

# Recent References: January 1, 2008 to March 31, 2008

National Nuclear Data Center, Brookhaven National Laboratory

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This document lists experimental references added to Nuclear Science References (NSR) during the period January 1, 2008 to March 31, 2008. The first section lists keynumbers and keywords sorted by mass and nuclide. The second section lists all references, ordered by keynumber.

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## Keynumbers and Keywords

## A=1

$^1\text{n}$	2007FI16	NUCLEAR REACTIONS $^1\text{H}(\text{polarized n, p})$ , E=230-590 MeV; measured analyzing powers, polarization of recoil particles; deduced polarization and depolarization coefficients. Nucleon-nucleon scattering and data on spin observables. JOUR PPNLA 4 503
$^1\text{H}$	2006TAZT	NUCLEAR REACTIONS $^1\text{H}(^{32}\text{Mg}, ^{32}\text{Mg}')$ , E=56 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, particle angular distributions. $^{32}\text{Mg}(\text{p}, \text{p}')$ ; inverse kinematics. CONF Tokyo (SENUF 06), P153, Takeuchi
	2007EL10	NUCLEAR REACTIONS $^1\text{H}(^{28}\text{Ne}, ^{28}\text{Ne}')$ , $(^{28}\text{Ne}, ^{27}\text{Ne})$ , E=51.3 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{27,28}\text{Ne}$ ; deduced level energies. JOUR ZSTNE 150 99
	2007ST29	NUCLEAR REACTIONS $^1\text{H}(\text{polarized d, d})$ , E=130 MeV; measured cross sections, angular distributions, vector and tensor analyzing powers. JOUR PRVCA 76 057001
	2008BR01	NUCLEAR REACTIONS $^1\text{H}(\text{polarized n, n})$ , E=12 MeV; measured analyzing power $A_y(\theta)$ and compared with various model predictions. JOUR PYLBB 660 161
	2008LA01	NUCLEAR REACTIONS $^1\text{H}, ^{12}\text{C}(^{10}\text{Be}, ^{10}\text{Be})$ , E=39.1 MeV / nucleon; $^1\text{H}, ^{12}\text{C}(^{11}\text{Be}, ^{11}\text{Be})$ , E=38.4 MeV / nucleon; measured $\sigma(\theta)$ . Comparison with optical models including a virtual coupling potential. JOUR PYLBB 658 198
	2008PE02	NUCLEAR REACTIONS $^1\text{H}(^{18}\text{Ne}, ^{18}\text{Ne})$ , $(^{18}\text{Ne}, ^{18}\text{Ne}')$ , E=66 MeV; measured $\sigma(\theta)$ , proton spectra. $^{19}\text{Na}$ deduced levels, J, $\pi$ . Microscopic cluster model and R-matrix analysis. JOUR PYLBB 659 864

## A=2

$^2\text{n}$	2007CL04	NUCLEAR REACTIONS $^2\text{H}, ^{12}\text{C}, ^{27}\text{Al}, ^{63}\text{Cu}, ^{197}\text{Au}(e, e'\pi^+)$ , E=4.021-5.767 GeV; measured electron and pion energies. Deduced nuclear transparency. JOUR PRLTA 99 242502
	2007SU25	NUCLEAR REACTIONS $^4\text{He}(\text{K}^-, \text{d})$ , E at rest; measured particle spectra, particle-particle coincidences, Ad correlation analysis. JOUR PRVCA 76 068202
	2007TE12	NUCLEAR REACTIONS $^2\text{H}(^8\text{He}, ^3\text{He})$ , $E \approx 25$ MeV / nucleon; measured $^3\text{He}, ^3\text{H}$ energies, yields and coincidences. Deduced $^7\text{H}$ missing mass spectrum, limit for the reaction exit channel populating a resonance lying 0-3 MeV above decay threshold. $^4\text{He}(^6\text{He}, 2\alpha)$ , E=25 MeV / nucleon; measured $E\alpha$ , $I\alpha$ , $\alpha\alpha$ -coin, angular and momentum distributions. Deduced cross section. JOUR ZSTNE 150 61
$^2\text{H}$	2007AT06	NUCLEAR REACTIONS $^2\text{H}(\text{n, n})$ , E=low; measured ultra cold neutron production cross sections. JOUR PRLTA 99 262502
	2007EL10	NUCLEAR REACTIONS $^1\text{H}(^{28}\text{Ne}, ^{28}\text{Ne}')$ , $(^{28}\text{Ne}, ^{27}\text{Ne})$ , E=51.3 MeV / nucleon; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin. $^{27,28}\text{Ne}$ ; deduced level energies. JOUR ZSTNE 150 99
	2007FR24	NUCLEAR REACTIONS $^2\text{H}(\text{n, n}')$ , E=thermal; measured ultracold neutron yield. JOUR ZAANE 34 119

**A=2 (continued)**

- 2008LI03 NUCLEAR REACTIONS  $^1\text{H}(^8\text{Li}, ^7\text{Li})$ ,  $E=39.8$  MeV; measured particle energies and yields.  $^8\text{Li}(p, d)$ ,  $E(\text{cm})=4.0$  MeV; deduced cross sections and backward angular distributions. JOUR CPLEE 25 455
- 2008M002 NUCLEAR REACTIONS  $^2\text{H}(^{56}\text{Ni}, ^{56}\text{Ni})$ ,  $E=50$  MeV / nucleon; measured deuteron recoil energies and yields.  $^{56}\text{Ni}$ ; deduced isoscalar giant monopole and giant quadrupole resonance centroids and angular distributions. JOUR PRLTA 100 042501
- 2008SA03 NUCLEAR REACTIONS  $^1\text{H}(^{19}\text{C}, ^{18}\text{C})$ ,  $(^{19}\text{C}, ^{16}\text{C})$ ,  $(^{17}\text{C}, ^{16}\text{C})$ ,  $E=70$  MeV / nucleon; measured  $\sigma$ ,  $\sigma(\theta)$ , relative energy spectra.  $^{17,19}\text{C}$  deduced level energies,  $J$ ,  $\pi$  using DWBA analysis. JOUR PYLBB 660 320

**A=3**

- $^3\text{n}$  2008SA01 NUCLEAR REACTIONS  $^4\text{He}(K^-, p)$ ,  $E$  at rest; measured charged-particle and proton momenta spectra and missing mass spectrum; deduced upper limit for a strange tribaryon state. JOUR PYLBB 659 107
- $^3\text{H}$  2008XI03 NUCLEAR REACTIONS  $^3\text{H}(p, p)$ ,  $E=1.4-3.4$  MeV; measured proton energies, yields,  $\sigma$  at backward angle. JOUR NIMBE 266 705
- $^3\text{He}$  2007AN34 NUCLEAR REACTIONS  $^4\text{He}(\pi^-, \pi^-)$ ,  $(\pi^-, \pi^-\gamma)$ ,  $(\pi^-, \pi^-n)$ ,  $E=106$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\sigma(\theta)$ , branching ratios using a streamer chamber. JOUR ZAANE 34 255
- 2007ES07 NUCLEAR MOMENTS  $^3\text{He}$ ; measured precessional frequency in magnetic field; deduced dressed spin effects of polarized  $^3\text{He}$ . Proposed measurement for neutron electric dipole moment. JOUR PRVCA 76 051302
- 2008AM01 NUCLEAR REACTIONS  $\text{Fe}, \text{Ni}(p, X)^3\text{He} / ^4\text{He} / ^{21}\text{Ne} / ^{22}\text{Ne} / ^{36}\text{Ar} / ^{38}\text{Ar}$ ,  $E < 1.6$  GeV; measured cross sections and excitation functions. JOUR NIMBE 266 2
- 2008IM01 NUCLEAR REACTIONS  $^2\text{H}(d, n)$ ,  $E$  not given; measured muon-catalyzed fusion neutron emission time spectra. JOUR PYLBB 658 120

**A=4**

- $^4\text{H}$  2008SA03 NUCLEAR REACTIONS  $^1\text{H}(^{19}\text{C}, ^{18}\text{C})$ ,  $(^{19}\text{C}, ^{16}\text{C})$ ,  $(^{17}\text{C}, ^{16}\text{C})$ ,  $E=70$  MeV / nucleon; measured  $\sigma$ ,  $\sigma(\theta)$ , relative energy spectra.  $^{17,19}\text{C}$  deduced level energies,  $J$ ,  $\pi$  using DWBA analysis. JOUR PYLBB 660 320
- $^4\text{He}$  2007AN34 NUCLEAR REACTIONS  $^4\text{He}(\pi^-, \pi^-)$ ,  $(\pi^-, \pi^-\gamma)$ ,  $(\pi^-, \pi^-n)$ ,  $E=106$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\sigma(\theta)$ , branching ratios using a streamer chamber. JOUR ZAANE 34 255
- 2007SC46 NUCLEAR REACTIONS  $^4\text{He}(^9\text{Be}, ^9\text{Be})$ ,  $E=30$  MeV;  $^4\text{He}(^{18}\text{O}, ^{18}\text{O})$ ,  $E=56$  MeV; measured elastic scattering excitation functions. JOUR ZSTNE 150 53

**A=4 (continued)**

2008AM01 NUCLEAR REACTIONS Fe, Ni(p, X)<sup>3</sup>He / <sup>4</sup>He / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>36</sup>Ar / <sup>38</sup>Ar, E < 1.6 GeV; measured cross sections and excitation functions. JOUR NIMBE 266 2

**A=5**

No references found

**A=6**

<sup>6</sup>He 2007MU17 NUCLEAR MOMENTS <sup>6,8</sup>He; measured isotope shifts. <sup>6,8</sup>He; Deduced nuclear charge radii. JOUR PRLTA 99 252501

2008YA05 NUCLEAR REACTIONS <sup>6,7</sup>Li(<sup>7</sup>Li, <sup>7</sup>Be), E=455 MeV; measured charged particle spectra, (particle)(particle)-coin, branching ratios. <sup>6,7</sup>He; measured decay channels, dipole resonances for charged particle decay. JOUR PRVCA 77 021303

<sup>6</sup>Li 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

<sup>6</sup>Be 2008CU01 error - unable to convert to LaTeX : Illegal close bracket JOUR PRVCA 77 021301

**A=7**

<sup>7</sup>H 2007CA47 NUCLEAR REACTIONS <sup>12</sup>C(<sup>8</sup>He, <sup>7</sup>H), E=15.4 MeV / nucleon; measured production  $\sigma(\theta)$ . <sup>7</sup>H; deduced resonance parameters. JOUR ZSTNE 150 9

2007TE12 NUCLEAR REACTIONS <sup>2</sup>H(<sup>8</sup>He, <sup>3</sup>He), E $\approx$  25 MeV / nucleon; measured <sup>3</sup>He, <sup>3</sup>H energies, yields and coincidences. Deduced <sup>7</sup>H missing mass spectrum, limit for the reaction exit channel populating a resonance lying 0-3 MeV above decay threshold. <sup>4</sup>He(<sup>6</sup>He, 2 $\alpha$ ), E=25 MeV / nucleon; measured E $\alpha$ , I $\alpha$ ,  $\alpha\alpha$ -coin, angular and momentum distributions. Deduced cross section. JOUR ZSTNE 150 61

**A=7 (continued)**

- <sup>7</sup>He      2008YA05      NUCLEAR REACTIONS <sup>6,7</sup>Li(<sup>7</sup>Li, <sup>7</sup>Be), E=455 MeV; measured charged particle spectra, (particle)(particle)-coin, branching ratios. <sup>6,7</sup>He; measured decay channels, dipole resonances for charged particle decay. JOUR PRVCA 77 021303
- <sup>7</sup>Li      2007BR30      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>6</sup>Li, <sup>6</sup>Li), E=60 MeV; measured charged particle spectra, branching ratios,  $\alpha\alpha$ -correlations. <sup>7</sup>Li, <sup>9</sup>Be; deduced excitation energies. JOUR PRVCA 76 054605
- 2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008AR01      RADIOACTIVITY <sup>7</sup>Be(EC); measured solar neutrino spectrum with the Borexino detector and compared to solar models. JOUR PYLBB 658 101
- 2008LI03      NUCLEAR REACTIONS <sup>1</sup>H(<sup>8</sup>Li, <sup>7</sup>Li), E=39.8 MeV; measured particle energies and yields. <sup>8</sup>Li(p, d), E(cm)=4.0 MeV; deduced cross sections and backward angular distributions. JOUR CPLEE 25 455
- <sup>7</sup>Be      2007BR32      NUCLEAR REACTIONS <sup>3</sup>He( $\alpha$ ,  $\gamma$ )<sup>7</sup>Be, E(cm)=0.33-1.23 MeV; measured E $\gamma$ , I $\gamma$ , cross sections; deduced astrophysical S-factors. JOUR PRVCA 76 055801
- 2008AR01      RADIOACTIVITY <sup>7</sup>Be(EC); measured solar neutrino spectrum with the Borexino detector and compared to solar models. JOUR PYLBB 658 101

**A=8**

- <sup>8</sup>He      2007MU17      NUCLEAR MOMENTS <sup>6,8</sup>He; measured isotope shifts. <sup>6,8</sup>He; Deduced nuclear charge radii. JOUR PRLTA 99 252501
- <sup>8</sup>Li      2007GA58      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>20</sup>Ne, <sup>21</sup>Na), E=63 MeV / nucleon; measured cross sections, E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (<sup>21</sup>Na) $\gamma$ -coin, momentum distributions. <sup>21</sup>Na; deduced levels, J,  $\pi$ . JOUR PRVCA 76 061302

## A=8 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- $^{8}\text{Be}$  2008KA04 NUCLEAR REACTIONS  $^2\text{H}(^9\text{Li}, t)$ ,  $(^9\text{Li}, d)$ ,  $E=1.68$  MeV / nucleon; measured  $\sigma(\theta)$ ; deduced spectroscopic factors. JOUR PYLBB 660 26
- $^{8}\text{Be}$  2007BA75 RADIOACTIVITY  $^8\text{B}(\beta^+)$  [from  $^3\text{He}(^6\text{Li}, n)$ ,  $E=15.5$  MeV]; measured delayed  $\alpha$  particles, branching ratio to the ground state of  $^8\text{Be}$ . JOUR PRVCA 76 055806
- 2008VI02 RADIOACTIVITY  $^8\text{Be}$  [from  $^7\text{Li}(p, \gamma)$ ,  $E=441$  keV]; measured angular distribution of the  $e^+e^-$  pairs from the M1 decay of the 17.64 MeV state. Compared results to model calculations and previous measurement. JOUR APOBB 39 483
- $^8\text{B}$  2007BA75 RADIOACTIVITY  $^8\text{B}(\beta^+)$  [from  $^3\text{He}(^6\text{Li}, n)$ ,  $E=15.5$  MeV]; measured delayed  $\alpha$  particles, branching ratio to the ground state of  $^8\text{Be}$ . JOUR PRVCA 76 055806

## A=9

- $^9\text{He}$  2007G041 NUCLEAR REACTIONS  $^2\text{H}(^8\text{He}, p)$ ,  $E=25$  MeV / nucleon; measured proton and  $^8\text{He}$  energies.  $^9\text{He}$ ; deduced resonance parameters. JOUR ZSTNE 150 23
- $^9\text{Li}$  2007MA91 RADIOACTIVITY  $^9\text{Li}(\beta^-)$ ; measured delayed  $E\alpha$ ,  $I\alpha$ , angular distributions.  $^9\text{Be}$  deduced decay channels. JOUR ZSTNE 150 137
- 2008KA04 NUCLEAR REACTIONS  $^2\text{H}(^9\text{Li}, t)$ ,  $(^9\text{Li}, d)$ ,  $E=1.68$  MeV / nucleon; measured  $\sigma(\theta)$ ; deduced spectroscopic factors. JOUR PYLBB 660 26
- $^9\text{Be}$  2007BR30 NUCLEAR REACTIONS  $^9\text{Be}(^6\text{Li}, ^6\text{Li})$ ,  $E=60$  MeV; measured charged particle spectra, branching ratios,  $\alpha\alpha$ -correlations.  $^7\text{Li}$ ,  $^9\text{Be}$ ; deduced excitation energies. JOUR PRVCA 76 054605
- 2007MA91 RADIOACTIVITY  $^9\text{Li}(\beta^-)$ ; measured delayed  $E\alpha$ ,  $I\alpha$ , angular distributions.  $^9\text{Be}$  deduced decay channels. JOUR ZSTNE 150 137

**A=9 (continued)**

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- 2007ONZZ NUCLEAR REACTIONS  $^9\text{Be}(^{18}\text{C}, ^{18}\text{C}')$ ,  $(^{18}\text{C}, 2n^{16}\text{C}')$ ,  $E=79$  MeV / nucleon;  $^9\text{Be}(^{16}\text{C}, ^{16}\text{C}')$ ,  $E=40, 72$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , angular distributions, and lifetimes using the RSM method.  $^{18,16}\text{C}$ ;  
deduced  $B(E2)$ . REPT RIKEN-NC-NP-16,Ong
- 2007VE13 NUCLEAR REACTIONS  $^9\text{Be}(^7\text{Li}, ^7\text{Li})$ ,  $E=17, 19, 21$  MeV;  $^9\text{Be}(^7\text{Li}, ^7\text{Li})$ ,  $E=15.75, 24.00, 30.00$  MeV; measured elastic scattering  $\sigma(\theta)$ .  
Compared results to optical model calculations.  $^9\text{Be}(^7\text{Li}, X)$ ,  $E=15.75, 24.00, 30.00$  MeV; measured  $E\alpha$ ,  $I\alpha$  from compound nuclear evaporation, fusion cross sections. JOUR ZSTNE 150 75
- 2008K002 NUCLEAR REACTIONS  $^{12}\text{C}(n, n')$ ,  $(n, \alpha)$ ,  $E < 14.2$  MeV; measured  $E\alpha$ ,  $I\alpha$ ,  $\sigma(\theta)$ . Compared results to model calculations. JOUR JNSTA 45 103
- <sup>9</sup>B 2008CU01 error - unable to convert to LaTeX : Illegal close bracket JOUR PRVCA 77 021301

**A=10**

- <sup>10</sup>Li 2008CH07 NUCLEAR REACTIONS  $^9\text{Be}(^{48}\text{Ca}, X)$ ,  $E=60$  MeV / nucleon; measured neutron decay energy spectra, (fragment)(neutron)-coin using sequential neutron decay spectroscopy technique.  $^{10}\text{Li}$ ,  $^{12,13}\text{Be}$ ,  $^{23}\text{O}$  observed unbound states. JOUR NUPAB 801 101
- <sup>10</sup>Be 2007MI46 NUCLEAR REACTIONS  $^{12,14}\text{C}(^6\text{He}, 2\alpha)$ ,  $E=35$  MeV; measured  $E\alpha$ ,  $I\alpha$ ,  $\alpha\alpha$ -coin.  $^{14}\text{C}$ ; deduced level energies. JOUR ZSTNE 150 41

## A=10 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- 2008TE02 NUCLEAR REACTIONS  $^9\text{Be}(^{30}\text{Mg}, ^{29}\text{Mg})$ ,  $E=85.8$  MeV / nucleon;  $^9\text{Be}(^{32}\text{Mg}, ^{31}\text{Mg})$ ,  $E=75.7$  MeV / nucleon; measured  $E_\gamma$ ,  $I_\gamma$ , (fragment) $\gamma$ -coin, cross sections; deduced spectroscopic factors.  $^{29,31}\text{Mg}$ ; deduced levels, angular momenta, half-lives. Single-particle knockout reaction. JOUR PRVCA 77 014316
- $^{10}\text{B}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- $^{10}\text{C}$  2008CU01 error - unable to convert to LaTeX : Illegal close bracket JOUR PRVCA 77 021301



## A=11

- <sup>11</sup>Be      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>11</sup>B      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>11</sup>C      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=12

- <sup>12</sup>Be      2007CH81      NUCLEAR REACTIONS H, <sup>12</sup>C(<sup>12</sup>Be, X), E=50 MeV / nucleon; measured charged particle spectra. <sup>12</sup>Be; measured breakup cross sections for decay modes  $\alpha + ^8\text{He}$ ,  $^6\text{He} + ^6\text{He}$ ,  $^3\text{H} + ^9\text{Li}$ ,  $\text{p} + ^{11}\text{Li}$ ; deduced excitation energies. JOUR PRVCA 76 064313
- 2007MI46      NUCLEAR REACTIONS <sup>12,14</sup>C(<sup>6</sup>He, 2 $\alpha$ ), E=35 MeV; measured E $\alpha$ , I $\alpha$ ,  $\alpha\alpha$ -coin. <sup>14</sup>C; deduced level energies. JOUR ZSTNE 150 41
- 2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008CH07      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>48</sup>Ca, X), E=60 MeV / nucleon; measured neutron decay energy spectra, (fragment)(neutron)-coin using sequential neutron decay spectroscopy technique. <sup>10</sup>Li, <sup>12,13</sup>Be, <sup>23</sup>O observed unbound states. JOUR NUPAB 801 101
- <sup>12</sup>B      2007CL04      NUCLEAR REACTIONS <sup>2</sup>H, <sup>12</sup>C, <sup>27</sup>Al, <sup>63</sup>Cu, <sup>197</sup>Au(e, e' $\pi^+$ ), E=4.021-5.767 GeV; measured electron and pion energies. Deduced nuclear transparency. JOUR PRLTA 99 242502
- 2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>12</sup>C      2007B049      NUCLEAR REACTIONS <sup>10</sup>B(<sup>3</sup>He, p), E=2.45 MeV; measured E $\alpha$ , I $\alpha$  from the triple  $\alpha$  breakup of <sup>12</sup>C from ground state upto 18 MeV. JOUR ZSTNE 150 207

**A=12 (continued)**

- 2007LA37 NUCLEAR REACTIONS  ${}^2\text{H}({}^{15}\text{N}, n\alpha)$ ,  $E=60$  MeV; measured  ${}^{12}\text{C}$  energies, particle coincidences, momentum.  ${}^{15}\text{N}(p, \alpha){}^{12}\text{C}$ ,  $E(\text{cm})=19.2-576.0$  MeV; deduced angular distributions, excitation functions, astrophysical S-factors using Trojan horse method. JOUR PRVCA 76 065804
- 2007NA31 NUCLEAR REACTIONS  ${}^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  ${}^6,7,8\text{Li}$ ,  ${}^9,10,11,12\text{Be}$ ,  ${}^{10,11,12,13}\text{B}$ ,  ${}^{11,12,13,14,15}\text{C}$ ,  ${}^{13,14,15,16,17}\text{N}$ ,  ${}^{15,16,17,18,19}\text{O}$ ,  ${}^{17,18,19,20,21}\text{F}$ ,  ${}^{19,20,21,22,23}\text{Ne}$ ,  ${}^{22,23,24,25}\text{Na}$ ,  ${}^{23,24,25,26,27}\text{Mg}$ ,  ${}^{25,26,27,28,29,30}\text{Al}$ ,  ${}^{28,29,30,31,32}\text{Si}$ ,  ${}^{30,31,32,33,34}\text{P}$ ,  ${}^{32,33,34,35,36,37,38}\text{S}$ ,  ${}^{34,35,36,37,38,39,40}\text{Cl}$ ,  ${}^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  ${}^{39,40,41,42,43,44,45}\text{K}$ ,  ${}^{41,42,43,44,45,46,47}\text{Ca}$ ,  ${}^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  ${}^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  ${}^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  ${}^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  ${}^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  ${}^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  ${}^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  ${}^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  ${}^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  ${}^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  ${}^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  ${}^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  ${}^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  ${}^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  ${}^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  ${}^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ; measured cross sections. JOUR PRVCA 76 064609
- 2008K002 NUCLEAR REACTIONS  ${}^{12}\text{C}(n, n')$ ,  $(n, \alpha)$ ,  $E < 14.2$  MeV; measured  $E\alpha$ ,  $I\alpha$ ,  $\sigma(\theta)$ . Compared results to model calculations. JOUR JNSTA 45 103
- 2008LA01 NUCLEAR REACTIONS  ${}^1\text{H}$ ,  ${}^{12}\text{C}({}^{10}\text{Be}, {}^{10}\text{Be})$ ,  $E=39.1$  MeV / nucleon;  ${}^1\text{H}$ ,  ${}^{12}\text{C}({}^{11}\text{Be}, {}^{11}\text{Be})$ ,  $E=38.4$  MeV / nucleon; measured  $\sigma(\theta)$ . Comparison with optical models including a virtual coupling potential. JOUR PYLBB 658 198
- 2008OH02 NUCLEAR REACTIONS  ${}^{56}\text{Fe}$ ,  ${}^{89}\text{Y}$ ,  ${}^{208}\text{Pb}(n, n)$ ,  $E=96$  MeV; measured  $\sigma(\theta)$ ;  ${}^{12}\text{C}$ ,  ${}^{16}\text{O}$ ; systematics, compared with Wick's limit. JOUR PRVCA 77 024605
- ${}^{12}\text{N}$  2008D002 NUCLEAR REACTIONS  ${}^{12}\text{C}(p, n)$ ,  $E=296$  MeV; measured cross sections and polarization transfer observables as a function of excitation energy. JOUR JUPSA 77 014201

**A=13**

- ${}^{13}\text{Be}$  2008CH07 NUCLEAR REACTIONS  ${}^9\text{Be}({}^{48}\text{Ca}, X)$ ,  $E=60$  MeV / nucleon; measured neutron decay energy spectra, (fragment)(neutron)-coin using sequential neutron decay spectroscopy technique.  ${}^{10}\text{Li}$ ,  ${}^{12,13}\text{Be}$ ,  ${}^{23}\text{O}$  observed unbound states. JOUR NUPAB 801 101

## A=13 (continued)

- <sup>13</sup>B      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>13</sup>C      2007NA26      NUCLEAR REACTIONS <sup>18</sup>O(n,  $\gamma$ ), E=thermal; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, cross sections; deduced levels, J,  $\pi$ , configurations, B(E1). <sup>13</sup>C, <sup>17,19</sup>O; systematics. JOUR PRVCA 76 051301
- 2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>13</sup>N      2007CA47      NUCLEAR REACTIONS <sup>12</sup>C(<sup>8</sup>He, <sup>7</sup>H), E=15.4 MeV / nucleon; measured production  $\sigma(\theta)$ . <sup>7</sup>H; deduced resonance parameters. JOUR ZSTNE 150 9
- 2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=13 (continued)**

- 2008ZE01 NUCLEAR REACTIONS  $^{13}\text{C}(^3\text{He}, t)$ ,  $E=420$  MeV; measured charged particles,  $\sigma(\theta)$ ; deduced  $B(\text{GT})$ , levels,  $J$ ,  $\pi$ .  $^{13}\text{C}(p, n)$ ; deduced electron capture rates in stellar environments as a function of temperature. JOUR PRVCA 77 024307

**A=14**

- $^{14}\text{C}$  2007MI46 NUCLEAR REACTIONS  $^{12,14}\text{C}(^6\text{He}, 2\alpha)$ ,  $E=35$  MeV; measured  $E\alpha$ ,  $I\alpha$ ,  $\alpha\alpha$ -coin.  $^{14}\text{C}$ ; deduced level energies. JOUR ZSTNE 150 41
- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^6,7,8\text{Li}$ ,  $^9,10,11,12\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- $^{14}\text{N}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^6,7,8\text{Li}$ ,  $^9,10,11,12\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609

## A=15

- <sup>15</sup>C      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008RE01      NUCLEAR REACTIONS <sup>14</sup>C(n,  $\gamma$ ), E=10-1000 keV; measured neutron spectra, neutron flux, E $\gamma$ , I $\gamma$ , cross sections; deduced reaction rate. <sup>15</sup>C; measured half-life. JOUR PRVCA 77 015804
- <sup>15</sup>N      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>15</sup>O      2007DE61      NUCLEAR REACTIONS <sup>1</sup>H(<sup>18</sup>F,  $\alpha$ ), E=13.8 MeV; measured E $\alpha$ , I $\alpha$ , cross sections. JOUR ZSTNE 150 211
- 2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=16

- <sup>16</sup>C      20070NZZ      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>18</sup>C, <sup>18</sup>C'), (<sup>18</sup>C, 2n<sup>16</sup>C'), E=79 MeV / nucleon; <sup>9</sup>Be(<sup>16</sup>C, <sup>16</sup>C'), E=40, 72 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , angular distributions, and lifetimes using the RSM method. <sup>18,16</sup>C; deduced B(E2). REPT RIKEN-NC-NP-16,Ong
- <sup>16</sup>N      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>16</sup>O      2007AM10      NUCLEAR REACTIONS <sup>12</sup>C(<sup>7</sup>Be, <sup>3</sup>He), E=34 MeV; measured  $\sigma$  and angular distributions. JOUR ZSTNE 150 1
- 2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2007RA36      RADIOACTIVITY <sup>18</sup>Ne(2p); measured decay proton energies and yields. JOUR ZSTNE 150 169
- 2008C003      NUCLEAR REACTIONS <sup>19</sup>F(p,  $\gamma$ ), E(cm)=200-700 keV; measured E $\gamma$ , I $\gamma$ , resonance parameters, interference signs. <sup>20</sup>Ne, <sup>16</sup>O, <sup>19</sup>F; deduced levels, J,  $\pi$ . JOUR PRVCA 77 015802
- 20080H02      NUCLEAR REACTIONS <sup>56</sup>Fe, <sup>89</sup>Y, <sup>208</sup>Pb(n, n), E=96 MeV; measured  $\sigma(\theta)$ ; <sup>12</sup>C, <sup>16</sup>O; systematics, compared with Wick's limit. JOUR PRVCA 77 024605

## A=17

- <sup>17</sup>C      2008SA03      NUCLEAR REACTIONS <sup>1</sup>H(<sup>19</sup>C, <sup>18</sup>C), (<sup>19</sup>C, <sup>16</sup>C), (<sup>17</sup>C, <sup>16</sup>C), E=70 MeV / nucleon; measured  $\sigma$ ,  $\sigma(\theta)$ , relative energy spectra. <sup>17,19</sup>C deduced level energies, J,  $\pi$  using DWBA analysis. JOUR PYLBB 660 320
- 2008SAZZ      NUCLEAR REACTIONS <sup>1</sup>H(<sup>17</sup>C, X), (<sup>19</sup>C, X), E=70 MeV / nucleon; measured fragment energies, yields, neutron-fragment-coinc,  $\sigma(\theta)$ . <sup>17</sup>C, <sup>19</sup>C; deduced levels, J,  $\pi$ . REPT RIKEN-NC-NP-18,Satou
- <sup>17</sup>N      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>17</sup>O      2007NA26      NUCLEAR REACTIONS <sup>18</sup>O(n,  $\gamma$ ), E=thermal; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, cross sections; deduced levels, J,  $\pi$ , configurations, B(E1). <sup>13</sup>C, <sup>17,19</sup>O; systematics. JOUR PRVCA 76 051301
- 2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609



## A=17 (continued)

<sup>17</sup>F      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=18

<sup>18</sup>C      2007ONZZ      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>18</sup>C, <sup>18</sup>C'), (<sup>18</sup>C, 2n<sup>16</sup>C'), E=79 MeV / nucleon; <sup>9</sup>Be(<sup>16</sup>C, <sup>16</sup>C'), E=40, 72 MeV / nucleon; measured E<sub>γ</sub>, I<sub>γ</sub>, angular distributions, and lifetimes using the RSM method. <sup>18,16</sup>C; deduced B(E2). REPT RIKEN-NC-NP-16,Ong

<sup>18</sup>O      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=18 (continued)**

- <sup>18</sup>F      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>18</sup>Ne      2007RA36      RADIOACTIVITY <sup>18</sup>Ne(2p); measured decay proton energies and yields. JOUR ZSTNE 150 169

**A=19**

- <sup>19</sup>C      2008SA03      NUCLEAR REACTIONS <sup>1</sup>H(<sup>19</sup>C, <sup>18</sup>C), (<sup>19</sup>C, <sup>16</sup>C), (<sup>17</sup>C, <sup>16</sup>C), E=70 MeV / nucleon; measured  $\sigma$ ,  $\sigma(\theta)$ , relative energy spectra. <sup>17,19</sup>C deduced level energies, J,  $\pi$  using DWBA analysis. JOUR PYLBB 660 320
- 2008SAZZ      NUCLEAR REACTIONS <sup>1</sup>H(<sup>17</sup>C, X), (<sup>19</sup>C, X), E=70 MeV / nucleon; measured fragment energies, yields, neutron-fragment-coinc,  $\sigma(\theta)$ . <sup>17</sup>C, <sup>19</sup>C; deduced levels, J,  $\pi$ . REPT RIKEN-NC-NP-18,Satou
- <sup>19</sup>O      2007NA26      NUCLEAR REACTIONS <sup>18</sup>O(n,  $\gamma$ ), E=thermal; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, cross sections; deduced levels, J,  $\pi$ , configurations, B(E1). <sup>13</sup>C, <sup>17,19</sup>O; systematics. JOUR PRVCA 76 051301
- 2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=19 (continued)

- <sup>19</sup>F      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008C003      NUCLEAR REACTIONS <sup>19</sup>F(p,  $\gamma$ ), E(cm)=200-700 keV; measured E $\gamma$ , I $\gamma$ , resonance parameters, interference signs. <sup>20</sup>Ne, <sup>16</sup>O, <sup>19</sup>F; deduced levels, J,  $\pi$ . JOUR PRVCA 77 015802
- <sup>19</sup>Ne      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>19</sup>Na      2008PE02      NUCLEAR REACTIONS <sup>1</sup>H(<sup>18</sup>Ne, <sup>18</sup>Ne), (<sup>18</sup>Ne, <sup>18</sup>Ne'), E=66 MeV; measured  $\sigma(\theta)$ , proton spectra. <sup>19</sup>Na deduced levels, J,  $\pi$ . Microscopic cluster model and R-matrix analysis. JOUR PYLBB 659 864

## A=20

- <sup>20</sup>F      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>20</sup>Ne      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008C003      NUCLEAR REACTIONS <sup>19</sup>F(p,  $\gamma$ ), E(cm)=200-700 keV; measured E $\gamma$ , I $\gamma$ , resonance parameters, interference signs. <sup>20</sup>Ne, <sup>16</sup>O, <sup>19</sup>F; deduced levels, J,  $\pi$ . JOUR PRVCA 77 015802

## A=21

- <sup>21</sup>F      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=21 (continued)**

- <sup>21</sup>Ne 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008AM01 NUCLEAR REACTIONS Fe, Ni(p, X)<sup>3</sup>He / <sup>4</sup>He / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>36</sup>Ar / <sup>38</sup>Ar, E < 1.6 GeV; measured cross sections and excitation functions. JOUR NIMBE 266 2
- <sup>21</sup>Na 2007GA58 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>20</sup>Ne, <sup>21</sup>Na), E=63 MeV / nucleon; measured cross sections, E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (<sup>21</sup>Na) $\gamma$ -coin, momentum distributions. <sup>21</sup>Na; deduced levels, J,  $\pi$ . JOUR PRVCA 76 061302
- 2008MU05 ATOMIC MASSES <sup>21,22,23</sup>Na, <sup>22,24</sup>Mg, <sup>37,39</sup>K; measured and evaluated masses using the ISOLTRAP Penning trap mass spectrometer. JOUR ZAANE 35 31

**A=22**

- <sup>22</sup>Ne 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008AM01 NUCLEAR REACTIONS Fe, Ni(p, X)<sup>3</sup>He / <sup>4</sup>He / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>36</sup>Ar / <sup>38</sup>Ar, E < 1.6 GeV; measured cross sections and excitation functions. JOUR NIMBE 266 2
- 2008LI02 RADIOACTIVITY <sup>22</sup>Na( $\beta^+$ ); measured E $\gamma$ , I $\gamma$ . Deduced evidence for temperature dependence of half life for decays in metallic environment. JOUR CPLEE 25 70

**A=22 (continued)**

$^{22}\text{Na}$	2007NA31	NUCLEAR REACTIONS $^{136}\text{Xe}(p, X)$ , $E=1$ GeV / nucleon; measured isotopic cross sections, kinetic energies. $^6,7,8\text{Li}$ , $^9,10,11,12\text{Be}$ , $^{10,11,12,13}\text{B}$ , $^{11,12,13,14,15}\text{C}$ , $^{13,14,15,16,17}\text{N}$ , $^{15,16,17,18,19}\text{O}$ , $^{17,18,19,20,21}\text{F}$ , $^{19,20,21,22,23}\text{Ne}$ , $^{22,23,24,25}\text{Na}$ , $^{23,24,25,26,27}\text{Mg}$ , $^{25,26,27,28,29,30}\text{Al}$ , $^{28,29,30,31,32}\text{Si}$ , $^{30,31,32,33,34}\text{P}$ , $^{32,33,34,35,36,37,38}\text{S}$ , $^{34,35,36,37,38,39,40}\text{Cl}$ , $^{36,37,38,39,40,41,42,43}\text{Ar}$ , $^{39,40,41,42,43,44,45}\text{K}$ , $^{41,42,43,44,45,46,47}\text{Ca}$ , $^{43,44,45,46,47,48,49,50}\text{Sc}$ , $^{45,46,47,48,49,50,51,52}\text{Ti}$ , $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ , $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ , $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ , $^{55,56,57,58,59,60,61,62}\text{Fe}$ , $^{57,58,59,60,61,62,63,64,65}\text{Co}$ , $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ , $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ , $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ , $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ , $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ , $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ , $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ , $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ , $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ; measured cross sections. JOUR PRVCA 76 064609
	2008LI02	RADIOACTIVITY $^{22}\text{Na}(\beta^+)$ ; measured $E\gamma$ , $I\gamma$ . Deduced evidence for temperature dependence of half life for decays in metallic environment. JOUR CPLEE 25 70
	2008MU05	ATOMIC MASSES $^{21,22,23}\text{Na}$ , $^{22,24}\text{Mg}$ , $^{37,39}\text{K}$ ; measured and evaluated masses using the ISOLTRAP Penning trap mass spectrometer. JOUR ZAANE 35 31
$^{22}\text{Mg}$	2007HE30	NUCLEAR REACTIONS $^1\text{H}(^{22}\text{Mg}, p)$ , $(^{22}\text{Mg}, \gamma)$ , $E=4.38$ MeV / nucleon; measured $E_p$ , $I_p$ , angular distributions; deduced reaction rate using R-matrix analysis. $^{23}\text{Al}$ ; deduced levels, $J$ , $\pi$ , $B(E2)$ , $B(M1)$ . $^{23}\text{Ne}$ ; systematics. JOUR PRVCA 76 055802
	2008MU05	ATOMIC MASSES $^{21,22,23}\text{Na}$ , $^{22,24}\text{Mg}$ , $^{37,39}\text{K}$ ; measured and evaluated masses using the ISOLTRAP Penning trap mass spectrometer. JOUR ZAANE 35 31

**A=23**

$^{23}\text{O}$	2008CH07	NUCLEAR REACTIONS $^9\text{Be}(^{48}\text{Ca}, X)$ , $E=60$ MeV / nucleon; measured neutron decay energy spectra, (fragment)(neutron)-coin using sequential neutron decay spectroscopy technique. $^{10}\text{Li}$ , $^{12,13}\text{Be}$ , $^{23}\text{O}$ observed unbound states. JOUR NUPAB 801 101
$^{23}\text{Ne}$	2007HE30	NUCLEAR REACTIONS $^1\text{H}(^{22}\text{Mg}, p)$ , $(^{22}\text{Mg}, \gamma)$ , $E=4.38$ MeV / nucleon; measured $E_p$ , $I_p$ , angular distributions; deduced reaction rate using R-matrix analysis. $^{23}\text{Al}$ ; deduced levels, $J$ , $\pi$ , $B(E2)$ , $B(M1)$ . $^{23}\text{Ne}$ ; systematics. JOUR PRVCA 76 055802

## A=23 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^6,7,8\text{Li}$ ,  $^9,10,11,12\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- $^{23}\text{Na}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^6,7,8\text{Li}$ ,  $^9,10,11,12\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- 2008MU05 ATOMIC MASSES  $^{21,22,23}\text{Na}$ ,  $^{22,24}\text{Mg}$ ,  $^{37,39}\text{K}$ ; measured and evaluated masses using the ISOLTRAP Penning trap mass spectrometer. JOUR ZAANE 35 31
- $^{23}\text{Mg}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^6,7,8\text{Li}$ ,  $^9,10,11,12\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- $^{23}\text{Al}$  2007HE30 NUCLEAR REACTIONS  $^1\text{H}(^{22}\text{Mg}, p)$ ,  $(^{22}\text{Mg}, \gamma)$ ,  $E=4.38$  MeV / nucleon; measured  $E_p$ ,  $I_p$ , angular distributions; deduced reaction rate using R-matrix analysis.  $^{23}\text{Al}$ ; deduced levels,  $J$ ,  $\pi$ ,  $B(E2)$ ,  $B(M1)$ .  $^{23}\text{Ne}$ ; systematics. JOUR PRVCA 76 055802

## A=24

- <sup>24</sup>Ne 2007BE66 NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>24</sup>Ne, X), E=7.9 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>24,25</sup>Ne; deduced levels. JOUR ZSTNE 150 83
- <sup>24</sup>Na 2007LU19 NUCLEAR REACTIONS <sup>27</sup>Al(n,  $\alpha$ ), E=13.5-14.8 MeV; <sup>96,98,104</sup>Ru(n, 2n), E=13.5-14.8 MeV; <sup>96,102,104</sup>Ru(n, p)<sup>96</sup>Tc / <sup>96m</sup>Tc / <sup>102m</sup>Tc / <sup>104</sup>Tc, E=13.5-14.8 MeV; <sup>96,102,104</sup>Ru(n,  $\alpha$ )<sup>93m</sup>Mo / <sup>99</sup>Mo / <sup>101</sup>Mo, E=13.5-14.8 MeV; <sup>96</sup>Ru(n, d)<sup>95m</sup>Tc, E=13.5-14.8 MeV; measured E $\gamma$ , I $\gamma$ , cross sections. JOUR PRVCA 76 057601
- 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>24</sup>Mg 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008MU05 ATOMIC MASSES <sup>21,22,23</sup>Na, <sup>22,24</sup>Mg, <sup>37,39</sup>K; measured and evaluated masses using the ISOLTRAP Penning trap mass spectrometer. JOUR ZAANE 35 31
- 2008SA04 NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>24</sup>Mg, <sup>24</sup>Mg'), <sup>24</sup>Mg(<sup>24</sup>Mg, X)<sup>45</sup>Ti / <sup>44</sup>Sc / <sup>42</sup>Ca / <sup>41</sup>Ca / <sup>41</sup>K / <sup>39</sup>K / <sup>38</sup>Ar / <sup>37</sup>Ar, E=91.72, 92.62 MeV; measured (fragment) $\gamma$ -, (charged particle) $\gamma$ - and  $\gamma\gamma$ -coin; deduced ON / OFF resonance yield ratios for the inelastic and fusion evaporation channels. ON resonance formation of <sup>48</sup>Cr discussed. <sup>45</sup>Ti deduced levels, J,  $\pi$ . JOUR NUPAB 801 1



**A=24 (continued)**

- <sup>24</sup>Al 2007VI16 NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>3</sup>He, t), E=30 MeV / nucleon; measured triton spectra, angular distributions. <sup>24</sup>Al; deduced resonance energies, reaction rates. <sup>23</sup>Mg(p,  $\gamma$ )<sup>24</sup>Al; resonance parameters. JOUR PRVCA 76 065803

**A=25**

- <sup>25</sup>Ne 2007BE66 NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>24</sup>Ne, X), E=7.9 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>24,25</sup>Ne; deduced levels. JOUR ZSTNE 150 83
- <sup>25</sup>Na 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>25</sup>Mg 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=25 (continued)**

<sup>25</sup>Al 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=26**

<sup>26</sup>Mg 2007MU20 NUCLEAR REACTIONS <sup>24</sup>Mg(t, p), E=1.65-3.40 MeV; measured  $\sigma(\tau)$ . Deduced resonance parameters. JOUR JNSTA 44 1484

2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

<sup>26</sup>Al 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=27

- <sup>27</sup>Ne 2007EL10 NUCLEAR REACTIONS <sup>1</sup>H(<sup>28</sup>Ne, <sup>28</sup>Ne'), (<sup>28</sup>Ne, <sup>27</sup>Ne), E=51.3 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>27,28</sup>Ne; deduced level energies. JOUR ZSTNE 150 99
- 2007GI17 NUCLEAR REACTIONS <sup>2</sup>H(<sup>26</sup>Ne, p), E=9.7 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin. <sup>27</sup>Ne; deduced levels, cross sections, and spectroscopic factors. JOUR ZSTNE 150 161
- <sup>27</sup>Mg 2007CL04 NUCLEAR REACTIONS <sup>2</sup>H, <sup>12</sup>C, <sup>27</sup>Al, <sup>63</sup>Cu, <sup>197</sup>Au(e, e' $\pi^+$ ), E=4.021-5.767 GeV; measured electron and pion energies. Deduced nuclear transparency. JOUR PRLTA 99 242502
- 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>27</sup>Al 2007LI81 NUCLEAR REACTIONS <sup>27</sup>Al(<sup>6</sup>He, <sup>6</sup>He'), E=9.5-13.4 MeV; <sup>51</sup>V(<sup>7</sup>Be, <sup>7</sup>Be'), E=26 MeV; measured reaction cross sections and angular distributions. Compared results to model calculations. JOUR ZSTNE 150 27
- 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=28

- <sup>28</sup>Ne 2007EL10 NUCLEAR REACTIONS <sup>1</sup>H(<sup>28</sup>Ne, <sup>28</sup>Ne'), (<sup>28</sup>Ne, <sup>27</sup>Ne), E=51.3 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>27,28</sup>Ne; deduced level energies. JOUR ZSTNE 150 99

## A=28 (continued)

- 2007R0ZY RADIOACTIVITY  $^{28,29,30}\text{Ne}$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coinc.  $^{28,29,30}\text{Ne}$ ; deduced levels, J,  $\pi$ . THESIS E Rodriguez-Vieitez, Berkeley University of California
- $^{28}\text{Al}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^6,7,8\text{Li}$ ,  $^9,10,11,12\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{28}\text{Si}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^6,7,8\text{Li}$ ,  $^9,10,11,12\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ; measured cross sections. JOUR PRVCA 76 064609
- 2007PA42 NUCLEAR REACTIONS  $^{28}\text{Si}(^6\text{Li}, X)^{29}\text{Si}$  /  $^{32}\text{S}$  /  $^{29}\text{P}$  /  $^{28}\text{Si}$ ,  $E=9, 13$  MeV; measured production cross sections,  $E\gamma$ ,  $I\gamma$ , angular distributions. JOUR PRVCA 76 054601
- $^{28}\text{S}$  2007BU36 NUCLEAR REACTIONS  $^9\text{Be}(^{37}\text{Ca}, X)^{36}\text{Ca}$  /  $^{28}\text{S}$ ,  $E=61$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coinc.  $^{36}\text{Ca}$ ,  $^{28}\text{S}$ ; deduced levels. JOUR ZSTNE 150 89

## A=29

- $^{29}\text{Ne}$  2007R0ZY RADIOACTIVITY  $^{28,29,30}\text{Ne}$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coinc.  $^{28,29,30}\text{Ne}$ ; deduced levels, J,  $\pi$ . THESIS E Rodriguez-Vieitez, Berkeley University of California
- $^{29}\text{Mg}$  2008TE02 NUCLEAR REACTIONS  $^9\text{Be}(^{30}\text{Mg}, ^{29}\text{Mg})$ ,  $E=85.8$  MeV / nucleon;  $^9\text{Be}(^{32}\text{Mg}, ^{31}\text{Mg})$ ,  $E=75.7$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , (fragment) $\gamma$ -coinc, cross sections; deduced spectroscopic factors.  $^{29,31}\text{Mg}$ ; deduced levels, angular momenta, half-lives. Single-particle knockout reaction. JOUR PRVCA 77 014316

**A=29 (continued)**

- <sup>29</sup>Al 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>29</sup>Si 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2007PA42 NUCLEAR REACTIONS <sup>28</sup>Si(<sup>6</sup>Li, X)<sup>29</sup>Si / <sup>32</sup>S / <sup>29</sup>P / <sup>28</sup>Si, E=9, 13 MeV; measured production cross sections, E $\gamma$ , I $\gamma$ , angular distributions. JOUR PRVCA 76 054601
- <sup>29</sup>P 2007PA42 NUCLEAR REACTIONS <sup>28</sup>Si(<sup>6</sup>Li, X)<sup>29</sup>Si / <sup>32</sup>S / <sup>29</sup>P / <sup>28</sup>Si, E=9, 13 MeV; measured production cross sections, E $\gamma$ , I $\gamma$ , angular distributions. JOUR PRVCA 76 054601

**A=30**

- <sup>30</sup>Ne 2007R0ZY RADIOACTIVITY <sup>28,29,30</sup>Ne; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coinc. <sup>28,29,30</sup>Ne; deduced levels, J,  $\pi$ . THESIS E Rodriguez-Vieitez, Berkeley University of California

## A=30 (continued)

- <sup>30</sup>Al      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2007UE02      RADIOACTIVITY <sup>30,31,32</sup>Al( $\beta^-$ ); measured magnetic dipole and electric quadrupole moments using the  $\beta$ -NMR method. JOUR ZSTNE 150 185
- <sup>30</sup>Si      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2007UE02      RADIOACTIVITY <sup>30,31,32</sup>Al( $\beta^-$ ); measured magnetic dipole and electric quadrupole moments using the  $\beta$ -NMR method. JOUR ZSTNE 150 185
- <sup>30</sup>P      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=31

<sup>31</sup> Mg	2008TE02	NUCLEAR REACTIONS <sup>9</sup> Be( <sup>30</sup> Mg, <sup>29</sup> Mg), E=85.8 MeV / nucleon; <sup>9</sup> Be( <sup>32</sup> Mg, <sup>31</sup> Mg), E=75.7 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (fragment) $\gamma$ -coin, cross sections; deduced spectroscopic factors. <sup>29,31</sup> Mg; deduced levels, angular momenta, half-lives. Single-particle knockout reaction. JOUR PRVCA 77 014316
<sup>31</sup> Al	2007UE02	RADIOACTIVITY <sup>30,31,32</sup> Al( $\beta^-$ ); measured magnetic dipole and electric quadrupole moments using the $\beta$ -NMR method. JOUR ZSTNE 150 185
<sup>31</sup> Si	2007NA31	NUCLEAR REACTIONS <sup>136</sup> Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup> Li, <sup>9,10,11,12</sup> Be, <sup>10,11,12,13</sup> B, <sup>11,12,13,14,15</sup> C, <sup>13,14,15,16,17</sup> N, <sup>15,16,17,18,19</sup> O, <sup>17,18,19,20,21</sup> F, <sup>19,20,21,22,23</sup> Ne, <sup>22,23,24,25</sup> Na, <sup>23,24,25,26,27</sup> Mg, <sup>25,26,27,28,29,30</sup> Al, <sup>28,29,30,31,32</sup> Si, <sup>30,31,32,33,34</sup> P, <sup>32,33,34,35,36,37,38</sup> S, <sup>34,35,36,37,38,39,40</sup> Cl, <sup>36,37,38,39,40,41,42,43</sup> Ar, <sup>39,40,41,42,43,44,45</sup> K, <sup>41,42,43,44,45,46,47</sup> Ca, <sup>43,44,45,46,47,48,49,50</sup> Sc, <sup>45,46,47,48,49,50,51,52</sup> Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup> V, <sup>49,50,51,52,53,54,55,56,57</sup> Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup> Mn, <sup>55,56,57,58,59,60,61,62</sup> Fe, <sup>57,58,59,60,61,62,63,64,65</sup> Co, <sup>59,60,61,62,63,64,65,66,67</sup> Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup> Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup> Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup> Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup> Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup> As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup> Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup> Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup> Kr; measured cross sections. JOUR PRVCA 76 064609
	2007UE02	RADIOACTIVITY <sup>30,31,32</sup> Al( $\beta^-$ ); measured magnetic dipole and electric quadrupole moments using the $\beta$ -NMR method. JOUR ZSTNE 150 185
<sup>31</sup> P	2007NA31	NUCLEAR REACTIONS <sup>136</sup> Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup> Li, <sup>9,10,11,12</sup> Be, <sup>10,11,12,13</sup> B, <sup>11,12,13,14,15</sup> C, <sup>13,14,15,16,17</sup> N, <sup>15,16,17,18,19</sup> O, <sup>17,18,19,20,21</sup> F, <sup>19,20,21,22,23</sup> Ne, <sup>22,23,24,25</sup> Na, <sup>23,24,25,26,27</sup> Mg, <sup>25,26,27,28,29,30</sup> Al, <sup>28,29,30,31,32</sup> Si, <sup>30,31,32,33,34</sup> P, <sup>32,33,34,35,36,37,38</sup> S, <sup>34,35,36,37,38,39,40</sup> Cl, <sup>36,37,38,39,40,41,42,43</sup> Ar, <sup>39,40,41,42,43,44,45</sup> K, <sup>41,42,43,44,45,46,47</sup> Ca, <sup>43,44,45,46,47,48,49,50</sup> Sc, <sup>45,46,47,48,49,50,51,52</sup> Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup> V, <sup>49,50,51,52,53,54,55,56,57</sup> Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup> Mn, <sup>55,56,57,58,59,60,61,62</sup> Fe, <sup>57,58,59,60,61,62,63,64,65</sup> Co, <sup>59,60,61,62,63,64,65,66,67</sup> Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup> Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup> Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup> Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup> Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup> As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup> Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup> Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup> Kr; measured cross sections. JOUR PRVCA 76 064609
<sup>31</sup> S	2007WR01	NUCLEAR REACTIONS <sup>31</sup> P( <sup>3</sup> He, t), E=20 MeV; measured charged particle spectra, angular distributions; <sup>31</sup> S; deduced resonance energies, levels, J, $\pi$ , <sup>30</sup> P(p, $\gamma$ ) reaction rates, width parameters, spectroscopic factors. Comparison with <sup>31</sup> P level scheme. JOUR PRVCA 76 052802

## A=32

<sup>32</sup> Mg	2006TAZT	NUCLEAR REACTIONS <sup>1</sup> H( <sup>32</sup> Mg, <sup>32</sup> Mg'), E=56 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, particle angular distributions. <sup>32</sup> Mg(p, p'); inverse kinematics. CONF Tokyo (SENUF 06),P153,Takeuchi
<sup>32</sup> Al	2007UE02	RADIOACTIVITY <sup>30,31,32</sup> Al( $\beta^-$ ); measured magnetic dipole and electric quadrupole moments using the $\beta$ -NMR method. JOUR ZSTNE 150 185
<sup>32</sup> Si	2007NA31	NUCLEAR REACTIONS <sup>136</sup> Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup> Li, <sup>9,10,11,12</sup> Be, <sup>10,11,12,13</sup> B, <sup>11,12,13,14,15</sup> C, <sup>13,14,15,16,17</sup> N, <sup>15,16,17,18,19</sup> O, <sup>17,18,19,20,21</sup> F, <sup>19,20,21,22,23</sup> Ne, <sup>22,23,24,25</sup> Na, <sup>23,24,25,26,27</sup> Mg, <sup>25,26,27,28,29,30</sup> Al, <sup>28,29,30,31,32</sup> Si, <sup>30,31,32,33,34</sup> P, <sup>32,33,34,35,36,37,38</sup> S, <sup>34,35,36,37,38,39,40</sup> Cl, <sup>36,37,38,39,40,41,42,43</sup> Ar, <sup>39,40,41,42,43,44,45</sup> K, <sup>41,42,43,44,45,46,47</sup> Ca, <sup>43,44,45,46,47,48,49,50</sup> Sc, <sup>45,46,47,48,49,50,51,52</sup> Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup> V, <sup>49,50,51,52,53,54,55,56,57</sup> Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup> Mn, <sup>55,56,57,58,59,60,61,62</sup> Fe, <sup>57,58,59,60,61,62,63,64,65</sup> Co, <sup>59,60,61,62,63,64,65,66,67</sup> Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup> Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup> Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup> Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup> Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup> As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup> Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup> Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup> Kr; measured cross sections. JOUR PRVCA 76 064609
	2007UE02	RADIOACTIVITY <sup>30,31,32</sup> Al( $\beta^-$ ); measured magnetic dipole and electric quadrupole moments using the $\beta$ -NMR method. JOUR ZSTNE 150 185
<sup>32</sup> P	2007NA31	NUCLEAR REACTIONS <sup>136</sup> Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup> Li, <sup>9,10,11,12</sup> Be, <sup>10,11,12,13</sup> B, <sup>11,12,13,14,15</sup> C, <sup>13,14,15,16,17</sup> N, <sup>15,16,17,18,19</sup> O, <sup>17,18,19,20,21</sup> F, <sup>19,20,21,22,23</sup> Ne, <sup>22,23,24,25</sup> Na, <sup>23,24,25,26,27</sup> Mg, <sup>25,26,27,28,29,30</sup> Al, <sup>28,29,30,31,32</sup> Si, <sup>30,31,32,33,34</sup> P, <sup>32,33,34,35,36,37,38</sup> S, <sup>34,35,36,37,38,39,40</sup> Cl, <sup>36,37,38,39,40,41,42,43</sup> Ar, <sup>39,40,41,42,43,44,45</sup> K, <sup>41,42,43,44,45,46,47</sup> Ca, <sup>43,44,45,46,47,48,49,50</sup> Sc, <sup>45,46,47,48,49,50,51,52</sup> Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup> V, <sup>49,50,51,52,53,54,55,56,57</sup> Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup> Mn, <sup>55,56,57,58,59,60,61,62</sup> Fe, <sup>57,58,59,60,61,62,63,64,65</sup> Co, <sup>59,60,61,62,63,64,65,66,67</sup> Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup> Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup> Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup> Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup> Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup> As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup> Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup> Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup> Kr; measured cross sections. JOUR PRVCA 76 064609



**A=32 (continued)**

- <sup>32</sup>S      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2007PA42      NUCLEAR REACTIONS <sup>28</sup>Si(<sup>6</sup>Li, X)<sup>29</sup>Si / <sup>32</sup>S / <sup>29</sup>P / <sup>28</sup>Si, E=9, 13 MeV; measured production cross sections, E $\gamma$ , I $\gamma$ , angular distributions. JOUR PRVCA 76 054601

**A=33**

- <sup>33</sup>P      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>33</sup>S      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=34

- <sup>34</sup>P 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>34</sup>S 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>34</sup>Cl 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008NA03 NUCLEAR REACTIONS S( $\alpha$ , X)<sup>34</sup>Cl, E=14.2-69.5 MeV; measured E $\gamma$ , I $\gamma$ , thick target saturation yield. S( $\alpha$ , X)<sup>34</sup>Cl, E=14.2-69.5 MeV; Deduced excitation function. JOUR NIMBE 266 709

## A=35

<sup>35</sup> Si	2007NE14	RADIOACTIVITY <sup>35</sup> Si( $\beta^-$ ); measured ground state g-factor using the $\beta$ -NMR method. JOUR ZSTNE 150 149
<sup>35</sup> P	2007NE14	RADIOACTIVITY <sup>35</sup> Si( $\beta^-$ ); measured ground state g-factor using the $\beta$ -NMR method. JOUR ZSTNE 150 149
<sup>35</sup> S	2007NA31	NUCLEAR REACTIONS <sup>136</sup> Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup> Li, <sup>9,10,11,12</sup> Be, <sup>10,11,12,13</sup> B, <sup>11,12,13,14,15</sup> C, <sup>13,14,15,16,17</sup> N, <sup>15,16,17,18,19</sup> O, <sup>17,18,19,20,21</sup> F, <sup>19,20,21,22,23</sup> Ne, <sup>22,23,24,25</sup> Na, <sup>23,24,25,26,27</sup> Mg, <sup>25,26,27,28,29,30</sup> Al, <sup>28,29,30,31,32</sup> Si, <sup>30,31,32,33,34</sup> P, <sup>32,33,34,35,36,37,38</sup> S, <sup>34,35,36,37,38,39,40</sup> Cl, <sup>36,37,38,39,40,41,42,43</sup> Ar, <sup>39,40,41,42,43,44,45</sup> K, <sup>41,42,43,44,45,46,47</sup> Ca, <sup>43,44,45,46,47,48,49,50</sup> Sc, <sup>45,46,47,48,49,50,51,52</sup> Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup> V, <sup>49,50,51,52,53,54,55,56,57</sup> Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup> Mn, <sup>55,56,57,58,59,60,61,62</sup> Fe, <sup>57,58,59,60,61,62,63,64,65</sup> Co, <sup>59,60,61,62,63,64,65,66,67</sup> Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup> Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup> Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup> Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup> Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup> As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup> Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup> Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup> Kr; measured cross sections. JOUR PRVCA 76 064609
<sup>35</sup> Cl	2007NA31	NUCLEAR REACTIONS <sup>136</sup> Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup> Li, <sup>9,10,11,12</sup> Be, <sup>10,11,12,13</sup> B, <sup>11,12,13,14,15</sup> C, <sup>13,14,15,16,17</sup> N, <sup>15,16,17,18,19</sup> O, <sup>17,18,19,20,21</sup> F, <sup>19,20,21,22,23</sup> Ne, <sup>22,23,24,25</sup> Na, <sup>23,24,25,26,27</sup> Mg, <sup>25,26,27,28,29,30</sup> Al, <sup>28,29,30,31,32</sup> Si, <sup>30,31,32,33,34</sup> P, <sup>32,33,34,35,36,37,38</sup> S, <sup>34,35,36,37,38,39,40</sup> Cl, <sup>36,37,38,39,40,41,42,43</sup> Ar, <sup>39,40,41,42,43,44,45</sup> K, <sup>41,42,43,44,45,46,47</sup> Ca, <sup>43,44,45,46,47,48,49,50</sup> Sc, <sup>45,46,47,48,49,50,51,52</sup> Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup> V, <sup>49,50,51,52,53,54,55,56,57</sup> Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup> Mn, <sup>55,56,57,58,59,60,61,62</sup> Fe, <sup>57,58,59,60,61,62,63,64,65</sup> Co, <sup>59,60,61,62,63,64,65,66,67</sup> Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup> Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup> Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup> Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup> Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup> As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup> Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup> Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup> Kr; measured cross sections. JOUR PRVCA 76 064609

## A=36

- <sup>36</sup>S 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>36</sup>Cl 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>36</sup>Ar 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008AM01 NUCLEAR REACTIONS Fe, Ni(p, X)<sup>3</sup>He / <sup>4</sup>He / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>36</sup>Ar / <sup>38</sup>Ar, E < 1.6 GeV; measured cross sections and excitation functions. JOUR NIMBE 266 2
- <sup>36</sup>Ca 2007BU36 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>37</sup>Ca, X)<sup>36</sup>Ca / <sup>28</sup>S, E=61 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>36</sup>Ca, <sup>28</sup>S; deduced levels. JOUR ZSTNE 150 89

**A=37**

- <sup>37</sup>S      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>37</sup>Cl      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>37</sup>Ar      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008SA04      NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>24</sup>Mg, <sup>24</sup>Mg'), <sup>24</sup>Mg(<sup>24</sup>Mg, X)<sup>45</sup>Ti / <sup>44</sup>Sc / <sup>42</sup>Ca / <sup>41</sup>Ca / <sup>41</sup>K / <sup>39</sup>K / <sup>38</sup>Ar / <sup>37</sup>Ar, E=91.72, 92.62 MeV; measured (fragment)γ-, (charged particle)γ- and γγ-coinc; deduced ON / OFF resonance yield ratios for the inelastic and fusion evaporation channels. ON resonance formation of <sup>48</sup>Cr discussed. <sup>45</sup>Ti deduced levels, J, π. JOUR NUPAB 801 1

## A=37 (continued)

- <sup>37</sup>K 2008MU05 ATOMIC MASSES <sup>21,22,23</sup>Na, <sup>22,24</sup>Mg, <sup>37,39</sup>K; measured and evaluated masses using the ISOLTRAP Penning trap mass spectrometer. JOUR ZAANE 35 31

## A=38

- <sup>38</sup>S 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>38</sup>Cl 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>38</sup>Ar 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=38 (continued)**

- 2008AM01 NUCLEAR REACTIONS Fe, Ni(p, X)<sup>3</sup>He / <sup>4</sup>He / <sup>21</sup>Ne / <sup>22</sup>Ne / <sup>36</sup>Ar / <sup>38</sup>Ar, E < 1.6 GeV; measured cross sections and excitation functions. JOUR NIMBE 266 2
- 2008BL01 NUCLEAR MOMENTS <sup>38,40,41,42,43,44</sup>Ar; measured isotope shifts, hfs; deduced charge radii, J,  $\mu$ , quadrupole moment. Fast-beam collinear laser spectroscopy. JOUR NUPAB 799 30
- 2008SA04 NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>24</sup>Mg, <sup>24</sup>Mg'), <sup>24</sup>Mg(<sup>24</sup>Mg, X)<sup>45</sup>Ti / <sup>44</sup>Sc / <sup>42</sup>Ca / <sup>41</sup>Ca / <sup>41</sup>K / <sup>39</sup>K / <sup>38</sup>Ar / <sup>37</sup>Ar, E=91.72, 92.62 MeV; measured (fragment) $\gamma$ -, (charged particle) $\gamma$ - and  $\gamma\gamma$ -coin; deduced ON / OFF resonance yield ratios for the inelastic and fusion evaporation channels. ON resonance formation of <sup>48</sup>Cr discussed. <sup>45</sup>Ti deduced levels, J,  $\pi$ . JOUR NUPAB 801 1

**A=39**

- <sup>39</sup>Cl 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>39</sup>Ar 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=39 (continued)

- <sup>39</sup>K      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008MU05      ATOMIC MASSES <sup>21,22,23</sup>Na, <sup>22,24</sup>Mg, <sup>37,39</sup>K; measured and evaluated masses using the ISOLTRAP Penning trap mass spectrometer. JOUR ZAANE 35 31
- 2008SA04      NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>24</sup>Mg, <sup>24</sup>Mg'), <sup>24</sup>Mg(<sup>24</sup>Mg, X)<sup>45</sup>Ti / <sup>44</sup>Sc / <sup>42</sup>Ca / <sup>41</sup>Ca / <sup>41</sup>K / <sup>39</sup>K / <sup>38</sup>Ar / <sup>37</sup>Ar, E=91.72, 92.62 MeV; measured (fragment) $\gamma^-$ , (charged particle) $\gamma^-$  and  $\gamma\gamma$ -coin; deduced ON / OFF resonance yield ratios for the inelastic and fusion evaporation channels. ON resonance formation of <sup>48</sup>Cr discussed. <sup>45</sup>Ti deduced levels, J,  $\pi$ . JOUR NUPAB 801 1

## A=40

- <sup>40</sup>Cl      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609



## A=40 (continued)

- <sup>40</sup>Ar      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008BL01      NUCLEAR MOMENTS <sup>38,40,41,42,43,44</sup>Ar; measured isotope shifts, hfs; deduced charge radii, J,  $\mu$ , quadrupole moment. Fast-beam collinear laser spectroscopy. JOUR NUPAB 799 30
- <sup>40</sup>K      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=41

- <sup>41</sup>Cl      2007WH01      RADIOACTIVITY <sup>41</sup>Cl( $\beta^-$ ) [from U(p, X), E=1.4 GeV]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\beta\gamma\gamma$ -coin,  $\beta\gamma(t)$ . <sup>41</sup>Ar; measured half-lives of isomeric states; deduced levels, J,  $\pi$ , multipolarities, B(E2), B(M1). JOUR PRVCA 76 057303

## A=41 (continued)

- <sup>41</sup>Ar      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2007WH01      RADIOACTIVITY <sup>41</sup>Cl( $\beta^-$ ) [from U(p, X), E=1.4 GeV]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\beta\gamma\gamma$ -coin,  $\beta\gamma(t)$ . <sup>41</sup>Ar; measured half-lives of isomeric states; deduced levels, J,  $\pi$ , multipolarities, B(E2), B(M1). JOUR PRVCA 76 057303
- 2008BL01      NUCLEAR MOMENTS <sup>38,40,41,42,43,44</sup>Ar; measured isotope shifts, hfs; deduced charge radii, J,  $\mu$ , quadrupole moment. Fast-beam collinear laser spectroscopy. JOUR NUPAB 799 30
- <sup>41</sup>K      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008SA04      NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>24</sup>Mg, <sup>24</sup>Mg'), <sup>24</sup>Mg(<sup>24</sup>Mg, X)<sup>45</sup>Ti / <sup>44</sup>Sc / <sup>42</sup>Ca / <sup>41</sup>Ca / <sup>41</sup>K / <sup>39</sup>K / <sup>38</sup>Ar / <sup>37</sup>Ar, E=91.72, 92.62 MeV; measured (fragment) $\gamma$ -, (charged particle) $\gamma$ - and  $\gamma\gamma$ -coin; deduced ON / OFF resonance yield ratios for the inelastic and fusion evaporation channels. ON resonance formation of <sup>48</sup>Cr discussed. <sup>45</sup>Ti deduced levels, J,  $\pi$ . JOUR NUPAB 801 1

## A=41 (continued)

- <sup>41</sup>Ca      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008SA04      NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>24</sup>Mg, <sup>24</sup>Mg'), <sup>24</sup>Mg(<sup>24</sup>Mg, X)<sup>45</sup>Ti / <sup>44</sup>Sc / <sup>42</sup>Ca / <sup>41</sup>Ca / <sup>41</sup>K / <sup>39</sup>K / <sup>38</sup>Ar / <sup>37</sup>Ar, E=91.72, 92.62 MeV; measured (fragment) $\gamma$ -, (charged particle) $\gamma$ - and  $\gamma\gamma$ -coin; deduced ON / OFF resonance yield ratios for the inelastic and fusion evaporation channels. ON resonance formation of <sup>48</sup>Cr discussed. <sup>45</sup>Ti deduced levels, J,  $\pi$ . JOUR NUPAB 801 1

## A=42

- <sup>42</sup>Ar      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008BL01      NUCLEAR MOMENTS <sup>38,40,41,42,43,44</sup>Ar; measured isotope shifts, hfs; deduced charge radii, J,  $\mu$ , quadrupole moment. Fast-beam collinear laser spectroscopy. JOUR NUPAB 799 30

## A=42 (continued)

- <sup>42</sup>K      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>42</sup>Ca      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008SA04      NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>24</sup>Mg, <sup>24</sup>Mg'), <sup>24</sup>Mg(<sup>24</sup>Mg, X)<sup>45</sup>Ti / <sup>44</sup>Sc / <sup>42</sup>Ca / <sup>41</sup>Ca / <sup>41</sup>K / <sup>39</sup>K / <sup>38</sup>Ar / <sup>37</sup>Ar, E=91.72, 92.62 MeV; measured (fragment) $\gamma$ -, (charged particle) $\gamma$ - and  $\gamma\gamma$ -coin; deduced ON / OFF resonance yield ratios for the inelastic and fusion evaporation channels. ON resonance formation of <sup>48</sup>Cr discussed. <sup>45</sup>Ti deduced levels, J,  $\pi$ . JOUR NUPAB 801 1
- <sup>42</sup>Ti      2008MI03      RADIOACTIVITY <sup>45</sup>Fe(2p), ( $\beta^+$ p), ( $\beta^+$ 2p), ( $\beta^+$ 3p); measured E<sub>p</sub>, I<sub>p</sub>, delayed proton angular and energy correlations. JOUR APOBB 39 477

## A=43

- <sup>43</sup>Ar      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008BL01      NUCLEAR MOMENTS <sup>38,40,41,42,43,44</sup>Ar; measured isotope shifts, hfs; deduced charge radii, J,  $\mu$ , quadrupole moment. Fast-beam collinear laser spectroscopy. JOUR NUPAB 799 30
- <sup>43</sup>K      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>43</sup>Ca      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=43 (continued)**

- <sup>43</sup>Sc 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008FE02 NUCLEAR REACTIONS <sup>126</sup>Te(<sup>18</sup>O, 4n), (<sup>18</sup>O, 5n), E=75 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>139,140</sup>Nd deduced level energies, J,  $\pi$ , T<sub>1/2</sub>. <sup>27</sup>Al(<sup>18</sup>O, 2n), E=75 MeV; measured E $\gamma$ , I $\gamma$ . <sup>43</sup>Sc; measured half-life of isomeric state. ALTO facility. JOUR ZAANE 35 167
- <sup>43</sup>V 2008MI03 RADIOACTIVITY <sup>45</sup>Fe(2p), ( $\beta^+$ p), ( $\beta^+$ 2p), ( $\beta^+$ 3p); measured E<sub>p</sub>, I<sub>p</sub>, delayed proton angular and energy correlations. JOUR APOBB 39 477
- <sup>43</sup>Cr 2007MI40 RADIOACTIVITY <sup>45</sup>Fe(2p) [from Ni(<sup>58</sup>Ni, X), E=161 MeV / nucleon]; measured proton energies, angular correlations, branching ratio, and half-life. JOUR PRLTA 99 192501
- 2008MI03 RADIOACTIVITY <sup>45</sup>Fe(2p), ( $\beta^+$ p), ( $\beta^+$ 2p), ( $\beta^+$ 3p); measured E<sub>p</sub>, I<sub>p</sub>, delayed proton angular and energy correlations. JOUR APOBB 39 477

**A=44**

- <sup>44</sup>Ar 2008BL01 NUCLEAR MOMENTS <sup>38,40,41,42,43,44</sup>Ar; measured isotope shifts, hfs; deduced charge radii, J,  $\mu$ , quadrupole moment. Fast-beam collinear laser spectroscopy. JOUR NUPAB 799 30
- <sup>44</sup>K 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=44 (continued)

- <sup>44</sup>Ca      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>44</sup>Sc      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008SA04      NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>24</sup>Mg, <sup>24</sup>Mg'), <sup>24</sup>Mg(<sup>24</sup>Mg, X)<sup>45</sup>Ti / <sup>44</sup>Sc / <sup>42</sup>Ca / <sup>41</sup>Ca / <sup>41</sup>K / <sup>39</sup>K / <sup>38</sup>Ar / <sup>37</sup>Ar, E=91.72, 92.62 MeV; measured (fragment) $\gamma$ -, (charged particle) $\gamma$ - and  $\gamma\gamma$ -coin; deduced ON / OFF resonance yield ratios for the inelastic and fusion evaporation channels. ON resonance formation of <sup>48</sup>Cr discussed. <sup>45</sup>Ti deduced levels, J,  $\pi$ . JOUR NUPAB 801 1
- <sup>44</sup>Cr      2008MI03      RADIOACTIVITY <sup>45</sup>Fe(2p), ( $\beta^+$ p), ( $\beta^+$ 2p), ( $\beta^+$ 3p); measured E<sub>p</sub>, I<sub>p</sub>, delayed proton angular and energy correlations. JOUR APOBB 39 477

## A=45

- <sup>45</sup>K      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>45</sup>Ca      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>45</sup>Sc      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609



## A=45 (continued)

- <sup>45</sup>Ti 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008SA04 NUCLEAR REACTIONS <sup>24</sup>Mg(<sup>24</sup>Mg, <sup>24</sup>Mg'), <sup>24</sup>Mg(<sup>24</sup>Mg, X)<sup>45</sup>Ti / <sup>44</sup>Sc / <sup>42</sup>Ca / <sup>41</sup>Ca / <sup>41</sup>K / <sup>39</sup>K / <sup>38</sup>Ar / <sup>37</sup>Ar, E=91.72, 92.62 MeV; measured (fragment) $\gamma$ -, (charged particle) $\gamma$ - and  $\gamma\gamma$ -coin; deduced ON / OFF resonance yield ratios for the inelastic and fusion evaporation channels. ON resonance formation of <sup>48</sup>Cr discussed. <sup>45</sup>Ti deduced levels, J,  $\pi$ . JOUR NUPAB 801 1
- <sup>45</sup>Fe 2007MI40 RADIOACTIVITY <sup>45</sup>Fe(2p) [from Ni(<sup>58</sup>Ni, X), E=161 MeV / nucleon]; measured proton energies, angular correlations, branching ratio, and half-life. JOUR PRLTA 99 192501
- 2008MI03 RADIOACTIVITY <sup>45</sup>Fe(2p), ( $\beta^+$ p), ( $\beta^+$ 2p), ( $\beta^+$ 3p); measured Ep, Ip, delayed proton angular and energy correlations. JOUR APOBB 39 477

## A=46

- <sup>46</sup>Ca 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=46 (continued)

- <sup>46</sup>Sc 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>46</sup>Ti 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>46</sup>V 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=47

- <sup>47</sup>Ca      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>47</sup>Sc      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>47</sup>Ti      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=47 (continued)

- <sup>47</sup>V      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008FA03      NUCLEAR REACTIONS <sup>46</sup>Ti, <sup>64</sup>Zn, <sup>114,116</sup>Sn(p,  $\gamma$ ), E(cm)=13.7 MeV; measured E $\gamma$ , I $\gamma$  following residual decay,  $\sigma$ ; deduced astrophysical S-factors, reaction rates. Activation technique. JOUR NUPAB 802 26

## A=48

- <sup>48</sup>Ca      2007GR22      NUCLEAR REACTIONS <sup>48</sup>Ca(<sup>3</sup>He, t), E=420 MeV; measured charged particles, angular distributions; calculated Gamow-Teller strengths. <sup>48</sup>Sc; deduced levels, J,  $\pi$ . Compared with <sup>48</sup>Ca(p, n), E=134 MeV and <sup>48</sup>Ca(d, <sup>2</sup>He), E=183 MeV reactions. <sup>48</sup>Ca; implications for  $2\beta$  decay. JOUR PRVCA 76 054307
- <sup>48</sup>Sc      2007GR22      NUCLEAR REACTIONS <sup>48</sup>Ca(<sup>3</sup>He, t), E=420 MeV; measured charged particles, angular distributions; calculated Gamow-Teller strengths. <sup>48</sup>Sc; deduced levels, J,  $\pi$ . Compared with <sup>48</sup>Ca(p, n), E=134 MeV and <sup>48</sup>Ca(d, <sup>2</sup>He), E=183 MeV reactions. <sup>48</sup>Ca; implications for  $2\beta$  decay. JOUR PRVCA 76 054307
- 2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=48 (continued)

- <sup>48</sup>Ti      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>48</sup>V      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=49

- <sup>49</sup>Cl      2008MA01      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>49</sup>Cl / <sup>50</sup>Ar / <sup>51</sup>Ar / <sup>52</sup>K / <sup>53</sup>K / <sup>54</sup>K / <sup>53</sup>Ca / <sup>54</sup>Ca / <sup>55</sup>Ca / <sup>56</sup>Ca / <sup>55</sup>Sc / <sup>56</sup>Sc / <sup>57</sup>Sc / <sup>57</sup>Ti / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>60</sup>V, E=140 MeV / nucleon; measured reaction yields. JOUR PRVCA 77 014313

## A=49 (continued)

- <sup>49</sup>Sc      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>49</sup>Ti      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>49</sup>V      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=49 (continued)**

<sup>49</sup>Cr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=50**

<sup>50</sup>Ar      2008MA01      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>49</sup>Cl / <sup>50</sup>Ar / <sup>51</sup>Ar / <sup>52</sup>K / <sup>53</sup>K / <sup>54</sup>K / <sup>53</sup>Ca / <sup>54</sup>Ca / <sup>55</sup>Ca / <sup>56</sup>Ca / <sup>55</sup>Sc / <sup>56</sup>Sc / <sup>57</sup>Sc / <sup>57</sup>Ti / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>60</sup>V, E=140 MeV / nucleon; measured reaction yields. JOUR PRVCA 77 014313

<sup>50</sup>Sc      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=50 (continued)

<sup>50</sup> Ti	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr;</p> <p>measured cross sections. JOUR PRVCA 76 064609</p>
<sup>50</sup> V	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr;</p> <p>measured cross sections. JOUR PRVCA 76 064609</p>
<sup>50</sup> Cr	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr;</p> <p>measured cross sections. JOUR PRVCA 76 064609</p>



## A=50 (continued)

<sup>50</sup>Mn 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=51

<sup>51</sup>Ar 2008MA01 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>49</sup>Cl / <sup>50</sup>Ar / <sup>51</sup>Ar / <sup>52</sup>K / <sup>53</sup>K / <sup>54</sup>K / <sup>53</sup>Ca / <sup>54</sup>Ca / <sup>55</sup>Ca / <sup>56</sup>Ca / <sup>55</sup>Sc / <sup>56</sup>Sc / <sup>57</sup>Sc / <sup>57</sup>Ti / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>60</sup>V, E=140 MeV / nucleon; measured reaction yields. JOUR PRVCA 77 014313

<sup>51</sup>Ca 2008F001 NUCLEAR REACTIONS <sup>238</sup>U(<sup>48</sup>Ca, X), E=330 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>51</sup>Ca, <sup>52</sup>Sc; deduced levels, J,  $\pi$ , configurations. Comparison with shell model calculations. JOUR PRVCA 77 014304

<sup>51</sup>Ti 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

<sup>51</sup>V 2007LI81 NUCLEAR REACTIONS <sup>27</sup>Al(<sup>6</sup>He, <sup>6</sup>He'), E=9.5-13.4 MeV; <sup>51</sup>V(<sup>7</sup>Be, <sup>7</sup>Be'), E=26 MeV; measured reaction cross sections and angular distributions. Compared results to model calculations. JOUR ZSTNE 150 27

## A=51 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- $^{51}\text{Cr}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- $^{51}\text{Mn}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609

## A=52

- <sup>52</sup>K      2008MA01      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>49</sup>Cl / <sup>50</sup>Ar / <sup>51</sup>Ar / <sup>52</sup>K / <sup>53</sup>K / <sup>54</sup>K / <sup>53</sup>Ca / <sup>54</sup>Ca / <sup>55</sup>Ca / <sup>56</sup>Ca / <sup>55</sup>Sc / <sup>56</sup>Sc / <sup>57</sup>Sc / <sup>57</sup>Ti / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>60</sup>V, E=140 MeV / nucleon; measured reaction yields. JOUR PRVCA 77 014313
- <sup>52</sup>Sc      2008F001      NUCLEAR REACTIONS <sup>238</sup>U(<sup>48</sup>Ca, X), E=330 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>51</sup>Ca, <sup>52</sup>Sc; deduced levels, J,  $\pi$ , configurations. Comparison with shell model calculations. JOUR PRVCA 77 014304
- <sup>52</sup>Ti      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>52</sup>V      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=52 (continued)**

- <sup>52</sup>Cr 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>52</sup>Mn 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=53**

- <sup>53</sup>K 2008MA01 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>49</sup>Cl / <sup>50</sup>Ar / <sup>51</sup>Ar / <sup>52</sup>K / <sup>53</sup>K / <sup>54</sup>K / <sup>53</sup>Ca / <sup>54</sup>Ca / <sup>55</sup>Ca / <sup>56</sup>Ca / <sup>55</sup>Sc / <sup>56</sup>Sc / <sup>57</sup>Sc / <sup>57</sup>Ti / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>60</sup>V, E=140 MeV / nucleon; measured reaction yields. JOUR PRVCA 77 014313
- <sup>53</sup>Ca 2008MA01 RADIOACTIVITY <sup>53,54,55,56</sup>Ca( $\beta^-$ ) [from <sup>9</sup>Be(<sup>76</sup>Ge, X), E=140 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin, half-lives. <sup>54</sup>Ca; deduced I $\beta$ , logft. <sup>54</sup>Sc; levels, J,  $\pi$ , half-lives, B(M1), B(E2), comparison with calculations. JOUR PRVCA 77 014313
- 2008MA01 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>49</sup>Cl / <sup>50</sup>Ar / <sup>51</sup>Ar / <sup>52</sup>K / <sup>53</sup>K / <sup>54</sup>K / <sup>53</sup>Ca / <sup>54</sup>Ca / <sup>55</sup>Ca / <sup>56</sup>Ca / <sup>55</sup>Sc / <sup>56</sup>Sc / <sup>57</sup>Sc / <sup>57</sup>Ti / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>60</sup>V, E=140 MeV / nucleon; measured reaction yields. JOUR PRVCA 77 014313
- <sup>53</sup>Sc 2008MA01 RADIOACTIVITY <sup>53,54,55,56</sup>Ca( $\beta^-$ ) [from <sup>9</sup>Be(<sup>76</sup>Ge, X), E=140 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin, half-lives. <sup>54</sup>Ca; deduced I $\beta$ , logft. <sup>54</sup>Sc; levels, J,  $\pi$ , half-lives, B(M1), B(E2), comparison with calculations. JOUR PRVCA 77 014313

## A=53 (continued)

- <sup>53</sup>V 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>53</sup>Cr 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>53</sup>Mn 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>53</sup>Fe 2008KU01 NUCLEAR REACTIONS <sup>46</sup>Ti(<sup>12</sup>C, X)<sup>58</sup>Ni, E=80 MeV; <sup>27</sup>Al(<sup>31</sup>P, X)<sup>58</sup>Ni, E=131 MeV; measured inclusive and exclusive neutron evaporation spectra, E $\gamma$ , I $\gamma$ , n $\gamma$ -coin. <sup>53,55</sup>Fe, <sup>56</sup>Co deduced average excitation energy and angular momenta. Comparison with statistical model calculations. JOUR NUPAB 798 1

## A=54

- <sup>54</sup>K 2008MA01 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>49</sup>Cl / <sup>50</sup>Ar / <sup>51</sup>Ar / <sup>52</sup>K / <sup>53</sup>K / <sup>54</sup>K / <sup>53</sup>Ca / <sup>54</sup>Ca / <sup>55</sup>Ca / <sup>56</sup>Ca / <sup>55</sup>Sc / <sup>56</sup>Sc / <sup>57</sup>Sc / <sup>57</sup>Ti / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>60</sup>V, E=140 MeV / nucleon; measured reaction yields. JOUR PRVCA 77 014313
- <sup>54</sup>Ca 2008MA01 RADIOACTIVITY <sup>53,54,55,56</sup>Ca( $\beta^-$ ) [from <sup>9</sup>Be(<sup>76</sup>Ge, X), E=140 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin, half-lives. <sup>54</sup>Ca; deduced I $\beta$ , logft. <sup>54</sup>Sc; levels, J,  $\pi$ , half-lives, B(M1), B(E2), comparison with calculations. JOUR PRVCA 77 014313
- 2008MA01 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>49</sup>Cl / <sup>50</sup>Ar / <sup>51</sup>Ar / <sup>52</sup>K / <sup>53</sup>K / <sup>54</sup>K / <sup>53</sup>Ca / <sup>54</sup>Ca / <sup>55</sup>Ca / <sup>56</sup>Ca / <sup>55</sup>Sc / <sup>56</sup>Sc / <sup>57</sup>Sc / <sup>57</sup>Ti / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>60</sup>V, E=140 MeV / nucleon; measured reaction yields. JOUR PRVCA 77 014313
- <sup>54</sup>Sc 2008MA01 RADIOACTIVITY <sup>53,54,55,56</sup>Ca( $\beta^-$ ) [from <sup>9</sup>Be(<sup>76</sup>Ge, X), E=140 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin, half-lives. <sup>54</sup>Ca; deduced I $\beta$ , logft. <sup>54</sup>Sc; levels, J,  $\pi$ , half-lives, B(M1), B(E2), comparison with calculations. JOUR PRVCA 77 014313
- <sup>54</sup>V 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>54</sup>Cr 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=54 (continued)**

<sup>54</sup>Mn 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=55**

<sup>55</sup>Ca 2008MA01 RADIOACTIVITY <sup>53,54,55,56</sup>Ca( $\beta^-$ ) [from <sup>9</sup>Be(<sup>76</sup>Ge, X), E=140 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin, half-lives. <sup>54</sup>Ca; deduced I $\beta$ , logft. <sup>54</sup>Sc; levels, J,  $\pi$ , half-lives, B(M1), B(E2), comparison with calculations. JOUR PRVCA 77 014313

2008MA01 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>49</sup>Cl / <sup>50</sup>Ar / <sup>51</sup>Ar / <sup>52</sup>K / <sup>53</sup>K / <sup>54</sup>K / <sup>53</sup>Ca / <sup>54</sup>Ca / <sup>55</sup>Ca / <sup>56</sup>Ca / <sup>55</sup>Sc / <sup>56</sup>Sc / <sup>57</sup>Sc / <sup>57</sup>Ti / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>60</sup>V, E=140 MeV / nucleon; measured reaction yields. JOUR PRVCA 77 014313

<sup>55</sup>Sc 2008MA01 RADIOACTIVITY <sup>53,54,55,56</sup>Ca( $\beta^-$ ) [from <sup>9</sup>Be(<sup>76</sup>Ge, X), E=140 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin, half-lives. <sup>54</sup>Ca; deduced I $\beta$ , logft. <sup>54</sup>Sc; levels, J,  $\pi$ , half-lives, B(M1), B(E2), comparison with calculations. JOUR PRVCA 77 014313

2008MA01 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>49</sup>Cl / <sup>50</sup>Ar / <sup>51</sup>Ar / <sup>52</sup>K / <sup>53</sup>K / <sup>54</sup>K / <sup>53</sup>Ca / <sup>54</sup>Ca / <sup>55</sup>Ca / <sup>56</sup>Ca / <sup>55</sup>Sc / <sup>56</sup>Sc / <sup>57</sup>Sc / <sup>57</sup>Ti / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>60</sup>V, E=140 MeV / nucleon; measured reaction yields. JOUR PRVCA 77 014313

<sup>55</sup>V 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=55 (continued)

- <sup>55</sup>Cr 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>55</sup>Mn 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>55</sup>Fe 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008KU01 NUCLEAR REACTIONS <sup>46</sup>Ti(<sup>12</sup>C, X)<sup>58</sup>Ni, E=80 MeV; <sup>27</sup>Al(<sup>31</sup>P, X)<sup>58</sup>Ni, E=131 MeV; measured inclusive and exclusive neutron evaporation spectra, E $\gamma$ , I $\gamma$ , n $\gamma$ -coin. <sup>53,55</sup>Fe, <sup>56</sup>Co deduced average excitation energy and angular momenta. Comparison with statistical model calculations. JOUR NUPAB 798 1



## A=56

<sup>56</sup> Ca	2008MA01	RADIOACTIVITY <sup>53,54,55,56</sup> Ca( $\beta^-$ ) [from <sup>9</sup> Be( <sup>76</sup> Ge, X), E=140 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , $\beta\gamma$ -coin, half-lives. <sup>54</sup> Ca; deduced I $\beta$ , logft. <sup>54</sup> Sc; levels, J, $\pi$ , half-lives, B(M1), B(E2), comparison with calculations. JOUR PRVCA 77 014313
	2008MA01	NUCLEAR REACTIONS <sup>9</sup> Be( <sup>76</sup> Ge, X) <sup>49</sup> Cl / <sup>50</sup> Ar / <sup>51</sup> Ar / <sup>52</sup> K / <sup>53</sup> K / <sup>54</sup> K / <sup>53</sup> Ca / <sup>54</sup> Ca / <sup>55</sup> Ca / <sup>56</sup> Ca / <sup>55</sup> Sc / <sup>56</sup> Sc / <sup>57</sup> Sc / <sup>57</sup> Ti / <sup>58</sup> Ti / <sup>59</sup> Ti / <sup>60</sup> V, E=140 MeV / nucleon; measured reaction yields. JOUR PRVCA 77 014313
<sup>56</sup> Sc	2008MA01	RADIOACTIVITY <sup>53,54,55,56</sup> Ca( $\beta^-$ ) [from <sup>9</sup> Be( <sup>76</sup> Ge, X), E=140 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , $\beta\gamma$ -coin, half-lives. <sup>54</sup> Ca; deduced I $\beta$ , logft. <sup>54</sup> Sc; levels, J, $\pi$ , half-lives, B(M1), B(E2), comparison with calculations. JOUR PRVCA 77 014313
	2008MA01	NUCLEAR REACTIONS <sup>9</sup> Be( <sup>76</sup> Ge, X) <sup>49</sup> Cl / <sup>50</sup> Ar / <sup>51</sup> Ar / <sup>52</sup> K / <sup>53</sup> K / <sup>54</sup> K / <sup>53</sup> Ca / <sup>54</sup> Ca / <sup>55</sup> Ca / <sup>56</sup> Ca / <sup>55</sup> Sc / <sup>56</sup> Sc / <sup>57</sup> Sc / <sup>57</sup> Ti / <sup>58</sup> Ti / <sup>59</sup> Ti / <sup>60</sup> V, E=140 MeV / nucleon; measured reaction yields. JOUR PRVCA 77 014313
<sup>56</sup> Cr	2007NA31	NUCLEAR REACTIONS <sup>136</sup> Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup> Li, <sup>9,10,11,12</sup> Be, <sup>10,11,12,13</sup> B, <sup>11,12,13,14,15</sup> C, <sup>13,14,15,16,17</sup> N, <sup>15,16,17,18,19</sup> O, <sup>17,18,19,20,21</sup> F, <sup>19,20,21,22,23</sup> Ne, <sup>22,23,24,25</sup> Na, <sup>23,24,25,26,27</sup> Mg, <sup>25,26,27,28,29,30</sup> Al, <sup>28,29,30,31,32</sup> Si, <sup>30,31,32,33,34</sup> P, <sup>32,33,34,35,36,37,38</sup> S, <sup>34,35,36,37,38,39,40</sup> Cl, <sup>36,37,38,39,40,41,42,43</sup> Ar, <sup>39,40,41,42,43,44,45</sup> K, <sup>41,42,43,44,45,46,47</sup> Ca, <sup>43,44,45,46,47,48,49,50</sup> Sc, <sup>45,46,47,48,49,50,51,52</sup> Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup> V, <sup>49,50,51,52,53,54,55,56,57</sup> Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup> Mn, <sup>55,56,57,58,59,60,61,62</sup> Fe, <sup>57,58,59,60,61,62,63,64,65</sup> Co, <sup>59,60,61,62,63,64,65,66,67</sup> Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup> Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup> Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup> Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup> Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup> As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup> Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup> Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup> Kr; measured cross sections. JOUR PRVCA 76 064609
<sup>56</sup> Mn	2007NA31	NUCLEAR REACTIONS <sup>136</sup> Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup> Li, <sup>9,10,11,12</sup> Be, <sup>10,11,12,13</sup> B, <sup>11,12,13,14,15</sup> C, <sup>13,14,15,16,17</sup> N, <sup>15,16,17,18,19</sup> O, <sup>17,18,19,20,21</sup> F, <sup>19,20,21,22,23</sup> Ne, <sup>22,23,24,25</sup> Na, <sup>23,24,25,26,27</sup> Mg, <sup>25,26,27,28,29,30</sup> Al, <sup>28,29,30,31,32</sup> Si, <sup>30,31,32,33,34</sup> P, <sup>32,33,34,35,36,37,38</sup> S, <sup>34,35,36,37,38,39,40</sup> Cl, <sup>36,37,38,39,40,41,42,43</sup> Ar, <sup>39,40,41,42,43,44,45</sup> K, <sup>41,42,43,44,45,46,47</sup> Ca, <sup>43,44,45,46,47,48,49,50</sup> Sc, <sup>45,46,47,48,49,50,51,52</sup> Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup> V, <sup>49,50,51,52,53,54,55,56,57</sup> Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup> Mn, <sup>55,56,57,58,59,60,61,62</sup> Fe, <sup>57,58,59,60,61,62,63,64,65</sup> Co, <sup>59,60,61,62,63,64,65,66,67</sup> Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup> Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup> Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup> Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup> Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup> As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup> Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup> Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup> Kr; measured cross sections. JOUR PRVCA 76 064609

**A=56 (continued)**

- <sup>56</sup>Fe      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 20080H02      NUCLEAR REACTIONS <sup>56</sup>Fe, <sup>89</sup>Y, <sup>208</sup>Pb(n, n), E=96 MeV; measured  $\sigma(\theta)$ ; <sup>12</sup>C, <sup>16</sup>O; systematics, compared with Wick's limit. JOUR PRVCA 77 024605
- <sup>56</sup>Co      2008KU01      NUCLEAR REACTIONS <sup>46</sup>Ti(<sup>12</sup>C, X)<sup>58</sup>Ni, E=80 MeV; <sup>27</sup>Al(<sup>31</sup>P, X)<sup>58</sup>Ni, E=131 MeV; measured inclusive and exclusive neutron evaporation spectra, E $\gamma$ , I $\gamma$ , n $\gamma$ -coin. <sup>53,55</sup>Fe, <sup>56</sup>Co deduced average excitation energy and angular momenta. Comparison with statistical model calculations. JOUR NUPAB 798 1
- <sup>56</sup>Ni      2008M002      NUCLEAR REACTIONS <sup>2</sup>H(<sup>56</sup>Ni, <sup>56</sup>Ni), E=50 MeV / nucleon; measured deuteron recoil energies and yields. <sup>56</sup>Ni; deduced isoscalar giant monopole and giant quadrupole resonance centroids and angular distributions. JOUR PRLTA 100 042501

**A=57**

- <sup>57</sup>Sc      2008MA01      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>49</sup>Cl / <sup>50</sup>Ar / <sup>51</sup>Ar / <sup>52</sup>K / <sup>53</sup>K / <sup>54</sup>K / <sup>53</sup>Ca / <sup>54</sup>Ca / <sup>55</sup>Ca / <sup>56</sup>Ca / <sup>55</sup>Sc / <sup>56</sup>Sc / <sup>57</sup>Sc / <sup>57</sup>Ti / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>60</sup>V, E=140 MeV / nucleon; measured reaction yields. JOUR PRVCA 77 014313
- <sup>57</sup>Ti      2008MA01      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>49</sup>Cl / <sup>50</sup>Ar / <sup>51</sup>Ar / <sup>52</sup>K / <sup>53</sup>K / <sup>54</sup>K / <sup>53</sup>Ca / <sup>54</sup>Ca / <sup>55</sup>Ca / <sup>56</sup>Ca / <sup>55</sup>Sc / <sup>56</sup>Sc / <sup>57</sup>Sc / <sup>57</sup>Ti / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>60</sup>V, E=140 MeV / nucleon; measured reaction yields. JOUR PRVCA 77 014313

## A=57 (continued)

- <sup>57</sup>Cr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>57</sup>Mn      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>57</sup>Fe      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=57 (continued)**

- <sup>57</sup>Co      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>57</sup>Ni      2007MI48      RADIOACTIVITY <sup>57</sup>Cu( $\beta^+$ ); measured ground state magnetic moment using the  $\beta$ -NMR technique. Deduced spin expectation value. JOUR ZSTNE 150 145
- <sup>57</sup>Cu      2007MI48      RADIOACTIVITY <sup>57</sup>Cu( $\beta^+$ ); measured ground state magnetic moment using the  $\beta$ -NMR technique. Deduced spin expectation value. JOUR ZSTNE 150 145

**A=58**

- <sup>58</sup>Ti      2008MA01      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>49</sup>Cl / <sup>50</sup>Ar / <sup>51</sup>Ar / <sup>52</sup>K / <sup>53</sup>K / <sup>54</sup>K / <sup>53</sup>Ca / <sup>54</sup>Ca / <sup>55</sup>Ca / <sup>56</sup>Ca / <sup>55</sup>Sc / <sup>56</sup>Sc / <sup>57</sup>Sc / <sup>57</sup>Ti / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>60</sup>V, E=140 MeV / nucleon; measured reaction yields. JOUR PRVCA 77 014313
- <sup>58</sup>Mn      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=58 (continued)

- <sup>58</sup>Fe 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>58</sup>Co 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>58</sup>Ni 2008BI04 NUCLEAR REACTIONS <sup>64</sup>Ni(<sup>6</sup>Li, <sup>6</sup>Li), E=1326 MeV; measured  $\sigma(\theta)$ ; <sup>58</sup>Ni(<sup>6</sup>Li, <sup>6</sup>Li), E=1220 MeV; analyzed  $\sigma(\theta)$ . Double folding optical model, threshold behaviour. JOUR NUPAB 802 67
- 2008KU01 NUCLEAR REACTIONS <sup>46</sup>Ti(<sup>12</sup>C, X)<sup>58</sup>Ni, E=80 MeV; <sup>27</sup>Al(<sup>31</sup>P, X)<sup>58</sup>Ni, E=131 MeV; measured inclusive and exclusive neutron evaporation spectra, E $\gamma$ , I $\gamma$ , n $\gamma$ -coin. <sup>53,55</sup>Fe, <sup>56</sup>Co deduced average excitation energy and angular momenta. Comparison with statistical model calculations. JOUR NUPAB 798 1
- 2008TE03 NUCLEAR REACTIONS <sup>116,118,120,122,124</sup>Sn(p, p), E=295 MeV; measured  $\sigma(\theta)$ , analyzing powers, nucleon density distributions, rms radii. <sup>58</sup>Ni; calculated proton, neutron density distributions. JOUR PRVCA 77 024317

## A=59

- <sup>59</sup>Ti 2008MA01 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>49</sup>Cl / <sup>50</sup>Ar / <sup>51</sup>Ar / <sup>52</sup>K / <sup>53</sup>K / <sup>54</sup>K / <sup>53</sup>Ca / <sup>54</sup>Ca / <sup>55</sup>Ca / <sup>56</sup>Ca / <sup>55</sup>Sc / <sup>56</sup>Sc / <sup>57</sup>Sc / <sup>57</sup>Ti / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>60</sup>V, E=140 MeV / nucleon; measured reaction yields. JOUR PRVCA 77 014313

## A=59 (continued)

- <sup>59</sup>Mn      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>59</sup>Fe      2007DE56      NUCLEAR REACTIONS <sup>13,14</sup>C(<sup>48</sup>Ca, 2n), E=2.75 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma(\theta)$ , symmetry parameters. <sup>59,60</sup>Fe; deduced angular momenta, levels, J,  $\pi$ ; calculated potential energy surfaces. Shell model calculations. JOUR PRVCA 76 054303
- 2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008HE01      NUCLEAR REACTIONS <sup>58</sup>Fe, <sup>59</sup>Co, <sup>64</sup>Ni, <sup>63,65</sup>Cu(n,  $\gamma$ ), E=25 keV; measured neutron capture cross sections, E $\gamma$ ; <sup>59</sup>Fe, <sup>60</sup>Co, <sup>65</sup>Ni, <sup>64,66</sup>Cu, <sup>198</sup>Au; deduced nucleosynthesis yields in stars. JOUR PRVCA 77 015808

**A=59 (continued)**

- <sup>59</sup>Co      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>59</sup>Ni      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=60**

- <sup>60</sup>V      2008MA01      NUCLEAR REACTIONS <sup>9</sup>Be(<sup>76</sup>Ge, X)<sup>49</sup>Cl / <sup>50</sup>Ar / <sup>51</sup>Ar / <sup>52</sup>K / <sup>53</sup>K / <sup>54</sup>K / <sup>53</sup>Ca / <sup>54</sup>Ca / <sup>55</sup>Ca / <sup>56</sup>Ca / <sup>55</sup>Sc / <sup>56</sup>Sc / <sup>57</sup>Sc / <sup>57</sup>Ti / <sup>58</sup>Ti / <sup>59</sup>Ti / <sup>60</sup>V, E=140 MeV / nucleon; measured reaction yields. JOUR PRVCA 77 014313

## A=60 (continued)

- <sup>60</sup>Mn 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>60</sup>Fe 2007DE56 NUCLEAR REACTIONS <sup>13,14</sup>C(<sup>48</sup>Ca, 2n), E=2.75 MeV / nucleon; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma(\theta)$ , symmetry parameters. <sup>59,60</sup>Fe; deduced angular momenta, levels, J,  $\pi$ ; calculated potential energy surfaces. Shell model calculations. JOUR PRVCA 76 054303
- 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>60</sup>Co 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609



## A=60 (continued)

- 2008HE01 NUCLEAR REACTIONS  $^{58}\text{Fe}$ ,  $^{59}\text{Co}$ ,  $^{64}\text{Ni}$ ,  $^{63,65}\text{Cu}(n, \gamma)$ ,  $E=25$  keV; measured neutron capture cross sections,  $E\gamma$ ;  $^{59}\text{Fe}$ ,  $^{60}\text{Co}$ ,  $^{65}\text{Ni}$ ,  $^{64,66}\text{Cu}$ ,  $^{198}\text{Au}$ ; deduced nucleosynthesis yields in stars. JOUR PRVCA 77 015808
- $^{60}\text{Ni}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- $^{60}\text{Cu}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609

## A=61

<sup>61</sup> Fe	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr;</p> <p>measured cross sections. JOUR PRVCA 76 064609</p>
<sup>61</sup> Co	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr;</p> <p>measured cross sections. JOUR PRVCA 76 064609</p>
<sup>61</sup> Ni	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr;</p> <p>measured cross sections. JOUR PRVCA 76 064609</p>

**A=61 (continued)**

- <sup>61</sup>Cu      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008DA01      NUCLEAR REACTIONS <sup>64</sup>Zn(d, 2p)<sup>64</sup>Cu, E=11.9-18.2 MeV; <sup>64</sup>Zn(d, nα)<sup>61</sup>Cu, E=12.9-18.4 MeV; measured Eγ, Iγ from residual nuclei; deduced excitation functions, cross sections. Compared results to of theoretical cross sections. JOUR ARISE 66 261

**A=62**

- <sup>62</sup>Fe      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=62 (continued)

- $^{62}\text{Co}$       2007NA31      NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- $^{62}\text{Ni}$       2007NA31      NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- $^{62}\text{Cu}$       2007NA31      NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609

**A=62 (continued)**

- <sup>62</sup>Zn      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008GR03      RADIOACTIVITY <sup>62</sup>Ga( $\beta^+$ ) [from Zr(p,  $\gamma$ ), E=500 MeV]; measured E $\gamma$ ,  $\beta^+$  particles; deduced half-life. JOUR PRVCA 77 015501
- <sup>62</sup>Ga      2008GR03      RADIOACTIVITY <sup>62</sup>Ga( $\beta^+$ ) [from Zr(p,  $\gamma$ ), E=500 MeV]; measured E $\gamma$ ,  $\beta^+$  particles; deduced half-life. JOUR PRVCA 77 015501

**A=63**

- <sup>63</sup>Co      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>63</sup>Ni      2007CL04      NUCLEAR REACTIONS <sup>2</sup>H, <sup>12</sup>C, <sup>27</sup>Al, <sup>63</sup>Cu, <sup>197</sup>Au(e, e' $\pi^+$ ), E=4.021-5.767 GeV; measured electron and pion energies. Deduced nuclear transparency. JOUR PRLTA 99 242502

## A=63 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^6,7,8\text{Li}$ ,  $^9,10,11,12\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- 2008AL03 NUCLEAR REACTIONS  $^{62}\text{Ni}(n, \gamma)$ ,  $E=35$  eV-500 keV; measured neutron capture cross sections,  $E\gamma$ . JOUR PRVCA 77 015806
- $^{63}\text{Cu}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^6,7,8\text{Li}$ ,  $^9,10,11,12\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- $^{63}\text{Zn}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^6,7,8\text{Li}$ ,  $^9,10,11,12\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609

## A=64

- <sup>64</sup>Co      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>64</sup>Ni      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008BE02      RADIOACTIVITY <sup>64</sup>Zn(2EC), ( $\beta^+$ EC); measured T<sub>1/2</sub> lower limits for various 2 $\beta$ -decay modes. JOUR PYLBB 658 193
- 2008BI04      NUCLEAR REACTIONS <sup>64</sup>Ni(<sup>6</sup>Li, <sup>6</sup>Li), E=1326 MeV; measured  $\sigma(\theta)$ ; <sup>58</sup>Ni(<sup>6</sup>Li, <sup>6</sup>Li), E=1220 MeV; analyzed  $\sigma(\theta)$ . Double folding optical model, threshold behaviour. JOUR NUPAB 802 67
- <sup>64</sup>Cu      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=64 (continued)**

- 2008DA01 NUCLEAR REACTIONS  $^{64}\text{Zn}(d, 2p)^{64}\text{Cu}$ ,  $E=11.9\text{-}18.2$  MeV;  $^{64}\text{Zn}(d, n\alpha)^{61}\text{Cu}$ ,  $E=12.9\text{-}18.4$  MeV; measured  $E\gamma$ ,  $I\gamma$  from residual nuclei; deduced excitation functions, cross sections. Compared results to of theoretical cross sections. JOUR ARISE 66 261
- 2008HE01 NUCLEAR REACTIONS  $^{58}\text{Fe}$ ,  $^{59}\text{Co}$ ,  $^{64}\text{Ni}$ ,  $^{63,65}\text{Cu}(n, \gamma)$ ,  $E=25$  keV; measured neutron capture cross sections,  $E\gamma$ ;  $^{59}\text{Fe}$ ,  $^{60}\text{Co}$ ,  $^{65}\text{Ni}$ ,  $^{64,66}\text{Cu}$ ,  $^{198}\text{Au}$ ; deduced nucleosynthesis yields in stars. JOUR PRVCA 77 015808
- $^{64}\text{Zn}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ; measured cross sections. JOUR PRVCA 76 064609
- 2008BE02 RADIOACTIVITY  $^{64}\text{Zn}(2\text{EC})$ ,  $(\beta^+\text{EC})$ ; measured  $T_{1/2}$  lower limits for various  $2\beta$ -decay modes. JOUR PYLBB 658 193

**A=65**

- $^{65}\text{Co}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ; measured cross sections. JOUR PRVCA 76 064609



## A=65 (continued)

- <sup>65</sup>Ni      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008HE01      NUCLEAR REACTIONS <sup>58</sup>Fe, <sup>59</sup>Co, <sup>64</sup>Ni, <sup>63,65</sup>Cu(n,  $\gamma$ ), E=25 keV; measured neutron capture cross sections, E $\gamma$ ; <sup>59</sup>Fe, <sup>60</sup>Co, <sup>65</sup>Ni, <sup>64,66</sup>Cu, <sup>198</sup>Au; deduced nucleosynthesis yields in stars. JOUR PRVCA 77 015808
- <sup>65</sup>Cu      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>65</sup>Zn      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=65 (continued)**

<sup>65</sup>Ga 2008FA03 NUCLEAR REACTIONS <sup>46</sup>Ti, <sup>64</sup>Zn, <sup>114,116</sup>Sn(p,  $\gamma$ ), E(cm)=13.7 MeV; measured E $\gamma$ , I $\gamma$  following residual decay,  $\sigma$ ; deduced astrophysical S-factors, reaction rates. Activation technique. JOUR NUPAB 802 26

**A=66**

<sup>66</sup>Ni 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

<sup>66</sup>Cu 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

2008HE01 NUCLEAR REACTIONS <sup>58</sup>Fe, <sup>59</sup>Co, <sup>64</sup>Ni, <sup>63,65</sup>Cu(n,  $\gamma$ ), E=25 keV; measured neutron capture cross sections, E $\gamma$ ; <sup>59</sup>Fe, <sup>60</sup>Co, <sup>65</sup>Ni, <sup>64,66</sup>Cu, <sup>198</sup>Au; deduced nucleosynthesis yields in stars. JOUR PRVCA 77 015808

**A=66 (continued)**

- <sup>66</sup>Zn      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>66</sup>Ga      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=67**

- <sup>67</sup>Ni      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=67 (continued)

- <sup>67</sup>Cu      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008ST04      NUCLEAR REACTIONS <sup>104</sup>Pd(<sup>67</sup>Cu, <sup>67</sup>Cu'), (<sup>69</sup>Cu, <sup>69</sup>Cu'), (<sup>71</sup>Cu, <sup>71</sup>Cu'), E=2.99 MeV / nucleon; <sup>120</sup>Sn(<sup>71</sup>Cu, <sup>71</sup>Cu'), (<sup>73</sup>Cu, <sup>73</sup>Cu'), E=2.99 MeV / nucleon; measured E $\gamma$ , I $\gamma$  following coulomb excitation. <sup>67,69,71,73</sup>Cu; deduced level energies, B(E2). JOUR PRLTA 100 112502
- <sup>67</sup>Zn      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>67</sup>Ga      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=68

- <sup>68</sup>Cu      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>68</sup>Zn      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>68</sup>Ga      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=68 (continued)**

<sup>68</sup>Ge 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=69**

<sup>69</sup>Cu 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

2008ST04 NUCLEAR REACTIONS <sup>104</sup>Pd(<sup>67</sup>Cu, <sup>67</sup>Cu'), (<sup>69</sup>Cu, <sup>69</sup>Cu'), (<sup>71</sup>Cu, <sup>71</sup>Cu'), E=2.99 MeV / nucleon; <sup>120</sup>Sn(<sup>71</sup>Cu, <sup>71</sup>Cu'), (<sup>73</sup>Cu, <sup>73</sup>Cu'), E=2.99 MeV / nucleon; measured E $\gamma$ , I $\gamma$  following coulomb excitation. <sup>67,69,71,73</sup>Cu; deduced level energies, B(E2). JOUR PRLTA 100 112502

## A=69 (continued)

- <sup>69</sup>Zn      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>69</sup>Ga      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>69</sup>Ge      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=70

- <sup>70</sup>Cu 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>70</sup>Zn 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>70</sup>Ga 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>70</sup>Ge 2007B041 NUCLEAR REACTIONS C(<sup>70</sup>Ge, X)<sup>70</sup>Ge, E=190, 225 MeV; measured E $\gamma$ , I $\gamma$ ; deduced levels, J,  $\pi$ , g-factors for 2<sup>+</sup>, 3<sup>+</sup> and 4<sup>+</sup> states, B(E2), half-lives. Comparison with calculated and measured g-factors of <sup>64,66,68</sup>Zn, <sup>74,76,78,80,82</sup>Se. JOUR PRVCA 76 054311



## A=70 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^6,7,8\text{Li}$ ,  $^9,10,11,12\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- $^{70}\text{As}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^6,7,8\text{Li}$ ,  $^9,10,11,12\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- $^{70}\text{Se}$  2008LJ01 NUCLEAR REACTIONS  $^{40}\text{Ca}(^{36}\text{Ar}, 2p\alpha)$ ,  $(^{36}\text{Ar}, 4p)$ ,  $E=136$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin, lifetimes using recoil distance doppler shift method.  $^{70,72}\text{Se}$ ; deduced level energies and  $B(E2)$ . JOUR PRLTA 100 102502

## A=71

- $^{71}\text{Cu}$  2008ST01 RADIOACTIVITY  $^{71}\text{Cu}(\beta^-)$ ; measured magnetic moment of ground state. Compared with magnetic dipole moments of  $^{57,59,61,63,65,67,69}\text{Cu}$ . JOUR PRVCA 77 014315
- 2008ST04 NUCLEAR REACTIONS  $^{104}\text{Pd}(^{67}\text{Cu}, ^{67}\text{Cu}')$ ,  $(^{69}\text{Cu}, ^{69}\text{Cu}')$ ,  $(^{71}\text{Cu}, ^{71}\text{Cu}')$ ,  $E=2.99$  MeV / nucleon;  $^{120}\text{Sn}(^{71}\text{Cu}, ^{71}\text{Cu}')$ ,  $(^{73}\text{Cu}, ^{73}\text{Cu}')$ ,  $E=2.99$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$  following coulomb excitation.  $^{67,69,71,73}\text{Cu}$ ; deduced level energies,  $B(E2)$ . JOUR PRLTA 100 112502

## A=71 (continued)

- <sup>71</sup>Zn      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008ST01      RADIOACTIVITY <sup>71</sup>Cu( $\beta^-$ ); measured magnetic moment of ground state. Compared with magnetic dipole moments of <sup>57,59,61,63,65,67,69</sup>Cu. JOUR PRVCA 77 014315
- <sup>71</sup>Ga      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>71</sup>Ge      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>71</sup>As      2007KI17      NUCLEAR REACTIONS <sup>70</sup>Ge(p,  $\gamma$ ), E=1.5-4.5 MeV; <sup>76</sup>Ge(p, n), E=1.5-4.5 MeV; measured E $\gamma$ , I $\gamma$ , cross sections; deduced astrophysical S-factors, reaction rates. JOUR PRVCA 76 055807

**A=71 (continued)**

2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^6,7,8\text{Li}$ ,  $^9,10,11,12\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ; measured cross sections. JOUR PRVCA 76 064609

**A=72**

$^{72}\text{Zn}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^6,7,8\text{Li}$ ,  $^9,10,11,12\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ; measured cross sections. JOUR PRVCA 76 064609

$^{72}\text{Ga}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^6,7,8\text{Li}$ ,  $^9,10,11,12\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=72 (continued)

<sup>72</sup> Ge	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr;</p> <p>measured cross sections. JOUR PRVCA 76 064609</p>
<sup>72</sup> As	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr;</p> <p>measured cross sections. JOUR PRVCA 76 064609</p>
<sup>72</sup> Se	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr;</p> <p>measured cross sections. JOUR PRVCA 76 064609</p>
	2008LJ01	<p>NUCLEAR REACTIONS <sup>40</sup>Ca(<sup>36</sup>Ar, 2pα), (<sup>36</sup>Ar, 4p), E=136 MeV; measured Eγ, Iγ, γγ-coin, lifetimes using recoil distance doppler shift method. <sup>70,72</sup>Se; deduced level energies and B(E2). JOUR PRLTA 100 102502</p>

**A=72 (continued)**

<sup>72</sup>Kr      2007YA20      NUCLEAR REACTIONS C(<sup>72</sup>Kr, X), (<sup>76</sup>Kr, X), (<sup>80</sup>Kr, X), E < 1 GeV / nucleon; measured particle energies, yields, and interaction cross sections. <sup>72,76,80</sup>Kr; deduced effective rms matter radii. JOUR ZSTNE 150 197

**A=73**

<sup>73</sup>Cu      2008ST04      NUCLEAR REACTIONS <sup>104</sup>Pd(<sup>67</sup>Cu, <sup>67</sup>Cu'), (<sup>69</sup>Cu, <sup>69</sup>Cu'), (<sup>71</sup>Cu, <sup>71</sup>Cu'), E=2.99 MeV / nucleon; <sup>120</sup>Sn(<sup>71</sup>Cu, <sup>71</sup>Cu'), (<sup>73</sup>Cu, <sup>73</sup>Cu'), E=2.99 MeV / nucleon; measured E $\gamma$ , I $\gamma$  following coulomb excitation. <sup>67,69,71,73</sup>Cu; deduced level energies, B(E2). JOUR PRLTA 100 112502

<sup>73</sup>Ga      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

<sup>73</sup>Ge      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr;

measured cross sections. JOUR PRVCA 76 064609

2008SC03      NUCLEAR REACTIONS <sup>74,76</sup>Ge, <sup>76,78</sup>Se(d, p), E=15 MeV; <sup>76</sup>Ge, <sup>76</sup>Se(p, d), E=23 MeV; <sup>74,76</sup>Ge, <sup>76,78</sup>Se(<sup>3</sup>He,  $\alpha$ ), E=26 MeV; <sup>74,76</sup>Ge, <sup>76,78</sup>Se( $\alpha$ , <sup>3</sup>He), E=40 MeV; measured reaction products energy spectra, cross sections. Deduced summed spectroscopic strengths, neutron vacancies. JOUR PRLTA 100 112501

**A=73 (continued)**

- <sup>73</sup>As      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>73</sup>Se      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=74**

- <sup>74</sup>Ga      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=74 (continued)

- <sup>74</sup>Ge      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>74</sup>As      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>74</sup>Se      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=74 (continued)

- <sup>74</sup>Br 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>74</sup>Kr 2007G042 NUCLEAR REACTIONS <sup>209</sup>Pb(<sup>74</sup>Kr, <sup>74</sup>Kr'), (<sup>76</sup>Kr, <sup>76</sup>Kr'), E=4.7 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin, angular distributions. <sup>74,76</sup>Kr; deduced B(E2), static quadrupole moments, shape coexistence. JOUR ZSTNE 150 117
- 2008VA03 NUCLEAR REACTIONS <sup>40</sup>Ca(<sup>40</sup>Ca, 2p $\alpha$ ), E=165 MeV; measured E $\gamma$ , I $\gamma$ , half-lives, transition quadrupole moments. <sup>74</sup>Kr; deduced excitation energies, rotational bands. JOUR PRVCA 77 024312

## A=75

- <sup>75</sup>Zn 2008WI01 RADIOACTIVITY <sup>76</sup>Cu( $\beta^-$ n); <sup>78</sup>Cu( $\beta^-$ ); <sup>79</sup>Cu( $\beta^-$ n); measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin. <sup>75,78</sup>Zn; deduced levels. JOUR APOBB 39 525
- <sup>75</sup>Ga 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609



## A=75 (continued)

- <sup>75</sup>Ge      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008SC03      NUCLEAR REACTIONS <sup>74,76</sup>Ge, <sup>76,78</sup>Se(d, p), E=15 MeV; <sup>76</sup>Ge, <sup>76</sup>Se(p, d), E=23 MeV; <sup>74,76</sup>Ge, <sup>76,78</sup>Se(<sup>3</sup>He, α), E=26 MeV; <sup>74,76</sup>Ge, <sup>76,78</sup>Se(α, <sup>3</sup>He), E=40 MeV; measured reaction products energy spectra, cross sections. Deduced summed spectroscopic strengths, neutron vacancies. JOUR PRLTA 100 112501
- <sup>75</sup>As      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>75</sup>Se      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

**A=75 (continued)**

- 2008SC03 NUCLEAR REACTIONS  $^{74,76}\text{Ge}$ ,  $^{76,78}\text{Se}(\text{d}, \text{p})$ ,  $E=15$  MeV;  $^{76}\text{Ge}$ ,  $^{76}\text{Se}(\text{p}, \text{d})$ ,  $E=23$  MeV;  $^{74,76}\text{Ge}$ ,  $^{76,78}\text{Se}(\text{}^3\text{He}, \alpha)$ ,  $E=26$  MeV;  $^{74,76}\text{Ge}$ ,  $^{76,78}\text{Se}(\alpha, \text{}^3\text{He})$ ,  $E=40$  MeV; measured reaction products energy spectra, cross sections. Deduced summed spectroscopic strengths, neutron vacancies. JOUR PRLTA 100 112501
- $^{75}\text{Br}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(\text{p}, \text{X})$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ; measured cross sections. JOUR PRVCA 76 064609

**A=76**

- $^{76}\text{Cu}$  2008WI01 RADIOACTIVITY  $^{76}\text{Cu}(\beta^- \text{n})$ ;  $^{78}\text{Cu}(\beta^-)$ ;  $^{79}\text{Cu}(\beta^- \text{n})$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\beta\gamma$ -coin.  $^{75,78}\text{Zn}$ ; deduced levels. JOUR APOBB 39 525
- $^{76}\text{Ge}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(\text{p}, \text{X})$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{76}\text{As}$  2007KI17 NUCLEAR REACTIONS  $^{70}\text{Ge}(\text{p}, \gamma)$ ,  $E=1.5\text{-}4.5$  MeV;  $^{76}\text{Ge}(\text{p}, \text{n})$ ,  $E=1.5\text{-}4.5$  MeV; measured  $E\gamma$ ,  $I\gamma$ , cross sections; deduced astrophysical S-factors, reaction rates. JOUR PRVCA 76 055807

## A=76 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- $^{76}\text{Se}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- $^{76}\text{Br}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- $^{76}\text{Kr}$  2007G042 NUCLEAR REACTIONS  $^{209}\text{Pb}(^{74}\text{Kr}, ^{74}\text{Kr}')$ ,  $(^{76}\text{Kr}, ^{76}\text{Kr}')$ ,  $E=4.7$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$ , (particle) $\gamma$ -coin, angular distributions.  $^{74,76}\text{Kr}$ ; deduced  $B(E2)$ , static quadrupole moments, shape coexistence. JOUR ZSTNE 150 117

**A=76 (continued)**

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^6,7,8\text{Li}$ ,  $^9,10,11,12\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- 2007YA20 NUCLEAR REACTIONS  $\text{C}(^{72}\text{Kr}, X)$ ,  $(^{76}\text{Kr}, X)$ ,  $(^{80}\text{Kr}, X)$ ,  $E < 1$  GeV / nucleon; measured particle energies, yields, and interaction cross sections.  $^{72,76,80}\text{Kr}$ ; deduced effective rms matter radii. JOUR ZSTNE 150 197

**A=77**

- $^{77}\text{Ge}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^6,7,8\text{Li}$ ,  $^9,10,11,12\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- 2008SC03 NUCLEAR REACTIONS  $^{74,76}\text{Ge}$ ,  $^{76,78}\text{Se}(d, p)$ ,  $E=15$  MeV;  $^{76}\text{Ge}$ ,  $^{76}\text{Se}(p, d)$ ,  $E=23$  MeV;  $^{74,76}\text{Ge}$ ,  $^{76,78}\text{Se}(^3\text{He}, \alpha)$ ,  $E=26$  MeV;  $^{74,76}\text{Ge}$ ,  $^{76,78}\text{Se}(\alpha, ^3\text{He})$ ,  $E=40$  MeV; measured reaction products energy spectra, cross sections. Deduced summed spectroscopic strengths, neutron vacancies. JOUR PRLTA 100 112501

## A=77 (continued)

- <sup>77</sup>As      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>77</sup>Se      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008SC03      NUCLEAR REACTIONS <sup>74,76</sup>Ge, <sup>76,78</sup>Se(d, p), E=15 MeV; <sup>76</sup>Ge, <sup>76</sup>Se(p, d), E=23 MeV; <sup>74,76</sup>Ge, <sup>76,78</sup>Se(<sup>3</sup>He, α), E=26 MeV; <sup>74,76</sup>Ge, <sup>76,78</sup>Se(α, <sup>3</sup>He), E=40 MeV; measured reaction products energy spectra, cross sections. Deduced summed spectroscopic strengths, neutron vacancies. JOUR PRLTA 100 112501
- <sup>77</sup>Br      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=77 (continued)

<sup>77</sup>Kr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=78

<sup>78</sup>Cu      2008WI01      RADIOACTIVITY <sup>76</sup>Cu( $\beta^-$ n); <sup>78</sup>Cu( $\beta^-$ ); <sup>79</sup>Cu( $\beta^-$ n); measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin. <sup>75,78</sup>Zn; deduced levels. JOUR APOBB 39 525

<sup>78</sup>Zn      2008WI01      RADIOACTIVITY <sup>76</sup>Cu( $\beta^-$ n); <sup>78</sup>Cu( $\beta^-$ ); <sup>79</sup>Cu( $\beta^-$ n); measured E $\gamma$ , I $\gamma$ ,  $\beta\gamma$ -coin. <sup>75,78</sup>Zn; deduced levels. JOUR APOBB 39 525

<sup>78</sup>As      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=78 (continued)

<sup>78</sup> Se	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr;</p> <p>measured cross sections. JOUR PRVCA 76 064609</p>
<sup>78</sup> Br	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr;</p> <p>measured cross sections. JOUR PRVCA 76 064609</p>
<sup>78</sup> Kr	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr;</p> <p>measured cross sections. JOUR PRVCA 76 064609</p>
<sup>78</sup> Sr	2007NA37	<p>RADIOACTIVITY <sup>78</sup>Y(<math>\beta^+</math>) [from <sup>40</sup>Ca(<sup>40</sup>Ca, np), E=118, 121 MeV]; measured E<math>\gamma</math>, I<math>\gamma</math>, <math>\gamma\gamma</math>, <math>\beta\gamma</math>-coin. <sup>78</sup>Y deduced levels. JOUR ZSTNE 150 147</p>
<sup>78</sup> Y	2007NA37	<p>RADIOACTIVITY <sup>78</sup>Y(<math>\beta^+</math>) [from <sup>40</sup>Ca(<sup>40</sup>Ca, np), E=118, 121 MeV]; measured E<math>\gamma</math>, I<math>\gamma</math>, <math>\gamma\gamma</math>, <math>\beta\gamma</math>-coin. <sup>78</sup>Y deduced levels. JOUR ZSTNE 150 147</p>

## A=79

<sup>79</sup> Cu	2008WI01	RADIOACTIVITY <sup>76</sup> Cu( $\beta^-$ n); <sup>78</sup> Cu( $\beta^-$ ); <sup>79</sup> Cu( $\beta^-$ n); measured E $\gamma$ , I $\gamma$ , $\beta\gamma$ -coin. <sup>75,78</sup> Zn; deduced levels. JOUR APOBB 39 525
<sup>79</sup> As	2007NA31	NUCLEAR REACTIONS <sup>136</sup> Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup> Li, <sup>9,10,11,12</sup> Be, <sup>10,11,12,13</sup> B, <sup>11,12,13,14,15</sup> C, <sup>13,14,15,16,17</sup> N, <sup>15,16,17,18,19</sup> O, <sup>17,18,19,20,21</sup> F, <sup>19,20,21,22,23</sup> Ne, <sup>22,23,24,25</sup> Na, <sup>23,24,25,26,27</sup> Mg, <sup>25,26,27,28,29,30</sup> Al, <sup>28,29,30,31,32</sup> Si, <sup>30,31,32,33,34</sup> P, <sup>32,33,34,35,36,37,38</sup> S, <sup>34,35,36,37,38,39,40</sup> Cl, <sup>36,37,38,39,40,41,42,43</sup> Ar, <sup>39,40,41,42,43,44,45</sup> K, <sup>41,42,43,44,45,46,47</sup> Ca, <sup>43,44,45,46,47,48,49,50</sup> Sc, <sup>45,46,47,48,49,50,51,52</sup> Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup> V, <sup>49,50,51,52,53,54,55,56,57</sup> Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup> Mn, <sup>55,56,57,58,59,60,61,62</sup> Fe, <sup>57,58,59,60,61,62,63,64,65</sup> Co, <sup>59,60,61,62,63,64,65,66,67</sup> Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup> Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup> Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup> Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup> Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup> As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup> Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup> Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup> Kr; measured cross sections. JOUR PRVCA 76 064609
<sup>79</sup> Se	2007NA31	NUCLEAR REACTIONS <sup>136</sup> Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup> Li, <sup>9,10,11,12</sup> Be, <sup>10,11,12,13</sup> B, <sup>11,12,13,14,15</sup> C, <sup>13,14,15,16,17</sup> N, <sup>15,16,17,18,19</sup> O, <sup>17,18,19,20,21</sup> F, <sup>19,20,21,22,23</sup> Ne, <sup>22,23,24,25</sup> Na, <sup>23,24,25,26,27</sup> Mg, <sup>25,26,27,28,29,30</sup> Al, <sup>28,29,30,31,32</sup> Si, <sup>30,31,32,33,34</sup> P, <sup>32,33,34,35,36,37,38</sup> S, <sup>34,35,36,37,38,39,40</sup> Cl, <sup>36,37,38,39,40,41,42,43</sup> Ar, <sup>39,40,41,42,43,44,45</sup> K, <sup>41,42,43,44,45,46,47</sup> Ca, <sup>43,44,45,46,47,48,49,50</sup> Sc, <sup>45,46,47,48,49,50,51,52</sup> Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup> V, <sup>49,50,51,52,53,54,55,56,57</sup> Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup> Mn, <sup>55,56,57,58,59,60,61,62</sup> Fe, <sup>57,58,59,60,61,62,63,64,65</sup> Co, <sup>59,60,61,62,63,64,65,66,67</sup> Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup> Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup> Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup> Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup> Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup> As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup> Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup> Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup> Kr; measured cross sections. JOUR PRVCA 76 064609
	2008SC03	NUCLEAR REACTIONS <sup>74,76</sup> Ge, <sup>76,78</sup> Se(d, p), E=15 MeV; <sup>76</sup> Ge, <sup>76</sup> Se(p, d), E=23 MeV; <sup>74,76</sup> Ge, <sup>76,78</sup> Se( <sup>3</sup> He, $\alpha$ ), E=26 MeV; <sup>74,76</sup> Ge, <sup>76,78</sup> Se( $\alpha$ , <sup>3</sup> He), E=40 MeV; measured reaction products energy spectra, cross sections. Deduced summed spectroscopic strengths, neutron vacancies. JOUR PRLTA 100 112501



## A=79 (continued)

- <sup>79</sup>Br      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>79</sup>Kr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008SI05      NUCLEAR REACTIONS <sup>74</sup>Ge(<sup>16</sup>O, 4n), (<sup>16</sup>O, 2np), (<sup>16</sup>O, 3np), (<sup>16</sup>O, 4np), (<sup>16</sup>O, nα), (<sup>16</sup>O, 3nα), (<sup>16</sup>O, 2npα), (<sup>16</sup>O, 3npα), (<sup>16</sup>O, 3n2α), E=60.2-111.6 MeV; measured Eγ, Iγ, cross sections using stacked foil activation. JOUR CJOPA 46 27

## A=79 (continued)

<sup>79</sup>Rb 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=80

<sup>80</sup>Zn 2007VE08 RADIOACTIVITY <sup>81</sup>Zn, <sup>81</sup>Ga, <sup>81</sup>Ge, <sup>81</sup>As ( $\beta^-$ ) [from U(d, F), E=26 MeV]; <sup>81</sup>Zn, <sup>81</sup>Ga ( $\beta^-n$ ); measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-lives. <sup>81</sup>Ga; deduced levels, J,  $\pi$ , configurations. <sup>81</sup>Ga, <sup>83</sup>As; calculated levels, J,  $\pi$ , configurations. <sup>80</sup>Zn, <sup>81</sup>Ga, <sup>82</sup>Ge, <sup>83</sup>As, <sup>84</sup>Se, <sup>85</sup>Br, <sup>86</sup>Kr, <sup>87</sup>Rb; systematics. JOUR PRVCA 76 054312

<sup>80</sup>As 2007B050 ATOMIC MASSES <sup>80</sup>As, <sup>81</sup>Se; measured masses a penning trap mass spectrometer. JOUR ZSTNE 150 337

2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

<sup>80</sup>Se 2007J014 NUCLEAR REACTIONS <sup>192</sup>Os(<sup>82</sup>Se, X), E=460 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin. <sup>80,82</sup>Se; deduced levels, J,  $\pi$ , configurations. JOUR PRVCA 76 054317

## A=80 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- $^{80}\text{Br}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- $^{80}\text{Kr}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609
- 2007YA20 NUCLEAR REACTIONS  $\text{C}(^{72}\text{Kr}, X)$ ,  $(^{76}\text{Kr}, X)$ ,  $(^{80}\text{Kr}, X)$ ,  $E < 1$  GeV / nucleon; measured particle energies, yields, and interaction cross sections.  $^{72,76,80}\text{Kr}$ ; deduced effective rms matter radii. JOUR ZSTNE 150 197

## A=80 (continued)

<sup>80</sup>Rb      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=81

<sup>81</sup>Zn      2007VE08      RADIOACTIVITY <sup>81</sup>Zn, <sup>81</sup>Ga, <sup>81</sup>Ge, <sup>81</sup>As ( $\beta^-$ ) [from U(d, F), E=26 MeV]; <sup>81</sup>Zn, <sup>81</sup>Ga ( $\beta^-n$ ); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma^-$ ,  $\beta\gamma$ -coin, half-lives. <sup>81</sup>Ga; deduced levels, J,  $\pi$ , configurations. <sup>81</sup>Ga, <sup>83</sup>As; calculated levels, J,  $\pi$ , configurations. <sup>80</sup>Zn, <sup>81</sup>Ga, <sup>82</sup>Ge, <sup>83</sup>As, <sup>84</sup>Se, <sup>85</sup>Br, <sup>86</sup>Kr, <sup>87</sup>Rb; systematics. JOUR PRVCA 76 054312

<sup>81</sup>Ga      2007VE08      RADIOACTIVITY <sup>81</sup>Zn, <sup>81</sup>Ga, <sup>81</sup>Ge, <sup>81</sup>As ( $\beta^-$ ) [from U(d, F), E=26 MeV]; <sup>81</sup>Zn, <sup>81</sup>Ga ( $\beta^-n$ ); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma^-$ ,  $\beta\gamma$ -coin, half-lives. <sup>81</sup>Ga; deduced levels, J,  $\pi$ , configurations. <sup>81</sup>Ga, <sup>83</sup>As; calculated levels, J,  $\pi$ , configurations. <sup>80</sup>Zn, <sup>81</sup>Ga, <sup>82</sup>Ge, <sup>83</sup>As, <sup>84</sup>Se, <sup>85</sup>Br, <sup>86</sup>Kr, <sup>87</sup>Rb; systematics. JOUR PRVCA 76 054312

<sup>81</sup>Ge      2007VE08      RADIOACTIVITY <sup>81</sup>Zn, <sup>81</sup>Ga, <sup>81</sup>Ge, <sup>81</sup>As ( $\beta^-$ ) [from U(d, F), E=26 MeV]; <sup>81</sup>Zn, <sup>81</sup>Ga ( $\beta^-n$ ); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma^-$ ,  $\beta\gamma$ -coin, half-lives. <sup>81</sup>Ga; deduced levels, J,  $\pi$ , configurations. <sup>81</sup>Ga, <sup>83</sup>As; calculated levels, J,  $\pi$ , configurations. <sup>80</sup>Zn, <sup>81</sup>Ga, <sup>82</sup>Ge, <sup>83</sup>As, <sup>84</sup>Se, <sup>85</sup>Br, <sup>86</sup>Kr, <sup>87</sup>Rb; systematics. JOUR PRVCA 76 054312

## A=81 (continued)

- <sup>81</sup>As      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2007VE08      RADIOACTIVITY <sup>81</sup>Zn, <sup>81</sup>Ga, <sup>81</sup>Ge, <sup>81</sup>As ( $\beta^-$ ) [from U(d, F), E=26 MeV]; <sup>81</sup>Zn, <sup>81</sup>Ga ( $\beta^-n$ ); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-lives. <sup>81</sup>Ga; deduced levels, J,  $\pi$ , configurations. <sup>81</sup>Ga, <sup>83</sup>As; calculated levels, J,  $\pi$ , configurations. <sup>80</sup>Zn, <sup>81</sup>Ga, <sup>82</sup>Ge, <sup>83</sup>As, <sup>84</sup>Se, <sup>85</sup>Br, <sup>86</sup>Kr, <sup>87</sup>Rb; systematics. JOUR PRVCA 76 054312
- <sup>81</sup>Se      2007B050      ATOMIC MASSES <sup>80</sup>As, <sup>81</sup>Se; measured masses a penning trap mass spectrometer. JOUR ZSTNE 150 337
- 2007LU18      NUCLEAR REACTIONS <sup>175</sup>Lu, <sup>198</sup>Pt, <sup>82</sup>Se(n, 2n), E=13.5-14.6 MeV; measured E $\gamma$ , I $\gamma$ ; deduced cross sections, isomeric cross section ratios. <sup>93</sup>Nb(n, 2n), E=13.5-14.6 MeV; compared cross sections. Comparisons with nuclear model calculations using the HFTT code. JOUR NIMBE 265 453
- 2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- 2008NA01      NUCLEAR REACTIONS <sup>80</sup>Se(n,  $\gamma$ ), E=thermal; measured E $\gamma$ , I $\gamma$ , thermal neutron capture cross sections to the ground and isomeric states using stacked foil activation. JOUR JNSTA 45 116

## A=81 (continued)

- <sup>81</sup>Br      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>81</sup>Kr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>81</sup>Rb      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=81 (continued)

<sup>81</sup>Sr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=82

<sup>82</sup>Ge      2007VE08      RADIOACTIVITY <sup>81</sup>Zn, <sup>81</sup>Ga, <sup>81</sup>Ge, <sup>81</sup>As ( $\beta^-$ ) [from U(d, F), E=26 MeV]; <sup>81</sup>Zn, <sup>81</sup>Ga ( $\beta^-n$ ); measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-lives. <sup>81</sup>Ga; deduced levels, J,  $\pi$ , configurations. <sup>81</sup>Ga, <sup>83</sup>As; calculated levels, J,  $\pi$ , configurations. <sup>80</sup>Zn, <sup>81</sup>Ga, <sup>82</sup>Ge, <sup>83</sup>As, <sup>84</sup>Se, <sup>85</sup>Br, <sup>86</sup>Kr, <sup>87</sup>Rb; systematics. JOUR PRVCA 76 054312

<sup>82</sup>Se      2007J014      NUCLEAR REACTIONS <sup>192</sup>Os(<sup>82</sup>Se, X), E=460 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin. <sup>80,82</sup>Se; deduced levels, J,  $\pi$ , configurations. JOUR PRVCA 76 054317

            2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=82 (continued)

<sup>82</sup> Br	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr;</p> <p>measured cross sections. JOUR PRVCA 76 064609</p>
<sup>82</sup> Kr	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr;</p> <p>measured cross sections. JOUR PRVCA 76 064609</p>
<sup>82</sup> Rb	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609</p>



**A=82 (continued)**

- 2008SI05 NUCLEAR REACTIONS  $^{74}\text{Ge}(^{16}\text{O}, 4n)$ ,  $(^{16}\text{O}, 2np)$ ,  $(^{16}\text{O}, 3np)$ ,  $(^{16}\text{O}, 4np)$ ,  $(^{16}\text{O}, n\alpha)$ ,  $(^{16}\text{O}, 3n\alpha)$ ,  $(^{16}\text{O}, 2np\alpha)$ ,  $(^{16}\text{O}, 3np\alpha)$ ,  $(^{16}\text{O}, 3n2\alpha)$ ,  $E=60.2\text{-}111.6$  MeV; measured  $E\gamma$ ,  $I\gamma$ , cross sections using stacked foil activation. JOUR CJOPA 46 27
- $^{82}\text{Sr}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{82}\text{Nb}$  2008GA04 NUCLEAR REACTIONS  $^9\text{Be}(^{107}\text{Ag}, X)^{82}\text{Nb}$  /  $^{86}\text{Tc}$ ,  $E=750$  MeV / nucleon; measured fragment and delayed  $\gamma$  spectra, (fragment) $\gamma$ -coin.  $^{82}\text{Nb}$ ,  $^{86}\text{Tc}$  deduced level energies,  $J$ ,  $\pi$ ,  $T_{1/2}$ , conversion coefficients. Deformation and K hindrance discussed. JOUR PYLBB 660 326

**A=83**

- $^{83}\text{As}$  2007VE08 RADIOACTIVITY  $^{81}\text{Zn}$ ,  $^{81}\text{Ga}$ ,  $^{81}\text{Ge}$ ,  $^{81}\text{As}$  ( $\beta^-$ ) [from U(d, F),  $E=26$  MeV];  $^{81}\text{Zn}$ ,  $^{81}\text{Ga}$  ( $\beta^-n$ ); measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-lives.  $^{81}\text{Ga}$ ; deduced levels,  $J$ ,  $\pi$ , configurations.  $^{81}\text{Ga}$ ,  $^{83}\text{As}$ ; calculated levels,  $J$ ,  $\pi$ , configurations.  $^{80}\text{Zn}$ ,  $^{81}\text{Ga}$ ,  $^{82}\text{Ge}$ ,  $^{83}\text{As}$ ,  $^{84}\text{Se}$ ,  $^{85}\text{Br}$ ,  $^{86}\text{Kr}$ ,  $^{87}\text{Rb}$ ; systematics. JOUR PRVCA 76 054312

## A=83 (continued)

- <sup>83</sup>Se      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>83</sup>Br      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>83</sup>Kr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

## A=83 (continued)

- <sup>83</sup>Rb      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008SI05      NUCLEAR REACTIONS <sup>74</sup>Ge(<sup>16</sup>O, 4n), (<sup>16</sup>O, 2np), (<sup>16</sup>O, 3np), (<sup>16</sup>O, 4np), (<sup>16</sup>O, nα), (<sup>16</sup>O, 3nα), (<sup>16</sup>O, 2npα), (<sup>16</sup>O, 3npα), (<sup>16</sup>O, 3n2α), E=60.2-111.6 MeV; measured Eγ, Iγ, cross sections using stacked foil activation. JOUR CJOPA 46 27
- <sup>83</sup>Sr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=83 (continued)**

- 2008SI05 NUCLEAR REACTIONS  $^{74}\text{Ge}(^{16}\text{O}, 4n)$ ,  $(^{16}\text{O}, 2np)$ ,  $(^{16}\text{O}, 3np)$ ,  $(^{16}\text{O}, 4np)$ ,  $(^{16}\text{O}, n\alpha)$ ,  $(^{16}\text{O}, 3n\alpha)$ ,  $(^{16}\text{O}, 2np\alpha)$ ,  $(^{16}\text{O}, 3np\alpha)$ ,  $(^{16}\text{O}, 3n2\alpha)$ ,  $E=60.2\text{-}111.6$  MeV; measured  $E\gamma$ ,  $I\gamma$ , cross sections using stacked foil activation. JOUR CJOPA 46 27

**A=84**

- $^{84}\text{Se}$  2007VE08 RADIOACTIVITY  $^{81}\text{Zn}$ ,  $^{81}\text{Ga}$ ,  $^{81}\text{Ge}$ ,  $^{81}\text{As}$  ( $\beta^-$ ) [from U(d, F),  $E=26$  MeV];  $^{81}\text{Zn}$ ,  $^{81}\text{Ga}$  ( $\beta^-n$ ); measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma^-$ ,  $\beta\gamma$ -coin, half-lives.  $^{81}\text{Ga}$ ; deduced levels, J,  $\pi$ , configurations.  $^{81}\text{Ga}$ ,  $^{83}\text{As}$ ; calculated levels, J,  $\pi$ , configurations.  $^{80}\text{Zn}$ ,  $^{81}\text{Ga}$ ,  $^{82}\text{Ge}$ ,  $^{83}\text{As}$ ,  $^{84}\text{Se}$ ,  $^{85}\text{Br}$ ,  $^{86}\text{Kr}$ ,  $^{87}\text{Rb}$ ; systematics. JOUR PRVCA 76 054312
- $^{84}\text{Br}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{84}\text{Kr}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{6,7,8}\text{Li}$ ,  $^{9,10,11,12}\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=84 (continued)

- <sup>84</sup>Rb      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>84</sup>Sr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=84 (continued)

<sup>84</sup>Y 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=85

<sup>85</sup>Br 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609

2007VE08 RADIOACTIVITY <sup>81</sup>Zn, <sup>81</sup>Ga, <sup>81</sup>Ge, <sup>81</sup>As ( $\beta^-$ ) [from U(d, F), E=26 MeV]; <sup>81</sup>Zn, <sup>81</sup>Ga ( $\beta^-n$ ); measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-lives. <sup>81</sup>Ga; deduced levels, J,  $\pi$ , configurations. <sup>81</sup>Ga, <sup>83</sup>As; calculated levels, J,  $\pi$ , configurations. <sup>80</sup>Zn, <sup>81</sup>Ga, <sup>82</sup>Ge, <sup>83</sup>As, <sup>84</sup>Se, <sup>85</sup>Br, <sup>86</sup>Kr, <sup>87</sup>Rb; systematics. JOUR PRVCA 76 054312

## A=85 (continued)

- <sup>85</sup>Kr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>85</sup>Rb      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=85 (continued)

<sup>85</sup> Sr	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609</p>
	2008SI05	<p>NUCLEAR REACTIONS <sup>74</sup>Ge(<sup>16</sup>O, 4n), (<sup>16</sup>O, 2np), (<sup>16</sup>O, 3np), (<sup>16</sup>O, 4np), (<sup>16</sup>O, nα), (<sup>16</sup>O, 3nα), (<sup>16</sup>O, 2npα), (<sup>16</sup>O, 3npα), (<sup>16</sup>O, 3n2α), E=60.2-111.6 MeV; measured Eγ, Iγ, cross sections using stacked foil activation. JOUR CJOPA 46 27</p>
<sup>85</sup> Y	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609</p>



## A=85 (continued)

2008SI05 NUCLEAR REACTIONS  $^{74}\text{Ge}(^{16}\text{O}, 4n)$ ,  $(^{16}\text{O}, 2np)$ ,  $(^{16}\text{O}, 3np)$ ,  $(^{16}\text{O}, 4np)$ ,  $(^{16}\text{O}, n\alpha)$ ,  $(^{16}\text{O}, 3n\alpha)$ ,  $(^{16}\text{O}, 2np\alpha)$ ,  $(^{16}\text{O}, 3np\alpha)$ ,  $(^{16}\text{O}, 3n2\alpha)$ , E=60.2-111.6 MeV; measured  $E\gamma$ ,  $I\gamma$ , cross sections using stacked foil activation. JOUR CJOPA 46 27

## A=86

$^{86}\text{Kr}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^6,7,8\text{Li}$ ,  $^9,10,11,12\text{Be}$ ,  $^{10,11,12,13}\text{B}$ ,  $^{11,12,13,14,15}\text{C}$ ,  $^{13,14,15,16,17}\text{N}$ ,  $^{15,16,17,18,19}\text{O}$ ,  $^{17,18,19,20,21}\text{F}$ ,  $^{19,20,21,22,23}\text{Ne}$ ,  $^{22,23,24,25}\text{Na}$ ,  $^{23,24,25,26,27}\text{Mg}$ ,  $^{25,26,27,28,29,30}\text{Al}$ ,  $^{28,29,30,31,32}\text{Si}$ ,  $^{30,31,32,33,34}\text{P}$ ,  $^{32,33,34,35,36,37,38}\text{S}$ ,  $^{34,35,36,37,38,39,40}\text{Cl}$ ,  $^{36,37,38,39,40,41,42,43}\text{Ar}$ ,  $^{39,40,41,42,43,44,45}\text{K}$ ,  $^{41,42,43,44,45,46,47}\text{Ca}$ ,  $^{43,44,45,46,47,48,49,50}\text{Sc}$ ,  $^{45,46,47,48,49,50,51,52}\text{Ti}$ ,  $^{46,47,48,49,50,51,52,53,54,55}\text{V}$ ,  $^{49,50,51,52,53,54,55,56,57}\text{Cr}$ ,  $^{50,51,52,53,54,55,56,57,58,59,60}\text{Mn}$ ,  $^{55,56,57,58,59,60,61,62}\text{Fe}$ ,  $^{57,58,59,60,61,62,63,64,65}\text{Co}$ ,  $^{59,60,61,62,63,64,65,66,67}\text{Ni}$ ,  $^{60,61,62,63,64,65,66,67,68,69,70}\text{Cu}$ ,  $^{62,63,64,65,66,67,68,69,70,71,72}\text{Zn}$ ,  $^{66,67,68,69,70,71,72,73,74,75}\text{Ga}$ ,  $^{68,69,70,71,72,73,74,75,76,77}\text{Ge}$ ,  $^{70,71,72,73,74,75,76,77,78,79,80,81}\text{As}$ ,  $^{72,73,74,75,76,77,78,79,80,81,82,83}\text{Se}$ ,  $^{74,75,76,77,78,79,80,81,82,83,84,85}\text{Br}$ ,  $^{76,77,78,79,80,81,82,83,84,85,86,87,88}\text{Kr}$ ;  
measured cross sections. JOUR PRVCA 76 064609

2007VE08 RADIOACTIVITY  $^{81}\text{Zn}$ ,  $^{81}\text{Ga}$ ,  $^{81}\text{Ge}$ ,  $^{81}\text{As}(\beta^-)$  [from U(d, F), E=26 MeV];  $^{81}\text{Zn}$ ,  $^{81}\text{Ga}(\beta^-n)$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma^-$ ,  $\beta\gamma$ -coin, half-lives.  $^{81}\text{Ga}$ ; deduced levels, J,  $\pi$ , configurations.  $^{81}\text{Ga}$ ,  $^{83}\text{As}$ ; calculated levels, J,  $\pi$ , configurations.  $^{80}\text{Zn}$ ,  $^{81}\text{Ga}$ ,  $^{82}\text{Ge}$ ,  $^{83}\text{As}$ ,  $^{84}\text{Se}$ ,  $^{85}\text{Br}$ ,  $^{86}\text{Kr}$ ,  $^{87}\text{Rb}$ ; systematics. JOUR PRVCA 76 054312

$^{86}\text{Rb}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=86 (continued)

- <sup>86</sup>Sr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>86</sup>Y      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008SI05      NUCLEAR REACTIONS <sup>74</sup>Ge(<sup>16</sup>O, 4n), (<sup>16</sup>O, 2np), (<sup>16</sup>O, 3np), (<sup>16</sup>O, 4np), (<sup>16</sup>O, nα), (<sup>16</sup>O, 3nα), (<sup>16</sup>O, 2npα), (<sup>16</sup>O, 3npα), (<sup>16</sup>O, 3n2α), E=60.2-111.6 MeV; measured Eγ, Iγ, cross sections using stacked foil activation. JOUR CJOPA 46 27

## A=86 (continued)

- 2008UD02 NUCLEAR REACTIONS Zr(p, X)<sup>88</sup>Zr / <sup>89</sup>Zr / <sup>86</sup>Y / <sup>87</sup>Y / <sup>88</sup>Y / <sup>90</sup>Nb / <sup>92</sup>Nb / <sup>95</sup>Nb / <sup>96</sup>Nb, E=4-40 MeV; measured E $\gamma$ , I $\gamma$ , cross sections, and excitation functions using the stacked foil activation technique. JOUR NIMBE 266 13
- <sup>86</sup>Zr 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008SI05 NUCLEAR REACTIONS <sup>74</sup>Ge(<sup>16</sup>O, 4n), (<sup>16</sup>O, 2np), (<sup>16</sup>O, 3np), (<sup>16</sup>O, 4np), (<sup>16</sup>O, n $\alpha$ ), (<sup>16</sup>O, 3n $\alpha$ ), (<sup>16</sup>O, 2np $\alpha$ ), (<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, 3n2 $\alpha$ ), E=60.2-111.6 MeV; measured E $\gamma$ , I $\gamma$ , cross sections using stacked foil activation. JOUR CJOPA 46 27
- <sup>86</sup>Tc 2008GA04 NUCLEAR REACTIONS <sup>9</sup>Be(<sup>107</sup>Ag, X)<sup>82</sup>Nb / <sup>86</sup>Tc, E=750 MeV / nucleon; measured fragment and delayed  $\gamma$  spectra, (fragment) $\gamma$ -coin. <sup>82</sup>Nb, <sup>86</sup>Tc deduced level energies, J,  $\pi$ , T<sub>1/2</sub>, conversion coefficients. Deformation and K hindrance discussed. JOUR PYLBB 660 326

## A=87

- <sup>87</sup>Kr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>87</sup>Rb      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007VE08      RADIOACTIVITY <sup>81</sup>Zn, <sup>81</sup>Ga, <sup>81</sup>Ge, <sup>81</sup>As ( $\beta^-$ ) [from U(d, F), E=26 MeV]; <sup>81</sup>Zn, <sup>81</sup>Ga ( $\beta^-n$ ); measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, half-lives. <sup>81</sup>Ga; deduced levels, J,  $\pi$ , configurations. <sup>81</sup>Ga, <sup>83</sup>As; calculated levels, J,  $\pi$ , configurations. <sup>80</sup>Zn, <sup>81</sup>Ga, <sup>82</sup>Ge, <sup>83</sup>As, <sup>84</sup>Se, <sup>85</sup>Br, <sup>86</sup>Kr, <sup>87</sup>Rb; systematics. JOUR PRVCA 76 054312

## A=87 (continued)

- <sup>87</sup>Sr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>87</sup>Y      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008SI05      NUCLEAR REACTIONS <sup>74</sup>Ge(<sup>16</sup>O, 4n), (<sup>16</sup>O, 2np), (<sup>16</sup>O, 3np), (<sup>16</sup>O, 4np), (<sup>16</sup>O, nα), (<sup>16</sup>O, 3nα), (<sup>16</sup>O, 2npα), (<sup>16</sup>O, 3npα), (<sup>16</sup>O, 3n2α), E=60.2-111.6 MeV; measured Eγ, Iγ, cross sections using stacked foil activation. JOUR CJOPA 46 27

## A=87 (continued)

- 2008UD02 NUCLEAR REACTIONS Zr(p, X)<sup>88</sup>Zr / <sup>89</sup>Zr / <sup>86</sup>Y / <sup>87</sup>Y / <sup>88</sup>Y / <sup>90</sup>Nb / <sup>92</sup>Nb / <sup>95</sup>Nb / <sup>96</sup>Nb, E=4-40 MeV; measured E $\gamma$ , I $\gamma$ , cross sections, and excitation functions using the stacked foil activation technique. JOUR NIMBE 266 13
- <sup>87</sup>Zr 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>87</sup>Nb 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=88

- <sup>88</sup>Kr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>6,7,8</sup>Li, <sup>9,10,11,12</sup>Be, <sup>10,11,12,13</sup>B, <sup>11,12,13,14,15</sup>C, <sup>13,14,15,16,17</sup>N, <sup>15,16,17,18,19</sup>O, <sup>17,18,19,20,21</sup>F, <sup>19,20,21,22,23</sup>Ne, <sup>22,23,24,25</sup>Na, <sup>23,24,25,26,27</sup>Mg, <sup>25,26,27,28,29,30</sup>Al, <sup>28,29,30,31,32</sup>Si, <sup>30,31,32,33,34</sup>P, <sup>32,33,34,35,36,37,38</sup>S, <sup>34,35,36,37,38,39,40</sup>Cl, <sup>36,37,38,39,40,41,42,43</sup>Ar, <sup>39,40,41,42,43,44,45</sup>K, <sup>41,42,43,44,45,46,47</sup>Ca, <sup>43,44,45,46,47,48,49,50</sup>Sc, <sup>45,46,47,48,49,50,51,52</sup>Ti, <sup>46,47,48,49,50,51,52,53,54,55</sup>V, <sup>49,50,51,52,53,54,55,56,57</sup>Cr, <sup>50,51,52,53,54,55,56,57,58,59,60</sup>Mn, <sup>55,56,57,58,59,60,61,62</sup>Fe, <sup>57,58,59,60,61,62,63,64,65</sup>Co, <sup>59,60,61,62,63,64,65,66,67</sup>Ni, <sup>60,61,62,63,64,65,66,67,68,69,70</sup>Cu, <sup>62,63,64,65,66,67,68,69,70,71,72</sup>Zn, <sup>66,67,68,69,70,71,72,73,74,75</sup>Ga, <sup>68,69,70,71,72,73,74,75,76,77</sup>Ge, <sup>70,71,72,73,74,75,76,77,78,79,80,81</sup>As, <sup>72,73,74,75,76,77,78,79,80,81,82,83</sup>Se, <sup>74,75,76,77,78,79,80,81,82,83,84,85</sup>Br, <sup>76,77,78,79,80,81,82,83,84,85,86,87,88</sup>Kr; measured cross sections. JOUR PRVCA 76 064609
- <sup>88</sup>Rb      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=88 (continued)

- <sup>88</sup>Sr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>88</sup>Y      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008UD02      NUCLEAR REACTIONS Zr(p, X)<sup>88</sup>Zr / <sup>89</sup>Zr / <sup>86</sup>Y / <sup>87</sup>Y / <sup>88</sup>Y / <sup>90</sup>Nb / <sup>92</sup>Nb / <sup>95</sup>Nb / <sup>96</sup>Nb, E=4-40 MeV; measured E<sub>γ</sub>, I<sub>γ</sub>, cross sections, and excitation functions using the stacked foil activation technique. JOUR NIMBE 266 13



## A=88 (continued)

- <sup>88</sup>Zr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>88</sup>Zr      2008UD02      NUCLEAR REACTIONS Zr(p, X)<sup>88</sup>Zr / <sup>89</sup>Zr / <sup>86</sup>Y / <sup>87</sup>Y / <sup>88</sup>Y / <sup>90</sup>Nb / <sup>92</sup>Nb / <sup>95</sup>Nb / <sup>96</sup>Nb, E=4-40 MeV; measured E $\gamma$ , I $\gamma$ , cross sections, and excitation functions using the stacked foil activation technique. JOUR NIMBE 266 13
- <sup>88</sup>Nb      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=89

- <sup>89</sup>Rb      2007BU35      NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>90</sup>Zr, X)<sup>89</sup>Rb, E=590 MeV; <sup>238</sup>U(<sup>82</sup>Se, X)<sup>92</sup>Y / <sup>93</sup>Y, E=505 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma\gamma$ -coin, angular distribution, multipolarity. <sup>89</sup>Rb, <sup>92,93</sup>Y; deduced levels, J,  $\pi$ , configurations. Comparisons to shell model calculations, and structure in <sup>94</sup>Nb. JOUR PRVCA 76 064301
- 2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>89</sup>Sr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=89 (continued)

- <sup>89</sup>Y      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 20080H02      NUCLEAR REACTIONS <sup>56</sup>Fe, <sup>89</sup>Y, <sup>208</sup>Pb(n, n), E=96 MeV; measured  $\sigma(\theta)$ ; <sup>12</sup>C, <sup>16</sup>O; systematics, compared with Wick's limit. JOUR PRVCA 77 024605
- <sup>89</sup>Zr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008AT01      NUCLEAR REACTIONS <sup>90</sup>Zr(n, 2n), E=13.73-14.77 MeV; measured E $\gamma$ , I $\gamma$ ,  $\sigma$  for metastable state production; calculated  $\sigma(E)$  using EMPIRE and TALYS codes. JOUR NUPAB 802 1

## A=89 (continued)

- 2008UD02 NUCLEAR REACTIONS Zr(p, X)<sup>88</sup>Zr / <sup>89</sup>Zr / <sup>86</sup>Y / <sup>87</sup>Y / <sup>88</sup>Y / <sup>90</sup>Nb / <sup>92</sup>Nb / <sup>95</sup>Nb / <sup>96</sup>Nb, E=4-40 MeV; measured E $\gamma$ , I $\gamma$ , cross sections, and excitation functions using the stacked foil activation technique. JOUR NIMBE 266 13
- <sup>89</sup>Nb 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008UD01 NUCLEAR REACTIONS Mo(p, X)<sup>89g</sup>Nb / <sup>93m,93g</sup>Tc / <sup>94m</sup>Tc, E=25.9-67.8 MeV; Mo(p, X)<sup>90</sup>Mo / <sup>97</sup>Nb, E=31.9-67.8 MeV; Mo(p, X)<sup>89m</sup>Nb, E=46.6-67.8 MeV; measured E $\gamma$ , I $\gamma$ , excitation functions, cross sections and integral yields using stacked-foil activation technique, natural Mo target. <sup>89</sup>Nb, <sup>89m</sup>Nb, <sup>90</sup>Mo, <sup>93m</sup>Tc, <sup>93g</sup>Tc, <sup>94m</sup>Tc, <sup>97</sup>Nb; isotopic yields and production. JOUR ARISE 66 208

## A=90

- <sup>90</sup>Rb      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>90</sup>Sr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=90 (continued)

- <sup>90</sup>Y      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>90</sup>Zr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=90 (continued)

- <sup>90</sup>Nb 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008UD02 NUCLEAR REACTIONS Zr(p, X)<sup>88</sup>Zr / <sup>89</sup>Zr / <sup>86</sup>Y / <sup>87</sup>Y / <sup>88</sup>Y / <sup>90</sup>Nb / <sup>92</sup>Nb / <sup>95</sup>Nb / <sup>96</sup>Nb, E=4-40 MeV; measured E $\gamma$ , I $\gamma$ , cross sections, and excitation functions using the stacked foil activation technique. JOUR NIMBE 266 13
- <sup>90</sup>Mo 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=90 (continued)**

2008UD01 NUCLEAR REACTIONS Mo(p, X)<sup>89g</sup>Nb / <sup>93m,93g</sup>Tc / <sup>94m</sup>Tc, E=25.9-67.8 MeV; Mo(p, X)<sup>90</sup>Mo / <sup>97</sup>Nb, E=31.9-67.8 MeV; Mo(p, X)<sup>89m</sup>Nb, E=46.6-67.8 MeV; measured E $\gamma$ , I $\gamma$ , excitation functions, cross sections and integral yields using stacked-foil activation technique, natural Mo target. <sup>89</sup>Nb, <sup>89m</sup>Nb, <sup>90</sup>Mo, <sup>93m</sup>Tc, <sup>93g</sup>Tc, <sup>94m</sup>Tc, <sup>97</sup>Nb; isotopic yields and production. JOUR ARISE 66 208

**A=91**

<sup>91</sup>Sr 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609



## A=91 (continued)

- <sup>91</sup>Y      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>91</sup>Zr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=91 (continued)

- <sup>91</sup>Nb      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>91</sup>Mo      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=92

- <sup>92</sup>Sr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>92</sup>Y      2007BU35      NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>90</sup>Zr, X)<sup>89</sup>Rb, E=590 MeV; <sup>238</sup>U(<sup>82</sup>Se, X)<sup>92</sup>Y / <sup>93</sup>Y, E=505 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma\gamma$ -coin, angular distribution, multipolarity. <sup>89</sup>Rb, <sup>92,93</sup>Y; deduced levels, J,  $\pi$ , configurations. Comparisons to shell model calculations, and structure in <sup>94</sup>Nb. JOUR PRVCA 76 064301
- 2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=92 (continued)

- <sup>92</sup>Zr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>92</sup>Nb      2007LU18      NUCLEAR REACTIONS <sup>175</sup>Lu, <sup>198</sup>Pt, <sup>82</sup>Se(n, 2n), E=13.5-14.6 MeV; measured E $\gamma$ , I $\gamma$ ; deduced cross sections, isomeric cross section ratios. <sup>93</sup>Nb(n, 2n), E=13.5-14.6 MeV; compared cross sections. Comparisons with nuclear model calculations using the HFTT code. JOUR NIMBE 265 453
- 2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=92 (continued)

- 2008UD02 NUCLEAR REACTIONS Zr(p, X)<sup>88</sup>Zr / <sup>89</sup>Zr / <sup>86</sup>Y / <sup>87</sup>Y / <sup>88</sup>Y / <sup>90</sup>Nb / <sup>92</sup>Nb / <sup>95</sup>Nb / <sup>96</sup>Nb, E=4-40 MeV; measured E $\gamma$ , I $\gamma$ , cross sections, and excitation functions using the stacked foil activation technique. JOUR NIMBE 266 13
- <sup>92</sup>Mo 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>92</sup>Tc 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=93

- <sup>93</sup>Sr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>93</sup>Y      2007BU35      NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>90</sup>Zr, X)<sup>89</sup>Rb, E=590 MeV; <sup>238</sup>U(<sup>82</sup>Se, X)<sup>92</sup>Y / <sup>93</sup>Y, E=505 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma\gamma$ -coin, angular distribution, multipolarity. <sup>89</sup>Rb, <sup>92,93</sup>Y; deduced levels, J,  $\pi$ , configurations. Comparisons to shell model calculations, and structure in <sup>94</sup>Nb. JOUR PRVCA 76 064301
- 2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=93 (continued)

- <sup>93</sup>Zr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>93</sup>Nb      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>93</sup>Mo      2007LU19      NUCLEAR REACTIONS <sup>27</sup>Al(n, α), E=13.5-14.8 MeV; <sup>96,98,104</sup>Ru(n, 2n), E=13.5-14.8 MeV; <sup>96,102,104</sup>Ru(n, p)<sup>96</sup>Tc / <sup>96m</sup>Tc / <sup>102m</sup>Tc / <sup>104</sup>Tc, E=13.5-14.8 MeV; <sup>96,102,104</sup>Ru(n, α)<sup>93m</sup>Mo / <sup>99</sup>Mo / <sup>101</sup>Mo, E=13.5-14.8 MeV; <sup>96</sup>Ru(n, d)<sup>95m</sup>Tc, E=13.5-14.8 MeV; measured E<sub>γ</sub>, I<sub>γ</sub>, cross sections. JOUR PRVCA 76 057601

## A=93 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{93}\text{Tc}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- 2008UD01 NUCLEAR REACTIONS  $\text{Mo}(p, X)^{89g}\text{Nb}$  /  $^{93m,93g}\text{Tc}$  /  $^{94m}\text{Tc}$ ,  $E=25.9-67.8$  MeV;  $\text{Mo}(p, X)^{90}\text{Mo}$  /  $^{97}\text{Nb}$ ,  $E=31.9-67.8$  MeV;  $\text{Mo}(p, X)^{89m}\text{Nb}$ ,  $E=46.6-67.8$  MeV; measured  $E\gamma$ ,  $I\gamma$ , excitation functions, cross sections and integral yields using stacked-foil activation technique, natural Mo target.  $^{89}\text{Nb}$ ,  $^{89m}\text{Nb}$ ,  $^{90}\text{Mo}$ ,  $^{93m}\text{Tc}$ ,  $^{93g}\text{Tc}$ ,  $^{94m}\text{Tc}$ ,  $^{97}\text{Nb}$ ; isotopic yields and production. JOUR ARISE 66 208



## A=94

- <sup>94</sup>Y      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>94</sup>Zr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=94 (continued)

- <sup>94</sup>Nb      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>94</sup>Mo      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=94 (continued)

$^{94}\text{Tc}$	2007NA31	<p>NUCLEAR REACTIONS <math>^{136}\text{Xe}(p, X)</math>, <math>E=1</math> GeV / nucleon; measured isotopic cross sections, kinetic energies. <math>^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}</math>, <math>^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}</math>, <math>^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}</math>, <math>^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}</math>, <math>^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}</math>, <math>^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}</math>, <math>^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}</math>, <math>^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}</math>, <math>^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}</math>, <math>^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}</math>, <math>^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}</math>, <math>^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}</math>, <math>^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}</math>, <math>^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}</math>, <math>^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}</math>, <math>^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}</math>, <math>^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}</math>, <math>^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}</math>, <math>^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}</math>, <math>^{127,128,129,130,131,132}\text{Ba}</math>; measured cross sections. JOUR PRVCA 76 064609</p>
	2008UD01	<p>NUCLEAR REACTIONS <math>\text{Mo}(p, X)^{89g}\text{Nb} / ^{93m,93g}\text{Tc} / ^{94m}\text{Tc}</math>, <math>E=25.9-67.8</math> MeV; <math>\text{Mo}(p, X)^{90}\text{Mo} / ^{97}\text{Nb}</math>, <math>E=31.9-67.8</math> MeV; <math>\text{Mo}(p, X)^{89m}\text{Nb}</math>, <math>E=46.6-67.8</math> MeV; measured <math>E\gamma</math>, <math>I\gamma</math>, excitation functions, cross sections and integral yields using stacked-foil activation technique, natural Mo target. <math>^{89}\text{Nb}</math>, <math>^{89m}\text{Nb}</math>, <math>^{90}\text{Mo}</math>, <math>^{93m}\text{Tc}</math>, <math>^{93g}\text{Tc}</math>, <math>^{94m}\text{Tc}</math>, <math>^{97}\text{Nb}</math>; isotopic yields and production. JOUR ARISE 66 208</p>

## A=95

- <sup>95</sup>Y      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>95</sup>Zr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=95 (continued)

- <sup>95</sup>Nb 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008UD02 NUCLEAR REACTIONS Zr(p, X)<sup>88</sup>Zr / <sup>89</sup>Zr / <sup>86</sup>Y / <sup>87</sup>Y / <sup>88</sup>Y / <sup>90</sup>Nb / <sup>92</sup>Nb / <sup>95</sup>Nb / <sup>96</sup>Nb, E=4-40 MeV; measured E $\gamma$ , I $\gamma$ , cross sections, and excitation functions using the stacked foil activation technique. JOUR NIMBE 266 13
- <sup>95</sup>Mo 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007SH46 NUCLEAR REACTIONS <sup>94,95</sup>Mo(n,  $\gamma$ ), E=800 MeV; measured neutron energies, E $\gamma$ , I $\gamma$ ,  $\gamma$ -ray multiplicities. <sup>95,96</sup>Mo; deduced neutron resonance levels, J,  $\pi$ . JOUR PRVCA 76 064317

## A=95 (continued)

<sup>95</sup> Tc	2007LU19	NUCLEAR REACTIONS <sup>27</sup> Al(n, α), E=13.5-14.8 MeV; <sup>96,98,104</sup> Ru(n, 2n), E=13.5-14.8 MeV; <sup>96,102,104</sup> Ru(n, p) <sup>96</sup> Tc / <sup>96m</sup> Tc / <sup>102m</sup> Tc / <sup>104</sup> Tc, E=13.5-14.8 MeV; <sup>96,102,104</sup> Ru(n, α) <sup>93m</sup> Mo / <sup>99</sup> Mo / <sup>101</sup> Mo, E=13.5-14.8 MeV; <sup>96</sup> Ru(n, d) <sup>95m</sup> Tc, E=13.5-14.8 MeV; measured Eγ, Iγ, cross sections. JOUR PRVCA 76 057601
	2007NA31	NUCLEAR REACTIONS <sup>136</sup> Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup> Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup> Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup> Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup> Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup> Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup> Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup> Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup> Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup> Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup> Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup> Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup> Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup> In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup> Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup> Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup> Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup> I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup> Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup> Cs, <sup>127,128,129,130,131,132</sup> Ba; measured cross sections. JOUR PRVCA 76 064609
<sup>95</sup> Ru	2007LU19	NUCLEAR REACTIONS <sup>27</sup> Al(n, α), E=13.5-14.8 MeV; <sup>96,98,104</sup> Ru(n, 2n), E=13.5-14.8 MeV; <sup>96,102,104</sup> Ru(n, p) <sup>96</sup> Tc / <sup>96m</sup> Tc / <sup>102m</sup> Tc / <sup>104</sup> Tc, E=13.5-14.8 MeV; <sup>96,102,104</sup> Ru(n, α) <sup>93m</sup> Mo / <sup>99</sup> Mo / <sup>101</sup> Mo, E=13.5-14.8 MeV; <sup>96</sup> Ru(n, d) <sup>95m</sup> Tc, E=13.5-14.8 MeV; measured Eγ, Iγ, cross sections. JOUR PRVCA 76 057601

## A=95 (continued)

2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=96

$^{96}\text{Y}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=96 (continued)

<sup>96</sup> Zr	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609</p>
<sup>96</sup> Nb	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609</p>
	2008UD02	<p>NUCLEAR REACTIONS Zr(p, X)<sup>88</sup>Zr / <sup>89</sup>Zr / <sup>86</sup>Y / <sup>87</sup>Y / <sup>88</sup>Y / <sup>90</sup>Nb / <sup>92</sup>Nb / <sup>95</sup>Nb / <sup>96</sup>Nb, E=4-40 MeV; measured E<sub>γ</sub>, I<sub>γ</sub>, cross sections, and excitation functions using the stacked foil activation technique. JOUR NIMBE 266 13</p>
<sup>96</sup> Mo	2007KR19	<p>NUCLEAR REACTIONS <sup>96</sup>Mo(<sup>138</sup>Xe, <sup>138</sup>Xe'), (<sup>140</sup>Xe, <sup>140</sup>Xe'), (<sup>142</sup>Xe, <sup>142</sup>Xe'), E=2.84 MeV / nucleon; measured E<sub>γ</sub>, I<sub>γ</sub>. <sup>138,140,142</sup>Xe; deduced B(E2). JOUR ZSTNE 150 127</p>



## A=96 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- 2007SH46 NUCLEAR REACTIONS  $^{94,95}\text{Mo}(n, \gamma)$ ,  $E=800$  MeV; measured neutron energies,  $E\gamma$ ,  $I\gamma$ ,  $\gamma$ -ray multiplicities.  $^{95,96}\text{Mo}$ ; deduced neutron resonance levels,  $J$ ,  $\pi$ . JOUR PRVCA 76 064317
- $^{96}\text{Tc}$  2007LU19 NUCLEAR REACTIONS  $^{27}\text{Al}(n, \alpha)$ ,  $E=13.5-14.8$  MeV;  $^{96,98,104}\text{Ru}(n, 2n)$ ,  $E=13.5-14.8$  MeV;  $^{96,102,104}\text{Ru}(n, p)^{96}\text{Tc} / ^{96m}\text{Tc} / ^{102m}\text{Tc} / ^{104}\text{Tc}$ ,  $E=13.5-14.8$  MeV;  $^{96,102,104}\text{Ru}(n, \alpha)^{93m}\text{Mo} / ^{99}\text{Mo} / ^{101}\text{Mo}$ ,  $E=13.5-14.8$  MeV;  $^{96}\text{Ru}(n, d)^{95m}\text{Tc}$ ,  $E=13.5-14.8$  MeV; measured  $E\gamma$ ,  $I\gamma$ , cross sections. JOUR PRVCA 76 057601

## A=96 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{96}\text{Ru}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=97

- <sup>97</sup>Zr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>97</sup>Nb      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008UD01      NUCLEAR REACTIONS Mo(p, X)<sup>89g</sup>Nb / <sup>93m,93g</sup>Tc / <sup>94m</sup>Tc, E=25.9-67.8 MeV; Mo(p, X)<sup>90</sup>Mo / <sup>97</sup>Nb, E=31.9-67.8 MeV; Mo(p, X)<sup>89m</sup>Nb, E=46.6-67.8 MeV; measured E $\gamma$ , I $\gamma$ , excitation functions, cross sections and integral yields using stacked-foil activation technique, natural Mo target. <sup>89</sup>Nb, <sup>89m</sup>Nb, <sup>90</sup>Mo, <sup>93m</sup>Tc, <sup>93g</sup>Tc, <sup>94m</sup>Tc, <sup>97</sup>Nb; isotopic yields and production. JOUR ARISE 66 208

## A=97 (continued)

- <sup>97</sup>Mo 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>97</sup>Tc 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>97</sup>Ru 2007LU19 NUCLEAR REACTIONS <sup>27</sup>Al(n, α), E=13.5-14.8 MeV; <sup>96,98,104</sup>Ru(n, 2n), E=13.5-14.8 MeV; <sup>96,102,104</sup>Ru(n, p)<sup>96</sup>Tc / <sup>96m</sup>Tc / <sup>102m</sup>Tc / <sup>104</sup>Tc, E=13.5-14.8 MeV; <sup>96,102,104</sup>Ru(n, α)<sup>93m</sup>Mo / <sup>99</sup>Mo / <sup>101</sup>Mo, E=13.5-14.8 MeV; <sup>96</sup>Ru(n, d)<sup>95m</sup>Tc, E=13.5-14.8 MeV; measured E<sub>γ</sub>, I<sub>γ</sub>, cross sections. JOUR PRVCA 76 057601

## A=97 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{97}\text{Rh}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=98

- <sup>98</sup>Zr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>98</sup>Nb      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=98 (continued)

- <sup>98</sup>Mo 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>98</sup>Tc 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=98 (continued)

- <sup>98</sup>Ru      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>98</sup>Rh      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609



## A=99

- <sup>99</sup>Zr      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>99</sup>Nb      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>99</sup>Mo      2007LU19      NUCLEAR REACTIONS <sup>27</sup>Al(n, α), E=13.5-14.8 MeV; <sup>96,98,104</sup>Ru(n, 2n), E=13.5-14.8 MeV; <sup>96,102,104</sup>Ru(n, p)<sup>96</sup>Tc / <sup>96m</sup>Tc / <sup>102m</sup>Tc / <sup>104</sup>Tc, E=13.5-14.8 MeV; <sup>96,102,104</sup>Ru(n, α)<sup>93m</sup>Mo / <sup>99</sup>Mo / <sup>101</sup>Mo, E=13.5-14.8 MeV; <sup>96</sup>Ru(n, d)<sup>95m</sup>Tc, E=13.5-14.8 MeV; measured E<sub>γ</sub>, I<sub>γ</sub>, cross sections. JOUR PRVCA 76 057601

## A=99 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{99}\text{Tc}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=99 (continued)

- <sup>99</sup>Ru      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>99</sup>Rh      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=99 (continued)

- <sup>99</sup>Pd      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>99</sup>Ag      2007MA92      ATOMIC MASSES <sup>99,101,103</sup>Ag, <sup>101,102,103,104</sup>Cd, <sup>102,103,104,105</sup>In, <sup>105,106</sup>Sn, <sup>107,109,111</sup>Sb, <sup>109,110,111,112</sup>Te, <sup>111,112,113</sup>I, <sup>113</sup>Xe; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer. <sup>104</sup>Sn, <sup>105</sup>Sb, <sup>108</sup>Te, <sup>109</sup>I, <sup>112</sup>Xe, <sup>113</sup>Cs; evaluated masses. JOUR ZAANE 34 341

## A=100

$^{100}\text{Nb}$	2007NA31	<p>NUCLEAR REACTIONS <math>^{136}\text{Xe}(p, X)</math>, <math>E=1</math> GeV / nucleon; measured isotopic cross sections, kinetic energies. <math>^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}</math>, <math>^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}</math>, <math>^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}</math>, <math>^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}</math>, <math>^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}</math>, <math>^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}</math>, <math>^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}</math>, <math>^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}</math>, <math>^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}</math>, <math>^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}</math>, <math>^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}</math>, <math>^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}</math>, <math>^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}</math>, <math>^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}</math>, <math>^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}</math>, <math>^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}</math>, <math>^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}</math>, <math>^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}</math>, <math>^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}</math>, <math>^{127,128,129,130,131,132}\text{Ba}</math>; measured cross sections. JOUR PRVCA 76 064609</p>
$^{100}\text{Mo}$	2007NA31	<p>NUCLEAR REACTIONS <math>^{136}\text{Xe}(p, X)</math>, <math>E=1</math> GeV / nucleon; measured isotopic cross sections, kinetic energies. <math>^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}</math>, <math>^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}</math>, <math>^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}</math>, <math>^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}</math>, <math>^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}</math>, <math>^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}</math>, <math>^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}</math>, <math>^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}</math>, <math>^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}</math>, <math>^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}</math>, <math>^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}</math>, <math>^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}</math>, <math>^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}</math>, <math>^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}</math>, <math>^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}</math>, <math>^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}</math>, <math>^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}</math>, <math>^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}</math>, <math>^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}</math>, <math>^{127,128,129,130,131,132}\text{Ba}</math>; measured cross sections. JOUR PRVCA 76 064609</p>

## A=100 (continued)

<sup>100</sup> Tc	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609</p>
<sup>100</sup> Ru	2007NA31	<p>NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609</p>

## A=100 (continued)

- <sup>100</sup>Rh 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>100</sup>Pd 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=101

<sup>101</sup> Mo	2007LU19	NUCLEAR REACTIONS <sup>27</sup> Al(n, α), E=13.5-14.8 MeV; <sup>96,98,104</sup> Ru(n, 2n), E=13.5-14.8 MeV; <sup>96,102,104</sup> Ru(n, p) <sup>96</sup> Tc / <sup>96m</sup> Tc / <sup>102m</sup> Tc / <sup>104</sup> Tc, E=13.5-14.8 MeV; <sup>96,102,104</sup> Ru(n, α) <sup>93m</sup> Mo / <sup>99</sup> Mo / <sup>101</sup> Mo, E=13.5-14.8 MeV; <sup>96</sup> Ru(n, d) <sup>95m</sup> Tc, E=13.5-14.8 MeV; measured E <sub>γ</sub> , I <sub>γ</sub> , cross sections. JOUR PRVCA 76 057601
	2007NA31	NUCLEAR REACTIONS <sup>136</sup> Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup> Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup> Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup> Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup> Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup> Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup> Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup> Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup> Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup> Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup> Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup> Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup> Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup> In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup> Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup> Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup> Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup> I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup> Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup> Cs, <sup>127,128,129,130,131,132</sup> Ba; measured cross sections. JOUR PRVCA 76 064609
<sup>101</sup> Tc	2007NA31	NUCLEAR REACTIONS <sup>136</sup> Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup> Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup> Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup> Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup> Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup> Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup> Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup> Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup> Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup> Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup> Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup> Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup> Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup> In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup> Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup> Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup> Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup> I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup> Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup> Cs, <sup>127,128,129,130,131,132</sup> Ba; measured cross sections. JOUR PRVCA 76 064609



## A=101 (continued)

- <sup>101</sup>Ru 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>101</sup>Rh 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=101 (continued)

- <sup>101</sup>Pd      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>101</sup>Ag      2007MA92      ATOMIC MASSES <sup>99,101,103</sup>Ag, <sup>101,102,103,104</sup>Cd, <sup>102,103,104,105</sup>In, <sup>105,106</sup>Sn, <sup>107,109,111</sup>Sb, <sup>109,110,111,112</sup>Te, <sup>111,112,113</sup>I, <sup>113</sup>Xe; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer. <sup>104</sup>Sn, <sup>105</sup>Sb, <sup>108</sup>Te, <sup>109</sup>I, <sup>112</sup>Xe, <sup>113</sup>Cs; evaluated masses. JOUR ZAANE 34 341
- 2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=101 (continued)**

- <sup>101</sup>Cd 2007MA92 ATOMIC MASSES <sup>99,101,103</sup>Ag, <sup>101,102,103,104</sup>Cd, <sup>102,103,104,105</sup>In, <sup>105,106</sup>Sn, <sup>107,109,111</sup>Sb, <sup>109,110,111,112</sup>Te, <sup>111,112,113</sup>I, <sup>113</sup>Xe; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer. <sup>104</sup>Sn, <sup>105</sup>Sb, <sup>108</sup>Te, <sup>109</sup>I, <sup>112</sup>Xe, <sup>113</sup>Cs; evaluated masses. JOUR ZAANE 34 341
- <sup>101</sup>Sn 2007LI83 RADIOACTIVITY <sup>105</sup>Te, <sup>109</sup>Xe( $\alpha$ ) [from <sup>54</sup>Fe(<sup>58</sup>Ni, 3n), E=220-225 MeV]; measured E $\alpha$ , I $\alpha$ . <sup>105</sup>Te, <sup>109</sup>Xe; deduced Q $\alpha$ . JOUR ZSTNE 150 131

**A=102**

- <sup>102</sup>Mo 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>102</sup>Tc 2007LU19 NUCLEAR REACTIONS <sup>27</sup>Al(n,  $\alpha$ ), E=13.5-14.8 MeV; <sup>96,98,104</sup>Ru(n, 2n), E=13.5-14.8 MeV; <sup>96,102,104</sup>Ru(n, p)<sup>96</sup>Tc / <sup>96m</sup>Tc / <sup>102m</sup>Tc / <sup>104</sup>Tc, E=13.5-14.8 MeV; <sup>96,102,104</sup>Ru(n,  $\alpha$ )<sup>93m</sup>Mo / <sup>99</sup>Mo / <sup>101</sup>Mo, E=13.5-14.8 MeV; <sup>96</sup>Ru(n, d)<sup>95m</sup>Tc, E=13.5-14.8 MeV; measured E $\gamma$ , I $\gamma$ , cross sections. JOUR PRVCA 76 057601

**A=102 (continued)**

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{102}\text{Ru}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=102 (continued)

- <sup>102</sup>Rh 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>102</sup>Pd 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=102 (continued)**

- <sup>102</sup>Ag      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>102</sup>Cd      2007MA92      ATOMIC MASSES <sup>99,101,103</sup>Ag, <sup>101,102,103,104</sup>Cd, <sup>102,103,104,105</sup>In, <sup>105,106</sup>Sn, <sup>107,109,111</sup>Sb, <sup>109,110,111,112</sup>Te, <sup>111,112,113</sup>I, <sup>113</sup>Xe; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer. <sup>104</sup>Sn, <sup>105</sup>Sb, <sup>108</sup>Te, <sup>109</sup>I, <sup>112</sup>Xe, <sup>113</sup>Cs; evaluated masses. JOUR ZAANE 34 341
- <sup>102</sup>In      2007MA92      ATOMIC MASSES <sup>99,101,103</sup>Ag, <sup>101,102,103,104</sup>Cd, <sup>102,103,104,105</sup>In, <sup>105,106</sup>Sn, <sup>107,109,111</sup>Sb, <sup>109,110,111,112</sup>Te, <sup>111,112,113</sup>I, <sup>113</sup>Xe; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer. <sup>104</sup>Sn, <sup>105</sup>Sb, <sup>108</sup>Te, <sup>109</sup>I, <sup>112</sup>Xe, <sup>113</sup>Cs; evaluated masses. JOUR ZAANE 34 341

## A=103

- $^{103}\text{Mo}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{103}\text{Tc}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{103}\text{Ru}$  2007LU19 NUCLEAR REACTIONS  $^{27}\text{Al}(n, \alpha)$ ,  $E=13.5-14.8$  MeV;  $^{96,98,104}\text{Ru}(n, 2n)$ ,  $E=13.5-14.8$  MeV;  $^{96,102,104}\text{Ru}(n, p)^{96}\text{Tc} / ^{96m}\text{Tc} / ^{102m}\text{Tc} / ^{104}\text{Tc}$ ,  $E=13.5-14.8$  MeV;  $^{96,102,104}\text{Ru}(n, \alpha)^{93m}\text{Mo} / ^{99}\text{Mo} / ^{101}\text{Mo}$ ,  $E=13.5-14.8$  MeV;  $^{96}\text{Ru}(n, d)^{95m}\text{Tc}$ ,  $E=13.5-14.8$  MeV; measured  $E_\gamma$ ,  $I_\gamma$ , cross sections. JOUR PRVCA 76 057601

**A=103 (continued)**

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{103}\text{Rh}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{103}\text{Pd}$  2007AS07 NUCLEAR REACTIONS  $^{98}\text{Mo}(^{12}\text{C}, 3n)$ ,  $(^{12}\text{C}, 4n)$ ,  $(^{12}\text{C}, 2n\alpha)$ ,  $(^{12}\text{C}, 3n\alpha)$ ,  $E=60$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$  coin.  $^{103}\text{Pd}$ ,  $^{106,107}\text{Cd}$ ; deduced levels,  $J$ ,  $\pi$ , configurations, lifetimes using recoil distance Doppler shift and differential decay cutoff methods. JOUR PRVCA 76 064302



## A=103 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{103}\text{Ag}$  2007MA92 ATOMIC MASSES  $^{99,101,103}\text{Ag}$ ,  $^{101,102,103,104}\text{Cd}$ ,  $^{102,103,104,105}\text{In}$ ,  $^{105,106}\text{Sn}$ ,  $^{107,109,111}\text{Sb}$ ,  $^{109,110,111,112}\text{Te}$ ,  $^{111,112,113}\text{I}$ ,  $^{113}\text{Xe}$ ; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer.  $^{104}\text{Sn}$ ,  $^{105}\text{Sb}$ ,  $^{108}\text{Te}$ ,  $^{109}\text{I}$ ,  $^{112}\text{Xe}$ ,  $^{113}\text{Cs}$ ; evaluated masses. JOUR ZAANE 34 341
- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

**A=103 (continued)**

- 2008RA06 NUCLEAR REACTIONS  $^{72}\text{Ge}(^{35}\text{Cl}, 2n2p\gamma)$ ,  $E=135$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin, angular distributions, half-lives; deduced level energies,  $J$ ,  $\pi$ ,  $B(M1)$ ,  $B(E2)$ , configurations, existence of magnetic dipole bands. JOUR PRVCA 77 024305
- 2008UD03 NUCLEAR REACTIONS  $\text{Ag}(p, xn)^{104}\text{Cd} / ^{105}\text{Cd}$ ,  $E=32-60$  MeV;  $\text{Ag}(p, xnp)^{103}\text{Ag} / ^{104}\text{Ag}$ ,  $E=32-60$  MeV; measured  $E\gamma$ ,  $I\gamma$ , excitation functions using stacked foil activation. Compared results to precompound hybrid model calculations. JOUR RAACA 96 67
- $^{103}\text{Cd}$  2007MA92 ATOMIC MASSES  $^{99,101,103}\text{Ag}$ ,  $^{101,102,103,104}\text{Cd}$ ,  $^{102,103,104,105}\text{In}$ ,  $^{105,106}\text{Sn}$ ,  $^{107,109,111}\text{Sb}$ ,  $^{109,110,111,112}\text{Te}$ ,  $^{111,112,113}\text{I}$ ,  $^{113}\text{Xe}$ ; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer.  $^{104}\text{Sn}$ ,  $^{105}\text{Sb}$ ,  $^{108}\text{Te}$ ,  $^{109}\text{I}$ ,  $^{112}\text{Xe}$ ,  $^{113}\text{Cs}$ ; evaluated masses. JOUR ZAANE 34 341
- $^{103}\text{In}$  2007MA92 ATOMIC MASSES  $^{99,101,103}\text{Ag}$ ,  $^{101,102,103,104}\text{Cd}$ ,  $^{102,103,104,105}\text{In}$ ,  $^{105,106}\text{Sn}$ ,  $^{107,109,111}\text{Sb}$ ,  $^{109,110,111,112}\text{Te}$ ,  $^{111,112,113}\text{I}$ ,  $^{113}\text{Xe}$ ; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer.  $^{104}\text{Sn}$ ,  $^{105}\text{Sb}$ ,  $^{108}\text{Te}$ ,  $^{109}\text{I}$ ,  $^{112}\text{Xe}$ ,  $^{113}\text{Cs}$ ; evaluated masses. JOUR ZAANE 34 341

**A=104**

- $^{104}\text{Mo}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{104}\text{Tc}$  2007LU19 NUCLEAR REACTIONS  $^{27}\text{Al}(n, \alpha)$ ,  $E=13.5-14.8$  MeV;  $^{96,98,104}\text{Ru}(n, 2n)$ ,  $E=13.5-14.8$  MeV;  $^{96,102,104}\text{Ru}(n, p)^{96}\text{Tc} / ^{96m}\text{Tc} / ^{102m}\text{Tc} / ^{104}\text{Tc}$ ,  $E=13.5-14.8$  MeV;  $^{96,102,104}\text{Ru}(n, \alpha)^{93m}\text{Mo} / ^{99}\text{Mo} / ^{101}\text{Mo}$ ,  $E=13.5-14.8$  MeV;  $^{96}\text{Ru}(n, d)^{95m}\text{Tc}$ ,  $E=13.5-14.8$  MeV; measured  $E\gamma$ ,  $I\gamma$ , cross sections. JOUR PRVCA 76 057601

## A=104 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{104}\text{Ru}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=104 (continued)

- <sup>104</sup>Rh 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>104</sup>Pd 2007AS07 NUCLEAR REACTIONS <sup>98</sup>Mo(<sup>12</sup>C, 3n), (<sup>12</sup>C, 4n), (<sup>12</sup>C, 2nα), (<sup>12</sup>C, 3nα), E=60 MeV; measured Eγ, Iγ, γγ coin. <sup>103</sup>Pd, <sup>106,107</sup>Cd; deduced levels, J, π, configurations, lifetimes using recoil distance Doppler shift and differential decay cutoff methods. JOUR PRVCA 76 064302
- 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=104 (continued)**

- 2008ST04 NUCLEAR REACTIONS  $^{104}\text{Pd}({}^{67}\text{Cu}, {}^{67}\text{Cu}')$ ,  $({}^{69}\text{Cu}, {}^{69}\text{Cu}')$ ,  $({}^{71}\text{Cu}, {}^{71}\text{Cu}')$ ,  $E=2.99$  MeV / nucleon;  $^{120}\text{Sn}({}^{71}\text{Cu}, {}^{71}\text{Cu}')$ ,  $({}^{73}\text{Cu}, {}^{73}\text{Cu}')$ ,  $E=2.99$  MeV / nucleon; measured  $E\gamma$ ,  $I\gamma$  following coulomb excitation.  ${}^{67,69,71,73}\text{Cu}$ ; deduced level energies,  $B(E2)$ . JOUR PRLTA 100 112502
- $^{104}\text{Ag}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  ${}^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  ${}^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  ${}^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  ${}^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  ${}^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  ${}^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  ${}^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  ${}^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  ${}^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  ${}^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  ${}^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  ${}^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  ${}^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  ${}^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  ${}^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  ${}^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  ${}^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  ${}^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  ${}^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  ${}^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- 2008UD03 NUCLEAR REACTIONS  $\text{Ag}(p, xn){}^{104}\text{Cd} / {}^{105}\text{Cd}$ ,  $E=32-60$  MeV;  $\text{Ag}(p, xnp){}^{103}\text{Ag} / {}^{104}\text{Ag}$ ,  $E=32-60$  MeV; measured  $E\gamma$ ,  $I\gamma$ , excitation functions using stacked foil activation. Compared results to precompound hybrid model calculations. JOUR RAACA 96 67
- $^{104}\text{Cd}$  2007MA92 ATOMIC MASSES  ${}^{99,101,103}\text{Ag}$ ,  ${}^{101,102,103,104}\text{Cd}$ ,  ${}^{102,103,104,105}\text{In}$ ,  ${}^{105,106}\text{Sn}$ ,  ${}^{107,109,111}\text{Sb}$ ,  ${}^{109,110,111,112}\text{Te}$ ,  ${}^{111,112,113}\text{I}$ ,  ${}^{113}\text{Xe}$ ; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer.  ${}^{104}\text{Sn}$ ,  ${}^{105}\text{Sb}$ ,  ${}^{108}\text{Te}$ ,  ${}^{109}\text{I}$ ,  ${}^{112}\text{Xe}$ ,  ${}^{113}\text{Cs}$ ; evaluated masses. JOUR ZAANE 34 341

## A=104 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- 2008UD03 NUCLEAR REACTIONS  $\text{Ag}(p, xn)^{104}\text{Cd} / ^{105}\text{Cd}$ ,  $E=32-60$  MeV;  $\text{Ag}(p, xnp)^{103}\text{Ag} / ^{104}\text{Ag}$ ,  $E=32-60$  MeV; measured  $E\gamma$ ,  $I\gamma$ , excitation functions using stacked foil activation. Compared results to precompound hybrid model calculations. JOUR RAACA 96 67
- $^{104}\text{In}$  2007MA92 ATOMIC MASSES  $^{99,101,103}\text{Ag}$ ,  $^{101,102,103,104}\text{Cd}$ ,  $^{102,103,104,105}\text{In}$ ,  $^{105,106}\text{Sn}$ ,  $^{107,109,111}\text{Sb}$ ,  $^{109,110,111,112}\text{Te}$ ,  $^{111,112,113}\text{I}$ ,  $^{113}\text{Xe}$ ; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer.  $^{104}\text{Sn}$ ,  $^{105}\text{Sb}$ ,  $^{108}\text{Te}$ ,  $^{109}\text{I}$ ,  $^{112}\text{Xe}$ ,  $^{113}\text{Cs}$ ; evaluated masses. JOUR ZAANE 34 341
- $^{104}\text{Sn}$  2007MA92 ATOMIC MASSES  $^{99,101,103}\text{Ag}$ ,  $^{101,102,103,104}\text{Cd}$ ,  $^{102,103,104,105}\text{In}$ ,  $^{105,106}\text{Sn}$ ,  $^{107,109,111}\text{Sb}$ ,  $^{109,110,111,112}\text{Te}$ ,  $^{111,112,113}\text{I}$ ,  $^{113}\text{Xe}$ ; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer.  $^{104}\text{Sn}$ ,  $^{105}\text{Sb}$ ,  $^{108}\text{Te}$ ,  $^{109}\text{I}$ ,  $^{112}\text{Xe}$ ,  $^{113}\text{Cs}$ ; evaluated masses. JOUR ZAANE 34 341

## A=105

$^{105}\text{Tc}$	2007NA31	<p>NUCLEAR REACTIONS <math>^{136}\text{Xe}(p, X)</math>, E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <math>^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}</math>, <math>^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}</math>, <math>^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}</math>, <math>^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}</math>, <math>^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}</math>, <math>^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}</math>, <math>^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}</math>, <math>^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}</math>, <math>^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}</math>, <math>^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}</math>, <math>^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}</math>, <math>^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}</math>, <math>^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}</math>, <math>^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}</math>, <math>^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}</math>, <math>^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}</math>, <math>^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}</math>, <math>^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}</math>, <math>^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}</math>, <math>^{127,128,129,130,131,132}\text{Ba}</math>; measured cross sections. JOUR PRVCA 76 064609</p>
$^{105}\text{Ru}$	2007NA31	<p>NUCLEAR REACTIONS <math>^{136}\text{Xe}(p, X)</math>, E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <math>^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}</math>, <math>^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}</math>, <math>^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}</math>, <math>^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}</math>, <math>^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}</math>, <math>^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}</math>, <math>^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}</math>, <math>^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}</math>, <math>^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}</math>, <math>^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}</math>, <math>^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}</math>, <math>^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}</math>, <math>^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}</math>, <math>^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}</math>, <math>^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}</math>, <math>^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}</math>, <math>^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}</math>, <math>^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}</math>, <math>^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}</math>, <math>^{127,128,129,130,131,132}\text{Ba}</math>; measured cross sections. JOUR PRVCA 76 064609</p>

## A=105 (continued)

- <sup>105</sup>Rh 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>105</sup>Pd 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609



## A=105 (continued)

- <sup>105</sup>Ag      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>105</sup>Cd      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008UD03      NUCLEAR REACTIONS Ag(p, xn)<sup>104</sup>Cd / <sup>105</sup>Cd, E=32-60 MeV; Ag(p, xnp)<sup>103</sup>Ag / <sup>104</sup>Ag, E=32-60 MeV; measured E $\gamma$ , I $\gamma$ , excitation functions using stacked foil activation. Compared results to precompound hybrid model calculations. JOUR RAACA 96 67

**A=105 (continued)**

- <sup>105</sup>In 2007MA92 ATOMIC MASSES <sup>99,101,103</sup>Ag, <sup>101,102,103,104</sup>Cd, <sup>102,103,104,105</sup>In, <sup>105,106</sup>Sn, <sup>107,109,111</sup>Sb, <sup>109,110,111,112</sup>Te, <sup>111,112,113</sup>I, <sup>113</sup>Xe; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer. <sup>104</sup>Sn, <sup>105</sup>Sb, <sup>108</sup>Te, <sup>109</sup>I, <sup>112</sup>Xe, <sup>113</sup>Cs; evaluated masses. JOUR ZAANE 34 341
- 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>105</sup>Sn 2007MA92 ATOMIC MASSES <sup>99,101,103</sup>Ag, <sup>101,102,103,104</sup>Cd, <sup>102,103,104,105</sup>In, <sup>105,106</sup>Sn, <sup>107,109,111</sup>Sb, <sup>109,110,111,112</sup>Te, <sup>111,112,113</sup>I, <sup>113</sup>Xe; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer. <sup>104</sup>Sn, <sup>105</sup>Sb, <sup>108</sup>Te, <sup>109</sup>I, <sup>112</sup>Xe, <sup>113</sup>Cs; evaluated masses. JOUR ZAANE 34 341
- <sup>105</sup>Sb 2007MA92 ATOMIC MASSES <sup>99,101,103</sup>Ag, <sup>101,102,103,104</sup>Cd, <sup>102,103,104,105</sup>In, <sup>105,106</sup>Sn, <sup>107,109,111</sup>Sb, <sup>109,110,111,112</sup>Te, <sup>111,112,113</sup>I, <sup>113</sup>Xe; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer. <sup>104</sup>Sn, <sup>105</sup>Sb, <sup>108</sup>Te, <sup>109</sup>I, <sup>112</sup>Xe, <sup>113</sup>Cs; evaluated masses. JOUR ZAANE 34 341
- <sup>105</sup>Te 2007LI83 RADIOACTIVITY <sup>105</sup>Te, <sup>109</sup>Xe( $\alpha$ ) [from <sup>54</sup>Fe(<sup>58</sup>Ni, 3n), E=220-225 MeV]; measured E $\alpha$ , I $\alpha$ . <sup>105</sup>Te, <sup>109</sup>Xe; deduced Q $\alpha$ . JOUR ZSTNE 150 131

**A=106**

- <sup>106</sup>Mo 2008SA05 RADIOACTIVITY <sup>106</sup>Tc( $\beta^+$ ) [from <sup>238</sup>U(p, F), E=25 MeV]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, T<sub>1/2</sub>, B(E2) using advanced time-delayed method. <sup>106</sup>Ru deduced levels, J,  $\pi$ , T<sub>1/2</sub>. Comparison with various models. JOUR ZAANE 35 159

## A=106 (continued)

- <sup>106</sup>Tc 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008SA05 RADIOACTIVITY <sup>106</sup>Tc( $\beta^+$ ) [from <sup>238</sup>U(p, F), E=25 MeV]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin, T<sub>1/2</sub>, B(E2) using advanced time-delayed method. <sup>106</sup>Ru deduced levels, J,  $\pi$ , T<sub>1/2</sub>. Comparison with various models. JOUR ZAANE 35 159
- <sup>106</sup>Ru 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=106 (continued)

- 2008SA05 RADIOACTIVITY  $^{106}\text{Tc}(\beta^+)$  [from  $^{238}\text{U}(\text{p}, \text{F})$ , E=25 MeV]; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -,  $\beta\gamma$ -coin,  $T_{1/2}$ , B(E2) using advanced time-delayed method.  $^{106}\text{Ru}$  deduced levels, J,  $\pi$ ,  $T_{1/2}$ . Comparison with various models. JOUR ZAANE 35 159
- $^{106}\text{Rh}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(\text{p}, \text{X})$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{106}\text{Pd}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(\text{p}, \text{X})$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=106 (continued)

- <sup>106</sup>Ag 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>106</sup>Cd 2007AS07 NUCLEAR REACTIONS <sup>98</sup>Mo(<sup>12</sup>C, 3n), (<sup>12</sup>C, 4n), (<sup>12</sup>C, 2n $\alpha$ ), (<sup>12</sup>C, 3n $\alpha$ ), E=60 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$  coin. <sup>103</sup>Pd, <sup>106,107</sup>Cd; deduced levels, J,  $\pi$ , configurations, lifetimes using recoil distance Doppler shift and differential decay cutoff methods. JOUR PRVCA 76 064302
- 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=106 (continued)

- <sup>106</sup>In 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>106</sup>Sn 2007MA92 ATOMIC MASSES <sup>99,101,103</sup>Ag, <sup>101,102,103,104</sup>Cd, <sup>102,103,104,105</sup>In, <sup>105,106</sup>Sn, <sup>107,109,111</sup>Sb, <sup>109,110,111,112</sup>Te, <sup>111,112,113</sup>I, <sup>113</sup>Xe; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer. <sup>104</sup>Sn, <sup>105</sup>Sb, <sup>108</sup>Te, <sup>109</sup>I, <sup>112</sup>Xe, <sup>113</sup>Cs; evaluated masses. JOUR ZAANE 34 341
- <sup>106</sup>Te 2007PE32 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301

## A=107

- <sup>107</sup>Ru 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>107</sup>Rh 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=107 (continued)

- <sup>107</sup>Pd 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>107</sup>Ag 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>107</sup>Cd 2007AS07 NUCLEAR REACTIONS <sup>98</sup>Mo(<sup>12</sup>C, 3n), (<sup>12</sup>C, 4n), (<sup>12</sup>C, 2n $\alpha$ ), (<sup>12</sup>C, 3n $\alpha$ ), E=60 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$  coin. <sup>103</sup>Pd, <sup>106,107</sup>Cd; deduced levels, J,  $\pi$ , configurations, lifetimes using recoil distance Doppler shift and differential decay cutoff methods. JOUR PRVCA 76 064302



## A=107 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{107}\text{In}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{107}\text{Sb}$  2007MA92 ATOMIC MASSES  $^{99,101,103}\text{Ag}$ ,  $^{101,102,103,104}\text{Cd}$ ,  $^{102,103,104,105}\text{In}$ ,  $^{105,106}\text{Sn}$ ,  $^{107,109,111}\text{Sb}$ ,  $^{109,110,111,112}\text{Te}$ ,  $^{111,112,113}\text{I}$ ,  $^{113}\text{Xe}$ ; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer.  $^{104}\text{Sn}$ ,  $^{105}\text{Sb}$ ,  $^{108}\text{Te}$ ,  $^{109}\text{I}$ ,  $^{112}\text{Xe}$ ,  $^{113}\text{Cs}$ ; evaluated masses. JOUR ZAANE 34 341

## A=108

$^{108}\text{Ru}$	2007NA31	<p>NUCLEAR REACTIONS <math>^{136}\text{Xe}(p, X)</math>, E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <math>^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}</math>, <math>^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}</math>, <math>^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}</math>, <math>^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}</math>, <math>^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}</math>, <math>^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}</math>, <math>^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}</math>, <math>^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}</math>, <math>^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}</math>, <math>^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}</math>, <math>^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}</math>, <math>^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}</math>, <math>^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}</math>, <math>^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}</math>, <math>^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}</math>, <math>^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}</math>, <math>^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}</math>, <math>^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}</math>, <math>^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}</math>, <math>^{127,128,129,130,131,132}\text{Ba}</math>; measured cross sections. JOUR PRVCA 76 064609</p>
$^{108}\text{Rh}$	2007NA31	<p>NUCLEAR REACTIONS <math>^{136}\text{Xe}(p, X)</math>, E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <math>^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}</math>, <math>^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}</math>, <math>^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}</math>, <math>^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}</math>, <math>^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}</math>, <math>^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}</math>, <math>^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}</math>, <math>^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}</math>, <math>^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}</math>, <math>^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}</math>, <math>^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}</math>, <math>^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}</math>, <math>^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}</math>, <math>^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}</math>, <math>^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}</math>, <math>^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}</math>, <math>^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}</math>, <math>^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}</math>, <math>^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}</math>, <math>^{127,128,129,130,131,132}\text{Ba}</math>; measured cross sections. JOUR PRVCA 76 064609</p>

## A=108 (continued)

- $^{108}\text{Pd}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{108}\text{Ag}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{108}\text{Cd}$  2007BA73 NUCLEAR REACTIONS  $^{114}\text{Cd}(n, n'\gamma)$ ,  $E^*=3.5$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma$ -yields,  $\gamma\gamma$ -coin, angular distributions, half-lives; deduced levels,  $J$ ,  $\pi$ , multipolarities, mixing ratios, configurations,  $B(E2)$ ,  $B(M1)$ ,  $B(E1)$ . Comparisons with IBA model calculations.  $^{108,110,112,114,116,118}\text{Cd}$ ; systematics. JOUR PRVCA 76 054308

## A=108 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{108}\text{In}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=108 (continued)

- $^{108}\text{Sn}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{108}\text{Te}$  2007MA92 ATOMIC MASSES  $^{99,101,103}\text{Ag}$ ,  $^{101,102,103,104}\text{Cd}$ ,  $^{102,103,104,105}\text{In}$ ,  $^{105,106}\text{Sn}$ ,  $^{107,109,111}\text{Sb}$ ,  $^{109,110,111,112}\text{Te}$ ,  $^{111,112,113}\text{I}$ ,  $^{113}\text{Xe}$ ; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer.  $^{104}\text{Sn}$ ,  $^{105}\text{Sb}$ ,  $^{108}\text{Te}$ ,  $^{109}\text{I}$ ,  $^{112}\text{Xe}$ ,  $^{113}\text{Cs}$ ; evaluated masses. JOUR ZAANE 34 341
- 2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2np)$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  $^{106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138}\text{Te}$ ,  $^{109,111,113,115,117,119,121,123,125,127,129,131}\text{I}$ ,  $^{110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144}\text{Xe}$ ,  $^{117,119,121,123,125,127,129}\text{Cs}$ ; systematics. JOUR PRVCA 76 054301

## A=109

- $^{109}\text{Ru}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{109}\text{Rh}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=109 (continued)

- <sup>109</sup>Pd 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>109</sup>Ag 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008ZI01 NUCLEAR REACTIONS <sup>109</sup>Ag, <sup>208</sup>Pb(<sup>44</sup>Ar, <sup>44</sup>Ar'), E=2.7, 3.7 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (charged-particle) $\gamma$ -coin. Deduced coulomb excitation  $\sigma(\theta)$ , B(E2). JOUR APOBB 39 519

**A=109 (continued)**

- <sup>109</sup>Cd      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>109</sup>In      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609



## A=109 (continued)

- <sup>109</sup>Sn 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>109</sup>Sb 2007MA92 ATOMIC MASSES <sup>99,101,103</sup>Ag, <sup>101,102,103,104</sup>Cd, <sup>102,103,104,105</sup>In, <sup>105,106</sup>Sn, <sup>107,109,111</sup>Sb, <sup>109,110,111,112</sup>Te, <sup>111,112,113</sup>I, <sup>113</sup>Xe; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer. <sup>104</sup>Sn, <sup>105</sup>Sb, <sup>108</sup>Te, <sup>109</sup>I, <sup>112</sup>Xe, <sup>113</sup>Cs; evaluated masses. JOUR ZAANE 34 341
- <sup>109</sup>Te 2007MA92 ATOMIC MASSES <sup>99,101,103</sup>Ag, <sup>101,102,103,104</sup>Cd, <sup>102,103,104,105</sup>In, <sup>105,106</sup>Sn, <sup>107,109,111</sup>Sb, <sup>109,110,111,112</sup>Te, <sup>111,112,113</sup>I, <sup>113</sup>Xe; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer. <sup>104</sup>Sn, <sup>105</sup>Sb, <sup>108</sup>Te, <sup>109</sup>I, <sup>112</sup>Xe, <sup>113</sup>Cs; evaluated masses. JOUR ZAANE 34 341
- <sup>109</sup>I 2007MA92 ATOMIC MASSES <sup>99,101,103</sup>Ag, <sup>101,102,103,104</sup>Cd, <sup>102,103,104,105</sup>In, <sup>105,106</sup>Sn, <sup>107,109,111</sup>Sb, <sup>109,110,111,112</sup>Te, <sup>111,112,113</sup>I, <sup>113</sup>Xe; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer. <sup>104</sup>Sn, <sup>105</sup>Sb, <sup>108</sup>Te, <sup>109</sup>I, <sup>112</sup>Xe, <sup>113</sup>Cs; evaluated masses. JOUR ZAANE 34 341
- 2007PE32 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multiplicities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301
- <sup>109</sup>Xe 2007LI83 RADIOACTIVITY <sup>105</sup>Te, <sup>109</sup>Xe( $\alpha$ ) [from <sup>54</sup>Fe(<sup>58</sup>Ni, 3n), E=220-225 MeV]; measured E $\alpha$ , I $\alpha$ . <sup>105</sup>Te, <sup>109</sup>Xe; deduced Q $\alpha$ . JOUR ZSTNE 150 131

## A=110

- <sup>110</sup>Rh 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>110</sup>Pd 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=110 (continued)

- <sup>110</sup>Ag 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>110</sup>Cd 2007BA73 NUCLEAR REACTIONS <sup>114</sup>Cd(n, n'γ), E\*=3.5 MeV; measured Eγ, Iγ, γ-yields, γγ-coin, angular distributions, half-lives; deduced levels, J, π, multipolarities, mixing ratios, configurations, B(E2), B(M1), B(E1). Comparisons with IBA model calculations. <sup>108,110,112,114,116,118</sup>Cd; systematics. JOUR PRVCA 76 054308
- 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=110 (continued)

- <sup>110</sup>In      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>110</sup>Sn      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=110 (continued)

- <sup>110</sup>Sb      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>110</sup>Te      2007MA92      ATOMIC MASSES <sup>99,101,103</sup>Ag, <sup>101,102,103,104</sup>Cd, <sup>102,103,104,105</sup>In, <sup>105,106</sup>Sn, <sup>107,109,111</sup>Sb, <sup>109,110,111,112</sup>Te, <sup>111,112,113</sup>I, <sup>113</sup>Xe; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer. <sup>104</sup>Sn, <sup>105</sup>Sb, <sup>108</sup>Te, <sup>109</sup>I, <sup>112</sup>Xe, <sup>113</sup>Cs; evaluated masses. JOUR ZAANE 34 341
- 2007PE32      NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E<sub>γ</sub>, I<sub>γ</sub>, γγ-coin, γγ(θ), multipolarities. <sup>109</sup>I; deduced levels, J, π, rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301
- <sup>110</sup>Xe      2007PE32      NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E<sub>γ</sub>, I<sub>γ</sub>, γγ-coin, γγ(θ), multipolarities. <sup>109</sup>I; deduced levels, J, π, rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301

## A=111

- <sup>111</sup>Rh 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>111</sup>Pd 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=111 (continued)

- <sup>111</sup>Ag 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>111</sup>Cd 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=111 (continued)

- <sup>111</sup>In 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>111</sup>Sn 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>111</sup>Sb 2007MA92 ATOMIC MASSES <sup>99,101,103</sup>Ag, <sup>101,102,103,104</sup>Cd, <sup>102,103,104,105</sup>In, <sup>105,106</sup>Sn, <sup>107,109,111</sup>Sb, <sup>109,110,111,112</sup>Te, <sup>111,112,113</sup>I, <sup>113</sup>Xe; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer. <sup>104</sup>Sn, <sup>105</sup>Sb, <sup>108</sup>Te, <sup>109</sup>I, <sup>112</sup>Xe, <sup>113</sup>Cs; evaluated masses. JOUR ZAANE 34 341



## A=111 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{111}\text{Te}$  2007MA92 ATOMIC MASSES  $^{99,101,103}\text{Ag}$ ,  $^{101,102,103,104}\text{Cd}$ ,  $^{102,103,104,105}\text{In}$ ,  $^{105,106}\text{Sn}$ ,  $^{107,109,111}\text{Sb}$ ,  $^{109,110,111,112}\text{Te}$ ,  $^{111,112,113}\text{I}$ ,  $^{113}\text{Xe}$ ; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer.  $^{104}\text{Sn}$ ,  $^{105}\text{Sb}$ ,  $^{108}\text{Te}$ ,  $^{109}\text{I}$ ,  $^{112}\text{Xe}$ ,  $^{113}\text{Cs}$ ; evaluated masses. JOUR ZAANE 34 341
- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

**A=111 (continued)**

- <sup>111</sup>I      2007MA92      ATOMIC MASSES <sup>99,101,103</sup>Ag, <sup>101,102,103,104</sup>Cd, <sup>102,103,104,105</sup>In, <sup>105,106</sup>Sn, <sup>107,109,111</sup>Sb, <sup>109,110,111,112</sup>Te, <sup>111,112,113</sup>I, <sup>113</sup>Xe; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer. <sup>104</sup>Sn, <sup>105</sup>Sb, <sup>108</sup>Te, <sup>109</sup>I, <sup>112</sup>Xe, <sup>113</sup>Cs; evaluated masses. JOUR ZAANE 34 341
- 2007PE32      NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301

**A=112**

- <sup>112</sup>Pd      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=112 (continued)

- <sup>112</sup>Ag 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>112</sup>Cd 2007BA73 NUCLEAR REACTIONS <sup>114</sup>Cd(n, n'γ), E\*=3.5 MeV; measured Eγ, Iγ, γ-yields, γγ-coin, angular distributions, half-lives; deduced levels, J, π, multipolarities, mixing ratios, configurations, B(E2), B(M1), B(E1). Comparisons with IBA model calculations. <sup>108,110,112,114,116,118</sup>Cd; systematics. JOUR PRVCA 76 054308
- 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008DA02 RADIOACTIVITY <sup>112</sup>Sn(2EC), (β<sup>+</sup>EC), <sup>124</sup>Sn(2β<sup>-</sup>); measured Eγ, Iγ; deduced T<sub>1/2</sub> lower limits. JOUR NUPAB 799 167

## A=112 (continued)

- <sup>112</sup>In 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>112</sup>Sn 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008DA02 RADIOACTIVITY <sup>112</sup>Sn(2EC), ( $\beta^+$ EC), <sup>124</sup>Sn(2 $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced T<sub>1/2</sub> lower limits. JOUR NUPAB 799 167

## A=112 (continued)

- <sup>112</sup>Sb 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>112</sup>Te 2007MA92 ATOMIC MASSES <sup>99,101,103</sup>Ag, <sup>101,102,103,104</sup>Cd, <sup>102,103,104,105</sup>In, <sup>105,106</sup>Sn, <sup>107,109,111</sup>Sb, <sup>109,110,111,112</sup>Te, <sup>111,112,113</sup>I, <sup>113</sup>Xe; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer. <sup>104</sup>Sn, <sup>105</sup>Sb, <sup>108</sup>Te, <sup>109</sup>I, <sup>112</sup>Xe, <sup>113</sup>Cs; evaluated masses. JOUR ZAANE 34 341
- 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=112 (continued)**

- 2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2\text{np})$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  
106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te,  
109,111,113,115,117,119,121,123,125,127,129,131I,  
110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe,  
117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301
- $^{112}\text{I}$  2007MA92 ATOMIC MASSES  $^{99,101,103}\text{Ag}$ ,  $^{101,102,103,104}\text{Cd}$ ,  $^{102,103,104,105}\text{In}$ ,  $^{105,106}\text{Sn}$ ,  $^{107,109,111}\text{Sb}$ ,  $^{109,110,111,112}\text{Te}$ ,  $^{111,112,113}\text{I}$ ,  $^{113}\text{Xe}$ ; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer.  $^{104}\text{Sn}$ ,  $^{105}\text{Sb}$ ,  $^{108}\text{Te}$ ,  $^{109}\text{I}$ ,  $^{112}\text{Xe}$ ,  $^{113}\text{Cs}$ ; evaluated masses. JOUR ZAANE 34 341
- $^{112}\text{Xe}$  2007MA92 ATOMIC MASSES  $^{99,101,103}\text{Ag}$ ,  $^{101,102,103,104}\text{Cd}$ ,  $^{102,103,104,105}\text{In}$ ,  $^{105,106}\text{Sn}$ ,  $^{107,109,111}\text{Sb}$ ,  $^{109,110,111,112}\text{Te}$ ,  $^{111,112,113}\text{I}$ ,  $^{113}\text{Xe}$ ; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer.  $^{104}\text{Sn}$ ,  $^{105}\text{Sb}$ ,  $^{108}\text{Te}$ ,  $^{109}\text{I}$ ,  $^{112}\text{Xe}$ ,  $^{113}\text{Cs}$ ; evaluated masses. JOUR ZAANE 34 341
- 2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2\text{np})$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  
106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te,  
109,111,113,115,117,119,121,123,125,127,129,131I,  
110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe,  
117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301

**A=113**

- $^{113}\text{Pd}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=113 (continued)

- $^{113}\text{Ag}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{113}\text{Cd}$  2007BE61 RADIOACTIVITY  $^{113}\text{Cd}(\beta^-)$ ; measured  $\beta$  spectra, half-life. Low background experiment. JOUR PRVCA 76 064603
- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{113}\text{In}$  2007BE61 RADIOACTIVITY  $^{113}\text{Cd}(\beta^-)$ ; measured  $\beta$  spectra, half-life. Low background experiment. JOUR PRVCA 76 064603

## A=113 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{113}\text{Sn}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609



## A=113 (continued)

- <sup>113</sup>Sb 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008BH02 NUCLEAR REACTIONS <sup>93</sup>Nb(<sup>20</sup>Ne, X), E=145, 160 MeV; measured E $\gamma$ , I $\gamma$ , neutron-spectra, fusion cross sections. <sup>113</sup>Sb; deduced giant dipole resonance parameters, J. JOUR PRVCA 77 024318
- <sup>113</sup>Te 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=113 (continued)

- <sup>113</sup>I      2007MA92      ATOMIC MASSES <sup>99,101,103</sup>Ag, <sup>101,102,103,104</sup>Cd, <sup>102,103,104,105</sup>In, <sup>105,106</sup>Sn, <sup>107,109,111</sup>Sb, <sup>109,110,111,112</sup>Te, <sup>111,112,113</sup>I, <sup>113</sup>Xe; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer. <sup>104</sup>Sn, <sup>105</sup>Sb, <sup>108</sup>Te, <sup>109</sup>I, <sup>112</sup>Xe, <sup>113</sup>Cs; evaluated masses. JOUR ZAANE 34 341
- 2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32      NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301
- <sup>113</sup>Xe      2007MA92      ATOMIC MASSES <sup>99,101,103</sup>Ag, <sup>101,102,103,104</sup>Cd, <sup>102,103,104,105</sup>In, <sup>105,106</sup>Sn, <sup>107,109,111</sup>Sb, <sup>109,110,111,112</sup>Te, <sup>111,112,113</sup>I, <sup>113</sup>Xe; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer. <sup>104</sup>Sn, <sup>105</sup>Sb, <sup>108</sup>Te, <sup>109</sup>I, <sup>112</sup>Xe, <sup>113</sup>Cs; evaluated masses. JOUR ZAANE 34 341
- <sup>113</sup>Cs      2007MA92      ATOMIC MASSES <sup>99,101,103</sup>Ag, <sup>101,102,103,104</sup>Cd, <sup>102,103,104,105</sup>In, <sup>105,106</sup>Sn, <sup>107,109,111</sup>Sb, <sup>109,110,111,112</sup>Te, <sup>111,112,113</sup>I, <sup>113</sup>Xe; measured and evaluated masses using the SHIPTRAP Penning trap mass spectrometer. <sup>104</sup>Sn, <sup>105</sup>Sb, <sup>108</sup>Te, <sup>109</sup>I, <sup>112</sup>Xe, <sup>113</sup>Cs; evaluated masses. JOUR ZAANE 34 341

## A=114

- $^{114}\text{Pd}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{114}\text{Ag}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{114}\text{Cd}$  2007BA73 NUCLEAR REACTIONS  $^{114}\text{Cd}(n, n'\gamma)$ ,  $E^*=3.5$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma$ -yields,  $\gamma\gamma$ -coin, angular distributions, half-lives; deduced levels,  $J$ ,  $\pi$ , multipolarities, mixing ratios, configurations,  $B(E2)$ ,  $B(M1)$ ,  $B(E1)$ . Comparisons with IBA model calculations.  $^{108,110,112,114,116,118}\text{Cd}$ ; systematics. JOUR PRVCA 76 054308

## A=114 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{114}\text{In}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=114 (continued)

- $^{114}\text{Sn}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{114}\text{Sb}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=114 (continued)

- <sup>114</sup>Te 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301
- <sup>114</sup>I 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=114 (continued)**

<sup>114</sup>Xe 2007PE32 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  
106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te,  
109,111,113,115,117,119,121,123,125,127,129,131I,  
110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe,  
117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301

**A=115**

<sup>115</sup>Pd 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb,  
<sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y,  
<sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr,  
<sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb,  
<sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo,  
<sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc,  
<sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru,  
<sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh,  
<sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd,  
<sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag,  
<sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd,  
<sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In,  
<sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn,  
<sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb,  
<sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te,  
<sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I,  
<sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe,  
<sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs,  
<sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76  
064609

## A=115 (continued)

- <sup>115</sup>Ag 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>115</sup>Cd 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609



## A=115 (continued)

- <sup>115</sup>In 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>115</sup>Sn 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=115 (continued)

- <sup>115</sup>Sb 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008FA03 NUCLEAR REACTIONS <sup>46</sup>Ti, <sup>64</sup>Zn, <sup>114,116</sup>Sn(p, γ), E(cm)=13.7 MeV; measured Eγ, Iγ following residual decay, σ; deduced astrophysical S-factors, reaction rates. Activation technique. JOUR NUPAB 802 26
- <sup>115</sup>Te 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=115 (continued)

- <sup>115</sup>I      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32      NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301

## A=116

- $^{116}\text{Ag}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{116}\text{Cd}$  2007BA73 NUCLEAR REACTIONS  $^{114}\text{Cd}(n, n'\gamma)$ ,  $E^*=3.5$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma$ -yields,  $\gamma\gamma$ -coin, angular distributions, half-lives; deduced levels, J,  $\pi$ , multipolarities, mixing ratios, configurations, B(E2), B(M1), B(E1). Comparisons with IBA model calculations.  $^{108,110,112,114,116,118}\text{Cd}$ ; systematics. JOUR PRVCA 76 054308
- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=116 (continued)

- <sup>116</sup>In 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>116</sup>Sn 2007CH76 NUCLEAR REACTIONS <sup>116</sup>Sn(<sup>6</sup>Li, <sup>6</sup>Li'), E=240 MeV; measured particle spectra, angular distributions, cross sections; deduced B(E2), B(E3). Comparison with <sup>90</sup>Zr. <sup>116</sup>Sn; deduced J, π. DWBA calculations. JOUR PRVCA 76 054606
- 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=116 (continued)

- 2008TE03 NUCLEAR REACTIONS  $^{116,118,120,122,124}\text{Sn}(p, p)$ , E=295 MeV; measured  $\sigma(\theta)$ , analyzing powers, nucleon density distributions, rms radii.  $^{58}\text{Ni}$ ; calculated proton, neutron density distributions. JOUR PRVCA 77 024317
- $^{116}\text{Sb}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{116}\text{Te}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

**A=116 (continued)**

- 2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2\text{np})$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels,  $J$ ,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  
106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138 $\text{Te}$ ,  
109,111,113,115,117,119,121,123,125,127,129,131 $\text{I}$ ,  
110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144 $\text{Xe}$ ,  
117,119,121,123,125,127,129 $\text{Cs}$ ; systematics. JOUR PRVCA 76 054301
- $^{116}\text{I}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  
 $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  
 $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  
 $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  
 $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  
 $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  
 $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  
 $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  
 $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  
 $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  
 $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  
 $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  
 $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  
 $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  
 $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  
 $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  
 $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  
 $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  
 $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76  
064609
- $^{116}\text{Xe}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  
 $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  
 $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  
 $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  
 $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  
 $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  
 $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  
 $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  
 $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  
 $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  
 $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  
 $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  
 $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  
 $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  
 $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  
 $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  
 $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  
 $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  
 $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76  
064609

**A=116 (continued)**

- 2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2\text{np})$ ,  $E=195$  MeV; measured  $E_\gamma$ ,  $I_\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multiplicities.  $^{109}\text{I}$ ; deduced levels,  $J$ ,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  
106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138 $\text{Te}$ ,  
109,111,113,115,117,119,121,123,125,127,129,131 $\text{I}$ ,  
110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144 $\text{Xe}$ ,  
117,119,121,123,125,127,129 $\text{Cs}$ ; systematics. JOUR PRVCA 76 054301

**A=117**

- $^{117}\text{Ru}$  2007T023 RADIOACTIVITY  $^{117}\text{Ru}$ ,  $^{120}\text{Rh}$ ,  $^{121}\text{Pd}$ ,  $^{123,124,125}\text{Ag}$ ,  
 $^{125,126,127}\text{Cd(IT)}$ ; measured  $E_\gamma$ ,  $I_\gamma$  from isomer decays. JOUR ZSTNE  
150 183
- $^{117}\text{Pd}$  2007RI17 RADIOACTIVITY  $^{117m}\text{Pd}$ ,  $^{118m}\text{Ag}$ ,  $^{120m}\text{Ag}$ ,  $^{118m}\text{In(IT)}$  [from U(p,  
F), E not given]; measured conversion electron spectra with the  
JYFLTRAP double Penning trap; deduced transition energies.  
Comparison with other data. JOUR ZAANE 34 113
- $^{117}\text{Ag}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured  
isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  
 $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  
 $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  
 $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  
 $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  
 $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  
 $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  
 $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  
 $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  
 $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  
 $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  
 $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  
 $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  
 $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  
 $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  
 $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  
 $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  
 $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  
 $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76  
064609



## A=117 (continued)

- $^{117}\text{Cd}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{117}\text{In}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=117 (continued)

- <sup>117</sup>Sn 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>117</sup>Sb 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008FA03 NUCLEAR REACTIONS <sup>46</sup>Ti, <sup>64</sup>Zn, <sup>114,116</sup>Sn(p,  $\gamma$ ), E(cm)=13.7 MeV; measured E $\gamma$ , I $\gamma$  following residual decay,  $\sigma$ ; deduced astrophysical S-factors, reaction rates. Activation technique. JOUR NUPAB 802 26

## A=117 (continued)

- <sup>117</sup>Te 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>117</sup>I 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E<sub>γ</sub>, I<sub>γ</sub>, γγ-coin, γγ(θ), multipolarities. <sup>109</sup>I; deduced levels, J, π, rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301

## A=117 (continued)

- $^{117}\text{Xe}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{117}\text{Cs}$  2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2np)$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels,  $J$ ,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  $^{106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138}\text{Te}$ ,  $^{109,111,113,115,117,119,121,123,125,127,129,131}\text{I}$ ,  $^{110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144}\text{Xe}$ ,  $^{117,119,121,123,125,127,129}\text{Cs}$ ; systematics. JOUR PRVCA 76 054301

## A=118

- $^{118}\text{Ag}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- 2007RI17 RADIOACTIVITY  $^{117m}\text{Pd}$ ,  $^{118m}\text{Ag}$ ,  $^{120m}\text{Ag}$ ,  $^{118m}\text{In(IT)}$  [from U(p, F), E not given]; measured conversion electron spectra with the JYFLTRAP double Penning trap; deduced transition energies. Comparison with other data. JOUR ZAANE 34 113
- $^{118}\text{Cd}$  2007BA73 NUCLEAR REACTIONS  $^{114}\text{Cd}(n, n'\gamma)$ ,  $E^*=3.5$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma$ -yields,  $\gamma\gamma$ -coin, angular distributions, half-lives; deduced levels, J,  $\pi$ , multipolarities, mixing ratios, configurations, B(E2), B(M1), B(E1). Comparisons with IBA model calculations.  $^{108,110,112,114,116,118}\text{Cd}$ ; systematics. JOUR PRVCA 76 054308

## A=118 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{118}\text{In}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- 2007RI17 RADIOACTIVITY  $^{117m}\text{Pd}$ ,  $^{118m}\text{Ag}$ ,  $^{120m}\text{Ag}$ ,  $^{118m}\text{In(IT)}$  [from U(p, F), E not given]; measured conversion electron spectra with the JYFLTRAP double Penning trap; deduced transition energies. Comparison with other data. JOUR ZAANE 34 113

## A=118 (continued)

- <sup>118</sup>Sn 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008TE03 NUCLEAR REACTIONS <sup>116,118,120,122,124</sup>Sn(p, p), E=295 MeV; measured  $\sigma(\theta)$ , analyzing powers, nucleon density distributions, rms radii. <sup>58</sup>Ni; calculated proton, neutron density distributions. JOUR PRVCA 77 024317
- <sup>118</sup>Sb 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=118 (continued)

- <sup>118</sup>Te 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301
- <sup>118</sup>I 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609



## A=118 (continued)

- $^{118}\text{Xe}$       2007NA31      NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32      NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2np)$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  $^{106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138}\text{Te}$ ,  $^{109,111,113,115,117,119,121,123,125,127,129,131}\text{I}$ ,  $^{110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144}\text{Xe}$ ,  $^{117,119,121,123,125,127,129}\text{Cs}$ ; systematics. JOUR PRVCA 76 054301

## A=119

- $^{119}\text{Ag}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{119}\text{Cd}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=119 (continued)

- <sup>119</sup>In 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>119</sup>Sn 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>119</sup>Sb 2007GU30 NUCLEAR REACTIONS <sup>121</sup>Sb(p, t), E=21 MeV; measured triton spectra,  $\sigma(\theta)$ . <sup>119</sup>Sb; deduced level energies, J,  $\pi$ . DWBA analysis. JOUR JPGPE 34 2665

## A=119 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{119}\text{Te}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=119 (continued)

- <sup>119</sup>I      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32      NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301
- <sup>119</sup>Xe      2007M037      NUCLEAR REACTIONS <sup>116</sup>Cd(<sup>13</sup>C, 4n), E=62 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ . <sup>125</sup>Xe; deduced levels, J,  $\pi$ , configurations. <sup>119,121,123,125</sup>Xe; systematics of yrast and yrare levels. JOUR PRVCA 76 067301

**A=119 (continued)**

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{119}\text{Cs}$  2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2np)$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  $^{106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138}\text{Te}$ ,  $^{109,111,113,115,117,119,121,123,125,127,129,131}\text{I}$ ,  $^{110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144}\text{Xe}$ ,  $^{117,119,121,123,125,127,129}\text{Cs}$ ; systematics. JOUR PRVCA 76 054301

**A=120**

- $^{120}\text{Rh}$  2007T023 RADIOACTIVITY  $^{117}\text{Ru}$ ,  $^{120}\text{Rh}$ ,  $^{121}\text{Pd}$ ,  $^{123,124,125}\text{Ag}$ ,  $^{125,126,127}\text{Cd(IT)}$ ; measured  $E\gamma$ ,  $I\gamma$  from isomer decays. JOUR ZSTNE 150 183

## A=120 (continued)

- <sup>120</sup>Ag 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007RI17 RADIOACTIVITY <sup>117m</sup>Pd, <sup>118m</sup>Ag, <sup>120m</sup>Ag, <sup>118m</sup>In(IT) [from U(p, F), E not given]; measured conversion electron spectra with the JYFLTRAP double Penning trap; deduced transition energies. Comparison with other data. JOUR ZAANE 34 113
- <sup>120</sup>Cd 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=120 (continued)

- <sup>120</sup>In 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>120</sup>Sn 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008ST04 NUCLEAR REACTIONS <sup>104</sup>Pd(<sup>67</sup>Cu, <sup>67</sup>Cu'), (<sup>69</sup>Cu, <sup>69</sup>Cu'), (<sup>71</sup>Cu, <sup>71</sup>Cu'), E=2.99 MeV / nucleon; <sup>120</sup>Sn(<sup>71</sup>Cu, <sup>71</sup>Cu'), (<sup>73</sup>Cu, <sup>73</sup>Cu'), E=2.99 MeV / nucleon; measured E $\gamma$ , I $\gamma$  following coulomb excitation. <sup>67,69,71,73</sup>Cu; deduced level energies, B(E2). JOUR PRLTA 100 112502



## A=120 (continued)

- 2008TE03 NUCLEAR REACTIONS  $^{116,118,120,122,124}\text{Sn}(p, p)$ , E=295 MeV; measured  $\sigma(\theta)$ , analyzing powers, nucleon density distributions, rms radii.  $^{58}\text{Ni}$ ; calculated proton, neutron density distributions. JOUR PRVCA 77 024317
- $^{120}\text{Sb}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{120}\text{Te}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

**A=120 (continued)**

- 2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2\text{np})$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels,  $J$ ,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  
106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te,  
109,111,113,115,117,119,121,123,125,127,129,131I,  
110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe,  
117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301
- $^{120}\text{I}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  
81,82,83,84,85,86,87,88,89,90,91,92,93Sr,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  
86,87,88,89,90,91,92,93,94,95,96,97,98,99Zr,  
87,88,89,90,91,92,93,94,95,96,97,98,99,100Nb,  
90,91,92,93,94,95,96,97,98,99,100,101,102,103,104Mo,  
92,93,94,95,96,97,98,99,100,101,102,103,104,105,106Tc,  
95,96,97,98,99,100,101,102,103,104,105,106,107,108,109Ru,  
97,98,99,100,101,102,103,104,105,106,107,108,109,110,111Rh,  
99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115Pd,  
101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122Ag,  
104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125Cd,  
105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127In,  
108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130Sn,  
110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132Sb,  
111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134Te,  
113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135I,  
116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135Xe,  
122,123,124,125,126,127,128,129,130,131,132,133,134,135Cs,  
127,128,129,130,131,132Ba; measured cross sections. JOUR PRVCA 76  
064609
- $^{120}\text{Xe}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  
81,82,83,84,85,86,87,88,89,90,91,92,93Sr,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  
86,87,88,89,90,91,92,93,94,95,96,97,98,99Zr,  
87,88,89,90,91,92,93,94,95,96,97,98,99,100Nb,  
90,91,92,93,94,95,96,97,98,99,100,101,102,103,104Mo,  
92,93,94,95,96,97,98,99,100,101,102,103,104,105,106Tc,  
95,96,97,98,99,100,101,102,103,104,105,106,107,108,109Ru,  
97,98,99,100,101,102,103,104,105,106,107,108,109,110,111Rh,  
99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115Pd,  
101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122Ag,  
104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125Cd,  
105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127In,  
108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130Sn,  
110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132Sb,  
111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134Te,  
113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135I,  
116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135Xe,  
122,123,124,125,126,127,128,129,130,131,132,133,134,135Cs,  
127,128,129,130,131,132Ba; measured cross sections. JOUR PRVCA 76  
064609

**A=120 (continued)**

- 2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2\text{np})$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels,  $J$ ,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  
106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te,  
109,111,113,115,117,119,121,123,125,127,129,131I,  
110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe,  
117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301

**A=121**

- $^{121}\text{Pd}$  2007T023 RADIOACTIVITY  $^{117}\text{Ru}$ ,  $^{120}\text{Rh}$ ,  $^{121}\text{Pd}$ ,  $^{123,124,125}\text{Ag}$ ,  
 $^{125,126,127}\text{Cd(IT)}$ ; measured  $E\gamma$ ,  $I\gamma$  from isomer decays. JOUR ZSTNE  
150 183
- $^{121}\text{Ag}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  
 $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  
 $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  
 $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  
 $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  
 $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  
 $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  
 $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  
 $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  
 $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  
 $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  
 $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  
 $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  
 $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  
 $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  
 $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  
 $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  
 $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  
 $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76  
064609

## A=121 (continued)

- <sup>121</sup>Cd 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>121</sup>In 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=121 (continued)

- <sup>121</sup>Sn 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>121</sup>Sb 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008K003 RADIOACTIVITY <sup>121</sup>Sb(IT); measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>121</sup>Sb; deduced levels, J,  $\pi$ , new isomer, half-life. JOUR APOBB 39 489

## A=121 (continued)

- <sup>121</sup>Te 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008EA01 NUCLEAR REACTIONS <sup>120,122,124,126,128,130</sup>Te(n,  $\gamma$ ), E not given; measured E $\gamma$ , I $\gamma$ , cross sections, resonance integral. JOUR PRVCA 77 024303
- 2008EA01 RADIOACTIVITY <sup>121m</sup>Te, <sup>121</sup>Te, <sup>127m</sup>Te, <sup>131m</sup>Te; measured half-lives. JOUR PRVCA 77 024303
- <sup>121</sup>I 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=121 (continued)**

- 2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2\text{np})$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels,  $J$ ,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  
106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te,  
109,111,113,115,117,119,121,123,125,127,129,131I,  
110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe,  
117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301
- $^{121}\text{Xe}$  2007M037 NUCLEAR REACTIONS  $^{116}\text{Cd}(^{13}\text{C}, 4\text{n})$ ,  $E=62$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ .  $^{125}\text{Xe}$ ; deduced levels,  $J$ ,  $\pi$ , configurations.  
119,121,123,125Xe; systematics of yrast and yrare levels. JOUR PRVCA  
76 067301
- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  
 $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  
 $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  
 $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  
 $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  
 $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  
 $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  
 $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  
 $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  
 $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  
 $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  
 $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  
 $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  
 $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  
 $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  
 $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  
 $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  
 $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  
 $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76  
064609
- $^{121}\text{Cs}$  2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2\text{np})$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels,  $J$ ,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  
106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te,  
109,111,113,115,117,119,121,123,125,127,129,131I,  
110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe,  
117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301

## A=122

- <sup>122</sup>Ag 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008SM01 RADIOACTIVITY <sup>122</sup>Ag( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=50 MeV]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, lifetimes. <sup>122</sup>Cd; deduced levels, B(M1), B(E1), B(E2), half-lives using Advanced Time-delayed  $\beta\gamma\gamma(t)$  method. Comparison with <sup>124</sup>Sn, <sup>126</sup>Te. JOUR PRVCA 77 014309
- <sup>122</sup>Cd 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609



**A=122 (continued)**

- 2008SM01 RADIOACTIVITY  $^{122}\text{Ag}(\beta^-)$  [from  $^{238}\text{U}(\text{p}, \text{F})$ ,  $E=50$  MeV]; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin, lifetimes.  $^{122}\text{Cd}$ ; deduced levels, B(M1), B(E1), B(E2), half-lives using Advanced Time-delayed  $\beta\gamma\gamma(t)$  method. Comparison with  $^{124}\text{Sn}$ ,  $^{126}\text{Te}$ . JOUR PRVCA 77 014309
- $^{122}\text{In}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(\text{p}, \text{X})$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{122}\text{Sn}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(\text{p}, \text{X})$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

**A=122 (continued)**

- 2008TE03 NUCLEAR REACTIONS  $^{116,118,120,122,124}\text{Sn}(p, p)$ , E=295 MeV; measured  $\sigma(\theta)$ , analyzing powers, nucleon density distributions, rms radii.  $^{58}\text{Ni}$ ; calculated proton, neutron density distributions. JOUR PRVCA 77 024317
- $^{122}\text{Sb}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{122}\text{Te}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

**A=122 (continued)**

- 2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2\text{np})$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels,  $J$ ,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  
106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te,  
109,111,113,115,117,119,121,123,125,127,129,131I,  
110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe,  
117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301
- $^{122}\text{I}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  
81,82,83,84,85,86,87,88,89,90,91,92,93Sr,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  
86,87,88,89,90,91,92,93,94,95,96,97,98,99Zr,  
87,88,89,90,91,92,93,94,95,96,97,98,99,100Nb,  
90,91,92,93,94,95,96,97,98,99,100,101,102,103,104Mo,  
92,93,94,95,96,97,98,99,100,101,102,103,104,105,106Tc,  
95,96,97,98,99,100,101,102,103,104,105,106,107,108,109Ru,  
97,98,99,100,101,102,103,104,105,106,107,108,109,110,111Rh,  
99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115Pd,  
101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122Ag,  
104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125Cd,  
105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127In,  
108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130Sn,  
110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132Sb,  
111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134Te,  
113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135I,  
116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135Xe,  
122,123,124,125,126,127,128,129,130,131,132,133,134,135Cs,  
127,128,129,130,131,132Ba; measured cross sections. JOUR PRVCA 76  
064609
- $^{122}\text{Xe}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  
81,82,83,84,85,86,87,88,89,90,91,92,93Sr,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  
86,87,88,89,90,91,92,93,94,95,96,97,98,99Zr,  
87,88,89,90,91,92,93,94,95,96,97,98,99,100Nb,  
90,91,92,93,94,95,96,97,98,99,100,101,102,103,104Mo,  
92,93,94,95,96,97,98,99,100,101,102,103,104,105,106Tc,  
95,96,97,98,99,100,101,102,103,104,105,106,107,108,109Ru,  
97,98,99,100,101,102,103,104,105,106,107,108,109,110,111Rh,  
99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115Pd,  
101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122Ag,  
104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125Cd,  
105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127In,  
108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130Sn,  
110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132Sb,  
111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134Te,  
113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135I,  
116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135Xe,  
122,123,124,125,126,127,128,129,130,131,132,133,134,135Cs,  
127,128,129,130,131,132Ba; measured cross sections. JOUR PRVCA 76  
064609

**A=122 (continued)**

- 2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2\text{np})$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels,  $J$ ,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  
106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te,  
109,111,113,115,117,119,121,123,125,127,129,131I,  
110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe,  
117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301
- $^{122}\text{Cs}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  
81,82,83,84,85,86,87,88,89,90,91,92,93Sr,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  
86,87,88,89,90,91,92,93,94,95,96,97,98,99Zr,  
87,88,89,90,91,92,93,94,95,96,97,98,99,100Nb,  
90,91,92,93,94,95,96,97,98,99,100,101,102,103,104Mo,  
92,93,94,95,96,97,98,99,100,101,102,103,104,105,106Tc,  
95,96,97,98,99,100,101,102,103,104,105,106,107,108,109Ru,  
97,98,99,100,101,102,103,104,105,106,107,108,109,110,111Rh,  
99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115Pd,  
101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122Ag,  
104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125Cd,  
105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127In,  
108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130Sn,  
110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132Sb,  
111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134Te,  
113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135I,  
116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135Xe,  
122,123,124,125,126,127,128,129,130,131,132,133,134,135Cs,  
127,128,129,130,131,132Ba; measured cross sections. JOUR PRVCA 76  
064609

**A=123**

- $^{123}\text{Ag}$  2007T023 RADIOACTIVITY  $^{117}\text{Ru}$ ,  $^{120}\text{Rh}$ ,  $^{121}\text{Pd}$ ,  $^{123,124,125}\text{Ag}$ ,  
 $^{125,126,127}\text{Cd(IT)}$ ; measured  $E\gamma$ ,  $I\gamma$  from isomer decays. JOUR ZSTNE  
150 183

**A=123 (continued)**

- <sup>123</sup>Cd      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>123</sup>In      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=123 (continued)

- <sup>123</sup>Sn 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>123</sup>Sb 2007JU06 NUCLEAR REACTIONS <sup>122</sup>Sn(<sup>7</sup>Li,  $\alpha 2n\gamma$ ), E=35 MeV; <sup>124</sup>Sn(<sup>7</sup>Li,  $\alpha 2n\gamma$ ), E=37 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, internal conversion coefficients, conversion electron spectra; deduced multipolarities, B(E1), B(E2), B(E3), B(M2), B(M4). <sup>123,125</sup>Sb; measured half-lives; deduced levels, J,  $\pi$ . JOUR PRVCA 76 054306
- 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=123 (continued)

- <sup>123</sup>Te 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008EA01 NUCLEAR REACTIONS <sup>120,122,124,126,128,130</sup>Te(n,  $\gamma$ ), E not given; measured E $\gamma$ , I $\gamma$ , cross sections, resonance integral. JOUR PRVCA 77 024303
- <sup>123</sup>I 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=123 (continued)**

- 2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2\text{np})$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels,  $J$ ,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  
106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te,  
109,111,113,115,117,119,121,123,125,127,129,131I,  
110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe,  
117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301
- $^{123}\text{Xe}$  2007M037 NUCLEAR REACTIONS  $^{116}\text{Cd}(^{13}\text{C}, 4\text{n})$ ,  $E=62$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ .  $^{125}\text{Xe}$ ; deduced levels,  $J$ ,  $\pi$ , configurations.  
119,121,123,125Xe; systematics of yrast and yrare levels. JOUR PRVCA  
76 067301
- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  
 $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  
 $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  
 $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  
 $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  
 $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  
 $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  
 $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  
 $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  
 $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  
 $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  
 $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  
 $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  
 $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  
 $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  
 $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  
 $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  
 $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  
 $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76  
064609



**A=123 (continued)**

- <sup>123</sup>Cs      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32      NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301

**A=124**

- <sup>124</sup>Ag      2007T023      RADIOACTIVITY <sup>117</sup>Ru, <sup>120</sup>Rh, <sup>121</sup>Pd, <sup>123,124,125</sup>Ag, <sup>125,126,127</sup>Cd(IT); measured E $\gamma$ , I $\gamma$  from isomer decays. JOUR ZSTNE 150 183

## A=124 (continued)

- $^{124}\text{Cd}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{124}\text{In}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=124 (continued)

$^{124}\text{Sn}$	2007NA31	NUCLEAR REACTIONS $^{136}\text{Xe}(p, X)$ , $E=1$ GeV / nucleon; measured isotopic cross sections, kinetic energies. $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ , $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ , $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ , $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ , $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ , $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ , $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ , $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ , $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ , $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ , $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ , $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ , $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ , $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ , $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ , $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ , $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ , $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ , $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ , $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
	2008DA02	RADIOACTIVITY $^{112}\text{Sn}(2\text{EC})$ , $(\beta^+\text{EC})$ , $^{124}\text{Sn}(2\beta^-)$ ; measured $E\gamma$ , $I\gamma$ ; deduced $T_{1/2}$ lower limits. JOUR NUPAB 799 167
	2008TE03	NUCLEAR REACTIONS $^{116,118,120,122,124}\text{Sn}(p, p)$ , $E=295$ MeV; measured $\sigma(\theta)$ , analyzing powers, nucleon density distributions, rms radii. $^{58}\text{Ni}$ ; calculated proton, neutron density distributions. JOUR PRVCA 77 024317
$^{124}\text{Sb}$	2007NA31	NUCLEAR REACTIONS $^{136}\text{Xe}(p, X)$ , $E=1$ GeV / nucleon; measured isotopic cross sections, kinetic energies. $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ , $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ , $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ , $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ , $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ , $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ , $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ , $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ , $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ , $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ , $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ , $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ , $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ , $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ , $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ , $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ , $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ , $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ , $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ , $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

**A=124 (continued)**

- <sup>124</sup>Te      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32      NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301
- 2008DA02      RADIOACTIVITY <sup>112</sup>Sn(2EC), ( $\beta^+$ EC), <sup>124</sup>Sn(2 $\beta^-$ ); measured E $\gamma$ , I $\gamma$ ; deduced T<sub>1/2</sub> lower limits. JOUR NUPAB 799 167

## A=124 (continued)

- <sup>124</sup>I      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>124</sup>Xe      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32      NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E<sub>γ</sub>, I<sub>γ</sub>, γγ-coin, γγ(θ), multipolarities. <sup>109</sup>I; deduced levels, J, π, rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301

**A=124 (continued)**

<sup>124</sup>Cs 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=125**

<sup>125</sup>Ag 2007T023 RADIOACTIVITY <sup>117</sup>Ru, <sup>120</sup>Rh, <sup>121</sup>Pd, <sup>123,124,125</sup>Ag, <sup>125,126,127</sup>Cd(IT); measured E<sub>γ</sub>, I<sub>γ</sub> from isomer decays. JOUR ZSTNE 150 183

<sup>125</sup>Cd 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=125 (continued)**

- 2007T023 RADIOACTIVITY  $^{117}\text{Ru}$ ,  $^{120}\text{Rh}$ ,  $^{121}\text{Pd}$ ,  $^{123,124,125}\text{Ag}$ ,  
 $^{125,126,127}\text{Cd(IT)}$ ; measured  $E_\gamma$ ,  $I_\gamma$  from isomer decays. JOUR ZSTNE  
150 183
- $^{125}\text{In}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured  
isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  
 $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  
 $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  
 $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  
 $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  
 $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  
 $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  
 $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  
 $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  
 $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  
 $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  
 $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  
 $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  
 $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  
 $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  
 $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  
 $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  
 $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  
 $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76  
064609
- $^{125}\text{Sn}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured  
isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  
 $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  
 $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  
 $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  
 $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  
 $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  
 $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  
 $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  
 $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  
 $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  
 $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  
 $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  
 $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  
 $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  
 $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  
 $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  
 $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  
 $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  
 $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76  
064609

## A=125 (continued)

- <sup>125</sup>Sb      2007JU06      NUCLEAR REACTIONS <sup>122</sup>Sn(<sup>7</sup>Li, α2nγ), E=35 MeV; <sup>124</sup>Sn(<sup>7</sup>Li, α2nγ), E=37 MeV; measured Eγ, Iγ, γγ-coin, internal conversion coefficients, conversion electron spectra; deduced multipolarities, B(E1), B(E2), B(E3), B(M2), B(M4). <sup>123,125</sup>Sb; measured half-lives; deduced levels, J, π. JOUR PRVCA 76 054306
- 2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>125</sup>Te      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609



## A=125 (continued)

- 2008EA01 NUCLEAR REACTIONS  $^{120,122,124,126,128,130}\text{Te}(n, \gamma)$ , E not given; measured  $E\gamma$ ,  $I\gamma$ , cross sections, resonance integral. JOUR PRVCA 77 024303
- $^{125}\text{I}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2np)$ , E=195 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  $^{106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138}\text{Te}$ ,  $^{109,111,113,115,117,119,121,123,125,127,129,131}\text{I}$ ,  $^{110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144}\text{Xe}$ ,  $^{117,119,121,123,125,127,129}\text{Cs}$ ; systematics. JOUR PRVCA 76 054301
- $^{125}\text{Xe}$  2007M037 NUCLEAR REACTIONS  $^{116}\text{Cd}(^{13}\text{C}, 4n)$ , E=62 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ .  $^{125}\text{Xe}$ ; deduced levels, J,  $\pi$ , configurations.  $^{119,121,123,125}\text{Xe}$ ; systematics of yrast and yrare levels. JOUR PRVCA 76 067301

## A=125 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{125}\text{Cs}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2np)$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  $^{106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138}\text{Te}$ ,  $^{109,111,113,115,117,119,121,123,125,127,129,131}\text{I}$ ,  $^{110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144}\text{Xe}$ ,  $^{117,119,121,123,125,127,129}\text{Cs}$ ; systematics. JOUR PRVCA 76 054301

## A=126

$^{126}\text{Cd}$	2007T023	RADIOACTIVITY $^{117}\text{Ru}$ , $^{120}\text{Rh}$ , $^{121}\text{Pd}$ , $^{123,124,125}\text{Ag}$ , $^{125,126,127}\text{Cd(IT)}$ ; measured $E_\gamma$ , $I_\gamma$ from isomer decays. JOUR ZSTNE 150 183
$^{126}\text{In}$	2007NA31	NUCLEAR REACTIONS $^{136}\text{Xe}(p, X)$ , $E=1$ GeV / nucleon; measured isotopic cross sections, kinetic energies. $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ , $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ , $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ , $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ , $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ , $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ , $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ , $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ , $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ , $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ , $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ , $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ , $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ , $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ , $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ , $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ , $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ , $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ , $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ , $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
$^{126}\text{Sn}$	2007NA31	NUCLEAR REACTIONS $^{136}\text{Xe}(p, X)$ , $E=1$ GeV / nucleon; measured isotopic cross sections, kinetic energies. $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ , $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ , $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ , $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ , $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ , $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ , $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ , $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ , $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ , $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ , $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ , $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ , $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ , $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ , $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ , $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ , $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ , $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ , $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ , $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=126 (continued)

- <sup>126</sup>Sb 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>126</sup>Te 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301

## A=126 (continued)

- <sup>126</sup>I      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>126</sup>Xe      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32      NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E<sub>γ</sub>, I<sub>γ</sub>, γγ-coin, γγ(θ), multipolarities. <sup>109</sup>I; deduced levels, J, π, rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301

**A=126 (continued)**

<sup>126</sup>Cs      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=127**

<sup>127</sup>Cd      2007T023      RADIOACTIVITY <sup>117</sup>Ru, <sup>120</sup>Rh, <sup>121</sup>Pd, <sup>123,124,125</sup>Ag, <sup>125,126,127</sup>Cd(IT); measured E<sub>γ</sub>, I<sub>γ</sub> from isomer decays. JOUR ZSTNE 150 183

<sup>127</sup>In      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=127 (continued)

- <sup>127</sup>Sn 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008DW01 ATOMIC MASSES <sup>127,131,132,133,134</sup>Sn; measured masses using the ISOLTRAP mass spectrometer. Discussed implications on the N=82 neutron-shell gap. JOUR PRLTA 100 072501
- <sup>127</sup>Sb 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=127 (continued)

- <sup>127</sup>Te 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008EA01 NUCLEAR REACTIONS <sup>120,122,124,126,128,130</sup>Te(n, γ), E not given; measured Eγ, Iγ, cross sections, resonance integral. JOUR PRVCA 77 024303
- 2008EA01 RADIOACTIVITY <sup>121m</sup>Te, <sup>121</sup>Te, <sup>127m</sup>Te, <sup>131m</sup>Te; measured half-lives. JOUR PRVCA 77 024303
- <sup>127</sup>I 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609



**A=127 (continued)**

- 2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2\text{np})$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels,  $J$ ,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  
106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te,  
109,111,113,115,117,119,121,123,125,127,129,131I,  
110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe,  
117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301
- $^{127}\text{Xe}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  
81,82,83,84,85,86,87,88,89,90,91,92,93Sr,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  
86,87,88,89,90,91,92,93,94,95,96,97,98,99Zr,  
87,88,89,90,91,92,93,94,95,96,97,98,99,100Nb,  
90,91,92,93,94,95,96,97,98,99,100,101,102,103,104Mo,  
92,93,94,95,96,97,98,99,100,101,102,103,104,105,106Tc,  
95,96,97,98,99,100,101,102,103,104,105,106,107,108,109Ru,  
97,98,99,100,101,102,103,104,105,106,107,108,109,110,111Rh,  
99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115Pd,  
101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122Ag,  
104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125Cd,  
105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127In,  
108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130Sn,  
110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132Sb,  
111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134Te,  
113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135I,  
116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135Xe,  
122,123,124,125,126,127,128,129,130,131,132,133,134,135Cs,  
127,128,129,130,131,132Ba; measured cross sections. JOUR PRVCA 76  
064609
- $^{127}\text{Cs}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  
81,82,83,84,85,86,87,88,89,90,91,92,93Sr,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  
86,87,88,89,90,91,92,93,94,95,96,97,98,99Zr,  
87,88,89,90,91,92,93,94,95,96,97,98,99,100Nb,  
90,91,92,93,94,95,96,97,98,99,100,101,102,103,104Mo,  
92,93,94,95,96,97,98,99,100,101,102,103,104,105,106Tc,  
95,96,97,98,99,100,101,102,103,104,105,106,107,108,109Ru,  
97,98,99,100,101,102,103,104,105,106,107,108,109,110,111Rh,  
99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115Pd,  
101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122Ag,  
104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125Cd,  
105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127In,  
108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130Sn,  
110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132Sb,  
111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134Te,  
113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135I,  
116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135Xe,  
122,123,124,125,126,127,128,129,130,131,132,133,134,135Cs,  
127,128,129,130,131,132Ba; measured cross sections. JOUR PRVCA 76  
064609

## A=127 (continued)

- 2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2\text{np})$ , E=195 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  
106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te,  
109,111,113,115,117,119,121,123,125,127,129,131I,  
110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe,  
117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301
- $^{127}\text{Ba}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  
81,82,83,84,85,86,87,88,89,90,91,92,93Sr,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  
86,87,88,89,90,91,92,93,94,95,96,97,98,99Zr,  
87,88,89,90,91,92,93,94,95,96,97,98,99,100Nb,  
90,91,92,93,94,95,96,97,98,99,100,101,102,103,104Mo,  
92,93,94,95,96,97,98,99,100,101,102,103,104,105,106Tc,  
95,96,97,98,99,100,101,102,103,104,105,106,107,108,109Ru,  
97,98,99,100,101,102,103,104,105,106,107,108,109,110,111Rh,  
99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115Pd,  
101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122Ag,  
104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125Cd,  
105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127In,  
108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130Sn,  
110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132Sb,  
111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134Te,  
113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135I,  
116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135Xe,  
122,123,124,125,126,127,128,129,130,131,132,133,134,135Cs,  
127,128,129,130,131,132Ba; measured cross sections. JOUR PRVCA 76  
064609

## A=128

- $^{128}\text{Sn}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{128}\text{Sb}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=128 (continued)

- <sup>128</sup>Te 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301
- <sup>128</sup>I 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=128 (continued)

- <sup>128</sup>Xe 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301
- <sup>128</sup>Cs 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=128 (continued)**

<sup>128</sup>Ba 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=129**

<sup>129</sup>Sn 2007KL06 NUCLEAR REACTIONS Be(<sup>238</sup>U, X)<sup>129</sup>Sn / <sup>130</sup>Sn / <sup>131</sup>Sn / <sup>132</sup>Sn / <sup>133</sup>Sb / <sup>134</sup>Sb, E=500 MeV / nucleon; measured pygmy dipole resonance strength, neutron skin thickness, symmetry parameters; deduced neutron separation energy, B(E1) using RQRPA approach. Compared to <sup>116</sup>Sn, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm, <sup>208</sup>Pb. JOUR PRVCA 76 051603

## A=129 (continued)

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{129}\text{Sb}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=129 (continued)

- <sup>129</sup>Te 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008EA01 NUCLEAR REACTIONS <sup>120,122,124,126,128,130</sup>Te(n,  $\gamma$ ), E not given; measured E $\gamma$ , I $\gamma$ , cross sections, resonance integral. JOUR PRVCA 77 024303
- <sup>129</sup>I 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609



**A=129 (continued)**

- 2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2\text{np})$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels,  $J$ ,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  
106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138 $\text{Te}$ ,  
109,111,113,115,117,119,121,123,125,127,129,131 $\text{I}$ ,  
110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144 $\text{Xe}$ ,  
117,119,121,123,125,127,129 $\text{Cs}$ ; systematics. JOUR PRVCA 76 054301
- $^{129}\text{Xe}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  
81,82,83,84,85,86,87,88,89,90,91,92,93 $\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  
86,87,88,89,90,91,92,93,94,95,96,97,98,99 $\text{Zr}$ ,  
87,88,89,90,91,92,93,94,95,96,97,98,99,100 $\text{Nb}$ ,  
90,91,92,93,94,95,96,97,98,99,100,101,102,103,104 $\text{Mo}$ ,  
92,93,94,95,96,97,98,99,100,101,102,103,104,105,106 $\text{Tc}$ ,  
95,96,97,98,99,100,101,102,103,104,105,106,107,108,109 $\text{Ru}$ ,  
97,98,99,100,101,102,103,104,105,106,107,108,109,110,111 $\text{Rh}$ ,  
99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115 $\text{Pd}$ ,  
101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122 $\text{Ag}$ ,  
104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125 $\text{Cd}$ ,  
105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127 $\text{In}$ ,  
108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130 $\text{Sn}$ ,  
110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132 $\text{Sb}$ ,  
111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134 $\text{Te}$ ,  
113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135 $\text{I}$ ,  
116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135 $\text{Xe}$ ,  
122,123,124,125,126,127,128,129,130,131,132,133,134,135,136 $\text{Cs}$ ,  
127,128,129,130,131,132 $\text{Ba}$ ; measured cross sections. JOUR PRVCA 76  
064609
- $^{129}\text{Cs}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  
81,82,83,84,85,86,87,88,89,90,91,92,93 $\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  
86,87,88,89,90,91,92,93,94,95,96,97,98,99 $\text{Zr}$ ,  
87,88,89,90,91,92,93,94,95,96,97,98,99,100 $\text{Nb}$ ,  
90,91,92,93,94,95,96,97,98,99,100,101,102,103,104 $\text{Mo}$ ,  
92,93,94,95,96,97,98,99,100,101,102,103,104,105,106 $\text{Tc}$ ,  
95,96,97,98,99,100,101,102,103,104,105,106,107,108,109 $\text{Ru}$ ,  
97,98,99,100,101,102,103,104,105,106,107,108,109,110,111 $\text{Rh}$ ,  
99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115 $\text{Pd}$ ,  
101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122 $\text{Ag}$ ,  
104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125 $\text{Cd}$ ,  
105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127 $\text{In}$ ,  
108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130 $\text{Sn}$ ,  
110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132 $\text{Sb}$ ,  
111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134 $\text{Te}$ ,  
113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135 $\text{I}$ ,  
116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135 $\text{Xe}$ ,  
122,123,124,125,126,127,128,129,130,131,132,133,134,135,136 $\text{Cs}$ ,  
127,128,129,130,131,132 $\text{Ba}$ ; measured cross sections. JOUR PRVCA 76  
064609

**A=129 (continued)**

- 2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2\text{np})$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels,  $J$ ,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. 106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te, 109,111,113,115,117,119,121,123,125,127,129,131I, 110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe, 117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301
- $^{129}\text{Ba}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

**A=130**

- $^{130}\text{Sn}$  2007KL06 NUCLEAR REACTIONS  $\text{Be}(^{238}\text{U}, X)^{129}\text{Sn} / ^{130}\text{Sn} / ^{131}\text{Sn} / ^{132}\text{Sn} / ^{133}\text{Sb} / ^{134}\text{Sb}$ ,  $E=500$  MeV / nucleon; measured pygmy dipole resonance strength, neutron skin thickness, symmetry parameters; deduced neutron separation energy,  $B(E1)$  using RQRPA approach. Compared to  $^{116}\text{Sn}$ ,  $^{140}\text{Ce}$ ,  $^{142}\text{Nd}$ ,  $^{144}\text{Sm}$ ,  $^{208}\text{Pb}$ . JOUR PRVCA 76 051603

**A=130 (continued)**

- 2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{130}\text{Sb}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

**A=130 (continued)**

- <sup>130</sup>Te      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32      NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301
- <sup>130</sup>I      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=130 (continued)

- <sup>130</sup>Xe 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301
- <sup>130</sup>Cs 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=130 (continued)**

- <sup>130</sup>Ba 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>130</sup>Ce 2008ME02 RADIOACTIVITY <sup>130</sup>Pr( $\beta^+$ )(EC) [from <sup>107</sup>Ag(<sup>27</sup>Al, p3n), E=113 MeV]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>130</sup>Ce; deduced levels, J,  $\pi$ , B(E2), comparison with calculations using X(5) and IBA models. JOUR PRVCA 77 014307
- <sup>130</sup>Pr 2008ME02 RADIOACTIVITY <sup>130</sup>Pr( $\beta^+$ )(EC) [from <sup>107</sup>Ag(<sup>27</sup>Al, p3n), E=113 MeV]; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>130</sup>Ce; deduced levels, J,  $\pi$ , B(E2), comparison with calculations using X(5) and IBA models. JOUR PRVCA 77 014307

**A=131**

- <sup>131</sup>Sn 2007KL06 NUCLEAR REACTIONS Be(<sup>238</sup>U, X)<sup>129</sup>Sn / <sup>130</sup>Sn / <sup>131</sup>Sn / <sup>132</sup>Sn / <sup>133</sup>Sb / <sup>134</sup>Sb, E=500 MeV / nucleon; measured pygmy dipole resonance strength, neutron skin thickness, symmetry parameters; deduced neutron separation energy, B(E1) using RQRPA approach. Compared to <sup>116</sup>Sn, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm, <sup>208</sup>Pb. JOUR PRVCA 76 051603
- 2008DW01 ATOMIC MASSES <sup>127,131,132,133,134</sup>Sn; measured masses using the ISOLTRAP mass spectrometer. Discussed implications on the N=82 neutron-shell gap. JOUR PRLTA 100 072501

**A=131 (continued)**

- <sup>131</sup>Sb      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>131</sup>Te      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008EA01      NUCLEAR REACTIONS <sup>120,122,124,126,128,130</sup>Te(n,  $\gamma$ ), E not given; measured E $\gamma$ , I $\gamma$ , cross sections, resonance integral. JOUR PRVCA 77 024303
- 2008EA01      RADIOACTIVITY <sup>121m</sup>Te, <sup>121</sup>Te, <sup>127m</sup>Te, <sup>131m</sup>Te; measured half-lives. JOUR PRVCA 77 024303

## A=131 (continued)

- <sup>131</sup>I      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32      NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301
- <sup>131</sup>Xe      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609



## A=131 (continued)

- <sup>131</sup>Cs      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008RA04      RADIOACTIVITY <sup>131</sup>Ba( $\beta^+$ ); measured E $\gamma$ , I $\gamma$ , conversion electrons. <sup>131</sup>Cs; deduced levels, ICC, transition multipolarities. JOUR ARISE 66 377
- <sup>131</sup>Ba      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2008RA04      RADIOACTIVITY <sup>131</sup>Ba( $\beta^+$ ); measured E $\gamma$ , I $\gamma$ , conversion electrons. <sup>131</sup>Cs; deduced levels, ICC, transition multipolarities. JOUR ARISE 66 377

## A=132

- <sup>132</sup>Sn      2007KL06      NUCLEAR REACTIONS Be(<sup>238</sup>U, X)<sup>129</sup>Sn / <sup>130</sup>Sn / <sup>131</sup>Sn / <sup>132</sup>Sn / <sup>133</sup>Sb / <sup>134</sup>Sb, E=500 MeV / nucleon; measured pygmy dipole resonance strength, neutron skin thickness, symmetry parameters; deduced neutron separation energy, B(E1) using RQRPA approach. Compared to <sup>116</sup>Sn, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm, <sup>208</sup>Pb. JOUR PRVCA 76 051603
- 2008DW01      ATOMIC MASSES <sup>127,131,132,133,134</sup>Sn; measured masses using the ISOLTRAP mass spectrometer. Discussed implications on the N=82 neutron-shell gap. JOUR PRLTA 100 072501
- <sup>132</sup>Sb      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=132 (continued)**

- <sup>132</sup>Te      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32      NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301
- <sup>132</sup>I      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=132 (continued)

- <sup>132</sup>Xe 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301
- <sup>132</sup>Cs 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=132 (continued)**

- <sup>132</sup>Ba 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=133**

- <sup>133</sup>Sn 2008DW01 ATOMIC MASSES <sup>127,131,132,133,134</sup>Sn; measured masses using the ISOLTRAP mass spectrometer. Discussed implications on the N=82 neutron-shell gap. JOUR PRLTA 100 072501
- <sup>133</sup>Sb 2007KL06 NUCLEAR REACTIONS Be(<sup>238</sup>U, X)<sup>129</sup>Sn / <sup>130</sup>Sn / <sup>131</sup>Sn / <sup>132</sup>Sn / <sup>133</sup>Sb / <sup>134</sup>Sb, E=500 MeV / nucleon; measured pygmy dipole resonance strength, neutron skin thickness, symmetry parameters; deduced neutron separation energy, B(E1) using RQRPA approach. Compared to <sup>116</sup>Sn, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm, <sup>208</sup>Pb. JOUR PRVCA 76 051603

**A=133 (continued)**

- <sup>133</sup>Te      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>133</sup>I      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

## A=133 (continued)

- $^{133}\text{Xe}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{133}\text{Xe}$  2008PE04 RADIOACTIVITY  $^{133}\text{Xe}(\text{IT})$ ; measured  $E\gamma$ ,  $I\gamma$ , conversion electrons. Deduced ICC. JOUR ARISE 66 530
- $^{133}\text{Cs}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

## A=134

- <sup>134</sup>Sn 2008DW01 ATOMIC MASSES <sup>127,131,132,133,134</sup>Sn; measured masses using the ISOLTRAP mass spectrometer. Discussed implications on the N=82 neutron-shell gap. JOUR PRLTA 100 072501
- <sup>134</sup>Sb 2007KL06 NUCLEAR REACTIONS Be(<sup>238</sup>U, X)<sup>129</sup>Sn / <sup>130</sup>Sn / <sup>131</sup>Sn / <sup>132</sup>Sn / <sup>133</sup>Sb / <sup>134</sup>Sb, E=500 MeV / nucleon; measured pygmy dipole resonance strength, neutron skin thickness, symmetry parameters; deduced neutron separation energy, B(E1) using RQRPA approach. Compared to <sup>116</sup>Sn, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm, <sup>208</sup>Pb. JOUR PRVCA 76 051603
- <sup>134</sup>Te 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301



## A=134 (continued)

- <sup>134</sup>I      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- <sup>134</sup>Xe      2007NA31      NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609
- 2007PE32      NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E<sub>γ</sub>, I<sub>γ</sub>, γγ-coin, γγ(θ), multipolarities. <sup>109</sup>I; deduced levels, J, π, rotational bands; calculated configurations. JUROGAM array. <sup>106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138</sup>Te, <sup>109,111,113,115,117,119,121,123,125,127,129,131</sup>I, <sup>110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144</sup>Xe, <sup>117,119,121,123,125,127,129</sup>Cs; systematics. JOUR PRVCA 76 054301

**A=134 (continued)**

<sup>134</sup>Cs 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=135**

<sup>135</sup>I 2007NA31 NUCLEAR REACTIONS <sup>136</sup>Xe(p, X), E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies. <sup>79,80,81,82,83,84,85,86,87,88,89,90</sup>Rb, <sup>81,82,83,84,85,86,87,88,89,90,91,92,93</sup>Sr, <sup>84,85,86,87,88,89,90,91,92,93,94,95,96</sup>Y, <sup>86,87,88,89,90,91,92,93,94,95,96,97,98,99</sup>Zr, <sup>87,88,89,90,91,92,93,94,95,96,97,98,99,100</sup>Nb, <sup>90,91,92,93,94,95,96,97,98,99,100,101,102,103,104</sup>Mo, <sup>92,93,94,95,96,97,98,99,100,101,102,103,104,105,106</sup>Tc, <sup>95,96,97,98,99,100,101,102,103,104,105,106,107,108,109</sup>Ru, <sup>97,98,99,100,101,102,103,104,105,106,107,108,109,110,111</sup>Rh, <sup>99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115</sup>Pd, <sup>101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122</sup>Ag, <sup>104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125</sup>Cd, <sup>105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127</sup>In, <sup>108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130</sup>Sn, <sup>110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132</sup>Sb, <sup>111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134</sup>Te, <sup>113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>I, <sup>116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135</sup>Xe, <sup>122,123,124,125,126,127,128,129,130,131,132,133,134,135,136</sup>Cs, <sup>127,128,129,130,131,132</sup>Ba; measured cross sections. JOUR PRVCA 76 064609

**A=135 (continued)**

- $^{135}\text{Xe}$       2007NA31      NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609
- $^{135}\text{Cs}$       2007NA31      NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ ,  $E=1$  GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76 064609

**A=136**

- $^{136}\text{Te}$  2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2\text{np})$ , E=195 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  
106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te,  
109,111,113,115,117,119,121,123,125,127,129,131I,  
110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe,  
117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301
- $^{136}\text{Xe}$  2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2\text{np})$ , E=195 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array.  
106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te,  
109,111,113,115,117,119,121,123,125,127,129,131I,  
110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe,  
117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301
- $^{136}\text{Cs}$  2007NA31 NUCLEAR REACTIONS  $^{136}\text{Xe}(p, X)$ , E=1 GeV / nucleon; measured isotopic cross sections, kinetic energies.  $^{79,80,81,82,83,84,85,86,87,88,89,90}\text{Rb}$ ,  
 $^{81,82,83,84,85,86,87,88,89,90,91,92,93}\text{Sr}$ ,  $^{84,85,86,87,88,89,90,91,92,93,94,95,96}\text{Y}$ ,  
 $^{86,87,88,89,90,91,92,93,94,95,96,97,98,99}\text{Zr}$ ,  
 $^{87,88,89,90,91,92,93,94,95,96,97,98,99,100}\text{Nb}$ ,  
 $^{90,91,92,93,94,95,96,97,98,99,100,101,102,103,104}\text{Mo}$ ,  
 $^{92,93,94,95,96,97,98,99,100,101,102,103,104,105,106}\text{Tc}$ ,  
 $^{95,96,97,98,99,100,101,102,103,104,105,106,107,108,109}\text{Ru}$ ,  
 $^{97,98,99,100,101,102,103,104,105,106,107,108,109,110,111}\text{Rh}$ ,  
 $^{99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115}\text{Pd}$ ,  
 $^{101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122}\text{Ag}$ ,  
 $^{104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125}\text{Cd}$ ,  
 $^{105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127}\text{In}$ ,  
 $^{108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130}\text{Sn}$ ,  
 $^{110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132}\text{Sb}$ ,  
 $^{111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134}\text{Te}$ ,  
 $^{113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{I}$ ,  
 $^{116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135}\text{Xe}$ ,  
 $^{122,123,124,125,126,127,128,129,130,131,132,133,134,135,136}\text{Cs}$ ,  
 $^{127,128,129,130,131,132}\text{Ba}$ ; measured cross sections. JOUR PRVCA 76  
064609

**A=137**

No references found

**A=138**

- <sup>138</sup>Te 2007PE32 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. 106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te, 109,111,113,115,117,119,121,123,125,127,129,131I, 110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe, 117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301
- <sup>138</sup>Xe 2007KR19 NUCLEAR REACTIONS <sup>96</sup>Mo(<sup>138</sup>Xe, <sup>138</sup>Xe'), (<sup>140</sup>Xe, <sup>140</sup>Xe'), (<sup>142</sup>Xe, <sup>142</sup>Xe'), E=2.84 MeV / nucleon; measured E $\gamma$ , I $\gamma$ . <sup>138,140,142</sup>Xe; deduced B(E2). JOUR ZSTNE 150 127
- 2007PE32 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. 106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te, 109,111,113,115,117,119,121,123,125,127,129,131I, 110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe, 117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301

**A=139**

- <sup>139</sup>Ba 2008KA01 NUCLEAR REACTIONS <sup>138</sup>Ba, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm( $\alpha$ , <sup>3</sup>He), E=51 MeV; measured  $\sigma(\theta)$ , excitation energy spectra; deduced spectroscopic factor and single-neutron energies. JOUR PYLBB 658 216
- <sup>139</sup>Nd 2007HI13 NUCLEAR REACTIONS <sup>141</sup>Pr(p, n)<sup>141</sup>Nd<sup>m</sup>, E=9.0, 9.6, 10.3, 10.8, 11.3, 12.4, 12.7, 13.3, 14.3, 15.6MeV; <sup>141</sup>Pr(p, 3n)<sup>139</sup>Nd<sup>m</sup>, E=21.0, 25.3, 26.6, 29.5, 30.4, 32.9, 39.1, 41.6, 43.8, 44.8 MeV; Ce(<sup>3</sup>He, xn)<sup>141</sup>Nd<sup>m</sup>, E=18.3, 19.4, 20.7, 22.1, 22.9, 23.3, 24.5, 25.6, 26.5, 28.1, 29.2, 30.3, 31.3, 32.3, 34.2 MeV; Ce(<sup>3</sup>He, xn)<sup>141</sup>Nd<sup>m</sup>, E=27.7, 29.1, 30.5, 32.0, 32.0, 33.2, 33.8, 35.2 MeV; measured E $\gamma$ , I $\gamma$ , cross sections, excitation functions. Comparison with experimental values. JOUR PRVCA 76 064601
- 2008FE02 NUCLEAR REACTIONS <sup>126</sup>Te(<sup>18</sup>O, 4n), (<sup>18</sup>O, 5n), E=75 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>139,140</sup>Nd deduced level energies, J,  $\pi$ , T<sub>1/2</sub>. <sup>27</sup>Al(<sup>18</sup>O, 2n), E=75 MeV; measured E $\gamma$ , I $\gamma$ . <sup>43</sup>Sc; measured half-life of isomeric state. ALTO facility. JOUR ZAANE 35 167

**A=140**

- <sup>140</sup>Xe 2007KR19 NUCLEAR REACTIONS <sup>96</sup>Mo(<sup>138</sup>Xe, <sup>138</sup>Xe'), (<sup>140</sup>Xe, <sup>140</sup>Xe'), (<sup>142</sup>Xe, <sup>142</sup>Xe'), E=2.84 MeV / nucleon; measured E $\gamma$ , I $\gamma$ . <sup>138,140,142</sup>Xe; deduced B(E2). JOUR ZSTNE 150 127

**A=140 (continued)**

- 2007PE32 NUCLEAR REACTIONS  $^{58}\text{Ni}(^{54}\text{Fe}, 2\text{np})$ ,  $E=195$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities.  $^{109}\text{I}$ ; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. 106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te, 109,111,113,115,117,119,121,123,125,127,129,131I, 110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe, 117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301
- $^{140}\text{Ba}$  2007VE14 NUCLEAR REACTIONS  $^{238}\text{U}(^{12}\text{C}, \text{X})^{140}\text{Ba} / ^{142}\text{Ce}$ ,  $E=90$  MeV;  $^{208}\text{Pb}(^{18}\text{O}, \text{X})^{140}\text{Ba} / ^{142}\text{Ce}$ ,  $E=85$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.  $^{140}\text{Ba}$ ,  $^{142}\text{Ce}$  deduced high-spin levels, J,  $\pi$ , configurations. Euroball III and IV arrays. JOUR ZAANE 34 349
- $^{140}\text{Ce}$  2007LI71 RADIOACTIVITY  $^{140}\text{Pr}(\beta^+)$ , (EC); measured decay rates for bare nuclei, hydrogenlike, and heliumlike configurations. JOUR PRLTA 99 262501
- 2008KU06 RADIOACTIVITY  $^{140}\text{Pr}(\text{EC})$ , ( $\beta^+$ ); measured Schottky frequency spectra of ions stored in an ESR storage ring.  $^{140}\text{Pr}(\text{EC})$ , ( $\beta^+$ ); deduced decay constant and half-life. JOUR APOBB 39 501
- $^{140}\text{Pr}$  2007LI71 RADIOACTIVITY  $^{140}\text{Pr}(\beta^+)$ , (EC); measured decay rates for bare nuclei, hydrogenlike, and heliumlike configurations. JOUR PRLTA 99 262501
- 2008KU06 RADIOACTIVITY  $^{140}\text{Pr}(\text{EC})$ , ( $\beta^+$ ); measured Schottky frequency spectra of ions stored in an ESR storage ring.  $^{140}\text{Pr}(\text{EC})$ , ( $\beta^+$ ); deduced decay constant and half-life. JOUR APOBB 39 501
- $^{140}\text{Nd}$  2008FE02 NUCLEAR REACTIONS  $^{126}\text{Te}(^{18}\text{O}, 4\text{n})$ , ( $^{18}\text{O}, 5\text{n}$ ),  $E=75$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.  $^{139,140}\text{Nd}$  deduced level energies, J,  $\pi$ ,  $T_{1/2}$ .  $^{27}\text{Al}(^{18}\text{O}, 2\text{n})$ ,  $E=75$  MeV; measured  $E\gamma$ ,  $I\gamma$ .  $^{43}\text{Sc}$ ; measured half-life of isomeric state. ALTO facility. JOUR ZAANE 35 167

**A=141**

- $^{141}\text{Ce}$  2008KA01 NUCLEAR REACTIONS  $^{138}\text{Ba}$ ,  $^{140}\text{Ce}$ ,  $^{142}\text{Nd}$ ,  $^{144}\text{Sm}(\alpha, ^3\text{He})$ ,  $E=51$  MeV; measured  $\sigma(\theta)$ , excitation energy spectra; deduced spectroscopic factor and single-neutron energies. JOUR PYLBB 658 216
- $^{141}\text{Nd}$  2007HI13 NUCLEAR REACTIONS  $^{141}\text{Pr}(\text{p}, \text{n})^{141}\text{Nd}^m$ ,  $E=9.0, 9.6, 10.3, 10.8, 11.3, 12.4, 12.7, 13.3, 14.3, 15.6$  MeV;  $^{141}\text{Pr}(\text{p}, 3\text{n})^{139}\text{Nd}^m$ ,  $E=21.0, 25.3, 26.6, 29.5, 30.4, 32.9, 39.1, 41.6, 43.8, 44.8$  MeV;  $\text{Ce}(^3\text{He}, \text{xn})^{141}\text{Nd}^m$ ,  $E=18.3, 19.4, 20.7, 22.1, 22.9, 23.3, 24.5, 25.6, 26.5, 28.1, 29.2, 30.3, 31.3, 32.3, 34.2$  MeV;  $\text{Ce}(^3\text{He}, \text{xn})^{141}\text{Nd}^m$ ,  $E=27.7, 29.1, 30.5, 32.0, 32.0, 33.2, 33.8, 35.2$  MeV; measured  $E\gamma$ ,  $I\gamma$ , cross sections, excitation functions. Comparison with experimental values. JOUR PRVCA 76 064601
- 2007PA45 NUCLEAR REACTIONS  $^{142}\text{Nd}(\gamma, \text{n})$ ,  $E < 35$  MeV; measured  $E\gamma$ ,  $I\gamma$ . Deduced isomeric yield ratio. JOUR AENGA 103 827

**A=142**

- <sup>142</sup>Xe 2007KR19 NUCLEAR REACTIONS <sup>96</sup>Mo(<sup>138</sup>Xe, <sup>138</sup>Xe'), (<sup>140</sup>Xe, <sup>140</sup>Xe'), (<sup>142</sup>Xe, <sup>142</sup>Xe'), E=2.84 MeV / nucleon; measured E $\gamma$ , I $\gamma$ . <sup>138,140,142</sup>Xe; deduced B(E2). JOUR ZSTNE 150 127
- 2007PE32 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. 106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te, 109,111,113,115,117,119,121,123,125,127,129,131I, 110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe, 117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301
- <sup>142</sup>Ce 2007VE14 NUCLEAR REACTIONS <sup>238</sup>U(<sup>12</sup>C, X)<sup>140</sup>Ba / <sup>142</sup>Ce, E=90 MeV; <sup>208</sup>Pb(<sup>18</sup>O, X)<sup>140</sup>Ba / <sup>142</sup>Ce, E=85 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>140</sup>Ba, <sup>142</sup>Ce deduced high-spin levels, J,  $\pi$ , configurations. Euroball III and IV arrays. JOUR ZAANE 34 349
- <sup>142</sup>Gd 2008LI08 NUCLEAR REACTIONS <sup>114</sup>Sn(<sup>32</sup>S, 2n2p), E=160 MeV; <sup>99</sup>Ru(<sup>48</sup>Ti, 3n2p), E=240 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, DSA. <sup>142</sup>Gd deduced high-spin levels, J,  $\pi$ , B(E2), T<sub>1/2</sub>; calculated configurations with cranked Nilsson-Strutinsky and interacting boson models. Euroball III and IV arrays. JOUR ZAANE 35 135

**A=143**

- <sup>143</sup>Nd 2008KA01 NUCLEAR REACTIONS <sup>138</sup>Ba, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm( $\alpha$ , <sup>3</sup>He), E=51 MeV; measured  $\sigma(\theta)$ , excitation energy spectra; deduced spectroscopic factor and single-neutron energies. JOUR PYLBB 658 216
- <sup>143</sup>Tb 2007RA37 ATOMIC MASSES <sup>143,147</sup>Tb, <sup>143,144,145,146,147,148</sup>Dy, <sup>144,145,146,147,148</sup>Ho, <sup>146,147,148</sup>Er, <sup>147,148</sup>Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. Compared results to previous results. JOUR ZSTNE 150 329
- <sup>143</sup>Dy 2007RA37 ATOMIC MASSES <sup>143,147</sup>Tb, <sup>143,144,145,146,147,148</sup>Dy, <sup>144,145,146,147,148</sup>Ho, <sup>146,147,148</sup>Er, <sup>147,148</sup>Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. Compared results to previous results. JOUR ZSTNE 150 329

**A=144**

- <sup>144</sup>Xe 2007PE32 NUCLEAR REACTIONS <sup>58</sup>Ni(<sup>54</sup>Fe, 2np), E=195 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ , multipolarities. <sup>109</sup>I; deduced levels, J,  $\pi$ , rotational bands; calculated configurations. JUROGAM array. 106,108,110,112,114,116,118,120,122,124,126,128,130,132,134,136,138Te, 109,111,113,115,117,119,121,123,125,127,129,131I, 110,112,114,116,118,120,122,124,126,128,130,132,134,136,138,140,142,144Xe, 117,119,121,123,125,127,129Cs; systematics. JOUR PRVCA 76 054301
- <sup>144</sup>Dy 2007RA37 ATOMIC MASSES <sup>143,147</sup>Tb, <sup>143,144,145,146,147,148</sup>Dy, <sup>144,145,146,147,148</sup>Ho, <sup>146,147,148</sup>Er, <sup>147,148</sup>Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. Compared results to previous results. JOUR ZSTNE 150 329

**A=144 (continued)**

- <sup>144</sup>Ho 2007RA37 ATOMIC MASSES <sup>143,147</sup>Tb, <sup>143,144,145,146,147,148</sup>Dy, <sup>144,145,146,147,148</sup>Ho, <sup>146,147,148</sup>Er, <sup>147,148</sup>Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. Compared results to previous results. JOUR ZSTNE 150 329
- 2008RA03 ATOMIC MASSES <sup>144,145,146,147</sup>Ho, <sup>147,148</sup>Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. JOUR PRLTA 100 012501

**A=145**

- <sup>145</sup>Sm 2008KA01 NUCLEAR REACTIONS <sup>138</sup>Ba, <sup>140</sup>Ce, <sup>142</sup>Nd, <sup>144</sup>Sm( $\alpha$ , <sup>3</sup>He), E=51 MeV; measured  $\sigma(\theta)$ , excitation energy spectra; deduced spectroscopic factor and single-neutron energies. JOUR PYLBB 658 216
- <sup>145</sup>Dy 2007RA37 ATOMIC MASSES <sup>143,147</sup>Tb, <sup>143,144,145,146,147,148</sup>Dy, <sup>144,145,146,147,148</sup>Ho, <sup>146,147,148</sup>Er, <sup>147,148</sup>Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. Compared results to previous results. JOUR ZSTNE 150 329
- <sup>145</sup>Ho 2007RA37 ATOMIC MASSES <sup>143,147</sup>Tb, <sup>143,144,145,146,147,148</sup>Dy, <sup>144,145,146,147,148</sup>Ho, <sup>146,147,148</sup>Er, <sup>147,148</sup>Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. Compared results to previous results. JOUR ZSTNE 150 329
- 2008RA03 ATOMIC MASSES <sup>144,145,146,147</sup>Ho, <sup>147,148</sup>Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. JOUR PRLTA 100 012501

**A=146**

- <sup>146</sup>Dy 2007RA37 ATOMIC MASSES <sup>143,147</sup>Tb, <sup>143,144,145,146,147,148</sup>Dy, <sup>144,145,146,147,148</sup>Ho, <sup>146,147,148</sup>Er, <sup>147,148</sup>Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. Compared results to previous results. JOUR ZSTNE 150 329
- <sup>146</sup>Ho 2007RA37 ATOMIC MASSES <sup>143,147</sup>Tb, <sup>143,144,145,146,147,148</sup>Dy, <sup>144,145,146,147,148</sup>Ho, <sup>146,147,148</sup>Er, <sup>147,148</sup>Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. Compared results to previous results. JOUR ZSTNE 150 329
- 2008RA03 ATOMIC MASSES <sup>144,145,146,147</sup>Ho, <sup>147,148</sup>Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. JOUR PRLTA 100 012501
- <sup>146</sup>Er 2007RA37 ATOMIC MASSES <sup>143,147</sup>Tb, <sup>143,144,145,146,147,148</sup>Dy, <sup>144,145,146,147,148</sup>Ho, <sup>146,147,148</sup>Er, <sup>147,148</sup>Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. Compared results to previous results. JOUR ZSTNE 150 329



**A=147**

<sup>147</sup> Nd	2008HA04	NUCLEAR REACTIONS <sup>148,150</sup> Nd, <sup>154</sup> Sm, <sup>154,160</sup> Gd( $\gamma$ , n), E=7450-9800 keV [from Cu(e, $\gamma$ )]; measured E $\gamma$ , I $\gamma$ , photon flux, normalization, cross section; deduced reaction rates. JOUR PRVCA 77 015803
<sup>147</sup> Gd	2007P013	RADIOACTIVITY <sup>147</sup> Gd, <sup>148</sup> Tb, <sup>204</sup> Pt(IT); measured delayed E $\gamma$ , I $\gamma$ from isomer decays. JOUR ZSTNE 150 165
<sup>147</sup> Tb	2007RA37	ATOMIC MASSES <sup>143,147</sup> Tb, <sup>143,144,145,146,147,148</sup> Dy, <sup>144,145,146,147,148</sup> Ho, <sup>146,147,148</sup> Er, <sup>147,148</sup> Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. Compared results to previous results. JOUR ZSTNE 150 329
<sup>147</sup> Dy	2007RA37	ATOMIC MASSES <sup>143,147</sup> Tb, <sup>143,144,145,146,147,148</sup> Dy, <sup>144,145,146,147,148</sup> Ho, <sup>146,147,148</sup> Er, <sup>147,148</sup> Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. Compared results to previous results. JOUR ZSTNE 150 329
<sup>147</sup> Ho	2007RA37	ATOMIC MASSES <sup>143,147</sup> Tb, <sup>143,144,145,146,147,148</sup> Dy, <sup>144,145,146,147,148</sup> Ho, <sup>146,147,148</sup> Er, <sup>147,148</sup> Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. Compared results to previous results. JOUR ZSTNE 150 329
	2008RA03	ATOMIC MASSES <sup>144,145,146,147</sup> Ho, <sup>147,148</sup> Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. JOUR PRLTA 100 012501
<sup>147</sup> Er	2007RA37	ATOMIC MASSES <sup>143,147</sup> Tb, <sup>143,144,145,146,147,148</sup> Dy, <sup>144,145,146,147,148</sup> Ho, <sup>146,147,148</sup> Er, <sup>147,148</sup> Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. Compared results to previous results. JOUR ZSTNE 150 329
<sup>147</sup> Tm	2007RA37	ATOMIC MASSES <sup>143,147</sup> Tb, <sup>143,144,145,146,147,148</sup> Dy, <sup>144,145,146,147,148</sup> Ho, <sup>146,147,148</sup> Er, <sup>147,148</sup> Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. Compared results to previous results. JOUR ZSTNE 150 329
	2008RA03	ATOMIC MASSES <sup>144,145,146,147</sup> Ho, <sup>147,148</sup> Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. JOUR PRLTA 100 012501

**A=148**

<sup>148</sup> Tb	2007P013	RADIOACTIVITY <sup>147</sup> Gd, <sup>148</sup> Tb, <sup>204</sup> Pt(IT); measured delayed E $\gamma$ , I $\gamma$ from isomer decays. JOUR ZSTNE 150 165
<sup>148</sup> Dy	2007RA37	ATOMIC MASSES <sup>143,147</sup> Tb, <sup>143,144,145,146,147,148</sup> Dy, <sup>144,145,146,147,148</sup> Ho, <sup>146,147,148</sup> Er, <sup>147,148</sup> Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. Compared results to previous results. JOUR ZSTNE 150 329
<sup>148</sup> Ho	2007RA37	ATOMIC MASSES <sup>143,147</sup> Tb, <sup>143,144,145,146,147,148</sup> Dy, <sup>144,145,146,147,148</sup> Ho, <sup>146,147,148</sup> Er, <sup>147,148</sup> Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. Compared results to previous results. JOUR ZSTNE 150 329

**A=148 (continued)**

- <sup>148</sup>Er 2007RA37 ATOMIC MASSES <sup>143,147</sup>Tb, <sup>143,144,145,146,147,148</sup>Dy, <sup>144,145,146,147,148</sup>Ho, <sup>146,147,148</sup>Er, <sup>147,148</sup>Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. Compared results to previous results. JOUR ZSTNE 150 329
- <sup>148</sup>Tm 2007RA37 ATOMIC MASSES <sup>143,147</sup>Tb, <sup>143,144,145,146,147,148</sup>Dy, <sup>144,145,146,147,148</sup>Ho, <sup>146,147,148</sup>Er, <sup>147,148</sup>Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. Compared results to previous results. JOUR ZSTNE 150 329
- 2008RA03 ATOMIC MASSES <sup>144,145,146,147</sup>Ho, <sup>147,148</sup>Tm; measured masses using the SHIPTRAP penning trap mass spectrometer. JOUR PRLTA 100 012501

**A=149**

- <sup>149</sup>Nd 2008HA04 NUCLEAR REACTIONS <sup>148,150</sup>Nd, <sup>154</sup>Sm, <sup>154,160</sup>Gd( $\gamma$ , n), E=7450-9800 keV [from Cu(e,  $\gamma$ )]; measured E $\gamma$ , I $\gamma$ , photon flux, normalization, cross section; deduced reaction rates. JOUR PRVCA 77 015803
- 2008JA01 NUCLEAR REACTIONS <sup>148</sup>Nd(d, p), E=12.1 MeV; <sup>150</sup>Nd(d, t), E=12.1 MeV; measured reaction product spectra and angular distributions, cross sections. <sup>149</sup>Nd; deduced levels, J,  $\pi$ . DWBA analysis. JOUR APOBB 39 695

**A=150**

No references found

**A=151**

- <sup>151</sup>Tb 2008R002 NUCLEAR REACTIONS <sup>130</sup>Te(<sup>27</sup>Al, xn), E=155 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>151,152</sup>Tb; deduced levels, J,  $\pi$ , superdeformed bands, dynamical moments, configurations; calculated single-particle energy levels. Compared with calculations and superdeformed bands in <sup>150</sup>Tb, <sup>152</sup>Dy. JOUR PRVCA 77 014308

**A=152**

- <sup>152</sup>Tb 2008R002 NUCLEAR REACTIONS <sup>130</sup>Te(<sup>27</sup>Al, xn), E=155 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>151,152</sup>Tb; deduced levels, J,  $\pi$ , superdeformed bands, dynamical moments, configurations; calculated single-particle energy levels. Compared with calculations and superdeformed bands in <sup>150</sup>Tb, <sup>152</sup>Dy. JOUR PRVCA 77 014308

**A=153**

- <sup>153</sup>Sm 2008HA04 NUCLEAR REACTIONS <sup>148,150</sup>Nd, <sup>154</sup>Sm, <sup>154,160</sup>Gd( $\gamma$ , n), E=7450-9800 keV [from Cu(e,  $\gamma$ )]; measured E $\gamma$ , I $\gamma$ , photon flux, normalization, cross section; deduced reaction rates. JOUR PRVCA 77 015803
- <sup>153</sup>Gd 2008HA04 NUCLEAR REACTIONS <sup>148,150</sup>Nd, <sup>154</sup>Sm, <sup>154,160</sup>Gd( $\gamma$ , n), E=7450-9800 keV [from Cu(e,  $\gamma$ )]; measured E $\gamma$ , I $\gamma$ , photon flux, normalization, cross section; deduced reaction rates. JOUR PRVCA 77 015803

**A=154**

No references found

**A=155**

No references found

**A=156**

No references found

**A=157**

- <sup>157</sup>Er 2008AG04 NUCLEAR REACTIONS <sup>120</sup>Sn(<sup>44</sup>Ca, 4n), E=210 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; calculated potential energy surfaces; <sup>160</sup>Yb; deduced excitation energies, configurations, high-spin rotational bands, triaxial strongly-deformed bands. <sup>157,158</sup>Er, <sup>161</sup>Lu; systematics, comparison with theory. JOUR PRVCA 77 021302

**A=158**

- <sup>158</sup>Pm 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363
- <sup>158</sup>Sm 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363
- <sup>158</sup>Er 2008AG04 NUCLEAR REACTIONS <sup>120</sup>Sn(<sup>44</sup>Ca, 4n), E=210 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; calculated potential energy surfaces; <sup>160</sup>Yb; deduced excitation energies, configurations, high-spin rotational bands, triaxial strongly-deformed bands. <sup>157,158</sup>Er, <sup>161</sup>Lu; systematics, comparison with theory. JOUR PRVCA 77 021302

**A=159**

- <sup>159</sup>Pm 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363
- <sup>159</sup>Sm 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363
- <sup>159</sup>Eu 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363
- <sup>159</sup>Gd 2008HA04 NUCLEAR REACTIONS <sup>148,150</sup>Nd, <sup>154</sup>Sm, <sup>154,160</sup>Gd( $\gamma$ , n), E=7450-9800 keV [from Cu(e,  $\gamma$ )]; measured E $\gamma$ , I $\gamma$ , photon flux, normalization, cross section; deduced reaction rates. JOUR PRVCA 77 015803

**A=160**

- <sup>160</sup>Eu 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363
- <sup>160</sup>Gd 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363
- <sup>160</sup>Yb 2008AG04 NUCLEAR REACTIONS <sup>120</sup>Sn(<sup>44</sup>Ca, 4n), E=210 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; calculated potential energy surfaces; <sup>160</sup>Yb; deduced excitation energies, configurations, high-spin rotational bands, triaxial strongly-deformed bands. <sup>157,158</sup>Er, <sup>161</sup>Lu; systematics, comparison with theory. JOUR PRVCA 77 021302

**A=161**

- <sup>161</sup>Sm 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363
- <sup>161</sup>Eu 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363
- <sup>161</sup>Gd 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363

**A=161 (continued)**

- <sup>161</sup>Lu 2008AG04 NUCLEAR REACTIONS <sup>120</sup>Sn(<sup>44</sup>Ca, 4n), E=210 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; calculated potential energy surfaces; <sup>160</sup>Yb; deduced excitation energies, configurations, high-spin rotational bands, triaxial strongly-deformed bands. <sup>157,158</sup>Er, <sup>161</sup>Lu; systematics, comparison with theory. JOUR PRVCA 77 021302

**A=162**

- <sup>162</sup>Eu 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363
- <sup>162</sup>Gd 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363

**A=163**

- <sup>163</sup>Eu 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363
- <sup>163</sup>Gd 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363
- <sup>163</sup>Tb 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363
- <sup>163</sup>Lu 2007ZH46 NUCLEAR REACTIONS <sup>128</sup>Te(<sup>48</sup>Ca, 4n), (<sup>48</sup>Ca, 5n), E=209 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>171,172</sup>Hf; deduced levels, J,  $\pi$ , configurations, superdeformed bands. <sup>163</sup>Lu, <sup>170,173,174,175</sup>Hf; systematics. JOUR PRVCA 76 064321
- 2008TA03 NUCLEAR REACTIONS <sup>128</sup>Te(<sup>50</sup>Ti, 4n), E=230 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; <sup>174</sup>W; deduced levels, J,  $\pi$ , band alignments, searched for triaxial strongly deformed bands. <sup>163,164,165,167</sup>Lu, <sup>174,175</sup>Hf; analyzed energy spacings. JOUR PRVCA 77 024313

**A=164**

- <sup>164</sup>Eu 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363

**A=164 (continued)**

- <sup>164</sup>Gd 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363
- <sup>164</sup>Lu 2008TA03 NUCLEAR REACTIONS <sup>128</sup>Te(<sup>50</sup>Ti, 4n), E=230 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; <sup>174</sup>W; deduced levels, J,  $\pi$ , band alignments, searched for triaxial strongly deformed bands. <sup>163,164,165,167</sup>Lu, <sup>174,175</sup>Hf; analyzed energy spacings. JOUR PRVCA 77 024313

**A=165**

- <sup>165</sup>Eu 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363
- <sup>165</sup>Gd 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363
- <sup>165</sup>Lu 2008TA03 NUCLEAR REACTIONS <sup>128</sup>Te(<sup>50</sup>Ti, 4n), E=230 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; <sup>174</sup>W; deduced levels, J,  $\pi$ , band alignments, searched for triaxial strongly deformed bands. <sup>163,164,165,167</sup>Lu, <sup>174,175</sup>Hf; analyzed energy spacings. JOUR PRVCA 77 024313

**A=166**

- <sup>166</sup>Tb 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363
- 2008SI02 NUCLEAR REACTIONS <sup>159</sup>Tb(<sup>16</sup>O, 3n $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2 $\alpha$ ), E=95 MeV; <sup>159</sup>Tb(<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2p $\alpha$ ), (<sup>16</sup>O, n3p $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 2n $\alpha$ ), E=95 MeV; measured E $\gamma$ , I $\gamma$ , production cross sections, excitation functions. <sup>167,168</sup>Lu, <sup>167</sup>Yb, <sup>177</sup>W, <sup>166</sup>Tb, <sup>178</sup>Ta, <sup>177</sup>Hf, <sup>177,179</sup>Re; measured excitation functions in fusion reactions. JOUR PRVCA 77 014607
- <sup>166</sup>Dy 2007HA57 RADIOACTIVITY <sup>158,159</sup>Pm, <sup>159,161</sup>Sm, <sup>160,161,162,163,164,165</sup>Eu, <sup>163</sup>Gd, <sup>166</sup>Tb( $\beta^-$ ) [from <sup>238</sup>U(p, F), E=24 MeV and subsequent decay]; measured E $\gamma$ , I $\gamma$ , E $\beta$ , I $\beta$ ; deduced Q $\beta$ , mass excess and two-neutron separation energies. Mass separator. JOUR ZAANE 34 363
- <sup>166</sup>Tm 2008SI02 NUCLEAR REACTIONS <sup>159</sup>Tb(<sup>16</sup>O, 3n $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2 $\alpha$ ), E=95 MeV; <sup>159</sup>Tb(<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2p $\alpha$ ), (<sup>16</sup>O, n3p $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 2n $\alpha$ ), E=95 MeV; measured E $\gamma$ , I $\gamma$ , production cross sections, excitation functions. <sup>167,168</sup>Lu, <sup>167</sup>Yb, <sup>177</sup>W, <sup>166</sup>Tb, <sup>178</sup>Ta, <sup>177</sup>Hf, <sup>177,179</sup>Re; measured excitation functions in fusion reactions. JOUR PRVCA 77 014607

**A=166 (continued)**

- <sup>166</sup>Yb 2007MC08 RADIOACTIVITY <sup>168</sup>Ta ( $\beta^+$ ), (EC) [from <sup>159</sup>Tb(<sup>16</sup>O, 7n), E=130 MeV]; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ . <sup>168</sup>Hf; deduced levels, J,  $\pi$ , multipolarities, mixing ratios, B(E2). Compared with calculations using CBS and Davidson models and IBA model. <sup>166,168</sup>Yb; measured  $E\gamma$ . JOUR PRVCA 76 064307

**A=167**

- <sup>167</sup>Er 2008SI02 NUCLEAR REACTIONS <sup>159</sup>Tb(<sup>16</sup>O, 3n $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2 $\alpha$ ), E=95 MeV; <sup>159</sup>Tb(<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2p $\alpha$ ), (<sup>16</sup>O, n3p $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 2n $\alpha$ ), E=95 MeV; measured  $E\gamma$ ,  $I\gamma$ , production cross sections, excitation functions. <sup>167,168</sup>Lu, <sup>167</sup>Yb, <sup>177</sup>W, <sup>166</sup>Tb, <sup>178</sup>Ta, <sup>177</sup>Hf, <sup>177,179</sup>Re; measured excitation functions in fusion reactions. JOUR PRVCA 77 014607
- <sup>167</sup>Yb 2008SI02 NUCLEAR REACTIONS <sup>159</sup>Tb(<sup>16</sup>O, 3n $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2 $\alpha$ ), E=95 MeV; <sup>159</sup>Tb(<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2p $\alpha$ ), (<sup>16</sup>O, n3p $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 2n $\alpha$ ), E=95 MeV; measured  $E\gamma$ ,  $I\gamma$ , production cross sections, excitation functions. <sup>167,168</sup>Lu, <sup>167</sup>Yb, <sup>177</sup>W, <sup>166</sup>Tb, <sup>178</sup>Ta, <sup>177</sup>Hf, <sup>177,179</sup>Re; measured excitation functions in fusion reactions. JOUR PRVCA 77 014607
- <sup>167</sup>Lu 2008GU02 NUCLEAR REACTIONS <sup>123</sup>Sb(<sup>48</sup>Ca, 4n), E=203 MeV; measured  $E\gamma$ ,  $I\gamma$ , conversion electrons; <sup>167</sup>Lu; deduced conversion coefficients. JOUR PRVCA 77 024314
- 2008SI02 NUCLEAR REACTIONS <sup>159</sup>Tb(<sup>16</sup>O, 3n $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2 $\alpha$ ), E=95 MeV; <sup>159</sup>Tb(<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2p $\alpha$ ), (<sup>16</sup>O, n3p $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 2n $\alpha$ ), E=95 MeV; measured  $E\gamma$ ,  $I\gamma$ , production cross sections, excitation functions. <sup>167,168</sup>Lu, <sup>167</sup>Yb, <sup>177</sup>W, <sup>166</sup>Tb, <sup>178</sup>Ta, <sup>177</sup>Hf, <sup>177,179</sup>Re; measured excitation functions in fusion reactions. JOUR PRVCA 77 014607
- 2008TA03 NUCLEAR REACTIONS <sup>128</sup>Te(<sup>50</sup>Ti, 4n), E=230 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin; <sup>174</sup>W; deduced levels, J,  $\pi$ , band alignments, searched for triaxial strongly deformed bands. <sup>163,164,165,167</sup>Lu, <sup>174,175</sup>Hf; analyzed energy spacings. JOUR PRVCA 77 024313

**A=168**

- <sup>168</sup>Tm 2008SI02 NUCLEAR REACTIONS <sup>159</sup>Tb(<sup>16</sup>O, 3n $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2 $\alpha$ ), E=95 MeV; <sup>159</sup>Tb(<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2p $\alpha$ ), (<sup>16</sup>O, n3p $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 2n $\alpha$ ), E=95 MeV; measured  $E\gamma$ ,  $I\gamma$ , production cross sections, excitation functions. <sup>167,168</sup>Lu, <sup>167</sup>Yb, <sup>177</sup>W, <sup>166</sup>Tb, <sup>178</sup>Ta, <sup>177</sup>Hf, <sup>177,179</sup>Re; measured excitation functions in fusion reactions. JOUR PRVCA 77 014607
- <sup>168</sup>Yb 2007MC08 RADIOACTIVITY <sup>168</sup>Ta ( $\beta^+$ ), (EC) [from <sup>159</sup>Tb(<sup>16</sup>O, 7n), E=130 MeV]; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin,  $\gamma\gamma(\theta)$ . <sup>168</sup>Hf; deduced levels, J,  $\pi$ , multipolarities, mixing ratios, B(E2). Compared with calculations using CBS and Davidson models and IBA model. <sup>166,168</sup>Yb; measured  $E\gamma$ . JOUR PRVCA 76 064307

**A=168 (continued)**

- <sup>168</sup>Lu 2008SI02 NUCLEAR REACTIONS <sup>159</sup>Tb(<sup>16</sup>O, 3nα), (<sup>16</sup>O, 4nα), (<sup>16</sup>O, 3npα), (<sup>16</sup>O, n2α), E=95 MeV; <sup>159</sup>Tb(<sup>16</sup>O, 3npα), (<sup>16</sup>O, n2pα), (<sup>16</sup>O, n3pα), (<sup>16</sup>O, 4nα), (<sup>16</sup>O, 2nα), E=95 MeV; measured Eγ, Iγ, production cross sections, excitation functions. <sup>167,168</sup>Lu, <sup>167</sup>Yb, <sup>177</sup>W, <sup>166</sup>Tb, <sup>178</sup>Ta, <sup>177</sup>Hf, <sup>177,179</sup>Re; measured excitation functions in fusion reactions. JOUR PRVCA 77 014607
- <sup>168</sup>Hf 2007MC08 RADIOACTIVITY <sup>168</sup>Ta (β<sup>+</sup>), (EC) [from <sup>159</sup>Tb(<sup>16</sup>O, 7n), E=130 MeV]; measured Eγ, Iγ, γγ-coin, γγ(θ). <sup>168</sup>Hf; deduced levels, J, π, multipolarities, mixing ratios, B(E2). Compared with calculations using CBS and Davidson models and IBA model. <sup>166,168</sup>Yb; measured Eγ. JOUR PRVCA 76 064307
- <sup>168</sup>Ta 2007MC08 RADIOACTIVITY <sup>168</sup>Ta (β<sup>+</sup>), (EC) [from <sup>159</sup>Tb(<sup>16</sup>O, 7n), E=130 MeV]; measured Eγ, Iγ, γγ-coin, γγ(θ). <sup>168</sup>Hf; deduced levels, J, π, multipolarities, mixing ratios, B(E2). Compared with calculations using CBS and Davidson models and IBA model. <sup>166,168</sup>Yb; measured Eγ. JOUR PRVCA 76 064307

**A=169**

- <sup>169</sup>Lu 2008SI02 NUCLEAR REACTIONS <sup>159</sup>Tb(<sup>16</sup>O, 3nα), (<sup>16</sup>O, 4nα), (<sup>16</sup>O, 3npα), (<sup>16</sup>O, n2α), E=95 MeV; <sup>159</sup>Tb(<sup>16</sup>O, 3npα), (<sup>16</sup>O, n2pα), (<sup>16</sup>O, n3pα), (<sup>16</sup>O, 4nα), (<sup>16</sup>O, 2nα), E=95 MeV; measured Eγ, Iγ, production cross sections, excitation functions. <sup>167,168</sup>Lu, <sup>167</sup>Yb, <sup>177</sup>W, <sup>166</sup>Tb, <sup>178</sup>Ta, <sup>177</sup>Hf, <sup>177,179</sup>Re; measured excitation functions in fusion reactions. JOUR PRVCA 77 014607

**A=170**

- <sup>170</sup>Hf 2007ZH46 NUCLEAR REACTIONS <sup>128</sup>Te(<sup>48</sup>Ca, 4n), (<sup>48</sup>Ca, 5n), E=209 MeV; measured Eγ, Iγ, γγ-coin. <sup>171,172</sup>Hf; deduced levels, J, π, configurations, superdeformed bands. <sup>163</sup>Lu, <sup>170,173,174,175</sup>Hf; systematics. JOUR PRVCA 76 064321

**A=171**

- <sup>171</sup>Hf 2007ZH46 NUCLEAR REACTIONS <sup>128</sup>Te(<sup>48</sup>Ca, 4n), (<sup>48</sup>Ca, 5n), E=209 MeV; measured Eγ, Iγ, γγ-coin. <sup>171,172</sup>Hf; deduced levels, J, π, configurations, superdeformed bands. <sup>163</sup>Lu, <sup>170,173,174,175</sup>Hf; systematics. JOUR PRVCA 76 064321



**A=172**

- <sup>172</sup>Hf 2007ZH46 NUCLEAR REACTIONS <sup>128</sup>Te(<sup>48</sup>Ca, 4n), (<sup>48</sup>Ca, 5n), E=209 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>171,172</sup>Hf; deduced levels, J,  $\pi$ , configurations, superdeformed bands. <sup>163</sup>Lu, <sup>170,173,174,175</sup>Hf; systematics. JOUR PRVCA 76 064321

**A=173**

- <sup>173</sup>Hf 2007ZH46 NUCLEAR REACTIONS <sup>128</sup>Te(<sup>48</sup>Ca, 4n), (<sup>48</sup>Ca, 5n), E=209 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>171,172</sup>Hf; deduced levels, J,  $\pi$ , configurations, superdeformed bands. <sup>163</sup>Lu, <sup>170,173,174,175</sup>Hf; systematics. JOUR PRVCA 76 064321

**A=174**

- <sup>174</sup>Lu 2007LU18 NUCLEAR REACTIONS <sup>175</sup>Lu, <sup>198</sup>Pt, <sup>82</sup>Se(n, 2n), E=13.5-14.6 MeV; measured E $\gamma$ , I $\gamma$ ; deduced cross sections, isomeric cross section ratios. <sup>93</sup>Nb(n, 2n), E=13.5-14.6 MeV; compared cross sections. Comparisons with nuclear model calculations using the HFTT code. JOUR NIMBE 265 453
- <sup>174</sup>Hf 2007ZH46 NUCLEAR REACTIONS <sup>128</sup>Te(<sup>48</sup>Ca, 4n), (<sup>48</sup>Ca, 5n), E=209 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>171,172</sup>Hf; deduced levels, J,  $\pi$ , configurations, superdeformed bands. <sup>163</sup>Lu, <sup>170,173,174,175</sup>Hf; systematics. JOUR PRVCA 76 064321
- 2008TA03 NUCLEAR REACTIONS <sup>128</sup>Te(<sup>50</sup>Ti, 4n), E=230 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; <sup>174</sup>W; deduced levels, J,  $\pi$ , band alignments, searched for triaxial strongly deformed bands. <sup>163,164,165,167</sup>Lu, <sup>174,175</sup>Hf; analyzed energy spacings. JOUR PRVCA 77 024313
- <sup>174</sup>W 2008TA03 NUCLEAR REACTIONS <sup>128</sup>Te(<sup>50</sup>Ti, 4n), E=230 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; <sup>174</sup>W; deduced levels, J,  $\pi$ , band alignments, searched for triaxial strongly deformed bands. <sup>163,164,165,167</sup>Lu, <sup>174,175</sup>Hf; analyzed energy spacings. JOUR PRVCA 77 024313

**A=175**

- <sup>175</sup>Hf 2007ZH46 NUCLEAR REACTIONS <sup>128</sup>Te(<sup>48</sup>Ca, 4n), (<sup>48</sup>Ca, 5n), E=209 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>171,172</sup>Hf; deduced levels, J,  $\pi$ , configurations, superdeformed bands. <sup>163</sup>Lu, <sup>170,173,174,175</sup>Hf; systematics. JOUR PRVCA 76 064321
- 2008TA03 NUCLEAR REACTIONS <sup>128</sup>Te(<sup>50</sup>Ti, 4n), E=230 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin; <sup>174</sup>W; deduced levels, J,  $\pi$ , band alignments, searched for triaxial strongly deformed bands. <sup>163,164,165,167</sup>Lu, <sup>174,175</sup>Hf; analyzed energy spacings. JOUR PRVCA 77 024313

**A=176**

No references found

**A=177**

- <sup>177</sup>Lu 2008DV01 NUCLEAR REACTIONS <sup>176</sup>Lu(n,  $\gamma$ )<sup>177</sup>Lu, E=thermal; measured E $\gamma$ , I $\gamma$ . deduced reactor neutron spectrum, and irradiation yield of <sup>177</sup>Lu using the Westcott convention. Calculated k-factor, comparisons of Westcott, Hogdahl, and experimental irradiation yield of <sup>177</sup>Lu. JOUR ARISE 66 147
- <sup>177</sup>Hf 2008SI02 NUCLEAR REACTIONS <sup>159</sup>Tb(<sup>16</sup>O, 3n $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2 $\alpha$ ), E=95 MeV; <sup>159</sup>Tb(<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2p $\alpha$ ), (<sup>16</sup>O, n3p $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 2n $\alpha$ ), E=95 MeV; measured E $\gamma$ , I $\gamma$ , production cross sections, excitation functions. <sup>167,168</sup>Lu, <sup>167</sup>Yb, <sup>177</sup>W, <sup>166</sup>Tb, <sup>178</sup>Ta, <sup>177</sup>Hf, <sup>177,179</sup>Re; measured excitation functions in fusion reactions. JOUR PRVCA 77 014607
- <sup>177</sup>W 2008SI02 NUCLEAR REACTIONS <sup>159</sup>Tb(<sup>16</sup>O, 3n $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2 $\alpha$ ), E=95 MeV; <sup>159</sup>Tb(<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2p $\alpha$ ), (<sup>16</sup>O, n3p $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 2n $\alpha$ ), E=95 MeV; measured E $\gamma$ , I $\gamma$ , production cross sections, excitation functions. <sup>167,168</sup>Lu, <sup>167</sup>Yb, <sup>177</sup>W, <sup>166</sup>Tb, <sup>178</sup>Ta, <sup>177</sup>Hf, <sup>177,179</sup>Re; measured excitation functions in fusion reactions. JOUR PRVCA 77 014607
- <sup>177</sup>Re 2008SI02 NUCLEAR REACTIONS <sup>159</sup>Tb(<sup>16</sup>O, 3n $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2 $\alpha$ ), E=95 MeV; <sup>159</sup>Tb(<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2p $\alpha$ ), (<sup>16</sup>O, n3p $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 2n $\alpha$ ), E=95 MeV; measured E $\gamma$ , I $\gamma$ , production cross sections, excitation functions. <sup>167,168</sup>Lu, <sup>167</sup>Yb, <sup>177</sup>W, <sup>166</sup>Tb, <sup>178</sup>Ta, <sup>177</sup>Hf, <sup>177,179</sup>Re; measured excitation functions in fusion reactions. JOUR PRVCA 77 014607

**A=178**

- <sup>178</sup>Ta 2008SI02 NUCLEAR REACTIONS <sup>159</sup>Tb(<sup>16</sup>O, 3n $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2 $\alpha$ ), E=95 MeV; <sup>159</sup>Tb(<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2p $\alpha$ ), (<sup>16</sup>O, n3p $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 2n $\alpha$ ), E=95 MeV; measured E $\gamma$ , I $\gamma$ , production cross sections, excitation functions. <sup>167,168</sup>Lu, <sup>167</sup>Yb, <sup>177</sup>W, <sup>166</sup>Tb, <sup>178</sup>Ta, <sup>177</sup>Hf, <sup>177,179</sup>Re; measured excitation functions in fusion reactions. JOUR PRVCA 77 014607

**A=179**

- <sup>179</sup>Re 2008SI02 NUCLEAR REACTIONS <sup>159</sup>Tb(<sup>16</sup>O, 3n $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2 $\alpha$ ), E=95 MeV; <sup>159</sup>Tb(<sup>16</sup>O, 3np $\alpha$ ), (<sup>16</sup>O, n2p $\alpha$ ), (<sup>16</sup>O, n3p $\alpha$ ), (<sup>16</sup>O, 4n $\alpha$ ), (<sup>16</sup>O, 2n $\alpha$ ), E=95 MeV; measured E $\gamma$ , I $\gamma$ , production cross sections, excitation functions. <sup>167,168</sup>Lu, <sup>167</sup>Yb, <sup>177</sup>W, <sup>166</sup>Tb, <sup>178</sup>Ta, <sup>177</sup>Hf, <sup>177,179</sup>Re; measured excitation functions in fusion reactions. JOUR PRVCA 77 014607

**A=180**

- <sup>180</sup>Hf 2008NG01 NUCLEAR REACTIONS <sup>179,180</sup>Hf(n,  $\gamma$ ), E=thermal; measured E $\gamma$ , I $\gamma$ , cross sections, and resonance integrals using the stacked foil activation technique. JOUR NIMBE 266 21
- 2008ZA01 RADIOACTIVITY <sup>180</sup>Hf(IT); measured E $\gamma$ , I $\gamma$  as a function of temperature and nuclear orientation. Deduced assymetry of the isomeric transition, parity mixing. JOUR APOBB 39 411
- <sup>180</sup>W 2007KA62 NUCLEAR REACTIONS W(n,  $\gamma$ ), E=thermal; measured E $\gamma$ , I $\gamma$ . <sup>180,181,185,187</sup>W; measured capture cross sections. JOUR PRVCA 76 067602

**A=181**

- <sup>181</sup>Hf 2008NG01 NUCLEAR REACTIONS <sup>179,180</sup>Hf(n,  $\gamma$ ), E=thermal; measured E $\gamma$ , I $\gamma$ , cross sections, and resonance integrals using the stacked foil activation technique. JOUR NIMBE 266 21
- <sup>181</sup>W 2007KA62 NUCLEAR REACTIONS W(n,  $\gamma$ ), E=thermal; measured E $\gamma$ , I $\gamma$ . <sup>180,181,185,187</sup>W; measured capture cross sections. JOUR PRVCA 76 067602

**A=182**

No references found

**A=183**

No references found

**A=184**

No references found

**A=185**

- <sup>185</sup>W 2007KA62 NUCLEAR REACTIONS W(n,  $\gamma$ ), E=thermal; measured E $\gamma$ , I $\gamma$ . <sup>180,181,185,187</sup>W; measured capture cross sections. JOUR PRVCA 76 067602

**A=186**

- <sup>186</sup>Pb 2007WI11 RADIOACTIVITY <sup>190,197</sup>Po( $\alpha$ ); measured E $\alpha$ . JOUR ZAANE 34 275

**A=186 (continued)**

- 2008GR04 NUCLEAR REACTIONS  $^{106,108}\text{Pd}$ ,  $^{114}\text{Cd}(^{83}\text{Kr}, 3\text{n})$ , E=340, 357, 375 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -, (recoil) $\gamma$ -coin and lifetimes for intruder states using the recoil distance Doppler-shift method.  $^{186,188}\text{Pb}$ ,  $^{194}\text{Po}$ ; deduced B(E2), quadrupole moment and deformation parameters. JUROGAM array used with RITU, GREAT spectrometer. Recoil-decay tagging. JOUR NUPAB 801 83

**A=187**

- $^{187}\text{W}$  2007KA62 NUCLEAR REACTIONS  $\text{W}(\text{n}, \gamma)$ , E=thermal; measured  $E\gamma$ ,  $I\gamma$ .  $^{180,181,185,187}\text{W}$ ; measured capture cross sections. JOUR PRVCA 76 067602

**A=188**

- $^{188}\text{Ir}$  2008JU02 NUCLEAR REACTIONS  $^{186}\text{W}(^7\text{Li}, 5\text{n}\gamma)$ , E=59 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin.  $^{188}\text{Ir}$ ; deduced levels, J,  $\pi$ , deformation parameters. JOUR PRVCA 77 024310
- $^{188}\text{Pb}$  2008GR04 NUCLEAR REACTIONS  $^{106,108}\text{Pd}$ ,  $^{114}\text{Cd}(^{83}\text{Kr}, 3\text{n})$ , E=340, 357, 375 MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -, (recoil) $\gamma$ -coin and lifetimes for intruder states using the recoil distance Doppler-shift method.  $^{186,188}\text{Pb}$ ,  $^{194}\text{Po}$ ; deduced B(E2), quadrupole moment and deformation parameters. JUROGAM array used with RITU, GREAT spectrometer. Recoil-decay tagging. JOUR NUPAB 801 83

**A=189**

No references found

**A=190**

- $^{190}\text{Po}$  2007WI11 NUCLEAR REACTIONS  $^{144}\text{Sm}(^{49}\text{Ti}, 3\text{n})$ , E=222 MeV; measured  $E\gamma$ ,  $I\gamma$ , recoil decay tagging,  $\gamma\gamma$ -,  $\alpha\gamma$ -coin.  $^{190,197}\text{Po}$  deduced levels, J,  $\pi$ , bands. JUROGAM array used with RITU, GREAT spectrometer. JOUR ZAANE 34 275
- 2007WI11 RADIOACTIVITY  $^{190,197}\text{Po}(\alpha)$ ; measured  $E\alpha$ . JOUR ZAANE 34 275

**A=191**

No references found

**A=192**

No references found

**A=193**

- <sup>193</sup>Pt 2008HI03 NUCLEAR REACTIONS <sup>192</sup>Os( $\alpha$ , n), ( $\alpha$ , 3n), E < 28 MeV; measured E $\gamma$ , I $\gamma$ , cross sections using stacked foil activation. JOUR ARISE 66 545
- <sup>193</sup>Pb 2007WI11 RADIOACTIVITY <sup>190,197</sup>Po( $\alpha$ ); measured E $\alpha$ . JOUR ZAANE 34 275

**A=194**

- <sup>194</sup>Po 2008GR04 NUCLEAR REACTIONS <sup>106,108</sup>Pd, <sup>114</sup>Cd(<sup>83</sup>Kr, 3n), E=340, 357, 375 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -, (recoil) $\gamma$ -coin and lifetimes for intruder states using the recoil distance Doppler-shift method. <sup>186,188</sup>Pb, <sup>194</sup>Po; deduced B(E2), quadrupole moment and deformation parameters. JUROGAM array used with RITU, GREAT spectrometer. Recoil-decay tagging. JOUR NUPAB 801 83

**A=195**

- <sup>195</sup>Pt 2008HI03 NUCLEAR REACTIONS <sup>192</sup>Os( $\alpha$ , n), ( $\alpha$ , 3n), E < 28 MeV; measured E $\gamma$ , I $\gamma$ , cross sections using stacked foil activation. JOUR ARISE 66 545

**A=196**

- <sup>196</sup>Tl 2008F003 NUCLEAR REACTIONS <sup>205</sup>Tl(n, 2n $\gamma$ ), E<25 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, half-lives; <sup>204</sup>Tl; deduced levels, J,  $\pi$ , configurations. <sup>196,198,200,202,206</sup>Tl; systematics. JOUR PRVCA 77 024306

**A=197**

- <sup>197</sup>Pt 2007CL04 NUCLEAR REACTIONS <sup>2</sup>H, <sup>12</sup>C, <sup>27</sup>Al, <sup>63</sup>Cu, <sup>197</sup>Au(e, e' $\pi^+$ ), E=4.021-5.767 GeV; measured electron and pion energies. Deduced nuclear transparency. JOUR PRLTA 99 242502
- 2007LU18 NUCLEAR REACTIONS <sup>175</sup>Lu, <sup>198</sup>Pt, <sup>82</sup>Se(n, 2n), E=13.5-14.6 MeV; measured E $\gamma$ , I $\gamma$ ; deduced cross sections, isomeric cross section ratios. <sup>93</sup>Nb(n, 2n), E=13.5-14.6 MeV; compared cross sections. Comparisons with nuclear model calculations using the HFTT code. JOUR NIMBE 265 453
- <sup>197</sup>Po 2007WI11 NUCLEAR REACTIONS <sup>144</sup>Sm(<sup>49</sup>Ti, 3n), E=222 MeV; measured E $\gamma$ , I $\gamma$ , recoil decay tagging,  $\gamma\gamma$ -,  $\alpha\gamma$ -coin. <sup>190,197</sup>Po deduced levels, J,  $\pi$ , bands. JUROGAM array used with RITU, GREAT spectrometer. JOUR ZAANE 34 275

**A=197 (continued)**

2007WI11 RADIOACTIVITY  $^{190,197}\text{Po}(\alpha)$ ; measured  $E\alpha$ . JOUR ZAANE 34 275

**A=198**

- $^{198}\text{Au}$  2007G039 RADIOACTIVITY  $^{198}\text{Au}(\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $T_{1/2}$ . Temperature dependence not observed. JOUR ZAANE 34 271
- 2008HE01 NUCLEAR REACTIONS  $^{58}\text{Fe}$ ,  $^{59}\text{Co}$ ,  $^{64}\text{Ni}$ ,  $^{63,65}\text{Cu}(n, \gamma)$ ,  $E=25$  keV; measured neutron capture cross sections,  $E\gamma$ ;  $^{59}\text{Fe}$ ,  $^{60}\text{Co}$ ,  $^{65}\text{Ni}$ ,  $^{64,66}\text{Cu}$ ,  $^{198}\text{Au}$ ; deduced nucleosynthesis yields in stars. JOUR PRVCA 77 015808
- $^{198}\text{Hg}$  2007G039 RADIOACTIVITY  $^{198}\text{Au}(\beta^-)$ ; measured  $E\gamma$ ,  $I\gamma$ ,  $T_{1/2}$ . Temperature dependence not observed. JOUR ZAANE 34 271
- $^{198}\text{Tl}$  2008F003 NUCLEAR REACTIONS  $^{205}\text{Tl}(n, 2n\gamma)$ ,  $E<25$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin, half-lives;  $^{204}\text{Tl}$ ; deduced levels,  $J$ ,  $\pi$ , configurations.  $^{196,198,200,202,206}\text{Tl}$ ; systematics. JOUR PRVCA 77 024306

**A=199**

No references found

**A=200**

- $^{200}\text{Tl}$  2008F003 NUCLEAR REACTIONS  $^{205}\text{Tl}(n, 2n\gamma)$ ,  $E<25$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin, half-lives;  $^{204}\text{Tl}$ ; deduced levels,  $J$ ,  $\pi$ , configurations.  $^{196,198,200,202,206}\text{Tl}$ ; systematics. JOUR PRVCA 77 024306

**A=201**

No references found

**A=202**

- $^{202}\text{Tl}$  2008F003 NUCLEAR REACTIONS  $^{205}\text{Tl}(n, 2n\gamma)$ ,  $E<25$  MeV; measured  $E\gamma$ ,  $I\gamma$ ,  $\gamma\gamma$ -coin, half-lives;  $^{204}\text{Tl}$ ; deduced levels,  $J$ ,  $\pi$ , configurations.  $^{196,198,200,202,206}\text{Tl}$ ; systematics. JOUR PRVCA 77 024306
- $^{202}\text{Po}$  2008RA07 NUCLEAR REACTIONS  $^{186}\text{Os}(^{16}\text{O}, X)^{202}\text{Po}$ ,  $E=74-105$  MeV;  $^{178}\text{Hf}(^{24}\text{Mg}, X)^{202}\text{Po}$ ,  $E=106-144$  MeV;  $^{168}\text{Er}(^{34}\text{S}, X)^{202}\text{Po}$ ,  $E=141-174$  MeV;  $^{154}\text{Sm}(^{48}\text{Ti}, X)^{202}\text{Po}$ ,  $E=198-235$  MeV; measured mass-angle correlations, mass ratio distributions, cross sections. JOUR PRVCA 77 024606

**A=203**

No references found

**A=204**

- <sup>204</sup>Pt 2007P013 RADIOACTIVITY <sup>147</sup>Gd, <sup>148</sup>Tb, <sup>204</sup>Pt(IT); measured delayed E $\gamma$ , I $\gamma$  from isomer decays. JOUR ZSTNE 150 165
- <sup>204</sup>Tl 2008F003 NUCLEAR REACTIONS <sup>205</sup>Tl(n, 2n $\gamma$ ), E<25 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, half-lives; <sup>204</sup>Tl; deduced levels, J,  $\pi$ , configurations. 196,198,200,202,206Tl; systematics. JOUR PRVCA 77 024306

**A=205**

No references found

**A=206**

- <sup>206</sup>Tl 2008F003 NUCLEAR REACTIONS <sup>205</sup>Tl(n, 2n $\gamma$ ), E<25 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, half-lives; <sup>204</sup>Tl; deduced levels, J,  $\pi$ , configurations. 196,198,200,202,206Tl; systematics. JOUR PRVCA 77 024306
- <sup>206</sup>Rn 2008AN01 NUCLEAR REACTIONS <sup>197</sup>Au(<sup>14</sup>N, 5n), E=82 MeV; measured E $\gamma$ , I $\gamma$ , conversion electrons. <sup>206</sup>Rn; deduced level energies, ICCs, transition multipolarities. JOUR NIMAE 585 155
- 2008KR01 NUCLEAR REACTIONS <sup>197</sup>Au(<sup>14</sup>N, 5n), E=80 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, conversion electron spectra using in-beam spectroscopy. <sup>206</sup>Rn; deduced levels, J,  $\pi$ . JOUR APOBB 39 495

**A=207**

No references found

**A=208**

- <sup>208</sup>Pb 2007BA76 NUCLEAR REACTIONS <sup>208</sup>Pb(<sup>17</sup>F, <sup>17</sup>F), E=141 MeV; <sup>208</sup>Pb(<sup>17</sup>O, <sup>17</sup>O), E=128 MeV; measured differential cross sections, angular dispersion plots. <sup>208</sup>Pb(<sup>16</sup>O, <sup>16</sup>O), E=170.1 MeV; <sup>208</sup>Pb(<sup>6</sup>He, <sup>6</sup>He), E=27, 29.6 MeV; <sup>208</sup>Pb(<sup>6</sup>Li, <sup>6</sup>Li), E=73.7, 99 MeV; <sup>208</sup>Pb( $\alpha$ ,  $\alpha$ ), E=40 MeV; analyzed differential cross sections, angular dispersion plots. JOUR CPLEE 24 3384
- 20080H02 NUCLEAR REACTIONS <sup>56</sup>Fe, <sup>89</sup>Y, <sup>208</sup>Pb(n, n), E=96 MeV; measured  $\sigma(\theta)$ ; <sup>12</sup>C, <sup>16</sup>O; systematics, compared with Wick's limit. JOUR PRVCA 77 024605
- 2008ZI01 NUCLEAR REACTIONS <sup>109</sup>Ag, <sup>208</sup>Pb(<sup>44</sup>Ar, <sup>44</sup>Ar'), E=2.7, 3.7 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (charged-particle) $\gamma$ -coin. Deduced coulomb excitation  $\sigma(\theta)$ , B(E2). JOUR APOBB 39 519

**A=208 (continued)**

- <sup>208</sup>Bi 2007MA83 NUCLEAR REACTIONS <sup>208</sup>Pb(p, n), E=9 MeV; measured ce, (ce)(ce)-,  $\gamma$ (ce)-coin; analyzed E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin. <sup>208</sup>Bi; deduced levels, J,  $\pi$ , multipolarities, configurations, angular momenta, spectroscopic factors for proton transfer and neutron pickup. Detailed shell-model calculations. JOUR PRVCA 76 064304
- 2007MAZR NUCLEAR REACTIONS <sup>208</sup>Pb(p, n), E=9.0 MeV; measured E $\gamma$ , I $\gamma$ , conversion electrons. <sup>208</sup>Bi; deduced internal conversion coefficients. PREPRINT ANU-P/1815, Maier
- 2008MI01 NUCLEAR REACTIONS <sup>209</sup>Bi(n, n' $\gamma$ ), (n, 2n $\gamma$ ), E=threshold - 20 MeV; measured, E $\gamma$ , I $\gamma$ , En, In,  $\sigma$ ,  $\sigma(\theta)$ . <sup>209</sup>Bi deduced level energies, branching ratios. Comparison with existing data and TALYS calculations. JOUR NUPAB 799 1

**A=209**

- <sup>209</sup>Pb 2007G042 NUCLEAR REACTIONS <sup>209</sup>Pb(<sup>74</sup>Kr, <sup>74</sup>Kr'), (<sup>76</sup>Kr, <sup>76</sup>Kr'), E=4.7 MeV / nucleon; measured E $\gamma$ , I $\gamma$ , (particle) $\gamma$ -coin, angular distributions. <sup>74,76</sup>Kr; deduced B(E2), static quadrupole moments, shape coexistence. JOUR ZSTNE 150 117
- <sup>209</sup>Bi 2007MA90 NUCLEAR REACTIONS <sup>209</sup>Bi(<sup>11</sup>Be, <sup>11</sup>Be), E=38-50 MeV; measured elastic scattering  $\sigma(\theta)$ . Compared results to model calculations. Deduced reaction and fusion cross sections. JOUR ZSTNE 150 37
- 2008MI01 NUCLEAR REACTIONS <sup>209</sup>Bi(n, n' $\gamma$ ), (n, 2n $\gamma$ ), E=threshold - 20 MeV; measured, E $\gamma$ , I $\gamma$ , En, In,  $\sigma$ ,  $\sigma(\theta)$ . <sup>209</sup>Bi deduced level energies, branching ratios. Comparison with existing data and TALYS calculations. JOUR NUPAB 799 1

**A=210**

No references found

**A=211**

No references found

**A=212**

- <sup>212</sup>At 2007KU30 RADIOACTIVITY <sup>220</sup>Ac, <sup>216</sup>Fr, <sup>212</sup>At ( $\alpha$ ) [from <sup>209</sup>Bi(<sup>14</sup>N, F), E=5.6 MeV / nucleon]; measured  $\alpha$ -spectra. <sup>212</sup>At, <sup>216</sup>Fr; deduced levels, J,  $\pi$ , half-lives. <sup>216</sup>Fr; deduced E $\alpha$ , Q $\alpha$ , excitation energies, mass excess. JOUR PRVCA 76 054320



**A=213**

<sup>213</sup>Th 2007KH22 NUCLEAR REACTIONS <sup>164</sup>Dy(<sup>54</sup>Cr, X)<sup>213</sup>Th / <sup>214</sup>Th, E=246, 258 MeV; measured  $\sigma$ , E $\gamma$ , I $\gamma$ ,  $\alpha\gamma$ -coin following residual nucleus decay. <sup>213,214</sup>Th deduced levels, J,  $\pi$ , T<sub>1/2</sub>. JOUR ZAANE 34 355

**A=214**

<sup>214</sup>Th 2007KH22 NUCLEAR REACTIONS <sup>164</sup>Dy(<sup>54</sup>Cr, X)<sup>213</sup>Th / <sup>214</sup>Th, E=246, 258 MeV; measured  $\sigma$ , E $\gamma$ , I $\gamma$ ,  $\alpha\gamma$ -coin following residual nucleus decay. <sup>213,214</sup>Th deduced levels, J,  $\pi$ , T<sub>1/2</sub>. JOUR ZAANE 34 355

**A=215**

No references found

**A=216**

<sup>216</sup>Fr 2007KU30 RADIOACTIVITY <sup>220</sup>Ac, <sup>216</sup>Fr, <sup>212</sup>At ( $\alpha$ ) [from <sup>209</sup>Bi(<sup>14</sup>N, F), E=5.6 MeV / nucleon]; measured  $\alpha$ -spectra. <sup>212</sup>At, <sup>216</sup>Fr; deduced levels, J,  $\pi$ , half-lives. <sup>216</sup>Fr; deduced E $\alpha$ , Q $\alpha$ , excitation energies, mass excess. JOUR PRVCA 76 054320

**A=217**

No references found

**A=218**

No references found

**A=219**

No references found

**A=220**

<sup>220</sup>Ac 2007KU30 RADIOACTIVITY <sup>220</sup>Ac, <sup>216</sup>Fr, <sup>212</sup>At ( $\alpha$ ) [from <sup>209</sup>Bi(<sup>14</sup>N, F), E=5.6 MeV / nucleon]; measured  $\alpha$ -spectra. <sup>212</sup>At, <sup>216</sup>Fr; deduced levels, J,  $\pi$ , half-lives. <sup>216</sup>Fr; deduced E $\alpha$ , Q $\alpha$ , excitation energies, mass excess. JOUR PRVCA 76 054320

**A=221**

No references found

**A=222**

No references found

**A=223**

No references found

**A=224**

No references found

**A=225**

No references found

**A=226**

No references found

**A=227**

No references found

**A=228**

No references found

**A=229**

No references found

**A=230**

No references found

**A=231**

<sup>231</sup> Ra	2007B048	RADIOACTIVITY <sup>231</sup> Ra( $\beta^-$ ) [from U(p, X), E=1 GeV]; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, conversion electrons. <sup>231</sup> Ac; deduced level energies, lifetimes. JOUR ZSTNE 150 87
<sup>231</sup> Ac	2007B048	RADIOACTIVITY <sup>231</sup> Ra( $\beta^-$ ) [from U(p, X), E=1 GeV]; measured E $\gamma$ , I $\gamma$ , $\gamma\gamma$ -coin, conversion electrons. <sup>231</sup> Ac; deduced level energies, lifetimes. JOUR ZSTNE 150 87
<sup>231</sup> Th	2008WE01	RADIOACTIVITY <sup>238,235</sup> U( $\alpha$ ); measured isotopic ratios in natural samples. JOUR GCACA 72 345

**A=232**

No references found

**A=233**

No references found

**A=234**

<sup>234</sup> Th	2008WE01	RADIOACTIVITY <sup>238,235</sup> U( $\alpha$ ); measured isotopic ratios in natural samples. JOUR GCACA 72 345
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**A=235**

<sup>235</sup> U	2008WE01	RADIOACTIVITY <sup>238,235</sup> U( $\alpha$ ); measured isotopic ratios in natural samples. JOUR GCACA 72 345
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**A=236**

No references found

**A=237**

<sup>237</sup> Np	2008SA02	RADIOACTIVITY <sup>237</sup> Np(SF)[from <sup>236</sup> U(n, $\gamma$ ) <sup>237</sup> U( $\beta^-$ ), <sup>238</sup> U(n, 2n) <sup>237</sup> U( $\beta^-$ )]; measured criticality conditions. JOUR NSENA 158 1
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**A=238**

<sup>238</sup> U	2008WE01	RADIOACTIVITY <sup>238,235</sup> U( $\alpha$ ); measured isotopic ratios in natural samples. JOUR GCACA 72 345
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**A=239**

No references found

**A=240**

No references found

**A=241**

No references found

**A=242**

$^{242}\text{Am}$	2007NA33	NUCLEAR REACTIONS $^{241}\text{Am}(n, \gamma)$ , E=thermal; measured decay $E\alpha$ , $I\alpha$ , cross section and resonance integral for thermal neutron capture leading to ground state using the activation method. JOUR JNSTA 44 1500
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**A=243**

No references found

**A=244**

No references found

**A=245**

$^{245}\text{Pu}$	2007MA82	NUCLEAR REACTIONS $^{244}\text{Pu}(^{18}\text{O}, ^{17}\text{O})$ , $(^{18}\text{O}, ^{16}\text{O})$ , E=162 MeV; measured $E\gamma$ , $I\gamma$ , $\gamma\gamma$ -coin, half-lives. $^{245,246}\text{Pu}$ ; deduced levels, J, $\pi$ , configurations. Compared with experimental and calculated values for the first $2^+$ level energy in $^{232,234,236,238,240,242}\text{U}$ , $^{234,236,238,240,242,244,248}\text{Pu}$ , $^{240,242,244,246,248,250}\text{Cm}$ , $^{244,246,248,250,252,254}\text{Cf}$ , $^{250,252,254,256}\text{Fm}$ , $^{248,250,252,254,256,258}\text{No}$ . $^{247}\text{Cm}$ , $^{249}\text{Cf}$ , $^{251}\text{Fm}$ , $^{253}\text{No}$ ; systematics. JOUR PRVCA 76 061301
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**A=246**

- <sup>246</sup>Pu 2007MA82 NUCLEAR REACTIONS <sup>244</sup>Pu(<sup>18</sup>O, <sup>17</sup>O), (<sup>18</sup>O, <sup>16</sup>O), E=162 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, half-lives. <sup>245,246</sup>Pu; deduced levels, J,  $\pi$ , configurations. Compared with experimental and calculated values for the first 2<sup>+</sup> level energy in <sup>232,234,236,238,240,242</sup>U, <sup>234,236,238,240,242,244,248</sup>Pu, <sup>240,242,244,246,248,250</sup>Cm, <sup>244,246,248,250,252,254</sup>Cf, <sup>250,252,254,256</sup>Fm, <sup>248,250,252,254,256,258</sup>No. <sup>247</sup>Cm, <sup>249</sup>Cf, <sup>251</sup>Fm, <sup>253</sup>No; systematics. JOUR PRVCA 76 061301

**A=247**

- <sup>247</sup>Cm 2007MA82 NUCLEAR REACTIONS <sup>244</sup>Pu(<sup>18</sup>O, <sup>17</sup>O), (<sup>18</sup>O, <sup>16</sup>O), E=162 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, half-lives. <sup>245,246</sup>Pu; deduced levels, J,  $\pi$ , configurations. Compared with experimental and calculated values for the first 2<sup>+</sup> level energy in <sup>232,234,236,238,240,242</sup>U, <sup>234,236,238,240,242,244,248</sup>Pu, <sup>240,242,244,246,248,250</sup>Cm, <sup>244,246,248,250,252,254</sup>Cf, <sup>250,252,254,256</sup>Fm, <sup>248,250,252,254,256,258</sup>No. <sup>247</sup>Cm, <sup>249</sup>Cf, <sup>251</sup>Fm, <sup>253</sup>No; systematics. JOUR PRVCA 76 061301

**A=248**

No references found

**A=249**

- <sup>249</sup>Cf 2007MA82 NUCLEAR REACTIONS <sup>244</sup>Pu(<sup>18</sup>O, <sup>17</sup>O), (<sup>18</sup>O, <sup>16</sup>O), E=162 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, half-lives. <sup>245,246</sup>Pu; deduced levels, J,  $\pi$ , configurations. Compared with experimental and calculated values for the first 2<sup>+</sup> level energy in <sup>232,234,236,238,240,242</sup>U, <sup>234,236,238,240,242,244,248</sup>Pu, <sup>240,242,244,246,248,250</sup>Cm, <sup>244,246,248,250,252,254</sup>Cf, <sup>250,252,254,256</sup>Fm, <sup>248,250,252,254,256,258</sup>No. <sup>247</sup>Cm, <sup>249</sup>Cf, <sup>251</sup>Fm, <sup>253</sup>No; systematics. JOUR PRVCA 76 061301

**A=250**

- <sup>250</sup>No 2008KN01 NUCLEAR REACTIONS <sup>206</sup>Pb(<sup>44</sup>Ca, X), E=217, 227 MeV; <sup>186</sup>W(<sup>64</sup>Ni, X), E=300, 311 MeV; measured mass-energy distributions of binary fragments,  $\sigma(\theta)$  for fissionlike fragments. <sup>250</sup>No; deduced influence of mass assymetry of the entrance channel in compound nucleus formation. JOUR PPNLA 5 21

**A=251**

<sup>251</sup>Fm      2007MA82      NUCLEAR REACTIONS <sup>244</sup>Pu(<sup>18</sup>O, <sup>17</sup>O), (<sup>18</sup>O, <sup>16</sup>O), E=162 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, half-lives. <sup>245,246</sup>Pu; deduced levels, J,  $\pi$ , configurations. Compared with experimental and calculated values for the first 2<sup>+</sup> level energy in <sup>232,234,236,238,240,242</sup>U, <sup>234,236,238,240,242,244,248</sup>Pu, <sup>240,242,244,246,248,250</sup>Cm, <sup>244,246,248,250,252,254</sup>Cf, <sup>250,252,254,256</sup>Fm, <sup>248,250,252,254,256,258</sup>No. <sup>247</sup>Cm, <sup>249</sup>Cf, <sup>251</sup>Fm, <sup>253</sup>No; systematics. JOUR PRVCA 76 061301

**A=252**

No references found

**A=253**

<sup>253</sup>No      2007MA82      NUCLEAR REACTIONS <sup>244</sup>Pu(<sup>18</sup>O, <sup>17</sup>O), (<sup>18</sup>O, <sup>16</sup>O), E=162 MeV; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ -coin, half-lives. <sup>245,246</sup>Pu; deduced levels, J,  $\pi$ , configurations. Compared with experimental and calculated values for the first 2<sup>+</sup> level energy in <sup>232,234,236,238,240,242</sup>U, <sup>234,236,238,240,242,244,248</sup>Pu, <sup>240,242,244,246,248,250</sup>Cm, <sup>244,246,248,250,252,254</sup>Cf, <sup>250,252,254,256</sup>Fm, <sup>248,250,252,254,256,258</sup>No. <sup>247</sup>Cm, <sup>249</sup>Cf, <sup>251</sup>Fm, <sup>253</sup>No; systematics. JOUR PRVCA 76 061301

**A=254**

No references found

**A=255**

No references found

**A=256**

No references found

**A=257**

No references found

**A=258**

No references found

**A=259**

No references found

**A=260**

<sup>260</sup>Bh      2008NE01      NUCLEAR REACTIONS <sup>209</sup>Bi(<sup>52</sup>Cr, n), E=257 MeV; measured  
correlated decay chain E $\alpha$ , I $\alpha$ , production cross section. JOUR PRLTA  
100 022501

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