L. Satpathy and R.C. Nayak Masses

† Nuclide is unstable to one-particle emission
‡ Nuclide is unstable to two-particle, but not one particle emission

Isotope	Mass Excess
^{18}B	48.990±2.120
^{19}B	50.160±4.230
^{18}C	24.580±0.640
^{19}C	32.550±0.980
^{20}C	34.780±1.950
^{21}C	43.790±4.140 †
^{22}C	47.870±5.400
^{18}N	13.600±0.370
^{19}N	15.160±0.320
^{20}N	22.360±0.460
^{21}N	24.450±0.950
^{22}N	32.150±2.000
^{23}N	35.910±2.780
^{24}N	44.160±4.180 †
^{25}N	48.050±6.110
^{18}O	-1.130±0.390
^{19}O	3.040±0.300
^{20}O	3.070±0.280
^{21}O	9.030±0.340
^{22}O	10.400±0.570
^{23}O	17.180±1.090
^{24}O	19.760±1.680
^{25}O	27.340±2.540
^{26}O	30.580±3.730
^{27}O	38.750±5.350 †
^{29}O	47.690±2.210
^{30}O	50.060±2.760
^{31}O	46.600±4.130
^{32}O	46.750±4.960
^{18}F	2.740±0.320
^{19}F	-1.940±0.280
^{20}F	0.260±0.210
^{21}F	-1.120±0.230
^{22}F	3.740±0.310
^{23}F	4.070±0.580
^{24}F	9.350±0.420
^{25}F	11.180±0.640
^{26}F	17.880±1.020
^{27}F	20.080±1.550
^{28}F	26.630±2.230
^{29}F	32.490±0.840
^{30}F	40.800±1.070 †
^{31}F	41.820±1.590
^{32}F	44.470±2.350
^{33}F	48.240±2.810
^{34}F	51.910±3.650
^{35}F	50.430±4.680
^{18}Ne	4.090±0.430
^{19}Ne	0.770±0.260
^{20}Ne	-5.800±0.230
^{21}Ne	-5.740±0.200
^{22}Ne	-8.790±0.290
^{23}Ne	-4.670±0.520
^{24}Ne	-5.840±0.280
^{25}Ne	-1.640±0.260
^{26}Ne	-0.270±0.360
^{27}Ne	6.190±0.640
^{28}Ne	8.590±1.050
^{29}Ne	15.030±0.350
^{30}Ne	17.950±0.450
^{31}Ne	24.780±0.650
^{32}Ne	26.940±0.960
^{33}Ne	32.060±1.400
^{34}Ne	33.980±1.850
^{35}Ne	39.200±2.420
^{36}Ne	39.730±3.110
^{37}Ne	43.190±3.970
^{18}Na	28.400±0.800
^{19}Na	13.090±0.420
^{20}Na	6.750±0.240
^{21}Na	-2.150±0.230
^{22}Na	-4.510±0.240
^{23}Na	-10.380±0.480
^{24}Na	-8.130±0.290
^{25}Na	-10.090±0.220
^{26}Na	-6.850±0.260
^{27}Na	-6.490±0.290
^{28}Na	-0.910±0.540
^{29}Na	2.950±0.280
^{30}Na	7.600±0.220
^{31}Na	10.930±0.220
^{32}Na	18.580±0.260
^{33}Na	21.870±0.320
^{34}Na	25.990±0.540
^{35}Na	29.280±0.730
^{36}Na	36.230±0.970
^{37}Na	35.720±1.620
^{18}Mg	56.190±2.560
^{19}Mg	37.780±1.030
^{20}Mg	19.290±0.470 ‡
^{21}Mg	10.020±0.260
^{22}Mg	-1.260±0.260
^{23}Mg	-5.170±0.350
^{24}Mg	-12.810±0.250
^{25}Mg	-13.240±0.210
^{26}Mg	-16.850±0.210
^{27}Mg	-14.940±0.320
^{28}Mg	-15.730±0.330
^{29}Mg	-10.540±0.260
^{30}Mg	-9.490±0.190
^{31}Mg	-4.480±0.180
^{32}Mg	-1.550±0.210
^{33}Mg	5.730±0.290
^{34}Mg	7.940±0.270
^{35}Mg	13.380±0.290
^{36}Mg	17.110±0.370
^{37}Mg	22.940±0.540
^{22}Al	19.100±0.480 †
^{23}Al	6.060±0.330 †
^{24}Al	0.100±0.270
^{25}Al	-9.050±0.230
^{26}Al	-11.590±0.240
^{27}Al	-17.030±0.310
^{28}Al	-16.760±0.450
^{29}Al	-19.130±0.200
^{30}Al	-15.760±0.180
^{31}Al	-15.810±0.150
^{32}Al	-11.370±0.160
^{33}Al	-9.420±0.190
^{34}Al	-3.510±0.220
^{35}Al	-1.480±0.240
^{36}Al	4.240±0.270
^{37}Al	6.770±0.310
^{38}Al	8.290±3.350
^{39}Al	9.830±4.240
^{40}Al	14.670±5.810
^{23}Si	25.370±0.850 ‡
^{24}Si	10.260±0.460
^{25}Si	2.920±0.280
^{26}Si	-8.030±0.220
^{27}Si	-12.280±0.250
^{28}Si	-19.080±0.320
^{29}Si	-21.520±0.230
^{30}Si	-25.010±0.180
^{31}Si	-23.070±0.160
^{32}Si	-24.300±0.160
^{33}Si	-20.770±0.190
^{34}Si	-20.220±0.190
^{35}Si	-15.150±0.220
^{36}Si	-13.630±0.260
^{37}Si	-8.130±0.310
^{38}Si	-7.720±1.430
^{39}Si	-2.330±1.970
^{40}Si	-0.840±2.760
^{41}Si	4.100±3.820
^{42}Si	1.250±5.480
^{43}Si	4.620±6.990
^{25}P	20.360±0.860 †
^{26}P	12.090±0.420 †
^{27}P	-0.780±0.330
^{28}P	-6.950±0.390
^{29}P	-16.170±0.200
^{30}P	-19.010±0.180
^{31}P	-23.990±0.150
^{32}P	-23.450±0.150
^{33}P	-25.680±0.160
^{34}P	-23.770±0.150
^{35}P	-24.150±0.160
^{36}P	-19.800±0.210
^{37}P	-18.610±0.280
^{38}P	-14.950±0.600
^{39}P	-13.840±0.590
^{40}P	-9.100±0.810
^{41}P	-8.230±1.160
^{42}P	-6.330±1.840
^{43}P	-5.530±2.980
^{44}P	-2.600±3.900
^{45}P	-3.540±5.000
^{46}P	0.080±6.970
^{26}S	26.630±1.570 ‡
^{27}S	18.340±0.720 ‡
^{28}S	3.730±0.550
^{29}S	-4.570±0.260
^{30}S	-14.670±0.180
^{31}S	-18.960±0.160
^{32}S	-25.460±0.150
^{33}S	-26.540±0.210
^{34}S	-30.290±0.150
^{35}S	-29.300±0.150
^{36}S	-30.830±0.180
^{37}S	-27.580±0.270
^{38}S	-26.980±0.390
^{39}S	-23.150±0.350
^{40}S	-22.700±0.300
^{41}S	-18.540±0.440
^{42}S	-19.350±0.790
^{43}S	-15.570±1.040
^{44}S	-15.210±1.630
^{45}S	-12.610±2.250
^{46}S	-12.800±3.150
^{30}Cl	4.650±0.270 †
^{31}Cl	-7.150±0.180 †
^{32}Cl	-13.030±0.170
^{33}Cl	-20.980±0.200
^{34}Cl	-23.710±0.150
^{35}Cl	-28.960±0.140
^{36}Cl	-29.230±0.170
^{37}Cl	-32.040±0.200
^{38}Cl	-29.040±0.250
^{39}Cl	-29.960±0.200
^{40}Cl	-26.840±0.200
^{41}Cl	-27.070±0.220
^{42}Cl	-23.980±0.270
^{43}Cl	-24.220±0.350
^{44}Cl	-20.870±0.500
^{45}Cl	-20.930±0.830
^{46}Cl	-17.970±1.280
^{47}Cl	-9.490±5.710 †
^{28}Ar	43.690±4.490 ‡
^{29}Ar	37.020±2.110 ‡
^{30}Ar	21.140±1.050 ‡
^{31}Ar	10.600±0.540 ‡
^{32}Ar	-2.420±0.290
^{33}Ar	-9.680±0.210
^{34}Ar	-19.150±0.170
^{35}Ar	-23.220±0.160
^{36}Ar	-29.800±0.180
^{37}Ar	-31.320±0.230
^{38}Ar	-35.460±0.350
^{39}Ar	-33.980±0.230
^{40}Ar	-35.680±0.180
^{41}Ar	-33.320±0.190
^{42}Ar	-34.210±0.240
^{43}Ar	-31.480±0.210
^{44}Ar	-32.140±0.200
^{45}Ar	-29.210±0.250
^{46}Ar	-29.650±0.440
^{47}Ar	-26.360±0.480
^{48}Ar	-22.740±2.130
^{49}Ar	-17.590±3.010
^{50}Ar	-15.080±4.220
^{51}Ar	-8.590±5.840
^{34}K	-0.740±0.280 †
^{35}K	-11.570±0.180 †
^{36}K	-17.120±0.190
^{37}K	-25.000±0.200
^{38}K	-28.150±0.240
^{39}K	-33.290±0.230
^{40}K	-33.150±0.160
^{41}K	-36.090±0.170
^{42}K	-34.990±0.190
^{43}K	-36.770±0.180
^{44}K	-35.080±0.170
^{45}K	-36.740±0.240
^{46}K	-34.870±0.380
^{47}K	-36.300±0.370
^{48}K	-32.110±0.270
^{49}K	-30.080±0.790
^{50}K	-25.780±1.150
^{51}K	-24.200±1.670
^{52}K	-17.800±2.500
^{53}K	-13.520±4.510
^{35}Ca	5.550±0.450 ‡
^{36}Ca	-6.480±0.250
^{37}Ca	-13.460±0.270
^{38}Ca	-22.810±0.350
^{39}Ca	-26.880±0.190
^{40}Ca	-33.400±0.180
^{41}Ca	-34.580±0.180
^{42}Ca	-38.690±0.290
^{43}Ca	-38.750±0.190
^{44}Ca	-41.600±0.170
^{45}Ca	-40.890±0.190
^{46}Ca	-43.460±0.300
^{47}Ca	-42.540±0.300
^{48}Ca	-43.300±0.240
^{49}Ca	-39.960±0.190
^{50}Ca	-39.010±0.310
^{51}Ca	-35.300±0.460
^{52}Ca	-33.570±0.820
^{53}Ca	-28.080±1.400
^{54}Ca	-24.920±2.540
^{55}Ca	-17.580±4.600
^{56}Ca	-13.810±5.950
^{38}Sc	-3.990±0.520 †
^{39}Sc	-14.850±0.310 †
^{40}Sc	-20.510±0.190
^{41}Sc	-28.480±0.200
^{42}Sc	-31.080±0.230
^{43}Sc	-36.630±0.180
^{44}Sc	-37.830±0.160
^{45}Sc	-41.780±0.210
^{46}Sc	-42.110±0.240
^{47}Sc	-45.570±0.240
^{48}Sc	-44.450±0.190
^{49}Sc	-45.950±0.170
^{50}Sc	-43.430±0.170
^{51}Sc	-43.380±0.220
^{52}Sc	-39.780±0.260
^{53}Sc	-38.820±0.430
^{54}Sc	-34.070±0.780
^{55}Sc	-31.770±1.440
^{56}Sc	-25.540±2.630
^{57}Sc	-22.060±3.890
^{40}Ti	-9.040±0.380
^{41}Ti	-16.350±0.230
^{42}Ti	-25.800±0.250
^{43}Ti	-30.100±0.200
^{44}Ti	-36.870±0.190
^{45}Ti	-39.250±0.230
^{46}Ti	-44.270±0.340
^{47}Ti	-44.790±0.330
^{48}Ti	-48.790±0.240
^{49}Ti	-48.570±0.190
^{50}Ti	-50.860±0.170
^{51}Ti	-49.120±0.190
^{52}Ti	-49.860±0.250
^{53}Ti	-46.830±0.250
^{54}Ti	-46.420±0.310
^{55}Ti	-42.290±0.500
^{56}Ti	-40.670±0.870
^{57}Ti	-35.260±1.570
^{58}Ti	-26.580±1.970 †
^{42}V	-6.670±0.380 †
^{43}V	-17.960±0.240 †
^{44}V	-23.950±0.200
^{45}V	-32.290±0.200
^{46}V	-36.240±0.240
^{47}V	-42.420±0.220
^{48}V	-43.910±0.230
^{49}V	-48.740±0.160
^{50}V	-49.290±0.150
^{51}V	-52.280±0.170
^{52}V	-51.310±0.200
^{53}V	-52.520±0.180
^{54}V	-50.010±0.210
^{55}V	-50.130±0.310
^{56}V	-46.620±0.460
^{57}V	-45.710±0.660
^{58}V	-39.280±0.750
^{59}V	-36.300±1.080
^{60}V	-25.380±2.350 †
^{61}V	-20.760±3.210
^{62}V	-12.090±4.300 †
^{63}V	-5.590±5.740
^{44}Cr	-12.170±0.370
^{45}Cr	-19.820±0.320
^{46}Cr	-29.680±0.370
^{47}Cr	-35.190±0.320
^{48}Cr	-42.470±0.180
^{49}Cr	-45.120±0.180
^{50}Cr	-50.790±0.150
^{51}Cr	-52.090±0.200
^{52}Cr	-55.670±0.280
^{53}Cr	-55.320±0.170
^{54}Cr	-57.330±0.150
^{55}Cr	-55.220±0.170
^{56}Cr	-55.690±0.310
^{57}Cr	-52.570±0.500
^{58}Cr	-52.050±0.430
^{59}Cr	-48.220±0.440
^{60}Cr	-46.540±0.580
^{61}Cr	-39.400±1.180
^{62}Cr	-36.780±1.680
^{63}Cr	-30.900±2.330
^{64}Cr	-24.090±3.580
^{46}Mn	-10.860±0.510 †
^{47}Mn	-22.400±0.430
^{48}Mn	-29.240±0.280
^{49}Mn	-37.850±0.180
^{50}Mn	-41.770±0.180
^{51}Mn	-48.420±0.180
^{52}Mn	-50.570±0.290
^{53}Mn	-54.920±0.200
^{54}Mn	-55.320±0.150
^{55}Mn	-58.080±0.170
^{56}Mn	-56.420±0.190
^{57}Mn	-57.240±0.330
^{58}Mn	-55.550±0.200
^{59}Mn	-55.890±0.200
^{60}Mn	-52.770±0.210
^{61}Mn	-52.020±0.280
^{62}Mn	-46.930±0.580
^{63}Mn	-45.710±0.870
^{64}Mn	-39.830±1.400
^{65}Mn	-35.380±2.220
^{66}Mn	-25.860±3.470 †
^{69}Mn	-22.280±3.970
^{48}Fe	-16.400±0.380
^{49}Fe	-25.000±0.240
^{50}Fe	-35.100±0.180
^{51}Fe	-40.360±0.200
^{52}Fe	-48.070±0.240
^{53}Fe	-51.120±0.180
^{54}Fe	-56.350±0.150
^{55}Fe	-57.560±0.160
^{56}Fe	-61.060±0.230
^{57}Fe	-59.860±0.230
^{58}Fe	-62.150±0.220
^{59}Fe	-60.550±0.160
^{60}Fe	-61.500±0.130
^{61}Fe	-59.020±0.130
^{62}Fe	-58.990±0.160
^{63}Fe	-55.150±0.300
^{64}Fe	-54.120±0.490
^{65}Fe	-49.420±0.820
^{66}Fe	-46.550±1.350
^{67}Fe	-39.360±2.160
^{68}Fe	-32.830±3.410
^{69}Fe	-41.760±0.620
^{70}Fe	-37.070±1.780
^{71}Fe	-30.970±2.410
^{72}Fe	-26.980±3.240
^{73}Fe	-19.530±4.320
^{50}Co	-15.800±0.560 †
^{51}Co	-27.560±0.310 †
^{52}Co	-34.320±0.270
^{53}Co	-43.060±0.200
^{54}Co	-47.310±0.180
^{55}Co	-53.560±0.180
^{56}Co	-55.700±0.240
^{57}Co	-60.030±0.340
^{58}Co	-59.800±0.160
^{59}Co	-62.330±0.160
^{60}Co	-61.500±0.110
^{61}Co	-63.220±0.100
^{62}Co	-61.650±0.140
^{63}Co	-63.000±0.210

Isotope	Mass Excess
^{64}Co	-59.550±0.140
^{65}Co	-59.830±0.160
^{66}Co	-56.920±0.260
^{67}Co	-56.530±0.450
^{68}Co	-52.980±0.720
^{69}Co	-52.530±0.210
^{70}Co	-48.260±0.310
^{71}Co	-45.550±0.810
^{72}Co	-40.660±1.110
^{73}Co	-38.040±1.510
^{74}Co	-32.340±2.030
^{75}Co	-27.080±3.380
^{51}Ni	-9.420±0.860 ‡
^{52}Ni	-21.990±0.430
^{53}Ni	-30.180±0.310
^{54}Ni	-39.940±0.190
^{55}Ni	-45.080±0.170
^{56}Ni	-52.080±0.170
^{57}Ni	-54.920±0.210
^{58}Ni	-60.090±0.200
^{59}Ni	-60.970±0.130
^{60}Ni	-64.220±0.120
^{61}Ni	-64.110±0.100
^{62}Ni	-66.410±0.140
^{63}Ni	-65.010±0.220
^{64}Ni	-66.760±0.130
^{65}Ni	-64.630±0.120
^{66}Ni	-65.550±0.110
^{67}Ni	-63.300±0.170
^{68}Ni	-63.570±0.280
^{69}Ni	-60.040±0.130
^{70}Ni	-59.710±0.140
^{71}Ni	-56.170±0.170
^{72}Ni	-54.620±0.370
^{73}Ni	-50.540±0.530
^{74}Ni	-48.890±0.730
^{75}Ni	-43.450±1.210
^{76}Ni	-39.750±2.020
^{77}Ni	-32.130±3.330
^{78}Ni	-28.200±4.170
^{80}Ni	-27.590±2.320
^{81}Ni	-21.560±2.980
^{84}Ni	-2.750±5.930
^{54}Cu	-21.580±0.520 †
^{55}Cu	-32.470±0.230 †
^{56}Cu	-38.620±0.240
^{57}Cu	-46.440±0.280
^{58}Cu	-51.140±0.260
^{59}Cu	-56.370±0.160
^{60}Cu	-57.960±0.110
^{61}Cu	-61.920±0.120
^{62}Cu	-62.660±0.110
^{63}Cu	-66.030±0.230
^{64}Cu	-65.130±0.140
^{65}Cu	-67.030±0.100
^{66}Cu	-65.580±0.130
^{67}Cu	-67.120±0.120
^{68}Cu	-65.500±0.180
^{69}Cu	-65.130±0.100
^{70}Cu	-62.920±0.090
^{71}Cu	-63.120±0.100
^{72}Cu	-60.190±0.110
^{73}Cu	-59.460±0.180
^{74}Cu	-56.080±0.260
^{75}Cu	-54.740±0.430
^{76}Cu	-50.200±0.730
^{77}Cu	-47.630±1.220
^{78}Cu	-41.530±2.020
^{79}Cu	-37.900±2.840
^{80}Cu	-38.080±1.060
^{81}Cu	-35.180±1.510
^{82}Cu	-29.830±2.020
^{83}Cu	-19.680±3.050 †
^{84}Cu	-16.700±3.480
^{85}Cu	-13.140±4.300
^{86}Cu	-7.340±5.250
^{87}Cu	-4.430±6.370
^{55}Zn	-14.800±0.960 ‡
^{56}Zn	-26.890±0.350
^{57}Zn	-34.110±0.370
^{58}Zn	-42.990±0.320
^{59}Zn	-47.600±0.180
^{60}Zn	-54.010±0.130
^{61}Zn	-56.550±0.120
^{62}Zn	-61.300±0.130
^{63}Zn	-62.530±0.190
^{64}Zn	-66.400±0.110
^{65}Zn	-66.520±0.100
^{66}Zn	-69.010±0.100
^{67}Zn	-68.180±0.150
^{68}Zn	-70.340±0.160
^{69}Zn	-67.930±0.110
^{70}Zn	-69.330±0.100
^{71}Zn	-67.620±0.090
^{72}Zn	-68.320±0.090
^{73}Zn	-65.920±0.090
^{74}Zn	-65.810±0.120
^{75}Zn	-62.800±0.160
^{76}Zn	-62.060±0.250
^{77}Zn	-58.230±0.430
^{78}Zn	-56.500±0.740
^{79}Zn	-51.500±1.230
^{80}Zn	-52.050±0.420
^{81}Zn	-47.340±0.620
^{82}Zn	-45.040±0.920
^{83}Zn	-40.110±1.300
^{84}Zn	-35.010±1.850
^{85}Zn	-29.150±2.400
^{86}Zn	-25.830±3.040
^{87}Zn	-20.130±3.780
^{88}Zn	-17.110±4.650
^{58}Ga	-38.200±5.240
^{59}Ga	-40.740±2.500
^{60}Ga	-42.970±1.200
^{61}Ga	-48.830±0.570
^{62}Ga	-51.580±0.280
^{63}Ga	-56.820±0.190
^{64}Ga	-58.640±0.140
^{65}Ga	-62.960±0.120
^{66}Ga	-63.810±0.120
^{67}Ga	-66.960±0.160
^{68}Ga	-66.780±0.220
^{69}Ga	-68.620±0.090
^{70}Ga	-68.060±0.090
^{71}Ga	-70.000±0.070
^{72}Ga	-68.850±0.070
^{73}Ga	-70.110±0.080
^{74}Ga	-68.410±0.110
^{75}Ga	-68.690±0.090
^{76}Ga	-66.350±0.100
^{77}Ga	-66.360±0.130
^{78}Ga	-63.430±0.170
^{79}Ga	-62.830±0.240
^{80}Ga	-58.810±0.270
^{81}Ga	-57.450±0.210
^{82}Ga	-52.910±0.360
^{83}Ga	-50.620±0.590
^{84}Ga	-43.610±0.910
^{85}Ga	-41.920±1.180
^{86}Ga	-35.880±1.590
^{87}Ga	-32.200±2.060
^{88}Ga	-27.950±2.610
^{89}Ga	-24.490±4.870
^{90}Ga	-17.570±6.110
^{60}Ge	-37.170±3.790
^{61}Ge	-38.940±1.860
^{62}Ge	-45.060±0.930
^{63}Ge	-48.510±0.470
^{64}Ge	-54.280±0.300
^{65}Ge	-56.660±0.130
^{66}Ge	-61.780±0.110
^{67}Ge	-63.400±0.110
^{68}Ge	-67.270±0.140
^{69}Ge	-66.960±0.120
^{70}Ge	-70.100±0.090
^{71}Ge	-70.070±0.080
^{72}Ge	-72.510±0.070
^{73}Ge	-71.840±0.100
^{74}Ge	-73.490±0.130
^{75}Ge	-72.190±0.080
^{76}Ge	-73.100±0.080
^{77}Ge	-71.260±0.090
^{78}Ge	-71.750±0.120
^{79}Ge	-69.340±0.150
^{80}Ge	-69.710±0.250
^{81}Ge	-66.130±0.190
^{82}Ge	-65.080±0.150
^{83}Ge	-60.940±0.280
^{84}Ge	-57.760±0.510
^{85}Ge	-53.340±0.590
^{86}Ge	-51.610±0.760
^{87}Ge	-45.670±1.090
^{88}Ge	-43.370±1.390
^{89}Ge	-38.150±2.200
^{90}Ge	-33.690±2.800
^{91}Ge	-27.650±3.960
^{92}Ge	-23.930±5.580
^{61}As	-30.640±5.650
^{62}As	-31.310±2.830 †
^{63}As	-37.600±1.490 †
^{64}As	-41.590±0.940
^{65}As	-47.920±0.590
^{66}As	-50.590±0.180
^{67}As	-56.550±0.180
^{68}As	-58.950±0.190
^{69}As	-63.080±0.150
^{70}As	-64.360±0.110
^{71}As	-68.000±0.080
^{72}As	-68.500±0.070
^{73}As	-71.470±0.080
^{74}As	-71.390±0.120
^{75}As	-73.450±0.100
^{76}As	-72.550±0.080
^{77}As	-73.960±0.080
^{78}As	-72.610±0.090
^{79}As	-73.580±0.120
^{80}As	-72.710±0.190
^{81}As	-72.780±0.150
^{82}As	-69.950±0.130
^{83}As	-69.470±0.150
^{84}As	-65.290±0.210
^{85}As	-63.960±0.270
^{86}As	-60.020±0.350
^{87}As	-58.570±0.480
^{88}As	-53.990±0.670
^{89}As	-50.760±0.930
^{90}As	-44.890±1.270
^{91}As	-41.340±1.790
^{92}As	-35.230±2.560
^{93}As	-31.430±3.630
^{94}As	-27.420±5.110
^{95}As	-23.440±6.620
^{63}Se	-26.470±4.260
^{64}Se	-33.240±2.780
^{65}Se	-37.190±1.810
^{66}Se	-43.770±1.180
^{67}Se	-46.140±0.300
^{68}Se	-52.970±0.300
^{69}Se	-56.460±0.260
^{70}Se	-61.690±0.160
^{71}Se	-63.600±0.110
^{72}Se	-67.780±0.080
^{73}Se	-68.800±0.080
^{74}Se	-72.240±0.080
^{75}Se	-72.580±0.070
^{76}Se	-75.160±0.070
^{77}Se	-74.730±0.070
^{78}Se	-76.600±0.090
^{79}Se	-75.730±0.100
^{80}Se	-77.850±0.270
^{81}Se	-76.540±0.200
^{82}Se	-77.400±0.160
^{83}Se	-75.350±0.150
^{84}Se	-75.540±0.180
^{85}Se	-72.580±0.170
^{86}Se	-71.880±0.200
^{87}Se	-68.490±0.280
^{88}Se	-67.490±0.400
^{89}Se	-59.970±0.480
^{90}Se	-58.180±0.420
^{91}Se	-52.540±0.500
^{92}Se	-49.170±0.660
^{93}Se	-43.270±0.890
^{94}Se	-41.410±1.280
^{95}Se	-35.800±2.520
^{96}Se	-32.030±3.300
^{97}Se	-25.780±4.280
^{98}Se	-21.770±5.520
^{65}Br	-27.390±5.150
^{66}Br	-30.410±3.390
^{67}Br	-36.670±2.240
^{68}Br	-37.620±0.510 †
^{69}Br	-49.290±1.010
^{70}Br	-51.890±0.450
^{71}Br	-57.210±0.200
^{72}Br	-59.490±0.110
^{73}Br	-64.110±0.090
^{74}Br	-65.630±0.100
^{75}Br	-69.490±0.090
^{76}Br	-70.300±0.080
^{77}Br	-73.380±0.080
^{78}Br	-73.450±0.090
^{79}Br	-75.790±0.110
^{80}Br	-76.560±0.170
^{81}Br	-78.330±0.160
^{82}Br	-77.500±0.130
^{83}Br	-78.770±0.140
^{84}Br	-77.040±0.160
^{85}Br	-78.060±0.120
^{86}Br	-75.360±0.130
^{87}Br	-74.830±0.180
^{88}Br	-71.510±0.280
^{89}Br	-68.410±0.350
^{90}Br	-64.500±0.290
^{91}Br	-62.810±0.260
^{92}Br	-57.440±0.300
^{93}Br	-54.290±0.400
^{94}Br	-49.830±0.600
^{95}Br	-46.920±0.710
^{96}Br	-41.420±1.240
^{97}Br	-37.860±1.660
^{98}Br	-31.810±2.190
^{99}Br	-27.880±3.310
^{67}Kr	-28.570±6.230
^{68}Kr	-33.350±4.150
^{69}Kr	-39.970±2.180
^{70}Kr	-46.290±1.600
^{71}Kr	-49.000±0.710
^{72}Kr	-54.670±0.320
^{73}Kr	-57.410±0.150
^{74}Kr	-62.550±0.100
^{75}Kr	-64.470±0.090
^{76}Kr	-68.800±0.090
^{77}Kr	-70.130±0.080
^{78}Kr	-73.690±0.090
^{79}Kr	-74.260±0.090
^{80}Kr	-78.180±0.220
^{81}Kr	-78.310±0.130
^{82}Kr	-80.700±0.120
^{83}Kr	-80.370±0.140
^{84}Kr	-82.160±0.190
^{85}Kr	-81.220±0.140
^{86}Kr	-82.660±0.120
^{87}Kr	-80.320±0.130
^{88}Kr	-80.120±0.230
^{89}Kr	-75.880±0.280
^{90}Kr	-74.810±0.230
^{91}Kr	-71.050±0.180
^{92}Kr	-69.470±0.170
^{93}Kr	-64.410±0.210
^{94}Kr	-62.340±0.340
^{95}Kr	-57.330±0.360
^{96}Kr	-54.480±0.390
^{97}Kr	-49.050±0.600
^{98}Kr	-45.740±0.850
^{99}Kr	-39.780±1.270
^{100}Kr	-33.080±4.500
^{69}Rb	-30.100±4.690
^{70}Rb	-33.800±3.410
^{71}Rb	-40.210±2.490
^{72}Rb	-42.800±1.130
^{73}Rb	-48.730±0.510
^{74}Rb	-51.970±0.250
^{75}Rb	-57.480±0.160
^{76}Rb	-59.890±0.120
^{77}Rb	-64.670±0.110
^{78}Rb	-66.550±0.120
^{79}Rb	-70.600±0.120
^{80}Rb	-71.960±0.260
^{81}Rb	-75.830±0.160
^{82}Rb	-76.710±0.120
^{83}Rb	-79.790±0.120
^{84}Rb	-79.940±0.140
^{85}Rb	-82.460±0.130
^{86}Rb	-82.180±0.120
^{87}Rb	-84.170±0.170
^{88}Rb	-82.240±0.180
^{89}Rb	-81.870±0.190
^{90}Rb	-78.980±0.160
^{91}Rb	-78.180±0.140
^{92}Rb	-74.650±0.130
^{93}Rb	-73.250±0.160
^{94}Rb	-68.940±0.150
^{95}Rb	-66.770±0.170
^{96}Rb	-61.950±0.190
^{97}Rb	-59.240±0.200
^{98}Rb	-53.940±0.280
^{99}Rb	-50.740±0.440
^{100}Rb	-46.130±1.900
^{101}Rb	-42.900±2.450
^{102}Rb	-36.250±3.660
^{72}Sr	-36.790±3.840
^{73}Sr	-38.870±1.760
^{74}Sr	-44.990±0.810
^{75}Sr	-48.570±0.520
^{76}Sr	-54.460±0.330
^{77}Sr	-57.300±0.210
^{78}Sr	-62.410±0.160
^{79}Sr	-64.820±0.160
^{80}Sr	-69.120±0.260
^{81}Sr	-71.170±0.170
^{82}Sr	-75.550±0.140
^{83}Sr	-77.050±0.150
^{84}Sr	-80.760±0.160
^{85}Sr	-81.590±0.140
^{86}Sr	-84.680±0.140
^{87}Sr	-85.000±0.190
^{88}Sr	-87.560±0.280
^{89}Sr	-86.400±0.300
^{90}Sr	-86.570±0.220
^{91}Sr	-83.950±0.170
^{92}Sr	-83.400±0.150
^{93}Sr	-80.110±0.160
^{94}Sr	-78.910±0.190
^{95}Sr	-74.930±0.170
^{96}Sr	-73.000±0.170
^{97}Sr	-68.390±0.180
^{98}Sr	-65.850±0.210
^{99}Sr	-60.710±0.270
^{100}Sr	-60.080±0.790
^{101}Sr	-55.400±1.030
^{102}Sr	-52.560±1.570
^{103}Sr	-46.870±2.360
^{104}Sr	-42.880±3.510
^{105}Sr	-36.730±4.270
^{74}Y	-32.060±2.710
^{75}Y	-38.480±1.730
^{76}Y	-42.180±1.110
^{77}Y	-48.310±0.710
^{78}Y	-51.500±0.460
^{79}Y	-56.750±0.230
^{80}Y	-60.680±0.280
^{81}Y	-65.470±0.190
^{82}Y	-67.750±0.140
^{83}Y	-72.430±0.160
^{84}Y	-73.730±0.170
^{85}Y	-78.310±0.140
^{86}Y	-79.390±0.120
^{87}Y	-82.720±0.130
^{88}Y	-83.280±0.180
^{89}Y	-86.420±0.190
^{90}Y	-86.090±0.200
^{91}Y	-86.760±0.140
^{92}Y	-84.640±0.120
^{93}Y	-84.580±0.140
^{94}Y	-81.750±0.150
^{95}Y	-81.130±0.140
^{96}Y	-77.670±0.130
^{97}Y	-76.210±0.150
^{98}Y	-72.070±0.210
^{99}Y	-69.960±0.310
^{100}Y	-67.030±0.280
^{101}Y	-65.340±0.430
^{102}Y	-61.080±0.660
^{103}Y	-58.790±1.010
^{104}Y	-53.810±1.520
^{105}Y	-50.640±2.270
^{106}Y	-44.950±3.030
^{107}Y	-41.010±4.020
^{76}Zr	-35.400±3.570
^{77}Zr	-38.640±2.300
^{78}Zr	-44.660±1.490
^{79}Zr	-47.980±0.970
^{80}Zr	-56.170±0.580
^{81}Zr	-58.920±0.360
^{82}Zr	-64.080±0.250
^{83}Zr	-66.480±0.220
^{84}Zr	-70.400±0.330
^{85}Zr	-73.030±0.200
^{86}Zr	-78.010±0.150
^{87}Zr	-79.300±0.180
^{88}Zr	-82.900±0.250
^{89}Zr	-84.640±0.230
^{90}Zr	-87.540±0.150
^{91}Zr	-87.570±0.150
^{92}Zr	-88.700±0.130
^{93}Zr	-87.100±0.150
^{94}Zr	-87.520±0.200
^{95}Zr	-85.300±0.150
^{96}Zr	-85.020±0.130
^{97}Zr	-82.090±0.140
^{98}Zr	-81.130±0.190
^{99}Zr	-77.470±0.280
^{100}Zr	-76.640±0.170

Isotope	Mass Excess
^{101}Zr	-73.290±0.110
^{102}Zr	-72.060±0.130
^{103}Zr	-68.370±0.190
^{104}Zr	-66.790±0.280
^{105}Zr	-62.790±0.420
^{106}Zr	-59.920±1.070
^{107}Zr	-55.150±1.440
^{108}Zr	-52.310±1.930
^{109}Zr	-46.890±2.570
^{110}Zr	-41.910±4.180
^{77}Nb	-28.250±4.810
^{78}Nb	-31.430±3.110
^{79}Nb	-37.590±2.030
^{80}Nb	-46.010±1.220
^{81}Nb	-51.520±0.840
^{82}Nb	-54.490±0.580
^{83}Nb	-59.950±0.430
^{84}Nb	-60.840±0.440
^{85}Nb	-66.500±0.320
^{86}Nb	-69.530±0.220
^{87}Nb	-74.910±0.210
^{88}Nb	-76.320±0.310
^{89}Nb	-81.170±0.280
^{90}Nb	-82.400±0.190
^{91}Nb	-85.630±0.130
^{92}Nb	-86.010±0.130
^{93}Nb	-87.580±0.140
^{94}Nb	-86.500±0.210
^{95}Nb	-87.530±0.160
^{96}Nb	-85.720±0.130
^{97}Nb	-85.820±0.140
^{98}Nb	-83.440±0.150
^{99}Nb	-83.030±0.220
^{100}Nb	-79.450±0.130
^{101}Nb	-79.190±0.100
^{102}Nb	-76.330±0.090
^{103}Nb	-75.410±0.090
^{104}Nb	-72.060±0.120
^{105}Nb	-70.860±0.160
^{106}Nb	-67.220±0.220
^{107}Nb	-65.260±0.500
^{108}Nb	-61.050±0.690
^{109}Nb	-58.860±0.930
^{110}Nb	-53.800±1.540
^{111}Nb	-47.970±2.840
^{112}Nb	-43.920±3.480
^{113}Nb	-37.780±5.270
^{114}Nb	-32.260±6.540
^{115}Nb	-34.370±6.380
^{79}Mo	-26.510±4.170
^{82}Mo	-42.350±2.290 †
^{83}Mo	-49.020±1.330
^{84}Mo	-56.450±0.840
^{85}Mo	-59.470±0.540
^{86}Mo	-65.170±0.370
^{87}Mo	-68.420±0.300
^{88}Mo	-74.100±0.330
^{89}Mo	-76.590±0.330
^{90}Mo	-80.770±0.230
^{91}Mo	-82.190±0.170
^{92}Mo	-85.660±0.140
^{93}Mo	-86.320±0.150
^{94}Mo	-88.200±0.160
^{95}Mo	-87.750±0.140
^{96}Mo	-89.180±0.130
^{97}Mo	-87.770±0.140
^{98}Mo	-88.250±0.190
^{99}Mo	-86.380±0.180
^{100}Mo	-85.840±0.120
^{101}Mo	-83.600±0.100
^{102}Mo	-83.540±0.080
^{103}Mo	-80.990±0.080
^{104}Mo	-80.350±0.080
^{105}Mo	-77.290±0.110

Isotope	Mass Excess
^{106}Mo	-76.440±0.120
^{107}Mo	-73.140±0.140
^{108}Mo	-71.730±0.250
^{109}Mo	-67.920±0.340
^{110}Mo	-66.070±0.560
^{111}Mo	-58.330±1.510
^{112}Mo	-56.910±1.900
^{113}Mo	-52.780±2.420
^{114}Mo	-49.300±3.320
^{115}Mo	-46.020±3.860
^{116}Mo	-43.830±4.740
^{117}Mo	-39.430±5.790
^{120}Mo	-12.180±5.030
^{121}Mo	-2.910±6.240
^{84}Tc	-45.070±1.560
^{85}Tc	-51.520±1.190
^{86}Tc	-54.310±0.820
^{87}Tc	-59.910±0.640
^{88}Tc	-63.150±0.540
^{89}Tc	-72.730±1.080
^{90}Tc	-74.130±0.530
^{91}Tc	-78.050±0.270
^{92}Tc	-79.430±0.180
^{93}Tc	-82.990±0.180
^{94}Tc	-83.830±0.200
^{95}Tc	-86.350±0.160
^{96}Tc	-86.150±0.150
^{97}Tc	-87.890±0.160
^{98}Tc	-86.840±0.210
^{99}Tc	-87.670±0.280
^{100}Tc	-86.080±0.090
^{101}Tc	-86.700±0.090
^{102}Tc	-84.790±0.080
^{103}Tc	-85.010±0.070
^{104}Tc	-82.760±0.080
^{105}Tc	-82.440±0.070
^{106}Tc	-79.760±0.080
^{107}Tc	-79.170±0.100
^{108}Tc	-76.180±0.110
^{109}Tc	-75.160±0.150
^{110}Tc	-71.720±0.220
^{111}Tc	-67.310±0.730
^{112}Tc	-63.830±0.950
^{113}Tc	-62.380±1.250
^{114}Tc	-58.590±1.640
^{115}Tc	-56.300±2.210
^{116}Tc	-52.320±2.780
^{117}Tc	-50.390±3.460
^{118}Tc	-46.240±4.280
^{119}Tc	-44.140±5.260
^{120}Tc	-31.250±2.350 †
^{121}Tc	-25.620±2.940 ‡
^{122}Tc	-18.170±4.100
^{123}Tc	-20.710±6.020
^{84}Ru	-39.310±2.780
^{85}Ru	-42.880±2.150
^{86}Ru	-49.260±1.660
^{87}Ru	-51.670±1.170
^{88}Ru	-57.080±0.990
^{89}Ru	-64.160±2.280
^{90}Ru	-70.270±1.660
^{91}Ru	-71.610±0.790
^{92}Ru	-75.670±0.380
^{93}Ru	-77.340±0.210
^{94}Ru	-81.640±0.150
^{95}Ru	-82.970±0.170
^{96}Ru	-85.940±0.140
^{97}Ru	-86.260±0.140
^{98}Ru	-88.570±0.150
^{99}Ru	-88.110±0.190
^{100}Ru	-89.170±0.100
^{101}Ru	-88.130±0.090
^{102}Ru	-89.130±0.080
^{103}Ru	-87.580±0.080

Isotope	Mass Excess
^{104}Ru	-88.110±0.080
^{105}Ru	-86.160±0.100
^{106}Ru	-86.220±0.100
^{107}Ru	-83.840±0.100
^{108}Ru	-83.530±0.110
^{109}Ru	-80.810±0.130
^{110}Ru	-80.110±0.150
^{111}Ru	-75.590±0.400
^{112}Ru	-74.270±0.400
^{113}Ru	-71.110±0.540
^{114}Ru	-69.940±0.720
^{115}Ru	-66.010±0.980
^{116}Ru	-64.250±1.370
^{117}Ru	-60.480±1.770
^{118}Ru	-58.730±2.250
^{119}Ru	-54.680±2.960
^{120}Ru	-50.530±1.090
^{121}Ru	-43.760±1.370
^{122}Ru	-39.820±1.920
^{123}Ru	-33.320±2.700
^{124}Ru	-31.430±3.830
^{125}Ru	-21.420±4.550 †
^{126}Ru	-15.200±5.840 ‡
^{84}Rh	-30.260±4.850
^{85}Rh	-35.360±3.770
^{86}Rh	-38.610±2.940
^{87}Rh	-44.810±2.290
^{88}Rh	-46.640±1.610
^{89}Rh	-56.150±4.850
^{90}Rh	-59.530±3.560
^{91}Rh	-65.420±2.610
^{92}Rh	-66.490±1.270
^{93}Rh	-70.550±0.630
^{94}Rh	-73.160±0.380
^{95}Rh	-77.590±0.210
^{96}Rh	-79.220±0.180
^{97}Rh	-82.530±0.160
^{98}Rh	-83.340±0.190
^{99}Rh	-86.190±0.240
^{100}Rh	-85.660±0.090
^{101}Rh	-87.700±0.080
^{102}Rh	-87.080±0.070
^{103}Rh	-88.450±0.070
^{104}Rh	-87.250±0.070
^{105}Rh	-88.090±0.070
^{106}Rh	-86.560±0.080
^{107}Rh	-86.920±0.070
^{108}Rh	-84.850±0.080
^{109}Rh	-84.830±0.100
^{110}Rh	-82.460±0.130
^{111}Rh	-81.890±0.320
^{112}Rh	-79.020±0.260
^{113}Rh	-78.110±0.230
^{114}Rh	-75.280±0.340
^{115}Rh	-74.140±0.480
^{116}Rh	-70.690±0.590
^{117}Rh	-69.240±0.820
^{118}Rh	-65.710±1.130
^{119}Rh	-64.110±1.500
^{120}Rh	-61.850±0.510
^{121}Rh	-58.990±0.650
^{122}Rh	-53.810±0.890
^{123}Rh	-50.450±1.250
^{124}Rh	-44.660±1.770
^{125}Rh	-41.650±2.490
^{126}Rh	-34.840±3.230
^{127}Rh	-29.610±4.160
^{128}Rh	-21.760±5.330
^{129}Rh	-15.280±6.810
^{85}Pd	-30.650±6.640
^{86}Pd	-34.830±5.150
^{87}Pd	-37.480±4.010
^{88}Pd	-43.300±3.140
^{91}Pd	-57.860±5.500

Isotope	Mass Excess
^{92}Pd	-63.290±4.070
^{93}Pd	-63.780±2.020
^{94}Pd	-68.720±1.040
^{95}Pd	-71.110±0.660
^{96}Pd	-75.620±0.410
^{97}Pd	-77.430±0.300
^{98}Pd	-80.930±0.220
^{99}Pd	-82.130±0.280
^{100}Pd	-84.980±0.120
^{101}Pd	-85.410±0.090
^{102}Pd	-87.840±0.080
^{103}Pd	-87.650±0.070
^{104}Pd	-89.420±0.090
^{105}Pd	-88.570±0.110
^{106}Pd	-89.800±0.070
^{107}Pd	-88.580±0.070
^{108}Pd	-89.260±0.070
^{109}Pd	-87.470±0.090
^{110}Pd	-87.670±0.120
^{111}Pd	-86.100±0.180
^{112}Pd	-86.110±0.160
^{113}Pd	-83.680±0.150
^{114}Pd	-83.180±0.140
^{115}Pd	-80.520±0.190
^{116}Pd	-79.750±0.230
^{117}Pd	-76.650±0.300
^{118}Pd	-75.520±0.460
^{119}Pd	-72.190±0.670
^{120}Pd	-71.750±0.250
^{121}Pd	-69.100±0.250
^{122}Pd	-66.770±0.280
^{123}Pd	-62.220±0.350
^{124}Pd	-59.620±0.470
^{125}Pd	-55.730±0.670
^{126}Pd	-53.000±1.270
^{127}Pd	-47.230±1.650
^{128}Pd	-43.200±2.150
^{129}Pd	-36.750±2.780
^{130}Pd	-31.490±4.200
^{93}Ag	-59.300±6.260
^{94}Ag	-60.330±3.180
^{95}Ag	-64.700±2.090
^{96}Ag	-66.810±1.370
^{97}Ag	-71.210±0.890
^{98}Ag	-73.070±0.620
^{99}Ag	-76.570±0.310
^{100}Ag	-77.630±0.150
^{101}Ag	-81.210±0.110
^{102}Ag	-82.110±0.080
^{103}Ag	-84.970±0.080
^{104}Ag	-85.230±0.080
^{105}Ag	-87.490±0.120
^{106}Ag	-87.060±0.090
^{107}Ag	-88.630±0.070
^{108}Ag	-87.740±0.070
^{109}Ag	-88.790±0.080
^{110}Ag	-87.360±0.110
^{111}Ag	-88.340±0.210
^{112}Ag	-86.820±0.140
^{113}Ag	-87.240±0.110
^{114}Ag	-85.240±0.120
^{115}Ag	-85.160±0.140
^{116}Ag	-82.790±0.120
^{117}Ag	-82.370±0.120
^{118}Ag	-79.630±0.160
^{119}Ag	-78.840±0.260
^{120}Ag	-75.640±0.170
^{121}Ag	-75.580±0.150
^{122}Ag	-73.270±0.160
^{123}Ag	-71.310±0.170
^{124}Ag	-67.170±0.230
^{125}Ag	-65.780±0.330
^{126}Ag	-62.260±0.380
^{127}Ag	-60.370±0.640
^{128}Ag	-55.350±0.860

Isotope	Mass Excess
^{129}Ag	-52.150±1.140
^{130}Ag	-46.820±1.700
^{95}Cd	-60.560±6.340
^{96}Cd	-63.900±4.220
^{97}Cd	-65.360±2.810
^{98}Cd	-69.380±1.890
^{99}Cd	-71.060±1.300
^{100}Cd	-72.840±0.220
^{101}Cd	-74.970±0.150
^{102}Cd	-79.000±0.110
^{103}Cd	-80.360±0.090
^{104}Cd	-83.640±0.090
^{105}Cd	-84.290±0.100
^{106}Cd	-86.950±0.080
^{107}Cd	-87.000±0.070
^{108}Cd	-88.970±0.070
^{109}Cd	-88.450±0.090
^{110}Cd	-89.880±0.090
^{111}Cd	-89.530±0.150
^{112}Cd	-90.480±0.130
^{113}Cd	-89.340±0.090
^{114}Cd	-90.130±0.090
^{115}Cd	-88.510±0.120
^{116}Cd	-88.650±0.110
^{117}Cd	-86.580±0.100
^{118}Cd	-86.460±0.140
^{119}Cd	-84.010±0.200
^{120}Cd	-83.130±0.140
^{121}Cd	-80.990±0.110
^{122}Cd	-80.980±0.100
^{123}Cd	-78.830±0.110
^{124}Cd	-77.190±0.120
^{125}Cd	-73.910±0.190
^{126}Cd	-72.970±0.200
^{127}Cd	-69.800±0.220
^{128}Cd	-68.430±0.320
^{129}Cd	-64.000±0.450
^{130}Cd	-61.790±0.670
^{131}Cd	-59.760±1.250
^{132}Cd	-56.160±1.710
^{135}Cd	-34.600±3.990
^{136}Cd	-28.500±5.080
^{137}Cd	-19.890±6.480 †
^{97}In	-59.110±5.770
^{98}In	-60.410±3.890
^{99}In	-64.450±2.640
^{100}In	-63.230±1.430 †
^{101}In	-67.640±0.760
^{102}In	-69.780±0.400
^{103}In	-74.040±0.220
^{104}In	-75.740±0.130
^{105}In	-79.410±0.100
^{106}In	-80.490±0.090
^{107}In	-83.520±0.090
^{108}In	-83.990±0.090
^{109}In	-86.370±0.100
^{110}In	-86.250±0.110
^{111}In	-88.500±0.160
^{112}In	-88.070±0.100
^{113}In	-89.500±0.090
^{114}In	-88.720±0.100
^{115}In	-89.890±0.130
^{116}In	-88.550±0.100
^{117}In	-89.110±0.100
^{118}In	-87.350±0.110
^{119}In	-87.540±0.180
^{120}In	-85.620±0.100
^{121}In	-85.690±0.080
^{122}In	-83.650±0.080
^{123}In	-83.720±0.080
^{124}In	-81.690±0.090
^{125}In	-80.680±0.090
^{126}In	-77.990±0.100
^{127}In	-77.270±0.100

Isotope	Mass Excess
^{128}In	-74.390±0.110
^{129}In	-73.390±0.150
^{130}In	-69.860±0.240
^{131}In	-69.350±0.490
^{132}In	-64.810±0.750
^{133}In	-61.480±1.060
^{134}In	-51.510±2.130 †
^{135}In	-49.110±2.120
^{136}In	-42.100±2.770
^{137}In	-36.590±3.570
^{138}In	-28.620±4.600
^{99}Sn	-57.760±5.320
^{100}Sn	-56.260±2.860 †
^{101}Sn	-59.210±2.170
^{102}Sn	-63.630±1.170
^{103}Sn	-66.000±0.630
^{104}Sn	-70.590±0.330
^{105}Sn	-72.690±0.180
^{106}Sn	-76.760±0.130
^{107}Sn	-78.220±0.090
^{108}Sn	-81.670±0.090
^{109}Sn	-82.560±0.090
^{110}Sn	-85.330±0.090
^{111}Sn	-85.350±0.170
^{112}Sn	-87.870±0.110
^{113}Sn	-87.900±0.080
^{114}Sn	-89.780±0.090
^{115}Sn	-89.330±0.110
^{116}Sn	-90.810±0.100
^{117}Sn	-89.880±0.090
^{118}Sn	-90.840±0.120
^{119}Sn	-89.350±0.140
^{120}Sn	-91.070±0.170
^{121}Sn	-89.330±0.120
^{122}Sn	-89.600±0.090
^{123}Sn	-87.730±0.080
^{124}Sn	-87.910±0.090
^{125}Sn	-86.000±0.100
^{126}Sn	-85.730±0.100
^{127}Sn	-83.290±0.090
^{128}Sn	-82.800±0.100
^{129}Sn	-80.180±0.110
^{130}Sn	-79.460±0.140
^{131}Sn	-76.640±0.370
^{132}Sn	-74.820±0.300
^{133}Sn	-70.510±0.410
^{134}Sn	-67.730±0.640
^{135}Sn	-60.930±1.040
^{136}Sn	-56.920±1.400
^{137}Sn	-50.460±1.870
^{138}Sn	-45.520±2.470
^{139}Sn	-38.140±3.230
^{140}Sn	-34.450±3.910
^{141}Sn	-27.150±4.890
^{142}Sn	-21.380±6.750
^{101}Sb	-49.700±4.270 ‡
^{102}Sb	-52.680±3.250
^{103}Sb	-56.890±1.780
^{104}Sb	-59.390±0.970
^{105}Sb	-64.280±0.520
^{106}Sb	-66.800±0.350
^{107}Sb	-71.240±0.240
^{108}Sb	-73.040±0.110
^{109}Sb	-76.910±0.110
^{110}Sb	-78.250±0.120
^{111}Sb	-80.390±0.220
^{112}Sb	-81.370±0.150
^{113}Sb	-84.280±0.120
^{114}Sb	-84.730±0.110
^{115}Sb	-87.040±0.120
^{116}Sb	-86.960±0.100
^{117}Sb	-88.800±0.100
^{118}Sb	-88.260±0.130
^{119}Sb	-89.600±0.190

Isotope	Mass Excess
^{120}Sb	-88.050±0.110
^{121}Sb	-89.970±0.110
^{122}Sb	-88.510±0.080
^{123}Sb	-89.010±0.070
^{124}Sb	-87.330±0.070
^{125}Sb	-87.700±0.080
^{126}Sb	-86.600±0.070
^{127}Sb	-86.640±0.070
^{128}Sb	-84.520±0.070
^{129}Sb	-84.350±0.100
^{130}Sb	-82.100±0.150
^{131}Sb	-82.530±0.370
^{132}Sb	-79.140±0.250
^{133}Sb	-77.620±0.230
^{134}Sb	-73.610±0.320
^{135}Sb	-70.030±0.510
^{136}Sb	-65.080±0.570
^{137}Sb	-61.360±0.820
^{138}Sb	-55.210±1.140
^{139}Sb	-51.020±1.560
^{140}Sb	-45.160±1.820
^{141}Sb	-40.450±2.300
^{142}Sb	-33.680±3.210
^{143}Sb	-28.430±4.460
^{144}Sb	-24.560±6.050
^{103}Te	-48.450±4.800
^{104}Te	-52.110±2.660
^{105}Te	-54.580±1.460
^{106}Te	-59.850±1.000
^{107}Te	-62.650±0.690
^{108}Te	-67.410±0.470
^{109}Te	-69.410±0.170
^{110}Te	-73.670±0.150
^{111}Te	-73.710±0.210
^{112}Te	-77.500±0.160
^{113}Te	-78.830±0.140
^{114}Te	-82.100±0.140
^{115}Te	-82.780±0.130
^{116}Te	-85.560±0.110
^{117}Te	-85.790±0.090
^{118}Te	-87.950±0.100
^{119}Te	-87.750±0.130
^{120}Te	-88.720±0.130
^{121}Te	-88.530±0.090
^{122}Te	-90.480±0.090
^{123}Te	-89.360±0.070
^{124}Te	-90.120±0.080
^{125}Te	-88.640±0.110
^{126}Te	-89.700±0.080
^{127}Te	-88.690±0.070
^{128}Te	-89.060±0.070
^{129}Te	-87.220±0.090
^{130}Te	-87.290±0.130
^{131}Te	-86.490±0.340
^{132}Te	-85.900±0.240
^{133}Te	-82.900±0.200
^{134}Te	-81.660±0.240
^{135}Te	-77.220±0.350
^{136}Te	-75.020±0.330
^{137}Te	-70.460±0.330
^{138}Te	-66.990±0.570
^{139}Te	-61.560±0.720
^{140}Te	-57.880±0.820
^{141}Te	-52.030±1.070
^{142}Te	-47.840±1.480
^{143}Te	-41.410±2.090
^{144}Te	-36.550±2.930
^{145}Te	-30.750±4.020
^{146}Te	-25.430±5.190
^{147}Te	-17.820±6.680
^{105}I	-44.990±3.930
^{106}I	-47.850±2.710
^{107}I	-53.050±1.870
^{108}I	-55.960±1.290

Isotope	Mass Excess
^{109}I	-60.920±0.900
^{110}I	-62.940±0.290
^{111}I	-64.950±0.370 †
^{112}I	-67.360±0.220
^{113}I	-71.600±0.140
^{114}I	-73.240±0.210
^{115}I	-76.530±0.270
^{116}I	-77.890±0.160
^{117}I	-81.100±0.110
^{118}I	-81.630±0.130
^{119}I	-84.100±0.180
^{120}I	-84.180±0.150
^{121}I	-86.310±0.110
^{122}I	-86.280±0.080
^{123}I	-88.330±0.080
^{124}I	-87.650±0.080
^{125}I	-88.780±0.120
^{126}I	-87.890±0.090
^{127}I	-89.050±0.070
^{128}I	-88.150±0.070
^{129}I	-88.910±0.070
^{130}I	-87.410±0.100
^{131}I	-88.570±0.250
^{132}I	-86.740±0.200
^{133}I	-86.540±0.180
^{134}I	-83.930±0.210
^{135}I	-82.650±0.200
^{136}I	-79.180±0.190
^{137}I	-77.330±0.200
^{138}I	-73.130±0.260
^{139}I	-70.350±0.360
^{140}I	-64.330±0.360
^{141}I	-61.430±0.380
^{142}I	-56.040±0.410
^{143}I	-52.350±0.540
^{144}I	-46.490±0.740
^{145}I	-43.350±1.010
^{146}I	-36.590±2.030
^{147}I	-31.940±2.650
^{148}I	-25.080±3.450
^{149}I	-19.770±4.460
^{150}I	-11.290±6.730 †
^{107}Xe	-44.130±4.880
^{108}Xe	-48.810±3.400
^{109}Xe	-51.510±2.370
^{110}Xe	-56.460±1.660
^{112}Xe	-59.670±0.410
^{113}Xe	-62.460±0.270
^{114}Xe	-67.110±0.200
^{115}Xe	-68.490±0.330
^{116}Xe	-72.660±0.240
^{117}Xe	-74.400±0.160
^{118}Xe	-78.000±0.150
^{119}Xe	-78.760±0.210
^{120}Xe	-82.110±0.190
^{121}Xe	-82.680±0.130
^{122}Xe	-85.140±0.090
^{123}Xe	-85.370±0.080
^{124}Xe	-87.590±0.090
^{125}Xe	-87.410±0.080
^{126}Xe	-89.000±0.080
^{127}Xe	-88.390±0.070
^{128}Xe	-89.740±0.070
^{129}Xe	-88.990±0.090
^{130}Xe	-90.210±0.090
^{131}Xe	-88.630±0.390
^{132}Xe	-89.670±0.270
^{133}Xe	-88.260±0.210
^{134}Xe	-88.450±0.210
^{135}Xe	-86.240±0.240
^{136}Xe	-85.510±0.220
^{137}Xe	-82.410±0.220
^{138}Xe	-80.910±0.270
^{139}Xe	-77.080±0.360
^{140}Xe	-72.860±0.290

Isotope	Mass Excess
^{141}Xe	-68.720±0.230
^{142}Xe	-66.170±0.230
^{143}Xe	-61.140±0.230
^{144}Xe	-57.830±0.300
^{145}Xe	-53.160±0.410
^{146}Xe	-49.360±0.530
^{147}Xe	-43.180±1.010
^{148}Xe	-39.050±1.340
^{149}Xe	-32.750±1.770
^{150}Xe	-27.470±2.720
^{109}Cs	-41.140±4.500 †
^{110}Cs	-43.850±3.150 †
^{114}Cs	-53.410±0.740 †
^{115}Cs	-59.050±0.410 †
^{116}Cs	-61.560±0.230
^{117}Cs	-66.010±0.160
^{118}Cs	-68.100±0.160
^{119}Cs	-72.050±0.230
^{120}Cs	-73.800±0.260
^{121}Cs	-77.160±0.150
^{122}Cs	-78.150±0.110
^{123}Cs	-80.980±0.100
^{124}Cs	-81.530±0.100
^{125}Cs	-84.010±0.120
^{126}Cs	-84.200±0.090
^{127}Cs	-86.200±0.080
^{128}Cs	-85.940±0.090
^{129}Cs	-87.570±0.100
^{130}Cs	-87.050±0.140
^{131}Cs	-88.270±0.260
^{132}Cs	-87.490±0.250
^{133}Cs	-88.720±0.190
^{134}Cs	-87.490±0.190
^{135}Cs	-87.830±0.200
^{136}Cs	-85.950±0.180
^{137}Cs	-85.340±0.160
^{138}Cs	-82.360±0.200
^{139}Cs	-80.970±0.300
^{140}Cs	-76.320±0.260
^{141}Cs	-74.590±0.200
^{142}Cs	-70.670±0.160
^{143}Cs	-68.400±0.170
^{144}Cs	-63.670±0.180
^{145}Cs	-61.190±0.260
^{146}Cs	-56.160±0.260
^{147}Cs	-52.710±0.290
^{148}Cs	-46.970±0.510
^{149}Cs	-43.270±0.690
^{150}Cs	-37.020±1.070
^{115}Ba	-46.990±0.860 ‡
^{116}Ba	-52.730±0.610
^{117}Ba	-55.480±0.400
^{118}Ba	-60.200±0.330
^{119}Ba	-62.590±0.300
^{120}Ba	-67.820±0.720
^{121}Ba	-69.710±0.480
^{122}Ba	-73.530±0.280
^{123}Ba	-74.950±0.210
^{124}Ba	-78.150±0.170
^{125}Ba	-79.340±0.150
^{126}Ba	-81.930±0.110
^{127}Ba	-82.590±0.100
^{128}Ba	-84.990±0.100
^{129}Ba	-85.080±0.110
^{130}Ba	-87.000±0.110
^{131}Ba	-86.460±0.350
^{132}Ba	-88.330±0.210
^{133}Ba	-87.850±0.190
^{134}Ba	-89.280±0.190
^{135}Ba	-88.240±0.270
^{136}Ba	-88.850±0.200
^{137}Ba	-87.190±0.180
^{138}Ba	-86.720±0.200
^{139}Ba	-83.850±0.320

Isotope	Mass Excess
^{140}Ba	-82.670±0.190
^{141}Ba	-79.410±0.160
^{142}Ba	-77.860±0.140
^{143}Ba	-74.130±0.130
^{144}Ba	-72.070±0.160
^{145}Ba	-67.870±0.140
^{146}Ba	-65.290±0.150
^{147}Ba	-60.510±0.180
^{148}Ba	-57.350±0.230
^{149}Ba	-51.950±0.350
^{150}Ba	-48.290±0.490
^{151}Ba	-44.810±3.780
^{152}Ba	-41.490±4.550
^{119}La	-51.480±0.570 †
^{120}La	-56.420±1.620
^{121}La	-60.750±1.180
^{122}La	-62.850±0.830
^{123}La	-67.170±0.500
^{124}La	-69.090±0.380
^{125}La	-73.420±0.340
^{126}La	-74.280±0.230
^{127}La	-77.080±0.160
^{128}La	-78.300±0.180
^{129}La	-81.190±0.190
^{130}La	-81.700±0.210
^{131}La	-83.010±0.410
^{132}La	-83.590±0.280
^{133}La	-85.810±0.200
^{134}La	-85.640±0.200
^{135}La	-87.340±0.220
^{136}La	-86.540±0.190
^{137}La	-87.410±0.180
^{138}La	-85.990±0.230
^{139}La	-85.680±0.260
^{140}La	-84.120±0.300
^{141}La	-83.220±0.220
^{142}La	-80.150±0.180
^{143}La	-78.770±0.150
^{144}La	-75.230±0.160
^{145}La	-73.370±0.190
^{146}La	-69.350±0.190
^{147}La	-66.980±0.200
^{148}La	-62.450±0.240
^{149}La	-59.530±0.300
^{150}La	-54.420±0.410
^{151}La	-54.160±2.090
^{152}La	-49.710±2.550
^{153}La	-46.680±3.310
^{154}La	-41.480±4.280
^{115}Ce	-18.160±3.140
^{120}Ce	-47.860±3.400
^{121}Ce	-50.500±2.530
^{122}Ce	-55.070±1.870
^{123}Ce	-57.410±1.370
^{124}Ce	-62.200±0.810
^{125}Ce	-65.740±0.630
^{126}Ce	-69.230±0.470
^{127}Ce	-70.440±0.340
^{128}Ce	-73.510±0.250
^{129}Ce	-75.330±0.280
^{130}Ce	-78.780±0.310
^{131}Ce	-77.500±0.510
^{132}Ce	-81.020±0.340
^{133}Ce	-82.050±0.270
^{134}Ce	-84.640±0.250
^{135}Ce	-84.830±0.280
^{136}Ce	-86.720±0.240
^{137}Ce	-86.250±0.230
^{138}Ce	-87.400±0.270
^{139}Ce	-86.260±0.360
^{140}Ce	-86.750±0.180
^{141}Ce	-85.030±0.200
^{142}Ce	-84.460±0.150
^{143}Ce	-81.700±0.130

Isotope	Mass Excess
^{144}Ce	-80.660±0.150
^{145}Ce	-77.470±0.150
^{146}Ce	-75.930±0.140
^{147}Ce	-72.290±0.130
^{148}Ce	-70.310±0.150
^{149}Ce	-66.190±0.210
^{150}Ce	-63.720±0.290
^{151}Ce	-61.530±1.060
^{152}Ce	-59.490±1.400
^{153}Ce	-55.330±1.840
^{154}Ce	-52.770±2.400
^{155}Ce	-48.060±3.120
^{156}Ce	-45.050±3.840
^{157}Ce	-39.880±4.710
^{115}Pr	-2.320±5.990
^{116}Pr	-7.250±4.560 †
^{121}Pr	-39.020±5.310 †
^{122}Pr	-41.860±3.960 †
^{123}Pr	-46.640±2.960 †
^{124}Pr	-49.200±2.190 †
^{125}Pr	-55.940±1.270
^{126}Pr	-58.130±0.920 †
^{127}Pr	-62.060±0.680
^{128}Pr	-63.660±0.500
^{129}Pr	-67.070±0.370
^{130}Pr	-69.510±0.390
^{131}Pr	-72.220±1.000
^{132}Pr	-73.650±0.640
^{133}Pr	-77.390±0.420
^{134}Pr	-78.600±0.330
^{135}Pr	-81.010±0.260
^{136}Pr	-81.510±0.230
^{137}Pr	-83.500±0.210
^{138}Pr	-83.100±0.230
^{139}Pr	-84.290±0.290
^{140}Pr	-84.230±0.230
^{141}Pr	-84.990±0.150
^{142}Pr	-83.510±0.150
^{143}Pr	-83.260±0.130
^{144}Pr	-80.830±0.160
^{145}Pr	-80.090±0.200
^{146}Pr	-77.250±0.150
^{147}Pr	-76.000±0.130
^{148}Pr	-72.720±0.140
^{149}Pr	-71.090±0.190
^{150}Pr	-67.330±0.280
^{151}Pr	-67.360±0.250
^{152}Pr	-63.910±0.540
^{153}Pr	-62.300±0.730
^{154}Pr	-58.620±0.970
^{155}Pr	-56.610±1.290
^{156}Pr	-52.170±1.980
^{157}Pr	-49.680±2.450
^{158}Pr	-45.110±3.020
^{159}Pr	-41.740±4.050
^{123}Nd	-42.240±6.330
^{124}Nd	-43.600±4.690
^{125}Nd	-44.490±3.490
^{126}Nd	-49.290±2.380
^{127}Nd	-51.800±1.640
^{128}Nd	-56.090±1.150
^{129}Nd	-58.060±0.810
^{130}Nd	-61.810±0.590
^{131}Nd	-65.390±2.030
^{132}Nd	-69.550±1.460
^{133}Nd	-71.300±1.010
^{134}Nd	-75.310±0.690
^{135}Nd	-76.120±0.560
^{136}Nd	-79.100±0.320
^{137}Nd	-79.790±0.230
^{138}Nd	-81.920±0.280
^{139}Nd	-81.610±0.380
^{140}Nd	-84.430±0.280
^{141}Nd	-83.750±0.190

Isotope	Mass Excess
^{142}Nd	-84.730±0.130
^{143}Nd	-83.480±0.130
^{144}Nd	-83.550±0.150
^{145}Nd	-81.440±0.200
^{146}Nd	-81.040±0.160
^{147}Nd	-78.450±0.130
^{148}Nd	-77.450±0.140
^{149}Nd	-74.520±0.150
^{150}Nd	-73.220±0.220
^{151}Nd	-71.220±0.130
^{152}Nd	-70.330±0.140
^{153}Nd	-67.310±0.270
^{154}Nd	-66.030±0.380
^{155}Nd	-62.740±0.510
^{156}Nd	-60.990±0.800
^{157}Nd	-57.080±1.250
^{158}Nd	-55.010±1.560
^{159}Nd	-50.710±2.120
^{160}Nd	-45.690±2.950
^{161}Nd	-41.100±3.580
^{162}Nd	-38.350±4.700
^{125}Pm	-34.050±6.090 †
^{126}Pm	-36.080±4.840 †
^{128}Pm	-44.220±2.340 †
^{129}Pm	-48.960±1.680
^{130}Pm	-51.360±1.230
^{131}Pm	-56.550±3.790
^{132}Pm	-59.630±2.890
^{133}Pm	-64.220±2.160
^{134}Pm	-66.360±1.570
^{135}Pm	-69.820±1.010
^{136}Pm	-71.460±0.680
^{137}Pm	-74.720±0.420
^{138}Pm	-75.670±0.310
^{139}Pm	-77.990±0.410
^{140}Pm	-79.430±0.280
^{141}Pm	-81.260±0.190
^{142}Pm	-80.840±0.140
^{143}Pm	-82.060±0.120
^{144}Pm	-81.060±0.130
^{145}Pm	-81.450±0.140
^{146}Pm	-79.710±0.140
^{147}Pm	-79.570±0.130
^{148}Pm	-77.230±0.140
^{149}Pm	-76.490±0.190
^{150}Pm	-73.910±0.180
^{151}Pm	-73.680±0.100
^{152}Pm	-71.390±0.090
^{153}Pm	-70.800±0.080
^{154}Pm	-68.120±0.140
^{155}Pm	-67.140±0.190
^{156}Pm	-64.140±0.310
^{157}Pm	-62.760±0.500
^{158}Pm	-59.280±0.780
^{159}Pm	-57.490±1.080
^{160}Pm	-51.570±1.470
^{161}Pm	-49.230±1.950
^{162}Pm	-44.940±2.580
^{163}Pm	-42.370±3.390
^{164}Pm	-37.960±4.430
^{127}Sm	-29.190±6.630 ‡
^{128}Sm	-34.700±4.590 ‡
^{129}Sm	-38.080±3.240
^{130}Sm	-43.270±2.350
^{133}Sm	-51.140±4.510 †
^{134}Sm	-58.050±3.270
^{135}Sm	-61.600±2.400
^{136}Sm	-66.110±1.650
^{137}Sm	-68.160±1.110
^{138}Sm	-71.760±0.740
^{139}Sm	-73.010±0.550
^{140}Sm	-77.130±0.330
^{141}Sm	-77.540±0.240
^{142}Sm	-79.600±0.190

Isotope	Mass Excess
^{143}Sm	-79.420±0.170
^{144}Sm	-80.870±0.170
^{145}Sm	-80.100±0.190
^{146}Sm	-80.860±0.160
^{147}Sm	-79.380±0.150
^{148}Sm	-79.500±0.160
^{149}Sm	-77.420±0.200
^{150}Sm	-76.930±0.270
^{151}Sm	-74.980±0.110
^{152}Sm	-74.950±0.090
^{153}Sm	-72.900±0.090
^{154}Sm	-72.560±0.080
^{155}Sm	-70.180±0.100
^{156}Sm	-69.480±0.120
^{157}Sm	-66.760±0.190
^{158}Sm	-65.700±0.300
^{159}Sm	-62.580±0.490
^{160}Sm	-59.700±0.280
^{161}Sm	-56.010±0.720
^{162}Sm	-53.920±0.970
^{163}Sm	-49.810±1.300
^{164}Sm	-47.330±1.720
^{165}Sm	-42.890±2.270
^{166}Sm	-40.620±3.590
^{167}Sm	-36.060±4.440
^{135}Eu	-52.740±4.310
^{136}Eu	-55.580±3.360
^{137}Eu	-60.290±2.380
^{138}Eu	-62.480±1.690
^{139}Eu	-66.170±1.190
^{140}Eu	-68.090±0.530
^{141}Eu	-71.720±0.350
^{142}Eu	-72.510±0.210
^{143}Eu	-74.940±0.170
^{144}Eu	-75.150±0.160
^{145}Eu	-77.210±0.140
^{146}Eu	-76.720±0.160
^{147}Eu	-77.890±0.130
^{148}Eu	-76.830±0.130
^{149}Eu	-77.360±0.150
^{150}Eu	-75.690±0.180
^{151}Eu	-74.850±0.100
^{152}Eu	-73.450±0.080
^{153}Eu	-73.670±0.070
^{154}Eu	-71.890±0.080
^{155}Eu	-71.840±0.100
^{156}Eu	-69.760±0.080
^{157}Eu	-69.360±0.080
^{158}Eu	-66.960±0.100
^{159}Eu	-66.260±0.130
^{160}Eu	-62.970±0.090
^{161}Eu	-61.500±0.140
^{162}Eu	-58.070±0.350
^{163}Eu	-56.310±0.480
^{164}Eu	-52.540±0.640
^{165}Eu	-50.380±0.860
^{166}Eu	-46.230±1.400
^{167}Eu	-43.910±2.230
^{168}Eu	-39.530±2.770
^{169}Eu	-36.800±3.430
^{170}Eu	-32.410±4.680
^{171}Eu	-22.940±3.750 †
^{172}Eu	-16.850±4.420
^{136}Gd	-47.930±5.820
^{137}Gd	-51.080±4.610
^{138}Gd	-56.050±3.330
^{139}Gd	-58.430±2.450
^{140}Gd	-61.590±1.270
^{141}Gd	-63.880±0.870
^{142}Gd	-67.780±0.570
^{143}Gd	-68.920±0.300
^{144}Gd	-71.720±0.260
^{145}Gd	-72.770±0.230
^{146}Gd	-74.880±0.150

Isotope	Mass Excess
^{147}Gd	-74.710±0.160
^{148}Gd	-76.280±0.140
^{149}Gd	-75.620±0.190
^{150}Gd	-76.550±0.250
^{151}Gd	-73.540±0.130
^{152}Gd	-74.420±0.090
^{153}Gd	-73.270±0.070
^{154}Gd	-73.690±0.080
^{155}Gd	-72.120±0.100
^{156}Gd	-72.370±0.080
^{157}Gd	-70.580±0.080
^{158}Gd	-70.420±0.090
^{159}Gd	-68.280±0.120
^{160}Gd	-68.000±0.060
^{161}Gd	-65.370±0.060
^{162}Gd	-64.310±0.070
^{163}Gd	-61.220±0.160
^{164}Gd	-59.820±0.230
^{165}Gd	-56.430±0.320
^{166}Gd	-54.540±0.530
^{167}Gd	-50.690±0.860
^{168}Gd	-48.540±1.390
^{169}Gd	-44.440±1.730
^{170}Gd	-41.970±2.380
^{171}Gd	-33.870±2.260 †
^{172}Gd	-30.390±2.680
^{173}Gd	-24.590±3.340
^{174}Gd	-20.200±4.140
^{175}Gd	-14.160±4.770
^{138}Tb	-44.050±6.220
^{139}Tb	-49.370±4.520
^{140}Tb	-49.930±2.950 †
^{141}Tb	-54.750±2.120
^{142}Tb	-57.300±1.500
^{143}Tb	-61.460±1.040
^{144}Tb	-62.930±0.500
^{145}Tb	-66.780±0.370
^{146}Tb	-67.670±0.250
^{147}Tb	-70.090±0.170
^{148}Tb	-70.240±0.180
^{149}Tb	-72.210±0.200
^{150}Tb	-71.980±0.270
^{151}Tb	-71.280±0.100
^{152}Tb	-70.600±0.080
^{153}Tb	-71.670±0.070
^{154}Tb	-70.730±0.070
^{155}Tb	-71.370±0.080
^{156}Tb	-70.110±0.070
^{157}Tb	-70.570±0.070
^{158}Tb	-69.030±0.080
^{159}Tb	-69.080±0.090
^{160}Tb	-67.720±0.050
^{161}Tb	-67.500±0.050
^{162}Tb	-65.230±0.040
^{163}Tb	-64.540±0.040
^{164}Tb	-61.820±0.080
^{165}Tb	-60.770±0.110
^{166}Tb	-57.680±0.190
^{167}Tb	-56.160±0.320
^{168}Tb	-52.650±0.530
^{169}Tb	-50.770±0.860
^{170}Tb	-46.950±1.200
^{171}Tb	-42.590±1.270
^{172}Tb	-37.930±1.610
^{173}Tb	-34.740±2.020
^{174}Tb	-29.490±2.520
^{175}Tb	-25.670±3.140
^{176}Tb	-19.930±3.760
^{177}Tb	-15.610±4.490
^{141}Dy	-44.540±5.010
^{142}Dy	-49.530±3.630
^{143}Dy	-52.280±2.620
^{144}Dy	-56.660±1.860
^{145}Dy	-59.320±0.860

Isotope	Mass Excess
^{146}Dy	-62.790±0.540
^{147}Dy	-63.970±0.340
^{148}Dy	-66.700±0.230
^{149}Dy	-67.150±0.230
^{150}Dy	-69.500±0.290
^{151}Dy	-67.970±0.110
^{152}Dy	-69.520±0.090
^{153}Dy	-69.060±0.080
^{154}Dy	-70.330±0.080
^{155}Dy	-69.600±0.090
^{156}Dy	-70.530±0.080
^{157}Dy	-69.470±0.080
^{158}Dy	-70.140±0.090
^{159}Dy	-68.820±0.110
^{160}Dy	-69.760±0.060
^{161}Dy	-68.170±0.050
^{162}Dy	-68.220±0.050
^{163}Dy	-66.270±0.050
^{164}Dy	-65.910±0.050
^{165}Dy	-63.530±0.050
^{166}Dy	-62.780±0.070
^{167}Dy	-60.020±0.110
^{168}Dy	-58.840±0.190
^{169}Dy	-55.680±0.320
^{170}Dy	-54.110±0.530
^{171}Dy	-49.670±0.460
^{172}Dy	-47.240±0.760
^{173}Dy	-43.080±0.970
^{174}Dy	-40.430±1.230
^{175}Dy	-35.780±1.550
^{176}Dy	-32.230±2.150
^{177}Dy	-27.080±2.580
^{178}Dy	-23.390±3.100
^{179}Dy	-17.260±3.940
^{180}Dy	-12.900±3.740
^{181}Dy	-7.210±4.430
^{143}Ho	-46.020±6.580
^{144}Ho	-47.130±4.690
^{145}Ho	-50.730±3.350
^{146}Ho	-52.800±2.140
^{147}Ho	-56.480±1.350
^{148}Ho	-57.930±0.840
^{149}Ho	-60.920±0.530
^{150}Ho	-61.670±0.400
^{151}Ho	-63.200±0.100
^{152}Ho	-63.430±0.090
^{153}Ho	-65.210±0.090
^{154}Ho	-64.960±0.080
^{155}Ho	-66.450±0.080
^{156}Ho	-66.030±0.080
^{157}Ho	-67.170±0.080
^{158}Ho	-66.330±0.090
^{159}Ho	-67.220±0.100
^{160}Ho	-66.660±0.050
^{161}Ho	-67.430±0.050
^{162}Ho	-66.130±0.040
^{163}Ho	-66.500±0.040
^{164}Ho	-64.890±0.040
^{165}Ho	-64.880±0.050
^{166}Ho	-62.820±0.040
^{167}Ho	-62.400±0.040
^{168}Ho	-60.000±0.050
^{169}Ho	-59.170±0.070
^{170}Ho	-56.330±0.090
^{171}Ho	-54.460±0.180
^{172}Ho	-51.070±0.270
^{173}Ho	-49.150±0.450
^{174}Ho	-45.410±0.580
^{175}Ho	-43.230±0.750
^{176}Ho	-38.870±1.050
^{177}Ho	-35.910±1.470
^{178}Ho	-31.260±1.780
^{179}Ho	-27.850±2.280
^{180}Ho	-21.190±2.190
^{181}Ho	-17.710±2.610

Isotope	Mass Excess
^{182}Ho	-12.320±3.290
^{183}Ho	-8.530±4.140
^{184}Ho	-2.840±4.790
^{145}Er	-40.450±6.210
^{146}Er	-45.220±4.860
^{147}Er	-47.640±3.170
^{148}Er	-51.700±2.070
^{149}Er	-53.560±1.340
^{150}Er	-56.980±0.870
^{151}Er	-57.380±0.180
^{152}Er	-59.860±0.120
^{153}Er	-60.300±0.090
^{154}Er	-62.310±0.100
^{155}Er	-62.280±0.120
^{156}Er	-64.060±0.090
^{157}Er	-63.850±0.090
^{158}Er	-65.190±0.100
^{159}Er	-64.540±0.130
^{160}Er	-65.880±0.060
^{161}Er	-65.290±0.050
^{162}Er	-66.340±0.040
^{163}Er	-65.290±0.040
^{164}Er	-65.930±0.050
^{165}Er	-64.640±0.060
^{166}Er	-64.930±0.040
^{167}Er	-63.210±0.040
^{168}Er	-63.120±0.040
^{169}Er	-61.070±0.060
^{170}Er	-60.620±0.070
^{171}Er	-57.500±0.100
^{172}Er	-56.490±0.100
^{173}Er	-53.480±0.150
^{174}Er	-51.970±0.260
^{175}Er	-48.600±0.340
^{176}Er	-46.700±0.490
^{177}Er	-42.790±0.710
^{178}Er	-40.330±1.000
^{179}Er	-35.960±1.300
^{180}Er	-31.410±1.190
^{181}Er	-26.690±1.520
^{182}Er	-23.510±1.940
^{183}Er	-18.440±2.450
^{184}Er	-14.920±3.090
^{185}Er	-9.540±3.730
^{186}Er	-5.700±4.490
^{147}Tm	-37.380±6.950 †
^{148}Tm	-40.100±4.590 †
^{149}Tm	-44.520±3.050
^{150}Tm	-46.780±2.040
^{151}Tm	-50.380±0.520
^{152}Tm	-51.420±0.340
^{153}Tm	-54.150±0.220
^{154}Tm	-54.830±0.150
^{155}Tm	-57.130±0.120
^{156}Tm	-57.400±0.110
^{157}Tm	-59.390±0.100
^{158}Tm	-59.380±0.110
^{159}Tm	-60.940±0.130
^{160}Tm	-60.390±0.080
^{161}Tm	-61.990±0.060
^{162}Tm	-61.630±0.050
^{163}Tm	-62.920±0.040
^{164}Tm	-62.070±0.040
^{165}Tm	-62.920±0.060
^{166}Tm	-61.940±0.050
^{167}Tm	-62.550±0.040
^{168}Tm	-61.160±0.040
^{169}Tm	-61.350±0.050
^{170}Tm	-59.620±0.060
^{171}Tm	-59.110±0.100
^{172}Tm	-56.820±0.080
^{173}Tm	-56.110±0.080
^{174}Tm	-53.440±0.090
^{175}Tm	-52.300±0.150

Isotope	Mass Excess
^{176}Tm	-49.230±0.220
^{177}Tm	-47.690±0.320
^{178}Tm	-44.180±0.470
^{179}Tm	-42.150±0.670
^{180}Tm	-36.700±0.360
^{181}Tm	-34.180±0.670
^{182}Tm	-29.800±0.870
^{183}Tm	-26.930±1.110
^{184}Tm	-22.180±1.420
^{185}Tm	-18.950±2.050
^{186}Tm	-13.870±2.490
^{187}Tm	-10.320±3.000
^{188}Tm	-4.920±3.900
^{149}Yb	-34.050±6.530
^{150}Yb	-38.780±4.380
^{151}Yb	-42.040±1.650
^{152}Yb	-45.470±1.120
^{153}Yb	-46.800±0.750
^{154}Yb	-49.800±0.500
^{155}Yb	-50.740±0.330
^{156}Yb	-53.320±0.180
^{157}Yb	-53.860±0.110
^{158}Yb	-56.070±0.110
^{159}Yb	-56.290±0.130
^{160}Yb	-57.900±0.080
^{161}Yb	-57.870±0.070
^{162}Yb	-59.590±0.060
^{163}Yb	-59.380±0.050
^{164}Yb	-60.870±0.050
^{165}Yb	-60.190±0.040
^{166}Yb	-61.350±0.040
^{167}Yb	-60.580±0.040
^{168}Yb	-61.430±0.040
^{169}Yb	-60.320±0.050
^{170}Yb	-60.750±0.050
^{171}Yb	-59.280±0.090
^{172}Yb	-59.260±0.080
^{173}Yb	-57.280±0.070
^{174}Yb	-56.890±0.080
^{175}Yb	-54.590±0.090
^{176}Yb	-53.740±0.070
^{177}Yb	-51.040±0.090
^{178}Yb	-49.890±0.130
^{179}Yb	-46.820±0.190
^{180}Yb	-43.860±0.120
^{181}Yb	-40.150±0.200
^{182}Yb	-37.960±0.370
^{183}Yb	-33.920±0.490
^{184}Yb	-31.400±0.640
^{185}Yb	-26.940±0.930
^{186}Yb	-24.010±1.360
^{187}Yb	-19.250±1.650
^{188}Yb	-15.980±2.160
^{189}Yb	-10.870±2.820
^{190}Yb	-9.340±4.580
^{152}Lu	-34.370±2.300 †
^{153}Lu	-38.100±1.570 †
^{154}Lu	-39.720±1.070
^{155}Lu	-42.940±0.720
^{156}Lu	-44.210±0.540
^{157}Lu	-47.070±0.290
^{158}Lu	-47.850±0.160
^{159}Lu	-50.290±0.120
^{160}Lu	-50.760±0.070
^{161}Lu	-52.900±0.070
^{162}Lu	-53.080±0.070
^{163}Lu	-54.970±0.070
^{164}Lu	-54.930±0.060
^{165}Lu	-56.590±0.060
^{166}Lu	-56.240±0.050
^{167}Lu	-57.570±0.050
^{168}Lu	-56.990±0.050
^{169}Lu	-58.060±0.050
^{170}Lu	-57.190±0.060

Isotope	Mass Excess
^{171}Lu	-58.010±0.120
^{172}Lu	-56.730±0.080
^{173}Lu	-57.020±0.060
^{174}Lu	-55.300±0.060
^{175}Lu	-55.200±0.090
^{176}Lu	-53.200±0.070
^{177}Lu	-52.720±0.070
^{178}Lu	-50.330±0.080
^{179}Lu	-49.520±0.110
^{180}Lu	-45.920±0.060
^{181}Lu	-44.500±0.070
^{182}Lu	-41.140±0.110
^{183}Lu	-39.300±0.210
^{184}Lu	-35.600±0.270
^{185}Lu	-33.380±0.410
^{186}Lu	-29.270±0.610
^{187}Lu	-26.660±0.890
^{188}Lu	-22.200±1.180
^{189}Lu	-19.250±1.560
^{190}Lu	-15.990±2.460
^{191}Lu	-13.230±3.000
^{192}Lu	-8.760±3.950
^{153}Hf	-28.060±3.170
^{154}Hf	-32.110±2.180
^{155}Hf	-33.900±1.490
^{156}Hf	-37.500±1.140
^{157}Hf	-39.040±0.860
^{158}Hf	-42.190±0.480
^{159}Hf	-43.230±0.270
^{160}Hf	-45.780±0.060
^{161}Hf	-46.670±0.060
^{162}Hf	-49.010±0.070
^{163}Hf	-49.370±0.070
^{164}Hf	-51.410±0.070
^{165}Hf	-51.570±0.070
^{166}Hf	-53.540±0.060
^{167}Hf	-53.360±0.060
^{168}Hf	-54.870±0.060
^{169}Hf	-54.510±0.060
^{170}Hf	-55.820±0.060
^{171}Hf	-55.620±0.120
^{172}Hf	-56.490±0.100
^{173}Hf	-55.440±0.080
^{174}Hf	-55.990±0.070
^{175}Hf	-54.500±0.060
^{176}Hf	-54.700±0.060
^{177}Hf	-52.980±0.060
^{178}Hf	-52.800±0.080
^{179}Hf	-50.680±0.090
^{180}Hf	-49.890±0.060
^{181}Hf	-47.280±0.050
^{182}Hf	-46.180±0.050
^{183}Hf	-43.160±0.060
^{184}Hf	-41.650±0.110
^{185}Hf	-38.250±0.170
^{186}Hf	-36.370±0.260
^{187}Hf	-32.580±0.390
^{188}Hf	-30.300±0.590
^{189}Hf	-26.170±0.780
^{190}Hf	-24.620±1.210
^{191}Hf	-20.690±1.610
^{192}Hf	-18.290±2.140
^{193}Hf	-14.080±2.820
^{194}Hf	-11.400±3.710
^{195}Hf	-6.870±4.620
^{156}Ta	-25.700±2.290 †
^{157}Ta	-29.630±1.760 †
^{158}Ta	-31.480±1.340 †
^{159}Ta	-34.990±0.760
^{160}Ta	-36.150±0.170
^{161}Ta	-39.220±0.110
^{162}Ta	-40.320±0.070
^{163}Ta	-42.920±0.070
^{164}Ta	-43.450±0.090

Isotope	Mass Excess
^{165}Ta	-45.660±0.090
^{166}Ta	-46.130±0.080
^{167}Ta	-48.270±0.070
^{168}Ta	-48.260±0.070
^{169}Ta	-49.930±0.080
^{170}Ta	-49.750±0.080
^{171}Ta	-52.230±0.150
^{172}Ta	-51.670±0.130
^{173}Ta	-52.740±0.110
^{174}Ta	-51.920±0.090
^{175}Ta	-52.700±0.090
^{176}Ta	-51.530±0.080
^{177}Ta	-51.950±0.080
^{178}Ta	-50.480±0.090
^{179}Ta	-50.580±0.110
^{180}Ta	-48.950±0.060
^{181}Ta	-48.560±0.050
^{182}Ta	-46.280±0.040
^{183}Ta	-45.530±0.050
^{184}Ta	-42.850±0.070
^{185}Ta	-41.650±0.040
^{186}Ta	-38.600±0.060
^{187}Ta	-37.050±0.090
^{188}Ta	-33.600±0.130
^{189}Ta	-31.610±0.290
^{190}Ta	-28.310±0.270
^{191}Ta	-26.620±0.590
^{192}Ta	-22.950±0.790
^{193}Ta	-20.820±1.060
^{194}Ta	-16.880±1.400
^{195}Ta	-14.560±2.260
^{196}Ta	-10.290±2.820
^{197}Ta	-7.550±3.500
^{198}Ta	-3.100±4.830
^{157}W	-18.630±3.470 ‡
^{158}W	-22.960±2.670
^{159}W	-25.170±2.060
^{160}W	-28.850±0.540
^{161}W	-30.600±0.360
^{162}W	-33.960±0.240
^{163}W	-35.300±0.160
^{164}W	-38.240±0.070
^{165}W	-38.990±0.100
^{166}W	-41.500±0.090
^{167}W	-42.120±0.080
^{168}W	-44.420±0.080
^{169}W	-44.580±0.090
^{170}W	-46.360±0.100
^{171}W	-47.380±0.200
^{172}W	-49.120±0.170
^{173}W	-48.770±0.150
^{174}W	-50.060±0.130
^{175}W	-49.480±0.110
^{176}W	-50.560±0.090
^{177}W	-49.620±0.080
^{178}W	-50.290±0.080
^{179}W	-49.100±0.090
^{180}W	-49.910±0.080
^{181}W	-48.340±0.050
^{182}W	-48.290±0.040
^{183}W	-46.320±0.040
^{184}W	-45.900±0.050
^{185}W	-43.530±0.040
^{186}W	-42.660±0.040
^{187}W	-39.940±0.050
^{188}W	-38.730±0.070
^{189}W	-35.580±0.080
^{190}W	-34.080±0.120
^{191}W	-31.130±0.150
^{192}W	-29.700±0.290
^{193}W	-26.290±0.400
^{194}W	-24.410±0.540
^{195}W	-20.830±0.860
^{196}W	-18.760±1.380
^{197}W	-14.750±1.730
^{198}W	-12.350±2.400
^{200}W	14.290±5.390 ‡
^{201}W	22.230±6.900
^{162}Re	-22.420±0.750 †
^{163}Re	-26.200±0.520 †
^{164}Re	-27.890±0.350 †
^{165}Re	-31.350±0.110
^{166}Re	-32.410±0.080
^{167}Re	-35.120±0.070
^{168}Re	-35.920±0.070
^{169}Re	-38.390±0.080
^{170}Re	-38.780±0.110
^{171}Re	-41.520±0.260
^{172}Re	-41.850±0.220
^{173}Re	-43.800±0.190
^{174}Re	-43.650±0.180
^{175}Re	-45.130±0.180
^{176}Re	-44.860±0.140
^{177}Re	-46.170±0.120
^{178}Re	-45.450±0.120
^{179}Re	-46.340±0.130
^{180}Re	-45.990±0.070
^{181}Re	-46.660±0.050
^{182}Re	-45.410±0.040
^{183}Re	-45.670±0.040
^{184}Re	-43.990±0.050
^{185}Re	-43.870±0.040
^{186}Re	-41.850±0.040
^{187}Re	-41.310±0.040
^{188}Re	-38.900±0.050
^{189}Re	-37.980±0.050
^{190}Re	-35.270±0.080
^{191}Re	-34.400±0.070
^{192}Re	-31.710±0.090
^{193}Re	-30.540±0.150
^{194}Re	-27.390±0.210
^{195}Re	-25.870±0.330
^{196}Re	-22.540±0.520
^{197}Re	-20.740±0.840
^{198}Re	-17.080±1.180
^{199}Re	-5.230±2.350 †
^{200}Re	0.610±3.050 ‡
^{201}Re	5.330±3.940
^{202}Re	12.220±5.060
^{203}Re	18.730±6.510
^{160}Os	-1.570±4.330
^{164}Os	-19.340±1.040 ‡
^{165}Os	-21.530±0.720
^{166}Os	-25.280±0.410
^{167}Os	-26.840±0.220
^{168}Os	-29.910±0.120
^{169}Os	-30.990±0.070
^{170}Os	-33.680±0.070
^{171}Os	-34.760±0.260
^{172}Os	-37.160±0.250
^{173}Os	-37.670±0.230
^{174}Os	-39.810±0.210
^{175}Os	-39.860±0.220
^{176}Os	-41.650±0.190
^{177}Os	-41.560±0.160
^{178}Os	-43.080±0.150
^{179}Os	-42.550±0.140
^{180}Os	-44.410±0.150
^{181}Os	-43.730±0.110
^{182}Os	-44.630±0.080
^{183}Os	-43.640±0.060
^{184}Os	-44.180±0.050
^{185}Os	-42.820±0.040
^{186}Os	-42.970±0.040
^{187}Os	-41.240±0.050
^{188}Os	-41.010±0.060
^{189}Os	-38.900±0.060
^{190}Os	-38.560±0.090
^{191}Os	-36.430±0.080
^{192}Os	-35.820±0.070
^{193}Os	-33.390±0.070
^{194}Os	-32.480±0.090
^{195}Os	-29.690±0.120
^{196}Os	-28.410±0.190
^{197}Os	-25.350±0.310
^{198}Os	-23.780±0.510
^{199}Os	-16.220±0.690
^{200}Os	-12.880±1.260
^{201}Os	-7.850±1.650
^{202}Os	-4.000±2.160
^{203}Os	2.410±2.810
^{204}Os	7.590±4.190
^{205}Os	14.630±5.140
^{206}Os	20.590±6.280
^{167}Ir	-17.060±0.640 †
^{168}Ir	-18.990±0.360 †
^{169}Ir	-22.340±0.190 †
^{170}Ir	-23.660±0.100 †
^{171}Ir	-27.150±0.110
^{172}Ir	-28.070±0.150
^{173}Ir	-30.640±0.190
^{174}Ir	-31.340±0.210
^{175}Ir	-33.660±0.210
^{176}Ir	-34.020±0.210
^{177}Ir	-35.990±0.200
^{178}Ir	-36.100±0.190
^{179}Ir	-37.810±0.180
^{180}Ir	-37.900±0.250
^{181}Ir	-39.490±0.200
^{182}Ir	-39.060±0.150
^{183}Ir	-40.220±0.110
^{184}Ir	-39.530±0.070
^{185}Ir	-40.380±0.060
^{186}Ir	-39.300±0.040
^{187}Ir	-39.760±0.050
^{188}Ir	-38.350±0.050
^{189}Ir	-38.410±0.060
^{190}Ir	-36.800±0.080
^{191}Ir	-36.950±0.070
^{192}Ir	-35.090±0.060
^{193}Ir	-34.750±0.060
^{194}Ir	-32.580±0.080
^{195}Ir	-32.030±0.060
^{196}Ir	-29.500±0.070
^{197}Ir	-28.480±0.100
^{198}Ir	-25.670±0.140
^{199}Ir	-23.470±0.350
^{200}Ir	-19.710±0.390
^{201}Ir	-17.160±0.660
^{202}Ir	-12.850±0.900
^{203}Ir	-9.470±1.210
^{204}Ir	-4.130±1.790
^{205}Ir	0.100±2.690
^{206}Ir	6.290±3.320
^{207}Ir	11.400±4.430
^{168}Pt	-10.020±0.980 ‡
^{169}Pt	-12.410±0.560
^{170}Pt	-16.100±0.320
^{172}Pt	-21.330±0.160
^{173}Pt	-22.430±0.110
^{174}Pt	-25.170±0.170
^{175}Pt	-26.040±0.200
^{176}Pt	-28.680±0.210
^{177}Pt	-29.230±0.230
^{178}Pt	-31.390±0.230
^{179}Pt	-31.690±0.220
^{180}Pt	-33.710±0.380
^{181}Pt	-33.980±0.320
^{182}Pt	-35.800±0.270
^{183}Pt	-35.560±0.220
^{184}Pt	-36.960±0.160
^{185}Pt	-36.580±0.120
^{186}Pt	-37.710±0.090
^{187}Pt	-36.880±0.070
^{188}Pt	-37.610±0.070
^{189}Pt	-36.510±0.060
^{190}Pt	-37.130±0.100
^{191}Pt	-36.030±0.070
^{192}Pt	-36.450±0.060
^{193}Pt	-34.870±0.060
^{194}Pt	-34.780±0.100
^{195}Pt	-32.980±0.060
^{196}Pt	-32.680±0.060
^{197}Pt	-30.410±0.070
^{198}Pt	-29.640±0.100
^{199}Pt	-27.740±0.190
^{200}Pt	-26.560±0.170
^{201}Pt	-23.420±0.190
^{202}Pt	-21.550±0.350
^{203}Pt	-17.730±0.480
^{204}Pt	-15.170±0.730
^{205}Pt	-10.590±1.130
^{206}Pt	-7.190±1.720
^{207}Pt	-1.770±2.330
^{208}Pt	-9.150±3.880
^{209}Pt	-3.230±5.200
^{210}Pt	1.280±6.940
^{173}Au	-13.360±0.340 †
^{174}Au	-14.640±0.130 †
^{175}Au	-17.480±0.140 †
^{176}Au	-18.700±0.160 †
^{177}Au	-21.530±0.180
^{178}Au	-22.280±0.240
^{179}Au	-24.620±0.260
^{180}Au	-25.250±0.490
^{181}Au	-27.510±0.440
^{182}Au	-27.950±0.390
^{183}Au	-29.970±0.340
^{184}Au	-29.880±0.310
^{185}Au	-31.590±0.250
^{186}Au	-31.440±0.190
^{187}Au	-32.820±0.150
^{188}Au	-32.210±0.110
^{189}Au	-33.250±0.080
^{190}Au	-32.800±0.130
^{191}Au	-33.840±0.090
^{192}Au	-33.030±0.070
^{193}Au	-33.720±0.060
^{194}Au	-32.420±0.070
^{195}Au	-32.700±0.060
^{196}Au	-31.160±0.060
^{197}Au	-31.130±0.060
^{198}Au	-29.120±0.080
^{199}Au	-29.440±0.200
^{200}Au	-27.420±0.150
^{201}Au	-26.760±0.120
^{202}Au	-24.190±0.130
^{203}Au	-22.920±0.210
^{204}Au	-19.720±0.300
^{205}Au	-17.790±0.460
^{206}Au	-13.900±0.720
^{207}Au	-11.230±1.110
^{208}Au	-11.580±0.720
^{209}Au	-8.490±1.770
^{210}Au	-2.850±2.390
^{211}Au	1.370±3.230
^{212}Au	7.380±4.340
^{213}Au	10.000±5.860
^{174}Hg	-6.780±0.640
^{175}Hg	-7.990±0.280
^{176}Hg	-11.290±0.150
^{177}Hg	-12.700±0.110
^{178}Hg	-15.720±0.140
^{179}Hg	-16.670±0.230
^{180}Hg	-20.010±0.320
^{181}Hg	-20.560±0.390
^{182}Hg	-22.840±0.420
^{183}Hg	-23.360±0.410
^{184}Hg	-25.500±0.380
^{185}Hg	-25.730±0.360
^{186}Hg	-27.560±0.310
^{187}Hg	-27.590±0.260
^{188}Hg	-29.180±0.220
^{189}Hg	-28.870±0.170
^{190}Hg	-30.420±0.210
^{191}Hg	-30.290±0.120
^{192}Hg	-31.630±0.080
^{193}Hg	-31.110±0.070
^{194}Hg	-32.080±0.080
^{195}Hg	-31.150±0.070
^{196}Hg	-31.710±0.070
^{197}Hg	-30.440±0.070
^{198}Hg	-30.660±0.090
^{199}Hg	-29.610±0.140
^{200}Hg	-29.620±0.120
^{201}Hg	-27.980±0.100
^{202}Hg	-27.720±0.130
^{203}Hg	-25.600±0.180
^{204}Hg	-24.780±0.110
^{205}Hg	-22.060±0.110
^{206}Hg	-20.660±0.150
^{207}Hg	-17.350±0.230
^{208}Hg	-16.220±0.380
^{209}Hg	-12.000±0.380
^{210}Hg	-9.060±0.790
^{211}Hg	-3.690±1.090
^{212}Hg	0.270±1.510
^{213}Hg	4.530±2.110
^{214}Hg	8.800±3.470
^{215}Hg	14.990±5.750
^{219}Hg	38.530±4.870
^{178}Tl	-4.530±0.280 †
^{179}Tl	-7.750±0.190 †
^{181}Tl	-12.680±0.230 †
^{182}Tl	-13.270±0.360 †
^{183}Tl	-15.630±0.430
^{184}Tl	-16.270±0.440
^{185}Tl	-18.740±0.420
^{186}Tl	-19.110±0.420
^{187}Tl	-21.130±0.380
^{188}Tl	-21.370±0.330
^{189}Tl	-23.260±0.280
^{190}Tl	-23.000±0.490
^{191}Tl	-25.170±0.360
^{192}Tl	-25.350±0.180
^{193}Tl	-26.980±0.100
^{194}Tl	-26.760±0.080
^{195}Tl	-28.100±0.070
^{196}Tl	-27.450±0.070
^{197}Tl	-28.280±0.080
^{198}Tl	-27.290±0.080
^{199}Tl	-27.980±0.190
^{200}Tl	-26.870±0.110
^{201}Tl	-27.230±0.090
^{202}Tl	-25.900±0.100
^{203}Tl	-25.980±0.140
^{204}Tl	-24.240±0.110
^{205}Tl	-23.880±0.110
^{206}Tl	-21.580±0.110
^{207}Tl	-20.620±0.180
^{208}Tl	-16.780±0.270
^{209}Tl	-14.600±0.240
^{210}Tl	-10.510±0.220
^{211}Tl	-7.700±0.340
^{212}Tl	-2.580±0.490
^{213}Tl	0.170±0.750
^{214}Tl	5.500±1.220
^{215}Tl	9.590±2.030
^{216}Tl	15.600±3.400
^{217}Tl	19.650±4.350
^{218}Tl	26.100±6.110
^{219}Tl	30.230±2.350
^{220}Tl	35.590±2.920
^{221}Tl	39.670±4.070
^{222}Tl	45.290±4.870
^{182}Pb	-6.870±0.160
^{183}Pb	-7.400±0.290
^{184}Pb	-9.740±0.420
^{185}Pb	-10.730±0.430
^{186}Pb	-13.330±0.430
^{187}Pb	-13.790±0.470
^{188}Pb	-15.930±0.450
^{189}Pb	-16.490±0.400
^{190}Pb	-17.520±1.130
^{191}Pb	-18.530±0.850
^{192}Pb	-21.010±0.640
^{193}Pb	-21.510±0.310
^{194}Pb	-23.440±0.170
^{195}Pb	-23.590±0.120
^{196}Pb	-25.210±0.090
^{197}Pb	-24.850±0.100
^{198}Pb	-25.950±0.120
^{199}Pb	-24.950±0.180
^{200}Pb	-25.830±0.120
^{201}Pb	-24.970±0.090
^{202}Pb	-25.610±0.090
^{203}Pb	-24.570±0.110
^{204}Pb	-24.950±0.100
^{205}Pb	-23.550±0.090
^{206}Pb	-23.580±0.130
^{207}Pb	-21.640±0.150
^{208}Pb	-19.880±0.180
^{209}Pb	-16.460±0.150
^{210}Pb	-14.350±0.140
^{211}Pb	-10.360±0.140
^{212}Pb	-7.650±0.180
^{213}Pb	-3.200±0.230
^{214}Pb	0.070±0.390
^{215}Pb	5.250±0.670
^{216}Pb	9.180±1.160
^{217}Pb	15.020±2.000
^{218}Pb	19.360±2.880
^{219}Pb	23.410±1.130
^{220}Pb	26.720±1.420
^{221}Pb	31.890±1.980
^{222}Pb	35.680±2.750
^{223}Pb	41.010±3.300
^{224}Pb	45.100±4.230
^{183}Bi	0.760±0.390 †
^{184}Bi	0.540±0.190 †
^{185}Bi	-2.220±0.270 †
^{186}Bi	-3.260±0.340 †
^{187}Bi	-5.950±0.380 †
^{188}Bi	-6.430±0.500 †
^{189}Bi	-8.890±0.480
^{190}Bi	-7.180±2.580 †
^{191}Bi	-10.440±1.950
^{192}Bi	-11.790±1.470
^{193}Bi	-14.590±1.110
^{194}Bi	-15.430±0.540
^{195}Bi	-17.740±0.370
^{196}Bi	-18.190±0.250
^{197}Bi	-20.100±0.170
^{198}Bi	-20.050±0.140
^{199}Bi	-20.620±0.200
^{200}Bi	-20.190±0.140
^{201}Bi	-21.300±0.120
^{202}Bi	-20.680±0.120
^{203}Bi	-21.580±0.130
^{204}Bi	-20.770±0.110
^{205}Bi	-21.440±0.100
^{206}Bi	-20.360±0.130
^{207}Bi	-20.720±0.190
^{208}Bi	-19.400±0.260
^{209}Bi	-17.820±0.190
^{210}Bi	-14.410±0.150

Isotope	Mass Excess
^{211}Bi	-12.340±0.140
^{212}Bi	-8.410±0.160
^{213}Bi	-5.780±0.180
^{214}Bi	-1.330±0.190
^{215}Bi	1.830±0.240
^{216}Bi	6.890±0.390
^{217}Bi	10.690±0.680
^{218}Bi	16.380±1.190
^{219}Bi	17.970±0.480
^{220}Bi	22.480±0.680
^{221}Bi	25.600±0.950
^{222}Bi	30.450±1.330
^{223}Bi	33.930±1.860
^{224}Bi	39.060±2.390
^{225}Bi	42.830±3.080
^{226}Bi	48.320±3.940
^{184}Po	7.170±0.880
^{185}Po	6.310±0.480
^{186}Po	3.650±0.230
^{187}Po	2.640±0.190
^{188}Po	-0.070±0.260
^{189}Po	-0.850±0.360
^{191}Po	-0.760±4.420 ‡
^{192}Po	-4.390±3.350
^{193}Po	-6.090±2.530
^{194}Po	-9.230±1.920
^{195}Po	-10.440±1.310
^{196}Po	-13.080±0.900
^{197}Po	-13.850±0.610
^{198}Po	-16.060±0.420
^{199}Po	-16.030±0.280
^{200}Po	-17.130±0.160
^{201}Po	-16.780±0.130
^{202}Po	-17.980±0.120
^{203}Po	-17.360±0.120
^{204}Po	-18.460±0.120
^{205}Po	-17.800±0.100
^{206}Po	-18.630±0.110
^{207}Po	-17.740±0.130
^{208}Po	-18.210±0.170
^{209}Po	-16.690±0.180
^{210}Po	-15.430±0.130
^{211}Po	-12.380±0.120
^{212}Po	-10.680±0.130
^{213}Po	-7.150±0.160
^{214}Po	-4.860±0.140
^{215}Po	-0.840±0.140
^{216}Po	1.870±0.170
^{217}Po	6.450±0.230
^{218}Po	9.770±0.330
^{219}Po	13.590±0.150
^{220}Po	16.250±0.200
^{221}Po	20.450±0.280
^{222}Po	23.250±0.380
^{223}Po	27.770±0.520
^{224}Po	31.080±1.000
^{225}Po	35.880±1.290
^{226}Po	39.310±1.660
^{227}Po	44.630±2.500
^{228}Po	47.970±2.730
^{229}Po	52.780±3.370
^{230}Po	55.940±4.620
^{193}At	4.010±4.440 †
^{194}At	1.960±3.370 †
^{195}At	-1.550±2.750 †
^{196}At	-3.100±1.890 †
^{197}At	-6.060±1.300
^{198}At	-7.140±0.900
^{199}At	-10.850±0.580
^{200}At	-10.340±0.360
^{201}At	-11.490±0.210
^{202}At	-11.230±0.200
^{203}At	-12.290±0.200
^{204}At	-11.910±0.130
^{205}At	-13.120±0.120
^{206}At	-12.590±0.120
^{207}At	-13.550±0.180
^{208}At	-12.660±0.210
^{209}At	-13.310±0.130
^{210}At	-11.980±0.130
^{211}At	-11.010±0.120
^{212}At	-8.270±0.150
^{213}At	-6.920±0.200
^{214}At	-3.770±0.140
^{215}At	-1.780±0.120
^{216}At	1.830±0.130
^{217}At	4.130±0.180
^{218}At	8.260±0.260
^{219}At	10.680±0.100
^{220}At	14.410±0.090
^{221}At	16.760±0.100
^{222}At	20.660±0.140
^{223}At	23.170±0.190
^{224}At	27.510±0.300
^{225}At	30.490±0.540
^{226}At	34.980±0.710
^{227}At	38.240±1.060
^{228}At	43.300±1.350
^{229}At	46.300±1.680
^{230}At	50.860±2.310
^{231}At	53.930±3.170
^{232}At	58.760±3.770
^{233}At	62.060±4.790
^{195}Rn	8.920±4.780 ‡
^{196}Rn	5.080±3.900
^{197}Rn	3.170±2.690
^{198}Rn	-0.120±1.870
^{199}Rn	-5.150±1.200
^{200}Rn	-6.280±0.830
^{201}Rn	-5.820±0.550
^{202}Rn	-7.010±0.350
^{203}Rn	-6.560±0.290
^{204}Rn	-7.860±0.200
^{205}Rn	-7.550±0.140
^{206}Rn	-8.850±0.150
^{207}Rn	-8.440±0.200
^{208}Rn	-9.520±0.300
^{209}Rn	-8.990±0.200
^{210}Rn	-9.740±0.130
^{211}Rn	-8.560±0.120
^{212}Rn	-7.800±0.140
^{213}Rn	-5.320±0.190
^{214}Rn	-4.400±0.140
^{215}Rn	-1.500±0.120
^{216}Rn	0.240±0.130
^{217}Rn	3.500±0.140
^{218}Rn	5.410±0.210
^{219}Rn	9.110±0.070
^{220}Rn	10.830±0.060
^{221}Rn	14.270±0.060
^{222}Rn	16.340±0.060
^{223}Rn	19.960±0.090
^{224}Rn	22.290±0.110
^{225}Rn	26.340±0.170
^{226}Rn	29.020±0.290
^{227}Rn	33.340±0.440
^{228}Rn	36.550±0.600
^{229}Rn	40.740±0.830
^{230}Rn	43.500±1.150
^{231}Rn	47.880±1.580
^{232}Rn	50.810±2.170
^{233}Rn	55.390±2.770
^{234}Rn	58.530±3.520
^{235}Rn	63.250±4.470
^{199}Fr	4.390±4.690
^{200}Fr	3.450±2.990 †
^{201}Fr	1.460±1.920 †
^{202}Fr	1.430±1.230
^{203}Fr	-0.080±0.780
^{204}Fr	0.150±0.450
^{205}Fr	-1.250±0.260
^{206}Fr	-1.030±0.180
^{207}Fr	-2.420±0.210
^{208}Fr	-2.810±0.310
^{209}Fr	-4.120±0.210
^{210}Fr	-3.590±0.150
^{211}Fr	-4.400±0.120
^{212}Fr	-3.310±0.130
^{213}Fr	-2.710±0.140
^{214}Fr	-0.710±0.130
^{215}Fr	0.050±0.110
^{216}Fr	2.760±0.120
^{217}Fr	4.270±0.180
^{218}Fr	7.220±0.170
^{219}Fr	8.820±0.080
^{220}Fr	11.670±0.070
^{221}Fr	13.120±0.060
^{222}Fr	16.290±0.060
^{223}Fr	18.070±0.060
^{224}Fr	21.510±0.060
^{225}Fr	23.570±0.070
^{226}Fr	27.330±0.090
^{227}Fr	29.730±0.160
^{228}Fr	34.020±0.120
^{229}Fr	36.290±0.240
^{230}Fr	40.270±0.340
^{231}Fr	42.850±0.470
^{232}Fr	47.070±0.650
^{233}Fr	49.760±1.200
^{234}Fr	54.180±1.540
^{235}Fr	57.190±1.960
^{236}Fr	61.670±2.880
^{237}Fr	62.380±3.100
^{238}Fr	66.560±3.780
^{200}Ra	11.020±6.910
^{201}Ra	9.360±4.410
^{202}Ra	7.010±2.860
^{203}Ra	6.370±1.710
^{204}Ra	5.200±1.250
^{205}Ra	5.470±0.780
^{206}Ra	4.130±0.510
^{207}Ra	4.390±0.360
^{208}Ra	0.550±0.340
^{209}Ra	0.810±0.250
^{210}Ra	-0.380±0.200
^{211}Ra	0.210±0.180
^{212}Ra	-0.570±0.180
^{213}Ra	0.500±0.190
^{214}Ra	0.570±0.150
^{215}Ra	2.510±0.140
^{216}Ra	3.180±0.150
^{217}Ra	5.750±0.190
^{218}Ra	7.100±0.260
^{219}Ra	9.500±0.060
^{220}Ra	10.480±0.060
^{221}Ra	13.040±0.050
^{222}Ra	14.220±0.050
^{223}Ra	17.110±0.050
^{224}Ra	18.710±0.050
^{225}Ra	21.870±0.050
^{226}Ra	23.650±0.080
^{227}Ra	27.120±0.120
^{228}Ra	29.420±0.070
^{229}Ra	32.910±0.070
^{230}Ra	34.980±0.110
^{231}Ra	38.740±0.150
^{232}Ra	41.110±0.220
^{233}Ra	45.080±0.370
^{234}Ra	47.620±0.670
^{235}Ra	51.850±0.860
^{236}Ra	54.620±1.270
^{237}Ra	57.860±1.590
^{238}Ra	60.550±1.960
^{239}Ra	64.530±2.640
^{240}Ra	66.880±3.540
^{241}Ra	71.120±4.190
^{202}Ac	17.750±6.470 †
^{203}Ac	12.870±3.340
^{204}Ac	13.520±2.570
^{205}Ac	12.430±1.950
^{206}Ac	12.710±1.260
^{207}Ac	11.420±0.880 †
^{208}Ac	11.930±0.630 †
^{209}Ac	8.460±0.410 †
^{210}Ac	8.540±0.220 †
^{211}Ac	7.120±0.170 †
^{212}Ac	7.420±0.150
^{213}Ac	5.870±0.140
^{214}Ac	6.540±0.160
^{215}Ac	6.250±0.120
^{216}Ac	7.770±0.120
^{217}Ac	7.980±0.130
^{218}Ac	10.060±0.170
^{219}Ac	11.480±0.090
^{220}Ac	13.560±0.060
^{221}Ac	14.270±0.050
^{222}Ac	16.560±0.050
^{223}Ac	17.470±0.090
^{224}Ac	20.170±0.060
^{225}Ac	21.490±0.050
^{226}Ac	24.380±0.070
^{227}Ac	25.890±0.100
^{228}Ac	29.050±0.050
^{229}Ac	30.630±0.050
^{230}Ac	33.870±0.040
^{231}Ac	35.720±0.050
^{232}Ac	39.240±0.080
^{233}Ac	41.360±0.120
^{234}Ac	45.120±0.210
^{235}Ac	47.470±0.370
^{236}Ac	51.460±0.550
^{237}Ac	53.710±0.740
^{238}Ac	57.690±1.000
^{239}Ac	60.180±1.360
^{240}Ac	64.150±1.840
^{241}Ac	66.580±2.470
^{242}Ac	70.600±3.110
^{243}Ac	73.090±3.910
^{244}Ac	76.990±4.900
^{203}Th	19.530±6.270
^{204}Th	18.710±4.930
^{205}Th	19.410±3.850
^{206}Th	18.370±2.980
^{207}Th	18.650±1.920
^{209}Th	18.440±1.160
^{210}Th	14.930±0.790
^{211}Th	14.910±0.400
^{212}Th	13.330±0.320
^{213}Th	12.540±0.290
^{214}Th	10.990±0.170
^{215}Th	11.430±0.160
^{216}Th	10.840±0.140
^{217}Th	12.000±0.180
^{218}Th	11.820±0.220
^{219}Th	14.730±0.110
^{220}Th	14.810±0.080
^{221}Th	16.630±0.060
^{222}Th	17.060±0.050
^{223}Th	19.090±0.090
^{224}Th	19.810±0.060
^{225}Th	22.250±0.050
^{226}Th	23.310±0.060
^{227}Th	25.930±0.070
^{228}Th	26.850±0.070
^{229}Th	29.550±0.060
^{230}Th	30.870±0.050
^{231}Th	33.870±0.050
^{232}Th	35.480±0.050
^{233}Th	38.750±0.050
^{234}Th	40.640±0.070
^{235}Th	44.170±0.110
^{236}Th	46.310±0.210
^{237}Th	50.440±0.120
^{238}Th	52.590±0.320
^{239}Th	56.510±0.440
^{240}Th	59.000±0.600
^{241}Th	63.030±0.810
^{242}Th	65.260±1.420
^{243}Th	69.350±1.800
^{244}Th	71.950±2.260
^{245}Th	75.660±3.240
^{206}Pa	27.320±5.750 †
^{207}Pa	26.310±4.500 †
^{212}Pa	23.000±0.730 †
^{213}Pa	20.060±0.520
^{214}Pa	19.640±0.350
^{215}Pa	17.970±0.230
^{216}Pa	18.240±0.210
^{217}Pa	17.410±0.210
^{218}Pa	18.280±0.270
^{219}Pa	19.320±0.670 †
^{220}Pa	20.480±0.400
^{221}Pa	20.280±0.240
^{222}Pa	21.820±0.140
^{223}Pa	21.980±0.090
^{224}Pa	23.810±0.060
^{225}Pa	24.260±0.060
^{226}Pa	26.430±0.070
^{227}Pa	27.220±0.080
^{228}Pa	28.920±0.050
^{229}Pa	29.680±0.050
^{230}Pa	32.120±0.040
^{231}Pa	33.190±0.040
^{232}Pa	35.940±0.040
^{233}Pa	37.300±0.040
^{234}Pa	40.330±0.040
^{235}Pa	41.990±0.060
^{236}Pa	45.300±0.100
^{237}Pa	47.530±0.070
^{238}Pa	51.110±0.070
^{239}Pa	53.220±0.140
^{240}Pa	57.000±0.200
^{241}Pa	59.380±0.280
^{242}Pa	63.210±0.470
^{243}Pa	65.500±0.820
^{244}Pa	69.540±1.050
^{245}Pa	71.950±1.500
^{246}Pa	78.540±3.260
^{247}Pa	81.620±3.950
^{210}U	34.780±5.290
^{211}U	32.870±3.890
^{212}U	29.520±2.850 ‡
^{213}U	27.870±1.300
^{214}U	25.650±0.880
^{215}U	25.250±0.590
^{216}U	23.540±0.410
^{217}U	23.710±0.350
^{218}U	22.720±0.360
^{219}U	24.870±1.360
^{220}U	24.160±1.070
^{221}U	25.040±0.650
^{222}U	24.560±0.390
^{223}U	25.810±0.240
^{224}U	25.790±0.170
^{225}U	27.340±0.090
^{226}U	27.530±0.070
^{227}U	29.430±0.080
^{228}U	29.150±0.070
^{229}U	31.030±0.050
^{230}U	31.540±0.040
^{231}U	33.710±0.050
^{232}U	34.520±0.070
^{233}U	37.020±0.050
^{234}U	38.140±0.040
^{235}U	40.920±0.050
^{236}U	42.330±0.080
^{237}U	45.560±0.050
^{238}U	47.350±0.040
^{239}U	50.750±0.040
^{240}U	52.720±0.060
^{241}U	56.320±0.090
^{242}U	58.510±0.160
^{243}U	62.230±0.270
^{244}U	64.480±0.470
^{245}U	68.320±0.690
^{246}U	72.400±1.610
^{247}U	76.680±2.130
^{248}U	79.560±2.810
^{249}U	83.970±3.700
^{250}U	86.970±4.860
^{213}Np	35.360±5.210
^{214}Np	34.770±3.440
^{215}Np	32.720±2.270
^{216}Np	32.410±1.500
^{217}Np	30.730±1.000
^{218}Np	30.880±0.720
^{219}Np	31.770±2.700 †
^{220}Np	32.130±2.140
^{221}Np	31.120±1.690
^{222}Np	31.700±1.030
^{223}Np	30.930±0.630
^{224}Np	32.000±0.460
^{225}Np	31.700±0.340
^{226}Np	32.970±0.150
^{227}Np	32.890±0.120
^{228}Np	33.730±0.120
^{229}Np	33.630±0.080
^{230}Np	35.230±0.060
^{231}Np	35.470±0.040
^{232}Np	37.380±0.080
^{233}Np	37.940±0.050
^{234}Np	40.170±0.040
^{235}Np	41.050±0.050
^{236}Np	43.560±0.060
^{237}Np	44.720±0.060
^{238}Np	47.640±0.050
^{239}Np	49.200±0.040
^{240}Np	52.380±0.040
^{241}Np	54.170±0.040
^{242}Np	57.570±0.050
^{243}Np	59.570±0.080
^{244}Np	63.140±0.150
^{245}Np	65.280±0.270
^{246}Np	70.180±0.320
^{247}Np	72.660±0.770
^{248}Np	76.810±1.030
^{249}Np	79.560±1.370
^{250}Np	83.840±1.810
^{251}Np	86.640±2.940
^{252}Np	91.080±3.650
^{253}Np	94.130±4.520
^{215}Pu	41.620±5.120
^{216}Pu	39.370±3.420
^{217}Pu	38.800±2.300
^{218}Pu	36.810±1.560
^{220}Pu	38.360±4.200 ‡
^{221}Pu	38.410±3.330
^{222}Pu	37.110±2.640
^{223}Pu	37.360±1.610
^{224}Pu	36.410±1.200
^{225}Pu	37.200±0.890
^{226}Pu	36.620±0.660
^{227}Pu	37.610±0.280
^{228}Pu	36.430±0.760
^{229}Pu	37.450±0.470

Isotope	Mass Excess
^{230}Pu	37.110±0.290
^{231}Pu	38.450±0.180
^{232}Pu	38.430±0.110
^{233}Pu	40.090±0.060
^{234}Pu	40.390±0.050
^{235}Pu	42.370±0.050
^{236}Pu	42.990±0.060
^{237}Pu	44.910±0.050
^{238}Pu	46.000±0.040
^{239}Pu	48.690±0.040
^{240}Pu	50.030±0.040
^{241}Pu	53.030±0.050
^{242}Pu	54.620±0.040
^{243}Pu	57.820±0.040
^{244}Pu	59.680±0.060
^{245}Pu	63.140±0.090
^{246}Pu	65.740±0.120
^{247}Pu	69.490±0.170
^{248}Pu	71.840±0.370
^{249}Pu	75.830±0.500
^{250}Pu	78.450±0.670
^{251}Pu	82.520±1.090
^{252}Pu	85.200±1.780
^{253}Pu	89.520±2.220
^{254}Pu	92.380±3.080
^{223}Am	45.230±4.100 †
^{224}Am	45.300±3.050 †
^{225}Am	44.030±2.270 †
^{226}Am	44.520±1.690 †
^{227}Am	43.660±1.260
^{228}Am	43.410±1.500
^{229}Am	42.480±1.200
^{230}Am	43.240±0.740
^{231}Am	42.630±0.460
^{232}Am	43.710±0.290
^{233}Am	43.440±0.210
^{234}Am	44.830±0.100
^{235}Am	44.880±0.070
^{236}Am	46.590±0.070
^{237}Am	46.230±0.070
^{238}Am	48.450±0.050
^{239}Am	49.300±0.040
^{240}Am	51.720±0.040
^{241}Am	52.800±0.070
^{242}Am	55.590±0.040
^{243}Am	56.990±0.040
^{244}Am	59.970±0.050
^{245}Am	61.600±0.070
^{246}Am	65.090±0.080
^{247}Am	67.110±0.080
^{248}Am	70.690±0.090
^{249}Am	72.890±0.180
^{250}Am	76.700±0.250
^{251}Am	79.110±0.400
^{252}Am	83.050±0.660
^{253}Am	85.600±1.080
^{254}Am	89.710±1.500
^{225}Cm	51.990±4.150 ‡
^{226}Cm	50.430±3.100
^{227}Cm	50.620±2.320
^{228}Cm	48.530±2.930
^{229}Cm	48.700±2.330
^{230}Cm	47.510±1.860
^{231}Cm	48.040±1.160
^{232}Cm	47.170±0.730
^{233}Cm	47.990±0.550
^{234}Cm	47.470±0.410
^{235}Cm	48.610±0.190
^{236}Cm	48.390±0.120
^{237}Cm	48.900±0.110
^{238}Cm	49.140±0.080
^{239}Cm	51.070±0.060
^{240}Cm	51.660±0.040
^{241}Cm	53.820±0.060

Isotope	Mass Excess
^{242}Cm	54.700±0.040
^{243}Cm	57.220±0.040
^{244}Cm	58.400±0.040
^{245}Cm	61.120±0.050
^{246}Cm	62.570±0.080
^{247}Cm	65.720±0.070
^{248}Cm	67.520±0.060
^{249}Cm	70.910±0.070
^{250}Cm	72.930±0.100
^{251}Cm	76.520±0.150
^{252}Cm	78.760±0.240
^{253}Cm	82.540±0.400
^{254}Cm	84.950±0.650
^{255}Cm	89.090±2.860
^{256}Cm	91.560±3.540
^{257}Cm	95.070±4.900
^{229}Bk	56.070±4.510 †
^{230}Bk	56.000±3.610 †
^{231}Bk	54.570±2.880
^{232}Bk	54.870±1.800
^{233}Bk	53.750±1.350
^{234}Bk	54.320±1.020
^{235}Bk	53.530±0.760
^{236}Bk	54.430±0.340
^{237}Bk	52.750±0.440
^{238}Bk	54.090±0.260
^{239}Bk	54.080±0.160
^{240}Bk	55.740±0.100
^{241}Bk	56.070±0.070
^{242}Bk	58.020±0.050
^{243}Bk	58.630±0.040
^{244}Bk	60.890±0.050
^{245}Bk	61.820±0.060
^{246}Bk	64.040±0.080
^{247}Bk	65.370±0.060
^{248}Bk	68.300±0.050
^{249}Bk	69.900±0.060
^{250}Bk	73.100±0.100
^{251}Bk	74.910±0.060
^{252}Bk	78.330±0.080
^{253}Bk	80.400±0.110
^{254}Bk	84.030±0.160
^{255}Bk	86.670±1.410
^{256}Bk	90.470±1.760
^{257}Bk	92.720±2.440
^{258}Bk	96.340±3.370
^{259}Bk	98.850±4.020
^{232}Cf	60.570±4.430
^{233}Cf	60.610±3.330
^{234}Cf	59.280±2.500
^{235}Cf	59.610±1.880
^{236}Cf	58.590±1.420
^{237}Cf	57.640±0.910
^{238}Cf	57.130±0.720
^{239}Cf	58.210±0.420
^{240}Cf	57.940±0.260
^{241}Cf	59.330±0.160
^{242}Cf	59.450±0.110
^{243}Cf	61.140±0.060
^{244}Cf	61.490±0.050
^{245}Cf	63.500±0.060
^{246}Cf	63.650±0.100
^{247}Cf	66.100±0.070
^{248}Cf	67.210±0.060
^{249}Cf	69.880±0.070
^{250}Cf	71.260±0.100
^{251}Cf	74.250±0.060
^{252}Cf	75.890±0.050
^{253}Cf	79.090±0.070
^{254}Cf	80.990±0.100
^{255}Cf	84.890±0.620
^{256}Cf	86.970±0.870
^{257}Cf	90.550±1.210
^{258}Cf	92.720±1.680

Isotope	Mass Excess
^{259}Cf	96.330±2.320
^{260}Cf	98.620±2.970
^{261}Cf	102.350±3.790
^{262}Cf	104.600±4.830
^{234}Es	68.420±4.510 †
^{235}Es	66.850±3.400 †
^{236}Es	66.940±2.570 †
^{237}Es	63.720±1.870
^{238}Es	64.280±1.470
^{239}Es	63.520±1.160
^{240}Es	64.370±0.690
^{241}Es	63.830±0.410
^{242}Es	65.010±0.300
^{243}Es	64.870±0.220
^{244}Es	66.290±0.110
^{245}Es	66.370±0.090
^{246}Es	67.510±0.150
^{247}Es	68.040±0.100
^{248}Es	70.210±0.070
^{249}Es	71.070±0.050
^{250}Es	73.440±0.060
^{251}Es	74.610±0.060
^{252}Es	77.370±0.050
^{253}Es	78.790±0.040
^{254}Es	81.760±0.070
^{255}Es	84.090±0.080
^{256}Es	87.260±0.240
^{257}Es	89.220±0.330
^{258}Es	92.710±0.470
^{259}Es	94.870±0.660
^{260}Es	98.260±1.290
^{261}Es	100.540±1.650
^{262}Es	104.300±2.120
^{263}Es	106.340±3.140
^{236}Fm	73.400±4.590
^{237}Fm	70.850±3.790
^{238}Fm	69.550±2.990
^{239}Fm	69.900±2.360
^{240}Fm	68.910±1.860
^{241}Fm	69.560±1.100
^{242}Fm	68.820±0.810
^{243}Fm	69.740±0.600
^{244}Fm	69.340±0.440
^{245}Fm	70.520±0.190
^{246}Fm	70.080±0.180
^{247}Fm	71.490±0.110
^{248}Fm	71.660±0.080
^{249}Fm	73.500±0.070
^{250}Fm	74.070±0.070
^{251}Fm	76.220±0.060
^{252}Fm	77.100±0.060
^{253}Fm	79.590±0.060
^{254}Fm	80.780±0.080
^{255}Fm	83.950±0.070
^{256}Fm	85.490±0.050
^{257}Fm	88.540±0.090
^{258}Fm	90.310±0.130
^{259}Fm	93.620±0.190
^{260}Fm	95.560±0.370
^{261}Fm	98.940±0.710
^{262}Fm	101.100±0.920
^{263}Fm	104.650±1.380
^{264}Fm	106.740±2.050
^{239}Md	77.170±4.770 †
^{240}Md	77.370±3.770 †
^{241}Md	76.200±2.970 †
^{242}Md	76.640±2.190
^{243}Md	75.720±1.620
^{244}Md	76.410±1.190
^{245}Md	75.780±0.880
^{246}Md	76.660±0.440
^{247}Md	76.240±0.320
^{248}Md	77.270±0.170
^{249}Md	77.110±0.120

Isotope	Mass Excess
^{250}Md	78.650±0.090
^{251}Md	79.000±0.070
^{252}Md	80.860±0.070
^{253}Md	81.460±0.070
^{254}Md	83.710±0.070
^{255}Md	84.950±0.050
^{256}Md	87.560±0.040
^{257}Md	88.860±0.040
^{258}Md	91.720±0.050
^{259}Md	93.280±0.070
^{260}Md	96.370±0.110
^{261}Md	98.140±0.210
^{262}Md	101.390±0.400
^{263}Md	103.340±0.600
^{264}Md	106.780±0.900
^{265}Md	108.810±1.340
^{241}No	83.840±4.900
^{242}No	82.450±4.100
^{243}No	82.710±3.030
^{244}No	81.570±2.240
^{245}No	82.030±1.660
^{246}No	81.950±1.080
^{247}No	82.390±0.810
^{248}No	81.600±0.610
^{249}No	82.230±0.290
^{250}No	81.690±0.190
^{251}No	83.020±0.140
^{252}No	83.070±0.110
^{253}No	84.590±0.110
^{254}No	84.900±0.100
^{255}No	86.910±0.070
^{256}No	87.760±0.050
^{257}No	90.170±0.040
^{258}No	91.270±0.040
^{259}No	93.920±0.050
^{260}No	95.270±0.060
^{261}No	98.160±0.080
^{262}No	99.740±0.130
^{263}No	102.830±0.230
^{264}No	104.620±0.340
^{265}No	107.920±0.510
^{266}No	109.870±0.750
^{267}No	113.280±1.120
^{244}Lr	90.720±4.160 †
^{245}Lr	89.400±3.080 †
^{248}Lr	90.390±1.500 †
^{249}Lr	89.190±1.130 †
^{250}Lr	89.330±0.530
^{251}Lr	88.580±0.370
^{252}Lr	89.540±0.260
^{253}Lr	89.260±0.190
^{254}Lr	90.380±0.180
^{255}Lr	89.950±0.070
^{256}Lr	91.890±0.050
^{257}Lr	92.540±0.040
^{258}Lr	94.730±0.040
^{259}Lr	95.620±0.060
^{260}Lr	98.050±0.050
^{261}Lr	99.200±0.070
^{262}Lr	101.900±0.100
^{263}Lr	103.310±0.140
^{264}Lr	106.180±0.120
^{265}Lr	107.810±0.150
^{266}Lr	110.980±0.190
^{267}Lr	112.840±0.250
^{250}Rf	96.120±2.070
^{251}Rf	96.050±1.410
^{252}Rf	94.840±0.960
^{253}Rf	95.370±0.660
^{254}Rf	94.710±0.450
^{255}Rf	93.960±0.090
^{256}Rf	94.130±0.070
^{257}Rf	95.860±0.050
^{258}Rf	96.340±0.060

Isotope	Mass Excess
^{259}Rf	98.310±0.090
^{260}Rf	98.990±0.060
^{261}Rf	101.210±0.060
^{262}Rf	102.150±0.080
^{263}Rf	104.610±0.120
^{264}Rf	105.810±0.120
^{265}Rf	108.520±0.120
^{266}Rf	109.950±0.150
^{267}Rf	112.900±0.180
^{253}Ha	102.810±1.430 †
^{254}Ha	102.950±0.980 †
^{255}Ha	98.790±0.220
^{256}Ha	100.140±0.150
^{257}Ha	100.150±0.100
^{258}Ha	101.700±0.070
^{259}Ha	102.070±0.080
^{260}Ha	103.820±0.060
^{261}Ha	104.270±0.060
^{262}Ha	106.280±0.060
^{263}Ha	107.040±0.090
^{264}Ha	109.290±0.100
^{265}Ha	110.250±0.110
^{266}Ha	112.750±0.130
^{267}Ha	113.980±0.150
^{254}Sg	110.030±2.090 ‡
^{255}Sg	103.670±0.960
^{256}Sg	103.630±0.630
^{257}Sg	105.000±0.410
^{258}Sg	104.950±0.270
^{259}Sg	106.400±0.180
^{260}Sg	106.560±0.100
^{261}Sg	108.200±0.060
^{262}Sg	108.500±0.060
^{263}Sg	110.340±0.070
^{264}Sg	110.880±0.080
^{265}Sg	112.950±0.100
^{266}Sg	113.720±0.110
^{267}Sg	116.030±0.130
^{255}Ns	109.630±1.800
^{256}Ns	110.660±1.450
^{257}Ns	110.630±0.950
^{258}Ns	111.940±0.630
^{259}Ns	111.790±0.420
^{260}Ns	113.020±0.310
^{261}Ns	113.070±0.170
^{262}Ns	114.560±0.110
^{263}Ns	114.680±0.090
^{264}Ns	116.300±0.080
^{265}Ns	116.670±0.100
^{266}Ns	118.530±0.120
^{267}Ns	119.100±0.140
^{255}Hs	115.660±3.350
^{256}Hs	115.280±2.700
^{257}Hs	116.330±2.180
^{258}Hs	116.430±1.420
^{259}Hs	117.750±0.940
^{260}Hs	117.380±0.720
^{261}Hs	118.500±0.550
^{262}Hs	118.520±0.290
^{263}Hs	119.890±0.180
^{264}Hs	119.800±0.140
^{265}Hs	121.240±0.110
^{266}Hs	121.480±0.120
^{267}Hs	123.150±0.150
^{257}Mt	122.260±4.050
^{258}Mt	123.420±3.270
^{259}Mt	123.790±2.120 †
^{260}Mt	124.890±1.620
^{261}Mt	124.540±1.240
^{262}Mt	125.620±0.950
^{263}Mt	125.720±0.500
^{264}Mt	126.870±0.360
^{265}Mt	126.670±0.260

Isotope	Mass Excess
^{266}Mt	127.970±0.190
^{267}Mt	128.140±0.160
^{259}110	128.850±4.900
^{260}110	129.010±3.720
^{261}110	130.380±2.840
^{262}110	130.190±2.170
^{263}110	131.350±1.660
^{264}110	131.230±1.160
^{265}110	132.460±0.810
^{266}110	132.260±0.570
^{267}110	133.500±0.410
^{261}111	136.610±4.980 †
^{262}111	138.140±3.790 †
^{263}111	138.030±2.900 †
^{264}111	138.970±2.380 †
^{265}111	138.930±1.660 †
^{266}111	140.160±1.170 †
^{267}111	139.900±0.830 †
^{264}112	144.190±4.150
^{265}112	145.210±3.410
^{266}112	145.360±2.380
^{267}112	146.660±1.680
^{266}113	152.760±4.880 †
^{267}113	153.250±3.390 †