

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| • 223.80 5 | 0.020 7 | ¹⁸⁹ Re(24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| 223.811 7 | 26.0 13 | ¹⁹⁰ Re(3.1 m) | 186.718(48.4), 557.972(28.2), 569.310(25.1) |
| 223.811 7 | 0.56 6 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| • 223.811 7 | 3.74 18 | ¹⁹⁰ Ir(11.78 d) | 186.718(52.4), 605.24(39.9), 518.55(34.0) |
| 223.83 4 | 1.44 8 | ¹⁰² Mo(11.3 m) | 211.66(3.8), 148.19(3.76), 359.9(0.27) |
| 223.85 10 | 0.056 5 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 223.85 10 | 0.96 8 | ²²⁸ Pa(22 h) | 911.205(4.19), 463.005(1.250), 964.770(4.25) |
| 223.9 1 | 64 6 | ¹⁴¹ Gd(24.5 s) | 351.1(89), 574.9(51), 361.2(37) |
| • 223.9 3 | 0.00024 6 | ²³⁰ U(20.8 d) | 72.20(0.60), 154.23(0.125), 230.37(0.122) |
| • 223.97 10 | 0.031 6 | ¹⁹⁴ Au(38.02 h) | 328.455(60), 293.545(10.2), 1468.91(6.3) |
| 224.00 15 | †1.7 7 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| 224.0 4 | †0.8 | ¹⁷¹ Hf(12.1 h) | 122.0(†100), 662.2(†83), 347.18(†47) |
| • 224.02 8 | 0.028 5 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 224.08 6 | 1.02 15 | ⁵⁵ V(6.54 s) | 517.71(73), 880.70(18.1), 921.10(4.6) |
| 224.1 3 | 8.5 4 | ¹⁵⁸ Sm(5.30 m) | 189.4(15.2), 363.6(12.4), 324.5(10.6) |
| • 224.1 1 | 0.0089 8 | ²³¹ Th(25.52 h) | 25.646(14.5), 84.216(6.6), 89.944(0.94) |
| 224.13 16 | 0.198 19 | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 224.16 7 | 0.141 16 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 224.2 2 | 20.1 13 | ¹¹⁸ Pd(1.9 s) | 125.4(34), 125.4(34), 151.6(15.0) |
| 224.2 6 | †1.1 | ¹⁷⁹ Os(6.5 m) | 65.39(†100), 218.6(†17), 32.3(†17) |
| 224.21 7 | 0.17 6 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 224.270 7 | 0.113 21 | ²⁰⁷ Po(5.80 h) | 992.33(59.3), 742.64(28.2), 911.79(16.95) |
| 224.29 6 | 0.0442 22 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| 224.346 4 | 0.30 4 | ¹⁷⁴ Tm(5.4 m) | 366.526(92), 992.128(87), 272.918(86) |
| 224.35 8 | 0.125 11 | ²²⁸ Fr(39 s) | 473.7(10.2), 474.0(7.6), 410.40(6.3) |
| 224.38 10 | †15 7 | ¹⁸² Lu(2.0 m) | 818.4(†100), 720.6(†100), 808.1(†50) |
| 224.4 | 0.36 | ⁹⁶ Y(9.6 s) | 1750.42(89), 915.0(60), 617.1(56) |
| 224.40 20 | †29 3 | ¹⁰⁶ Sn(115 s) | 386.8(†100), 477.5(†62), 253.30(†57) |
| 224.437 10 | 0.40 5 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 224.495 12 | 0.043 11 | ¹⁶³ Tb(19.5 m) | 351.138(26), 389.734(24.3), 494.534(23) |
| 224.5 7 | 0.39 7 | ²⁰¹ Bi(108 m) | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| 224.55 2 | 0.15 5 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 224.6 7 | 0.20 17 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| • 224.6 3 | 0.014 9 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 224.6 3 | †329 33 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| 224.6 2 | †24.0 15 | ¹⁶⁶ W(18.8 s) | 125.8(†310), 172.5(†17.8), 395.9(†17) |
| 224.64 5 | 0.039 | ²²¹ Rn(25 m) | 186.38(21.6), 150.04(4.5), 216.90(2.6) |
| • 224.64 5 | 0.096 9 | ²²⁵ Ac(10.0 d) | 99.91(1.01), 150.04(0.80), 99.63(0.62) |
| 224.68 10 | 0.178 23 | ¹³² Ce(3.51 h) | 182.11(77), 155.37(10.5), 216.83(4.95) |
| 224.7 3 | 0.054 9 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 224.7 2 | 3.4 4 | ¹⁹¹ Hg(50.8 m) | 252.5(57), 420.1(18.6), 578.6(17.6) |
| 224.7 2 | †60 7 | ¹⁹¹ Hg(49 m) | 252.5(†100), 196.3(†65), 240.9(†44) |
| 224.75 6 | 43.9 13 | ⁷⁸ Zn(1.47 s) | 181.68(28.1), 860.30(24.5), 635.56(20.9) |
| 224.8 4 | 32.7 13 | ⁸³ Se(22.3 m) | 356.687(70), 510.17(43), 718.10(15.0) |
| 224.8 3 | 0.13 5 | ¹¹⁹ Ag(2.1 s) | 626.4(13), 366.2(12.1), 399.1(10.9) |
| 224.8 4 | 0.3 1 | ¹⁵⁹ Er(36 m) | 624.5(33), 649.1(23.4), 205.92(9.7) |
| 224.8 3 | >0.12 | ²⁰⁴ Bi(11.22 h) | 899.15(98), 374.72(82), 984.02(59) |
| 224.8 6 | >0.11 | ²⁰⁹ Rn(28.5 m) | 408.32(50.3), 745.78(22.8), 337.45(14.5) |
| 224.81 4 | | ¹⁹³ Hg(3.80 h) | 861.11(†100), 1118.84(†64), 789.21(†36) |
| • 224.85 4 | 0.027 16 | ²⁰⁶ Po(8.8 d) | 1032.26(32.9), 511.36(24.1), 286.410(23.8) |
| 224.86 4 | 0.24 5 | ²³⁷ Am(73.0 m) | 280.23(47.3), 438.4(8.3), 473.5(4.3) |
| • 224.9 4 | †0.05 3 | ¹⁰² Rh(207 d) | 475.070(†47), 628.05(†4.6), 1103.16(†2.99) |
| 224.9 3 | 0.28 4 | ¹⁹⁰ Au(42.8 m) | 295.78(71.0), 301.82(23.4), 597.67(9.4) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|---|--|
| 224.99 3 | 0.59 8 | ¹⁷⁷ W(135 m) | 115.65(50), 426.98(13.2), 1036.4(10.3) |
| 225.0 8 | 0.007 | ¹⁵⁰ Pm(2.68 h) | 333.971(68), 1324.51(17.5), 1165.739(15.8) |
| 225.0 10 | 0.14 14 | ¹⁷² Ta(36.8 m) | 214.02(46), 95.23(17.5), 1109.27(12.4) |
| 225.00 8 | 5.0 5 | ¹⁹⁴ Pb(12.0 m) | 581.82(18.8), 1519.45(16.4), 203.82(16.2) |
| • 225.0 3 | 9.0×10 ⁻⁶ 2 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 225.01 10 | 0.152 20 | ¹⁸³ Hf(1.067 h) | 783.754(66), 73.174(38), 459.069(27) |
| 225.08 12 | 0.123 10 | ¹⁰⁵ Ru(4.44 h) | 724.21(47), 469.37(17.5), 676.36(15.7) |
| 225.1 5 | 0.28 6 | ⁷⁴ Kr(11.50 m) | 89.65(31), 203.0(18.0), 296.67(9.9) |
| 225.1 1 | 0.92 7 | ²⁰⁰ Po(11.5 m) | 671.0(34.0), 617.7(19.7), 434.4(9.3) |
| 225.1 1 | 0.051 5 | ²¹⁰ Rn(2.4 h) | 458.25(1.7), 648.70(0.843), 570.95(0.840) |
| 225.1 1 | †55 4 | ²²⁵ Fr(4.0 m) | 182.3(†100), 31.50(†91), 75.1(†45) |
| 225.12 4 | 0.085 6 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 225.13 5 | 26 | ¹¹⁹ Cs(43.0 s) | 176.05(29.7), 257.9(17.4), 259.4(7) |
| • 225.149 19 | 0.072 10 | ²²⁹ Th(7340 y) | 193.509(4.4), 210.853(2.8), 86.40(2.57) |
| 225.19 18 | 0.43 3 | ¹⁸⁶ Au(10.7 m) | 191.56(62), 298.67(25.4), 764.89(10.5) |
| 225.2 2 | †<0.15 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 225.2 3 | 0.16 4 | ¹⁸⁸ Hg(3.25 m) | 66.7(63), 190.1(4.40), 82.7(2.6) |
| 225.3 | | ¹⁶¹ Er(3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| 225.3 | †4.0 | ²²⁴ Ac(2.9 h) | 156.4(†100), 140.8(†55), 261.6(†28) |
| 225.32 2 | 0.408 12 | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 225.38 7 | 3.02 3 | ¹³⁹ Xe(39.68 s) | 218.59(56), 296.53(21.7), 174.97(11.3) |
| 225.4 3 | 1.5 | ⁶⁷ As(42.5 s) | 122.7(19.2), 120.8(9.3), 243.6(7.8) |
| 225.4 1 | 10 | ¹⁴⁰ Sm(14.82 m) | 225.5(>10), 140.0(5.0), 1138.1(1.8) |
| 225.4 3 | 0.033 13 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 225.4 3 | 1.1 | ¹⁷⁰ Hf(16.01 h) | 164.78(33), 620.7(23), 120.17(19) |
| • 225.417 5 | 1.51×10 ⁻⁵ 5 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| • 225.44 22 | 0.0039 7 | ¹⁴⁵ Eu(5.93 d) | 893.73(66), 653.512(15.0), 1658.53(14.9) |
| • 225.45 20 | 0.0058 9 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 225.469 39 | 0.071 16 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| 225.49 14 | 0.126 15 | ²⁰⁵ Po(1.66 h) | 872.39(37), 1001.21(28.8), 849.83(25.5) |
| 225.5 1 | >10 | ¹⁴⁰ Sm(14.82 m) | 225.4(10), 140.0(5.0), 1138.1(1.8) |
| 225.5 2 | 2.68 18 | ¹⁵² Ho(49.5 s) | 647.2(92), 613.8(88.4), 683.3(88) |
| 225.5 3 | †2.7 | ¹⁷¹ Hf(12.1 h) | 122.0(†100), 662.2(†83), 347.18(†47) |
| 225.5 2 | 0.075 10 | ²⁰⁸ Fr(59.1 s) | 635.8(10), 778.5(6.8), 325.3(5.2) |
| • 225.5 10 | †0.24 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 225.6 1 | 1.57 22 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| 225.65 11 | 2.13 21 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 225.69 4 | 2.9 3 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 225.7 3 | †1.3 | ¹⁴⁹ Ce(5.3 s) | 57.7(†100), 380.0(†33.7), 86.4(†20.2) |
| 225.72 16 | †10.8 22 | ¹⁸⁹ Au(28.7 m) | 713.17(†100), 812.68(†63), 447.65(†55) |
| 225.82 12 | 0.191 6 | ¹⁹² Au(4.94 h) | 316.50791(58.0), 295.95827(22.3), 2236.89(5.6) |
| 225.85 14 | †15.2 | ¹⁵⁹ Yb(1.58 m) | 166.16(†500), 177.12(†159), 390.20(†113) |
| 225.87 14 | 0.091 21 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 225.9 5 | 0.0013 6 | ¹⁶⁶ Tm(7.70 h) | 778.817(18.9), 2052.36(17.2), 184.410(16.1) |
| • 225.901 6 | 0.07 4 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| 225.93 24 | 0.20 6 | ⁶⁶ Ge(2.26 h) | 43.89(28.7), 381.85(28), 272.97(10.4) |
| 225.93 5 | 1.28 9 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| 225.94 3 | 26.8 21 | ¹⁵⁴ Tb(22.7 h) | 247.925(79), 346.643(69), 1419.81(46) |
| 225.945 4 | 0.156 10 | ¹⁹⁹ Pt(30.80 m) | 542.993(15), 493.772(5.59), 317.056(4.95) |
| 225.98 3 | 19.6 10 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 1929.05(13.7), 358.79(13.6) |
| 226.0 3 | 0.017 4 | ¹¹² Ag(3.130 h) | 617.27(43), 1387.67(5.4), 606.49(3.1) |
| 226 | †4.5 | ¹⁷⁵ Os(1.4 m) | 125.0(†100), 181(†10.8), 248(†8.6) |
| 226.0 10 | †12.2 | ²²⁹ U(58 m) | 122.51(†100), 88.43(†88), 198.83(†88) |
| 226.0 5 | 0.036 3 | ²³³ Np(36.2 m) | 312.17(0.7), 298.89(0.44), 546.9(0.280) |

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|------------------------|------------------------|---|---|
| 226.01 4 | 0.215 5 | ¹⁵⁹ Gd(18.479 h) | 363.55(11.4), 58.00(2.15), 348.16(0.234) |
| • 226.01 4 | 3.6×10^{-6} 2 | ¹⁵⁹ Dy(144.4 d) | 58.00(2.22), 348.16(0.00095), 79.45(0.00048) |
| 226.04 5 | 7.0 4 | ¹⁰⁶ In(6.2 m) | 632.66(100), 861.16(92), 997.87(48) |
| 226.1 2 | 0.023 | ²³³ Th(22.3 m) | 86.477(2.7), 29.374(2.5), 459.222(1.4) |
| 226.11 10 | 0.19 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| • 226.19 5 | 3.06 21 | ¹⁸² Re(64.0 h) | 229.3220(26), 67.75001(22.2), 1121.3007(22.0) |
| 226.2 | 0.33 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 226.2 3 | †19 3 | ¹⁹⁸ Tl(1.87 h) | 636.4(†202), 411.8044(†202), 587.2(†185) |
| 226.30 20 | 0.69 14 | ¹⁰² Zr(2.9 s) | 599.60(13.9), 535.30(10.6), 64.50(8.9) |
| 226.3 2 | 0.65 15 | ¹⁰⁵ Mo(35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 226.3 10 | 0.022 9 | ¹²⁹ Sb(4.40 h) | 812.8(43), 914.6(20.0), 544.7(17.9) |
| 226.3 3 | 0.24 5 | ¹⁵¹ Dy(17.9 m) | 386.10(19.4), 49.46(18.0), 546.31(14.3) |
| • 226.3 7 | 0.00025 18 | ¹⁶⁹ Yb(32.026 d) | 63.12077(44.2), 197.95788(35.8), 177.21402(22.16) |
| 226.3 3 | 0.097 22 | ¹⁸⁸ Hg(3.25 m) | 66.7(63), 190.1(4.40), 82.7(2.6) |
| 226.3 1 | 0.10 5 | ²⁴² U(16.8 m) | 67.60(9.6), 55.58(3.90), 585.0(1.92) |
| 226.36 9 | 0.61 7 | ¹²³ Cd(1.82 s) | 1165.86(25.7), 1027.45(22.6), 2102.81(12.5) |
| • 226.378 8 | 0.28 2 | ²³⁹ Np(2.3565 d) | 106.125(27.2), 277.599(14.38), 228.183(10.76) |
| 226.378 8 | 3.30 20 | ²³⁹ Am(11.9 h) | 277.599(15.0), 228.183(11.3), 209.753(3.50) |
| 226.4 2 | †29 3 | ¹¹⁶ Xe(56 s) | 104.5(†100), 310.7(†42), 247.7(†40) |
| 226.5 4 | 0.030 12 | ¹⁴⁰ Xe(13.60 s) | 805.52(20), 1413.66(12.2), 1315.05(8.2) |
| 226.5 5 | †4.4 8 | ¹⁷² W(6.6 m) | 38.9(†100), 423.3(†44), 89.8(†33.0) |
| 226.5 5 | †5.8 13 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 226.50 3 | 4.2 3 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 226.6 3 | 5.2 4 | ¹⁵⁸ Sm(5.30 m) | 189.4(15.2), 363.6(12.4), 324.5(10.6) |
| 226.6 1 | 0.027 | ²²⁷ Ra(42.2 m) | 27.36(16), 300.07(4.6), 302.65(4.3) |
| 226.63 3 | 0.037 8 | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| 226.69 23 | †2.1 3 | ¹⁸¹ Pt(51 s) | 289.29(†100), 111.97(†100), 230.15(†92) |
| 226.7 2 | 1.1 3 | ¹⁰⁵ Mo(35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| • 226.7 3 | 9.0×10^{-6} 2 | ²³³ U(1.592 $\times 10^5$ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 226.746 5 | 6.6 4 | ¹⁸⁴ Ta(8.7 h) | 414.03(72), 252.848(43), 920.932(32.0) |
| • 226.746 5 | 0.018 3 | ¹⁸⁴ Re(38.0 d) | 903.279(37.9), 792.071(37.5), 111.208(17.1) |
| • 226.746 5 | 1.47 4 | ¹⁸⁴ Re(169 d) | 252.848(10.7), 216.548(9.43), 920.932(8.14) |
| 226.8 1 | 0.06 6 | ¹⁰¹ Zr(2.1 s) | 119.3(10.8), 205.6(6.0), 912.2(3.48) |
| 226.8 1 | †17.8 5 | ¹⁵² Pr(3.24 s) | 164.2(†100), 284.9(†81.0), 72.40(†38.9) |
| 226.8 2 | †100 23 | ¹⁵⁵ Tm(21.6 s) | 531.7(†20), 88.1(†17), 1057.2(†13) |
| 226.82 8 | 1.4 | ⁹⁶ Y(9.6 s) | 1750.42(89), 915.0(60), 617.1(56) |
| 226.83 8 | 0.171 25 | ²⁰⁸ Rn(24.35 m) | 426.78(7.07), 251.05(5.02), 350.026(3.34) |
| 226.847 19 | 0.163 5 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 226.918 4 | 68.4 12 | ¹⁵⁵ Dy(9.9 h) | 184.564(3.37), 1089.8(>2.8), 1090.0(>2.8) |
| • 226.991 1 | 0.1483 20 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 227.0 2 | 1 | ¹¹⁵ Rh(0.99 s) | 127.9(64.6), 125.6(33.3), 296.5(17) |
| 227 | | ¹⁶² Tm(24.3 s) | 811.52(6.5), 798.68(5.2), 227.52(5) |
| 227 1 | 0.46 | ¹⁶⁸ Lu(6.7 m) | 198.82(28), 979.22(20), 896.12(15) |
| 227.0 2 | | ¹⁷⁷ Tm(85 s) | 104.5(†11.1), 517.5(†22.2), 44.5(†10) |
| 227.0 10 | 5.8 16 | ²⁴⁷ Am(23.0 m) | 285.0(23) |
| • 227.0 10 | 6.3 11 | ²⁵¹ Cf(898 y) | 176.6(17.7), 285.0(1.4), 61.5(0.56) |
| • 227.083 7 | 0.221 8 | ¹⁸⁸ W(69.4 d) | 290.669(0.402), 63.582(0.109), 207.849(0.0080) |
| 227.106 7 | 0.21 | ¹⁸² Hf(61.5 m) | 942.80(18.8), 799.64(9.4), 114.3152(6.2) |
| 227.135 5 | 0.68 14 | ¹⁵¹ Pr(18.90 s) | 880.19(13), 189.057(11.8), 484.501(11.3) |
| • 227.18 2 | 0.338 23 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 227.2 3 | | ¹³¹ La(59 m) | 108.081(25.0), 417.783(18.0), 365.162(16.9) |
| 227.2 3 | †1.2 6 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 227.25 3 | 5.8 3 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 227.3 2 | 1.5 3 | ¹²⁸ Sb(9.01 h) | 753.82(100), 743.22(100), 314.12(61) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| 227.36 2 | 0.67 6 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 227.4 2 | †595 57 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| 227.4 2 | 0.015 5 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 227.46 15 | >0.21 | ²⁰⁴ Bi(11.22 h) | 899.15(98), 374.72(82), 984.02(59) |
| 227.47 4 | 2.06 11 | ²⁰⁰ Pt(12.5 h) | 76.21(13), 135.90(3.24), 243.71(2.49) |
| 227.481 6 | 0.85 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 227.481 6 | 0.70 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 227.50 20 | 0.113 13 | ⁸³ Y(7.08 m) | 35.50(0.44), 882.1(6.30), 489.90(5.53) |
| 227.5 3 | 1.6 5 | ¹⁵⁹ Eu(18.1 m) | 67.8(19), 78.6(9.1), 95.7(7.0) |
| 227.5 3 | 3.5 4 | ¹⁷⁰ Ho(2.76 m) | 258.2(37.0), 931.3(36.1), 181.6(23.8) |
| 227.5 3 | †5.0 9 | ¹⁹⁸ Tl(1.87 h) | 636.4(†202), 411.8044(†202), 587.2(†185) |
| 227.52 3 | 7 | ¹⁶² Tm(21.70 m) | 102.00(17.5), 798.68(8.4), 900.7(6.5) |
| 227.52 3 | 5 3 | ¹⁶² Tm(24.3 s) | 811.52(6.5), 798.68(5.2), 900.7(4.0) |
| 227.55 16 | 0.012 5 | ¹³⁰ I(12.36 h) | 536.09(99), 668.54(96), 739.48(82) |
| 227.6 2 | †6.4 7 | ¹¹³ Ru(0.80 s) | 263.2(†100), 211.7(†31.0), 337.5(†27.9) |
| 227.62 15 | †4.3 | ¹⁹⁷ Ir(5.8 m) | 469.72(†100), 430.56(†61), 815.92(†45) |
| • 227.65 5 | | ²⁰⁶ Bi(6.243 d) | 803.10(99), 881.01(66.2), 516.18(40.7) |
| • 227.7 4 | 0.020 15 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 227.7 1 | 3.0 3 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| 227.72 10 | 43 | ²¹² Fr(20.0 m) | 1273.8(46), 1185.6(14.1), 138.30(7.7) |
| 227.76 8 | 0.125 12 | ⁹⁰ Kr(32.32 s) | 1118.69(39.0), 121.82(35.5), 539.49(30.8) |
| 227.76 6 | 1.51 4 | ¹³⁸ Cs(33.41 m) | 1435.795(76.3), 462.796(30.7), 1009.78(29.8) |
| 227.8 1 | | ¹⁷² Ir(4.4 s) | 475.0, 378.4 |
| 227.8 1 | †100.0 21 | ¹⁷² Ir(2.0 s) | 378.4(†62.0), 448.4(†40.5), 582.3(†20.2) |
| 227.8 1 | | ¹⁷⁶ Pt(6.33 s) | |
| 227.81 14 | 0.83 21 | ¹⁰⁵ In(5.07 m) | 131.37(41), 260.21(15.7), 604.11(9.2) |
| 227.82 6 | 0.0077 12 | ¹³³ La(3.912 h) | 278.835(2.50), 302.353(1.648), 290.06(1.413) |
| 227.82 30 | 0.20 5 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| • 227.85 7 | 0.050 16 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| • 227.878 3 | 0.22 4 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| • 227.891 10 | 0.1302 21 | ¹²⁵ Sb(2.7582 y) | 427.875(30), 600.600(17.86), 635.954(11.31) |
| 227.9 2 | 6.5 8 | ¹⁹⁴ Tl(32.8 m) | 636.5(99), 428.0(99), 748.9(76) |
| 228.0 2 | †<0.15 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 228.0 2 | 2.99 18 | ¹³⁹ Sm(2.57 m) | 273.7(37), 306.7(28.5), 596.3(8.0) |
| 228 1 | 0.10 | ¹⁴² Gd(70.2 s) | 750.2(11.2), 178.90(11.20), 284.4(6.16) |
| 228.0 6 | †2.5 | ¹⁷⁷ Os(2.8 m) | 84.7(†100), 125.4(†63), 195.8(†61) |
| • 228 | | ²⁰² Pt(44 h) | 244 |
| 228.0 1 | 0.38 | ²²⁷ Ra(42.2 m) | 27.36(16), 300.07(4.6), 302.65(4.3) |
| 228.0 4 | | ²³⁰ Ac(122 s) | 454.95(8), 508.20(5.15), 1243.9(3.50) |
| • 228.0 4 | >0.005 | ²³⁰ Pa(17.4 d) | 951.95(1.65), 918.48(8.2), 454.95(6.27) |
| • 228.0 4 | 0.027 5 | ²⁵² Es(471.7 d) | 52.33(0.55), 64.42(0.274), 418.5(0.220) |
| 228.04 4 | 0.099 18 | ¹⁸³ Os(13.0 h) | 381.768(89.6), 114.463(20.63), 167.844(8.81) |
| • 228.05 15 | 0.0358 22 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 228.06 11 | 0.255 20 | ¹⁶⁴ Lu(3.14 m) | 123.3(34.0), 740.52(12.2), 262.22(10.8) |
| 228.09 4 | 0.0050 20 | ¹⁶³ Tb(19.5 m) | 351.138(26), 389.734(24.3), 494.534(23) |
| • 228.1 1 | 2.0×10 ⁻⁵ 2 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 228.12 3 | 77.3 6 | ¹⁶⁶ Lu(2.65 m) | 337.50(41), 367.95(31.4), 102.38(25.2) |
| 228.12 3 | 15 4 | ¹⁶⁶ Lu(1.41 m) | 102.38(13), 285.07(11.0), 830.06(10.2) |
| 228.12 3 | 4 4 | ¹⁶⁶ Lu(2.12 m) | 1427.18(23.0), 2098.6(16.1), 1256.64(15.2) |
| • 228.16 6 | 88.0 18 | ¹³² Te(3.204 d) | 49.72(15.0), 116.30(1.96), 111.76(1.74) |
| • 228.183 1 | 10.76 18 | ²³⁹ Np(2.3565 d) | 106.125(27.2), 277.599(14.38), 209.753(3.42) |
| 228.183 1 | 11.3 6 | ²³⁹ Am(11.9 h) | 277.599(15.0), 209.753(3.50), 226.378(3.30) |
| • 228.183 1 | 10.6 3 | ²⁴³ Cm(29.1 y) | 277.599(14.0), 209.753(3.29), 285.460(0.728) |
| 228.2 3 | †1.50 20 | ¹⁸² Ir(15 m) | 273.23(†100), 126.79(†77), 236.3(†21.0) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------------|---|--|
| 228.21 7 | 0.0229 8 | $^{166}\text{Tm}(7.70 \text{ h})$ | 778.817(18.9), 2052.36(17.2), 184.410(16.1) |
| 228.22 10 | 0.77 10 | $^{115}\text{Te}(5.8 \text{ m})$ | 723.569(30), 1380.58(23.0), 1326.83(22.7) |
| 228.3 3 | 0.00042 25 | $^{165}\text{Dy}(2.334 \text{ h})$ | 94.700(3.58), 361.68(0.84), 633.415(0.568) |
| 228.34 20 | 0.029 4 | $^{165}\text{Yb}(9.9 \text{ m})$ | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 228.4 1 | 40 | $^{53}\text{Ti}(32.7 \text{ s})$ | 127.6(46), 1675.5(25), 100.8(20.3) |
| 228.4 4 | 1.68 9 | $^{86}\text{Se}(15.3 \text{ s})$ | 2441.1(43.0), 2660.0(21.6), 48.3(15.4) |
| 228.4 4 | 0.19 4 | $^{127}\text{Sn}(2.10 \text{ h})$ | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 228.4 | $\dagger 50 5$ | $^{189}\text{Tl}(1.4 \text{ m})$ | 317.5($\dagger 100$), 215.6($\dagger 90$), 335($\dagger 63$) |
| 228.48 6 | 1.326 14 | $^{144}\text{Ba}(11.5 \text{ s})$ | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| • 228.4838 6 | 37.0 7 | $^{177}\text{Lu}(160.4 \text{ d})$ | 208.3664(57.7), 378.5029(29.7), 418.5391(21.3) |
| 228.5 1 | $\dagger 1.83 17$ | $^{123}\text{La}(17 \text{ s})$ | 92.5($\dagger 100$), 937.3($\dagger 43$), 153.6($\dagger 43$) |
| • 228.5 2 | $1.9 \times 10^{-5} 4$ | $^{228}\text{Th}(1.9131 \text{ y})$ | 84.373(1.266), 215.985(0.263), 131.613(0.1355) |
| 228.56 20 | 0.048 4 | $^{233}\text{Np}(36.2 \text{ m})$ | 312.17(0.7), 298.89(0.44), 546.9(0.280) |
| • 228.56 20 | $\dagger 3.93 \times 10^6 16$ | $^{237}\text{Pu}(45.2 \text{ d})$ | 280.40($\dagger 870000$), 298.89($\dagger 7.85 \times 10^6$), 320.75($\dagger 6.48 \times 10^6$) |
| 228.58 8 | $\dagger 97 10$ | $^{168}\text{Lu}(5.5 \text{ m})$ | 1483.65($\dagger 100$), 111.8($\dagger 68$), 111.79($\dagger 68$) |
| 228.59 6 | 0.38 2 | $^{133}\text{Ce}(4.9 \text{ h})$ | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 228.6 1 | $\dagger 3.3 4$ | $^{225}\text{Fr}(4.0 \text{ m})$ | 182.3($\dagger 100$), 31.50($\dagger 91$), 225.1($\dagger 55$) |
| 228.630 20 | 2.1 14 | $^{106}\text{Rh}(131 \text{ m})$ | 511.842(85), 1045.83(30.4), 717.24(28.9) |
| • 228.630 20 | 2.10 10 | $^{106}\text{Ag}(8.28 \text{ d})$ | 511.842(88), 1045.83(29.6), 717.24(28.9) |
| 228.67 5 | 28.9 12 | $^{75}\text{Zn}(10.2 \text{ s})$ | 432.29(20.2), 155.94(17.2), 606.43(9.0) |
| 228.7 1 | 0.074 20 | $^{75}\text{Kr}(4.3 \text{ m})$ | 132.43(67), 154.66(20.8), 153.15(8.0) |
| 228.70 7 | 6.9 10 | $^{183}\text{Ir}(58 \text{ m})$ | 392.52(10.4), 87.67(5.6), 282.39(4.9) |
| • 228.71 5 | > 0.00039 | $^{169}\text{Yb}(32.026 \text{ d})$ | 63.12077(44.2), 197.95788(35.8), 177.21402(22.16) |
| 228.71 7 | 0.037 7 | $^{246}\text{Am}(25.0 \text{ m})$ | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 228.7346 18 | 0.052 8 | $^{155}\text{Sm}(22.3 \text{ m})$ | 104.3346(74.6), 245.771(3.7), 141.4428(1.98) |
| 228.76 11 | 1.6 4 | $^{181}\text{Os}(105 \text{ m})$ | 238.75(44), 826.77(20), 118.03(12.9) |
| 228.78 20 | $\dagger 2.3$ | $^{197}\text{Ir}(5.8 \text{ m})$ | 469.72($\dagger 100$), 430.56($\dagger 61$), 815.92($\dagger 45$) |
| • 228.785 6 | 0.008 3 | $^{235}\text{U}(7.038 \times 10^8 \text{ y})$ | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| 228.80 6 | 2.52 13 | $^{143}\text{Cs}(1.78 \text{ s})$ | 195.554(13), 232.421(8.32), 306.424(6.80) |
| 228.8 | | $^{238}\text{Pa}(2.3 \text{ m})$ | 1015.3($\dagger < 100$), 1014.6($\dagger < 100$), 635.18($\dagger 88$) |
| 228.9 1 | 0.11 1 | $^{107}\text{Tc}(21.2 \text{ s})$ | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| 228.9 3 | 0.14 5 | $^{159}\text{Tm}(9.13 \text{ m})$ | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 228.9 | 0.08 | $^{185}\text{Ir}(14.4 \text{ h})$ | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 228.951 15 | 0.012 3 | $^{163}\text{Tb}(19.5 \text{ m})$ | 351.138(26), 389.734(24.3), 494.534(23) |
| • 229.00 7 | 0.023 5 | $^{151}\text{Pm}(28.40 \text{ h})$ | 340.08(23), 167.75(8.3), 275.21(6.8) |
| • 229.0 5 | 0.0024 6 | $^{154}\text{Eu}(8.593 \text{ y})$ | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 229 | 0.07 | $^{185}\text{Au}(4.25 \text{ m})$ | 310.6(13), 243.1(6.6), 77.7(6) |
| 229.0 2 | $\dagger 3.0$ | $^{256}\text{Es}(7.6 \text{ h})$ | 861.8($\dagger 100$), 231.1($\dagger 61$), 172.6($\dagger 49$) |
| 229.08 9 | 18 | $^{115}\text{Ag}(20.0 \text{ m})$ | 212.80(4.4), 472.70(4.0), 649.10(3.0) |
| 229.08 9 | $\dagger 100$ | $^{115}\text{Ag}(18.0 \text{ s})$ | 131.52($\dagger 77$), 388.9($\dagger 52$), 360.52($\dagger 16.3$) |
| • 229.080 10 | 0.356 9 | $^{172}\text{Lu}(6.70 \text{ d})$ | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 229.1 3 | 0.102 24 | $^{100}\text{Rh}(20.8 \text{ h})$ | 539.59(78.4), 2376.1(35.3), 1553.4(21) |
| • 229.1 | | $^{185}\text{Os}(93.6 \text{ d})$ | 646.116(78.0), 874.813(6.29), 880.523(5.17) |
| 229.1 3 | 0.15 5 | $^{237}\text{Am}(73.0 \text{ m})$ | 280.23(47.3), 438.4(8.3), 473.5(4.3) |
| 229.17 13 | $\dagger 5.2 10$ | $^{189}\text{Hg}(7.6 \text{ m})$ | 320.99($\dagger 100$), 78.21($\dagger 63$), 565.42($\dagger 48$) |
| 229.2 5 | 0.14 5 | $^{89}\text{Nb}(1.9 \text{ h})$ | 1627.20(3.4), 1833.46(3.16), 3092.7(3.0) |
| 229.2 2 | 0.12 6 | $^{109}\text{Sn}(18.0 \text{ m})$ | 1099.4(30), 649.90(28.0), 1321.3(11.9) |
| 229.2 1 | 23.4 14 | $^{130}\text{Sn}(3.72 \text{ m})$ | 192.5(70), 779.8(59), 70.0(35.5) |
| 229.2 3 | $\dagger 15 4$ | $^{155}\text{Er}(5.3 \text{ m})$ | 110.12($\dagger 100$), 241.5($\dagger 65$), 234.0($\dagger 40.0$) |
| 229.3 3 | 2.29 14 | $^{95}\text{Rh}(5.02 \text{ m})$ | 941.6(72), 1352.0(20.8), 677.6(5.80) |
| • 229.3 2 | 0.036 10 | $^{247}\text{Cm}(1.56 \times 10^7 \text{ y})$ | 402.6(72), 278.0(3.4), 287.4(2.0) |
| • 229.32 2 | 63 3 | $^{147}\text{Gd}(38.06 \text{ h})$ | 396.00(34.3), 929.01(20.2), 370.0(17.2) |
| • 229.3220 6 | 3.630 21 | $^{182}\text{Ta}(114.43 \text{ d})$ | 67.75001(41.2), 1121.3007(34.9), 1221.4066(26.98) |
| 229.3220 6 | 2.5 3 | $^{182}\text{Re}(12.7 \text{ h})$ | 67.75001(38.2), 1121.3007(32), 1221.4066(24.8) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|---|---|
| • 229.3220 6 | 26 | ¹⁸² Re(64.0 h) | 67.75001(22.2), 1121.3007(22.0), 1221.4066(17.4) |
| 229.4 6 | 13 3 | ¹⁷² Ho(25 s) | 133.6(36), 178.0(23), 757.2(18) |
| 229.4 3 | 0.32 8 | ¹⁸⁴ Au(53.0 s) | 162.97(50), 272.98(40), 362.47(17.5) |
| • 229.420 20 | 0.0120 8 | ¹¹⁰ Ag(249.79 d) | 657.7622(94.0), 884.685(72.2), 937.493(34.13) |
| • 229.50 6 | 0.106 9 | ¹²⁸ Ba(2.43 d) | 273.44(15), 374.99(0.309), 359.10(0.096) |
| • 229.50 25 | 0.028 12 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 229.5 1 | 0.56 8 | ²³⁶ Th(37.5 m) | 110.8(4.2), 646.6(0.72), 196.0(0.69) |
| • 229.50 10 | 0.040 | ²⁴⁹ Cf(351 y) | 388.16(66), 333.37(14.6), 252.80(2.50) |
| 229.51 8 | 0.30 14 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 229.566 9 | 0.482 13 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 229.6 7 | 0.08 5 | ⁹⁷ Rb(169.9 ms) | 167.1(26), 585.2(21.0), 600.5(10.6) |
| • 229.6 6 | 0.683 17 | ¹⁷⁵ Hf(70 d) | 343.40(84), 89.36(2.40), 433.0(1.436) |
| 229.60 10 | †100 | ¹⁸⁵ Pt(33.0 m) | 135.3(†80), 197.4(†74), 255.10(†51) |
| 229.6 3 | 0.29 3 | ¹⁸⁸ Hg(3.25 m) | 66.7(63), 190.1(4.40), 82.7(2.6) |
| 229.6 10 | †10.0 16 | ²²⁹ U(58 m) | 122.51(†100), 88.43(†88), 198.83(†88) |
| 229.61 5 | 0.0025 8 | ¹⁷³ Hf(23.6 h) | 123.672(83), 296.974(33.9), 139.634(12.7) |
| 229.65 1 | 0.752 23 | ¹¹⁸ In(4.45 m) | 1229.68(96), 1050.69(81.0), 683.08(54.3) |
| 229.7 5 | 0.46 22 | ⁷⁴ Kr(11.50 m) | 89.65(31), 203.0(18.0), 296.67(9.9) |
| 229.7 6 | 0.09 5 | ¹¹⁷ Ag(72.8 s) | 135.4(23), 337.7(10.3), 157.1(7.9) |
| 229.7 3 | 6.7 4 | ¹⁵⁸ Sm(5.30 m) | 189.4(15.2), 363.6(12.4), 324.5(10.6) |
| 229.7 2 | 0.069 10 | ²²³ Ac(2.10 m) | 98.58(0.891), 191.3(0.58), 83.55(0.57) |
| 229.72 3 | 0.2428 23 | ¹³⁵ I(6.57 h) | 1260.409(28.90), 1131.511(22.74), 1678.027(9.62) |
| 229.78 5 | 0.87 5 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 229.81 9 | 0.070 9 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| 229.90 5 | 0.037 10 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 229.9 | | ¹⁵² Pm(13.8 m) | 200.6, 63.51, 137.08 |
| 229.94 2 | 0.80 6 | ²⁰⁴ Po(3.53 h) | 883.984(29.9), 270.068(27.8), 1016.31(24.1) |
| • 229.94 5 | 0.014 4 | ²³⁷ Np(2.14×10 ⁶ y) | 29.374(15.0), 86.477(12.4), 94.66(0.6) |
| 229.943 5 | 0.0030 8 | ¹⁵⁵ Sm(22.3 m) | 104.3346(74.6), 245.771(3.7), 141.4428(1.98) |
| 230.0 3 | †8.9 5 | ¹¹¹ Rh(11 s) | 275.4(†100.0), 411.8(†9.42), 789.0(†3.8) |
| 230.0 6 | 0.7 | ¹⁵³ Ho(2.0 m) | 295.8(67), 637.0(5.36), 688.5(3.7) |
| 230.0 1 | †2.2 5 | ¹⁶⁹ Ta(4.9 m) | 511.0(†20.6), 28.80(†18.3), 192.4(†8) |
| 230 20 | | ²⁰¹ Pt(2.5 m) | 1760, 150, 70 |
| 230 1 | 0.0030 10 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| • 230 1 | 0.0017 9 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| • 230.01 20 | 0.0033 7 | ¹⁴⁵ Eu(5.93 d) | 893.73(66), 653.512(15.0), 1658.53(14.9) |
| 230.1 2 | 0.28 11 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 230.1 5 | 0.020 11 | ¹⁷⁹ W(6.40 m) | 238.61(0.218), 281.70(0.186), 222.5(0.057) |
| • 230.11 2 | 6.2×10 ⁻⁵ 10 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 230.12 7 | 0.31 3 | ²⁰⁵ At(26.2 m) | 719.30(31), 669.41(8.6), 628.88(5.6) |
| 230.12 7 | 0.00061 10 | ²⁰⁹ Rn(28.5 m) | 143.166(0.0102), 154.198(0.0073), 384.61(0.0024) |
| 230.15 12 | †92 14 | ¹⁸¹ Pt(51 s) | 289.29(†100), 111.97(†100), 243.11(†61) |
| 230.15 4 | 0.348 15 | ¹⁸³ Os(9.9 h) | 1101.94(49.0), 1107.92(22.36), 1034.85(6.02) |
| 230.20 20 | 0.29 4 | ⁸⁴ Br(31.80 m) | 881.610(42), 1897.761(14.7), 3927.5(6.8) |
| 230.2 1 | †53 4 | ¹⁵³ Ho(9.3 m) | 108.7(†100), 365.9(†92), 161.5(†83) |
| • 230.2 1 | 0.0018 8 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 230.26 5 | 0.132 11 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| 230.29 2 | 0.220 11 | ⁵⁷ Mn(87.2 s) | 122.0614(13.9), 14.41300(10.56), 692.03(5.50) |
| • 230.29 2 | 0.0004 4 | ⁵⁷ Co(271.79 d) | 122.0614(85.60), 136.4743(10.68), 14.41300(9.16) |
| 230.3 2 | 0.0234 25 | ¹¹¹ Pd(23.4 m) | 580.00(0.8), 70.44(0.78), 1459.0(0.56) |
| 230.3 | | ¹⁶⁵ Dy(1.257 m) | 515.467(1.53), 361.68(0.534), 153.803(0.242) |
| • 230.3 3 | | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 230.33 9 | 0.54 4 | ⁸⁷ Br(55.60 s) | 1419.71(22.0), 1476.04(7.9), 1577.60(6.0) |
| 230.37 17 | 0.20 18 | ¹⁴⁸ Ba(0.607 s) | 56.08(29.20), 133.53(3.88), 415.78(3.59) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| • 230.37 5 | 27 | ²²⁶ Ac(29 h) | 158.18(17.5), 72.20(0.56), 574.8(0.070) |
| • 230.37 5 | 0.122 6 | ²³⁰ U(20.8 d) | 72.20(0.60), 154.23(0.125), 158.18(0.070) |
| 230.4 3 | †0.35 5 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 230.4 | | ¹³¹ La(59 m) | 108.081(25.0), 417.783(18.0), 365.162(16.9) |
| 230.4 8 | >0.11 | ²⁰⁹ Rn(28.5 m) | 408.32(50.3), 745.78(22.8), 337.45(14.5) |
| 230.43 5 | †2 | ¹³¹ Ce(10.3 m) | 169.42(†100), 414.25(†68), 119.18(†44) |
| 230.43 5 | †100 5 | ¹³¹ Ce(5.0 m) | 436.85(†7.3), 462.9(†6.9), 568.95(†4.7) |
| 230.49 20 | 0.13 | ¹¹³ Pd(93 s) | 95.74(3.3), 643.7(3.0), 739.63(2.4) |
| 230.5 1 | 1.28 13 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| 230.5 | | ¹⁶⁸ Hf(25.95 m) | 183.8(†100), 157.2(†68), 324.1 |
| 230.50 7 | 0.54 6 | ¹⁹³ Au(17.65 h) | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| 230.557 8 | 0.012 3 | ¹⁸⁴ Ta(8.7 h) | 414.03(72), 252.848(43), 920.932(32.0) |
| • 230.557 8 | 0.0151 25 | ¹⁸⁴ Re(38.0 d) | 903.279(37.9), 792.071(37.5), 111.208(17.1) |
| • 230.557 8 | 0.0051 8 | ¹⁸⁴ Re(169 d) | 252.848(10.7), 216.548(9.43), 920.932(8.14) |
| 230.6 6 | 0.023 7 | ⁷² Ga(14.10 h) | 834.01(96), 2201.69(25.9), 629.95(24.8) |
| 230.6 2 | 1.5 3 | ¹⁵¹ Er(23.5 s) | 638.3(36), 667.2(17), 256.4(15.9) |
| 230.62 5 | 1.7 | ⁷⁹ Ge(19.1 s) | 109.58(21), 1505.85(9.2), 100.48(2.70) |
| 230.62 5 | 61 | ⁷⁹ Ge(39.0 s) | 542.27(32.6), 755(18), 634.00(13) |
| • 230.628 13 | 0.0801 12 | ¹⁶⁰ Tb(72.3 d) | 879.383(30.01), 298.580(25.51), 966.171(25.21) |
| • 230.65 5 | 0.253 15 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 230.65 8 | 2.21 21 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 230.66 10 | | ¹¹⁸ Ag(2.0 s) | 487.77(57), 677.13(53), 1058.39(14.8) |
| 230.7 3 | 1.47 20 | ⁶⁹ Ni(11.4 s) | 1871.1(40.9), 679.7(39.7), 1213.0(39.3) |
| 230.76 9 | 0.036 3 | ¹³⁹ Cs(9.27 m) | 1283.23(8.3), 627.24(1.78), 1420.66(0.91) |
| 230.8 3 | 0.70 4 | ¹⁷⁵ Ta(10.5 h) | 207.4(14.0), 348.5(12.0), 266.9(10.8) |
| 230.82 3 | 6.3 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 230.88 8 | 0.0265 22 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 230.9 2 | 0.019 6 | ¹³³ Te(12.5 m) | 312.072(62), 407.63(27.1), 1333.21(10.67) |
| 230.90 13 | 0.52 6 | ¹⁵¹ Dy(17.9 m) | 386.10(19.4), 49.46(18.0), 546.31(14.3) |
| 230.9 2 | †100 10 | ²⁰⁴ Fr(1 s) | |
| 230.9 5 | | ²²³ Rn(23.2 m) | 591.8(†100), 635.2(†76), 416.0(†55) |
| • 230.9 4 | 0.024 5 | ²⁵² Es(471.7 d) | 52.33(0.55), 64.42(0.274), 418.5(0.220) |
| 230.92 10 | †100 | ¹⁵⁷ Yb(38.6 s) | 340.7(†90), 241.7(†74), 353.94(†57) |
| 230.95 5 | 0.278 17 | ¹²¹ I(2.12 h) | 212.189(84), 532.08(6.07), 598.74(1.47) |
| 231.0 | >0.0043 | ⁸³ As(13.4 s) | 734.60(43), 1113.10(14.7), 2076.70(11.9) |
| 231.0 3 | | ¹²² Ba(1.95 m) | 550.7, 388.7, 65.8 |
| 231.0 10 | 0.12 6 | ¹³⁸ Pr(2.12 h) | 1037.8(101), 788.742(100), 302.7(80) |
| 231.10 5 | 0.93 19 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 231.1 2 | †3.5 10 | ¹⁵⁹ Yb(1.58 m) | 166.16(†500), 177.12(†159), 390.20(†113) |
| 231.1 3 | | ²⁰⁷ Hg(2.9 m) | 351.059(77), 997.1(69), 1637.1(30) |
| 231.1 2 | †61 | ²⁵⁶ Es(7.6 h) | 861.8(†100), 172.6(†49), 1092.9(†47) |
| • 231.15 20 | 0.0058 7 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 231.2 8 | 2.68 4 | ⁹⁰ Tc(49.2 s) | 1054.3(100), 948.1(100), 944.7(36.6) |
| 231.2 4 | †0.8 4 | ¹⁰⁵ Nb(2.95 s) | 94.8(†100), 246.9(†79), 309.9(†41.9) |
| 231.2 4 | 0.10 5 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 231.2 1 | 0.063 6 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| 231.2 3 | | ²⁰⁷ Hg(2.9 m) | 351.059(77), 997.1(69), 1637.1(30) |
| 231.3 4 | †8 2 | ¹³⁴ Pr(17 m) | 1964.1(†100), 1904.3(†100), 1579.9(†100) |
| 231.3 3 | †6.0 15 | ¹⁸⁹ Au(28.7 m) | 713.17(†100), 812.68(†63), 447.65(†55) |
| • 231.3 2 | 0.0022 11 | ²²⁵ Ac(10.0 d) | 99.91(1.01), 150.04(0.80), 99.63(0.62) |
| • 231.326 19 | 0.209 7 | ¹⁶⁶ Ho(1.20×10 ³ y) | 184.410(72.6), 810.276(58.08), 711.683(55.32) |
| 231.4 1 | 0.10 | ⁴³ Ar(5.37 m) | 975.0(34), 738.1(15), 1439.5(13) |
| 231.42 10 | 0.026 4 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| • 231.4255 250.062 5 | | ⁷⁷ Br(57.036 h) | 238.996(23), 520.639(22.4), 297.215(4.16) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| • 231.440 20 | 0.74 1 | ¹¹⁵ Cd(53.46 h) | 336.240(45.9), 527.900(27.45), 492.3(8.03) |
| • 231.440 20 | 0.00088 6 | ¹¹⁵ Cd(44.6 d) | 933.8(2.000), 1290.580(0.890), 484.470(0.290) |
| 231.5 | | ¹⁶¹ Er(3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| 231.54 9 | 0.325 12 | ⁸³ Se(70.1 s) | 1030.86(21.2), 356.687(18), 987.96(16.1) |
| • 231.550 2 | 2.05 4 | ¹⁴³ Ce(33.039 h) | 293.266(42.80), 57.356(11.7), 664.571(5.69) |
| 231.6 1 | 10.74 23 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 231.6 2 | 0.33 7 | ¹⁴⁸ Ce(56 s) | 269.519(17.0), 291.724(16.7), 121.169(13.2) |
| 231.6 2 | †30 4 | ¹⁸¹ Ir(4.90 m) | 107.64(†100), 1639.6(†52), 318.9(†46) |
| 231.611 10 | 12.12 25 | ¹⁴² Ba(10.6 m) | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| 231.67 1 | 84 6 | ⁸⁵ Y(2.68 h) | 504.45(60), 913.93(9.0), 409.5(0.84) |
| 231.67 1 | 22.8 14 | ⁸⁵ Y(4.86 h) | 2123.8(5.0), 767.40(3.6), 535.61(3.46) |
| 231.7 3 | 0.90 12 | ¹²⁶ Ba(100 m) | 233.6(19.6), 257.6(7.6), 241.0(6.0) |
| 231.70 10 | 0.0030 | ²³⁹ U(23.45 m) | 74.664(48), 43.533(4.14), 662.24(0.18) |
| 231.73 21 | 0.58 4 | ¹⁸⁶ Au(10.7 m) | 191.56(62), 298.67(25.4), 764.89(10.5) |
| 231.8 6 | †100 | ¹¹⁹ Xe(5.8 m) | 98.5(†95), 461.5(†91), 207.8(†60) |
| 231.8 | | ¹³¹ La(59 m) | 108.081(25.0), 417.783(18.0), 365.162(16.9) |
| 231.8 3 | 0.070 7 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 231.85 23 | 0.101 19 | ¹⁰³ Tc(54.2 s) | 346.380(17.5), 136.079(16.6), 562.90(7.0) |
| 231.85 10 | 0.100 14 | ²⁰¹ Pb(9.33 h) | 331.19(79), 361.27(9.9), 945.96(7.4) |
| 231.9 2 | 0.17 3 | ¹⁰¹ Sr(118 ms) | 128.34(18.0), 1124.82(10.9), 510.73(8.5) |
| 231.9 2 | †0.41 21 | ¹⁹⁴ Bi(92 s) | 965.4(†100.0), 575.1(†98.0), 280.1(†73.7) |
| 231.92 2 | 0.36 4 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 232.0 2 | 4.90 20 | ¹¹⁴ Pd(2.42 m) | 126.7(4.49), 358.5(1.63), 136.7(0.90) |
| 232.0 6 | | ¹⁹² Hg(4.85 h) | 274.8(50.4), 157.2(7), 306.5(5.4) |
| 232.06 5 | 0.34 5 | ²⁰² Bi(1.72 h) | 960.67(99), 422.18(83.7), 657.49(60.6) |
| 232.08 1 | 2.04 4 | ¹⁴⁵ Ce(3.01 m) | 724.33(59), 62.54(13.33), 1148.03(9.15) |
| 232.08 3 | 4.4 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 232.1 2 | †11.9 15 | ¹⁰¹ Y(448 ms) | 98.3(†100), 133.8(†18.8), 661.8(†11.3) |
| 232.1 10 | 0.301 9 | ¹²⁹ Sb(4.40 h) | 812.8(43), 914.6(20.0), 544.7(17.9) |
| • 232.101 3 | 0.0238 10 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 232.101 3 | 0.47 4 | ¹⁵⁴ Tb(9.4 h) | 123.071(30), 247.925(22.1), 540.18(20) |
| 232.101 3 | | ¹⁵⁴ Tb(21.5 h) | 123.071(26), 1274.436(10.5), 2187.10(9.9) |
| 232.101 3 | | ¹⁵⁴ Tb(22.7 h) | 247.925(79), 346.643(69), 1419.81(46) |
| 232.12 6 | 0.198 18 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| • 232.18 15 | 0.0032 4 | ¹³¹ I(8.02070 d) | 364.489(81.7), 636.989(7.17), 284.305(6.14) |
| 232.18 6 | 0.54 6 | ¹⁹³ Au(17.65 h) | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| 232.2 4 | 0.85 8 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 232.2 1 | 0.27 | ²²⁷ Ra(42.2 m) | 27.36(16), 300.07(4.6), 302.65(4.3) |
| 232.21 3 | 0.175 21 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 232.3 3 | †6.1 6 | ¹¹³ Ru(0.80 s) | 263.2(†100), 211.7(†31.0), 337.5(†27.9) |
| • 232.3 1 | 0.121 15 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 232.37 8 | 0.084 9 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| 232.37 20 | 0.21 3 | ¹⁰⁷ Rh(21.7 m) | 302.77(66), 392.47(8.8), 312.21(4.8) |
| 232.38 15 | 0.0149 15 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| 232.4 2 | †4.9 4 | ¹⁰¹ Nb(7.1 s) | 276.10(†100), 157.466(†32), 13.5(†32) |
| 232.4 2 | 0.070 16 | ¹⁴⁰ Xe(13.60 s) | 805.52(20), 1413.66(12.2), 1315.05(8.2) |
| 232.421 16 | 8.32 25 | ¹⁴³ Cs(1.78 s) | 195.554(13), 306.424(6.80), 660.06(4.79) |
| • 232.43 2 | 1.04 9 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| • 232.437 1 | 0.0173 20 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 232.5 3 | 0.081 9 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 232.5 3 | | ¹²² Ba(1.95 m) | 550.7, 388.7, 231.0 |
| 232.5 2 | 0.78 17 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| 232.54 20 | 0.16 5 | ²⁰⁵ At(26.2 m) | 719.30(31), 669.41(8.6), 628.88(5.6) |
| • 232.61 | <0.0002 | ¹³⁴ Cs(2.062 y) | 604.699(97.56), 795.845(85.44), 569.315(15.43) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|---|---|
| 232.61 8 | 0.243 13 | ¹⁶⁵ Yb(9.9 m) | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 232.69 2 | 11 | ⁶⁹ As(15.2 m) | 145.95(4.96), 86.78(3.44), 287.18(1.420) |
| 232.7 3 | 0.055 12 | ⁷⁶ Kr(14.8 h) | 315.7(39), 270.2(21.1), 45.48(19.5) |
| 232.7 | †8 | ¹⁰¹ Rb(32 ms) | 271.2(†100), 251.6(†31), 1091.8(†25) |
| 232.7 1 | | ¹²⁵ La(76 s) | 67.6(34), 43.6(3.5), 985.2 |
| • 232.70 25 | 0.028 12 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| • 232.7 2 | 0.015 4 | ²⁴⁵ Cm(8500 y) | 174.94(10), 132.99(2.77), 41.95(0.350) |
| 232.7 2 | †3.0 | ²⁵⁶ Es(7.6 h) | 861.8(†100), 231.1(†61), 172.6(†49) |
| 232.72 12 | 8.5×10 ⁻⁶ 15 | ⁹⁹ Tc(6.01 h) | 322.41(0.000097), 89.65 |
| • 232.72 12 | 0.43 7 | ⁹⁹ Rh(16.1 d) | 528.24(33), 353.05(30.0), 89.65(29.0) |
| 232.72 12 | 0.089 22 | ⁹⁹ Rh(4.7 h) | 340.71(70), 617.8(12.0), 1261.2(11) |
| 232.73 5 | 0.090 7 | ²⁰⁰ Pt(12.5 h) | 76.21(13), 135.90(3.24), 243.71(2.49) |
| • 232.75 2 | 0.080 13 | ²⁴⁶ Pu(10.84 d) | 43.81(25.0), 223.75(23.5), 179.94(9.7) |
| 232.8 2 | 0.10 3 | ⁹⁷ Rb(169.9 ms) | 167.1(26), 585.2(21.0), 600.5(10.6) |
| 232.8 3 | †1.8 | ¹⁴⁹ Ce(5.3 s) | 57.7(†100), 380.0(†33.7), 86.4(†20.2) |
| • 232.81 5 | †4.6×10 ⁻⁴ 3 | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| 232.87 3 | 0.56 4 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 232.9 1 | †14.3 12 | ¹⁰⁵ Nb(2.95 s) | 94.8(†100), 246.9(†79), 309.9(†41.9) |
| 232.9 | 0.6 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 232.92 13 | 0.037 10 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| • 232.94 7 | 0.088 20 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 232.94 3 | 0.020 7 | ¹⁶³ Tb(19.5 m) | 351.138(26), 389.734(24.3), 494.534(23) |
| 233.0 2 | 3.1 10 | ¹¹⁸ Pd(1.9 s) | 125.4(34), 125.4(34), 224.2(20.1) |
| 233.0 | | ¹³⁸ Nd(5.04 h) | 325.76(2.84), 199.50(0.53), 341.65(0.40) |
| 233.0 2 | 2.1 3 | ¹⁹⁴ Tl(32.8 m) | 636.5(99), 428.0(99), 748.9(76) |
| • 233 2 | 0.008 1 | ²⁵⁴ Es(275.7 d) | 63.0(2.0), 316(0.15), 304(0.07) |
| 233.221 18 | | ¹³³ I(20.8 h) | 529.872(87.0), 875.329(4.51), 1298.223(2.35) |
| 233.25 4 | 0.38 3 | ²²⁸ Fr(39 s) | 473.7(10.2), 474.0(7.6), 410.40(6.3) |
| • 233.280 13 | 0.103 3 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 233.30 11 | 0.291 9 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 233.3 2 | †1.3 | ¹⁴⁴ Gd(4.5 m) | 333.3(†100), 2432.6(†94.8), 629.5(†32.4) |
| 233.3 1 | 0.524 15 | ²¹⁰ Rn(2.4 h) | 458.25(1.7), 648.70(0.843), 570.95(0.840) |
| 233.35 10 | †17 1 | ¹⁶³ Hf(40.0 s) | 70.98(†100), 62.14(†64), 45.39(†48) |
| 233.36 15 | 0.307 20 | ²⁰⁸ Tl(3.053 m) | 2614.533(99), 583.191(84.5), 510.77(22.6) |
| 233.37 8 | 2.8 2 | ¹⁷⁴ W(31 m) | 35.42(14.1), 428.83(12.7), 328.68(9.5) |
| 233.376 5 | 0.09 | ¹⁷⁴ Tm(5.4 m) | 366.526(92), 992.128(87), 272.918(86) |
| 233.38 12 | †100 20 | ¹⁸⁷ Hg(1.9 m) | 376.34(†38), 240.26(†33), 103.55(†32) |
| 233.395 12 | 0.16 3 | ⁷⁴ Ga(8.12 m) | 595.847(91), 2353.46(44.5), 608.353(14.3) |
| 233.4 3 | 1.45 16 | ¹⁷¹ Re(15.2 s) | 568.4(16.1), 102.0(9.7), 1066.0(8.1) |
| 233.4 | | ¹⁸² Hg(10.83 s) | 129.3(†100), 217.7(†75), 413.5(†53) |
| 233.45 22 | 0.0108 25 | ¹³⁹ Cs(9.27 m) | 1283.23(8.3), 627.24(1.78), 1420.66(0.91) |
| • 233.46 20 | 0.34 9 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| • 233.469 3 | 0.029 5 | ²³⁵ U(7.038×10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| • 233.5 4 | †0.08 1 | ¹³⁶ Cs(13.16 d) | 818.514(†100), 1048.073(†80), 340.547(†42.3) |
| 233.5 1 | 0.060 5 | ¹⁴³ Ba(14.33 s) | 211.475(25), 798.79(15.6), 980.45(11.55) |
| • 233.54 3 | 0.071 3 | ¹⁸⁹ Re(24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| • 233.54 3 | 0.300 12 | ¹⁸⁹ Ir(13.2 d) | 245.09(6), 69.537(3.5), 59.053(1.20) |
| 233.55 9 | 3.1 3 | ²⁰⁶ At(30.0 m) | 700.66(98), 477.10(86), 395.54(48) |
| 233.56 10 | 1.29 16 | ¹³⁵ Nd(12.4 m) | 204.02(52), 41.43(23), 441.2(14.9) |
| 233.58 5 | 0.13 3 | ²⁰⁷ At(1.80 h) | 814.41(44.5), 588.33(19.2), 300.654(12.8) |
| 233.6 | | ²⁶ Ne(197 ms) | 151.1, 82.5 |
| 233.6 1 | 19.6 10 | ¹²⁶ Ba(100 m) | 257.6(7.6), 241.0(6.0), 681.8(4.4) |
| 233.6 3 | 29.57 11 | ¹³⁷ Pm(2.4 m) | 177.5(40.29), 108.6(35), 286.0(16.06) |
| 233.6 1 | 0.96 6 | ²⁰⁹ At(5.41 h) | 545.0(91), 781.9(83.5), 790.2(63.5) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|-----------------------|----------------------------|---|
| 233.6 2 | | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 233.6 2 | | ²³⁴ Pa(1.17 m) | 1001.03(†837000), 766.38(†294000), 742.81(†80000) |
| • 233.6 2 | | ²³⁴ Np(4.4 d) | 1558.31(18.72), 1527.21(11.2), 1601.80(9.1) |
| • 233.6 2 | | ²³⁸ Pu(87.74 y) | 43.498(0.0395), 99.853(0.00735), 152.720(0.000937) |
| 233.6 3 | 0.45 4 | ²⁵¹ Cm(16.8 m) | 542.7(10.9), 530.0(1.62), 389.7(1.28) |
| • 233.6 3 | | ²⁵⁵ Es(39.8 d) | 269.1, 35.7 |
| 233.6 3 | 0.00026 5 | ²⁵⁵ Fm(20.07 h) | 81.477(0.81), 58.477(0.67), 80.92(0.27) |
| • 233.605 12 | 0.553 11 | ¹⁷³ Lu(1.37 y) | 272.105(21.2), 78.63(11.87), 100.724(5.24) |
| 233.61 10 | 1.8 6 | ¹⁸¹ Os(105 m) | 238.75(44), 826.77(20), 118.03(12.9) |
| 233.7 1 | 6.5 5 | ⁷¹ Br(21.4 s) | 260.5(8.0), 171.6(6.2), 122.72(5.1) |
| 233.7 1 | 0.274 15 | ¹⁰¹ Tc(14.22 m) | 306.85(88), 545.06(6.0), 127.23(2.86) |
| • 233.7 1 | †0.23 3 | ¹⁰¹ Rh(4.34 d) | 306.85(†115), 545.06(†6.1), 127.23(†0.85) |
| 233.71 5 | 1.0 1 | ¹⁴⁸ Ce(56 s) | 269.519(17.0), 291.724(16.7), 121.169(13.2) |
| 233.77 4 | 0.405 22 | ¹⁰⁰ Sr(202 ms) | 963.85(22.0), 898.50(18.9), 65.46(15.2) |
| 233.8 2 | 0.69 14 | ²⁰⁷ Rn(9.25 m) | 344.53(46), 747.15(14.2), 402.68(11.9) |
| 233.8 4 | †2.5 4 | ²⁴⁴ Bk(4.35 h) | 891.5(†100), 217.6(†88), 921.5(†19) |
| • 233.84 15 | 0.087 22 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| • 233.8608 8 | 5.58 14 | ¹⁷⁷ Lu(160.4 d) | 208.3664(57.7), 228.4838(37.0), 378.5029(29.7) |
| 233.88 10 | 4.3 6 | ⁷⁴ Kr(11.50 m) | 89.65(31), 203.0(18.0), 296.67(9.9) |
| 233.9 3 | 0.36 5 | ¹¹⁷ Cs(8.4 s) | 204.8(15.0), 29.7(9.9), 205.6(6.8) |
| 233.987 8 | 0.79 3 | ¹⁸⁰ Re(2.44 m) | 902.795(90), 103.557(22.2), 825.357(9.9) |
| 234 1 | 0.078 16 | ¹⁰⁰ Rh(20.8 h) | 539.59(78.4), 2376.1(35.3), 1553.4(21) |
| 234.0 5 | †0.4 2 | ¹³⁶ Eu(3.3 s) | 254.9(†100), 431.4(†34), 458.0(†20) |
| 234 1 | 0.021 7 | ¹³⁸ Nd(5.04 h) | 325.76(2.84), 199.50(0.53), 341.65(0.40) |
| 234.0 1 | †40.0 18 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 512.2(†37) |
| 234.02 20 | 0.08 3 | ⁶⁶ Ge(2.26 h) | 43.89(28.7), 381.85(28), 272.97(10.4) |
| 234.1 | >0.026 | ¹⁹⁷ Tl(2.84 h) | 425.84(12.9), 152.22(7.2), 1411.34(4.5) |
| • 234.157 9 | 0.413 10 | ¹⁸⁵ Os(93.6 d) | 646.116(78.0), 874.813(6.29), 880.523(5.17) |
| 234.2 2 | 1.5 7 | ¹⁰³ Zr(1.3 s) | 248(100), 164.05(94), 126.30(84) |
| 234.2 3 | 0.102 11 | ¹²³ Cs(5.94 m) | 97.3(23), 596.7(10.1), 83.3(4.1) |
| 234.2 1 | 0.252 25 | ¹⁴³ Cs(1.78 s) | 195.554(13), 232.421(8.32), 306.424(6.80) |
| 234.2 2 | 0.50 9 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 234.2 2 | 3.1 3 | ¹⁷⁶ Tm(1.9 m) | 189.57(44.5), 1069.3(34), 381.8(21.8) |
| • 234.242 23 | 0.241 12 | ²⁰⁶ Bi(6.243 d) | 803.10(99), 881.01(66.2), 516.18(40.7) |
| 234.3 4 | 0.54 4 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 234.3 6 | 0.030 10 | ¹³² I(2.295 h) | 667.718(99), 772.60(75.6), 954.55(17.6) |
| 234.3 5 | †2.5 13 | ¹³⁴ I(3.69 m) | 884.090(†3.6), 847.025(†3.6) |
| 234.3 3 | 0.154 7 | ²³³ Np(36.2 m) | 312.17(0.7), 298.89(0.44), 546.9(0.280) |
| 234.4 3 | 0.063 13 | ⁸³ Y(7.08 m) | 35.50(0.44), 882.1(6.30), 489.90(5.53) |
| 234.4 2 | 1.32 13 | ¹¹⁹ Cs(43.0 s) | 176.05(29.7), 225.13(26), 257.9(17.4) |
| 234.4 | 0.11 3 | ¹³⁰ La(8.7 m) | 357.4(81.0), 550.7(25.9), 908.0(17.0) |
| 234.4 | 0.08 | ¹⁴⁷ Ce(56.4 s) | 268.80(7), 92.9(4.7), 374.23(3.5) |
| 234.4 | 0.4 3 | ²²⁴ Th(1.05 s) | 178.1(9), 410(0.8), 295.7(0.3) |
| • 234.40 4 | 0.0205 7 | ²³⁷ U(6.75 d) | 59.537(34.5), 208.00(21.14), 26.345(2.43) |
| • 234.40 4 | †7×10 ⁰³ 3 | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| 234.41 15 | 0.106 22 | ¹⁵⁰ Pr(6.19 s) | 130.2(32), 722.5(7.0), 852.7(6.1) |
| 234.44 3 | 2.65 12 | ⁹⁰ Kr(32.32 s) | 1118.69(39.0), 121.82(35.5), 539.49(30.8) |
| 234.45 5 | 0.78 4 | ¹⁶³ Yb(11.05 m) | 860.28(10.1), 63.62(6.5), 123.21(1.98) |
| 234.48 26 | | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 234.5 | 0.9 | ⁸³ Zr(44 s) | 55.55(8), 104.97(5.70), 475.1(5.1) |
| 234.50 8 | †4 1 | ¹¹⁴ Te(15.2 m) | 90.28(†100), 83.8(†67), 1417.6(†32) |
| 234.5 2 | 4.7 3 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 234.5 1 | 0.8 3 | ¹⁴¹ Tb(3.5 s) | 293.3(16.8), 343.6(16.3), 198.4(14.8) |
| 234.5 4 | 0.16 9 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|----------------------------|---|---|
| 234.5 1 | 0.151 13 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| 234.6 3 | 1.1 4 | ¹³⁹ Sm(2.57 m) | 273.7(37), 306.7(28.5), 596.3(8.0) |
| 234.6 3 | 0.057 11 | ¹⁴¹ Eu(40.0 s) | 394.0(9), 384.5(5.6), 382.9(2.97) |
| • 234.60 3 | 0.051 7 | ¹⁹³ Os(30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| 234.6 1 | 0.26 3 | ²⁴⁹ Es(102.2 m) | 379.5(40.4), 813.2(9.2), 375.1(3.3) |
| 234.61 5 | $\dagger 2.14 \times 10^3$ | ²⁴⁹ Ho(12.6 m) | 279.97($\dagger 47600$), 341.16($\dagger 37000$), 193.41($\dagger 15200$) |
| 234.7 3 | 0.13 3 | ⁷⁶ Kr(14.8 h) | 315.7(39), 270.2(21.1), 45.48(19.5) |
| • 234.70 10 | 0.0349 19 | ¹²⁵ Sn(9.64 d) | 1067.10(10), 1089.15(4.59), 822.48(4.28) |
| 234.7 | 0.6 | ¹⁴⁵ La(24.8 s) | 70.0(11), 355.8(3.8), 118.2(3.6) |
| 234.7 1 | 0.020 7 | ²²⁶ Fr(48 s) | 253.73(22.3), 186.05(16.3), 253.9(2.5) |
| • 234.7 1 | 8.4×10^{-6} | ²³⁰ Th(7.538×10^4 y) | 67.67(0.376), 143.87(0.0486), 253.73(0.0111) |
| • 234.789 22 | 0.0650 25 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 234.8 3 | 0.082 8 | ¹¹² Sb(51.4 s) | 1257.05(96), 990.70(14.3), 670.0(3.7) |
| 234.8 2 | $\dagger 19.2$ | ¹⁵⁵ Er(5.3 m) | 110.12($\dagger 100$), 241.5($\dagger 65$), 234.0($\dagger 40.0$) |
| 234.8 2 | $\dagger 0.14$ | ¹⁶⁰ Ho(5.02 h) | 728.18($\dagger 100$), 879.383($\dagger 65.9$), 962.317($\dagger 59.1$) |
| 234.8 2 | 0.064 21 | ¹⁶⁰ Ho(25.6 m) | 728.18(46.9), 879.383(26.6), 962.317(25.6) |
| 234.8 3 | $\dagger 0.24$ | ¹⁸⁸ Au(8.84 m) | 265.63($\dagger 100$), 340.04($\dagger 23.9$), 605.5($\dagger 16.3$) |
| 234.8 2 | 0.45 7 | ¹⁹⁸ Tl(5.3 h) | 411.8044(82), 675.8874(11), 636.4(10.1) |
| 234.8 1 | $\dagger 14.3$ | ²²⁵ Fr(4.0 m) | 182.3($\dagger 100$), 31.50($\dagger 91$), 225.1($\dagger 55$) |
| 234.81 9 | 3.0 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 49.89(2.7) |
| • 234.81 9 | $\dagger 27$ | ²²⁷ Th(18.72 d) | 235.971($\dagger 813$), 50.13($\dagger 528$), 256.25($\dagger 463$) |
| • 234.832 1 | 0.0331 20 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| • 234.90 6 | 0.37 3 | ⁶⁹ Ge(39.05 h) | 1107.01(36), 574.17(13.3), 872.14(11.9) |
| 234.9 5 | 0.14 | ¹⁰¹ Cd(1.2 m) | 98.0(47), 1722.5(11), 1259.3(8) |
| 234.9 | 0.060 14 | ¹⁴¹ Ba(18.27 m) | 190.328(46.0), 304.194(25.4), 276.948(23.4) |
| 234.96 13 | 0.105 14 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 235.0 1 | 0.3 1 | ¹²⁸ Sb(9.01 h) | 753.82(100), 743.22(100), 314.12(61) |
| • 235.0 2 | 0.020 15 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 235.0 1 | 0.17 6 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| • 235.0 | 0.021 | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 235.024 6 | 1.12 13 | ¹⁸⁰ Lu(5.7 m) | 407.94(43.0), 1199.7(24.3), 1106.00(22.7) |
| 235.1 4 | 0.033 16 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 235.11 3 | 0.113 21 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 235.21 9 | 0.095 8 | ¹⁶⁵ Yb(9.9 m) | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 235.3 2 | 0.28 8 | ¹¹⁹ Ag(2.1 s) | 626.4(13), 366.2(12.1), 399.1(10.9) |
| 235.3 4 | 0.27 4 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| • 235.3 1 | 0.043 8 | ²²⁶ Ac(29 h) | 230.37(27), 158.18(17.5), 72.20(0.56) |
| • 235.3 1 | 0.0117 8 | ²³⁰ U(20.8 d) | 72.20(0.60), 154.23(0.125), 230.37(0.122) |
| 235.40 22 | 0.396 16 | ⁸⁶ Y(14.74 h) | 1076.64(83), 627.72(32.6), 1153.01(30.5) |
| 235.4 3 | 0.25 5 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 235.4 3 | $\dagger 100$ | ²³³ Pu(20.9 m) | 534.8($\dagger 90.2$), 500.3($\dagger 38.6$), 688.1($\dagger 33.3$) |
| 235.471 26 | 2.19 19 | ¹³⁴ I(52.6 m) | 847.025(95.4), 884.090(64.9), 1072.547(15.0) |
| • 235.50 12 | 0.42 3 | ¹⁹⁰ Ir(11.78 d) | 186.718(52.4), 605.24(39.9), 518.55(34.0) |
| 235.519 17 | 0.219 18 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| • 235.55 15 | 0.039 4 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 235.58 25 | 0.008 3 | ⁸⁵ Br(2.90 m) | 802.41(2.56), 924.63(1.63), 919.06(0.65) |
| 235.62 6 | 1.05 6 | ¹⁴⁸ Ba(0.607 s) | 56.08(29.20), 133.53(3.88), 415.78(3.59) |
| 235.63 2 | 4.30 13 | ²⁰⁰ Pb(21.5 h) | 147.63(37.7), 257.17(4.46), 268.38(3.96) |
| 235.68 5 | 0.42 8 | ⁷⁷ Zn(2.08 s) | 189.49(28.1), 473.94(19.7), 1832.0(12.4) |
| • 235.69 2 | 0.294 16 | ⁹⁵ Zr(64.02 d) | 756.729(54), 724.199(44.17) |
| 235.7 6 | $\dagger 10$ | ¹¹⁹ Xe(5.8 m) | 231.8($\dagger 100$), 98.5($\dagger 95$), 461.5($\dagger 91$) |
| 235.736 10 | 0.35 10 | ¹⁸² Os(22.10 h) | 510.056(52), 180.230(33.5), 263.285(6.71) |
| • 235.79 4 | 0.057 3 | ²⁰⁵ Bi(15.31 d) | 1764.36(1.368), 703.44(31), 987.62(0.585) |
| 235.9 8 | 4.2 4 | ⁸⁰ Sr(106.3 m) | 589.0(39), 175.4(10.1), 553.4(6.9) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| 235.9 3 | 0.30 3 | ¹¹⁷ Cs(8.4 s) | 204.8(15.0), 29.7(9.9), 205.6(6.8) |
| 235.9 2 | | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 235.9 3 | 0.50 | ¹⁵⁰ Tb(5.8 m) | 638.05(100), 650.4(70), 438.37(42) |
| 235.90 8 | 0.82 7 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 235.9 3 | | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 235.9 3 | †80 40 | ²³⁴ Pa(1.17 m) | 1001.03(†837000), 766.38(†294000), 742.81(†80000) |
| • 235.9 3 | 0.012 2 | ²³⁴ Np(4.4 d) | 1558.31(18.72), 1527.21(11.2), 1601.80(9.1) |
| • 235.9 3 | 1.0×10 ⁻⁸ 5 | ²³⁸ Pu(87.74 y) | 43.498(0.0395), 99.853(0.00735), 152.720(0.000937) |
| 235.91 12 | 0.48 4 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 235.93 2 | 2.472 12 | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| • 235.971 20 | †813 57 | ²²⁷ Th(18.72 d) | 50.13(†528), 256.25(†463), 329.851(†178) |
| • 235.993 18 | 0.0092 6 | ²³¹ Th(25.52 h) | 25.646(14.5), 84.216(6.6), 89.944(0.94) |
| • 235.993 18 | 0.2 | ²³¹ U(4.2 d) | 25.646(12), 84.216(7), 217.940(0.8) |
| 236.0 10 | 0.17 3 | ⁹⁹ Pd(21.4 m) | 136.00(73), 263.60(15.2), 673.38(6.9) |
| • 236.0 6 | 0.010 | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 236.021 5 | 0.07 3 | ¹⁶² Ho(67.0 m) | 185.005(28.6), 1220.0(22.5), 282.864(11.3) |
| 236.075 4 | 0.79 5 | ⁷⁵ Br(96.7 m) | 286.572(88), 141.3147(6.6), 427.883(4.4) |
| 236.10 30 | 0.83 7 | ¹¹⁵ Ag(20.0 m) | 229.08(18), 212.80(4.4), 472.70(4.0) |
| 236.14 3 | 0.122 9 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 236.18 16 | 64 | ¹⁸⁴ Hg(30.6 s) | 156.24(58), 295.11(10.3), 392.42(7.1) |
| 236.19 7 | 0.08 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 236.2 1 | 0.12 | ⁴³ Ar(5.37 m) | 975.0(34), 738.1(15), 1439.5(13) |
| 236.2 2 | 1.9 5 | ¹⁰³ Zr(1.3 s) | 248(100), 164.05(94), 126.30(84) |
| 236.2 4 | 0.50 15 | ¹²¹ Cd(13.5 s) | 324.976(49.5), 1040.26(16.8), 349.937(12.9) |
| • 236.20 7 | 0.095 16 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 236.2 1 | †100 | ¹⁵⁵ Yb(1.75 s) | 174.9(†55), 361.6(†46), 378.0(†26) |
| 236.2 | | ¹⁸² Hg(10.83 s) | 129.3(†100), 217.7(†75), 413.5(†53) |
| 236.249 8 | †0.54 8 | ²²⁵ Fr(4.0 m) | 182.3(†100), 31.50(†91), 225.1(†55) |
| • 236.249 8 | 0.174 9 | ²²⁹ Th(7340 y) | 193.509(4.4), 210.853(2.8), 86.40(2.57) |
| 236.25 3 | 6.2 3 | ¹⁰⁸ Sn(10.30 m) | 396.44(64.3), 272.75(45.5), 669.08(22.6) |
| 236.3 3 | 0.054 9 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 236.3 3 | †4 1 | ¹⁷¹ W(2.38 m) | 184.2(†100), 294.5(†89), 478.7(†83) |
| 236.3 3 | †21.0 20 | ¹⁸² Ir(15 m) | 273.23(†100), 126.79(†77), 912.02(†20.3) |
| 236.3 | 0.12 6 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 236.3 3 | †>0.27 | ²³⁰ Ra(93 m) | 72.0(†100), 63.0(†35.4), 202.8(†27.3) |
| 236.369 12 | 3.41 5 | ¹⁸³ Os(13.0 h) | 381.768(89.6), 114.463(20.63), 167.844(8.81) |
| 236.4 4 | †9 2 | ¹¹² Te(2.0 m) | 372.70(†100), 296.20(†86), 418.9(†57) |
| 236.4 2 | †>0.14 | ¹⁶⁰ Ho(5.02 h) | 728.18(†100), 879.383(†65.9), 962.317(†59.1) |
| • 236.42 21 | 4.6×10 ⁻⁵ 7 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 236.43 3 | 0.512 24 | ¹⁶¹ Er(3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| 236.48 1 | 0.97 6 | ²⁰⁷ At(1.80 h) | 814.41(44.5), 588.33(19.2), 300.654(12.8) |
| 236.48 1 | 0.063 9 | ²¹¹ Rn(14.6 h) | 68.573(0.42), 167.90(0.07) |
| 236.5 5 | †8 | ¹⁷⁷ Os(2.8 m) | 84.7(†100), 125.4(†63), 195.8(†61) |
| 236.59 11 | †28.6 24 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| 236.6 | 0.42 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 236.60 23 | 0.044 4 | ¹⁹⁵ Pb(15.0 m) | 383.64(106.9), 394.21(44), 878.40(24.2) |
| 236.66 10 | 0.55 5 | ²⁰⁸ At(1.63 h) | 686.527(98), 660.040(89), 177.595(48.6) |
| 236.68 10 | 6.0×10 ⁻⁵ 3 | ¹³⁵ La(19.5 h) | 480.51(1.5), 874.51(0.164), 587.83(0.1108) |
| • 236.68 7 | 0.160 18 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 236.7 4 | 0.34 11 | ¹¹³ Rh(2.72 s) | 189.7(17.0), 409.3(15.9), 219.6(3.88) |
| 236.7 1 | 3.0 3 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| 236.7 1 | 6.2 9 | ¹⁴⁰ Gd(15.8 s) | 174.8(76), 749.9(70), 379.0(38) |
| 236.72 17 | 0.21 3 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 236.78 4 | †1.5 5 | ¹⁰¹ Nb(7.1 s) | 276.10(†100), 157.466(†32), 13.5(†32) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|---|---|
| 236.8 2 | $\dagger 1.6 4$ | $^{103}\text{Nb}(1.5 \text{ s})$ | 102.64($\dagger 100$), 641.1($\dagger 55$), 538.5($\dagger 34.0$) |
| 236.8 2 | | $^{146}\text{Dy}(29 \text{ s})$ | 2156.8, 1915.7, 1876.7 |
| • 236.81 7 | 0.19 5 | $^{151}\text{Pm}(28.40 \text{ h})$ | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 236.81 9 | 1.66 25 | $^{183}\text{Ir}(58 \text{ m})$ | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 236.9 5 | 2 1 | $^{105}\text{Mo}(35.6 \text{ s})$ | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 237.0 2 | 0.10 | $^{140}\text{Sm}(14.82 \text{ m})$ | 225.5(>10), 225.4(10), 140.0(5.0) |
| 237.0 | $\dagger 1.2 2$ | $^{178}\text{Ir}(12 \text{ s})$ | 266.1($\dagger 100.0$), 131.6($\dagger 79$), 363.1($\dagger 39.9$) |
| 237.09 13 | 0.73 7 | $^{187}\text{Au}(8.4 \text{ m})$ | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 237.1 5 | 0.40 11 | $^{77}\text{Rb}(3.75 \text{ m})$ | 66.52(57), 178.99(22.2), 393.37(9.7) |
| • 237.11 7 | 0.52 9 | $^{151}\text{Pm}(28.40 \text{ h})$ | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 237.11 7 | 0.24 | $^{183}\text{Os}(9.9 \text{ h})$ | 1101.94(49.0), 1107.92(22.36), 1034.85(6.02) |
| 237.14 4 | 0.302 10 | $^{171}\text{Er}(7.516 \text{ h})$ | 308.31(64.4), 295.901(28.9), 111.621(20.5) |
| • 237.19 | >0.00049 | $^{83}\text{Rb}(86.2 \text{ d})$ | 520.39(44.7), 529.635(29.3), 552.63(16.0) |
| 237.2 3 | 52 7 | $^{146}\text{Ho}(3.6 \text{ s})$ | 682.9(100), 925.3(69), 673.7(55) |
| 237.2 | | $^{161}\text{Er}(3.21 \text{ h})$ | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| 237.2 2 | 0.055 16 | $^{227}\text{Fr}(2.47 \text{ m})$ | 90.035(39), 585.804(29.5), 64.267(14.5) |
| 237.23 7 | 0.32 3 | $^{184}\text{Pt}(17.3 \text{ m})$ | 154.90(31), 191.97(27), 548.36(23.1) |
| 237.23 4 | 0.143 7 | $^{246}\text{Am}(25.0 \text{ m})$ | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| • 237.23 4 | 0.019 2 | $^{246}\text{Bk}(1.80 \text{ d})$ | 798.80(61), 1081.40(5.8), 833.60(5.0) |
| • 237.28 6 | 0.0094 8 | $^{152}\text{Eu}(13.542 \text{ y})$ | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| 237.2881 | 180.07 | $^{182}\text{Hf}(61.5 \text{ m})$ | 942.80(18.8), 799.64(9.4), 114.3152(6.2) |
| 237.3 2 | 0.26 5 | $^{97}\text{Rb}(169.9 \text{ ms})$ | 167.1(26), 585.2(21.0), 600.5(10.6) |
| 237.3 3 | 45 3 | $^{178}\text{Re}(13.2 \text{ m})$ | 105.9(23.0), 939.1(8.9), 777.9(3.8) |
| 237.4 | 5.0 13 | $^{51}\text{Fe}(305 \text{ ms})$ | 1825(0.49), 2140(0.24), 3423(0.20) |
| 237.4 5 | 0.22 7 | $^{98}\text{Sr}(0.653 \text{ s})$ | 119.353(73), 444.628(39), 428.4(31) |
| 237.40 14 | 0.127 17 | $^{103}\text{Ag}(65.7 \text{ m})$ | 118.72(31.2), 148.193(28.3), 266.86(13.3) |
| 237.4 3 | 0.102 11 | $^{123}\text{Cs}(5.94 \text{ m})$ | 97.3(23), 596.7(10.1), 83.3(4.1) |
| 237.4 1 | | $^{125}\text{La}(76 \text{ s})$ | 67.6(34), 43.6(3.5), 985.2 |
| 237.4 6 | 0.041 7 | $^{150}\text{Pm}(2.68 \text{ h})$ | 333.971(68), 1324.51(17.5), 1165.739(15.8) |
| 237.4 2 | 0.00743 16 | $^{159}\text{Gd}(18.479 \text{ h})$ | 363.55(11.4), 58.00(2.15), 348.16(0.234) |
| 237.4 5 | $\dagger 0.20 2$ | $^{188}\text{Au}(8.84 \text{ m})$ | 265.63($\dagger 100$), 340.04($\dagger 23.9$), 605.5($\dagger 16.3$) |
| • 237.5 4 | 0.0028 20 | $^{155}\text{Tb}(5.32 \text{ d})$ | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 237.6 5 | 0.038 19 | $^{118}\text{In}(4.45 \text{ m})$ | 1229.68(96), 1050.69(81.0), 683.08(54.3) |
| 237.6 | $\dagger 0.8 4$ | $^{178}\text{Ir}(12 \text{ s})$ | 266.1($\dagger 100.0$), 131.6($\dagger 79$), 363.1($\dagger 39.9$) |
| 237.63 11 | 1.67 3 | $^{172}\text{Ta}(36.8 \text{ m})$ | 214.02(46), 95.23(17.5), 1109.27(12.4) |
| • 237.64 9 | 0.012 5 | $^{160}\text{Tb}(72.3 \text{ d})$ | 879.383(30.01), 298.580(25.51), 966.171(25.21) |
| 237.65 9 | $\dagger 2.89 9$ | $^{129}\text{Ba}(2.17 \text{ h})$ | 182.30($\dagger 100$), 1459.1($\dagger 50.0$), 202.38($\dagger 33.7$) |
| 237.7 5 | 0.50 5 | $^{61}\text{Mn}(0.71 \text{ s})$ | 628.6(16.7), 206.8(8.2), 391.0(1.1) |
| 237.7 | | $^{99}\text{Y}(1.470 \text{ s})$ | 121.761(33), 724.30(14.9), 536.2(6.6) |
| • 237.7 | 0.0063 25 | $^{154}\text{Eu}(8.593 \text{ y})$ | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 237.7 2 | 0.18 3 | $^{177}\text{W}(135 \text{ m})$ | 115.65(50), 426.98(13.2), 1036.4(10.3) |
| • 237.774 5 | $1.44 \times 10^{-5} 6$ | $^{239}\text{Pu}(24110 \text{ y})$ | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 237.8 | | $^{152}\text{Ho}(49.5 \text{ s})$ | 315.9, 78 |
| 237.8 3 | 0.3 1 | $^{159}\text{Er}(36 \text{ m})$ | 624.5(33), 649.1(23.4), 205.92(9.7) |
| • 237.8 1 | <0.09 | $^{231}\text{Th}(25.52 \text{ h})$ | 25.646(14.5), 84.216(6.6), 89.944(0.94) |
| 237.86 2 | 0.0021 | $^{233}\text{Th}(22.3 \text{ m})$ | 86.477(2.7), 29.374(2.5), 459.222(1.4) |
| • 237.86 2 | 0.063 7 | $^{237}\text{Np}(2.14 \times 10^6 \text{ y})$ | 29.374(15.0), 86.477(12.4), 94.66(0.6) |
| 237.873 15 | 5.0 3 | $^{167}\text{Ho}(3.1 \text{ h})$ | 346.547(56), 321.336(23.5), 207.801(4.9) |
| 237.9 3 | 0.132 25 | $^{86}\text{Y}(14.74 \text{ h})$ | 1076.64(83), 627.72(32.6), 1153.01(30.5) |
| 237.9 2 | 0.19 3 | $^{96}\text{Rh}(9.90 \text{ m})$ | 832.57(100), 685.49(95.7), 631.71(74.5) |
| 237.9 2 | 4 | $^{132}\text{La}(24.3 \text{ m})$ | 464.55(22), 663.07(11.6), 285.6(7) |
| 237.9 2 | 1.2 | $^{145}\text{Ba}(4.31 \text{ s})$ | 96.6(17), 91.9(7), 65.9(5) |
| 237.9 2 | 0.015 8 | $^{157}\text{Eu}(15.18 \text{ h})$ | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| 237.9 7 | 0.231 22 | $^{199}\text{Bi}(27 \text{ m})$ | 560.1(22.0), 424.85(22), 841.7(11) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 237.92 14 | 0.10 3 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| 237.93 4 | 0.39 10 | ¹⁴³ Cs(1.78 s) | 195.554(13), 232.421(8.32), 306.424(6.80) |
| 238.0 3 | | ¹²² Ba(1.95 m) | 550.7, 388.7, 231.0 |
| 238.0 2 | 1.1 | ¹⁴⁵ La(24.8 s) | 70.0(11), 355.8(3.8), 118.2(3.6) |
| 238 | †1.0 | ¹⁸¹ Os(2.7 m) | 144.99(†100), 118.03(†28.3), 1118.8(†4.2) |
| 238.1 1 | 0.150 7 | ²¹⁰ Rn(2.4 h) | 458.25(1.7), 648.70(0.843), 570.95(0.840) |
| 238.1 2 | 0.069 10 | ²²³ Ac(2.10 m) | 98.58(0.891), 191.3(0.58), 83.55(0.57) |
| 238.2 1 | 3.5 3 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| 238.2 1 | 0.21 10 | ²⁴² U(16.8 m) | 67.60(9.6), 55.58(3.90), 585.0(1.92) |
| 238.25 7 | 0.306 17 | ¹⁰¹ Tc(14.22 m) | 306.85(88), 545.06(6.0), 127.23(2.86) |
| • 238.25 7 | †0.28 3 | ¹⁰¹ Rh(4.34 d) | 306.85(†115), 545.06(†6.1), 127.23(†0.85) |
| • 238.25 15 | 0.0166 18 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 238.3 8 | 0.70 12 | ¹⁰⁵ In(5.07 m) | 131.37(41), 260.21(15.7), 604.11(9.2) |
| 238.3 5 | 0.23 | ¹⁵⁷ Er(18.65 m) | 53.05(24), 391.32(14.2), 121.57(10.1) |
| 238.3 5 | 0.11 4 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 238.3 2 | 0.25 5 | ¹⁹⁸ Tl(5.3 h) | 411.8044(82), 675.8874(11), 636.4(10.1) |
| 238.3 | | ²³⁸ Pa(2.3 m) | 1015.3(†<100), 1014.6(†<100), 635.18(†88) |
| • 238.38 12 | 0.00022 3 | ¹⁴⁹ Pm(53.08 h) | 285.95(3.1), 859.46(0.109), 590.88(0.069) |
| 238.4 3 | 0.049 10 | ⁹⁷ Nb(72.1 m) | 658.08(98), 1024.49(1.09), 1268.68(0.148) |
| 238.4 5 | †0.2 2 | ¹⁰¹ Nb(7.1 s) | 276.10(†100), 157.466(†32), 13.5(†32) |
| 238.4 5 | 0.46 15 | ¹¹³ Te(1.7 m) | 814.4(22), 1018.1(13.0), 1181.0(12.3) |
| 238.4 1 | †1.09 13 | ¹²³ La(17 s) | 92.5(†100), 937.3(†43), 153.6(†43) |
| • 238.40 25 | 0.034 9 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 238.4 3 | 2.4 3 | ¹⁷⁶ Tm(1.9 m) | 189.57(44.5), 1069.3(34), 381.8(21.8) |
| 238.4 | <0.015 | ²¹⁴ Pb(26.8 m) | 351.921(35.8), 295.213(18.5), 241.981(7.50) |
| 238.41 2 | 1.56 16 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 238.453 20 | 0.80 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| • 238.471 18 | 0.160 14 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| • 238.481 2 | 0.00226 12 | ¹⁶¹ Tb(6.88 d) | 25.65150(23.2), 48.91562(17.0), 74.56711(10.2) |
| 238.481 2 | 0.00070 23 | ¹⁶¹ Ho(2.48 h) | 25.65150(27), 103.062(3.9), 77.414(1.91) |
| 238.54 15 | †2.5 8 | ¹⁵⁵ Nd(8.9 s) | 180.574(†100), 418.99(†75), 955.08(†50) |
| 238.54 9 | 0.063 25 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 238.581 20 | 0.0353 10 | ¹⁶⁶ Tm(7.70 h) | 778.817(18.9), 2052.36(17.2), 184.410(16.1) |
| • 238.6 4 | | ²³⁴ Np(4.4 d) | 1558.31(18.72), 1527.21(11.2), 1601.80(9.1) |
| 238.61 9 | 0.218 11 | ¹⁷⁹ W(6.40 m) | 281.70(0.186), 222.5(0.057), 213.9(0.057) |
| 238.62 12 | †40 3 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| 238.63 2 | 0.53 3 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 238.632 2 | 43.3 4 | ²¹² Pb(10.64 h) | 300.087(3.28), 115.183(0.592), 415.2(0.143) |
| 238.638 3 | 0.40 8 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 238.64 3 | 0.146 7 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 238.7 3 | 1.53 15 | ⁹⁸ Sr(0.653 s) | 119.353(73), 444.628(39), 428.4(31) |
| 238.7 1 | 2.30 22 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| 238.70 15 | †3.4 5 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 238.7 6 | 0.42 21 | ¹⁸⁶ Pt(2.0 h) | 276.7(0), 611.5(6.0), 635.6(>3.8) |
| 238.75 9 | 44 4 | ¹⁸¹ Os(105 m) | 826.77(20), 118.03(12.9), 831.62(7.7) |
| 238.8 2 | 0.019 9 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| 238.8 1 | 0.146 22 | ¹⁴² Gd(70.2 s) | 750.2(11.2), 178.90(11.20), 284.4(6.16) |
| 238.8 5 | †0.13 2 | ¹⁸⁸ Au(8.84 m) | 265.63(†100), 340.04(†23.9), 605.5(†16.3) |
| 238.9 | >0.08 | ⁸³ Zr(44 s) | 55.55(8), 104.97(5.70), 475.1(5.1) |
| 238.9 4 | 0.34 6 | ⁸⁵ Y(2.68 h) | 231.67(84), 504.45(60), 913.93(9.0) |
| 238.9 4 | 0.013 3 | ⁸⁵ Y(4.86 h) | 231.67(22.8), 2123.8(5.0), 767.40(3.6) |
| 238.9 2 | †3.3×10 ³ 4 | ¹⁵⁸ Er(2.29 h) | 71.91(†23300), 386.84(†111000), 248.58(†42000) |
| • 238.94 5 | 0.087 12 | ¹⁵¹ Gd(124 d) | 153.56(6.20), 243.28(5.60), 174.70(2.96) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 238.97 15 | 0.58 13 | ¹²⁵ Cd(0.57 s) | 1027.53(25.8), 1173.16(25.1), 736.65(12.6) |
| • 238.996 3 | 1.6 | ⁷⁷ As(38.83 h) | 520.639(0.558), 249.786(0.394), 87.8671(0.202) |
| • 238.996 3 | 23 | ⁷⁷ Br(57.036 h) | 520.639(22.4), 297.215(4.16), 249.786(2.98) |
| 239.0 3 | 0.27 4 | ⁷⁶ Kr(14.8 h) | 315.7(39), 270.2(21.1), 45.48(19.5) |
| 239.0 2 | 0.061 19 | ¹⁰³ Tc(54.2 s) | 346.380(17.5), 136.079(16.6), 562.90(7.0) |
| • 239.0 2 | 0.0021 9 | ¹⁶⁰ Tb(72.3 d) | 879.383(30.01), 298.580(25.51), 966.171(25.21) |
| 239.0 2 | †0.23 5 | ¹⁶⁰ Ho(5.02 h) | 728.18(†100), 879.383(†65.9), 962.317(†59.1) |
| 239.0 2 | 0.107 21 | ¹⁶⁰ Ho(25.6 m) | 728.18(46.9), 879.383(26.6), 962.317(25.6) |
| 239.0 1 | 0.9 5 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 239.0 7 | 0.91 23 | ¹⁹⁴ Tl(32.8 m) | 636.5(99), 428.0(99), 748.9(76) |
| 239.127 23 | 0.086 4 | ¹⁸⁷ W(23.72 h) | 685.774(27.3), 479.531(21.8), 72.001(11.14) |
| 239.17 11 | †58 4 | ¹⁵⁹ Yb(1.58 m) | 166.16(†500), 177.12(†159), 390.20(†113) |
| 239.190 18 | 12.4 5 | ²⁰⁹ At(5.41 h) | 545.0(91), 781.9(83.5), 790.2(63.5) |
| • 239.2 4 | 0.022 12 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 239.2 2 | | ¹⁸¹ Ir(4.90 m) | 107.64(†100), 1639.6(†52), 318.9(†46) |
| 239.2 2 | †2.96 18 | ¹⁹² Tl(9.6 m) | 422.8(†100), 634.8(†75.9), 786.3(†31.7) |
| 239.21 | 0.12 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 239.22 8 | 8.6 5 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 213.19(3.6), 1267.26(3.25) |
| 239.26 22 | 0.16 3 | ⁹³ Kr(1.286 s) | 253.42(41.2), 323.89(24.1), 266.83(20.6) |
| 239.261 5 | 1.67 9 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 239.3 5 | 0.45 12 | ¹²⁶ Ba(100 m) | 233.6(19.6), 257.6(7.6), 241.0(6.0) |
| 239.3 2 | †4.1 12 | ²²⁹ Ac(62.7 m) | 164.522(†100), 569.1(†91), 261.92(†39) |
| 239.3 1 | 0.41 6 | ²⁴⁰ Np(61.9 m) | 566.34(25.3), 973.9(23.8), 600.57(18.4) |
| • 239.4 2 | 0.0042 10 | ¹⁵² Eu(13.542 y) | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| 239.4 1 | †5 1 | ²²⁷ Rn(22.5 s) | 162.14(†100), 739.2(†65), 686.2(†62) |
| • 239.46 10 | 0.054 6 | ¹⁹⁴ Au(38.02 h) | 328.455(60), 293.545(10.2), 1468.91(6.3) |
| 239.5 12 | 16.6 19 | ³² Na(13.2 ms) | 885.4(60), 2151.3(32), 1972.8(8.6) |
| 239.5 44 | †<0.2 | ¹⁴² Xe(1.22 s) | 571.83(†100), 657.05(†79), 538.24(†77) |
| • 239.5 2 | 0.0042 8 | ¹⁷² Er(49.3 h) | 610.062(44.2), 407.338(42.1), 68.107(3.29) |
| 239.50 19 | 0.09 3 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| 239.5 10 | 0.017 | ²¹⁰ Rn(2.4 h) | 458.25(1.7), 648.70(0.843), 570.95(0.840) |
| 239.51 13 | 1.21 12 | ¹⁷⁴ W(31 m) | 35.42(14.1), 428.83(12.7), 328.68(9.5) |
| • 239.540 1 | 0.2267 20 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 239.54 9 | 0.079 11 | ²⁰⁰ Pt(12.5 h) | 76.21(13), 135.90(3.24), 243.71(2.49) |
| 239.585 5 | 4.4 4 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 239.6 5 | 0.4 3 | ⁷⁴ Kr(11.50 m) | 89.65(31), 203.0(18.0), 296.67(9.9) |
| 239.6 2 | 7.7 5 | ¹²¹ Cs(155 s) | 153.9(15.2), 427.1(3.63), 179.4(2.7) |
| 239.6 2 | 1.75 18 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 239.6 | 0.013 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 239.60 6 | 0.41 3 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 239.6 2 | †8.9 9 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 239.62 6 | 0.5 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| • 239.629 8 | 2.410 23 | ¹³¹ Ba(11.50 d) | 496.326(47), 123.805(28.97), 216.078(19.66) |
| • 239.65 2 | †1.31×10 ⁴ | ¹³⁴ Ce(75.9 h) | 162.306(†230000), 130.414(†209000), 39.08(†>150000) |
| 239.68 10 | †18 4 | ¹⁶³ Lu(238 s) | 163.08(†100), 54.00(†88), 396.34(†63) |
| 239.7 2 | 8.4 7 | ¹⁷⁶ Tm(1.9 m) | 189.57(44.5), 1069.3(34), 381.8(21.8) |
| 239.7 10 | 0.17 3 | ²⁰¹ Bi(108 m) | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| • 239.703 24 | 0.014 3 | ¹⁸⁹ Re(24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| 239.8 10 | | ¹⁸¹ Hg(3.6 s) | 158.7, 92.4, 214.2 |
| 239.8 4 | 1.5 | ¹⁹⁹ Po(4.13 m) | 1002.19(19), 1034.3(16), 362.01(7) |
| 239.828 25 | 0.0060 24 | ¹⁷³ Hf(23.6 h) | 123.672(83), 296.974(33.9), 139.634(12.7) |
| 239.864 2 | 0.176 10 | ¹⁹⁹ Pt(30.80 m) | 542.993(15), 493.772(5.59), 317.056(4.95) |
| 239.90 3 | 1.07 6 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 239.9 1 | 0.018 4 | ¹²¹ I(2.12 h) | 212.189(84), 532.08(6.07), 598.74(1.47) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| • 239.9 2 | 0.0114 8 | ¹⁷² Er(49.3 h) | 610.062(44.2), 407.338(42.1), 68.107(3.29) |
| 240.0 3 | †2.1 6 | ¹¹¹ Ru(2.12 s) | 303.8(†100), 211.7(†77.7), 382.0(†41.3) |
| 240.0 3 | †55 6 | ¹²¹ La(5.3 s) | 139.3(†100), 134.4(†73), 97.8(†57) |
| 240.00 20 | 0.25 5 | ¹⁵⁸ Tm(3.98 m) | 192.13(62), 335.10(16.8), 1149.83(7.6) |
| 240.0 3 | | ¹⁶³ Yb(11.05 m) | 860.28(10.1), 63.62(6.5), 123.21(1.98) |
| 240.0 | >0.006 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| 240.0 5 | 8.1 14 | ¹⁹⁶ Pb(37 m) | 253.1(27.0), 502.1(26.5), 366.5(11.1) |
| 240 | †23 | ²²⁸ Pa(22 h) | 95(†100), 310(†42), 280(†20) |
| 240.03 7 | 1.8 3 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| • 240.09 1 | 3.83 23 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 240.1 2 | †71.0 25 | ²⁰¹ Po(15.3 m) | 890.1(†100), 904.2(†54.8), 1186.7(†20.8) |
| 240.17 9 | 48 | ¹⁷⁶ Re(5.3 m) | 109.08(25.0), 848.7(4.0), 820(3.8) |
| 240.19 2 | 12.5 6 | ¹⁵⁵ Ho(48 m) | 136.30(5.00), 45.38(5), 39.39(3.31) |
| 240.20 5 | 0.54 3 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| 240.2 2 | 3.5 4 | ¹⁹⁰ Tl(3.7 m) | 416.4(91), 625.4(82), 731.1(37) |
| 240.2 | | ¹⁹⁰ Tl(3.7 m) | 416.4(91), 625.4(82), 731.1(37) |
| 240.2 8 | 0.11 | ²²⁸ Pa(22 h) | 911.205(4.19), 463.005(1.250), 964.770(4.25) |
| 240.20 10 | 0.052 21 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 240.220 7 | 3.94 16 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 240.22 4 | 4.5 3 | ²⁰² Bi(1.72 h) | 960.67(99), 422.18(83.7), 657.49(60.6) |
| 240.26 15 | †33 7 | ¹⁸⁷ Hg(1.9 m) | 233.38(†100), 376.34(†38), 103.55(†32) |
| • 240.26 4 | 0.00028 3 | ²³¹ Th(25.52 h) | 25.646(14.5), 84.216(6.6), 89.944(0.94) |
| 240.3 7 | 0.187 22 | ¹⁹⁹ Bi(27 m) | 560.1(22.0), 424.85(22), 841.7(11) |
| 240.3 2 | †2 | ²⁵⁶ Es(7.6 h) | 861.8(†100), 231.1(†61), 172.6(†49) |
| • 240.332 3 | 0.1138 14 | ¹⁶⁹ Yb(32.026 d) | 63.12077(44.2), 197.95788(35.8), 177.21402(22.16) |
| 240.36 2 | 0.246 9 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| • 240.39 6 | 0.00035 6 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 240.4 5 | 0.16 5 | ¹³⁶ Nd(50.65 m) | 108.90(32), 40.2(18.9), 574.8(10.4) |
| 240.4 | 1.0 | ²⁰³ Po(36.7 m) | 908.64(55), 1090.95(19.2), 893.49(18.7) |
| 240.43 7 | | ¹³¹ Sn(58.4 s) | 367.40, 285.0, 62.9 |
| 240.43 7 | †6.5 10 | ¹³¹ Sn(56.0 s) | 1226.03(†100), 450.03(†90), 798.50(†86) |
| 240.45 6 | 0.31 4 | ²⁰⁴ Bi(11.22 h) | 899.15(98), 374.72(82), 984.02(59) |
| 240.49 3 | 7.5 4 | ¹⁶⁴ Tm(5.1 m) | 208.08(14.6), 314.97(10), 547.17(4.44) |
| 240.5 5 | 0.22 4 | ⁷⁰ As(52.6 m) | 1039.20(81), 1114.1(21.8), 668.3(21.8) |
| 240.5 2 | †74 15 | ¹³⁶ I(46.9 s) | 1686.1(†100), 1689.0(†85), 1639.8(†61) |
| 240.5 4 | 4.6 13 | ¹⁸¹ Lu(3.5 m) | 652.5(22.0), 205.94(16.1), 574.9(15.4) |
| 240.51 10 | †30 3 | ²²⁹ U(58 m) | 122.51(†100), 88.43(†88), 198.83(†88) |
| 240.564 17 | 0.37 3 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 240.593 7 | 1.38 4 | ¹³¹ La(59 m) | 108.081(25.0), 417.783(18.0), 365.162(16.9) |
| 240.6 | | ¹⁶⁸ Hf(25.95 m) | 183.8(†100), 157.2(†68), 324.1 |
| 240.6 2 | 0.72 8 | ²²¹ Rn(25 m) | 186.38(21.6), 150.04(4.5), 216.90(2.6) |
| • 240.6 2 | 0.0076 22 | ²²⁵ Ac(10.0 d) | 99.91(1.01), 150.04(0.80), 99.63(0.62) |
| • 240.63 8 | 0.0038 10 | ¹⁷¹ Lu(8.24 d) | 739.78(47.8), 19.394(13.7), 667.404(11.04) |
| 240.64 8 | 0.169 15 | ¹⁰⁰ Sr(202 ms) | 963.85(22.0), 898.50(18.9), 65.46(15.2) |
| • 240.64 5 | 1.54 8 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 396.00(34.3), 929.01(20.2) |
| 240.67 11 | †100 | ¹¹⁰ Tc(0.92 s) | 372.1(†17.0), 613.0(†16.0), 619.2(†14) |
| 240.7 2 | †1.6 6 | ¹⁷¹ Hf(12.1 h) | 122.0(†100), 662.2(†83), 347.18(†47) |
| 240.7 1 | 0.27 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 240.71 4 | 0.253 7 | ⁸⁸ Kr(2.84 h) | 2392.11(34.6), 196.301(25.98), 2195.842(13.18) |
| 240.8 2 | 0.16 7 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 240.8 1 | †0.60 6 | ¹⁷¹ Ta(23.3 m) | 49.6(†100), 506.4(†54), 501.8(†22.6) |
| 240.8 2 | 0.157 11 | ¹⁹⁹ Pb(90 m) | 366.90(44.2), 353.39(9.5), 1135.04(7.8) |
| 240.86 2 | 0.34 7 | ²⁴⁵ Am(2.05 h) | 252.80(6), 295.72(0.22), 42.88(0.06) |
| • 240.86 2 | | ²⁴⁵ Bk(4.94 d) | 252.80(29.1), 380.8(2.40), 385.0(0.57) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|-----------------------|---|---|
| • 240.86 2 | 0.208 8 | ²⁴⁹ Cf(351 y) | 388.16(66), 333.37(14.6), 252.80(2.50) |
| 240.875 3 | 3.9 3 | ²³¹ Ac(7.5 m) | 282.471(39.0), 307.063(30.4), 221.399(16.8) |
| • 240.875 3 | 0.075 6 | ²³⁵ U(7.038×10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| 240.9 2 | 0.33 11 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 240.9 2 | 12.1 12 | ¹⁹¹ Hg(50.8 m) | 252.5(57), 420.1(18.6), 578.6(17.6) |
| 240.9 2 | †44 9 | ¹⁹¹ Hg(49 m) | 252.5(†100), 196.3(†65), 224.7(†60) |
| 240.9 10 | >0.06 | ¹⁹⁹ Pt(30.80 m) | 542.993(15), 493.772(5.59), 317.056(4.95) |
| • 240.93 1 | 9.91 10 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 240.97 2 | 5.72 6 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| • 240.987 6 | 3.97 4 | ²²⁴ Ra(3.66 d) | 292.70(0.0060), 645.50(0.0052), 422.04(0.0029) |
| 240.987 6 | †100 | ²²⁰ At(224 s) | 292.70(†39), 422.04(†23), 645.50(†6) |
| 241.0 1 | 6.0 5 | ¹²⁶ Ba(100 m) | 233.6(19.6), 257.6(7.6), 681.8(4.4) |
| 241 | | ¹⁹¹ Hg(50.8 m) | 252.5(57), 420.1(18.6), 578.6(17.6) |
| 241 2 | 0.9 3 | ¹⁹⁶ Pb(37 m) | 253.1(27.0), 502.1(26.5), 366.5(11.1) |
| • 241 2 | †5×10 ⁰⁴ | ²³⁷ Pu(45.2 d) | 280.40(†870000), 298.89(†7.85×10 ⁶), 320.75(†6.48×10 ⁶) |
| • 241.0 1 | 11.0 6 | ²⁵⁷ Fm(100.5 d) | 179.4(8.7), 61.6(1.45), 104.4(0.62) |
| 241.02 8 | 0.174 24 | ²⁰¹ Pb(9.33 h) | 331.19(79), 361.27(9.9), 945.96(7.4) |
| 241.1 2 | 2.5 5 | ¹⁰³ Zr(1.3 s) | 248(100), 164.05(94), 126.30(84) |
| 241.1 2 | †6.9 6 | ¹⁰³ Nb(1.5 s) | 102.64(†100), 641.1(†55), 538.5(†34.0) |
| 241.1 2 | | ¹⁴⁶ Dy(29 s) | 2156.8, 1915.7, 1876.7 |
| 241.1 1 | 0.84 15 | ²⁰² Pb(3.53 h) | 490.47(9.1), 459.72(8.6), 389.94(6.2) |
| 241.17 5 | | ¹⁷³ W(7.5 m) | 457.68(†100), 130.19(†31.5), 174.8(†29.1) |
| 241.299 10 | 0.92 5 | ¹⁸² Os(22.10 h) | 510.056(52), 180.230(33.5), 263.285(6.71) |
| 241.3 | 27.0 11 | ³⁵ Si(0.78 s) | 4100.7(36.5), 3859.5(32.7), 2386.3(31.6) |
| 241.3 4 | 7.2 7 | ⁷³ Kr(27.0 s) | 177.8(65.8), 62.5(19.1), 454.8(15) |
| 241.305 5 | 10.9 3 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 1434.45(7.96) |
| 241.377 15 | 3.86 7 | ⁹⁶ Nb(23.35 h) | 778.224(96.45), 568.80(58.0), 459.88(26.62) |
| • 241.377 15 | 0.090 20 | ⁹⁶ Tc(4.28 d) | 778.224(100), 849.929(98), 812.581(82) |
| 241.377 15 | 0.0075 11 | ⁹⁶ Tc(51.5 m) | 778.224(1.9), 1200.231(1.08), 480.705(0.311) |
| • 241.41 4 | 0.0258 19 | ¹⁷¹ Lu(8.24 d) | 739.78(47.8), 19.394(13.7), 667.404(11.04) |
| 241.5 2 | 5.7 9 | ⁹⁸ Y(2.0 s) | 1223.0(80), 620.505(63), 647.58(53) |
| 241.5 2 | 2.02 22 | ⁹⁸ Y(0.548 s) | 1223.0(36.0), 2941.3(16.7), 1590.9(14.7) |
| 241.5 | 0.8 4 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 241.5 4 | 0.014 | ¹⁵⁰ Pm(2.68 h) | 333.971(68), 1324.51(17.5), 1165.739(15.8) |
| 241.5 2 | †65 7 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 234.0(†40.0), 512.2(†37) |
| • 241.50 5 | 0.228 7 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 241.5 5 | †0.5 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 241.50 10 | 0.069 11 | ¹⁹⁵ Hg(9.9 h) | 779.80(7), 61.46(6.2), 585.13(1.99) |
| 241.55 5 | 6.3 7 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 241.56 5 | 2.92 12 | ⁹² Sr(2.71 h) | 1383.93(90), 953.31(3.52), 430.49(3.28) |
| 241.59 8 | 1.21 13 | ⁷⁵ Kr(4.3 m) | 132.43(67), 154.66(20.8), 153.15(8.0) |
| 241.6 1 | 0.95 17 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| • 241.6 4 | 0.020 9 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 241.6 2 | †0.9 3 | ¹⁵⁵ Tm(21.6 s) | 226.8(†100), 531.7(†20), 88.1(†17) |
| • 241.653 1 | 1.44 3 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| 241.7 2 | 0.17 5 | ¹⁴² Gd(70.2 s) | 750.2(11.2), 178.90(11.20), 284.4(6.16) |
| 241.7 | 0.14 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 241.7 3 | †74 10 | ¹⁵⁷ Yb(38.6 s) | 230.92(†100), 340.7(†90), 353.94(†57) |
| 241.7 2 | 0.178 20 | ²²³ Ac(2.10 m) | 98.58(0.891), 191.3(0.58), 83.55(0.57) |
| • 241.7 2 | †1.97×10 ⁴ | ²²⁷ Ac(21.773 y) | 100(†110000), 69.21(†78000), 160.26(†70000) |
| 241.75 6 | 1.0 3 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| • 241.78 8 | 0.060 13 | ¹¹⁹ Te(4.70 d) | 153.59(66), 1212.73(66), 270.53(28.0) |
| 241.8 3 | 2.83 9 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| • 241.88 4 | 0.0180 13 | ¹⁰³ Ru(39.26 d) | 497.080(90.9), 610.33(5.75), 443.799(3.27) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-------------------------------------|--|
| • 241.88 4 | 5.0×10^{-7} 5 | $^{103}\text{Pd}(16.991 \text{ d})$ | 39.757(0.07), 357.47(0.0221), 497.080(0.00396) |
| 241.9 2 | 1.6 | $^{104}\text{Zr}(1.2 \text{ s})$ | 100.9(6), 504.7(5), 445.0(5) |
| 241.9 | 6 | $^{133}\text{Pr}(6.5 \text{ m})$ | 134.3(14), 74.0(10), 315.6(10) |
| 241.90 30 | 0.10 3 | $^{161}\text{Tm}(33 \text{ m})$ | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 241.9 3 | 1.02 14 | $^{176}\text{Tm}(1.9 \text{ m})$ | 189.57(44.5), 1069.3(34), 381.8(21.8) |
| 241.91 5 | $\dagger 22.4$ 24 | $^{229}\text{U}(58 \text{ m})$ | 122.51($\dagger 100$), 88.43($\dagger 88$), 198.83($\dagger 88$) |
| • 241.933 30 | 0.414 8 | $^{140}\text{La}(1.6781 \text{ d})$ | 1596.210(95), 487.021(45.5), 815.772(23.28) |
| 241.94 5 | 0.80 15 | $^{55}\text{V}(6.54 \text{ s})$ | 517.71(73), 880.70(18.1), 921.10(4.6) |
| 241.981 8 | 7.50 10 | $^{214}\text{Pb}(26.8 \text{ m})$ | 351.921(35.8), 295.213(18.5), 53.226(1.11) |
| 242.0 7 | 0.070 23 | $^{103}\text{Cd}(7.3 \text{ m})$ | 1461.81(12), 1448.70(5.55), 1079.90(5.44) |
| 242.0 1 | 0.031 12 | $^{133}\text{Te}(12.5 \text{ m})$ | 312.072(62), 407.63(27.1), 1333.21(10.67) |
| 242.0 2 | 0.144 20 | $^{140}\text{Xe}(13.60 \text{ s})$ | 805.52(20), 1413.66(12.2), 1315.05(8.2) |
| 242.00 4 | 0.21 3 | $^{153}\text{Dy}(6.4 \text{ h})$ | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 242.0 2 | $\dagger 4.1$ | $^{256}\text{Es}(7.6 \text{ h})$ | 861.8($\dagger 100$), 231.1($\dagger 61$), 172.6($\dagger 49$) |
| • 242.085 20 | 7.3×10^{-6} 5 | $^{239}\text{Pu}(24110 \text{ y})$ | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| • 242.10 14 | 0.00019 3 | $^{149}\text{Pm}(53.08 \text{ h})$ | 285.95(3.1), 859.46(0.109), 590.88(0.069) |
| 242.1 1 | $\dagger 1.6$ 2 | $^{225}\text{Fr}(4.0 \text{ m})$ | 182.3($\dagger 100$), 31.50($\dagger 91$), 225.1($\dagger 55$) |
| 242.1 2 | 0.027 | $^{227}\text{Ra}(42.2 \text{ m})$ | 27.36(16), 300.07(4.6), 302.65(4.3) |
| 242.12 11 | 6.0×10^{-5} 3 | $^{135}\text{La}(19.5 \text{ h})$ | 480.51(1.5), 874.51(0.164), 587.83(0.1108) |
| 242.12 5 | 1.89 20 | $^{222}\text{Fr}(14.2 \text{ m})$ | 206.15(51), 111.12(12.5), 317.8(0.8) |
| 242.12 5 | 0.866 40 | $^{226}\text{Th}(30.9 \text{ m})$ | 111.12(3.29), 131.02(0.278), 206.15(0.189) |
| 242.15 5 | 4.3 3 | $^{195}\text{Tl}(1.16 \text{ h})$ | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| 242.19 3 | 9.9 3 | $^{90}\text{Kr}(32.32 \text{ s})$ | 1118.69(39.0), 121.82(35.5), 539.49(30.8) |
| 242.2 11 | 0.012 8 | $^{89}\text{Kr}(3.15 \text{ m})$ | 220.948(20.1), 586.03(16.6), 904.27(7.2) |
| 242.2 1 | 1.5×10^{-6} 8 | $^{129}\text{Te}(69.6 \text{ m})$ | 27.81(16.3), 459.60(7.70), 487.39(1.42) |
| • 242.2 1 | 0.00066 9 | $^{129}\text{Te}(33.6 \text{ d})$ | 695.88(2.988), 729.57(0.70), 556.65(0.118) |
| • 242.2 1 | 0.0090 14 | $^{231}\text{Pa}(32760 \text{ y})$ | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 242.25 5 | 82 | $^{108}\text{Tc}(5.17 \text{ s})$ | 465.6(14.3), 707.81(11.4), 1583.5(9.8) |
| 242.281 25 | 1.7 3 | $^{179}\text{Re}(19.5 \text{ m})$ | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| • 242.29 8 | 0.00146 24 | $^{99}\text{Mo}(65.94 \text{ h})$ | 739.50(12.1), 181.063(6.08), 140.511(4.52) |
| 242.3 3 | 0.143 14 | $^{190}\text{Re}(3.2 \text{ h})$ | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| 242.35 20 | $\dagger 0.21$ 2 | $^{184}\text{Ir}(3.09 \text{ h})$ | 263.97($\dagger 100$), 119.80($\dagger 45$), 390.38($\dagger 38$) |
| 242.4 2 | $\dagger 2$ | $^{87}\text{Nb}(2.6 \text{ m})$ | 200.95($\dagger 100$), 470.63($\dagger 73$), 1066.8($\dagger 37$) |
| 242.4 3 | 0.036 9 | $^{120}\text{Xe}(40 \text{ m})$ | 25.1(30), 72.6(9), 178.1(6.8) |
| 242.4 | $\dagger 0.8$ 2 | $^{178}\text{Ir}(12 \text{ s})$ | 266.1($\dagger 100.0$), 131.6($\dagger 79$), 363.1($\dagger 39.9$) |
| 242.4 5 | 76 33 | $^{184}\text{Lu}(20 \text{ s})$ | 367.6(109), 481.9(65), 107.4(27) |
| • 242.4 2 | 0.094 14 | $^{229}\text{Th}(7340 \text{ y})$ | 193.509(4.4), 210.853(2.8), 86.40(2.57) |
| 242.45 10 | 0.093 20 | $^{105}\text{Tc}(7.6 \text{ m})$ | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 242.5 3 | 37 | $^{87}\text{Se}(5.85 \text{ s})$ | 334.0(35), 573.2(19), 468.0(18) |
| • 242.5 8 | 0.0072 9 | $^{160}\text{Tb}(72.3 \text{ d})$ | 879.383(30.01), 298.580(25.51), 966.171(25.21) |
| • 242.5 | 0.037 12 | $^{177}\text{Lu}(160.4 \text{ d})$ | 208.3664(57.7), 228.4838(37.0), 378.5029(29.7) |
| 242.5 4 | 0.084 7 | $^{233}\text{Np}(36.2 \text{ m})$ | 312.17(0.7), 298.89(0.44), 546.9(0.280) |
| • 242.524 22 | 0.00084 8 | $^{231}\text{Th}(25.52 \text{ h})$ | 25.646(14.5), 84.216(6.6), 89.944(0.94) |
| 242.56 5 | 3.50 6 | $^{138}\text{Xe}(14.08 \text{ m})$ | 258.411(31.5), 434.562(20.3), 1768.26(16.7) |
| 242.6 10 | | $^{77}\text{Ga}(13.2 \text{ s})$ | 469.4($\dagger 100$), 458.6($\dagger 48$), 2187.3 |
| 242.6 3 | 0.023 5 | $^{113}\text{Sb}(6.67 \text{ m})$ | 497.96(80), 332.41(14.8), 88.25(2.7) |
| 242.6 12 | 0.35 14 | $^{186}\text{Pt}(2.0 \text{ h})$ | 276.7(0), 611.5(6.0), 635.6(> 3.8) |
| 242.6 | | $^{190}\text{Hg}(20.0 \text{ m})$ | 142.6(68), 171.5(4.8), 154.7(2.5) |
| • 242.69 4 | 0.0210 8 | $^{134}\text{Cs}(2.062 \text{ y})$ | 604.699(97.56), 795.845(85.44), 569.315(15.43) |
| 242.7 1 | 2.9 3 | $^{117}\text{Cs}(8.4 \text{ s})$ | 204.8(15.0), 29.7(9.9), 205.6(6.8) |
| 242.7 | 0.092 14 | $^{141}\text{Ba}(18.27 \text{ m})$ | 190.328(46.0), 304.194(25.4), 276.948(23.4) |
| 242.80 10 | 96 | $^{86}\text{Zr}(16.5 \text{ h})$ | 29.10(21.6), 612.00(5.7), 135.6(0.47) |
| 242.8 6 | $\dagger 2.7$ 13 | $^{142}\text{Xe}(1.22 \text{ s})$ | 571.83($\dagger 100$), 657.05($\dagger 79$), 538.24($\dagger 77$) |
| 242.8 2 | 0.47 7 | $^{167}\text{Lu}(51.5 \text{ m})$ | 29.66(14.4), 239.22(8.6), 213.19(3.6) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|----------------------------|--|
| 242.8 3 | 0.10 | ¹⁷⁰ Hf(16.01 h) | 164.78(33), 620.7(23), 120.17(19) |
| 242.84 9 | 2.4 3 | ⁸¹ Ge(7.6 s) | 335.98(58.9), 792.94(34), 1495.53(19.9) |
| 242.84 9 | 0.5 3 | ⁸¹ Ge(7.6 s) | 93.10(26), 335.98(12.8), 197.30(12.3) |
| 242.84 7 | 41 4 | ¹⁰⁸ In(58.0 m) | 875.46(100), 632.96(100), 1032.85(35) |
| 242.851 19 | 0.8 3 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| • 242.855 1 | 0.0156 8 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 242.9 2 | 0.18 4 | ¹⁴² Ba(10.6 m) | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| 242.9 1 | 0.13 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 242.90 4 | 0.16 5 | ²⁰⁷ Rn(9.25 m) | 344.53(46), 747.15(14.2), 402.68(11.9) |
| 242.91 3 | 0.00163 16 | ¹⁴⁵ Pr(5.984 h) | 748.278(0.5250), 675.795(0.514), 72.500(0.261) |
| 242.91 6 | 6.1 14 | ¹⁸¹ Os(105 m) | 238.75(44), 826.77(20), 118.03(12.9) |
| • 242.917 7 | 35.5 7 | ¹⁶⁵ Tm(30.06 h) | 47.155(16.9), 297.369(12.71), 806.372(9.5) |
| 243.0 4 | 0.169 25 | ¹⁰⁵ In(5.07 m) | 131.37(41), 260.21(15.7), 604.11(9.2) |
| 243.00 15 | †6 2 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 243.1 4 | 1.47 5 | ¹⁰³ Cd(7.3 m) | 1461.81(12), 1448.70(5.55), 1079.90(5.44) |
| 243.1 1 | †2.22 22 | ¹²³ La(17 s) | 92.5(†100), 937.3(†43), 153.6(†43) |
| 243.10 10 | 0.92 14 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 243.1 4 | 6.6 13 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 77.7(6), 332.0(5.5) |
| 243.1 2 | †10 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 243.1 10 | 0.082 17 | ²⁰¹ Bi(108 m) | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| 243.10 6 | 0.49 | ²²⁷ Ra(42.2 m) | 27.36(16), 300.07(4.6), 302.65(4.3) |
| • 243.10 6 | 0.048 3 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 243.11 11 | †61 9 | ¹⁸¹ Pt(51 s) | 289.29(†100), 111.97(†100), 230.15(†92) |
| 243.12 5 | 10.6 10 | ¹²⁴ In(2.4 s) | 1131.64(100), 969.94(52), 1072.85(47) |
| • 243.127 3 | 0.22 5 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| 243.13 14 | 0.86 14 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 243.2 1 | †100 | ¹⁶⁰ Lu(36.1 s) | 395.4(†21.0), 577.2(†10.7), 1115.3(†6.8) |
| 243.2 | 6.7 8 | ¹⁷⁹ Pt(21.2 s) | 171.7(16), 193.1(14.2), 99.8(13.2) |
| 243.2 3 | 0.11 3 | ¹⁸⁸ Hg(3.25 m) | 66.7(63), 190.1(4.40), 82.7(2.6) |
| 243.2 1 | 0.019 9 | ²²¹ Rn(25 m) | 186.38(21.6), 150.04(4.5), 216.90(2.6) |
| • 243.2 1 | 0.0013 5 | ²²⁵ Ac(10.0 d) | 99.91(1.01), 150.04(0.80), 99.63(0.62) |
| • 243.28 5 | 5.60 3 | ¹⁵¹ Gd(124 d) | 153.56(6.20), 174.70(2.96), 21.531(2.85) |
| 243.3 1 | †100 6 | ¹³⁷ Te(2.49 s) | 554.0(†34), 469.1(†21), 358.6(†18.8) |
| 243.3 3 | †4 | ²²³ Rn(23.2 m) | 591.8(†100), 635.2(†76), 416.0(†55) |
| 243.37 6 | 7.0 10 | ¹⁸⁹ Pt(10.87 h) | 721.41(9.3), 94.33(7.6), 568.84(7.1) |
| 243.378 5 | 30.1 6 | ¹²⁵ Xe(16.9 h) | 188.418(54), 54.968(6.81), 453.796(4.69) |
| • 243.383 11 | 2.53×10 ⁻⁵ 5 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 243.39 5 | 2.52 13 | ⁶² Zn(9.186 h) | 596.56(26), 40.84(25.5), 548.35(15.3) |
| 243.4 3 | †5 1 | ¹⁴⁸ Er(4.6 s) | 1653.4(†100), 387.7(†88), 197.1(†71) |
| 243.4 1 | 37 | ¹⁷⁴ Re(2.40 m) | 113.0(19.8), 1002.9(5.62), 349.5(4.8) |
| • 243.414 4 | 0.037 5 | ⁷⁷ Br(57.036 h) | 238.996(23), 520.639(22.4), 297.215(4.16) |
| 243.46 40 | 0.092 23 | ⁷⁹ Rb(22.9 m) | 688.1(23), 182.77(19.2), 143.41(13.9) |
| 243.5 3 | 0.34 5 | ¹²⁷ In(1.09 s) | 1597.7(49), 646.1(6.2), 805.1(5.6) |
| 243.5 3 | †<0.15 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 243.5 | 0.7 | ¹⁴⁷ Ce(56.4 s) | 268.80(7), 92.9(4.7), 374.23(3.5) |
| • 243.5 3 | | ²²⁹ Th(7340 y) | 193.509(4.4), 210.853(2.8), 86.40(2.57) |
| 243.5 8 | †5.0×10 ² 10 | ²³⁴ Pa(1.17 m) | 1001.03(†837000), 766.38(†294000), 742.81(†80000) |
| 243.55 3 | 0.29 4 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 243.56 10 | 0.055 16 | ²⁰⁰ Pt(12.5 h) | 76.21(13), 135.90(3.24), 243.71(2.49) |
| 243.6 3 | 7.8 | ⁶⁷ As(42.5 s) | 122.7(19.2), 120.8(9.3), 808.1(6.2) |
| 243.6 6 | 0.40 9 | ¹¹⁵ Ag(20.0 m) | 229.08(18), 212.80(4.4), 472.70(4.0) |
| 243.6 2 | †4.2 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 243.6 2 | 0.23 3 | ²³⁶ Pa(9.1 m) | 642.35(37.0), 687.59(9.9), 1762.7(6.0) |
| 243.7 5 | 0.22 7 | ⁹⁸ Sr(0.653 s) | 119.353(73), 444.628(39), 428.4(31) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 243.70 20 | 0.39 7 | ⁹⁹ Ag(124 s) | 264.41(65), 832.29(13.5), 805.07(12.5) |
| 243.7 4 | 0.31 25 | ¹⁰² Cd(5.5 m) | 481.0(63), 1036.6(12.8), 505.1(9.6) |
| 243.7 3 | 3.8 3 | ¹⁸⁵ Ta(49.4 m) | 177.59(25.7), 173.68(22.6), 65.86(3.9) |
| 243.71 3 | 2.49 16 | ²⁰⁰ Pt(12.5 h) | 76.21(13), 135.90(3.24), 59.97(2.30) |
| 243.80 8 | 53 3 | ¹⁰² Sr(69 ms) | 150.15(18.0), 93.89(13.4), 253.95(12.6) |
| 243.8 3 | 7.0 10 | ¹²² In(10.8 s) | 1140.55(100), 1001.58(98.4), 103.74(81) |
| 243.8 2 | 0.041 4 | ¹⁹² Au(4.94 h) | 316.50791(58.0), 295.95827(22.3), 2236.89(5.6) |
| • 243.83 4 | 0.324 10 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| 243.855 14 | 0.75 5 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 243.89 8 | <71 | ³⁰ Mg(335 ms) | 443.62(71), 2168.9(2.1), 687.52(2.0) |
| 243.90 6 | 8 | ¹⁰³ Ag(65.7 m) | 118.72(31.2), 148.193(28.3), 266.86(13.3) |
| 243.9 1 | †29 3 | ¹²³ La(17 s) | 92.5(†100), 937.3(†43), 153.6(†43) |
| 243.9 | 0.09 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 243.91 15 | †6.2 15 | ¹⁶³ Lu(238 s) | 163.08(†100), 54.00(†88), 396.34(†63) |
| 244 2 | 1.1 6 | ⁷⁶ Rb(39.1 s) | 2571.3(47), 424.0(43.4), 355.6(8.2) |
| 244.0 1 | †1.1 3 | ¹⁰³ Nb(1.5 s) | 102.64(†100), 641.1(†55), 538.5(†34.0) |
| 244.0 3 | 0.37 22 | ¹²³ Cd(2.10 s) | 371.32(51), 1052.28(24.8), 1438.13(8.3) |
| 244.0 1 | 7.1 4 | ¹⁴⁸ Er(4.6 s) | 1311.8(8.9), 315.3(6.9), 609.5(5.8) |
| 244.0 8 | 2.1 8 | ¹⁵⁶ Sm(9.4 h) | 87.4897(24), 203.818(20.6), 165.8452(12.7) |
| • 244 | | ²⁰² Pt(44 h) | 228 |
| 244 | 0.039 13 | ²¹¹ Pb(36.1 m) | 404.853(3.78), 832.01(3.52), 427.088(1.76) |
| 244.03 3 | 0.679 25 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 244.07 13 | 0.309 9 | ⁸¹ Rb(4.576 h) | 190.38(64.0), 446.15(23.2), 510.31(5.3) |
| 244.1 2 | †3.1 3 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| 244.1 2 | †7.6 7 | ¹⁴⁸ Er(4.6 s) | 1653.4(†100), 387.7(†88), 197.1(†71) |
| 244.14 9 | 2.85 9 | ⁷⁰ Se(41.1 m) | 49.51(35.8), 426.15(29), 376.65(9.43) |
| 244.20 20 | 0.23 2 | ⁸⁸ Nb(7.8 m) | 1057.01(89.3), 1082.53(53.9), 399.41(45.7) |
| 244.2 4 | 0.42 13 | ¹⁵⁴ Ho(11.76 m) | 334.6(84), 412.4(15.0), 873.4(12.5) |
| 244.2 3 | 0.018 12 | ¹⁷⁸ Lu(28.4 m) | 93.180(6.0), 1340.8(3.22), 1310.05(1.40) |
| 244.2 1 | †45 4 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 244.2 1 | †0.7 2 | ²²⁵ Fr(4.0 m) | 182.3(†100), 31.50(†91), 225.1(†55) |
| 244.249 5 | 4.30 9 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| • 244.2648 6 | 8.50 24 | ¹⁸³ Ta(5.1 d) | 246.0591(27), 353.9912(11.2), 107.9322(11.0) |
| • 244.2648 6 | 0.408 9 | ¹⁸³ Re(70.0 d) | 162.3219(23.3), 46.4839(7.97), 291.7238(3.05) |
| 244.3 5 | 0.090 16 | ⁶³ Zn(38.47 m) | 669.62(8), 962.06(6.5), 1412.08(0.75) |
| 244.3 2 | †16 3 | ¹⁴⁸ Er(4.6 s) | 1653.4(†100), 387.7(†88), 197.1(†71) |
| 244.31 4 | 0.95 10 | ²⁰⁸ Rn(24.35 m) | 426.78(7.07), 251.05(5.02), 350.026(3.34) |
| 244.38 2 | 0.97 7 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 244.4 5 | 0.094 4 | ⁴⁷ V(32.6 m) | 1793.9(0.19), 159.369(0.107), 1390.4(0.0793) |
| 244.4 1 | 0.049 11 | ²²⁸ Fr(39 s) | 473.7(10.2), 474.0(7.6), 410.40(6.3) |
| 244.41 6 | 0.33 6 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 244.42 10 | 13.3 5 | ⁹² Tc(4.23 m) | 1509.48(101), 773.04(100), 329.71(79.9) |
| • 244.474 5 | 0.19 4 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| 244.49 3 | 3.5 4 | ¹⁸⁴ Ta(8.7 h) | 414.03(72), 252.848(43), 920.932(32.0) |
| 244.5 6 | 0.52 9 | ¹²⁹ Sb(4.40 h) | 812.8(43), 914.6(20.0), 544.7(17.9) |
| 244.52 15 | 0.18 | ¹⁵⁴ Pm(1.73 m) | 2057.76(17.1), 1393.9(14.4), 81.99(12.6) |
| 244.57 8 | 1.10 11 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 244.59 24 | †0.42 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 244.6 | | ¹¹² Ru(1.75 s) | 327.0, 82.4 |
| 244.6 4 | 1.6 5 | ¹⁶⁶ Hf(6.77 m) | 78.76(41), 341.82(4.7), 407.91(4.5) |
| 244.6 1 | 0.16 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 244.6 12 | 0.28 14 | ¹⁸⁶ Pt(2.0 h) | 276.7(0), 611.5(6.0), 635.6(>3.8) |
| • 244.6 | 0.0032 8 | ¹⁹¹ Pt(2.9 d) | 538.90(13.7), 409.44(8.0), 359.90(6.0) |
| 244.6989 100.51 7 | | ¹⁵² Pm(4.1 m) | 121.7824(15.7), 841.586(2.17), 961.06(1.92) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|-----------------------------------|------------------------|---|--|
| 244.6989 10 | | ¹⁵² Pm(13.8 m) | 229.9, 200.6, 63.51 |
| 244.6989 1078 4 | | ¹⁵² Pm(7.52 m) | 121.7824(45), 340.48(31.3), 1097.1(28.7) |
| • 244.6989 107.49 13 | | ¹⁵² Eu(13.542 y) | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| 244.6989 100.0255 6 | | ¹⁵² Eu(9.274 h) | 841.586(14.6), 963.37(12.01), 121.7824(7.21) |
| 244.70 15 †7 | | ¹⁵⁴ Nd(25.9 s) | 151.703(†800), 799.55(†600), 180.693(†510) |
| • 244.7 3 0.009 3 | | ¹⁵⁶ Eu(15.19 d) | 811.79(9.70), 88.9667(8.4), 1230.68(7.98) |
| 244.724 14 1.82 7 | | ²⁰⁴ Po(3.53 h) | 883.984(29.9), 270.068(27.8), 1016.31(24.1) |
| 244.75 6 0.160 8 | | ¹²¹ I(2.12 h) | 212.189(84), 532.08(6.07), 598.74(1.47) |
| 244.80 8 0.55 4 | | ¹⁰⁰ Y(735 ms) | 212.531(73), 118.59(15.4), 665.98(7.7) |
| 244.80 21 0.013 3 | | ¹¹² Ag(3.130 h) | 617.27(43), 1387.67(5.4), 606.49(3.1) |
| 244.8 | | ¹¹² In(14.97 m) | 617.27(4.6), 606.49(1.111), 1253.43(0.218) |
| 244.8 2 0.148 25 | | ¹²⁹ La(11.6 m) | 278.6(25), 110.5(16.9), 457.0(8.0) |
| 244.82 5 0.0077 5 | | ¹⁹⁴ Ir(19.15 h) | 328.455(13.1), 293.545(2.55), 645.157(1.17) |
| • 244.82 5 0.027 4 | | ¹⁹⁴ Au(38.02 h) | 328.455(60), 293.545(10.2), 1468.91(6.3) |
| 244.83 10 0.22 4 | | ¹⁶² Yb(18.87 m) | 163.35(40.0), 118.70(33.6), 576.10(3.24) |
| • 244.832 17 0.0239 11 | | ¹⁴⁷ Eu(24.1 d) | 197.299(27), 121.220(22.9), 677.516(9.8) |
| 244.85 10 †24 2 | | ¹³¹ Ce(10.3 m) | 169.42(†100), 414.25(†68), 119.18(†44) |
| 244.9 2 0.006 4 | | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 244.93 10 0.198 13 | | ¹⁹⁴ Pb(12.0 m) | 581.82(18.8), 1519.45(16.4), 203.82(16.2) |
| • 244.93 2 5.1×10 ⁻⁶ 5 | | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 244.95 15 0.9 3 | | ¹⁸⁷ Pt(2.35 h) | 106.46(9), 201.52(6.4), 110.04(5.7) |
| 245.0 3 0.037 8 | | ¹¹⁶ In(54.41 m) | 1293.54(84.4), 1097.3(56.2), 416.86(28.9) |
| 245.06 14 0.6 3 | | ¹⁸⁷ Pt(2.35 h) | 106.46(9), 201.52(6.4), 110.04(5.7) |
| 245.080 2 1.30 11 | | ¹⁰⁹ Rh(80 s) | 326.868(54), 426.135(7.7), 178.034(7.6) |
| 245.09 3 2.58 18 | | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| • 245.09 3 3.5 4 | | ¹⁸⁹ Re(24.3 h) | 216.663(5.50), 219.395(4.54), 185.85(1.89) |
| • 245.09 3 6 | | ¹⁸⁹ Ir(13.2 d) | 69.537(3.5), 59.053(1.20), 36.202(0.67) |
| 245.10 4 0.31 5 | | ¹³¹ La(59 m) | 108.081(25.0), 417.783(18.0), 365.162(16.9) |
| 245.1 10 >0.037 | | ¹⁹⁹ Tl(7.42 h) | 455.46(12.4), 208.20597(12.3), 247.26(9.3) |
| • 245.129 3 0.0028 15 | | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 245.15 20 †0.27 2 | | ¹⁸⁴ Ir(3.09 h) | 263.97(†100), 119.80(†45), 390.38(†38) |
| 245.154 12 46 3 | | ²⁰⁰ Bi(36.4 m) | 1026.5(100), 462.34(98), 419.70(91) |
| 245.154 12 †5.6 3 | | ²⁰⁰ Bi(31 m) | 1026.5(†110), 462.34(†45.7), 419.70(†26.0) |
| 245.2 5 †0.03 1 | | ¹⁸⁸ Au(8.84 m) | 265.63(†100), 340.04(†23.9), 605.5(†16.3) |
| • 245.2 3 0.010 3 | | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 245.21 15 0.025 5 | | ¹⁰⁵ Ru(4.44 h) | 724.21(47), 469.37(17.5), 676.36(15.7) |
| 245.24 10 0.7 3 | | ⁷⁷ Rb(3.75 m) | 66.52(57), 178.99(22.2), 393.37(9.7) |
| 245.24 4 0.70 5 | | ⁸¹ Sr(22.3 m) | 153.54(33.8), 147.76(30.1), 443.34(17.5) |
| • 245.2400 5 0.410 19 | | ¹⁸³ Ta(5.1 d) | 246.0591(27), 353.9912(11.2), 107.9322(11.0) |
| • 245.2400 5 0.245 19 | | ¹⁸³ Re(70.0 d) | 162.3219(23.3), 46.4839(7.97), 291.7238(3.05) |
| 245.3 4 0.063 19 | | ⁸³ Y(7.08 m) | 35.50(0.44), 882.1(6.30), 489.90(5.53) |
| 245.31 1 79 4 | | ²¹⁰ At(8.1 h) | 1181.39(99.3), 1483.39(46.5), 1436.70(29.0) |
| 245.345 2 †7.8 14 | | ²²⁹ Ac(62.7 m) | 164.522(†100), 569.1(†91), 261.92(†39) |
| • 245.345 2 0.00362 3 | | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 245.37 2 0.75 8 | | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 245.38 46 0.08 3 | | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| 245.39 14 0.051 7 | | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 245.4 1 3.5 3 | | ¹³⁵ Nd(12.4 m) | 204.02(52), 41.43(23), 441.2(14.9) |
| 245.4 3 1.7 3 | | ¹⁹² Hg(4.85 h) | 274.8(50.4), 157.2(7), 306.5(5.4) |
| 245.4 7 0.220 22 | | ¹⁹⁹ Bi(27 m) | 560.1(22.0), 424.85(22), 841.7(11) |
| 245.408 45 0.08 1 | | ¹⁵⁸ Eu(45.9 m) | 944.09(25), 977.131(13.6), 79.5104(11) |
| • 245.422 6 1.24 7 | | ¹¹¹ Ag(7.45 d) | 342.118(7), 96.73(0.20), 620.3(0.019) |
| 245.422 6 0.50 3 | | ¹¹¹ Ag(64.8 s) | 620.3(0.121), 171.28(0.12), 752.7(0.043) |
| • 245.422 6 94 | | ¹¹¹ In(2.8049 d) | 171.28(90), 150.824(0.0028) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|------------------------------------|--|
| 245.5 6 | 0.44 18 | $^{104}\text{Tc}(18.3 \text{ m})$ | 358.0(89), 530.5(15.6), 535.1(14.7) |
| 245.50 10 | 0.270 17 | $^{146}\text{Ce}(13.52 \text{ m})$ | 316.74(56), 218.23(20.8), 264.56(9.0) |
| 245.5 | 0.21 10 | $^{149}\text{Nd}(1.728 \text{ h})$ | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 245.5 4 | \dagger 7 | $^{177}\text{Os}(2.8 \text{ m})$ | 84.7(\dagger 100), 125.4(\dagger 63), 195.8(\dagger 61) |
| 245.5 3 | 0.11 4 | $^{181}\text{Re}(19.9 \text{ h})$ | 365.57(56), 360.70(20), 639.30(6.4) |
| 245.588 25 | 0.60 18 | $^{149}\text{Pr}(2.26 \text{ m})$ | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 245.60 5 | 0.0210 15 | $^{223}\text{Fr}(21.8 \text{ m})$ | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 245.6 1 | 0.0078 9 | $^{231}\text{Pa}(32760 \text{ y})$ | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 245.7 3 | 0.044 11 | $^{103}\text{Tc}(54.2 \text{ s})$ | 346.380(17.5), 136.079(16.6), 562.90(7.0) |
| 245.7 | >0.028 | $^{179}\text{Re}(19.5 \text{ m})$ | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 245.7 4 | 0.16 4 | $^{207}\text{Rn}(9.25 \text{ m})$ | 344.53(46), 747.15(14.2), 402.68(11.9) |
| 245.71 3 | 5.36 20 | $^{66}\text{Ge}(2.26 \text{ h})$ | 43.89(28.7), 381.85(28), 272.97(10.4) |
| 245.72 5 | 0.80 21 | $^{149}\text{Nd}(1.728 \text{ h})$ | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 245.771 4 | 3.7 | $^{155}\text{Sm}(22.3 \text{ m})$ | 104.3346(74.6), 141.4428(1.98), 30.5(0.56) |
| 245.80 8 | 3.1 14 | $^{79}\text{Sr}(2.25 \text{ m})$ | 39.41(28), 105.00(21.8), 413.8(7.6) |
| 245.8 | 4.5 5 | $^{147}\text{Cs}(0.225 \text{ s})$ | 85.2(7.3), 109.7(4.5), 596.0(4.3) |
| 245.8 10 | 0.32 5 | $^{208}\text{Rn}(24.35 \text{ m})$ | 426.78(7.07), 251.05(5.02), 350.026(3.34) |
| • 245.83 9 | 0.0018 4 | $^{95}\text{Tc}(61 \text{ d})$ | 204.117(63.25), 582.082(29.96), 835.149(26.63) |
| 245.88 4 | 0.31 12 | $^{183}\text{Os}(9.9 \text{ h})$ | 1101.94(49.0), 1107.92(22.36), 1034.85(6.02) |
| 245.9 4 | 0.18 4 | $^{119}\text{Cd}(2.69 \text{ m})$ | 292.9(36.8), 343.0(16.9), 1609.7(10.9) |
| 245.9 5 | \dagger 40 4 | $^{119}\text{Cs}(30.4 \text{ s})$ | 169.3(\dagger >100), 314.0(\dagger 47) |
| 245.95 8 | 0.035 9 | $^{133}\text{I}(20.8 \text{ h})$ | 529.872(87.0), 875.329(4.51), 1298.223(2.35) |
| 245.99 6 | 0.027 | $^{227}\text{Ra}(42.2 \text{ m})$ | 27.36(16), 300.07(4.6), 302.65(4.3) |
| • 245.99 6 | 0.0110 15 | $^{231}\text{Pa}(32760 \text{ y})$ | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 246.0 2 | 28 | $^{199}\text{Po}(5.48 \text{ m})$ | 845.7(23), 206.7(5.1), 545.8(4.6) |
| 246.0 1 | 5.06 11 | $^{225}\text{Th}(8.72 \text{ m})$ | 321.4(23), 359.0(4.1), 305.9(4.1) |
| 246 3 | \dagger 0.42 11 | $^{228}\text{U}(9.1 \text{ m})$ | 98.0(\dagger 1.8), 185.7(\dagger 0.32), 152(\dagger 0.21) |
| 246.0 3 | | $^{233}\text{Th}(22.3 \text{ m})$ | 86.477(2.7), 29.374(2.5), 459.222(1.4) |
| • 246.05 9 | 0.0013 5 | $^{155}\text{Tb}(5.32 \text{ d})$ | 86.545(32.0), 105.305(25), 180.103(7.45) |
| • 246.0591 5 27 4 | | $^{183}\text{Ta}(5.1 \text{ d})$ | 353.9912(11.2), 107.9322(11.0), 161.3467(8.9) |
| • 246.0591 5 1.31 4 | | $^{183}\text{Re}(70.0 \text{ d})$ | 162.3219(23.3), 46.4839(7.97), 291.7238(3.05) |
| 246.15 15 | \dagger 8 | $^{197}\text{Ir}(5.8 \text{ m})$ | 469.72(\dagger 100), 430.56(\dagger 61), 815.92(\dagger 45) |
| 246.19 11 | 0.076 12 | $^{183}\text{Au}(42.0 \text{ s})$ | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| • 246.19 20 | \dagger 0.65 24 | $^{227}\text{Th}(18.72 \text{ d})$ | 235.971(\dagger 813), 50.13(\dagger 528), 256.25(\dagger 463) |
| 246.2 3 | 2.12 22 | $^{118}\text{Ag}(2.0 \text{ s})$ | 487.77(57), 677.13(53), 1058.39(14.8) |
| 246.2 2 | 0.183 18 | $^{148}\text{Pr}(2.27 \text{ m})$ | 301.702(61), 1357.78(5.5), 1023.18(4.8) |
| 246.2 2 | 1.80 25 | $^{148}\text{Pr}(2.0 \text{ m})$ | 301.702(95), 450.58(50), 697.61(40) |
| 246.2 3 | >0.10 | $^{161}\text{Tm}(33 \text{ m})$ | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 246.278 19 | 0.119 4 | $^{187}\text{W}(23.72 \text{ h})$ | 685.774(27.3), 479.531(21.8), 72.001(11.14) |
| 246.29 5 | 0.60 14 | $^{105}\text{Tc}(7.6 \text{ m})$ | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 246.3 2 | 0.23 3 | $^{120}\text{Xe}(40 \text{ m})$ | 25.1(30), 72.6(9), 178.1(6.8) |
| • 246.3 5 | | $^{146}\text{Eu}(4.59 \text{ d})$ | 747.2(98), 633.03(43), 634.07(37) |
| 246.4 8 | 0.49 20 | $^{122}\text{In}(10.3 \text{ s})$ | 1140.55(98), 1001.58(50.7), 1190.58(20.5) |
| 246.44 5 | 0.047 5 | $^{130}\text{I}(12.36 \text{ h})$ | 536.09(99), 668.54(96), 739.48(82) |
| 246.45 2 | 0.37 6 | $^{147}\text{La}(4.015 \text{ s})$ | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 246.456 1 | 2.23 10 | $^{199}\text{Pt}(30.80 \text{ m})$ | 542.993(15), 493.772(5.59), 317.056(4.95) |
| • 246.489 16 | 0.0225 9 | $^{160}\text{Tb}(72.3 \text{ d})$ | 879.383(30.01), 298.580(25.51), 966.171(25.21) |
| 246.5 2 | 0.008 4 | $^{157}\text{Eu}(15.18 \text{ h})$ | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| 246.5 5 | 0.42 11 | $^{164}\text{Tb}(3.0 \text{ m})$ | 168.838(25.4), 754.80(23.3), 215.07(21) |
| 246.53 17 | 0.9 3 | $^{168}\text{Lu}(6.7 \text{ m})$ | 198.82(28), 979.22(20), 896.12(15) |
| 246.6 3 | 0.68 4 | $^{146}\text{Ba}(2.22 \text{ s})$ | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 246.66 6 | 1.20 12 | $^{148}\text{Ba}(0.607 \text{ s})$ | 56.08(29.20), 133.53(3.88), 415.78(3.59) |
| 246.7 3 | 0.61 6 | $^{109}\text{Sb}(17.0 \text{ s})$ | 925.4(32), 1062.8(23.9), 664.5(20.1) |
| 246.7 1 | \dagger 1.04 9 | $^{123}\text{La}(17 \text{ s})$ | 92.5(\dagger 100), 937.3(\dagger 43), 153.6(\dagger 43) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-----------------------------|---|--|
| 246.7 3 | 0.16 7 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| • 246.73 10 | $\dagger 2.4 \times 10^4$ 3 | ²⁴¹ Am(432.2 y) | 59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$) |
| 246.771 10 | 0.60 4 | ¹⁸² Os(22.10 h) | 510.056(52), 180.230(33.5), 263.285(6.71) |
| 246.8 2 | 0.12 3 | ¹⁷³ Ta(3.14 h) | 172.2(18), 69.70(5.9), 90.3(5.0) |
| 246.8 2 | $\dagger 1.19$ 7 | ¹⁹² Tl(9.6 m) | 422.8($\dagger 100$), 634.8($\dagger 75.9$), 786.3($\dagger 31.7$) |
| • 246.84 4 | 0.053 3 | ²³⁵ U(7.038 $\times 10^8$ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| 246.87 5 | 42.3 20 | ¹³² Sn(39.7 s) | 340.53(49), 85.58(48.2), 899.04(44.8) |
| 246.88 3 | 0.142 6 | ¹⁴⁵ Ce(3.01 m) | 724.33(59), 62.54(13.33), 1148.03(9.15) |
| • 246.885 12 | 0.632 9 | ¹³¹ Ba(11.50 d) | 496.326(47), 123.805(28.97), 216.078(19.66) |
| 246.90 5 | 0.90 14 | ⁷⁷ Zn(2.08 s) | 189.49(28.1), 473.94(19.7), 1832.0(12.4) |
| 246.90 20 | 0.56 14 | ¹⁰² Zr(2.9 s) | 599.60(13.9), 535.30(10.6), 64.50(8.9) |
| 246.9 1 | $\dagger 79$ 4 | ¹⁰⁵ Nb(2.95 s) | 94.8($\dagger 100$), 309.9($\dagger 41.9$), 137.9($\dagger 38.8$) |
| 246.90 7 | 0.186 23 | ¹³² Ce(3.51 h) | 182.11(77), 155.37(10.5), 216.83(4.95) |
| 246.92 2 | 0.487 12 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 246.92 6 | 3.69 19 | ²⁵⁰ Es(8.6 h) | 828.82(72), 303.41(21.6), 349.4(19.8) |
| 246.96 5 | 1.90 10 | ⁶² Zn(9.186 h) | 596.56(26), 40.84(25.5), 548.35(15.3) |
| 247.0 10 | 0.18 9 | ¹¹⁵ Ag(20.0 m) | 229.08(18), 212.80(4.4), 472.70(4.0) |
| 247.0 3 | 0.29 5 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 247.0 2 | $\dagger 2.7$ 11 | ¹⁵⁵ Tm(21.6 s) | 226.8($\dagger 100$), 531.7($\dagger 20$), 88.1($\dagger 17$) |
| 247.0 2 | $\dagger 28$ 5 | ¹⁵⁵ Tm(45 s) | 88.1($\dagger 100$), 323.2($\dagger 65$), 507.0($\dagger 40$) |
| 247 | 20 3 | ²²⁷ U(1.1 m) | 310(3.6), 259(3.0), 209(2.8) |
| 247.01 8 | 0.114 11 | ²²⁸ Fr(39 s) | 473.7(10.2), 474.0(7.6), 410.40(6.3) |
| 247.08 11 | 0.18 | ⁵³ V(1.61 m) | 1006.14(90), 1289.59(10), 283.14(0.8) |
| 247.1 3 | 0.019 9 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| 247.1 2 | $\dagger 3.1$ 4 | ¹¹⁰ Tc(0.92 s) | 240.67($\dagger 100$), 372.1($\dagger 17.0$), 613.0($\dagger 16.0$) |
| 247.1 | 4.1 4 | ¹⁴⁵ Tb(29.5 s) | 257.8(39), 987.8(37), 537.0(23) |
| 247.1 3 | 15 10 | ¹⁴⁸ Tm(0.7 s) | 646.6(100), 877.4(72), 1002.9(55) |
| 247.1 1 | 0.45 5 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| • 247.155 6 | 0.575 25 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 247.158 15 | 0.0012 | ¹⁶² Tb(7.60 m) | 260.070(37.2), 807.53(42.8), 888.20(38.7) |
| 247.158 15 | 0.06 3 | ¹⁶² Ho(67.0 m) | 185.005(28.6), 1220.0(22.5), 282.864(11.3) |
| 247.2 1 | 0.18 3 | ¹⁴² Gd(70.2 s) | 750.2(11.2), 178.90(11.20), 284.4(6.16) |
| 247.2 7 | 0.012 | ¹⁶¹ Er(3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| • 247.2 3 | 0.056 19 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| • 247.26 7 | 0.018 5 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 247.26 3 | 9.3 5 | ¹⁹⁹ Tl(7.42 h) | 455.46(12.4), 208.20597(12.3), 158.37947(4.96) |
| 247.30 5 | 1.29 8 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| • 247.351 5 | 0.194 3 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 247.4 1 | $\dagger 2.1$ 6 | ¹⁷¹ Hf(12.1 h) | 122.0($\dagger 100$), 662.2($\dagger 83$), 347.18($\dagger 47$) |
| 247.4 3 | $\dagger > 0.27$ | ²³⁰ Ra(93 m) | 72.0($\dagger 100$), 63.0($\dagger 35.4$), 202.8($\dagger 27.3$) |
| 247.4 4 | $\dagger 7.2$ 19 | ²³³ Pu(20.9 m) | 235.4($\dagger 100$), 534.8($\dagger 90.2$), 500.3($\dagger 38.6$) |
| 247.4 2 | $\dagger 2$ | ²⁵⁶ Es(7.6 h) | 861.8($\dagger 100$), 231.1($\dagger 61$), 172.6($\dagger 49$) |
| 247.42 14 | 1.25 10 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| • 247.444 21 | 5.0 3 | ¹⁸² Re(64.0 h) | 229.3220(26), 67.75001(22.2), 1121.3007(22.0) |
| 247.48 2 | 0.75 5 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 247.49 5 | 0.70 6 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 247.5 4 | 0.44 6 | ⁷⁰ Se(41.1 m) | 49.51(35.8), 426.15(29), 376.65(9.43) |
| 247.5 5 | $\dagger 100$ 1 | ¹¹⁷ Pd(4.3 s) | 649.9($\dagger 41$), 323.9($\dagger 37$), 625.9($\dagger 28$) |
| 247.5 3 | 0.029 9 | ¹³⁵ I(6.57 h) | 1260.409(28.90), 1131.511(22.74), 1678.027(9.62) |
| 247.5 5 | | ¹⁴⁴ Gd(4.5 m) | 333.3($\dagger 100$), 2432.6($\dagger 94.8$), 629.5($\dagger 32.4$) |
| 247.5 2 | 0.5 | ¹⁴⁵ Ba(4.31 s) | 96.6(17), 91.9(7), 65.9(5) |
| 247.5 | 0.17 3 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 247.50 5 | 2.8 4 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 247.5 | | ¹⁷¹ Ta(23.3 m) | 49.6($\dagger 100$), 506.4($\dagger 54$), 501.8($\dagger 22.6$) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 247.52 9 | 0.94 10 | ¹⁴⁸ Ce(56 s) | 269.519(17.0), 291.724(16.7), 121.169(13.2) |
| 247.53 10 | 2.7 | ¹¹⁵ Pd(25 s) | 342.71(8), 303.87(7), 396.56(6) |
| 247.53 3 | 2.6 3 | ¹²⁵ Cd(0.57 s) | 1027.53(25.8), 1173.16(25.1), 736.65(12.6) |
| 247.586 3 | 0.39 8 | ²³¹ Ac(7.5 m) | 282.471(39.0), 307.063(30.4), 221.399(16.8) |
| 247.6 1 | 0.85 13 | ¹¹⁹ Ag(2.1 s) | 626.4(13), 366.2(12.1), 399.1(10.9) |
| 247.6 1 | †10.7 5 | ¹⁵² Pr(3.24 s) | 164.2(†100), 284.9(†81.0), 72.40(†38.9) |
| 247.6 1 | 1.67 9 | ¹⁸⁸ Tl(71 s) | 412.7(88), 592.0(61), 504.2(23.3) |
| 247.6 | †2.2 | ¹⁹⁸ Bi(693 s) | 1063.5(†100), 197.6(†80), 562.4(†79) |
| 247.6 4 | 0.040 5 | ²³³ Np(36.2 m) | 312.17(0.7), 298.89(0.44), 546.9(0.280) |
| 247.66 8 | 3.7 4 | ¹⁸⁷ Pt(2.35 h) | 106.46(9), 201.52(6.4), 110.04(5.7) |
| 247.7 3 | †40 5 | ¹¹⁶ Xe(56 s) | 104.5(†100), 310.7(†42), 191.6(†38) |
| 247.70 20 | 0.8 3 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 247.70 20 | >0.32 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 247.75 15 | 0.71 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| • 247.766 15 | 0.035 7 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| 247.77 2 | 1.55 8 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 247.79 7 | 0.00037 3 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 247.79 7 | †244 19 | ²³⁴ Pa(1.17 m) | 1001.03(†837000), 766.38(†294000), 742.81(†80000) |
| • 247.79 7 | 0.109 7 | ²³⁴ Np(4.4 d) | 1558.31(18.72), 1527.21(11.2), 1601.80(9.1) |
| 247.8 3 | 0.71 6 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 247.82 5 | †58 5 | ²²⁹ U(58 m) | 122.51(†100), 88.43(†88), 198.83(†88) |
| 247.84 7 | 3.43 22 | ⁶³ Ga(32.4 s) | 637.04(11), 627.10(10.3), 192.94(5.7) |
| 247.9 2 | 0.77 16 | ¹⁴¹ Sm(22.6 m) | 196.88(74), 431.6(40.4), 777.6(20.3) |
| • 247.91 8 | 0.029 5 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 247.92 10 | 75 | ¹²⁸ Cd(0.34 s) | 857.05(71), 68.02(29), 925.0(9) |
| • 247.925 6 | 6.95 3 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 247.925 6 | 22.1 20 | ¹⁵⁴ Tb(9.4 h) | 123.071(30), 540.18(20), 649.564(10.9) |
| 247.925 6 | 17.9 9 | ¹⁵⁴ Tb(21.5 h) | 123.071(26), 1274.436(10.5), 2187.10(9.9) |
| 247.925 6 | 79 9 | ¹⁵⁴ Tb(22.7 h) | 346.643(69), 1419.81(46), 123.071(43) |
| 247.96 5 | 0.0708 25 | ¹²³ I(13.27 h) | 158.97(83), 528.96(1.39), 440.02(0.428) |
| 248.0 3 | 1.5 | ⁶⁷ As(42.5 s) | 122.7(19.2), 120.8(9.3), 243.6(7.8) |
| 248 | | ⁸² Zr(32 s) | 525, 397, 278 |
| 248 | 100 15 | ¹⁰³ Zr(1.3 s) | 164.05(94), 126.30(84), 120.00(68) |
| 248.0 1 | 0.21 10 | ¹³⁵ Nd(12.4 m) | 204.02(52), 41.43(23), 441.2(14.9) |
| 248 | †8.6 | ¹⁷⁵ Os(1.4 m) | 125.0(†100), 181(†10.8), 170.1(†6.2) |
| 248 1 | 1.67 9 | ¹⁸⁸ Tl(71 s) | 412.7(88), 592.0(61), 504.2(23.3) |
| 248 | 0.008 | ²¹⁰ Rn(2.4 h) | 458.25(1.7), 648.70(0.843), 570.95(0.840) |
| 248.08 10 | 0.23 4 | ¹⁵⁸ Tm(3.98 m) | 192.13(62), 335.10(16.8), 1149.83(7.6) |
| 248.17 9 | 0.14 3 | ²⁰⁵ Po(1.66 h) | 872.39(37), 1001.21(28.8), 849.83(25.5) |
| 248.2 3 | †5.0 15 | ¹⁵⁹ Yb(1.58 m) | 166.16(†500), 177.12(†159), 390.20(†113) |
| • 248.2 3 | 0.121 21 | ¹⁹⁰ Ir(11.78 d) | 186.718(52.4), 605.24(39.9), 518.55(34.0) |
| 248.29 8 | 0.028 3 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 248.30 3 | 0.260 14 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 248.4 | | ¹⁶⁸ Hf(25.95 m) | 183.8(†100), 157.2(†68), 324.1 |
| 248.4 4 | 5.0 5 | ¹⁸³ Lu(58 s) | 1125.3(25.0), 1056.8(16.5), 168.1(7.5) |
| • 248.48 5 | 0.0019 12 | ²⁰⁵ Bi(15.31 d) | 1764.36(1.368), 703.44(31), 987.62(0.585) |
| 248.5 3 | | ¹¹⁸ Ag(2.0 s) | 487.77(57), 677.13(53), 1058.39(14.8) |
| 248.5 2 | †2.6 6 | ¹⁵² Tb(17.5 h) | 344.281(†1500), 586.294(†223), 271.135(†203) |
| 248.5 4 | 0.10 3 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 248.5 5 | | ²⁰² At(0.46 s) | |
| • 248.5 5 | 0.059 3 | ²³³ Pa(26.967 d) | 312.17(38.6), 300.34(6.62), 340.81(4.47) |
| 248.5 5 | 0.00073 6 | ²³³ Np(36.2 m) | 312.17(0.7), 298.89(0.44), 546.9(0.280) |
| 248.51 13 | †39 3 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| 248.53 7 | 4.84 25 | ¹⁶⁶ Lu(2.65 m) | 228.12(77.3), 337.50(41), 367.95(31.4) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|---|---|
| 248.58 1 | 42000 3 | ¹⁵⁸ Er(2.29 h) | 71.91(†23300), 386.84(†111000), 45.5(†35800) |
| 248.6 3 | | ¹²² Ba(1.95 m) | 550.7, 388.7, 231.0 |
| 248.6 4 | 0.08 4 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| • 248.6 1 | 0.0050 25 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 248.64 10 | 0.75 8 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 248.645 22 | 0.107 5 | ¹⁵⁵ Dy(9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| • 248.7 | 0.4 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 248.7 | †6.8 16 | ²²⁹ Ac(62.7 m) | 164.522(†100), 569.1(†91), 261.92(†39) |
| 248.7 2 | 0.59 6 | ²³⁷ Am(73.0 m) | 280.23(47.3), 438.4(8.3), 473.5(4.3) |
| 248.726 6 | †2.5 6 | ²²⁹ Ac(62.7 m) | 164.522(†100), 569.1(†91), 261.92(†39) |
| • 248.726 6 | 0.00143 21 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 248.8 4 | 0.4 3 | ¹⁰⁵ In(5.07 m) | 131.37(41), 260.21(15.7), 604.11(9.2) |
| 248.8 1 | 0.8 3 | ¹⁴¹ Tb(3.5 s) | 293.3(16.8), 343.6(16.3), 198.4(14.8) |
| 248.8 | 0.11 | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 248.8 | 0.07 3 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 248.84 5 | †4.0 2 | ⁸² Ge(4.60 s) | 1091.90(†100), 843.24(†9.3), 951.8(†1.7) |
| • 248.882 6 | 7.2×10 ⁻⁶ 7 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 248.9 5 | 0.033 11 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 248.91 4 | 3.07 18 | ²⁰² Bi(1.72 h) | 960.67(99), 422.18(83.7), 657.49(60.6) |
| 248.95 2 | 1.33 3 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| • 248.95 10 | 0.0050 14 | ²³⁷ Np(2.14×10 ⁶ y) | 29.374(15.0), 86.477(12.4), 94.66(0.6) |
| • 248.962 7 | 0.799 21 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| • 248.962 7 | >0.8 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| • 249.00 15 | †5×10 ⁰³ | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| • 249 2 | 0.025 4 | ²⁵⁴ Es(275.7 d) | 63.0(2.0), 316(0.15), 304(0.07) |
| 249.029 4 | 0.94 5 | ¹⁴⁷ Pr(13.4 m) | 77.9921(15), 314.675(13.2), 641.380(10.0) |
| • 249.03 3 | 0.0029 4 | ⁹⁹ Mo(65.94 h) | 739.50(12.1), 181.063(6.08), 140.511(4.52) |
| 249.03 4 | 2.14 16 | ²⁰⁴ Bi(11.22 h) | 899.15(98), 374.72(82), 984.02(59) |
| 249.06 17 | †4.6 7 | ¹⁸¹ Pt(51 s) | 289.29(†100), 111.97(†100), 230.15(†92) |
| 249.1 3 | 4.4 4 | ⁶⁹ Ni(11.4 s) | 1871.1(40.9), 679.7(39.7), 1213.0(39.3) |
| 249.1 1 | 0.33 4 | ⁷³ Br(3.4 m) | 64.9(37.0), 336.0(10.4), 699.8(9.1) |
| 249.10 20 | †5.6 7 | ¹⁰⁶ Mo(8.4 s) | 465.70(†100), 54.00(†54), 618.60(†25) |
| 249.1 1 | †18 2 | ¹³⁵ Pm(49 s) | 198.5(†100), 207.2(†70), 463.5(†62) |
| • 249.15 10 | 0.395 21 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 396.00(34.3), 929.01(20.2) |
| 249.2 1 | 1.44 22 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 249.2 2 | 0.8 | ¹⁴⁵ Ho(2.4 s) | 339.8(15), 312.9(14.3), 334.1(13.5) |
| 249.2 | 0.8 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| • 249.2 4 | 0.022 6 | ¹⁵⁶ Tb(5.35 d) | 534.318(66.6), 199.2132(40.9), 1222.36(31.00) |
| 249.22 1 | 2.5 3 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 249.238 11 | 5.8 3 | ¹⁰⁹ Rh(80 s) | 326.868(54), 426.135(7.7), 178.034(7.6) |
| 249.29 3 | 0.37 3 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 249.3 | 3.6 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 249.3 4 | >0.11 | ²⁰⁹ Rn(28.5 m) | 408.32(50.3), 745.78(22.8), 337.45(14.5) |
| 249.3 1 | 0.063 16 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| 249.32 3 | 1.36 12 | ⁹⁰ Kr(32.32 s) | 1118.69(39.0), 121.82(35.5), 539.49(30.8) |
| 249.33 12 | 0.068 9 | ¹⁹⁷ Tl(2.84 h) | 425.84(12.9), 152.22(7.2), 1411.34(4.5) |
| • 249.4 3 | 9.4×10 ⁻⁵ 23 | ⁷⁵ Se(119.779 d) | 264.6584(58.50), 136.0008(58.3), 279.5441(24.79) |
| 249.4 10 | 0.023 14 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| 249.4 2 | 0.14 3 | ¹¹⁷ Cs(8.4 s) | 204.8(15.0), 29.7(9.9), 205.6(6.8) |
| • 249.4 3 | 0.038 10 | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 249.41 6 | 0.047 19 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| • 249.432 8 | 2.813 23 | ¹³¹ Ba(11.50 d) | 496.326(47), 123.805(28.97), 216.078(19.66) |
| 249.49 5 | 0.087 6 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|------------------------------------|---|
| 249.5 5 | $\dagger 28.7$ 29 | $^{88}\text{Se}(1.52 \text{ s})$ | 159.2($\dagger 100$), 259.2($\dagger 82$), 1903.7($\dagger 64$) |
| 249.5 2 | 1.01 24 | $^{117}\text{Ag}(5.34 \text{ s})$ | 135.4(48), 386.8(39.9), 298.1(21.1) |
| 249.5 2 | $\dagger 1$ | $^{139}\text{I}(2.29 \text{ s})$ | 527.7($\dagger 100$), 571.2($\dagger 98$), 536.6($\dagger 67$) |
| • 249.5 2 | 0.012 5 | $^{225}\text{Ac}(10.0 \text{ d})$ | 99.91(1.01), 150.04(0.80), 99.63(0.62) |
| • 249.508 25 | 1.95 12 | $^{153}\text{Tb}(2.34 \text{ d})$ | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 249.52 11 | 0.291 12 | $^{144}\text{Ba}(11.5 \text{ s})$ | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 249.52 15 | 1.01 | $^{154}\text{Pm}(2.68 \text{ m})$ | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 249.563 2 | 1.4 3 | $^{151}\text{Pr}(18.90 \text{ s})$ | 880.19(13), 189.057(11.8), 484.501(11.3) |
| • 249.57 4 | 0.00078 8 | $^{231}\text{Th}(25.52 \text{ h})$ | 25.646(14.5), 84.216(6.6), 89.944(0.94) |
| 249.6 1 | 1.60 9 | $^{207}\text{Po}(5.80 \text{ h})$ | 992.33(59.3), 742.64(28.2), 911.79(16.95) |
| • 249.6 5 | $\dagger 0.49$ | $^{227}\text{Th}(18.72 \text{ d})$ | 235.971($\dagger 813$), 50.13($\dagger 528$), 256.25($\dagger 463$) |
| • 249.6741 100.212 11 | | $^{177}\text{Lu}(6.734 \text{ d})$ | 208.3664(11.0), 112.9498(6.4), 321.3162(0.219) |
| • 249.6741 106.14 18 | | $^{177}\text{Lu}(160.4 \text{ d})$ | 208.3664(57.7), 228.4838(37.0), 378.5029(29.7) |
| • 249.6741 100.031 3 | | $^{177}\text{Ta}(56.56 \text{ h})$ | 112.9498(7.2), 208.3664(0.94), 1057.8(0.29) |
| 249.7 2 | 0.6 1 | $^{128}\text{Sb}(9.01 \text{ h})$ | 753.82(100), 743.22(100), 314.12(61) |
| • 249.7 10 | 0.020 3 | $^{240}\text{Am}(50.8 \text{ h})$ | 987.76(73.2), 888.80(25.1), 98.860(1.5) |
| 249.770 4 | 90 | $^{135}\text{Xe}(9.14 \text{ h})$ | 608.151(2.90), 408.009(0.359), 158.260(0.290) |
| • 249.786 3 | 0.394 16 | $^{77}\text{As}(38.83 \text{ h})$ | 238.996(1.6), 520.639(0.558), 87.8671(0.202) |
| • 249.786 3 | 2.98 7 | $^{77}\text{Br}(57.036 \text{ h})$ | 238.996(23), 520.639(22.4), 297.215(4.16) |
| 249.8 2 | 9.3 8 | $^{105}\text{Mo}(35.6 \text{ s})$ | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 249.8 1 | 0.053 6 | $^{145}\text{Ce}(3.01 \text{ m})$ | 724.33(59), 62.54(13.33), 1148.03(9.15) |
| 249.8 4 | $\dagger 1.1$ 5 | $^{198}\text{Tl}(1.87 \text{ h})$ | 636.4($\dagger 202$), 411.8044($\dagger 202$), 587.2($\dagger 185$) |
| 249.81 12 | 0.278 17 | $^{192}\text{Au}(4.94 \text{ h})$ | 316.50791(58.0), 295.95827(22.3), 2236.89(5.6) |
| • 249.83 4 | 0.142 14 | $^{165}\text{Tm}(30.06 \text{ h})$ | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 249.83 10 | 0.21 3 | $^{183}\text{Ir}(58 \text{ m})$ | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 249.89 18 | 0.0116 25 | $^{139}\text{Cs}(9.27 \text{ m})$ | 1283.23(8.3), 627.24(1.78), 1420.66(0.91) |
| 249.9 | 68 3 | $^{36}\text{Si}(0.45 \text{ s})$ | 175.0(68), 878.2(44), 424.9(32) |
| 249.9 4 | 1.1 | $^{113}\text{Ag}(68.7 \text{ s})$ | 316.3(18), 392.3(11), 298.58(10) |
| 249.94 10 | 0.0205 11 | $^{85}\text{Br}(2.90 \text{ m})$ | 802.41(2.56), 924.63(1.63), 919.06(0.65) |
| • 249.95 20 | 0.0038 11 | $^{170}\text{Lu}(2.00 \text{ d})$ | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 250.00 5 | 0.178 22 | $^{153}\text{Dy}(6.4 \text{ h})$ | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 250.0 | | $^{180}\text{Os}(21.5 \text{ m})$ | 20.1($\dagger 100$), 717.4, 667.0 |
| 250.03 13 | 9.6 5 | $^{167}\text{Dy}(6.20 \text{ m})$ | 569.7(48), 259.33(27.9), 310.26(25.0) |
| 250.1 4 | 0.12 6 | $^{109}\text{Sn}(18.0 \text{ m})$ | 1099.4(30), 649.90(28.0), 1321.3(11.9) |
| 250.1 | 0.5 | $^{147}\text{Ce}(56.4 \text{ s})$ | 268.80(7), 92.9(4.7), 374.23(3.5) |
| 250.1 2 | 21.8 10 | $^{152}\text{Nd}(11.4 \text{ m})$ | 278.5(32), 16.0(8.0), 294.6(3.8) |
| • 250.17 10 | 0.030 4 | $^{194}\text{Au}(38.02 \text{ h})$ | 328.455(60), 293.545(10.2), 1468.91(6.3) |
| 250.20 5 | 1.16 19 | $^{157}\text{Tm}(3.63 \text{ m})$ | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 250.2 1 | 0.74 8 | $^{161}\text{Tm}(33 \text{ m})$ | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 250.2 5 | | $^{167}\text{Ho}(3.1 \text{ h})$ | 346.547(56), 321.336(23.5), 237.873(5.0) |
| • 250.2 5 | 0.0022 5 | $^{167}\text{Tm}(9.25 \text{ d})$ | 207.801(41), 57.0723(4.6), 531.54(1.6) |
| 250.2 | >0.013 | $^{197}\text{Tl}(2.84 \text{ h})$ | 425.84(12.9), 152.22(7.2), 1411.34(4.5) |
| 250.2 1 | 6.0 3 | $^{211}\text{Rn}(14.6 \text{ h})$ | 674.1(45), 1362.9(32.5), 678.4(28.9) |
| 250.3 3 | | $^{122}\text{Ba}(1.95 \text{ m})$ | 550.7, 388.7, 231.0 |
| 250.3 2 | $\dagger 39$ 4 | $^{185}\text{Hg}(21.6 \text{ s})$ | 222.8($\dagger 100.0$), 258.7($\dagger 98$), 212.5($\dagger 58$) |
| 250.31 21 | 0.084 21 | $^{187}\text{Au}(8.4 \text{ m})$ | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 250.332 | 46.3 16 | $^{39}\text{Cl}(55.6 \text{ m})$ | 1267.185(54), 1517.508(39.2), 1091.058(2.42) |
| 250.35 3 | 0.21 4 | $^{210}\text{At}(8.1 \text{ h})$ | 1181.39(99.3), 245.31(79), 1483.39(46.5) |
| 250.35 5 | 0.0204 9 | $^{223}\text{Fr}(21.8 \text{ m})$ | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| 250.35 5 | 0.0204 12 | $^{223}\text{Fr}(21.8 \text{ m})$ | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 250.35 5 | $\dagger 5.7$ 16 | $^{227}\text{Th}(18.72 \text{ d})$ | 235.971($\dagger 813$), 50.13($\dagger 528$), 256.25($\dagger 463$) |
| • 250.35 5 | $\dagger 23$ 3 | $^{227}\text{Th}(18.72 \text{ d})$ | 235.971($\dagger 813$), 50.13($\dagger 528$), 256.25($\dagger 463$) |
| 250.4 1 | 0.067 5 | $^{143}\text{Ba}(14.33 \text{ s})$ | 211.475(25), 798.79(15.6), 980.45(11.55) |
| • 250.43 4 | 0.00065 7 | $^{231}\text{Th}(25.52 \text{ h})$ | 25.646(14.5), 84.216(6.6), 89.944(0.94) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------------|---|---|
| 250.5 2 | $\dagger 22.3 8$ | $^{111}\text{Ru}(2.12 \text{ s})$ | 303.8($\dagger 100$), 211.7($\dagger 77.7$), 382.0($\dagger 41.3$) |
| 250.5 2 | $\dagger 2.0 5$ | $^{129}\text{Sb}(17.7 \text{ m})$ | 759.8($\dagger 100.0$), 657.78($\dagger 92$), 433.76($\dagger 73$) |
| 250.5 3 | 0.0047 | $^{233}\text{Th}(22.3 \text{ m})$ | 86.477(2.7), 29.374(2.5), 459.222(1.4) |
| • 250.5 3 | | $^{237}\text{Np}(2.14 \times 10^6 \text{ y})$ | 29.374(15.0), 86.477(12.4), 94.66(0.6) |
| 250.6 2 | 1.0 | $^{104}\text{Zr}(1.2 \text{ s})$ | 100.9(6), 504.7(5), 445.0(5) |
| 250.62 5 | 0.383 12 | $^{129}\text{Te}(69.6 \text{ m})$ | 27.81(16.3), 459.60(7.70), 487.39(1.42) |
| • 250.62 5 | 0.00039 8 | $^{129}\text{Te}(33.6 \text{ d})$ | 695.88(2.988), 729.57(0.70), 556.65(0.118) |
| 250.68 9 | $\dagger 32.0 22$ | $^{142}\text{Xe}(1.22 \text{ s})$ | 571.83($\dagger 100$), 657.05($\dagger 79$), 538.24($\dagger 77$) |
| 250.69 11 | 0.66 9 | $^{183}\text{Ir}(58 \text{ m})$ | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 250.7 2 | 4.5 4 | $^{192}\text{Pb}(3.5 \text{ m})$ | 1195.4(47), 608.2(17.9), 167.5(13.6) |
| 250.71 5 | 0.038 13 | $^{127}\text{Cs}(6.25 \text{ h})$ | 411.95(62.8), 124.70(11.37), 462.31(5.07) |
| 250.78 5 | 2.10 15 | $^{123}\text{Ag}(0.309 \text{ s})$ | 263.87(35.9), 409.79(13.2), 591.30(8.2) |
| 250.8 6 | 0.018 5 | $^{132}\text{I}(2.295 \text{ h})$ | 667.718(99), 772.60(75.6), 954.55(17.6) |
| 250.826 31 | 0.034 3 | $^{149}\text{Nd}(1.728 \text{ h})$ | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| • 250.83 8 | 0.009 5 | $^{151}\text{Pm}(28.40 \text{ h})$ | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 250.881 8 | 6.7 7 | $^{163}\text{Tb}(19.5 \text{ m})$ | 351.138(26), 389.734(24.3), 494.534(23) |
| 250.89 6 | 2.53 11 | $^{146}\text{Ce}(13.52 \text{ m})$ | 316.74(56), 218.23(20.8), 264.56(9.0) |
| 250.9 1 | 0.67 20 | $^{159}\text{Er}(36 \text{ m})$ | 624.5(33), 649.1(23.4), 205.92(9.7) |
| 250.9 10 | 0.17 3 | $^{201}\text{Bi}(108 \text{ m})$ | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| 250.977 4 | 0.14 | $^{182}\text{Hf}(61.5 \text{ m})$ | 942.80(18.8), 799.64(9.4), 114.3152(6.2) |
| 251.0 5 | 0.51 4 | $^{99}\text{Rh}(4.7 \text{ h})$ | 340.71(70), 617.8(12.0), 1261.2(11) |
| 251.0 2 | 2.7 | $^{118}\text{Pd}(1.9 \text{ s})$ | 125.4(34), 125.4(34), 224.2(20.1) |
| 251.05 4 | 5.02 12 | $^{208}\text{Rn}(24.35 \text{ m})$ | 426.78(7.07), 350.026(3.34), 287.160(2.85) |
| 251.1 4 | 2.6 5 | $^{185}\text{Au}(4.25 \text{ m})$ | 310.6(13), 243.1(6.6), 77.7(6) |
| • 251.1 3 | 0.041 14 | $^{223}\text{Ra}(11.435 \text{ d})$ | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 251.18 9 | $\dagger 1.9 4$ | $^{103}\text{Nb}(1.5 \text{ s})$ | 102.64($\dagger 100$), 641.1($\dagger 55$), 538.5($\dagger 34.0$) |
| 251.2 1 | 19.6 5 | $^{146}\text{Ba}(2.22 \text{ s})$ | 140.7(20.2), 121.2(14.2), 197.0(12.6) |
| • 251.2 5 | | $^{146}\text{Eu}(4.59 \text{ d})$ | 747.2(98), 633.03(43), 634.07(37) |
| 251.2 | 0.13 | $^{164}\text{Tm}(5.1 \text{ m})$ | 208.08(14.6), 314.97(10), 240.49(7.5) |
| 251.2 | $\dagger 100 28$ | $^{182}\text{Hg}(10.83 \text{ s})$ | 170.1($\dagger 100$) |
| 251.2 4 | $\dagger 1.3$ | $^{183}\text{Hg}(9.4 \text{ s})$ | 60.5($\dagger 100$), 159.91($\dagger 21$), 172.70($\dagger 17$) |
| 251.2 3 | $\dagger 8 1$ | $^{185}\text{Pt}(33.0 \text{ m})$ | 229.60($\dagger 100$), 135.3($\dagger 80$), 197.4($\dagger 74$) |
| 251.23 12 | 0.98 10 | $^{187}\text{Au}(8.4 \text{ m})$ | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 251.24 8 | 0.98 11 | $^{184}\text{Pt}(17.3 \text{ m})$ | 154.90(31), 191.97(27), 548.36(23.1) |
| 251.3 2 | $\dagger 1.2$ | $^{101}\text{Y}(448 \text{ ms})$ | 98.3($\dagger 100$), 133.8($\dagger 18.8$), 232.1($\dagger 11.9$) |
| 251.3 3 | 3.04 16 | $^{150}\text{Pr}(6.19 \text{ s})$ | 130.2(32), 722.5(7.0), 852.7(6.1) |
| 251.3 10 | $\dagger 7$ | $^{238}\text{Pa}(2.3 \text{ m})$ | 1015.3($\dagger < 100$), 1014.6($\dagger < 100$), 635.18($\dagger 88$) |
| 251.38 13 | 0.28 6 | $^{133}\text{Te}(55.4 \text{ m})$ | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 251.4 3 | 0.031 12 | $^{133}\text{Te}(12.5 \text{ m})$ | 312.072(62), 407.63(27.1), 1333.21(10.67) |
| 251.4 | 0.13 | $^{147}\text{Ba}(0.893 \text{ s})$ | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 251.4 5 | 0.26 15 | $^{193}\text{Au}(17.65 \text{ h})$ | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| 251.46 4 | 2.24 15 | $^{132}\text{Ce}(3.51 \text{ h})$ | 182.11(77), 155.37(10.5), 216.83(4.95) |
| • 251.46 15 | 0.033 6 | $^{172}\text{Lu}(6.70 \text{ d})$ | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 251.46 22 | 0.064 11 | $^{200}\text{Pt}(12.5 \text{ h})$ | 76.21(13), 135.90(3.24), 243.71(2.49) |
| 251.47 7 | $\dagger 13.7 9$ | $^{131}\text{Pr}(1.53 \text{ m})$ | 266.13($\dagger 100$), 72.82($\dagger 64$), 387.56($\dagger 38$) |
| 251.47 7 | 0.86 3 | $^{240}\text{Np}(7.22 \text{ m})$ | 554.60(20.9), 597.40(11.7), 1496.9(1.33) |
| • 251.47 7 | 0.005 2 | $^{240}\text{Am}(50.8 \text{ h})$ | 987.76(73.2), 888.80(25.1), 98.860(1.5) |
| • 251.47 7 | $9.8 \times 10^{-6} 15$ | $^{244}\text{Cm}(18.10 \text{ y})$ | 42.824(.0044100), 98.860(.0001470), 152.63($< 4.9 \times 10^{-7}$) |
| • 251.474 17 | 0.084 5 | $^{175}\text{Yb}(4.185 \text{ d})$ | 396.329(6.40), 282.522(3.01), 113.805(1.88) |
| 251.5 10 | 0.19 6 | $^{120}\text{In}(3.08 \text{ s})$ | 1171.3(19), 2039.8(1.86), 703.8(1.42) |
| 251.5 5 | $\dagger 3.3 \times 10^2 14$ | $^{157}\text{Ho}(12.6 \text{ m})$ | 279.97($\dagger 47600$), 341.16($\dagger 37000$), 193.41($\dagger 15200$) |
| 251.5 1 | 55 6 | $^{186}\text{Hg}(1.38 \text{ m})$ | 112.1(63), 191.6(3.7), 227.7(3.0) |
| 251.5 1 | $\dagger 8.8 4$ | $^{230}\text{Ra}(93 \text{ m})$ | 72.0($\dagger 100$), 63.0($\dagger 35.4$), 202.8($\dagger 27.3$) |
| • 251.5 1 | < 0.04 | $^{235}\text{U}(7.038 \times 10^8 \text{ y})$ | 185.712(57.2), 143.764(10.96), 163.358(5.08) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 251.50 10 | 0.0027 5 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| • 251.510 37 | 0.0109 12 | ¹⁴⁹ Eu(93.1 d) | 327.526(4.03), 277.089(3.56), 22.510(2.32) |
| 251.51 6 | 1.24 18 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 251.596 25 | 0.18 3 | ¹⁵⁰ Pm(2.68 h) | 333.971(68), 1324.51(17.5), 1165.739(15.8) |
| • 251.596 25 | 0.173 9 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| 251.6 | †31 | ¹⁰¹ Rb(32 ms) | 271.2(†100), 1091.8(†25), 1362.9(†14) |
| 251.6 2 | 0.022 7 | ¹³⁷ Pr(1.28 h) | 836.7(1.8), 433.9(1.28), 514.0(1.08) |
| 251.6 2 | 0.55 10 | ¹⁸⁴ Au(53.0 s) | 162.97(50), 272.98(40), 362.47(17.5) |
| 251.61 5 | 1.79 19 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 251.628 10 | 0.066 17 | ¹⁵² Pm(4.1 m) | 121.7824(15.7), 841.586(2.17), 961.06(1.92) |
| • 251.628 10 | 0.0626 21 | ¹⁵² Eu(13.542 y) | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| • 251.63 3 | 0.217 16 | ¹⁹³ Os(30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| 251.70 10 | | ¹³¹ Sn(56.0 s) | 3267.5, 2470.5, 2039.25 |
| 251.70 10 | | ¹³¹ Sn(58.4 s) | 367.40, 285.0, 62.9 |
| 251.70 10 | †4.6 8 | ¹³¹ Sn(56.0 s) | 1226.03(†100), 450.03(†90), 798.50(†86) |
| 251.7 2 | †30.6 20 | ²⁰² Po(44.7 m) | 688.6(†1000), 316.0(†286), 165.7(†174) |
| 251.70 | 0.151 16 | ²⁰⁴ Bi(11.22 h) | 899.15(98), 374.72(82), 984.02(59) |
| 251.73 5 | 0.0180 9 | ¹⁶⁵ Dy(1.257 m) | 515.467(1.53), 361.68(0.534), 153.803(0.242) |
| 251.75 20 | 0.045 10 | ¹²⁶ In(1.60 s) | 1141.11(55.9), 3344.61(21.6), 969.61(14.9) |
| 251.75 20 | 0.22 5 | ¹²⁶ In(1.64 s) | 1141.11(100), 908.58(99), 111.79(88) |
| • 251.75 10 | 0.0470 22 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 251.8 2 | 0.086 9 | ¹²³ Cs(5.94 m) | 97.3(23), 596.7(10.1), 83.3(4.1) |
| • 251.8 1 | 0.067 8 | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 251.82 20 | 1.8 9 | ¹⁸¹ Lu(3.5 m) | 652.5(22.0), 205.94(16.1), 574.9(15.4) |
| 251.86 5 | 0.39 5 | ¹⁸³ Os(9.9 h) | 1101.94(49.0), 1107.92(22.36), 1034.85(6.02) |
| 251.863 10 | 26.3 9 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 108.088(24.3), 587.46(15.6) |
| 251.9 | | ¹⁶⁵ Dy(1.257 m) | 515.467(1.53), 361.68(0.534), 153.803(0.242) |
| 251.9 1 | 0.063 16 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| 251.96 34 | 0.12 3 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| • 251.961 5 | 0.28 4 | ²⁰⁰ Tl(26.1 h) | 367.943(87), 1205.717(29.9), 579.298(13.8) |
| 251.99 25 | 0.042 13 | ¹⁸⁹ Pt(10.87 h) | 721.41(9.3), 94.33(7.6), 568.84(7.1) |
| 252.0 2 | 6.2 8 | ⁷⁶ Kr(14.8 h) | 315.7(39), 270.2(21.1), 45.48(19.5) |
| 252 1 | †100 | ¹⁰¹ In(16 s) | 750.3(†61), 420.7(†54), 891.4(†48) |
| • 252.0 10 | 9.0×10^{-5} 7 | ¹¹⁵ Cd(53.46 h) | 336.240(45.9), 527.900(27.45), 492.3(8.03) |
| 252.00 10 | 0.43 9 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 252 | >0.00019 | ¹⁶¹ Ho(2.48 h) | 25.65150(27), 103.062(3.9), 77.414(1.91) |
| 252.0 3 | †2.7 3 | ¹⁶⁴ Hf(111 s) | 122.1(†100), 153.3(†47), 313.7(†22) |
| 252.0 15 | †0.36 | ²⁵⁶ Es(7.6 h) | 861.8(†100), 231.1(†61), 172.6(†49) |
| 252.05 13 | 0.371 16 | ⁸⁶ Y(14.74 h) | 1076.64(83), 627.72(32.6), 1153.01(30.5) |
| 252.067 20 | 5.8 6 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 252.1 3 | 3.0 3 | ⁷⁰ As(52.6 m) | 1039.20(81), 1114.1(21.8), 668.3(21.8) |
| 252.1 3 | 2.56 19 | ¹¹³ Rh(2.72 s) | 189.7(17.0), 409.3(15.9), 219.6(3.88) |
| 252.1 3 | †1.10 11 | ¹⁸² Ir(15 m) | 273.23(†100), 126.79(†77), 236.3(†21.0) |
| 252.12 18 | 1.06 9 | ⁹⁷ Rh(46.2 m) | 189.21(49), 2245.6(14), 421.55(12.7) |
| 252.17 16 | 0.98 24 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| 252.17 20 | 0.48 5 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| • 252.2 1 | >0.08 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 396.00(34.3), 929.01(20.2) |
| 252.2 | †1.5 3 | ¹⁷⁸ Ir(12 s) | 266.1(†100.0), 131.6(†79), 363.1(†39.9) |
| 252.2 2 | †24 3 | ²²⁹ Ac(62.7 m) | 164.522(†100), 569.1(†91), 261.92(†39) |
| 252.2 2 | 0.27 7 | ²³⁷ Am(73.0 m) | 280.23(47.3), 438.4(8.3), 473.5(4.3) |
| 252.2 | 0.15 5 | ²³⁷ Am(73.0 m) | 280.23(47.3), 438.4(8.3), 473.5(4.3) |
| • 252.219 7 | 0.270 6 | ¹⁴⁹ Gd(9.28 d) | 149.735(48.2), 298.634(28.6), 346.651(23.9) |
| 252.23 4 | 0.148 15 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 252.3 3 | 0.10 5 | ¹²⁷ In(1.09 s) | 1597.7(49), 646.1(6.2), 805.1(5.6) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-----------------------------|---|---|
| 252.3 3 | 38 4 | ¹²⁷ In(3.66 s) | 3074(2.85), 948.4(2.73), 832.8(1.98) |
| 252.3 4 | | ¹³² La(24.3 m) | 464.55(22), 663.07(11.6), 285.6(7) |
| 252.3 1 | 0.088 18 | ¹⁴⁹ Tb(4.118 h) | 352.24(29.43), 164.98(26.4), 388.57(18.37) |
| 252.3 5 | 0.34 9 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 252.3 2 | 0.044 22 | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| 252.3 3 | 3.3 | ¹⁵⁹ Er(36 m) | 624.5(33), 649.1(23.4), 205.92(9.7) |
| 252.3 6 | 0.10 | ²⁰³ Bi(11.76 h) | 820.3(30), 825.2(14.6), 896.9(13) |
| • 252.350 6 | 0.096 17 | ²⁰⁰ Tl(26.1 h) | 367.943(87), 1205.717(29.9), 579.298(13.8) |
| 252.35 12 | 0.79 6 | ²⁰⁸ At(1.63 h) | 686.527(98), 660.040(89), 177.595(48.6) |
| • 252.4 3 | 8.5 3 | ¹²⁷ Sb(3.85 d) | 685.7(37), 473.0(25.7), 783.7(15.0) |
| 252.4 5 | 0.062 14 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 252.4 7 | | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 252.4 | †3.8 | ²²⁴ Ac(2.9 h) | 156.4(†100), 140.8(†55), 261.6(†28) |
| • 252.43 3 | 0.095 12 | ²²⁹ Th(7340 y) | 193.509(4.4), 210.853(2.8), 86.40(2.57) |
| 252.44 12 | 0.28 8 | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 252.45 5 | 1.38 8 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 252.45 7 | 1.67 11 | ¹⁴⁸ La(1.05 s) | 158.468(55.6), 989.85(9.3), 760.30(8.6) |
| • 252.5 | | ⁵⁷ Ni(35.60 h) | 1377.63(81.7), 127.164(16.7), 1919.52(12.26) |
| 252.5 4 | 5.9 7 | ⁷² Kr(17.2 s) | 415.1(34.7), 310.0(28.5), 162.2(16.3) |
| 252.50 10 | 1.55 14 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 252.5 2 | †1.6 2 | ¹⁸² Au(21 s) | 154.76(†100), 264.33(†40.0), 855.41(†14.5) |
| 252.5 5 | †2.7 6 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 252.5 2 | 57 6 | ¹⁹¹ Hg(50.8 m) | 420.1(18.6), 578.6(17.6), 274.2(13) |
| 252.5 2 | †100 27 | ¹⁹¹ Hg(49 m) | 196.3(†65), 224.7(†60), 240.9(†44) |
| 252.51 6 | 19.5 10 | ⁹³ Kr(1.286 s) | 253.42(41.2), 323.89(24.1), 266.83(20.6) |
| • 252.53 11 | 3.4×10^{-5} 5 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| • 252.54 7 | $\dagger 3.7 \times 10^3$ 5 | ¹³⁴ Ce(75.9 h) | 162.306(†230000), 130.414(†209000), 39.08(†>150000) |
| • 252.60 3 | 0.134 4 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| 252.6 2 | 1.8 3 | ¹⁵⁸ Yb(1.49 m) | 74.1(54), 160.3(1.13), 147.7(0.92) |
| • 252.6 3 | †6.3 19 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 252.61 10 | 0.69 4 | ²⁰⁸ Tl(3.053 m) | 2614.533(99), 583.191(84.5), 510.77(22.6) |
| 252.65 20 | 0.127 14 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| 252.68 3 | 0.488 24 | ¹⁶¹ Er(3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| 252.69 17 | †8.0 16 | ¹⁸⁷ Hg(1.9 m) | 233.38(†100), 376.34(†38), 240.26(†33) |
| 252.70 5 | 0.117 11 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| 252.7 2 | 13 | ¹²¹ Xe(40.1 m) | 132.8(10.9), 445.2(7.7), 310.5(5.4) |
| 252.7 3 | †<0.15 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 252.7 3 | 0.28 5 | ¹³⁶ Nd(50.65 m) | 108.90(32), 40.2(18.9), 574.8(10.4) |
| • 252.7 5 | | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 252.70 5 | 1.8 3 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 252.7 1 | †7.4 7 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 252.7 2 | †1.3 | ²⁵⁶ Es(7.6 h) | 861.8(†100), 231.1(†61), 172.6(†49) |
| 252.76 4 | 4.9 14 | ¹⁸⁴ Ta(8.7 h) | 414.03(72), 252.848(43), 920.932(32.0) |
| 252.8 3 | 0.27 5 | ¹²⁹ In(0.61 s) | 2118.0(45), 1865.0(32), 769.3(9.1) |
| 252.8 8 | 0.63 14 | ¹⁸⁶ Pt(2.0 h) | 276.7(0), 611.5(6.0), 635.6(>3.8) |
| 252.80 2 | 6 | ²⁴⁵ Am(2.05 h) | 240.86(0.34), 295.72(0.22), 42.88(0.06) |
| • 252.80 2 | 29.1 19 | ²⁴⁵ Bk(4.94 d) | 380.8(2.40), 385.0(0.57), 103.1(0.39) |
| • 252.80 2 | 2.50 8 | ²⁴⁹ Cf(351 y) | 388.16(66), 333.37(14.6), 266.62(0.69) |
| 252.83 7 | 0.14 | ¹³⁷ I(24.5 s) | 1218.00(12.8), 601.05(4.80), 1302.64(4.42) |
| 252.848 5 | 43 3 | ¹⁸⁴ Ta(8.7 h) | 414.03(72), 920.932(32.0), 111.208(23.7) |
| • 252.848 5 | 3.02 25 | ¹⁸⁴ Re(38.0 d) | 903.279(37.9), 792.071(37.5), 111.208(17.1) |
| • 252.848 5 | 10.7 3 | ¹⁸⁴ Re(169 d) | 216.548(9.43), 920.932(8.14), 161.269(6.49) |
| 252.9 3 | 0.050 12 | ¹⁴⁰ Xe(13.60 s) | 805.52(20), 1413.66(12.2), 1315.05(8.2) |
| 252.9 5 | 0.019 16 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 252.9 3 | 0.012 | ²³³ Th(22.3 m) | 86.477(2.7), 29.374(2.5), 459.222(1.4) |
| 252.92 7 | 0.28 3 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 252.963 8 | 13.7 4 | ¹⁵⁹ Ho(33.05 m) | 121.012(36.2), 131.973(23.6), 309.594(17.2) |
| 253.0 1 | †100 | ⁷⁵ Ga(126 s) | 574.8(†31.6), 885.6(†11.1), 177.0(†10.7) |
| 253.0 1 | 0.59 4 | ⁹⁴ Rb(2.702 s) | 1309.1(87), 836.9(87.10), 1577.5(31.8) |
| 253.0 5 | 2.1 5 | ⁹⁸ Rb(96 ms) | 144.224(73), 289.4(68), 3010.5(23.4) |
| 253.0 5 | | ¹²⁷ Ce(32 s) | 58.4(7.3), 177.0, 114.8 |
| 253.00 10 | †7.1 15 | ¹⁶³ Lu(238 s) | 163.08(†100), 54.00(†88), 396.34(†63) |
| 253 | †0.2 | ¹⁸¹ Os(2.7 m) | 144.99(†100), 118.03(†28.3), 1118.8(†4.2) |
| 253 1 | 0.0030 10 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| 253.01 15 | †8.6 14 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| 253.05 8 | 0.060 9 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| • 253.068 4 | 0.611 4 | ⁹⁵ Tc(61 d) | 204.117(63.25), 582.082(29.96), 835.149(26.63) |
| 253.07 4 | †26.0 26 | ¹⁵⁵ Nd(8.9 s) | 180.574(†100), 418.99(†75), 955.08(†50) |
| 253.1 2 | 3.4 23 | ⁹⁸ Y(2.0 s) | 1223.0(80), 620.505(63), 647.58(53) |
| 253.10 5 | 0.10 3 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| 253.1 3 | 4.8 | ¹²⁴ Ba(11.9 m) | 169.3(20), 1216(12), 188.98(10) |
| 253.1 5 | †3 1 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 253.1 5 | 27.0 22 | ¹⁹⁶ Pb(37 m) | 502.1(26.5), 366.5(11.1), 191.7(11.1) |
| • 253.17 2 | 0.850 15 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 253.2 3 | 0.099 9 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 253.2 1 | †343 10 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| 253.2 5 | †4.7 9 | ¹⁹⁵ Pb(15 m) | 883.1(†100), 393.7(†42), 871.0(†36) |
| 253.30 20 | †57 | ¹⁰⁶ Sn(115 s) | 386.8(†100), 477.5(†62), 1190.0(†33) |
| 253.3 2 | 6.2 13 | ¹⁴⁰ Gd(15.8 s) | 174.8(76), 749.9(70), 379.0(38) |
| 253.3 | 0.7 | ¹⁴⁷ Ce(56.4 s) | 268.80(7), 92.9(4.7), 374.23(3.5) |
| 253.3 7 | 0.198 22 | ¹⁹⁹ Bi(27 m) | 560.1(22.0), 424.85(22), 841.7(11) |
| 253.36 13 | 1.9 3 | ⁷⁵ Rb(19.0 s) | 178.98(<63), 178.97(>51), 187.21(8.7) |
| 253.4 1 | 0.21 3 | ¹⁰⁰ Zr(7.1 s) | 504.25(31), 400.48(19.2), 498.0(0.72) |
| 253.4 2 | 6 | ¹¹⁵ Rh(0.99 s) | 127.9(64.6), 125.6(33.3), 296.5(17) |
| 253.4 2 | †80 | ¹⁴⁷ Dy(40 s) | 365.1(†100), 1388.0(†60), 100.7(†60) |
| 253.4 2 | | ¹⁵¹ Ho(35.2 s) | 100.7 |
| 253.4 2 | | ¹⁵¹ Ho(47.2 s) | 100.7 |
| 253.4 1 | 7.0 3 | ¹⁴⁹ Dy(4.20 m) | 100.8(15.2), 789.4(11.8), 1776.3(11.1) |
| 253.4 3 | †15 5 | ¹⁵⁹ Yb(1.58 m) | 166.16(†500), 177.12(†159), 390.20(†113) |
| 253.4 1 | 0.35 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 253.4 1 | †1.9 3 | ²²⁵ Fr(4.0 m) | 182.3(†100), 31.50(†91), 225.1(†55) |
| 253.42 5 | 41.2 22 | ⁹³ Kr(1.286 s) | 323.89(24.1), 266.83(20.6), 252.51(19.5) |
| 253.420 30 | 0.145 9 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| 253.43 7 | †16.2 15 | ¹⁶⁵ Lu(10.74 m) | 132.49(†100), 120.60(†100), 174.25(†47.0) |
| 253.45 13 | 0.32 3 | ⁶⁷ Ge(18.9 m) | 167.01(84), 1472.48(4.9), 910.92(3.1) |
| 253.45 5 | 4.4 4 | ¹²⁴ In(2.4 s) | 1131.64(100), 969.94(52), 1072.85(47) |
| • 253.45 5 | 0.064 14 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 253.50 7 | 3.64 20 | ⁹⁹ Nb(2.6 m) | 97.785(7), 2641.3(3.64), 2851.5(3.05) |
| 253.5 5 | †0.13 2 | ¹⁸⁸ Au(8.84 m) | 265.63(†100), 340.04(†23.9), 605.5(†16.3) |
| 253.54 5 | 0.57 5 | ²²¹ Rn(25 m) | 186.38(21.6), 150.04(4.5), 216.90(2.6) |
| • 253.54 5 | 0.123 5 | ²²⁵ Ac(10.0 d) | 99.91(1.01), 150.04(0.80), 99.63(0.62) |
| • 253.56 10 | 0.0030 12 | ¹⁹⁴ Au(38.02 h) | 328.455(60), 293.545(10.2), 1468.91(6.3) |
| 253.6 3 | 0.0025 10 | ²³⁰ Ac(122 s) | 454.95(8), 508.20(5.15), 1243.9(3.50) |
| • 253.6 3 | 0.022 8 | ²³⁰ Pa(17.4 d) | 951.95(1.65), 918.48(8.2), 454.95(6.27) |
| 253.67 15 | | ¹⁸⁹ Au(28.7 m) | 713.17(†100), 812.68(†63), 447.65(†55) |
| 253.68 1 | 1.30 14 | ¹¹⁸ In(8.5 s) | 1229.68(1.4), 1050.69(1.37), 41.0(0.25) |
| 253.68 1 | 99 6 | ¹¹⁸ Sb(5.00 h) | 1229.68(100), 1050.69(97), 41.0(30.0) |
| 253.69 6 | 0.119 12 | ¹²² Xe(20.1 h) | 350.065(7.80), 148.612(2.62), 416.633(1.87) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|--|---|
| 253.70 7 | 2.356 24 | ⁷³ Se(39.8 m) | 67.03(2.59), 84.0(2.03), 393.43(1.626) |
| 253.7 2 | †18.6 19 | ¹⁰⁵ Nb(2.95 s) | 94.8(†100), 246.9(†79), 309.9(†41.9) |
| 253.7 1 | 0.53 4 | ¹⁴² Ba(10.6 m) | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| 253.7 2 | †1.30 13 | ¹⁷¹ Ta(23.3 m) | 49.6(†100), 506.4(†54), 501.8(†22.6) |
| 253.73 1 | 22.3 15 | ²²⁶ Fr(48 s) | 186.05(16.3), 253.9(2.5), 1322.5(2.18) |
| • 253.73 1 | 5.7 4 | ²²⁶ Ac(29 h) | 186.05(4.8), 67.67(0.11) |
| • 253.73 1 | 0.0111 5 | ²³⁰ Th(7.538×10 ⁴ y) | 67.67(0.376), 143.87(0.0486), 186.05(0.0088) |
| 253.8 1 | 8.0 4 | ¹²⁹ La(11.6 m) | 278.6(25), 110.5(16.9), 457.0(8.0) |
| 253.8 2 | 0.33 7 | ¹⁵³ Ho(2.0 m) | 295.8(67), 637.0(5.36), 688.5(3.7) |
| 253.8 3 | 0.53 4 | ¹⁸⁸ Hg(3.25 m) | 66.7(63), 190.1(4.40), 82.7(2.6) |
| 253.8 3 | 0.4 | ²⁰⁷ Hg(2.9 m) | 351.059(77), 997.1(69), 1637.1(30) |
| 253.821 9 | 0.59 3 | ²⁰⁴ Po(3.53 h) | 883.984(29.9), 270.068(27.8), 1016.31(24.1) |
| 253.9 5 | 1.4 3 | ⁷⁵ Zn(10.2 s) | 228.67(28.9), 432.29(20.2), 155.94(17.2) |
| 253.9 2 | | ¹³⁰ Pr(40.0 s) | 951.9, 499.0, 1405 |
| 253.9 2 | | ¹³¹ Nd(27 s) | |
| 253.9 2 | 0.00038 6 | ¹⁶³ Er(75.0 m) | 1113.5(0.0490), 436.1(0.0285), 439.94(0.0276) |
| 253.9 1 | †100 | ¹⁷² Re(15 s) | 350.5(†55), 123.2(†45), 419.3(†10) |
| 253.9 1 | †74 | ¹⁷² Re(55 s) | 123.2(†100), 743.0(†19), 350.5(†>3.7) |
| 253.9 1 | 2.5 7 | ²²⁶ Fr(48 s) | 253.73(22.3), 186.05(16.3), 1322.5(2.18) |
| • 253.9 1 | 0.00085 9 | ²³⁰ Th(7.538×10 ⁴ y) | 67.67(0.376), 143.87(0.0486), 253.73(0.0111) |
| 253.91 13 | 0.12 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 253.94 2 | 2.53 17 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 253.95 15 | 12.6 8 | ¹⁰² Sr(69 ms) | 243.80(53), 150.15(18.0), 93.89(13.4) |
| 254 2 | 0.9 5 | ⁷⁶ Rb(39.1 s) | 2571.3(47), 424.0(43.4), 355.6(8.2) |
| 254.0 2 | 0.24 7 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 254.05 14 | 0.019 9 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| • 254.09 4 | 0.0095 5 | ¹⁴⁷ Eu(24.1 d) | 197.299(27), 121.220(22.9), 677.516(9.8) |
| 254.1 6 | >0.11 | ¹⁴¹ Xe(1.73 s) | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| 254.1 | >0.28 | ¹⁵² Ho(49.5 s) | 647.2(92), 613.8(88.4), 683.3(88) |
| 254.17 14 | 1.14 7 | ⁹⁷ Zr(16.91 h) | 743.36(93), 507.64(5.03), 1147.97(2.61) |
| 254.2 3 | 1.8 | ²²¹ Rn(25 m) | 264.68(0.94) |
| 254.228 22 | 0.085 3 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 254.259 17 | 8.58 22 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| • 254.26 3 | 0.169 16 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 254.3 3 | | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 254.3 4 | 1.9 4 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 254.39 2 | 2.415 25 | ¹⁴³ Ba(14.33 s) | 211.475(25), 798.79(15.6), 980.45(11.55) |
| • 254.39 24 | 0.056 16 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 254.4 2 | 0.18 6 | ¹⁰¹ Zr(2.1 s) | 119.3(10.8), 205.6(6.0), 912.2(3.48) |
| • 254.4 1 | 0.010 8 | ¹²⁴ Sb(60.20 d) | 602.730(97.8), 1690.980(47.3), 722.786(10.76) |
| 254.4 | 0.21 4 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 254.4 4 | †3.0 6 | ¹⁷² W(6.6 m) | 38.9(†100), 423.3(†44), 89.8(†33.0) |
| 254.4 2 | 0.035 9 | ¹⁷³ Ta(3.14 h) | 172.2(18), 69.70(5.9), 90.3(5.0) |
| 254.4 2 | 0.84 12 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 254.4 2 | 13.3 13 | ¹⁸⁵ Ir(14.4 h) | 1828.8(10), 60.0(5.7), 97.4(4.2) |
| 254.4 3 | †2.9 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 254.4 3 | 0.069 20 | ²²³ Ac(2.10 m) | 98.58(0.891), 191.3(0.58), 83.55(0.57) |
| • 254.418 3 | 0.110 6 | ²³⁹ Np(2.3565 d) | 106.125(27.2), 277.599(14.38), 228.183(10.76) |
| 254.418 3 | 0.084 6 | ²³⁹ Am(11.9 h) | 277.599(15.0), 228.183(11.3), 209.753(3.50) |
| • 254.418 3 | 0.110 10 | ²⁴³ Cm(29.1 y) | 277.599(14.0), 228.183(10.6), 209.753(3.29) |
| 254.43 17 | 1.778 23 | ⁷⁷ Rb(3.75 m) | 66.52(57), 178.99(22.2), 393.37(9.7) |
| 254.43 8 | 9.8 4 | ¹⁵⁹ Sm(11.37 s) | 189.79(46), 861.97(18.2), 797.2(6.1) |
| 254.46 14 | 0.218 10 | ⁹⁵ Ru(1.643 h) | 336.43(70.2), 1096.76(21.0), 626.77(17.8) |
| 254.5 3 | 0.59 9 | ⁷⁷ Rb(3.75 m) | 66.52(57), 178.99(22.2), 393.37(9.7) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|--|
| 254.5 5 | 0.29 10 | ²⁰⁸ At(1.63 h) | 686.527(98), 660.040(89), 177.595(48.6) |
| • 254.566 23 | 0.0053 3 | ¹⁴⁹ Pm(53.08 h) | 285.95(3.1), 859.46(0.109), 590.88(0.069) |
| • 254.566 23 | 0.636 12 | ¹⁴⁹ Eu(93.1 d) | 327.526(4.03), 277.089(3.56), 22.510(2.32) |
| 254.6 1 | 1.20 14 | ¹³⁹ Nd(5.50 h) | 113.94(40), 737.96(35), 982.2(26.4) |
| 254.61 20 | 0.22 | ¹¹³ Pd(93 s) | 95.74(3.3), 643.7(3.0), 739.63(2.4) |
| 254.68 9 | 0.0063 9 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 254.68 9 | †49 33 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 254.7 | | ¹³¹ La(59 m) | 108.081(25.0), 417.783(18.0), 365.162(16.9) |
| 254.7 2 | †0.5 1 | ¹³⁶ Pm(107 s) | 373.8(†100), 602.7(†38.4), 857.2(†23.4) |
| 254.7 2 | 0.21 6 | ¹⁶⁷ Ho(3.1 h) | 346.547(56), 321.336(23.5), 237.873(5.0) |
| 254.74 15 | 0.211 6 | ⁷⁷ Ge(11.30 h) | 264.44(54), 211.03(30.8), 215.50(28.6) |
| 254.74 13 | 0.023 9 | ¹³⁵ I(6.57 h) | 1260.409(28.90), 1131.511(22.74), 1678.027(9.62) |
| 254.74 7 | 1.25 19 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 254.76 4 | 4.72 23 | ⁸³ Zr(44 s) | 55.55(8), 104.97(5.70), 475.1(5.1) |
| 254.794 15 | †1.18 7 | ¹⁵³ Pm(5.4 m) | 35.842(†100), 127.298(†75), 28.309(†34.6) |
| 254.83 5 | 0.70 7 | ⁹³ Kr(1.286 s) | 253.42(41.2), 323.89(24.1), 266.83(20.6) |
| 254.88 12 | 0.066 10 | ¹⁰⁵ Ru(4.44 h) | 724.21(47), 469.37(17.5), 676.36(15.7) |
| 254.89 11 | †4.0 7 | ¹⁶⁵ Lu(10.74 m) | 132.49(†100), 120.60(†100), 174.25(†47.0) |
| 254.90 30 | 7 | ¹¹⁶ Ag(10.4 s) | 513.39(92), 705.82(61), 1028.90(30.4) |
| 254.9 2 | 0.32 7 | ¹²⁹ La(11.6 m) | 278.6(25), 110.5(16.9), 457.0(8.0) |
| 254.9 2 | †100 10 | ¹³⁶ Eu(3.3 s) | 431.4(†34), 458.0(†20), 778.0(†17) |
| 254.9 2 | 1.0 | ¹⁴⁵ Ba(4.31 s) | 96.6(17), 91.9(7), 65.9(5) |
| 254.94 5 | 0.59 6 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 255.0 1 | 0.053 7 | ¹⁶⁵ Yb(9.9 m) | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 255.0 4 | 0.33 7 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| • 255 | 0.2 | ²⁵¹ Cf(898 y) | 176.6(17.7), 227.0(6.3), 285.0(1.4) |
| 255.0 2 | 0.11 3 | ²⁴⁹ Es(102.2 m) | 379.5(40.4), 813.2(9.2), 375.1(3.3) |
| 255.04 8 | 0.62 9 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| • 255.06 5 | 1.82 6 | ¹¹³ Sn(115.09 d) | 391.690(64), 638.03(0.00095), 382.6(>0.000060) |
| 255.1 2 | 0.237 20 | ¹³² I(2.295 h) | 667.718(99), 772.60(75.6), 954.55(17.6) |
| 255.1 3 | >0.020 | ¹³² I(2.295 h) | 667.718(99), 772.60(75.6), 954.55(17.6) |
| 255.1 6 | 0.009 5 | ¹⁴¹ Ba(18.27 m) | 190.328(46.0), 304.194(25.4), 276.948(23.4) |
| 255.10 15 | †51 5 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 255.1 4 | 0.05 3 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 255.11 2 | 0.236 7 | ¹³⁹ Pr(4.41 h) | 1347.33(0.47), 1630.67(0.343), 1375.56(0.154) |
| 255.13 14 | †8.9 18 | ¹⁸⁷ Hg(1.9 m) | 233.38(†100), 376.34(†38), 240.26(†33) |
| 255.16 3 | 1.56 7 | ⁸¹ Sr(22.3 m) | 153.54(33.8), 147.76(30.1), 443.34(17.5) |
| 255.19 10 | 0.49 4 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| 255.2 3 | 0.17 5 | ¹⁰¹ Zr(2.1 s) | 119.3(10.8), 205.6(6.0), 912.2(3.48) |
| 255.2 | †19 1 | ¹⁴⁸ Er(4.6 s) | 1653.4(†100), 387.7(†88), 197.1(†71) |
| 255.2 3 | †14 4 | ¹⁵³ Nd(28.9 s) | 418.3(†100), 105.4(†36), 475.2(†33) |
| • 255.20 12 | 0.0043 9 | ¹⁶⁶ Ho(1.20×10 ³ y) | 184.410(72.6), 810.276(58.08), 711.683(55.32) |
| 255.2 2 | 1.02 14 | ¹⁷⁶ Tm(1.9 m) | 189.57(44.5), 1069.3(34), 381.8(21.8) |
| 255.2 3 | †1.5 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| • 255.23 15 | 0.052 7 | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 255.24 5 | 0.82 7 | ¹⁴¹ Xe(1.73 s) | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| 255.25 10 | 0.0027 | ²³⁹ U(23.45 m) | 74.664(48), 43.533(4.14), 662.24(0.18) |
| 255.3 4 | 0.12 4 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 255.300 12 | 20.5 5 | ¹⁴² Ba(10.6 m) | 1204.3(14.23), 895.2(13.9), 231.611(12.12) |
| 255.3 | | ¹⁹⁰ Hg(20.0 m) | 142.6(68), 171.5(4.8), 154.7(2.5) |
| 255.3 2 | †3.0 | ²⁵⁶ Es(7.6 h) | 861.8(†100), 231.1(†61), 172.6(†49) |
| • 255.35 13 | 0.0223 14 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| • 255.370 15 | 8.0×10 ⁻⁵ 1 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 255.39 5 | 0.039 14 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|------------------------|--|---|
| • 255.4 5 | 0.025 7 | ⁶⁹ Ge(39.05 h) | 1107.01(36), 574.17(13.3), 872.14(11.9) |
| 255.4 3 | 0.0117 20 | ¹¹⁰ In(69.1 m) | 657.7622(98), 2129.53(2.13), 2211.49(1.76) |
| 255.4 3 | †0.47 7 | ¹¹¹ Rh(11 s) | 275.4(†100.0), 411.8(†9.42), 230.0(†8.9) |
| 255.4 3 | 0.38 3 | ¹⁵² Tb(4.2 m) | 344.281(20.8), 411.115(18.8), 471.9(12.2) |
| 255.4 1 | 9.1 15 | ¹⁹⁴ Tl(32.8 m) | 636.5(99), 428.0(99), 748.9(76) |
| • 255.44 7 | 0.405 15 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 255.44 6 | 0.0053 6 | ¹⁶⁶ Tm(7.70 h) | 778.817(18.9), 2052.36(17.2), 184.410(16.1) |
| • 255.45 3 | 0.026 3 | ²⁴⁹ Cf(351 y) | 388.16(66), 333.37(14.6), 252.80(2.50) |
| 255.5 1 | 0.012 4 | ¹⁹⁹ Tl(7.42 h) | 455.46(12.4), 208.20597(12.3), 247.26(9.3) |
| 255.5 1 | 0.099 5 | ²¹⁰ Rn(2.4 h) | 458.25(1.7), 648.70(0.843), 570.95(0.840) |
| 255.53 10 | | ¹¹⁵ Pd(25 s) | 342.71(8), 303.87(7), 396.56(6) |
| • 255.54 3 | 0.230 17 | ²⁴⁶ Pu(10.84 d) | 43.81(25.0), 223.75(23.5), 179.94(9.7) |
| 255.57 4 | 6.7 6 | ¹⁹³ Au(17.65 h) | 186.17(10.1), 268.22(3.9), 173.52(2.9) |
| 255.6 2 | 0.18 | ¹⁴⁰ Sm(14.82 m) | 225.5(>10), 225.4(10), 140.0(5.0) |
| • 255.6 5 | 0.005 3 | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 255.6 2 | 0.0040 3 | ²⁴⁰ U(14.1 h) | 44.10(1.05), 189.7(0.24), 66.5(0.154) |
| 255.68 1 | 16.4 3 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 1180.89(14.8), 138.89(7.84) |
| 255.7 3 | †7.2 15 | ¹⁰⁹ Tc(0.87 s) | 194.6(†100), 128.7(†51), 96.2(†48) |
| 255.7 2 | †1.4 4 | ²³⁰ Ra(93 m) | 72.0(†100), 63.0(†35.4), 202.8(†27.3) |
| 255.741 30 | 0.85 9 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| • 255.75 16 | 0.0020 3 | ¹⁴⁷ Eu(24.1 d) | 197.299(27), 121.220(22.9), 677.516(9.8) |
| 255.77 5 | 0.18 | ²²⁷ Ra(42.2 m) | 27.36(16), 300.07(4.6), 302.65(4.3) |
| • 255.77 5 | 0.112 5 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| • 255.8 5 | | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 255.86 8 | 1.83 6 | ⁷⁰ Se(41.1 m) | 49.51(35.8), 426.15(29), 376.65(9.43) |
| 255.87 9 | 0.38 3 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 255.87 8 | †119 9 | ²⁰⁰ Au(18.7 h) | 497.77(†123), 367.943(†123), 579.298(†121) |
| 255.92 5 | 0.039 14 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 255.94 2 | 0.495 20 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| • 255.94 4 | 3.9×10^{-5} 6 | ²³³ U(1.592×10^5 y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 256.0 2 | 0.098 20 | ⁹⁵ Rb(377.5 ms) | 352.02(49), 204.02(15.1), 680.7(14.8) |
| 256.0 1 | 2.7 3 | ¹³⁵ Nd(12.4 m) | 204.02(52), 41.43(23), 441.2(14.9) |
| 256.0 2 | †>0.07 | ¹⁶⁰ Ho(5.02 h) | 728.18(†100), 879.383(†65.9), 962.317(†59.1) |
| 256.0 2 | >0.034 | ¹⁶⁰ Ho(25.6 m) | 728.18(46.9), 879.383(26.6), 962.317(25.6) |
| 256 | 0.08 4 | ¹⁷⁵ Ta(10.5 h) | 207.4(14.0), 348.5(12.0), 266.9(10.8) |
| 256.0 4 | 1.40 21 | ¹⁸⁶ Pt(2.0 h) | 276.7(0), 611.5(6.0), 635.6(>3.8) |
| 256.0 2 | 0.35 9 | ²²¹ Rn(25 m) | 186.38(21.6), 150.04(4.5), 216.90(2.6) |
| • 256.0 2 | 0.00033 11 | ²²⁵ Ac(10.0 d) | 99.91(1.01), 150.04(0.80), 99.63(0.62) |
| 256.0 5 | 0.042 3 | ²³³ Np(36.2 m) | 312.17(0.7), 298.89(0.44), 546.9(0.280) |
| 256.10 7 | | ¹²⁶ La(54 s) | 625, 460, 340 |
| 256.1 4 | 0.07 | ¹⁵⁴ Pm(1.73 m) | 2057.76(17.1), 1393.9(14.4), 81.99(12.6) |
| 256.1 4 | 0.006 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 256.1 5 | †4.5 12 | ¹⁸⁹ Au(28.7 m) | 713.17(†100), 812.68(†63), 447.65(†55) |
| • 256.19 10 | 0.0066 17 | ¹⁸⁹ Re(24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| 256.2 1 | 0.70 8 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 256.2 | †11 2 | ²¹⁰ Fr(3.18 m) | 643.8(†100), 817.6(†60), 203.1(†35) |
| 256.24 25 | †49 8 | ¹⁶¹ Lu(77 s) | 110.78(†100), 100.32(†95), 43.7(†70) |
| 256.25 2 | 0.0225 12 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 256.25 2 | †463 24 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 329.851(†178) |
| • 256.3 | >0.006 | ¹⁸⁴ Re(38.0 d) | 903.279(37.9), 792.071(37.5), 111.208(17.1) |
| 256.3 4 | >0.11 | ²⁰⁹ Rn(28.5 m) | 408.32(50.3), 745.78(22.8), 337.45(14.5) |
| 256.4 4 | 0.074 25 | ⁸⁶ Y(14.74 h) | 1076.64(83), 627.72(32.6), 1153.01(30.5) |
| 256.4 2 | 15.9 16 | ¹⁵¹ Er(23.5 s) | 638.3(36), 667.2(17), 100.3(10.7) |
| • 256.45 3 | 9.5 8 | ¹⁸² Re(64.0 h) | 229.3220(26), 67.75001(22.2), 1121.3007(22.0) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| 256.5 2 | 1.63 19 | ¹⁵¹ Ho(35.2 s) | 527.4(63), 775.53(9.2), 209.5(5.69) |
| 256.50 10 | 0.037 6 | ¹⁵⁸ Tm(3.98 m) | 192.13(62), 335.10(16.8), 1149.83(7.6) |
| 256.5 8 | 0.067 19 | ¹⁶⁴ Tm(5.1 m) | 208.08(14.6), 314.97(10), 240.49(7.5) |
| 256.53 8 | 4.4 4 | ²⁰⁶ At(30.0 m) | 700.66(98), 477.10(86), 395.54(48) |
| 256.57 6 | 0.0228 15 | ¹³³ La(3.912 h) | 278.835(2.50), 302.353(1.648), 290.06(1.413) |
| 256.6 3 | 0.17 3 | ⁸¹ Ga(1.221 s) | 216.47(37.4), 828.26(22.1), 711.18(17.6) |
| 256.6 3 | †63 | ¹¹⁹ Pd(0.92 s) | 129.9(†100), 326.1(†52), 69.9(†12) |
| 256.6 2 | 0.5 1 | ¹²⁹ Sn(2.23 m) | 645.13(100), 80.5(6.6), 913.2(5.0) |
| 256.6 2 | 0.051 20 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| • 256.60 4 | 0.0225 14 | ¹⁷¹ Lu(8.24 d) | 739.78(47.8), 19.394(13.7), 667.404(11.04) |
| 256.60 2 | 0.090 24 | ¹⁷⁸ Lu(28.4 m) | 93.180(6.0), 1340.8(3.22), 1310.05(1.40) |
| 256.60 2 | 0.0034 7 | ¹⁷⁸ Ta(9.31 m) | 93.180(1.78), 1350.68(1.18), 1340.8(1.027) |
| 256.63 4 | 0.442 22 | ¹⁰⁰ Sr(202 ms) | 963.85(22.0), 898.50(18.9), 65.46(15.2) |
| 256.68 9 | 0.24 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 256.69 5 | 2.8 4 | ¹²³ Cd(2.10 s) | 371.32(51), 1052.28(24.8), 1438.13(8.3) |
| 256.70 17 | 0.8 3 | ¹⁴⁸ Ba(0.607 s) | 56.08(29.20), 133.53(3.88), 415.78(3.59) |
| 256.7 3 | 0.07 3 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 256.8 4 | 0.02 2 | ¹⁰² Tc(5.28 s) | 475.070(7), 468.59(0.88), 865.5(0.87) |
| • 256.8 4 | †0.021 10 | ¹⁰² Rh(207 d) | 475.070(†47), 628.05(†4.6), 1103.16(†2.99) |
| 256.84 4 | †13.5 14 | ²²⁴ Rn(107 m) | 260.581(†100), 265.806(†93), 202.21(†21.9) |
| • 256.89 7 | 0.0217 20 | ¹⁴⁵ Eu(5.93 d) | 893.73(66), 653.512(15.0), 1658.53(14.9) |
| 256.894 10 | 98 3 | ⁵⁰ Ca(13.9 s) | 1519.30(62.0), 71.552(52), 1590.85(37.8) |
| 256.9 1 | 1.25 15 | ¹¹⁷ Xe(61 s) | 28.5(7.0), 221.3(10.0), 32.3(7.6) |
| 256.9 1 | †65 3 | ¹⁴⁸ Er(4.6 s) | 1653.4(†100), 387.7(†88), 197.1(†71) |
| • 256.9 1 | 0.00087 9 | ¹⁷⁷ Ta(56.56 h) | 112.9498(7.2), 208.3664(0.94), 1057.8(0.29) |
| 256.9 4 | 0.09 5 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 256.93 13 | 98 | ¹⁵² Dy(2.38 h) | |
| 256.99 22 | 0.0010 4 | ¹⁵² Eu(9.274 h) | 841.586(14.6), 963.37(12.01), 121.7824(7.21) |
| 257.087 9 | 3.43 7 | ¹³¹ La(59 m) | 108.081(25.0), 417.783(18.0), 365.162(16.9) |
| 257.09 9 | 0.33 6 | ¹⁴⁸ La(1.05 s) | 158.468(55.6), 989.85(9.3), 760.30(8.6) |
| • 257.09 20 | 0.0064 14 | ²³⁷ Np(2.14×10 ⁶ y) | 29.374(15.0), 86.477(12.4), 94.66(0.6) |
| 257.1 3 | 0.13 | ¹¹³ Pd(93 s) | 95.74(3.3), 643.7(3.0), 739.63(2.4) |
| 257.1 2 | 1.55 18 | ¹⁹⁰ Tl(3.7 m) | 416.4(91), 625.4(82), 731.1(37) |
| 257.17 10 | 4.4 3 | ¹²⁸ In(0.72 s) | 831.54(100), 1168.80(100), 120.54(11.1) |
| 257.17 2 | 4.46 13 | ²⁰⁰ Pb(21.5 h) | 147.63(37.7), 235.63(4.30), 268.38(3.96) |
| 257.2 1 | 0.042 5 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| 257.2 2 | †3.4 11 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| 257.2 4 | 0.13 7 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 257.2 1 | 0.052 21 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 257.3 | †1.0 | ¹⁴⁴ Gd(4.5 m) | 333.3(†100), 2432.6(†94.8), 629.5(†32.4) |
| 257.30 15 | 0.068 | ²³³ Th(22.3 m) | 86.477(2.7), 29.374(2.5), 459.222(1.4) |
| 257.30 | | ²³³ Th(22.3 m) | 86.477(2.7), 29.374(2.5), 459.222(1.4) |
| • 257.30 15 | | ²³⁷ Np(2.14×10 ⁶ y) | 29.374(15.0), 86.477(12.4), 94.66(0.6) |
| • 257.31 5 | | ²⁰⁶ Bi(6.243 d) | 803.10(99), 881.01(66.2), 516.18(40.7) |
| 257.34 4 | 78 3 | ⁹⁰ Mo(5.67 h) | 122.370(64.2), 203.13(6.4), 323.20(6.3) |
| 257.36 10 | 0.0032 10 | ¹⁶⁶ Tm(7.70 h) | 778.817(18.9), 2052.36(17.2), 184.410(16.1) |
| 257.38 8 | 0.079 16 | ²⁰⁴ Bi(11.22 h) | 899.15(98), 374.72(82), 984.02(59) |
| 257.4 3 | †1.10 11 | ¹⁷¹ Ta(23.3 m) | 49.6(†100), 506.4(†54), 501.8(†22.6) |
| 257.46 23 | †3.4 7 | ¹⁸⁷ Hg(1.9 m) | 233.38(†100), 376.34(†38), 240.26(†33) |
| 257.5 1 | 0.14 3 | ¹⁴² Ba(10.6 m) | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| 257.5 1 | 0.137 5 | ¹⁴³ Ba(14.33 s) | 211.475(25), 798.79(15.6), 980.45(11.55) |
| 257.5 3 | 52 20 | ¹⁴⁸ Tm(0.7 s) | 646.6(100), 877.4(72), 1002.9(55) |
| 257.50 20 | 0.33 9 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 257.51 15 | 0.0015 4 | ¹²³ I(13.27 h) | 158.97(83), 528.96(1.39), 440.02(0.428) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|--------------------------|-----------------------------|---|
| 257.52 4 | 87 | ¹¹⁹ I(19.1 m) | 635.86(2.69), 320.53(2.17), 557.24(1.77) |
| 257.52 10 | 0.031 3 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 257.52 10 | 0.113 13 | ²²⁸ Pa(22 h) | 911.205(4.19), 463.005(1.250), 964.770(4.25) |
| 257.6 1 | 7.6 4 | ¹²⁶ Ba(100 m) | 233.6(19.6), 241.0(6.0), 681.8(4.4) |
| 257.6 1 | †26 | ¹⁸⁰ Au(8.1 s) | 153.3(†100), 524.3(†29), 861.3(†22.6) |
| 257.7 1 | 0.08 2 | ¹⁰⁷ Tc(21.2 s) | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| 257.7 3 | 0.11 | ¹⁷⁰ Hf(16.01 h) | 164.78(33), 620.7(23), 120.17(19) |
| • 257.77 11 | 0.00034 3 | ¹⁴⁹ Pm(53.08 h) | 285.95(3.1), 859.46(0.109), 590.88(0.069) |
| 257.8 | 39 4 | ¹⁴⁵ Tb(29.5 s) | 987.8(37), 537.0(23), 1446.8(15) |
| 257.8 2 | 2.3 1 | ¹⁹⁶ Os(34.9 m) | 407.9(5.9), 126.2(5.3), 315.4(2.5) |
| 257.82 4 | 0.44 6 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 257.82 10 | †23 3 | ¹⁵⁷ Yb(38.6 s) | 230.92(†100), 340.7(†90), 241.7(†74) |
| 257.88 5 | †2.38×10 ³ 24 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| 257.9 4 | 1.02 15 | ¹¹³ Rh(2.72 s) | 189.7(17.0), 409.3(15.9), 219.6(3.88) |
| 257.9 10 | 17.4 16 | ¹¹⁹ Cs(43.0 s) | 176.05(29.7), 225.13(26), 259.4(7) |
| 257.9 4 | 1.4 8 | ¹⁴⁰ Pm(5.95 m) | 1028.19(100), 773.74(100), 419.57(92) |
| 257.9 3 | 0.87 5 | ¹⁸⁶ Au(10.7 m) | 191.56(62), 298.67(25.4), 764.89(10.5) |
| 257.95 10 | 0.238 19 | ¹⁹⁴ Pb(12.0 m) | 581.82(18.8), 1519.45(16.4), 203.82(16.2) |
| 257.97 5 | | ¹⁹³ Hg(3.80 h) | 861.11(†100), 1118.84(†64), 789.21(†36) |
| 257.97 5 | 61 6 | ¹⁹³ Hg(11.8 h) | 407.63(25), 573.25(14.2), 932.37(6.7) |
| 257.99 41 | 0.15 5 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| 258.0 3 | 0.033 7 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 258.0 3 | 0.45 11 | ¹⁸⁰ Ir(1.5 m) | 276.4(56), 132.2(38.1), 699.0(13.4) |
| 258 3 | †100 | ¹⁸⁹ W(11.5 m) | 417(†96), 550(†28), 855(†20) |
| 258.04 7 | 0.073 22 | ¹³³ Sb(2.5 m) | 1096.22(43.0), 817.8(18.5), 2755(12.5) |
| 258.067 13 | 0.376 10 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| • 258.11 2 | 0.56 5 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 258.14 11 | 0.072 7 | ¹⁹⁹ Tl(7.42 h) | 455.46(12.4), 208.20597(12.3), 247.26(9.3) |
| 258.2 3 | | ¹²² Ba(1.95 m) | 550.7, 388.7, 231.0 |
| 258.2 1 | †177 15 | ¹⁴¹ Gd(24.5 s) | 198.4(†208), 113.2(†69), 145.0(†46) |
| 258.2 1 | 11.8 12 | ¹⁴¹ Tb(3.5 s) | 293.3(16.8), 343.6(16.3), 198.4(14.8) |
| 258.2 3 | 37.0 22 | ¹⁷⁰ Ho(2.76 m) | 931.3(36.1), 181.6(23.8), 890.2(22) |
| 258.2 1 | †5 1 | ²²⁷ Rn(22.5 s) | 162.14(†100), 739.2(†65), 686.2(†62) |
| 258.2 2 | †3.0 | ²⁵⁶ Es(7.6 h) | 861.8(†100), 231.1(†61), 172.6(†49) |
| 258.21 3 | 3.9 4 | ¹³⁰ Sb(39.5 m) | 793.53(100), 839.49(100), 331.05(78) |
| 258.22 9 | 0.222 12 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| 258.23 7 | †7.28×10 ⁴ 4 | ²³⁴ Pa(1.17 m) | 1001.03(†837000), 766.38(†294000), 742.81(†80000) |
| • 258.23 7 | 0.119 8 | ²³⁴ Np(4.4 d) | 1558.31(18.72), 1527.21(11.2), 1601.80(9.1) |
| • 258.23 7 | 8.5×10 ⁻⁸ 13 | ²³⁸ Pu(87.74 y) | 43.498(0.0395), 99.853(0.00735), 152.720(0.000937) |
| • 258.25 10 | >0.019 | ¹²⁵ Sn(9.64 d) | 1067.10(10), 1089.15(4.59), 822.48(4.28) |
| 258.3 2 | 0.9 2 | ¹²⁹ Sn(2.23 m) | 645.13(100), 80.5(6.6), 913.2(5.0) |
| • 258.311 3 | 0.339 14 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| 258.327 2 | 5.7 2 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 258.36 8 | 0.0135 16 | ¹²⁵ Xe(16.9 h) | 188.418(54), 243.378(30.1), 54.968(6.81) |
| 258.36 4 | 0.32 3 | ¹⁸⁹ Pt(10.87 h) | 721.41(9.3), 94.33(7.6), 568.84(7.1) |
| 258.38 7 | 1.8 | ²²⁷ Ra(42.2 m) | 27.36(16), 300.07(4.6), 302.65(4.3) |
| • 258.38 7 | 0.0024 4 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 258.411 20 | 31.5 6 | ¹³⁸ Xe(14.08 m) | 434.562(20.3), 1768.26(16.7), 2015.82(12.25) |
| • 258.46 20 | 0.0039 16 | ²³³ Pa(26.967 d) | 312.17(38.6), 300.34(6.62), 340.81(4.47) |
| 258.46 20 | 0.098 7 | ²³³ Np(36.2 m) | 312.17(0.7), 298.89(0.44), 546.9(0.280) |
| • 258.46 20 | †1.75×10 ⁶ 13 | ²³⁷ Pu(45.2 d) | 280.40(†870000), 298.89(†7.85×10 ⁶), 320.75(†6.48×10 ⁶) |
| 258.47 6 | 64 | ¹⁴⁶ La(6.27 s) | 924.58(7.45), 702.28(6.43), 666.07(6.18) |
| 258.47 6 | 93 | ¹⁴⁶ La(10.0 s) | 409.86(81), 514.75(31), 502.95(26) |
| 258.47 5 | 0.0025 | ²³⁹ U(23.45 m) | 74.664(48), 43.533(4.14), 662.24(0.18) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| 258.5 | 0.17 | ¹⁴⁵ Ba(4.31 s) | 96.6(17), 91.9(7), 65.9(5) |
| 258.5 3 | †1.5 | ¹⁴⁹ Ce(5.3 s) | 57.7(†100), 380.0(†33.7), 86.4(†20.2) |
| • 258.5 | 0.025 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 258.5 | 0.056 5 | ²¹⁷ At(32.3 ms) | 593.1(0.0120), 334, 455 |
| 258.5 | †8 | ²³⁸ Pa(2.3 m) | 1015.3(†<100), 1014.6(†<100), 635.18(†88) |
| 258.53 15 | | ¹⁰⁸ Mo(1.5 s) | 268.21, 125.5 |
| 258.53 5 | 9.2 7 | ¹²⁶ In(1.64 s) | 1141.11(100), 908.58(99), 111.79(88) |
| 258.54 4 | 1.21 8 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 258.60 20 | 1.0 3 | ¹⁰² Zr(2.9 s) | 599.60(13.9), 535.30(10.6), 64.50(8.9) |
| 258.62 3 | 0.98 4 | ¹⁶¹ Gd(3.66 m) | 360.94(0.59), 314.92(22.7), 102.315(13.9) |
| • 258.7 | 0.04 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 258.7 1 | †98 10 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 212.5(†58), 190.1(†52) |
| 258.79 6 | 0.55 5 | ²¹⁴ Pb(26.8 m) | 351.921(35.8), 295.213(18.5), 241.981(7.50) |
| 258.8 5 | 0.11 3 | ⁷⁴ Ga(8.12 m) | 595.847(91), 2353.46(44.5), 608.353(14.3) |
| 258.8 1 | 1.64 3 | ¹¹³ Ag(5.37 h) | 298.58(10), 316.3(1.343), 672.3(0.87) |
| 258.81 3 | 75 | ¹⁴³ Gd(39 s) | 204.77(19.4), 463.7(9.9), 812.9(5.4) |
| 258.822 11 | 1.84 6 | ¹⁵⁹ Ho(33.05 m) | 121.012(36.2), 131.973(23.6), 309.594(17.2) |
| • 258.89 10 | 0.025 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 258.98 10 | 5.4 6 | ¹⁸⁴ Hg(30.6 s) | 236.18(64), 156.24(58), 295.11(10.3) |
| 258.99 4 | 0.374 9 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| 259 1 | †3.5 3 | ¹⁰³ Mo(67.5 s) | 83.4(†100), 423.91(†69), 45.8(†57) |
| 259.0 2 | 0.0009 4 | ¹²³ I(13.27 h) | 158.97(83), 528.96(1.39), 440.02(0.428) |
| 259.0 1 | | ¹⁵³ Ho(9.3 m) | 108.7(†100), 365.9(†92), 161.5(†83) |
| 259 | 3.0 12 | ²²⁷ U(1.1 m) | 247(20), 310(3.6), 209(2.8) |
| 259.05 6 | 0.20 9 | ¹⁹³ Au(17.65 h) | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| • 259.08 4 | 0.034 5 | ²²⁹ Th(7340 y) | 193.509(4.4), 210.853(2.8), 86.40(2.57) |
| 259.09 7 | 0.237 13 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 259.090 15 | 4.2 11 | ¹⁶⁴ Tb(3.0 m) | 168.838(25.4), 754.80(23.3), 215.07(21) |
| 259.10 10 | | ⁸³ Y(7.08 m) | 35.50(0.44), 882.1(6.30), 489.90(5.53) |
| 259.10 10 | 54 3 | ⁸³ Y(2.85 m) | 421.8(19.5), 494.50(8.1) |
| 259.1 5 | 0.044 7 | ¹⁰⁹ In(4.2 h) | 203.5(74), 623.7(5.5), 1148.9(4.3) |
| 259.2 3 | †82 8 | ⁸⁸ Se(1.52 s) | 159.2(†100), 1903.7(†64), 1744.5(†62) |
| 259.2 1 | †0.50 5 | ¹⁷¹ Ta(23.3 m) | 49.6(†100), 506.4(†54), 501.8(†22.6) |
| 259.21 16 | †1.8 4 | ¹⁸⁷ Hg(1.9 m) | 233.38(†100), 376.34(†38), 240.26(†33) |
| 259.25 20 | 0.93 6 | ¹⁷⁷ W(135 m) | 115.65(50), 426.98(13.2), 1036.4(10.3) |
| 259.3 3 | †1.55 18 | ¹¹¹ Rh(11 s) | 275.4(†100.0), 411.8(†9.42), 230.0(†8.9) |
| 259.3 10 | 0.007 | ¹⁵⁰ Pm(2.68 h) | 333.971(68), 1324.51(17.5), 1165.739(15.8) |
| 259.32 12 | 92 3 | ⁹² Ru(3.65 m) | 213.81(96), 134.57(65.5), 47.46(28) |
| 259.33 13 | 27.9 19 | ¹⁶⁷ Dy(6.20 m) | 569.7(48), 310.26(25.0), 250.03(9.6) |
| • 259.33 4 | 0.00016 3 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 259.351 6 | 0.75 9 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 259.36 82 | 0.061 11 | ¹⁷⁴ Ta(1.05 h) | 206.50(58), 91.00(16.0), 1205.92(4.9) |
| 259.37 5 | 1.61 9 | ¹⁴⁸ Ba(0.607 s) | 56.08(29.20), 133.53(3.88), 415.78(3.59) |
| 259.38 4 | 2.84 5 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 259.4 1 | 7 3 | ¹¹⁹ Cs(43.0 s) | 176.05(29.7), 225.13(26), 257.9(17.4) |
| 259.4 4 | 0.055 16 | ¹²² Xe(20.1 h) | 350.065(7.80), 148.612(2.62), 416.633(1.87) |
| • 259.49 5 | 0.050 25 | ²⁰⁵ Bi(15.31 d) | 1764.36(1.368), 703.44(31), 987.62(0.585) |
| 259.5 | 0.11 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 259.5 1 | 5.8 7 | ¹⁹⁸ Pb(2.40 h) | 290.3(36), 365.4(19), 173.4(18) |
| 259.53 5 | 0.0146 8 | ¹⁶⁵ Dy(2.334 h) | 94.700(3.58), 361.68(0.84), 633.415(0.568) |
| 259.58 4 | 0.0044 3 | ¹³⁵ La(19.5 h) | 480.51(1.5), 874.51(0.164), 587.83(0.1108) |
| 259.65 4 | 0.50 6 | ²⁰⁸ Rn(24.35 m) | 426.78(7.07), 251.05(5.02), 350.026(3.34) |
| 259.7 2 | 0.027 | ²²⁷ Ra(42.2 m) | 27.36(16), 300.07(4.6), 302.65(4.3) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|----------------------------|---|--|
| 259.73 11 | $\dagger 5.4$ 16 | $^{189}\text{Au}(28.7 \text{ m})$ | 713.17($\dagger 100$), 812.68($\dagger 63$), 447.65($\dagger 55$) |
| • 259.737 12 | 1.089 15 | $^{166}\text{Ho}(1.20 \times 10^3 \text{ y})$ | 184.410(72.6), 810.276(58.08), 711.683(55.32) |
| 259.8 3 | 0.46 9 | $^{134}\text{Te}(41.8 \text{ m})$ | 767.20(29.0), 210.465(22.3), 277.951(20.9) |
| 259.8 4 | 0.52 16 | $^{175}\text{Ta}(10.5 \text{ h})$ | 207.4(14.0), 348.5(12.0), 266.9(10.8) |
| 259.862 15 | 0.193 9 | $^{183}\text{Os}(13.0 \text{ h})$ | 381.768(89.6), 114.463(20.63), 167.844(8.81) |
| 259.9 2 | $\dagger 3.0$ 4 | $^{230}\text{Ra}(93 \text{ m})$ | 72.0($\dagger 100$), 63.0($\dagger 35.4$), 202.8($\dagger 27.3$) |
| 260.070 6 | 37.2 4 | $^{162}\text{Tb}(7.60 \text{ m})$ | 807.53(42.8), 888.20(38.7), 185.289(14.4) |
| 260.070 6 | 0.035 14 | $^{162}\text{Ho}(67.0 \text{ m})$ | 185.005(28.6), 1220.0(22.5), 282.864(11.3) |
| 260.09 9 | $\dagger 100$ 4 | $^{126}\text{Cd}(0.506 \text{ s})$ | 428.11($\dagger 83.7$), 688.23($\dagger 5.9$), 555.40($\dagger 4.8$) |
| 260.1 1 | 0.8 3 | $^{135}\text{Nd}(12.4 \text{ m})$ | 204.02(52), 41.43(23), 441.2(14.9) |
| 260.12 5 | 7.3 4 | $^{93}\text{Sr}(7.423 \text{ m})$ | 590.238(67), 875.73(24.1), 888.13(21.8) |
| 260.15 40 | $\dagger 1.0$ 5 | $^{131}\text{Sn}(56.0 \text{ s})$ | 1226.03($\dagger 100$), 450.03($\dagger 90$), 798.50($\dagger 86$) |
| • 260.19 6 | 0.1878 24 | $^{231}\text{Pa}(32760 \text{ y})$ | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 260.2 3 | 0.80 15 | $^{98}\text{Sr}(0.653 \text{ s})$ | 119.353(73), 444.628(39), 428.4(31) |
| • 260.2 | 0.0022 6 | $^{154}\text{Eu}(8.593 \text{ y})$ | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 260.21 9 | 0.048 13 | $^{81}\text{Se}(57.28 \text{ m})$ | 275.988(0.049), 767.1(0.00061), 491.30(0.000089) |
| 260.21 9 | 15.7 7 | $^{105}\text{In}(5.07 \text{ m})$ | 131.37(41), 604.11(9.2), 668.23(7.8) |
| 260.26 15 | 1.40 9 | $^{144}\text{Ba}(11.5 \text{ s})$ | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 260.29 2 | 0.18 4 | $^{145}\text{Cs}(0.594 \text{ s})$ | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 260.3 3 | 0.68 3 | $^{200}\text{Po}(11.5 \text{ m})$ | 671.0(34.0), 617.7(19.7), 434.4(9.3) |
| 260.330 10 | 0.61 11 | $^{163}\text{Tb}(19.5 \text{ m})$ | 351.138(26), 389.734(24.3), 494.534(23) |
| 260.43 7 | 1.35 8 | $^{62}\text{Zn}(9.186 \text{ h})$ | 596.56(26), 40.84(25.5), 548.35(15.3) |
| • 260.46 7 | 0.0428 25 | $^{151}\text{Gd}(124 \text{ d})$ | 153.56(6.20), 243.28(5.60), 174.70(2.96) |
| • 260.48 3 | 0.1555 3 | $^{205}\text{Bi}(15.31 \text{ d})$ | 1764.36(1.368), 703.44(31), 987.62(0.585) |
| • 260.48 3 | 0.7 | $^{209}\text{Po}(102 \text{ y})$ | 262.81(0.225) |
| 260.5 1 | 8.0 4 | $^{71}\text{Br}(21.4 \text{ s})$ | 233.7(6.5), 171.6(6.2), 122.72(5.1) |
| 260.50 11 | 0.39 3 | $^{187}\text{Au}(8.4 \text{ m})$ | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| • 260.5 5 | 0.007 3 | $^{223}\text{Ra}(11.435 \text{ d})$ | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 260.581 17 | $\dagger 100$ 5 | $^{224}\text{Rn}(107 \text{ m})$ | 265.806($\dagger 93$), 202.21($\dagger 21.9$), 328.331($\dagger 17.2$) |
| 260.6 | 0.50 | $^{95}\text{Sr}(23.90 \text{ s})$ | 685.6(23), 2717.3(4.6), 2933.1(4.1) |
| 260.6 4 | 0.0083 25 | $^{139}\text{Cs}(9.27 \text{ m})$ | 1283.23(8.3), 627.24(1.78), 1420.66(0.91) |
| 260.6 2 | 0.16 | $^{140}\text{Sm}(14.82 \text{ m})$ | 225.5(>10), 225.4(10), 140.0(5.0) |
| 260.6 10 | 0.11 11 | $^{172}\text{Ta}(36.8 \text{ m})$ | 214.02(46), 95.23(17.5), 1109.27(12.4) |
| 260.61 25 | | $^{189}\text{Au}(28.7 \text{ m})$ | 713.17($\dagger 100$), 812.68($\dagger 63$), 447.65($\dagger 55$) |
| • 260.65 22 | 9.8×10^{-5} 15 | $^{233}\text{U}(1.592 \times 10^5 \text{ y})$ | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 260.7 2 | $\dagger 129$ 43 | $^{157}\text{Ho}(12.6 \text{ m})$ | 279.97($\dagger 47600$), 341.16($\dagger 37000$), 193.41($\dagger 15200$) |
| • 260.736 6 | 1.321 19 | $^{149}\text{Gd}(9.28 \text{ d})$ | 149.735(48.2), 298.634(28.6), 346.651(23.9) |
| 260.77 6 | 0.0022 | $^{239}\text{U}(23.45 \text{ m})$ | 74.664(48), 43.533(4.14), 662.24(0.18) |
| • 260.80 15 | $\dagger 1.21 \times 10^4$ | $^{241}\text{Am}(432.2 \text{ y})$ | 59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$) |
| • 260.8 | | $^{241}\text{Am}(432.2 \text{ y})$ | 59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$) |
| 260.87 9 | 0.097 10 | $^{165}\text{Yb}(9.9 \text{ m})$ | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| • 260.890 30 | 1.94 1 | $^{115}\text{Cd}(53.46 \text{ h})$ | 336.240(45.9), 527.900(27.45), 492.3(8.03) |
| • 260.890 30 | 0.00092 8 | $^{115}\text{Cd}(44.6 \text{ d})$ | 933.8(2.000), 1290.580(0.890), 484.470(0.290) |
| 260.9 1 | 0.37 4 | $^{161}\text{Tm}(33 \text{ m})$ | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 260.98 2 | 0.43 9 | $^{133}\text{Sb}(2.5 \text{ m})$ | 1096.22(43.0), 817.8(18.5), 2755(12.5) |
| 261.0 1 | 53 | $^{101}\text{Ag}(11.1 \text{ m})$ | 588.0(10.0), 667.3(9.8), 1173.9(8.94) |
| 261.0 3 | 0.64 6 | $^{109}\text{Sb}(17.0 \text{ s})$ | 925.4(32), 1062.8(23.9), 664.5(20.1) |
| 261 | | $^{122}\text{Ba}(1.95 \text{ m})$ | 550.7, 388.7, 231.0 |
| 261.0 3 | $\dagger 0.70$ 13 | $^{144}\text{Cs}(1.01 \text{ s})$ | 199.326($\dagger 100.0$), 639.00($\dagger 21.2$), 758.96($\dagger 20.6$) |
| 261.0 3 | 0.13 3 | $^{153}\text{Dy}(6.4 \text{ h})$ | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| • 261.0 5 | | $^{229}\text{Th}(7340 \text{ y})$ | 193.509(4.4), 210.853(2.8), 86.40(2.57) |
| • 261.07857 12 | 715 11 | $^{169}\text{Yb}(32.026 \text{ d})$ | 63.12077(44.2), 197.95788(35.8), 177.21402(22.16) |
| 261.08 7 | 4.03 22 | $^{205}\text{Po}(1.66 \text{ h})$ | 872.39(37), 1001.21(28.8), 849.83(25.5) |
| 261.1 3 | $\dagger 2.7$ 8 | $^{105}\text{Nb}(2.95 \text{ s})$ | 94.8($\dagger 100$), 246.9($\dagger 79$), 309.9($\dagger 41.9$) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| 261.1 4 | 0.33 12 | ¹⁰⁹ Sn(18.0 m) | 1099.4(30), 649.90(28.0), 1321.3(11.9) |
| • 261.1 1 | 1.98 9 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 396.00(34.3), 929.01(20.2) |
| 261.1 2 | †1.5 4 | ¹⁹⁴ Bi(92 s) | 965.4(†100.0), 575.1(†98.0), 280.1(†73.7) |
| 261.13 4 | 0.011 3 | ¹⁸⁷ W(23.72 h) | 685.774(27.3), 479.531(21.8), 72.001(11.14) |
| 261.19 7 | 0.80 8 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 261.2 2 | 0.448 7 | ⁹¹ Sr(9.63 h) | 1024.3(33), 749.8(23.61), 652.9(8.0) |
| 261.2 3 | 0.24 7 | ¹⁶¹ Yb(4.2 m) | 78.20(34), 599.88(25.9), 631.45(13.9) |
| • 261.29 10 | 13 | ⁷⁹ Kr(35.04 h) | 397.54(9.3), 606.09(8.12), 306.47(2.6) |
| 261.3 5 | 0.036 17 | ¹⁴¹ Xe(1.73 s) | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| 261.32 14 | | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 261.34 20 | 1.25 18 | ¹³⁰ In(0.55 s) | 1221.24(89), 774.37(46), 89.23(20.2) |
| • 261.369 1 | 0.040 6 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 261.396 14 | 1.74 4 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 261.4 4 | 0.019 9 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| • 261.4 2 | 0.020 5 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 261.4 2 | >0.02 | ¹⁷¹ Er(7.516 h) | 308.31(64.4), 295.901(28.9), 111.621(20.5) |
| 261.4 | †0.9 3 | ¹⁷⁸ Ir(12 s) | 266.1(†100.0), 131.6(†79), 363.1(†39.9) |
| 261.4 3 | †1.2 3 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| • 261.42 8 | 0.011 3 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 261.44 3 | 2.32 18 | ²⁰⁴ At(9.2 m) | 684.341(95), 516.318(90), 426.253(67.5) |
| 261.47 3 | 1.668 17 | ¹⁴³ Ba(14.33 s) | 211.475(25), 798.79(15.6), 980.45(11.55) |
| 261.5 | 0.79 8 | ⁴⁰ Cl(1.35 m) | 1460.830(79), 2839.8(30.4), 2621.5(15.4) |
| 261.5 5 | 0.95 10 | ¹²³ Cd(1.82 s) | 1165.86(25.7), 1027.45(22.6), 2102.81(12.5) |
| 261.5 5 | 0.27 7 | ¹⁴⁸ Ho(9.59 s) | 1687.5(82.47), 660.8(58.94), 504.3(18.62) |
| 261.5 1 | 0.08 3 | ¹⁸² Os(22.10 h) | 510.056(52), 180.230(33.5), 263.285(6.71) |
| • 261.53 18 | 0.0057 12 | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 261.54 6 | 0.178 10 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| 261.6 2 | 22.7 9 | ¹⁶⁸ Ta(2.0 m) | 124.0(35.6), 751.4(7.3), 907(5.0) |
| 261.6 | †28 | ²²⁴ Ac(2.9 h) | 156.4(†100), 140.8(†55), 83(†21) |
| 261.626 7 | 7.85 11 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| • 261.66 20 | †1.97×10 ⁶ | ¹²³⁷ Pu(45.2 d) | 280.40(†870000), 298.89(†7.85×10 ⁶), 320.75(†6.48×10 ⁶) |
| 261.7 1 | 2.16 23 | ¹²³ Cs(5.94 m) | 97.3(23), 596.7(10.1), 83.3(4.1) |
| 261.73 5 | 0.156 5 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 261.75 20 | †14.8 22 | ¹⁵⁵ Nd(8.9 s) | 180.574(†100), 418.99(†75), 955.08(†50) |
| 261.75 4 | 1.5 3 | ¹⁹⁵ Hg(9.9 h) | 779.80(7), 61.46(6.2), 585.13(1.99) |
| • 261.75 4 | 30.9 25 | ¹⁹⁵ Hg(41.6 h) | 560.27(7), 387.87(2.15), 200.38(0.79) |
| 261.79 9 | 0.83 10 | ¹²² In(10.3 s) | 1140.55(98), 1001.58(50.7), 1190.58(20.5) |
| 261.8 2 | 5.3 9 | ¹⁴⁰ Gd(15.8 s) | 174.8(76), 749.9(70), 379.0(38) |
| 261.8 | 0.46 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 261.8 | †60 | ¹⁸² Tl(3.1 s) | 351.8(†100), 333.2(†30), 413.6(†20) |
| 261.85 2 | 1.19 22 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 261.88 8 | 1.2 4 | ²⁰³ Po(36.7 m) | 908.64(55), 1090.95(19.2), 893.49(18.7) |
| 261.92 5 | †39 5 | ²²⁹ Ac(62.7 m) | 164.522(†100), 569.1(†91), 146.345(†35) |
| • 261.92 5 | 0.00028 5 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 261.96 3 | 7.9 5 | ¹²¹ In(23.1 s) | 925.57(87), 657.32(7.1), 919.28(4.2) |
| 262.0 3 | 0.063 9 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| • 262.00 5 | 0.56 5 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 262.0 3 | 0.11 | ¹⁷⁰ Hf(16.01 h) | 164.78(33), 620.7(23), 120.17(19) |
| 262.0 1 | 0.80 8 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 262.0 5 | †3.5 10 | ¹⁸⁹ Au(28.7 m) | 713.17(†100), 812.68(†63), 447.65(†55) |
| • 262 | 0.2 | ²⁵¹ Cf(898 y) | 176.6(17.7), 227.0(6.3), 285.0(1.4) |
| 262.01 7 | 0.168 4 | ⁷³ Se(39.8 m) | 67.03(2.59), 253.70(2.356), 84.0(2.03) |
| 262.03 4 | 0.284 19 | ⁸¹ Ga(1.221 s) | 216.47(37.4), 828.26(22.1), 711.18(17.6) |
| 262.04 13 | | ⁸⁸ Nb(14.5 m) | 1082.53(103), 1057.01(100), 671.20(64) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|------------------------|---|---|
| 262.04 13 | 9.65 30 | ⁸⁸ Nb(7.8 m) | 1057.01(89.3), 1082.53(53.9), 399.41(45.7) |
| 262.1 1 | 0.221 23 | ²¹¹ Rn(14.6 h) | 674.1(45), 1362.9(32.5), 678.4(28.9) |
| 262.15 3 | 1.86 20 | ¹²⁵ Cd(0.57 s) | 1027.53(25.8), 1173.16(25.1), 736.65(12.6) |
| 262.2 10 | †2.5 | ¹⁷⁷ Os(2.8 m) | 84.7(†100), 125.4(†63), 195.8(†61) |
| 262.21 19 | 2.9 3 | ⁷⁸ Zn(1.47 s) | 224.75(43.9), 181.68(28.1), 860.30(24.5) |
| 262.22 4 | 10.8 5 | ¹⁶⁴ Lu(3.14 m) | 123.3(34.0), 740.52(12.2), 863.89(9.2) |
| 262.23 3 | 1.13 13 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| • 262.26 10 | †3.4×10 ³ 5 | ¹³⁴ Ce(75.9 h) | 162.306(†230000), 130.414(†209000), 39.08(†>150000) |
| • 262.26 10 | †>3.4×10 ³ | ¹³⁴ Ce(75.9 h) | 162.306(†230000), 130.414(†209000), 39.08(†>150000) |
| • 262.27 5 | 0.0049 5 | ²²⁶ Ra(1600 y) | 186.10(3.50), 600.66(0.00049), 414.60(0.00030) |
| 262.3 5 | †218 35 | ¹⁰⁰ Rh(4.6 m) | 539.59(†5900), 687.0(†3500), 1827.2(†1410) |
| 262.3 2 | †16 2 | ¹³⁵ Pm(49 s) | 198.5(†100), 207.2(†70), 463.5(†62) |
| 262.3 3 | †3.2 13 | ¹⁵⁵ Nd(8.9 s) | 180.574(†100), 418.99(†75), 955.08(†50) |
| • 262.322 2 | 5.29 5 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 262.33 10 | 4.3 5 | ¹⁸⁴ Hg(30.6 s) | 236.18(64), 156.24(58), 295.11(10.3) |
| 262.4 2 | 0.92 4 | ¹⁸⁸ Hg(3.25 m) | 66.7(63), 190.1(4.40), 82.7(2.6) |
| • 262.44 20 | 0.0068 14 | ²³⁷ Np(2.14×10 ⁶ y) | 29.374(15.0), 86.477(12.4), 94.66(0.6) |
| 262.5 4 | †100 9 | ⁸⁷ Mo(13.4 s) | 397.0(†33), 585.5 |
| 262.5 8 | 1.3 4 | ⁹⁰ Tc(49.2 s) | 1054.3(100), 948.1(100), 944.7(36.6) |
| 262.5 4 | 2.37 23 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| • 262.579 3 | 5.8 3 | ¹⁵⁶ Tb(5.35 d) | 534.318(66.6), 199.2132(40.9), 1222.36(31.00) |
| 262.597 18 | 0.780 21 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 262.6 10 | | ¹²⁹ Sn(2.23 m) | 645.13(100), 80.5(6.6), 913.2(5.0) |
| 262.6 3 | 0.66 21 | ¹⁹² Hg(4.85 h) | 274.8(50.4), 157.2(7), 306.5(5.4) |
| 262.60 12 | 0.38 10 | ²⁰⁸ At(1.63 h) | 686.527(98), 660.040(89), 177.595(48.6) |
| 262.61 18 | 0.21 7 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| 262.7 4 | †100 | ⁹¹ Br(0.541 s) | 803.3(†80), 364.8(†40), 185.6(†30) |
| 262.7 | >0.10 | ¹¹⁵ Pd(25 s) | 342.71(8), 303.87(7), 396.56(6) |
| 262.7 2 | 0.13 4 | ¹¹⁹ Ag(2.1 s) | 626.4(13), 366.2(12.1), 399.1(10.9) |
| • 262.70 3 | 3.02 5 | ²⁰⁶ Bi(6.243 d) | 803.10(99), 881.01(66.2), 516.18(40.7) |
| 262.702 12 | 0.359 10 | ¹³³ I(20.8 h) | 529.872(87.0), 875.329(4.51), 1298.223(2.35) |
| 262.8 | 0.7 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 262.80 13 | 0.175 14 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| • 262.81 3 | 0.364 12 | ²⁰⁵ Bi(15.31 d) | 1764.36(1.368), 703.44(31), 987.62(0.585) |
| • 262.81 3 | 0.225 11 | ²⁰⁹ Po(102 y) | 260.48(0.7) |
| 262.83 10 | 6.57 14 | ¹⁰⁵ Ru(4.44 h) | 724.21(47), 469.37(17.5), 676.36(15.7) |
| 262.87 12 | 0.011 3 | ¹⁸⁷ W(23.72 h) | 685.774(27.3), 479.531(21.8), 72.001(11.14) |
| 262.886 9 | 0.0041 3 | ¹⁴⁵ Pr(5.984 h) | 748.278(0.5250), 675.795(0.514), 72.500(0.261) |
| 262.9 1 | 1.28 10 | ¹³² I(2.295 h) | 667.718(99), 772.60(75.6), 954.55(17.6) |
| 262.90 20 | 0.046 9 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 262.91 9 | 0.0045 12 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 262.91 9 | †6.3 7 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 262.94 | 0.0028 3 | ¹⁴⁵ Pr(5.984 h) | 748.278(0.5250), 675.795(0.514), 72.500(0.261) |
| 262.95 8 | 0.118 25 | ¹¹⁶ In(54.41 m) | 1293.54(84.4), 1097.3(56.2), 416.86(28.9) |
| 262.95 7 | 0.94 14 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 262.990 30 | 0.183 9 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| • 263 | >0.00013 | ⁹⁵ Tc(61 d) | 204.117(63.25), 582.082(29.96), 835.149(26.63) |
| 263 | †0.5 | ¹⁸¹ Os(2.7 m) | 144.99(†100), 118.03(†28.3), 1118.8(†4.2) |
| 263.07 7 | 0.069 4 | ¹²¹ I(2.12 h) | 212.189(84), 532.08(6.07), 598.74(1.47) |
| 263.07 15 | 0.037 19 | ¹⁸⁹ Pt(10.87 h) | 721.41(9.3), 94.33(7.6), 568.84(7.1) |
| 263.07 2 | 1.55 10 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 263.1 1 | 4.0 3 | ¹¹⁷ Cs(8.4 s) | 204.8(15.0), 29.7(9.9), 205.6(6.8) |
| 263.1 4 | >0.11 | ²⁰⁹ Rn(28.5 m) | 408.32(50.3), 745.78(22.8), 337.45(14.5) |
| 263.17 5 | 0.0333 22 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------------------|--------------------------|-----------------------------|--|
| • 263.17 5 | 0.0057 7 | ²⁴⁶ Bk(1.80 d) | 798.80(61), 1081.40(5.8), 833.60(5.0) |
| 263.20 8 | 2.76 6 | ⁷⁰ Se(41.1 m) | 49.51(35.8), 426.15(29), 376.65(9.43) |
| 263.2 2 | 1.0 5 | ¹⁰⁴ Ag(69.2 m) | 555.796(92.6), 767.72(65.7), 941.7(25.0) |
| 263.2 3 | †100 4 | ¹¹³ Ru(0.80 s) | 211.7(†31.0), 337.5(†27.9), 657.9(†24.0) |
| 263.207 22 | 1.34 7 | ¹⁵⁷ Sm(482 s) | 197.870(56.00), 196.461(16.8), 394.351(11.93) |
| • 263.23 4 | 0.0096 3 | ¹⁴⁹ Pm(53.08 h) | 285.95(3.1), 859.46(0.109), 590.88(0.069) |
| 263.285 10 | 6.71 21 | ¹⁸² Os(22.10 h) | 510.056(52), 180.230(33.5), 55.506(5.8) |
| 263.37 7 | 1.139 20 | ²⁴⁰ Np(7.22 m) | 554.60(20.9), 597.40(11.7), 1496.9(1.33) |
| • 263.37 7 | 5.4×10 ⁻⁵ 3 | ²⁴⁴ Cm(18.10 y) | 42.824(.0044100), 98.860(.0001470), 152.63(<4.9×10 ⁻⁷) |
| 263.383 14 | 3.65 13 | ¹⁴³ Cs(1.78 s) | 195.554(13), 232.421(8.32), 306.424(6.80) |
| 263.4 | 0.023 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 263.4 3 | 0.22 3 | ¹⁸¹ Au(11.4 s) | 198.60(4.4), 2022.4(4.2), 79.40(4.2) |
| • 263.41 10 | 0.022 4 | ⁵⁶ Co(77.27 d) | 846.771(100), 1238.282(67.6), 2598.459(17.28) |
| 263.5 3 | 0.14 3 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 263.5 2 | 0.23 7 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 263.5 3 | | ¹⁸⁸ Hg(3.25 m) | 66.7(63), 190.1(4.40), 82.7(2.6) |
| 263.51 10 | 0.88 5 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| 263.53 | 0.11 3 | ⁴⁴ K(22.13 m) | 1157.031(58), 2150.76(22.7), 2518.95(9.69) |
| 263.56 2 | 0.87 4 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 263.58 10 | 0.041 4 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 263.58 10 | 0.125 13 | ²²⁸ Pa(22 h) | 911.205(4.19), 463.005(1.250), 964.770(4.25) |
| 263.60 10 | 15.2 7 | ⁹⁹ Pd(21.4 m) | 136.00(73), 673.38(6.9), 1335.6(4.65) |
| 263.7 2 | 4.1 | ¹⁰⁴ Zr(1.2 s) | 100.9(6), 504.7(5), 445.0(5) |
| 263.7 3 | | ¹²² Ba(1.95 m) | 550.7, 388.7, 231.0 |
| 263.7 1 | 0.047 16 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| 263.707 17 | 0.198 9 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 263.78 6 | †1.80 7 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 263.79 14 | †8.6 10 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| 263.80 12 | 0.75 6 | ⁹⁹ Nb(2.6 m) | 97.785(7), 253.50(3.64), 2641.3(3.64) |
| 263.8 3 | 2.84 10 | ²³¹ Np(48.8 m) | 370.9(10), 348.4(3.63), 484.7(1.6) |
| 263.84 17 | 0.011 3 | ⁸⁵ Br(2.90 m) | 802.41(2.56), 924.63(1.63), 919.06(0.65) |
| 263.87 2 | 35.9 3 | ¹²³ Ag(0.309 s) | 409.79(13.2), 591.30(8.2), 116.41(7.58) |
| 263.89 20 | 0.021 5 | ¹⁶⁵ Yb(9.9 m) | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 263.9 1 | 0.50 6 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 263.9 | | ¹⁸⁰ Hg(2.8 s) | 170 |
| • 263.914 2 | 2.65×10 ⁻⁵ 10 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 263.96 7 | 0.20 2 | ⁸⁷ Br(55.60 s) | 1419.71(22.0), 1476.04(7.9), 1577.60(6.0) |
| 263.97 7 | †100 | ¹⁸⁴ Ir(3.09 h) | 119.80(†45), 390.38(†38), 961.22(†18.3) |
| 264.0 3 | †2.6 1 | ¹¹⁴ Te(15.2 m) | 90.28(†100), 83.8(†67), 1417.6(†32) |
| 264.0 | >0.28 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| • 264 2 | 0.05 1 | ²⁵⁴ Es(275.7 d) | 63.0(2.0), 316(0.15), 304(0.07) |
| 264.04 14 | 0.17 5 | ²⁰⁷ At(1.80 h) | 814.41(44.5), 588.33(19.2), 300.654(12.8) |
| • 264.07519 18 605 24 | | ¹⁸² Ta(114.43 d) | 67.75001(41.2), 1121.3007(34.9), 1221.4066(26.98) |
| 264.07519 18 29 4 | | ¹⁸² Re(12.7 h) | 67.75001(38.2), 1121.3007(32), 1221.4066(24.8) |
| • 264.07519 18 57 23 | | ¹⁸² Re(64.0 h) | 229.3220(26), 67.75001(22.2), 1121.3007(22.0) |
| 264.1 1 | †27 3 | ¹⁶⁰ Tm(9.4 m) | 125.8(†100), 728.5(†37), 1368.5(†24.6) |
| 264.1 1 | 9 | ¹⁶⁰ Tm(74.5 s) | 125.8(6.5), 375.8(2.4), 738.7(1.08) |
| 264.10 6 | 0.08 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 264.1 2 | 0.0010 1 | ²⁵⁵ Fm(20.07 h) | 81.477(0.81), 58.477(0.67), 80.92(0.27) |
| 264.1 2 | †2 | ²⁵⁶ Es(7.6 h) | 861.8(†100), 231.1(†61), 172.6(†49) |
| 264.2 2 | †8 2 | ¹³¹ Ce(10.3 m) | 169.42(†100), 414.25(†68), 119.18(†44) |
| 264.2 1 | 0.46 3 | ¹⁴² Gd(70.2 s) | 750.2(11.2), 178.90(11.20), 284.4(6.16) |
| 264.2 2 | †1.6 6 | ¹⁹² Bi(37 s) | 853.8(†100.0), 501.8(†80), 504.3(†39) |
| 264.2 4 | 5.2 3 | ²⁰³ Bi(11.76 h) | 820.3(30), 825.2(14.6), 896.9(13) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|-----------------------------|---|
| • 264.21 15 | 0.008 4 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 264.26 9 | 0.185 3 | ¹³⁵ I(6.57 h) | 1260.409(28.90), 1131.511(22.74), 1678.027(9.62) |
| 264.30 30 | 5 | ¹¹⁶ Ag(10.4 s) | 513.39(92), 705.82(61), 1028.90(30.4) |
| 264.3 6 | 0.7 5 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| 264.3 3 | †1.6 4 | ¹⁴² Xe(1.22 s) | 571.83(†100), 657.05(†79), 538.24(†77) |
| 264.3 4 | 0.26 13 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 264.33 9 | †40.0 20 | ¹⁸² Au(21 s) | 154.76(†100), 855.41(†14.5), 787.15(†13.5) |
| 264.348 14 | 0.66 4 | ⁸⁹ Kr(3.15 m) | 220.948(20.1), 586.03(16.6), 904.27(7.2) |
| 264.35 14 | 0.162 25 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 264.378 11 | 0.38 11 | ¹⁰⁹ Rh(80 s) | 326.868(54), 426.135(7.7), 178.034(7.6) |
| 264.4 6 | 0.13 4 | ¹⁰³ Cd(7.3 m) | 1461.81(12), 1448.70(5.55), 1079.90(5.44) |
| 264.4 4 | †2.5 8 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 234.0(†40.0) |
| 264.40 15 | †8.4 15 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 264.41 10 | 65 | ⁹⁹ Ag(124 s) | 832.29(13.5), 805.07(12.5), 815.63(6.8) |
| 264.44 3 | 54 | ⁷⁷ Ge(11.30 h) | 211.03(30.8), 215.50(28.6), 416.33(21.8) |
| • 264.492 7 | 0.554 14 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 264.5 5 | 0.056 9 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 264.5 2 | 0.40 4 | ²³⁰ Fr(19.1 s) | 711.0(13.6), 129.1(11.0), 728.4(7.3) |
| 264.53 13 | 0.536 25 | ⁸⁶ Y(14.74 h) | 1076.64(83), 627.72(32.6), 1153.01(30.5) |
| 264.56 4 | 9.0 5 | ¹⁴⁶ Ce(13.52 m) | 316.74(56), 218.23(20.8), 133.52(8.1) |
| 264.6 | | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 264.61 5 | 0.59 6 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 264.621 18 | 0.14 3 | ¹⁵⁵ Dy(9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| 264.6584 1911 | | ⁷⁵ Ge(82.78 m) | 198.6031(1.19), 468.8(0.223), 419.1(0.185) |
| 264.6584 19 | | ⁷⁵ Ge(47.7 s) | 136.0008(0.020), 121.1166(0.0050), 279.5441(0.0043) |
| • 264.6584 1958.50 23 | | ⁷⁵ Se(119.779 d) | 136.0008(58.3), 279.5441(24.79), 121.1166(17.14) |
| • 264.67 3 | 0.041 4 | ¹⁴⁹ Gd(9.28 d) | 149.735(48.2), 298.634(28.6), 346.651(23.9) |
| 264.68 4 | 0.94 7 | ²²¹ Rn(25 m) | 254.2(1.8) |
| 264.70 10 | 0.071 16 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 264.70 4 | 0.090 12 | ¹⁴⁷ Pr(13.4 m) | 77.9921(15), 314.675(13.2), 641.380(10.0) |
| 264.7 | 0.37 | ¹⁵⁷ Er(18.65 m) | 53.05(24), 391.32(14.2), 121.57(10.1) |
| • 264.738 9 | 0.750 19 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 264.8 | 0.7 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 264.8 3 | †5.5 6 | ¹⁵³ Yb(4.2 s) | 547.4(†100), 674.1(†61), 369.6(†32) |
| 264.8 4 | †1.30 15 | ¹⁸² Ir(15 m) | 273.23(†100), 126.79(†77), 236.3(†21.0) |
| 264.8 1 | 0.51 5 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 264.8 2 | †0.6 1 | ²⁰⁰ At(43 s) | 665.9(†100), 611.1(†85.0), 484.5(†49.8) |
| • 264.89 6 | †9.0×10 ⁻⁴ 4 | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| • 264.89 | | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| • 264.9 | >0.07 | ¹⁶⁷ Tm(9.25 d) | 207.801(41), 57.0723(4.6), 531.54(1.6) |
| 264.9 | †100 | ²⁰⁵ Rn(2.8 m) | 464.5(†25), 620.2(†25), 675.0(†20) |
| 265.0 1 | 0.064 11 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| 265.0 3 | 1.06 15 | ¹¹³ Rh(2.72 s) | 189.7(17.0), 409.3(15.9), 219.6(3.88) |
| 265.0 | 0.50 25 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| • 265.0 | >0.0015 | ¹⁸⁴ Re(38.0 d) | 903.279(37.9), 792.071(37.5), 111.208(17.1) |
| 265.0 2 | †56 3 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| • 265 10 | 30 | ²⁴⁷ Bk(1380 y) | 84.0(40) |
| 265.05 21 | 0.8 4 | ¹⁰³ Ag(65.7 m) | 118.72(31.2), 148.193(28.3), 266.86(13.3) |
| 265.1 1 | 14.4 12 | ²⁴² Np(5.5 m) | 785.7(60), 944.8(37.8), 159.0(19.2) |
| • 265.2 5 | | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 265.2 6 | >0.11 | ²⁰⁹ Rn(28.5 m) | 408.32(50.3), 745.78(22.8), 337.45(14.5) |
| • 265.25 5 | 0.018 3 | ¹⁸⁹ Re(24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| 265.26 9 | 56 | ⁹⁷ Pd(3.10 m) | 475.2(26.7), 792.70(13.8), 1759.60(6.8) |
| 265.290 8 | 0.47 6 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|--|--|---|
| 265.3 4 | 0.49 10 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 265.34 21 | 0.19 5 | ¹⁵⁷ Dy(8.14 h) | 326.16(92), 182.20(1.84), 83.01(0.62) |
| 265.36 7 | 27.0 14 | ⁸⁰ Ge(29.5 s) | 110.4(6.5), 1564.3(4.9), 936.97(4.05) |
| 265.4 2 | \dagger 9.7 13 | ¹⁸¹ Hg(3.6 s) | 147.8(\dagger 100), 42.5(\dagger 25), 1986.7(\dagger 17) |
| 265.46 10 | 1.04 11 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 265.5 3 | 0.46 18 | ¹⁵² Ho(49.5 s) | 647.2(92), 613.8(88.4), 683.3(88) |
| 265.51 5 | 0.1300 19 | ¹²⁷ Cs(6.25 h) | 411.95(62.8), 124.70(11.37), 462.31(5.07) |
| • 265.54 7 | \dagger 3.9 \times 10 ³ 5 | ¹³⁴ Ce(75.9 h) | 162.306(\dagger 230000), 130.414(\dagger 209000), 39.08(\dagger >150000) |
| 265.56 2 | 41.8 13 | ¹³⁵ Ce(17.7 h) | 300.07(23.5), 606.76(18.8), 518.05(13.6) |
| 265.56 6 | 0.203 11 | ¹⁵⁹ Ho(33.05 m) | 121.012(36.2), 131.973(23.6), 309.594(17.2) |
| 265.61 3 | 0.50 3 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 265.619 24 | 2.46 7 | ¹⁵⁷ Pm(10.56 s) | 160.61(35), 188.052(13.5), 571.27(5.39) |
| 265.63 6 | \dagger 100 3 | ¹⁸⁸ Au(8.84 m) | 340.04(\dagger 23.9), 605.5(\dagger 16.3), 405.49(\dagger 9.1) |
| 265.7 6 | 0.087 8 | ¹¹¹ Sn(35.3 m) | 1152.98(2.7), 1914.70(1.99), 761.97(1.48) |
| 265.7 5 | \dagger 2.5 10 | ¹⁸⁹ Au(28.7 m) | 713.17(\dagger 100), 812.68(\dagger 63), 447.65(\dagger 55) |
| 265.7 3 | 0.17 | ¹⁹⁰ Pb(1.2 m) | 942.20(34), 151.19(8.92), 598.3(8.0) |
| • 265.724 4 | 1.6 \times 10 ⁻⁶ 3 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 265.8 3 | | ¹²² Ba(1.95 m) | 550.7, 388.7, 231.0 |
| • 265.8 5 | <0.04 | ²³⁴ Np(4.4 d) | 1558.31(18.72), 1527.21(11.2), 1601.80(9.1) |
| 265.806 17 | \dagger 93 5 | ²²⁴ Rn(107 m) | 260.581(\dagger 100), 202.21(\dagger 21.9), 328.331(\dagger 17.2) |
| 265.83 6 | 3.9 4 | ¹⁵⁴ Tb(22.7 h) | 247.925(79), 346.643(69), 1419.81(46) |
| • 265.832 5 | | ²¹⁰ Bi(5.013 d) | 304.896 |
| • 265.832 5 | 50 | ²¹⁰ Bi(3.04 \times 10 ⁶ y) | 304.896(28), 649.42(3.8), 344.52(0.7) |
| 265.9 2 | 0.55 3 | ⁶¹ Zn(89.1 s) | 475.0(16.85), 1660.5(7.80), 970.0(2.57) |
| • 265.922 12 | 0.40 4 | ²⁴¹ Cm(32.8 d) | 471.805(71), 430.634(4.06), 132.413(3.86) |
| • 265.922 12 | 0.00014 4 | ²⁴⁵ Bk(4.94 d) | 205.879(0.040), 471.805(0.026), 164.8(0.0084) |
| 266.0 5 | 0.8 3 | ¹⁶¹ Yb(4.2 m) | 78.20(34), 599.88(25.9), 631.45(13.9) |
| 266.0 2 | \dagger 24 5 | ¹⁸⁰ Yb(2.4 m) | 172.9(\dagger 100), 375.0(\dagger 87), 419.8(\dagger 56) |
| • 266.0 | 0.0141 24 | ²³⁰ Pa(17.4 d) | 314.8(0.094), 366.56(0.076), 383.6(0.036) |
| • 266.0 3 | 0.5 2 | ²⁵¹ Cf(898 y) | 176.6(17.7), 227.0(6.3), 285.0(1.4) |
| 266.04 8 | 0.39 4 | ¹³³ Sb(2.5 m) | 1096.22(43.0), 817.8(18.5), 2755(12.5) |
| 266.06 20 | 0.28 2 | ¹⁰⁷ Rh(21.7 m) | 302.77(66), 392.47(8.8), 312.21(4.8) |
| • 266.068 4 | 0.00276 25 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 266.08 15 | 0.065 15 | ¹²⁶ In(1.60 s) | 1141.11(55.9), 3344.61(21.6), 969.61(14.9) |
| 266.08 15 | 0.31 6 | ¹²⁶ In(1.64 s) | 1141.11(100), 908.58(99), 111.79(88) |
| 266.1 7 | \dagger 100.0 22 | ¹⁷⁸ Ir(12 s) | 131.6(\dagger 79), 363.1(\dagger 39.9), 899.7(\dagger 16.9) |
| 266.11 18 | 0.260 25 | ¹⁸⁶ Au(10.7 m) | 191.56(62), 298.67(25.4), 764.89(10.5) |
| 266.13 7 | \dagger 100 | ¹³¹ Pr(1.53 m) | 72.82(\dagger 64), 387.56(\dagger 38), 324.35(\dagger 34) |
| 266.2 4 | 2.17 23 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 266.2 | \dagger 15.6 | ¹⁵⁸ Ho(21.3 m) | 406.14(\dagger 100), 838.9(\dagger 84.3), 1484.1(\dagger 66.2) |
| 266.20 16 | 0.074 4 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| 266.3 2 | 2.57 18 | ⁸⁵ Zr(7.86 m) | 454.20(45), 416.3(27.0), 1198.4(4.8) |
| 266.32 10 | 0.66 7 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 266.346 3 | 0.27 5 | ¹⁰⁹ Rh(80 s) | 326.868(54), 426.135(7.7), 178.034(7.6) |
| 266.35 6 | 54.7 6 | ¹⁵⁶ Ho(56 m) | 137.83(51), 366.25(10.73), 884.45(7.08) |
| 266.4 1 | 3.2 6 | ¹⁰⁸ In(58.0 m) | 875.46(100), 632.96(100), 242.84(41) |
| 266.4 1 | >0.32 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| • 266.45 5 | 0.006 2 | ²³⁵ U(7.038 \times 10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| 266.5 2 | 2.7 4 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| 266.5 | | ¹⁵³ Tm(2.5 s) | |
| 266.5 5 | | ¹⁶⁷ Ho(3.1 h) | 346.547(56), 321.336(23.5), 237.873(5.0) |
| • 266.5 5 | 0.0022 5 | ¹⁶⁷ Tm(9.25 d) | 207.801(41), 57.0723(4.6), 531.54(1.6) |
| 266.5 4 | | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 266.5 1 | \dagger 9 1 | ²²⁷ Rn(22.5 s) | 162.14(\dagger 100), 739.2(\dagger 65), 686.2(\dagger 62) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 266.5 2 | 0.25 3 | ²³⁰ Fr(19.1 s) | 711.0(13.6), 129.1(11.0), 728.4(7.3) |
| • 266.543 12 | 0.466 8 | ¹⁴⁰ La(1.6781 d) | 1596.210(95), 487.021(45.5), 815.772(23.28) |
| 266.543 12 | 0.20 6 | ¹⁶³ Tb(19.5 m) | 351.138(26), 389.734(24.3), 494.534(23) |
| 266.6 4 | 0.084 8 | ¹⁰² Mo(11.3 m) | 211.66(3.8), 148.19(3.76), 223.83(1.44) |
| • 266.62 2 | 0.69 3 | ²⁴⁹ Cf(351 y) | 388.16(66), 333.37(14.6), 252.80(2.50) |
| 266.63 19 | 0.037 5 | ⁸¹ Rb(4.576 h) | 190.38(64.0), 446.15(23.2), 510.31(5.3) |
| 266.63 19 | 0.00012 | ⁸¹ Rb(30.5 m) | 49.56(0.78), 643.6(0.115), 1194.9(0.112) |
| 266.7 1 | 0.9 | ¹⁹⁸ Pb(2.40 h) | 290.3(36), 365.4(19), 173.4(18) |
| 266.8 3 | †2.7 12 | ¹⁰⁵ Nb(2.95 s) | 94.8(†100), 246.9(†79), 309.9(†41.9) |
| 266.8 2 | 0.016 5 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| 266.8 1 | 10.36 15 | ¹³⁵ Te(19.0 s) | 603.5(37.0), 870.3(7.73), 1133.3(1.74) |
| 266.8 3 | 0.46 18 | ¹⁵² Ho(49.5 s) | 647.2(92), 613.8(88.4), 683.3(88) |
| 266.80 15 | 0.0011 3 | ¹⁶⁵ Dy(2.334 h) | 94.700(3.58), 361.68(0.84), 633.415(0.568) |
| • 266.820 7 | 0.272 3 | ¹²⁹ Cs(32.06 h) | 371.918(30.60), 411.490(22.31), 548.945(3.40) |
| 266.83 5 | 20.6 10 | ⁹³ Kr(1.286 s) | 253.42(41.2), 323.89(24.1), 252.51(19.5) |
| 266.86 4 | 13.3 4 | ¹⁰³ Ag(65.7 m) | 118.72(31.2), 148.193(28.3), 1273.83(9.3) |
| 266.89 21 | †2.0 5 | ¹³¹ Sn(56.0 s) | 1226.03(†100), 450.03(†90), 798.50(†86) |
| 266.9 1 | 7.3 4 | ⁹³ Y(10.18 h) | 947.1(2.09), 1917.8(1.55), 680.2(0.658) |
| 266.9 2 | 0.33 9 | ¹⁷³ Ta(3.14 h) | 172.2(18), 69.70(5.9), 90.3(5.0) |
| 266.9 4 | 10.8 13 | ¹⁷⁵ Ta(10.5 h) | 207.4(14.0), 348.5(12.0), 81.5(6) |
| 266.9 4 | 0.44 16 | ¹⁷⁵ Ta(10.5 h) | 207.4(14.0), 348.5(12.0), 266.9(10.8) |
| 266.91 22 | 0.0012 6 | ¹⁵² Eu(9.274 h) | 344.281(2.44), 1314.67(0.956), 970.38(0.604) |
| • 266.913 12 | 0.0404 9 | ¹¹⁰ Ag(249.79 d) | 657.7622(94.0), 884.685(72.2), 937.493(34.13) |
| • 266.97 5 | 0.0304 14 | ¹⁴⁹ Gd(9.28 d) | 149.735(48.2), 298.634(28.6), 346.651(23.9) |
| • 266.980 10 | 0.092 3 | ¹¹⁵ Cd(53.46 h) | 336.240(45.9), 527.900(27.45), 492.3(8.03) |
| 267.0 1 | 0.96 13 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| 267.0 4 | †1.1×10 ³ 6 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| 267.0 5 | †0.26 13 | ¹⁸⁰ Au(8.1 s) | 153.3(†100), 524.3(†29), 257.6(†26) |
| • 267.06 11 | 0.062 16 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| • 267.090 6 | 0.07 3 | ¹⁵⁶ Tb(5.35 d) | 534.318(66.6), 199.2132(40.9), 1222.36(31.00) |
| 267.1 2 | 1.06 16 | ¹⁰⁸ Tc(5.17 s) | 242.25(82), 465.6(14.3), 707.81(11.4) |
| 267.1 1 | †0.50 5 | ¹⁷¹ Ta(23.3 m) | 49.6(†100), 506.4(†54), 501.8(†22.6) |
| 267.10 15 | 0.56 9 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| • 267.1 2 | | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 267.12 5 | 0.175 21 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| • 267.14 20 | 0.0022 7 | ¹⁷² Tm(63.6 h) | 78.7435(6.5), 1093.657(6.0), 1387.093(5.6) |
| 267.17 9 | 0.00030 5 | ¹³⁵ La(19.5 h) | 480.51(1.5), 874.51(0.164), 587.83(0.1108) |
| 267.173 22 | 0.117 6 | ¹³³ I(20.8 h) | 529.872(87.0), 875.329(4.51), 1298.223(2.35) |
| • 267.2 3 | 0.020 15 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 267.3 3 | †6.2 15 | ¹⁰⁹ Tc(0.87 s) | 194.6(†100), 128.7(†51), 96.2(†48) |
| 267.3 2 | 31 4 | ¹³⁹ Eu(17.9 s) | 155.3(31), 190.1(25), 111.9(21.3) |
| 267.3 2 | †1.7 4 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 267.3 5 | | ¹⁹¹ Hg(50.8 m) | 252.5(57), 420.1(18.6), 578.6(17.6) |
| • 267.30 10 | | ²⁴⁹ Cf(351 y) | 388.16(66), 333.37(14.6), 252.80(2.50) |
| 267.3 5 | 0.0049 25 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 267.32 5 | 13.3 7 | ¹⁵⁶ Pm(26.70 s) | 173.75(52.0), 1147.84(20.5), 117.42(13.8) |
| • 267.4 2 | 0.119 8 | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 267.4 12 | 0.21 | ¹⁸⁶ Pt(2.0 h) | 276.7(0), 611.5(6.0), 635.6(>3.8) |
| 267.42 14 | †11 1 | ¹⁵⁹ Yb(1.58 m) | 166.16(†500), 177.12(†159), 390.20(†113) |
| • 267.499 16 | 0.0137 7 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 267.5 3 | 0.004 3 | ¹³¹ Te(25.0 m) | 149.716(69), 452.323(18.18), 1146.96(4.95) |
| 267.5 2 | 0.27 4 | ¹⁴⁰ Sm(14.82 m) | 225.5(>10), 225.4(10), 140.0(5.0) |
| 267.5 3 | 3.9 4 | ¹⁵⁴ Tb(22.7 h) | 247.925(79), 346.643(69), 1419.81(46) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|------------------------------|----------------------------|--|
| 267.50 20 | 0.18 5 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 267.54 11 | 1.01 20 | ¹⁸¹ Os(105 m) | 238.75(44), 826.77(20), 118.03(12.9) |
| • 267.54 4 | 0.710 20 | ²³⁷ U(6.75 d) | 59.537(34.5), 208.00(21.14), 26.345(2.43) |
| • 267.54 4 | $\dagger 2.63 \times 10^5$ 6 | ²⁴¹ Am(432.2 y) | 59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$) |
| 267.6 3 | 0.011 3 | ¹³⁹ Cs(9.27 m) | 1283.23(8.3), 627.24(1.78), 1420.66(0.91) |
| 267.6 2 | $\dagger 5.7$ 5 | ¹⁸⁵ Hg(21.6 s) | 222.8($\dagger 100.0$), 258.7($\dagger 98$), 212.5($\dagger 58$) |
| 267.6 2 | 0.386 22 | ¹⁹⁹ Pb(90 m) | 366.90(44.2), 353.39(9.5), 1135.04(7.8) |
| • 267.62 4 | 0.00116 13 | ²³¹ Th(25.52 h) | 25.646(14.5), 84.216(6.6), 89.944(0.94) |
| 267.693 8 | 6.03 16 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 267.7 3 | 0.084 18 | ⁸⁹ Kr(3.15 m) | 220.948(20.1), 586.03(16.6), 904.27(7.2) |
| 267.7 1 | 0.49 16 | ¹³⁰ La(8.7 m) | 357.4(81.0), 550.7(25.9), 908.0(17.0) |
| • 267.74 3 | 0.0117 5 | ¹⁴⁷ Eu(24.1 d) | 197.299(27), 121.220(22.9), 677.516(9.8) |
| 267.76 3 | 0.62 4 | ¹³⁵ Ce(17.7 h) | 265.56(41.8), 300.07(23.5), 606.76(18.8) |
| • 267.8 2 | 0.037 19 | ¹⁴⁶ Gd(48.27 d) | 154.57(47), 115.51(44.0), 114.71(44.0) |
| 267.8 1 | $\dagger 10$ 1 | ²²⁷ Rn(22.5 s) | 162.14($\dagger 100$), 739.2($\dagger 65$), 686.2($\dagger 62$) |
| 267.88 25 | 1.3 4 | ¹²⁵ Cd(0.65 s) | 436.29(37), 1099.48(22.3), 2147.19(19.1) |
| 267.92 10 | 0.147 5 | ¹⁹⁴ Pb(12.0 m) | 581.82(18.8), 1519.45(16.4), 203.82(16.2) |
| 268.0 | 0.0043 | ⁸³ As(13.4 s) | 734.60(43), 1113.10(14.7), 2076.70(11.9) |
| 268 | >0.0041 | ⁹⁰ Nb(14.60 h) | 1129.224(92.7), 2318.968(82.03), 141.178(66.8) |
| 268.0 6 | >0.35 | ¹¹³ Ag(68.7 s) | 316.3(18), 392.3(11), 298.58(10) |
| 268.0 4 | 1.1 3 | ¹⁶⁸ Lu(6.7 m) | 198.82(28), 979.22(20), 896.12(15) |
| 268 1 | 0.15 | ¹⁷⁵ Tm(15.2 m) | 514.868(65), 941.23(15), 363.942(12.7) |
| • 268.00 19 | $\dagger 0.37$ 12 | ²²⁷ Th(18.72 d) | 235.971($\dagger 813$), 50.13($\dagger 528$), 256.25($\dagger 463$) |
| 268.0 5 | 0.00018 4 | ²⁵⁵ Fm(20.07 h) | 81.477(0.81), 58.477(0.67), 80.92(0.27) |
| 268.09 14 | 0.125 21 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 268.10 22 | 0.22 16 | ⁷⁷ Ge(11.30 h) | 264.44(54), 211.03(30.8), 215.50(28.6) |
| 268.1 2 | 11.4 4 | ¹²⁰ In(47.3 s) | 1171.3(100), 1023.1(97.4), 197.3(80.6) |
| • 268.1 1 | 0.78 8 | ¹⁹¹ Pt(2.9 d) | 538.90(13.7), 409.44(8.0), 359.90(6.0) |
| 268.1 1 | 0.191 18 | ²⁰⁷ At(1.80 h) | 814.41(44.5), 588.33(19.2), 300.654(12.8) |
| 268.13 5 | 0.47 5 | ¹³² Ce(3.51 h) | 182.11(77), 155.37(10.5), 216.83(4.95) |
| 268.16 16 | 0.82 8 | ¹⁶⁶ Lu(2.65 m) | 228.12(77.3), 337.50(41), 367.95(31.4) |
| 268.2 | 0.32 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| • 268.2 4 | 0.012 6 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 268.21 6 | | ¹⁰⁸ Mo(1.5 s) | 258.53, 125.5 |
| 268.218 20 | | ¹³⁵ La(19.5 h) | 480.51(1.5), 874.51(0.164), 587.83(0.1108) |
| 268.22 5 | 3.9 3 | ¹⁹³ Au(17.65 h) | 186.17(10.1), 255.57(6.7), 173.52(2.9) |
| 268.24 | | ⁸⁸ Kr(2.84 h) | 2392.11(34.6), 196.301(25.98), 2195.842(13.18) |
| 268.3 2 | 4.9 5 | ¹⁴¹ Tb(3.5 s) | 293.3(16.8), 343.6(16.3), 198.4(14.8) |
| 268.3 4 | 0.07 3 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 268.3 1 | 0.038 6 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| • 268.3 | | ¹⁸⁸ Ir(41.5 h) | 155.032(29.7), 2214.62(18.7), 632.99(18) |
| 268.31 9 | 0.198 19 | ¹⁵⁸ Tm(3.98 m) | 192.13(62), 335.10(16.8), 1149.83(7.6) |
| 268.32 2 | 1.97 15 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 268.34 9 | 1.27 10 | ²⁰⁶ At(30.0 m) | 700.66(98), 477.10(86), 395.54(48) |
| 268.36 5 | 1.22 16 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| 268.38 2 | 3.96 17 | ²⁰⁰ Pb(21.5 h) | 147.63(37.7), 257.17(4.46), 235.63(4.30) |
| 268.39 20 | 0.34 8 | ¹⁰⁸ In(58.0 m) | 875.46(100), 632.96(100), 242.84(41) |
| 268.4 2 | | ¹⁴⁶ Dy(29 s) | 2156.8, 1915.7, 1876.7 |
| 268.4 3 | 0.24 3 | ¹⁸⁸ Hg(3.25 m) | 66.7(63), 190.1(4.40), 82.7(2.6) |
| 268.4 2 | $\dagger 1.71$ 24 | ¹⁸⁹ Hg(7.6 m) | 320.99($\dagger 100$), 78.21($\dagger 63$), 565.42($\dagger 48$) |
| 268.5 2 | | ⁸⁹ Tc(12.9 s) | 118.87 |
| 268.5 3 | 0.32 11 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| 268.5 8 | 2.4 8 | ¹⁵⁶ Sm(9.4 h) | 87.4897(24), 203.818(20.6), 165.8452(12.7) |
| • 268.5 2 | 0.00013 4 | ¹⁷⁷ Ta(56.56 h) | 112.9498(7.2), 208.3664(0.94), 1057.8(0.29) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|----------------------|---|---|
| 268.5 4 | 0.33 7 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 268.6 10 | 0.14 5 | ¹⁰³ Tc(54.2 s) | 346.380(17.5), 136.079(16.6), 562.90(7.0) |
| 268.6 8 | 0.26 4 | ¹²⁹ Sb(4.40 h) | 812.8(43), 914.6(20.0), 544.7(17.9) |
| 268.6 | 3.0 4 | ¹⁴⁵ Tb(29.5 s) | 257.8(39), 987.8(37), 537.0(23) |
| • 268.625 2 | 0.71 5 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| • 268.66 3 | 0.00023 4 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 268.67 4 | 0.178 15 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 268.7 2 | 6.7 4 | ⁹⁸ Y(0.548 s) | 1223.0(36.0), 2941.3(16.7), 1590.9(14.7) |
| 268.7 3 | 8.47 7 | ¹³⁷ Pm(2.4 m) | 177.5(40.29), 108.6(35), 233.6(29.57) |
| 268.7 5 | | ¹⁴⁸ Er(4.6 s) | 1311.8(8.9), 244.0(7.1), 315.3(6.9) |
| 268.7 4 | | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 268.72 11 | †6.0 7 | ¹⁶⁵ Lu(10.74 m) | 132.49(†100), 120.60(†100), 174.25(†47.0) |
| • 268.73 7 | 1.65 16 | ¹⁹¹ Pt(2.9 d) | 538.90(13.7), 409.44(8.0), 359.90(6.0) |
| 268.758 10 | >0.021 | ¹⁸² Os(22.10 h) | 510.056(52), 180.230(33.5), 263.285(6.71) |
| 268.78 5 | 0.231 22 | ¹⁹⁷ Pt(18.3 h) | 77.351(17.0), 191.437(3.7) |
| • 268.78 5 | 0.0378 18 | ¹⁹⁷ Hg(64.14 h) | 77.351(18.0), 191.437(0.608) |
| 268.7850 10 | 0.162 11 | ¹⁷⁷ Yb(1.911 h) | 150.392(20.3), 1080.21(5.6), 1241.2(3.47) |
| 268.8 2 | 0.45 5 | ¹¹⁷ Cs(8.4 s) | 204.8(15.0), 29.7(9.9), 205.6(6.8) |
| 268.80 6 | 7 | ¹⁴⁷ Ce(56.4 s) | 92.9(4.7), 374.23(3.5), 452.1(3.3) |
| 268.8 3 | 0.151 17 | ¹⁸¹ Au(11.4 s) | 198.60(4.4), 2022.4(4.2), 79.40(4.2) |
| 268.8 1 | 0.37 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 268.8 2 | | ¹⁹² Bi(39.6 s) | 33.6, 103.1 |
| 268.8 5 | | ¹⁹¹ Hg(50.8 m) | 252.5(57), 420.1(18.6), 578.6(17.6) |
| 268.81 10 | 0.80 25 | ¹⁸⁶ Ta(10.5 m) | 197.93(50), 214.87(42.3), 510.82(37.5) |
| 268.9 6 | 0.018 12 | ¹⁷⁸ Lu(28.4 m) | 93.180(6.0), 1340.8(3.22), 1310.05(1.40) |
| 269.0 10 | †6 | ⁸⁷ Nb(2.6 m) | 200.95(†100), 470.63(†73), 1066.8(†37) |
| 269.0 3 | 0.97 14 | ¹⁰² Zr(2.9 s) | 599.60(13.9), 535.30(10.6), 64.50(8.9) |
| 269.0 5 | †8 3 | ¹⁰⁶ Mo(8.4 s) | 465.70(†100), 54.00(†54), 618.60(†25) |
| 269.0 2 | 1.3 4 | ¹⁴⁰ Gd(15.8 s) | 174.8(76), 749.9(70), 379.0(38) |
| 269.0 3 | 0.14 | ¹⁷⁰ Hf(16.01 h) | 164.78(33), 620.7(23), 120.17(19) |
| 269.00 9 | 0.20 8 | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 269.0 7 | 0.030 10 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| • 269.1 | | ²⁵⁵ Es(39.8 d) | 233.6, 35.7 |
| 269.11 5 | 0.083 9 | ¹⁵⁹ Ho(33.05 m) | 121.012(36.2), 131.973(23.6), 309.594(17.2) |
| 269.11 10 | †12.6 13 | ¹⁷¹ Hf(12.1 h) | 122.0(†100), 662.2(†83), 347.18(†47) |
| 269.12 4 | †13 | ¹⁹⁷ Ir(5.8 m) | 469.72(†100), 430.56(†61), 815.92(†45) |
| 269.17 2 | †0.84 5 | ¹⁵³ Pm(5.4 m) | 35.842(†100), 127.298(†75), 28.309(†34.6) |
| 269.2 2 | 4.3 6 | ¹⁰⁵ Mo(35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| • 269.2 3 | >0.14 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 269.2 2 | 1.23 9 | ¹⁸⁸ Tl(71 s) | 412.7(88), 592.0(61), 504.2(23.3) |
| 269.2 1 | 0.099 20 | ²²³ Ac(2.10 m) | 98.58(0.891), 191.3(0.58), 83.55(0.57) |
| 269.26 5 | 6.3 5 | ¹²⁶ In(1.64 s) | 1141.11(100), 908.58(99), 111.79(88) |
| 269.3 3 | 0.18 8 | ¹²⁶ Ba(100 m) | 233.6(19.6), 257.6(7.6), 241.0(6.0) |
| 269.3 1 | †395 38 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| 269.358 24 | 0.172 7 | ¹⁵⁵ Dy(9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| 269.4 2 | 0.028 19 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| 269.4 1 | 0.018 4 | ¹⁷⁸ Ta(9.31 m) | 93.180(1.78), 1350.68(1.18), 1340.8(1.027) |
| 269.4 1 | 1.23 9 | ¹⁸⁸ Tl(71 s) | 412.7(88), 592.0(61), 504.2(23.3) |
| • 269.459 10 | 13.7 3 | ²²³ Ra(11.435 d) | 154.21(5.62), 323.871(3.93), 144.232(3.22) |
| • 269.50 2 | †36.5 8 | ⁵⁶ Ni(5.9 d) | 158.38(†98.8), 811.85(†86.0), 749.95(†49.5) |
| 269.5 1 | 0.92 8 | ¹⁴² Ba(10.6 m) | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| • 269.5 10 | 0.0025 6 | ¹⁵¹ Gd(124 d) | 153.56(6.20), 243.28(5.60), 174.70(2.96) |
| 269.5 10 | 0.35 21 | ¹⁸⁶ Pt(2.0 h) | 276.7(0), 611.5(6.0), 635.6(>3.8) |
| 269.5 3 | 3.5 3 | ¹⁹² Pb(3.5 m) | 1195.4(47), 608.2(17.9), 167.5(13.6) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|--|---|
| 269.5 2 | †3.8 | ²⁵⁶ Es(7.6 h) | 861.8(†100), 231.1(†61), 172.6(†49) |
| 269.519 45 | 17.0 9 | ¹⁴⁸ Ce(56 s) | 291.724(16.7), 121.169(13.2), 98.99(12.4) |
| 269.57 10 | 0.52 4 | ¹⁹⁷ Tl(2.84 h) | 425.84(12.9), 152.22(7.2), 1411.34(4.5) |
| 269.6 4 | 1.3 3 | ¹¹⁶ Cs(3.84 s) | 393.5(<0.09), 524.3(76), 615.1(30.4) |
| 269.6 3 | 4.30 14 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 269.6 2 | 0.0019 4 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| 269.67 7 | 6.43 12 | ¹⁰¹ Pd(8.47 h) | 296.29(19), 590.44(12.06), 24.46(3.90) |
| 269.76 13 | 0.38 6 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 269.8 | 0.29 | ⁸³ Zr(44 s) | 55.55(8), 104.97(5.70), 475.1(5.1) |
| 269.8 | 0.0017 6 | ⁹⁶ Tc(51.5 m) | 778.224(1.9), 1200.231(1.08), 480.705(0.311) |
| 269.8 5 | 0.59 15 | ¹¹³ Te(1.7 m) | 814.4(22), 1018.1(13.0), 1181.0(12.3) |
| 269.8 2 | †26 3 | ¹³⁵ Pm(49 s) | 198.5(†100), 207.2(†70), 463.5(†62) |
| • 269.83 | 0.0072 8 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 269.84 5 | 0.84 17 | ¹⁹³ Au(17.65 h) | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| • 269.86 6 | 0.0081 8 | ¹⁵² Eu(13.542 y) | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| • 270.0 5 | 0.13 3 | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 270.0 2 | 0.094 11 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| • 270 | 0.2 | ²⁵¹ Cf(898 y) | 176.6(17.7), 227.0(6.3), 285.0(1.4) |
| • 270.028 8 | 1.93 4 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 270.068 11 | 27.8 9 | ²⁰⁴ Po(3.53 h) | 883.984(29.9), 1016.31(24.1), 534.90(13.2) |
| 270.07 5 | 56 | ¹⁰⁶ Tc(35.6 s) | 2239.30(13.6), 1969.40(8.9), 2789.30(7.9) |
| 270.07 3 | 1.02 3 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 270.09 10 | 0.60 5 | ¹⁰³ Tc(54.2 s) | 346.380(17.5), 136.079(16.6), 562.90(7.0) |
| 270.10 20 | 0.4 3 | ¹⁰² Zr(2.9 s) | 599.60(13.9), 535.30(10.6), 64.50(8.9) |
| 270.10 20 | 0.14 3 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 270.1 2 | †7.1 6 | ¹⁶⁶ W(18.8 s) | 125.8(†310), 224.6(†24.0), 172.5(†17.8) |
| 270.1 | †0.6 2 | ¹⁷⁸ Ir(12 s) | 266.1(†100.0), 131.6(†79), 363.1(†39.9) |
| 270.1 2 | †10.4 11 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 270.1 4 | †12 | ²³⁸ Pa(2.3 m) | 1015.3(†<100), 1014.6(†<100), 635.18(†88) |
| 270.166 7 | 10.7 3 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 654.831(8.0) |
| 270.2 4 | 0.0034 11 | ⁷⁵ Ge(82.78 m) | 264.6584(11), 198.6031(1.19), 468.8(0.223) |
| 270.2 2 | 21.1 23 | ⁷⁶ Kr(14.8 h) | 315.7(39), 45.48(19.5), 406.5(12.1) |
| 270.2 2 | 1.66 13 | ¹²¹ Cs(155 s) | 153.9(15.2), 239.6(7.7), 427.1(3.63) |
| 270.2 2 | 0.52 8 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 270.2 3 | 0.21 5 | ¹³⁶ I(83.4 s) | 1313.02(67), 1321.08(24.8), 2289.6(10.4) |
| 270.2 1 | 0.17 4 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 270.2 | >0.026 | ¹⁹⁷ Tl(2.84 h) | 425.84(12.9), 152.22(7.2), 1411.34(4.5) |
| 270.22 7 | †0.26 5 | ¹⁵⁸ Ho(11.3 m) | 218.21(†100.0), 98.91(†70), 945.7(†37) |
| 270.243 4 | 3.43 8 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 270.243 4 | 2.19 11 | ²²⁸ Pa(22 h) | 911.205(4.19), 463.005(1.250), 964.770(4.25) |
| • 270.243 4 | 0.00316 5 | ²³² U(68.9 y) | 57.762(0.200), 129.065(0.0686), 327.995(0.00282) |
| 270.25 12 | 1.46 15 | ¹⁴⁸ Ba(0.607 s) | 56.08(29.20), 133.53(3.88), 415.78(3.59) |
| 270.25 | 12.6 22 | ¹⁷⁵ W(35.2 m) | 166.69(9.0), 149.17(3.6), 121.16(1.8) |
| 270.3 1 | 0.59 5 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| • 270.352 5 | 0.2127 24 | ¹²⁹ Cs(32.06 h) | 371.918(30.60), 411.490(22.31), 548.945(3.40) |
| 270.37 15 | 0.257 20 | ¹⁰⁰ Cd(49.1 s) | 936.55(66), 139.71(6.7), 582.5(6.3) |
| 270.37 6 | 0.0046 3 | ¹²⁹ Te(69.6 m) | 27.81(16.3), 459.60(7.70), 487.39(1.42) |
| 270.4 4 | 0.65 18 | ¹³⁶ Sm(47 s) | 114.4(36), 747.7(5.4), 485.3(5.0) |
| • 270.4031 2080 5 | | ¹⁸² Hf(9×10 ⁶ y) | 156.088(7.0), 114.3152(2.6), 172.5708(0.20) |
| • 270.48 30 | 0.0026 7 | ¹⁴⁵ Eu(5.93 d) | 893.73(66), 653.512(15.0), 1658.53(14.9) |
| 270.5 3 | 0.076 10 | ⁸³ Y(7.08 m) | 35.50(0.44), 882.1(6.30), 489.90(5.53) |
| 270.52 4 | 2.07 11 | ¹⁹⁴ Pb(12.0 m) | 581.82(18.8), 1519.45(16.4), 203.82(16.2) |
| 270.53 4 | 0.118 25 | ¹¹⁹ Te(16.03 h) | 644.01(84), 699.85(10.1), 1749.65(3.95) |
| • 270.53 4 | 28.0 4 | ¹¹⁹ Te(4.70 d) | 153.59(66), 1212.73(66), 1136.75(7.66) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------------|-------------------------------------|--|
| 270.55 10 | $\dagger 10$ 3 | $^{152}\text{Tb}(17.5 \text{ h})$ | 344.281($\dagger 1500$), 586.294($\dagger 223$), 271.135($\dagger 203$) |
| • 270.56 4 | 0.0095 10 | $^{189}\text{Re}(24.3 \text{ h})$ | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| • 270.60 5 | 0.107 4 | $^{125}\text{Sn}(9.64 \text{ d})$ | 1067.10(10), 1089.15(4.59), 822.48(4.28) |
| 270.6 2 | $\dagger 72$ 4 | $^{153}\text{Ho}(9.3 \text{ m})$ | 108.7($\dagger 100$), 365.9($\dagger 92$), 161.5($\dagger 83$) |
| 270.6 2 | 0.7 | $^{153}\text{Ho}(2.0 \text{ m})$ | 295.8(67), 637.0(5.36), 688.5(3.7) |
| 270.60 5 | 0.70 14 | $^{157}\text{Tm}(3.63 \text{ m})$ | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 270.6 1 | 0.047 8 | $^{227}\text{Fr}(2.47 \text{ m})$ | 90.035(39), 585.804(29.5), 64.267(14.5) |
| • 270.63 15 | $\dagger 6.4 \times 10^3$ 20 | $^{241}\text{Am}(432.2 \text{ y})$ | 59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$) |
| 270.7 2 | 0.074 25 | $^{129}\text{La}(11.6 \text{ m})$ | 278.6(25), 110.5(16.9), 457.0(8.0) |
| 270.7 3 | 0.038 9 | $^{195}\text{Ir}(3.8 \text{ h})$ | 98.85(10), 684.88(9.4), 432.86(9) |
| • 270.7 5 | $\dagger 2.4$ 8 | $^{227}\text{Th}(18.72 \text{ d})$ | 235.971($\dagger 813$), 50.13($\dagger 528$), 256.25($\dagger 463$) |
| • 270.72 3 | 0.068 7 | $^{151}\text{Pm}(28.40 \text{ h})$ | 340.08(23), 167.75(8.3), 275.21(6.8) |
| • 270.758 3 | 0.0020 13 | $^{155}\text{Tb}(5.32 \text{ d})$ | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 270.81 20 | 0.6 | $^{113}\text{Pd}(93 \text{ s})$ | 95.74(3.3), 643.7(3.0), 739.63(2.4) |
| • 270.844 4 | 0.0083 5 | $^{77}\text{As}(38.83 \text{ h})$ | 238.996(1.6), 520.639(0.558), 249.786(0.394) |
| • 270.844 4 | 0.321 12 | $^{77}\text{Br}(57.036 \text{ h})$ | 238.996(23), 520.639(22.4), 297.215(4.16) |
| 270.86 19 | 0.063 14 | $^{187}\text{Au}(8.4 \text{ m})$ | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 270.87 5 | 0.87 4 | $^{161}\text{Gd}(3.66 \text{ m})$ | 360.94(0.59), 314.92(22.7), 102.315(13.9) |
| 270.89 3 | 0.36 3 | $^{151}\text{Nd}(12.44 \text{ m})$ | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 270.9 3 | 0.10 5 | $^{127}\text{In}(1.09 \text{ s})$ | 1597.7(49), 646.1(6.2), 805.1(5.6) |
| 270.9 3 | 1.33 7 | $^{146}\text{Ba}(2.22 \text{ s})$ | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 271.0 10 | 0.018 6 | $^{99}\text{Rh}(4.7 \text{ h})$ | 340.71(70), 617.8(12.0), 1261.2(11) |
| 271.0 3 | 6.3 11 | $^{118}\text{Pd}(1.9 \text{ s})$ | 125.4(34), 125.4(34), 224.2(20.1) |
| 271.0 3 | 2.3 5 | $^{118}\text{Pd}(1.9 \text{ s})$ | 125.4(34), 125.4(34), 224.2(20.1) |
| 271.00 20 | 0.19 3 | $^{153}\text{Dy}(6.4 \text{ h})$ | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 271.0 3 | 0.00032 4 | $^{255}\text{Fm}(20.07 \text{ h})$ | 81.477(0.81), 58.477(0.67), 80.92(0.27) |
| 271.02 9 | 3.98 13 | $^{177}\text{W}(135 \text{ m})$ | 115.65(50), 426.98(13.2), 1036.4(10.3) |
| 271.056 9 | 1.21 7 | $^{155}\text{Dy}(9.9 \text{ h})$ | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| 271.1 1 | 4.3 3 | $^{117}\text{Cs}(8.4 \text{ s})$ | 204.8(15.0), 29.7(9.9), 205.6(6.8) |
| 271.1 2 | 0.41 12 | $^{119}\text{Ag}(2.1 \text{ s})$ | 626.4(13), 366.2(12.1), 399.1(10.9) |
| 271.1 | $\dagger 2.7$ | $^{144}\text{Gd}(4.5 \text{ m})$ | 333.3($\dagger 100$), 2432.6($\dagger 94.8$), 629.5($\dagger 32.4$) |
| 271.1 2 | 0.0049 25 | $^{246}\text{Am}(25.0 \text{ m})$ | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 271.135 8 | 0.076 3 | $^{152}\text{Eu}(9.274 \text{ h})$ | 344.281(2.44), 1314.67(0.956), 970.38(0.604) |
| • 271.135 8 | 0.0730 21 | $^{152}\text{Eu}(13.542 \text{ y})$ | 344.281(26.58), 778.91(12.96), 411.115(2.231) |
| 271.135 8 | $\dagger 203$ 14 | $^{152}\text{Tb}(17.5 \text{ h})$ | 344.281($\dagger 1500$), 586.294($\dagger 223$), 778.91($\dagger 137$) |
| 271.135 8 | 0.08 5 | $^{152}\text{Tb}(4.2 \text{ m})$ | 344.281(20.8), 411.115(18.8), 471.9(12.2) |
| 271.15 10 | $\dagger 19.8$ 10 | $^{165}\text{Lu}(10.74 \text{ m})$ | 132.49($\dagger 100$), 120.60($\dagger 100$), 174.25($\dagger 47.0$) |
| 271.2 | $\dagger 100$ 5 | $^{101}\text{Rb}(32 \text{ ms})$ | 251.6($\dagger 31$), 1091.8($\dagger 25$), 1362.9($\dagger 14$) |
| 271.2 1 | 0.23 7 | $^{107}\text{Tc}(21.2 \text{ s})$ | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| 271.2 1 | 0.012 4 | $^{161}\text{Er}(3.21 \text{ h})$ | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| 271.23 1 | $\dagger 5.5$ 5 | $^{215}\text{Bi}(7.6 \text{ m})$ | 293.54($\dagger 100$), 517.63($\dagger 1.9$), 833($\dagger 1.4$) |
| 271.23 1 | 10.8 3 | $^{219}\text{Rn}(3.96 \text{ s})$ | 401.81(6.37), 130.59(0.119), 293.54(0.073) |
| 271.30 10 | 5.1 7 | $^{159}\text{Tm}(9.13 \text{ m})$ | 38.35(5.8), 84.8(5.8), 220.18(4.60) |
| 271.3 1 | 5.7 3 | $^{240}\text{Np}(61.9 \text{ m})$ | 566.34(25.3), 973.9(23.8), 600.57(18.4) |
| 271.31 7 | 1.56 24 | $^{183}\text{Ir}(58 \text{ m})$ | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 271.4 3 | 6.4 26 | $^{49}\text{Mn}(384 \text{ ms})$ | |
| 271.4 1 | 0.031 6 | $^{186}\text{Hg}(1.38 \text{ m})$ | 112.1(63), 251.5(55), 191.6(3.7) |
| 271.45 17 | $\dagger 31$ 6 | $^{187}\text{Hg}(1.9 \text{ m})$ | 233.38($\dagger 100$), 376.34($\dagger 38$), 240.26($\dagger 33$) |
| • 271.48 8 | 0.328 12 | $^{233}\text{Pa}(26.967 \text{ d})$ | 312.17(38.6), 300.34(6.62), 340.81(4.47) |
| 271.48 8 | 0.0059 3 | $^{233}\text{Np}(36.2 \text{ m})$ | 312.17(0.7), 298.89(0.44), 546.9(0.280) |
| 271.5 4 | 0.12 4 | $^{127}\text{Sn}(2.10 \text{ h})$ | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 271.5 2 | 0.67 10 | $^{148}\text{Ce}(56 \text{ s})$ | 269.519(17.0), 291.724(16.7), 121.169(13.2) |
| 271.5 2 | $\dagger 2.9 \times 10^3$ 4 | $^{158}\text{Er}(2.29 \text{ h})$ | 71.91($\dagger 23300$), 386.84($\dagger 11000$), 248.58($\dagger 42000$) |
| 271.5 6 | 0.14 | $^{203}\text{Bi}(11.76 \text{ h})$ | 820.3(30), 825.2(14.6), 896.9(13) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| • 271.56 5 | 0.026 4 | ¹⁸⁸ Ir(41.5 h) | 155.032(29.7), 2214.62(18.7), 632.99(18) |
| 271.58 9 | 0.0130 22 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 271.6 2 | 4.3 4 | ⁷⁶ Kr(14.8 h) | 315.7(39), 270.2(21.1), 45.48(19.5) |
| 271.6 5 | 8 | ¹²⁴ Ba(11.9 m) | 169.3(20), 1216(12), 188.98(10) |
| 271.60 15 | †12 2 | ¹³¹ Ce(10.3 m) | 169.42(†100), 414.25(†68), 119.18(†44) |
| • 271.63 16 | 0.82 3 | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 271.64 2 | 2.52 17 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 271.7 7 | 0.05 3 | ⁹⁷ Rb(169.9 ms) | 167.1(26), 585.2(21.0), 600.5(10.6) |
| 271.7 4 | 0.151 13 | ⁹⁹ Nb(2.6 m) | 97.785(7), 253.50(3.64), 2641.3(3.64) |
| 271.80 2 | 30.1 9 | ⁸⁸ Nb(14.5 m) | 1082.53(103), 1057.01(100), 671.20(64) |
| 271.8 3 | 0.144 18 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 271.8 4 | †0.7 3 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| • 271.8 4 | 2.6 | ²⁵³ Fm(3.00 d) | 144.99(0.192), 62.47(0.16), 405(0.08) |
| 271.9 1 | 2.5 3 | ¹³⁵ Nd(12.4 m) | 204.02(52), 41.43(23), 441.2(14.9) |
| 271.9 1 | 0.40 5 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 271.9 1 | †7.1 3 | ²⁰¹ Po(8.9 m) | 967.4(†100.0), 964.3(†85), 411.9(†33.0) |
| 271.94 3 | 84 | ¹⁴³ Gd(112 s) | 588.00(15.7), 798.89(10.7), 668.10(9.7) |
| 272.0 10 | 0.18 9 | ¹⁰⁴ Tc(18.3 m) | 358.0(89), 530.5(15.6), 535.1(14.7) |
| 272.0 2 | 0.166 16 | ¹¹¹ Pd(5.5 h) | 70.44(8.3), 391.25(5.4), 632.80(3.6) |
| • 272.0 | | ¹⁹¹ Pt(2.9 d) | 538.90(13.7), 409.44(8.0), 359.90(6.0) |
| 272.0 10 | | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 272.05 10 | 0.072 4 | ⁸⁵ Br(2.90 m) | 802.41(2.56), 924.63(1.63), 919.06(0.65) |
| • 272.053 10 | 0.028 9 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| 272.07 10 | 0.75 10 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 272.1 1 | 0.11 4 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 272.10 5 | 0.64 6 | ¹⁴³ Sm(8.83 m) | 1056.58(4), 1514.98(1.39), 1173.18(0.88) |
| 272.1 2 | 0.0027 8 | ¹⁶⁷ Yb(17.5 m) | 113.34(55.3), 106.18(22.5), 176.25(21) |
| 272.1 4 | †0.18 5 | ¹⁸⁴ Ir(3.09 h) | 263.97(†100), 119.80(†45), 390.38(†38) |
| • 272.105 15 | 21.2 3 | ¹⁷³ Lu(1.37 y) | 78.63(11.87), 100.724(5.24), 171.393(2.90) |
| • 272.112 6 | 0.035 17 | ²⁰⁰ Tl(26.1 h) | 367.943(87), 1205.717(29.9), 579.298(13.8) |
| 272.17 8 | †9.0×10 ³ 9 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| 272.181 2 | 2.5 3 | ²³¹ Ac(7.5 m) | 282.471(39.0), 307.063(30.4), 221.399(16.8) |
| 272.2 5 | 1.64 20 | ¹⁶⁶ Lu(2.65 m) | 228.12(77.3), 337.50(41), 367.95(31.4) |
| • 272.2 3 | 0.012 3 | ²⁴⁵ Bk(4.94 d) | 252.80(29.1), 380.8(2.40), 385.0(0.57) |
| • 272.21 14 | 0.00013 9 | ¹⁴⁹ Eu(93.1 d) | 327.526(4.03), 277.089(3.56), 22.510(2.32) |
| 272.22 2 | 0.71 13 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 272.28 5 | 1.08 10 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| • 272.321 8 | 3.21 8 | ¹⁴⁹ Gd(9.28 d) | 149.735(48.2), 298.634(28.6), 346.651(23.9) |
| • 272.34 5 | 5.7×10 ⁻⁵ 9 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 272.40 16 | 0.23 3 | ⁹⁷ Zr(16.91 h) | 743.36(93), 507.64(5.03), 1147.97(2.61) |
| 272.4 8 | 0.08 3 | ¹¹⁶ In(54.41 m) | 1293.54(84.4), 1097.3(56.2), 416.86(28.9) |
| 272.4 1 | 7.6 9 | ¹⁴⁰ Gd(15.8 s) | 174.8(76), 749.9(70), 379.0(38) |
| • 272.40 15 | 0.0092 9 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 272.4 | | ¹⁹⁴ Bi(125 s) | 63.9, 112.2 |
| 272.41 4 | 0.0104 10 | ¹⁵² Eu(9.274 h) | 841.586(14.6), 963.37(12.01), 121.7824(7.21) |
| 272.42 7 | 1.42 7 | ⁸⁹ Rb(15.15 m) | 1031.94(58), 1248.19(42.6), 2196.02(13.3) |
| 272.43 23 | 0.32 8 | ¹⁵¹ Dy(17.9 m) | 386.10(19.4), 49.46(18.0), 546.31(14.3) |
| • 272.498 17 | 0.0578 11 | ¹³¹ I(8.02070 d) | 364.489(81.7), 636.989(7.17), 284.305(6.14) |
| 272.55 9 | 0.251 23 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 272.6 6 | 0.26 4 | ⁹¹ Sr(9.63 h) | 1024.3(33), 749.8(23.61), 652.9(8.0) |
| 272.6 1 | 0.37 3 | ²⁰⁰ Po(11.5 m) | 671.0(34.0), 617.7(19.7), 434.4(9.3) |
| 272.646 29 | 3.5 5 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 272.656 90 | 4.28 13 | ¹⁴³ Cs(1.78 s) | 195.554(13), 232.421(8.32), 306.424(6.80) |
| • 272.66 16 | 0.058 19 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 272.7 4 | †41 4 | ⁸⁸ Se(1.52 s) | 159.2(†100), 259.2(†82), 1903.7(†64) |
| 272.7 4 | 0.12 3 | ¹³⁹ Pm(4.15 m) | 402.8(15), 463.1(4.1), 367.8(3.52) |
| 272.7 | †>0.47 | ¹⁷¹ Hf(12.1 h) | 122.0(†100), 662.2(†83), 347.18(†47) |
| 272.75 3 | 45.5 6 | ¹⁰⁸ Sn(10.30 m) | 396.44(64.3), 669.08(22.6), 168.62(19.9) |
| 272.76 2 | 0.060 12 | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 272.82 3 | 0.061 20 | ¹⁵⁰ Pm(2.68 h) | 333.971(68), 1324.51(17.5), 1165.739(15.8) |
| • 272.82 3 | 0.038 5 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| • 272.848 3 | 0.077 4 | ²³⁹ Np(2.3565 d) | 106.125(27.2), 277.599(14.38), 228.183(10.76) |
| 272.848 3 | 0.064 5 | ²³⁹ Am(11.9 h) | 277.599(15.0), 228.183(11.3), 209.753(3.50) |
| • 272.848 3 | 0.080 10 | ²⁴³ Cm(29.1 y) | 277.599(14.0), 228.183(10.6), 209.753(3.29) |
| • 272.876 2 | 0.089 4 | ¹⁶⁸ Tm(93.1 d) | 198.241(52.39), 815.990(48.99), 447.515(23.05) |
| • 272.9 2 | >0.009 | ¹⁴³ Ce(33.039 h) | 293.266(42.80), 57.356(11.7), 664.571(5.69) |
| 272.9 3 | 0.27 6 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 272.9 4 | †5.5 6 | ¹⁷² W(6.6 m) | 38.9(†100), 423.3(†44), 89.8(†33.0) |
| 272.918 6 | 86 3 | ¹⁷⁴ Tm(5.4 m) | 366.526(92), 992.128(87), 176.645(66.2) |
| • 272.918 6 | 0.550 17 | ¹⁷⁴ Lu(142 d) | 992.128(0.546), 176.645(0.470), 76.471(0.0638) |
| 272.93 9 | 0.0045 9 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 272.93 9 | †32 5 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 272.97 4 | 10.4 4 | ⁶⁶ Ge(2.26 h) | 43.89(28.7), 381.85(28), 108.85(10.4) |
| 272.98 8 | 40 4 | ¹⁸⁴ Au(53.0 s) | 162.97(50), 362.47(17.5), 777.13(6.6) |
| 272.99 9 | 0.023 5 | ¹⁸³ Os(13.0 h) | 381.768(89.6), 114.463(20.63), 167.844(8.81) |
| 273.0 10 | 0.071 15 | ⁹³ Y(10.18 h) | 266.9(7.3), 947.1(2.09), 1917.8(1.55) |
| 273.0 3 | 0.5 1 | ⁹⁷ Sr(426 ms) | 1905.0(25), 953.8(21.4), 652.2(11.4) |
| 273.0 2 | 0.100 18 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 273.1 2 | 0.54 7 | ⁷⁵ Kr(4.3 m) | 132.43(67), 154.66(20.8), 153.15(8.0) |
| 273.1 2 | 0.05 3 | ⁹⁷ Rb(169.9 ms) | 167.1(26), 585.2(21.0), 600.5(10.6) |
| 273.1 3 | †2.1 4 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| • 273.14 16 | 0.0021 5 | ¹⁴⁷ Eu(24.1 d) | 197.299(27), 121.220(22.9), 677.516(9.8) |
| 273.14 5 | 0.9 | ²²⁷ Ra(42.2 m) | 27.36(16), 300.07(4.6), 302.65(4.3) |
| • 273.14 5 | 0.0597 22 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 273.2 3 | 0.17 3 | ¹²¹ Cs(155 s) | 153.9(15.2), 239.6(7.7), 427.1(3.63) |
| 273.2 3 | 0.10 3 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 273.2 10 | 0.022 5 | ²⁰¹ Bi(108 m) | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| 273.23 16 | †100 5 | ¹⁸² Ir(15 m) | 126.79(†77), 236.3(†21.0), 912.02(†20.3) |
| 273.24 4 | 0.18 8 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 273.3 1 | 0.76 5 | ²³⁷ Am(73.0 m) | 280.23(47.3), 438.4(8.3), 473.5(4.3) |
| 273.349 18 | 28 | ¹¹⁷ Cd(2.49 h) | 1303.27(18.4), 344.459(17.9), 1576.62(11.19) |
| 273.349 18 | | ¹¹⁷ Cd(3.36 h) | 1997.33(26), 1065.98(23.1), 564.397(14.7) |
| 273.39 20 | 1.2 2 | ²⁰⁰ Bi(36.4 m) | 1026.5(100), 462.34(98), 419.70(91) |
| 273.39 20 | †>0.5 | ²⁰⁰ Bi(31 m) | 1026.5(†110), 462.34(†45.7), 419.70(†26.0) |
| 273.4 4 | 10.9 13 | ⁶⁰ Zn(2.38 m) | 670.3(64), 61.4(26), 334.4(9.0) |
| 273.4 2 | 0.25 7 | ¹⁰⁸ Tc(5.17 s) | 242.25(82), 465.6(14.3), 707.81(11.4) |
| 273.4 2 | 0.038 4 | ¹¹³ Sb(6.67 m) | 497.96(80), 332.41(14.8), 88.25(2.7) |
| 273.4 3 | †0.36 1 | ¹²⁰ Cs(64 s) | 322.4(†100), 473.5(†30), 553.4(†19.1) |
| • 273.44 1 | 15 | ¹²⁸ Ba(2.43 d) | 374.99(0.309), 229.50(0.106), 359.10(0.096) |
| • 273.480 8 | 0.802 25 | ⁸² Br(35.30 h) | 776.517(83.5), 554.348(70.8), 619.106(43.4) |
| 273.480 8 | 1.04 6 | ⁸² Rb(6.472 h) | 776.517(84), 554.348(62.4), 619.106(37.976) |
| 273.5 3 | | ¹²² Ba(1.95 m) | 550.7, 388.7, 231.0 |
| 273.5 | 0.08 4 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 273.5 | | ¹⁸² Hg(10.83 s) | 129.3(†100), 217.7(†75), 413.5(†53) |
| 273.5 3 | 0.49 22 | ²²¹ Rn(25 m) | 186.38(21.6), 150.04(4.5), 216.90(2.6) |
| • 273.5 3 | | ²²⁵ Ac(10.0 d) | 99.91(1.01), 150.04(0.80), 99.63(0.62) |
| 273.6 2 | 0.02 | ¹¹³ Pd(93 s) | 95.74(3.3), 643.7(3.0), 739.63(2.4) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 273.6 5 | 0.044 9 | ¹³⁷ Pr(1.28 h) | 836.7(1.8), 433.9(1.28), 514.0(1.08) |
| 273.6 | 0.0007 3 | ¹⁵⁹ Gd(18.479 h) | 363.55(11.4), 58.00(2.15), 348.16(0.234) |
| • 273.646 8 | †11.1 4 | ¹³⁶ Cs(13.16 d) | 818.514(†100), 1048.073(†80), 340.547(†42.3) |
| 273.7 2 | 0.4 1 | ¹²⁹ Sn(2.23 m) | 645.13(100), 80.5(6.6), 913.2(5.0) |
| 273.7 2 | 37 | ¹³⁹ Sm(2.57 m) | 306.7(28.5), 596.3(8.0), 782.0(6.9) |
| • 273.7 6 | 0.053 16 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 273.7 4 | 0.172 22 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| 273.77 5 | 5.4 3 | ¹⁴⁸ Ce(56 s) | 269.519(17.0), 291.724(16.7), 121.169(13.2) |
| 273.77 29 | †2.5 | ¹⁹⁷ Ir(5.8 m) | 469.72(†100), 430.56(†61), 815.92(†45) |
| 273.8 5 | 1.2 2 | ¹⁴² Eu(1.22 m) | 768.1(100), 1023.3(92.0), 556.6(86.6) |
| 273.8 2 | †643 67 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| 273.9 3 | †1.3 6 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| 273.9 2 | †1.1 2 | ¹⁵⁵ Tm(21.6 s) | 226.8(†100), 531.7(†20), 88.1(†17) |
| 273.93 9 | 0.37 5 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 273.96 20 | 0.10 | ¹⁵⁴ Pm(1.73 m) | 2057.76(17.1), 1393.9(14.4), 81.99(12.6) |
| 273.96 20 | 0.27 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 273.97 7 | 6.75 25 | ¹⁸⁶ Ta(10.5 m) | 197.93(50), 214.87(42.3), 510.82(37.5) |
| 274.0 6 | †29 12 | ¹¹⁸ Xe(6 m) | 53.5(†100), 60.0(†82), 119.9(†76) |
| • 274.0 5 | 0.00391 18 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 274.0 3 | †36 8 | ¹⁵⁶ Nd(5.47 s) | 150.4(†100), 157.3(†78), 84.6(†63) |
| 274.0 3 | †5.4 7 | ¹⁹⁸ Tl(1.87 h) | 636.4(†202), 411.8044(†202), 587.2(†185) |
| 274.0 2 | 0.050 10 | ²²³ Ac(2.10 m) | 98.58(0.891), 191.3(0.58), 83.55(0.57) |
| 274 | †1.5 | ²²⁴ Ac(2.9 h) | 156.4(†100), 140.8(†55), 261.6(†28) |
| • 274.02 5 | 0.0083 17 | ¹⁸⁹ Re(24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| 274.04 4 | 0.43 4 | ¹⁸⁴ Ta(8.7 h) | 414.03(72), 252.848(43), 920.932(32.0) |
| • 274.15 4 | 0.00003 1 | ²³¹ Th(25.52 h) | 25.646(14.5), 84.216(6.6), 89.944(0.94) |
| 274.16 2 | 2.3 5 | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 274.2 2 | 0.5 | ¹⁰⁴ Zr(1.2 s) | 100.9(6), 504.7(5), 445.0(5) |
| 274.2 4 | †5 2 | ¹¹² Te(2.0 m) | 372.70(†100), 296.20(†86), 418.9(†57) |
| 274.2 1 | >2.4 | ¹³¹ Sb(23.03 m) | 943.4(47), 933.1(26.1), 642.30(23) |
| 274.2 2 | 0.0055 3 | ¹⁵⁹ Gd(18.479 h) | 363.55(11.4), 58.00(2.15), 348.16(0.234) |
| 274.2 5 | 13 3 | ¹⁹¹ Hg(50.8 m) | 252.5(57), 420.1(18.6), 578.6(17.6) |
| 274.2 2 | 0.11 4 | ²⁴² U(16.8 m) | 67.60(9.6), 55.58(3.90), 585.0(1.92) |
| 274.21 10 | 3.0 5 | ¹⁹⁰ Pb(1.2 m) | 942.20(34), 151.19(8.92), 598.3(8.0) |
| 274.25 10 | 0.0033 11 | ²³⁰ Ac(122 s) | 454.95(8), 508.20(5.15), 1243.9(3.50) |
| • 274.25 10 | 0.10 3 | ²³⁰ Pa(17.4 d) | 951.95(1.65), 918.48(8.2), 454.95(6.27) |
| 274.3 2 | 1.15 15 | ¹⁰⁵ Mo(35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 274.3 1 | 0.91 11 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 274.30 15 | 0.22 3 | ¹⁶³ Yb(11.05 m) | 860.28(10.1), 63.62(6.5), 123.21(1.98) |
| 274.321 10 | 1.81 7 | ¹⁸² Os(22.10 h) | 510.056(52), 180.230(33.5), 263.285(6.71) |
| 274.328 7 | 0.11 5 | ¹⁰⁹ Rh(80 s) | 326.868(54), 426.135(7.7), 178.034(7.6) |
| 274.39 14 | †13.5 13 | ¹⁹³ Tl(21.6 m) | 324.37(†100), 1044.7(†59), 676.10(†48) |
| 274.4 1 | 20.4 10 | ¹¹⁷ I(2.22 m) | 325.9(75), 661.5(5.1), 684.0(3.23) |
| 274.4 | †8.3 | ¹⁴⁴ Gd(4.5 m) | 333.3(†100), 2432.6(†94.8), 629.5(†32.4) |
| 274.41 4 | 10.0 6 | ¹⁶⁶ Lu(2.65 m) | 228.12(77.3), 337.50(41), 367.95(31.4) |
| 274.41 2 | 0.205 18 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 274.50 11 | 0.36 4 | ¹⁹⁷ Pb(43 m) | 385.85(74), 387.72(25.1), 222.45(24.6) |
| 274.53 5 | 0.35 10 | ²¹⁴ Pb(26.8 m) | 351.921(35.8), 295.213(18.5), 241.981(7.50) |
| 274.6 2 | †0.9 3 | ²³⁰ Ra(93 m) | 72.0(†100), 63.0(†35.4), 202.8(†27.3) |
| 274.673 15 | 3.1 6 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 274.673 15 | 2.00 22 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 274.68 15 | >0.007 | ¹³¹ Te(25.0 m) | 149.716(69), 452.323(18.18), 1146.96(4.95) |
| 274.7 2 | 1.03 3 | ⁹¹ Sr(9.63 h) | 1024.3(33), 749.8(23.61), 652.9(8.0) |
| 274.7 1 | 1.68 16 | ¹⁰¹ Ag(11.1 m) | 261.0(53), 588.0(10.0), 667.3(9.8) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| 274.7 3 | †1.6 4 | ¹⁰⁵ Nb(2.95 s) | 94.8(†100), 246.9(†79), 309.9(†41.9) |
| 274.728 10 | †1.7 8 | ²²⁹ Ac(62.7 m) | 164.522(†100), 569.1(†91), 261.92(†39) |
| • 274.728 10 | 0.00040 6 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 274.8 1 | 0.27 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 274.8 3 | 50.4 20 | ¹⁹² Hg(4.85 h) | 157.2(7), 306.5(5.4), 186.4(3.3) |
| 274.82 19 | †<2.1 | ¹⁸² Au(21 s) | 154.76(†100), 264.33(†40.0), 855.41(†14.5) |
| 274.84 7 | 0.133 20 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 274.9 3 | 1.9 7 | ¹⁵⁰ Tb(5.8 m) | 638.05(100), 650.4(70), 438.37(42) |
| 274.9 1 | 0.28 5 | ²⁰⁶ Fr(15.9 s) | 575.3(12), 559.0(8.19), 628.6(3.6) |
| 274.91 10 | 2.03 15 | ¹²¹ Cd(13.5 s) | 324.976(49.5), 1040.26(16.8), 349.937(12.9) |
| 274.93 21 | 0.090 11 | ¹⁰¹ Mo(14.61 m) | 191.92(19), 590.91(16.4), 1012.47(12.8) |
| 275 | | ¹¹⁵ I(1.3 m) | 709, 460, 284 |
| 275.0 1 | 0.029 4 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| 275 | 0.048 | ¹⁷⁵ Ta(10.5 h) | 207.4(14.0), 348.5(12.0), 266.9(10.8) |
| 275.00 15 | 0.128 12 | ¹⁹² Au(4.94 h) | 316.50791(58.0), 295.95827(22.3), 2236.89(5.6) |
| 275.04 10 | 0.093 21 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 275.04 10 | | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 275.04 10 | †310 60 | ²³⁴ Pa(1.17 m) | 1001.03(†837000), 766.38(†294000), 742.81(†80000) |
| 275.1 1 | 2.70 22 | ⁷³ Br(3.4 m) | 64.9(37.0), 336.0(10.4), 699.8(9.1) |
| 275.1 2 | 0.106 23 | ⁷⁹ Rb(22.9 m) | 688.1(23), 182.77(19.2), 143.41(13.9) |
| • 275.1 2 | | ²⁴⁷ Cm(1.56×10 ⁷ y) | 402.6(72), 278.0(3.4), 287.4(2.0) |
| 275.125 8 | 2.68 7 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 275.129 2 | >0.31 | ²³¹ Ac(7.5 m) | 282.471(39.0), 307.063(30.4), 221.399(16.8) |
| • 275.129 2 | 0.042 5 | ²³⁵ U(7.038×10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| • 275.18 18 | 0.00037 15 | ¹⁴⁰ Ba(12.752 d) | 537.261(24.39), 29.9640(14.1), 162.660(6.21) |
| • 275.21 2 | 6.8 5 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 717.72(4.05) |
| • 275.22 10 | 0.24 5 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 275.25 9 | 0.66 14 | ⁷⁵ Zn(10.2 s) | 228.67(28.9), 432.29(20.2), 155.94(17.2) |
| 275.3 10 | | ⁷⁶ Zn(5.7 s) | 281.7, 1030.6, 831.2 |
| 275.3 8 | 0.8 4 | ⁷⁸ Zn(1.47 s) | 224.75(43.9), 181.68(28.1), 860.30(24.5) |
| 275.3 2 | †6 | ²⁵⁶ Es(7.6 h) | 861.8(†100), 231.1(†61), 172.6(†49) |
| 275.32 5 | 0.022 4 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| • 275.374 15 | 0.80 5 | ¹⁴⁷ Nd(10.98 d) | 91.105(28), 531.016(13.1), 319.411(1.95) |
| • 275.38 8 | 0.0030 13 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 275.4 3 | †100.0 4 | ¹¹¹ Rh(11 s) | 411.8(†9.42), 230.0(†8.9), 789.0(†3.8) |
| • 275.40 20 | 0.0045 5 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 275.4 4 | 0.13 6 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 275.4 | 0.27 5 | ¹⁹⁸ Pb(2.40 h) | 290.3(36), 365.4(19), 173.4(18) |
| • 275.428 4 | 0.007 2 | ²³⁵ U(7.038×10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| 275.437 11 | 0.650 16 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| • 275.452 15 | 0.0336 10 | ¹⁵² Eu(13.542 y) | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| 275.48 5 | 0.260 21 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| 275.5 3 | | ¹⁸⁷ Pb(15.2 s) | 208.0, 67.4 |
| 275.50 3 | 0.0021 6 | ¹⁸⁷ W(23.72 h) | 685.774(27.3), 479.531(21.8), 72.001(11.14) |
| 275.5 7 | 0.53 5 | ²⁰¹ Bi(108 m) | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| 275.52 3 | 0.25 3 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 275.53 7 | 0.16 3 | ¹⁶⁵ Yb(9.9 m) | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 275.59 11 | 2.05 20 | ²⁰⁶ At(30.0 m) | 700.66(98), 477.10(86), 395.54(48) |
| 275.595 15 | 0.81 17 | ¹⁶² Ho(67.0 m) | 185.005(28.6), 1220.0(22.5), 282.864(11.3) |
| 275.6 3 | 0.058 14 | ¹⁵⁰ Tb(3.48 h) | 638.05(72), 496.3(14.8), 792.5(4.39) |
| 275.6 2 | 0.32 5 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 275.61 6 | 0.040 6 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| • 275.7 | 0.21 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 275.70 20 | 0.039 | ¹⁶⁵ Yb(9.9 m) | 80.11(49), 68.86(9.1), 1090.28(4.4) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-----------------------------|--|--|
| • 275.77 8 | $\dagger 6.6 \times 10^4$ 4 | ^{241}Am (432.2 y) | 59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$) |
| 275.8 10 | 0.07 | ^{115}Ag (20.0 m) | 229.08(18), 212.80(4.4), 472.70(4.0) |
| 275.8 3 | 1.70 18 | ^{118}Ag (2.0 s) | 487.77(57), 677.13(53), 1058.39(14.8) |
| 275.90 25 | 0.35 8 | ^{209}Rn (28.5 m) | 408.32(50.3), 745.78(22.8), 337.45(14.5) |
| • 275.904 22 | 0.308 17 | ^{189}Re (24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| • 275.904 22 | 0.54 3 | ^{189}Ir (13.2 d) | 245.09(6), 69.537(3.5), 59.053(1.20) |
| 275.925 7 | | ^{133}La (3.912 h) | 278.835(2.50), 302.353(1.648), 290.06(1.413) |
| 275.988 12 | 0.7 | ^{81}Se (18.45 m) | 290.03(0.55), 828.27(0.280), 566.04(0.220) |
| 275.988 12 | 0.049 13 | ^{81}Se (57.28 m) | 260.21(0.048), 767.1(0.00061), 491.30(0.000089) |
| • 275.988 12 | 0.30 | ^{81}Kr (2.29×10^5 y) | |
| 276.0 2 | 2.92 16 | ^{77}Kr (74.4 m) | 129.64(81), 146.59(37.3), 312.0(3.7) |
| 276.0 2 | 4 1 | ^{132}Sb (4.10 m) | 696.8(100), 973.9(100), 150.6(66) |
| 276.00 25 | 0.90 | ^{154}Pm (2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 276.0 1 | 0.100 12 | ^{161}Er (3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| 276 | $\dagger 25$ | ^{173}Os (16 s) | 177($\dagger 100$), 187($\dagger 50$), 285($\dagger 30$) |
| 276 | | ^{238}Pa (2.3 m) | 1015.3($\dagger < 100$), 1014.6($\dagger < 100$), 635.18($\dagger 88$) |
| 276.05 3 | 0.99 3 | ^{157}Sm (482 s) | 197.870(56.00), 196.461(16.8), 394.351(11.93) |
| 276.05 12 | 0.037 9 | ^{187}Ir (10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| 276.10 4 | $\dagger 100$ 6 | ^{101}Nb (7.1 s) | 157.466($\dagger 32$), 13.5($\dagger 32$), 441.01($\dagger 22$) |
| 276.1 2 | $\dagger 2.8$ 8 | ^{131}Ce (10.3 m) | 169.42($\dagger 100$), 414.25($\dagger 68$), 119.18($\dagger 44$) |
| 276.1 | 0.25 13 | ^{147}Cs (0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 276.1 1 | 0.32 3 | ^{184}Pt (17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 276.11 13 | 0.64 16 | ^{181}Re (19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| 276.28 4 | 13.7 8 | ^{166}Lu (2.65 m) | 228.12(77.3), 337.50(41), 367.95(31.4) |
| 276.296 5 | 2.16 16 | ^{109}Rh (80 s) | 326.868(54), 426.135(7.7), 178.034(7.6) |
| 276.3 5 | 0.29 7 | ^{136}Sm (47 s) | 114.4(36), 747.7(5.4), 485.3(5.0) |
| 276.3 1 | 0.64 10 | ^{137}Nd (38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| • 276.311 22 | 8.7 5 | ^{182}Re (64.0 h) | 229.3220(26), 67.75001(22.2), 1121.3007(22.0) |
| • 276.398 2 | 7.164 22 | ^{133}Ba (10.52 y) | 356.017(62.05), 80.997(34.06), 302.853(18.33) |
| 276.4 3 | 1.45 17 | ^{99}Y (1.470 s) | 121.761(33), 724.30(14.9), 536.2(6.6) |
| 276.4 3 | 56 3 | ^{180}Ir (1.5 m) | 132.2(38.1), 699.0(13.4), 870.4(11.2) |
| 276.5 3 | 0.030 15 | ^{131}La (59 m) | 108.081(25.0), 417.783(18.0), 365.162(16.9) |
| 276.5 5 | 0.21 3 | ^{136}Pr (13.1 m) | 552.16(76), 539.75(52), 1092.3(18.5) |
| 276.5 5 | 0.10 3 | ^{150}Pm (2.68 h) | 333.971(68), 1324.51(17.5), 1165.739(15.8) |
| 276.5 | 0.18 | ^{185}Ir (14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 276.5 1 | 0.132 13 | ^{186}Hg (1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| 276.5 1 | | ^{212}Bi (25.0 m) | 120.9, 223.0, 405.2 |
| 276.56 4 | 0.73 17 | ^{133}Sb (2.5 m) | 1096.22(43.0), 817.8(18.5), 2755(12.5) |
| 276.59 6 | 0.67 17 | ^{186}Ir (2.0 h) | 137.155(27), 767.508(21.2), 630.354(18.0) |
| 276.6 2 | $\dagger 2.9$ 3 | ^{185}Hg (21.6 s) | 222.8($\dagger 100.0$), 258.7($\dagger 98$), 212.5($\dagger 58$) |
| 276.60 8 | 1.59 8 | ^{186}Ir (16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 276.61 23 | $\dagger 3.7$ 8 | ^{183}Hg (9.4 s) | 60.5($\dagger 100$), 159.91($\dagger 21$), 172.70($\dagger 17$) |
| 276.64 9 | 0.12 | ^{183}Ir (58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 276.7 | 0.9 | ^{133}Pr (6.5 m) | 134.3(14), 74.0(10), 315.6(10) |
| 276.7 6 | 0 | ^{186}Pt (2.0 h) | 611.5(6.0), 635.6(> 3.8), 366.7(2.3) |
| 276.7 | > 0.013 | ^{197}Tl (2.84 h) | 425.84(12.9), 152.22(7.2), 1411.34(4.5) |
| 276.71 2 | $\dagger 1.07$ 6 | ^{153}Pm (5.4 m) | 35.842($\dagger 100$), 127.298($\dagger 75$), 28.309($\dagger 34.6$) |
| 276.73 11 | 0.08 4 | ^{183}Ir (58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 276.79 17 | 1.63 10 | ^{99}Rh (4.7 h) | 340.71(70), 617.8(12.0), 1261.2(11) |
| 276.8 3 | | ^{122}Ba (1.95 m) | 550.7, 388.7, 231.0 |
| • 276.8 1 | $\dagger 20.2$ 19 | ^{258}Md (51.5 d) | 367.8($\dagger 100$), 447.9($\dagger 37$), 71.1($\dagger 8.0$) |
| 276.81 5 | 0.038 14 | ^{155}Dy (9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(> 2.8) |
| 276.85 10 | < 0.07 | ^{16}C (0.747 s) | 120.42(0.67), 298.22(< 0.5), 397.27(< 0.03) |
| 276.86 5 | 0.041 8 | ^{157}Eu (15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------------|-----------------------------|--|
| 276.90 6 | 0.207 20 | ¹⁰⁰ Sr(202 ms) | 963.85(22.0), 898.50(18.9), 65.46(15.2) |
| 276.9 3 | 0.23 6 | ¹²⁵ Cd(0.57 s) | 1027.53(25.8), 1173.16(25.1), 736.65(12.6) |
| 276.9 1 | $\dagger 7.8 \times 10^2$ 22 | ¹⁵⁸ Er(2.29 h) | 71.91(\dagger 23300), 386.84(\dagger 111000), 248.58(\dagger 42000) |
| 276.948 13 | 23.4 7 | ¹⁴¹ Ba(18.27 m) | 190.328(46.0), 304.194(25.4), 343.673(14.4) |
| 276.95 10 | \dagger 12.5 19 | ¹⁵⁵ Nd(8.9 s) | 180.574(\dagger 100), 418.99(\dagger 75), 955.08(\dagger 50) |
| 276.960 17 | 0.342 10 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 276.99 10 | 0.56 6 | ¹⁴⁰ Xe(13.60 s) | 805.52(20), 1413.66(12.2), 1315.05(8.2) |
| 277.0 | 0.17 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 277.0 1 | 0.026 7 | ¹⁷³ Ta(3.14 h) | 172.2(18), 69.70(5.9), 90.3(5.0) |
| 277.0 4 | 0.038 9 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 277.0 5 | 0.017 9 | ²⁴⁵ Pu(10.5 h) | 327.428(25.4), 560.13(5.4), 308.222(4.9) |
| 277.0 2 | 0.0020 7 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 277.01 7 | 0.76 12 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 277.03 9 | 1.25 25 | ¹⁸⁶ Ta(10.5 m) | 197.93(50), 214.87(42.3), 510.82(37.5) |
| 277.04 6 | 2.31 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| • 277.089 10 | 0.0288 12 | ¹⁴⁹ Pm(53.08 h) | 285.95(3.1), 859.46(0.109), 590.88(0.069) |
| • 277.089 10 | 3.56 6 | ¹⁴⁹ Eu(93.1 d) | 327.526(4.03), 22.510(2.32), 254.566(0.636) |
| 277.1 10 | 0.27 9 | ¹⁰⁴ Tc(18.3 m) | 358.0(89), 530.5(15.6), 535.1(14.7) |
| 277.1 3 | 0.30 6 | ¹¹⁷ Cs(8.4 s) | 204.8(15.0), 29.7(9.9), 205.6(6.8) |
| • 277.11 4 | 0.016 3 | ²⁰⁵ Bi(15.31 d) | 1764.36(1.368), 703.44(31), 987.62(0.585) |
| 277.12 2 | 0.424 16 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 277.17 13 | 0.30 6 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 277.26 14 | 0.16 5 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| 277.3 3 | 96 | ⁷⁸ Ge(88.0 m) | 293.9(4.0) |
| 277.30 20 | 0.058 9 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| 277.3 2 | \dagger 3.0 | ²⁵⁶ Es(7.6 h) | 861.8(\dagger 100), 231.1(\dagger 61), 172.6(\dagger 49) |
| • 277.32 1 | 0.069 3 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 277.351 10 | 6.31 9 | ²⁰⁸ Tl(3.053 m) | 2614.533(99), 583.191(84.5), 510.77(22.6) |
| 277.37 13 | 0.58 2 | ¹⁷¹ Er(7.516 h) | 308.31(64.4), 295.901(28.9), 111.621(20.5) |
| 277.4 5 | \dagger 0.6 2 | ¹²⁶ Cd(0.506 s) | 260.09(\dagger 100), 428.11(\dagger 83.7), 688.23(\dagger 5.9) |
| • 277.4 1 | 0.061 14 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 277.4 1 | 2.6 | ²²⁷ Ra(42.2 m) | 27.36(16), 300.07(4.6), 302.65(4.3) |
| 277.47 5 | 8.5 6 | ¹⁶⁴ Tb(3.0 m) | 168.838(25.4), 754.80(23.3), 215.07(21) |
| • 277.48 5 | | ²²⁹ Th(7340 y) | 193.509(4.4), 210.853(2.8), 86.40(2.57) |
| 277.5 3 | 0.37 4 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| • 277.523 5 | 0.0323 23 | ⁷⁷ Br(57.036 h) | 238.996(23), 520.639(22.4), 297.215(4.16) |
| 277.58 20 | 1.70 12 | ¹⁰⁷ Rh(21.7 m) | 302.77(66), 392.47(8.8), 312.21(4.8) |
| • 277.599 1 | 14.38 21 | ²³⁹ Np(2.3565 d) | 106.125(27.2), 228.183(10.76), 209.753(3.42) |
| 277.599 1 | 15.0 7 | ²³⁹ Am(11.9 h) | 228.183(11.3), 209.753(3.50), 226.378(3.30) |
| • 277.599 1 | 14.0 4 | ²⁴³ Cm(29.1 y) | 228.183(10.6), 209.753(3.29), 285.460(0.728) |
| • 277.6 6 | 0.009 6 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 277.63 10 | 0.262 19 | ¹⁹⁷ Tl(2.84 h) | 425.84(12.9), 152.22(7.2), 1411.34(4.5) |
| • 277.655 33 | 0.0387 18 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 277.7 6 | \dagger 3 | ¹¹⁹ Xe(5.8 m) | 231.8(\dagger 100), 98.5(\dagger 95), 461.5(\dagger 91) |
| 277.72 | | ²⁰⁸ Tl(3.053 m) | 2614.533(99), 583.191(84.5), 510.77(22.6) |
| 277.73 20 | 0.0057 19 | ¹⁶⁶ Tm(7.70 h) | 778.817(18.9), 2052.36(17.2), 184.410(16.1) |
| 277.74 8 | 0.0108 22 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 277.75 20 | 0.29 12 | ¹⁰⁵ In(5.07 m) | 131.37(41), 260.21(15.7), 604.11(9.2) |
| 277.85 20 | 0.35 5 | ¹⁷⁷ W(135 m) | 115.65(50), 426.98(13.2), 1036.4(10.3) |
| 277.88 2 | 7.2 5 | ¹⁹¹ Au(3.18 h) | 586.45(17), 674.19(6.8), 283.91(6.7) |
| 277.90 20 | 0.61 6 | ⁹¹ Tc(3.14 m) | 2450.90(13.5), 1639.90(9.2), 1605.20(7.77) |
| 277.951 8 | 20.9 9 | ¹³⁴ Te(41.8 m) | 767.20(29.0), 210.465(22.3), 79.445(20.9) |
| 278 | | ⁸² Zr(32 s) | 525, 397, 248 |
| 278.0 2 | 3 | ¹¹⁵ Rh(0.99 s) | 127.9(64.6), 125.6(33.3), 296.5(17) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| 278.00 11 | 0.55 11 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 278.0 | 0.24 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| • 278.0 1 | 0.008 3 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 278.0 3 | 0.9 3 | ¹⁵² Ho(49.5 s) | 647.2(92), 613.8(88.4), 683.3(88) |
| 278.00 25 | 0.44 5 | ¹⁵⁶ Ho(56 m) | 266.35(54.7), 137.83(51), 366.25(10.73) |
| 278.0 3 | 0.42 8 | ¹⁶⁰ Yb(4.8 m) | 173.74(42.0), 215.78(20.2), 140.35(9.3) |
| 278.0 | | ¹⁶⁷ Ta(1.4 m) | 296.3, 214.2, 139.5 |
| 278 | >0.13 | ²²⁸ Pa(22 h) | 911.205(4.19), 463.005(1.250), 964.770(4.25) |
| 278.0 2 | †<36 | ²²⁹ U(58 m) | 122.51(†100), 88.43(†88), 198.83(†88) |
| • 278.0 8 | 3.4 7 | ²⁴⁷ Cm(1.56×10 ⁷ y) | 402.6(72), 287.4(2.0), 344.5(1.3) |
| • 278 2 | 0.03 1 | ²⁵⁴ Es(275.7 d) | 63.0(2.0), 316(0.15), 304(0.07) |
| • 278.04 15 | †4.4×10 ³ | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| 278.1 2 | †4.7 8 | ¹⁰⁵ Nb(2.95 s) | 94.8(†100), 246.9(†79), 309.9(†41.9) |
| 278.1 4 | 1.22 19 | ¹²² Cs(4.5 m) | 331.1(94), 497.1(79), 638.5(63) |
| 278.1 2 | †1.5 3 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 278.111 8 | †2.8 10 | ²²⁹ Ac(62.7 m) | 164.522(†100), 569.1(†91), 261.92(†39) |
| • 278.111 8 | 0.00108 17 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 278.16 13 | 0.205 14 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 278.17 2 | 0.098 5 | ¹³¹ Te(25.0 m) | 149.716(69), 452.323(18.18), 1146.96(4.95) |
| 278.2 | | ¹³⁵ Ce(17.7 h) | 265.56(41.8), 300.07(23.5), 606.76(18.8) |
| 278.22 7 | 0.9 3 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 278.24 5 | 0.42 | ¹⁰¹ Cd(1.2 m) | 98.0(47), 1722.5(11), 1259.3(8) |
| • 278.28 2 | 0.069 3 | ¹⁴⁹ Gd(9.28 d) | 149.735(48.2), 298.634(28.6), 346.651(23.9) |
| 278.29 10 | †14.0 21 | ¹⁵⁵ Nd(8.9 s) | 180.574(†100), 418.99(†75), 955.08(†50) |
| • 278.3 4 | 0.00049 15 | ¹¹¹ Ag(7.45 d) | 342.118(7), 245.422(1.24), 96.73(0.20) |
| 278.3 4 | 0.006 | ¹¹¹ Ag(64.8 s) | 245.422(0.50), 620.3(0.121), 171.28(0.12) |
| 278.3 3 | 0.057 11 | ¹²³ Cs(5.94 m) | 97.3(23), 596.7(10.1), 83.3(4.1) |
| 278.3 3 | 0.6 1 | ¹²⁸ Sb(9.01 h) | 753.82(100), 743.22(100), 314.12(61) |
| 278.3 | 0.28 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 278.3 5 | †1.9 9 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 234.0(†40.0) |
| 278.3 1 | 0.041 10 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 278.31 20 | 1.51 18 | ¹³⁰ In(0.55 s) | 1221.24(89), 774.37(46), 89.23(20.2) |
| 278.31 8 | 1.09 11 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| • 278.352 14 | 0.0517 16 | ¹⁴⁷ Eu(24.1 d) | 197.299(27), 121.220(22.9), 677.516(9.8) |
| 278.36 12 | 0.0022 4 | ¹²³ I(13.27 h) | 158.97(83), 528.96(1.39), 440.02(0.428) |
| 278.4 4 | 0.096 12 | ⁷³ Zn(23.5 s) | 218.1(6.00), 910.5(1.91), 495.6(1.48) |
| 278.4 5 | 0.07 5 | ¹²⁵ Sn(9.52 m) | 332.10(97.2), 1404.0(0.70), 589.6(0.20) |
| 278.4 4 | 0.039 10 | ¹³² I(2.295 h) | 667.718(99), 772.60(75.6), 954.55(17.6) |
| 278.4 5 | 7.1 9 | ¹⁴⁰ Gd(15.8 s) | 174.8(76), 749.9(70), 379.0(38) |
| 278.4 6 | 0.23 12 | ¹⁶² Ho(67.0 m) | 185.005(28.6), 1220.0(22.5), 282.864(11.3) |
| 278.43 5 | 0.567 17 | ¹²⁹ Te(69.6 m) | 27.81(16.3), 459.60(7.70), 487.39(1.42) |
| • 278.43 5 | 0.00058 12 | ¹²⁹ Te(33.6 d) | 695.88(2.988), 729.57(0.70), 556.65(0.118) |
| 278.49 8 | 0.143 17 | ¹¹⁶ In(54.41 m) | 1293.54(84.4), 1097.3(56.2), 416.86(28.9) |
| 278.5 2 | 32 | ¹⁵² Nd(11.4 m) | 250.1(21.8), 16.0(8.0), 294.6(3.8) |
| • 278.5 | 0.047 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 278.5 10 | 1.0 3 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 278.53 16 | †3.0 10 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| • 278.56 2 | 2.33 5 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| • 278.595 5 | 0.131 9 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| 278.6 1 | 25 | ¹²⁹ La(11.6 m) | 110.5(16.9), 457.0(8.0), 253.8(8.0) |
| • 278.6 1 | 0.0025 25 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| • 278.614 4 | 1.32 3 | ¹²⁹ Cs(32.06 h) | 371.918(30.60), 411.490(22.31), 548.945(3.40) |
| • 278.65 15 | 0.037 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 278.70 4 | 0.096 6 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 278.7 3 | | ¹⁵² Eu(9.274 h) | 841.586(14.6), 963.37(12.01), 121.7824(7.21) |
| 278.7 4 | 0.0078 | ²³³ Th(22.3 m) | 86.477(2.7), 29.374(2.5), 459.222(1.4) |
| • 278.8 3 | 2.4 6 | ¹²⁶ Sb(12.46 d) | 695.03(100), 666.331(100), 414.81(83.3) |
| 278.80 15 | 0.153 19 | ¹³⁴ I(52.6 m) | 847.025(95.4), 884.090(64.9), 1072.547(15.0) |
| 278.8 3 | 0.11 | ¹⁷⁰ Hf(16.01 h) | 164.78(33), 620.7(23), 120.17(19) |
| 278.80 30 | 0.13 | ²⁰⁷ At(1.80 h) | 814.41(44.5), 588.33(19.2), 300.654(12.8) |
| 278.83 10 | 0.307 24 | ⁷⁹ Ga(2.847 s) | 464.79(24.2), 516.41(21.5), 1187.28(12.8) |
| 278.835 17 | 2.50 3 | ¹³³ La(3.912 h) | 302.353(1.648), 290.06(1.413), 632.765(0.98) |
| 278.87 6 | 0.128 7 | ¹²¹ I(2.12 h) | 212.189(84), 532.08(6.07), 598.74(1.47) |
| 278.88 5 | 2.6 3 | ²⁰⁶ At(30.0 m) | 700.66(98), 477.10(86), 395.54(48) |
| 278.9 3 | 1.3 3 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 278.90 10 | 0.81 10 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 278.92 9 | 2.0 4 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 278.95 15 | 0.043 6 | ¹⁵⁸ Tm(3.98 m) | 192.13(62), 335.10(16.8), 1149.83(7.6) |
| 278.95 5 | 0.197 13 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 278.95 5 | 0.046 19 | ²²⁸ Pa(22 h) | 911.205(4.19), 463.005(1.250), 964.770(4.25) |
| 279.0 2 | 0.010 3 | ¹¹¹ Pd(23.4 m) | 580.00(0.8), 70.44(0.78), 1459.0(0.56) |
| 279.0 2 | 0.49 | ¹⁴⁰ Sm(14.82 m) | 225.5(>10), 225.4(10), 140.0(5.0) |
| 279.0 1 | 0.53 3 | ²³⁶ Pa(9.1 m) | 642.35(37.0), 687.59(9.9), 1762.7(6.0) |
| 279.01 5 | 2.4 | ¹⁹⁷ Pt(95.41 m) | 130.2(0.105), 201.6(0.034), 77.351(0.0111) |
| 279.01 5 | 2000 | ¹⁹⁷ Hg(23.8 h) | 130.2(†89), 201.6(†29), 77.351(†9.4) |
| 279.024 10 | >0.0007 | ¹⁸⁴ Ta(8.7 h) | 414.03(72), 252.848(43), 920.932(32.0) |
| • 279.024 10 | >0.0008 | ¹⁸⁴ Re(169 d) | 252.848(10.7), 216.548(9.43), 920.932(8.14) |
| 279.029 4 | 0.0019 5 | ¹⁷⁹ Lu(4.59 h) | 214.335(11.3), 214.930(0.46), 123.3790(0.45) |
| 279.07 12 | 0.140 14 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 279.07 13 | †6.2 5 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| 279.1 2 | †<36 | ²²⁹ U(58 m) | 122.51(†100), 88.43(†88), 198.83(†88) |
| 279.12 7 | 1.93 23 | ¹³² Ce(3.51 h) | 182.11(77), 155.37(10.5), 216.83(4.95) |
| 279.19 5 | 3.7 3 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| • 279.1967 1281 | | ²⁰³ Hg(46.612 d) | |
| • 279.1967 1281 | | ²⁰³ Pb(51.873 h) | 401.323(3.35), 680.516(0.753) |
| 279.2 4 | †60 9 | ¹⁷¹ Ho(53 s) | 903.3(†100), 198.6(†88), 532.2(†58) |
| 279.2 3 | 0.42 6 | ¹⁹² Hg(4.85 h) | 274.8(50.4), 157.2(7), 306.5(5.4) |
| 279.2 7 | 0.220 22 | ¹⁹⁹ Bi(27 m) | 560.1(22.0), 424.85(22), 841.7(11) |
| 279.20 10 | 1.11 12 | ²⁰⁹ Rn(28.5 m) | 408.32(50.3), 745.78(22.8), 337.45(14.5) |
| • 279.25 10 | 0.14 4 | ¹⁹⁵ Hg(41.6 h) | 261.75(30.9), 560.27(7), 387.87(2.15) |
| 279.26 4 | 1.97 13 | ²²¹ Rn(25 m) | 186.38(21.6), 150.04(4.5), 216.90(2.6) |
| • 279.26 4 | 0.0185 22 | ²²⁵ Ac(10.0 d) | 99.91(1.01), 150.04(0.80), 99.63(0.62) |
| • 279.264 7 | 0.600 18 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 279.3 2 | †2.9 6 | ⁷⁵ Ga(126 s) | 253.0(†100), 574.8(†31.6), 885.6(†11.1) |
| 279.3 3 | | ¹¹⁶ Pd(12.4 s) | 569, 178.3, 215.8 |
| 279.3 4 | 0.58 8 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 279.3 3 | 0.36 5 | ¹²⁹ In(0.61 s) | 2118.0(45), 1865.0(32), 769.3(9.1) |
| • 279.30 5 | 0.084 4 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| • 279.379 7 | 0.186 6 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 279.4 1 | 8.3 4 | ⁹⁶ Sr(1.07 s) | 122.297(76.50), 809.401(71.9), 931.7(11.8) |
| • 279.40 15 | 0.0211 13 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 279.42 9 | 0.35 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 279.46 2 | 0.79 10 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 279.48 15 | 0.26 9 | ¹³³ Sb(2.5 m) | 1096.22(43.0), 817.8(18.5), 2755(12.5) |
| 279.50 20 | 0.055 5 | ¹¹² Sb(51.4 s) | 1257.05(96), 990.70(14.3), 670.0(3.7) |
| 279.5 1 | 0.31 4 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 279.5 1 | 3.93 17 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|--|
| 279.5 3 | 0.10 4 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| • 279.50 5 | 0.27 | ²³⁵ U(7.038×10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| 279.5441 130.0057 11 | | ⁷⁵ Ge(82.78 m) | 264.6584(11), 198.6031(1.19), 468.8(0.223) |
| 279.5441 130.0043 19 | | ⁷⁵ Ge(47.7 s) | 136.0008(0.020), 121.1166(0.0050), 400.6600(0.0039) |
| • 279.5441 1324.79 11 | | ⁷⁵ Se(119.779 d) | 264.6584(58.50), 136.0008(58.3), 121.1166(17.14) |
| 279.55 7 | †20 2 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| 279.6 3 | 0.38 4 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| • 279.6 | | ¹⁸⁸ Ir(41.5 h) | 155.032(29.7), 2214.62(18.7), 632.99(18) |
| • 279.640 15 | 0.00299 14 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| • 279.65 20 | 0.002 2 | ²³⁷ Np(2.14×10 ⁶ y) | 29.374(15.0), 86.477(12.4), 94.66(0.6) |
| • 279.717 5 | 0.0048 12 | ¹⁷² Tm(63.6 h) | 78.7435(6.5), 1093.657(6.0), 1387.093(5.6) |
| • 279.717 5 | 1.19 4 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| • 279.72 9 | †4.1 24 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 279.763 12 | 0.498 25 | ¹⁶⁵ Dy(2.334 h) | 94.700(3.58), 361.68(0.84), 633.415(0.568) |
| 279.8 1 | 0.11 6 | ¹¹⁷ Cd(2.49 h) | 273.349(28), 1303.27(18.4), 344.459(17.9) |
| 279.8 3 | 0.030 10 | ²²³ Ac(2.10 m) | 98.58(0.891), 191.3(0.58), 83.55(0.57) |
| 279.82 10 | †3.5 6 | ¹⁶⁵ Lu(10.74 m) | 132.49(†100), 120.60(†100), 174.25(†47.0) |
| 279.9 | 14.8 6 | ²¹ O(3.42 s) | 1730.3(45.6), 3517(15.4), 1787(14.2) |
| 279.9 | 46 10 | ¹⁵² Tm(5.2 s) | 807.9(100), 672.5(76), 422.4(66) |
| 279.93 4 | 11.9 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 279.96 18 | 1.36 6 | ¹⁸⁶ Au(10.7 m) | 191.56(62), 298.67(25.4), 764.89(10.5) |
| 279.97 1 | 47600 24 | ¹⁵⁷ Ho(12.6 m) | 341.16(†37000), 193.41(†15200), 86.55(†12200) |
| 280 1 | 20.4 9 | ⁹⁷ Y(1.17 s) | 1103.0(92.6), 161.4(71.8), 1091(56) |
| 280.0 2 | | ¹¹³ Pd(93 s) | 95.74(3.3), 643.7(3.0), 739.63(2.4) |
| 280.0 3 | 0.24 5 | ¹¹⁷ Cs(8.4 s) | 204.8(15.0), 29.7(9.9), 205.6(6.8) |
| 280.0 1 | 0.007 4 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| 280 1 | 0.015 4 | ¹⁵⁵ Sm(22.3 m) | 104.3346(74.6), 245.771(3.7), 141.4428(1.98) |
| 280 2 | 1.2 5 | ¹⁶⁸ Lu(6.7 m) | 198.82(28), 979.22(20), 896.12(15) |
| 280.0 6 | 0.14 14 | ¹⁷² Ta(36.8 m) | 214.02(46), 95.23(17.5), 1109.27(12.4) |
| 280 | | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 280.0 4 | 0.53 9 | ¹⁸⁸ Tl(71 s) | 412.7(88), 592.0(61), 504.2(23.3) |
| 280 | †20 | ²²⁸ Pa(22 h) | 95(†100), 310(†42), 240(†23) |
| • 280.04 5 | 0.023 11 | ¹⁹² Ir(73.831 d) | 316.50791(82.81), 468.07152(47.83), 308.45692(30.00) |
| 280.09 11 | 0.024 7 | ¹³⁰ I(12.36 h) | 536.09(99), 668.54(96), 739.48(82) |
| 280.1 2 | 3.1 5 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 280.1 2 | 1.6 3 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 280.1 3 | 0.004 | ¹⁵⁴ Pm(1.73 m) | 2057.76(17.1), 1393.9(14.4), 81.99(12.6) |
| 280.1 3 | 0.27 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 280.1 5 | †3.1 | ¹⁷⁷ Os(2.8 m) | 84.7(†100), 125.4(†63), 195.8(†61) |
| 280.1 2 | †9.5 11 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 280.1 1 | †73.7 10 | ¹⁹⁴ Bi(92 s) | 965.4(†100.0), 575.1(†98.0), 421.1(†59.9) |
| 280.1 1 | 0.016 1 | ²⁴⁰ U(14.1 h) | 44.10(1.05), 189.7(0.24), 66.5(0.154) |
| 280.13 2 | 0.47 10 | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| • 280.13 3 | 0.232 18 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 280.17 12 | 0.017 5 | ¹³¹ Te(25.0 m) | 149.716(69), 452.323(18.18), 1146.96(4.95) |
| 280.2 3 | | ¹⁴⁶ Dy(29 s) | 2156.8, 1915.7, 1876.7 |
| 280.23 2 | 47.3 20 | ²³⁷ Am(73.0 m) | 438.4(8.3), 473.5(4.3), 908.8(2.60) |
| 280.25 4 | †3.4 4 | ¹⁰¹ Nb(7.1 s) | 276.10(†100), 157.466(†32), 13.5(†32) |
| 280.26 8 | 1.02 16 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 280.28 7 | 0.072 24 | ¹⁴¹ Xe(1.73 s) | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| 280.3 1 | 4.02 9 | ¹⁴² Gd(70.2 s) | 750.2(11.2), 178.90(11.20), 284.4(6.16) |
| • 280.30 15 | 0.31 4 | ¹⁸⁸ Pt(10.2 d) | 187.59(19.4), 195.05(18.6), 381.43(7.5) |
| 280.35 23 | 0.256 20 | ⁹⁹ Nb(2.6 m) | 97.785(7), 253.50(3.64), 2641.3(3.64) |
| 280.385 13 | 1.28 14 | ²⁴⁵ Pu(10.5 h) | 327.428(25.4), 560.13(5.4), 308.222(4.9) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|--|
| 280.39 2 | 2.94 19 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 280.4 5 | †3 2 | ¹¹² Te(2.0 m) | 372.70(†100), 296.20(†86), 418.9(†57) |
| 280.4 4 | 1.87 19 | ¹²² Cs(4.5 m) | 331.1(94), 497.1(79), 638.5(63) |
| • 280.4 5 | 0.66 15 | ¹²⁷ Sb(3.85 d) | 685.7(37), 473.0(25.7), 783.7(15.0) |
| 280.4 | 1.31 19 | ¹⁵⁴ Ho(3.10 m) | 334.6(94), 412.4(79), 477.1(55) |
| 280.40 20 | 0.133 7 | ²³³ Np(36.2 m) | 312.17(0.7), 298.89(0.44), 546.9(0.280) |
| • 280.40 20 | 870000 22 | ²³⁷ Pu(45.2 d) | 298.89(†7.85×10 ⁶), 320.75(†6.48×10 ⁶), 228.56(†3.93×10 ⁶) |
| • 280.41 6 | 0.167 13 | ¹⁰⁵ Rh(35.36 h) | 319.14(19), 306.25(5.1), 442.37(0.042) |
| • 280.41 6 | 30.2 17 | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 644.55(11.1), 443.37(10.5) |
| 280.41 6 | †2.6×10 ³ 8 | ¹⁰⁵ Ag(7.23 m) | 319.14(†63000), 306.25(†12800), 442.37(†5900) |
| 280.42 16 | †4.9 17 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| • 280.45 2 | 1.24 6 | ¹⁹³ Os(30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| • 280.459 8 | 29.77 22 | ¹⁶⁶ Ho(1.20×10 ³ y) | 184.410(72.6), 810.276(58.08), 711.683(55.32) |
| 280.459 8 | 0.278 6 | ¹⁶⁶ Tm(7.70 h) | 778.817(18.9), 2052.36(17.2), 184.410(16.1) |
| • 280.46 25 | 0.0103 14 | ⁷⁹ Kr(35.04 h) | 261.29(13), 397.54(9.3), 606.09(8.12) |
| 280.462 9 | | ¹¹⁰ Sn(4.11 h) | |
| 280.5 2 | 0.0062 14 | ¹⁶⁷ Yb(17.5 m) | 113.34(55.3), 106.18(22.5), 176.25(21) |
| 280.5 4 | | ¹⁷⁵ Ta(10.5 h) | 207.4(14.0), 348.5(12.0), 266.9(10.8) |
| 280.5 4 | 0.56 4 | ¹⁷⁵ Ta(10.5 h) | 207.4(14.0), 348.5(12.0), 266.9(10.8) |
| 280.6 2 | 8.2 5 | ¹⁰⁰ Ag(2.01 m) | 665.54(99), 750.67(78), 773.20(24.2) |
| 280.6 1 | 0.59 10 | ¹¹⁹ Ag(2.1 s) | 626.4(13), 366.2(12.1), 399.1(10.9) |
| • 280.6 4 | 0.011 6 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 280.6 4 | 0.070 14 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 280.7 | 1.0 5 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 280.77 7 | 0.0119 22 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 280.8 10 | 0.18 9 | ¹⁰⁴ Tc(18.3 m) | 358.0(89), 530.5(15.6), 535.1(14.7) |
| 280.8 3 | 2.6 4 | ¹⁷⁰ Ho(2.76 m) | 258.2(37.0), 931.3(36.1), 181.6(23.8) |
| 280.80 9 | 0.88 10 | ¹⁷⁷ W(135 m) | 115.65(50), 426.98(13.2), 1036.4(10.3) |
| 280.8 4 | 1.7 3 | ¹⁸⁶ Pt(2.0 h) | 276.7(0), 611.5(6.0), 635.6(>3.8) |
| 280.85 14 | 0.58 17 | ¹⁰⁵ In(5.07 m) | 131.37(41), 260.21(15.7), 604.11(9.2) |
| 280.9 | 0.35 11 | ¹⁷⁵ Re(5.89 m) | 184.5(4.8) |
| 280.9 6 | †21 5 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 280.94 5 | | ¹⁹³ Hg(3.80 h) | 861.11(†100), 1118.84(†64), 789.21(†36) |
| 280.94 12 | 0.061 22 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| 280.96 4 | 1.23 | ¹⁵⁴ Pm(1.73 m) | 2057.76(17.1), 1393.9(14.4), 81.99(12.6) |
| 280.98 10 | | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 281 | | ¹²⁹ Cd(0.27 s) | |
| 281 | 0.0042 | ¹³⁵ Ce(17.7 h) | 265.56(41.8), 300.07(23.5), 606.76(18.8) |
| 281.0 1 | 0.22 5 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 281.0 2 | †3.7 7 | ¹⁸¹ Hg(3.6 s) | 147.8(†100), 42.5(†25), 1986.7(†17) |
| 281 | 6.8 6 | ²¹¹ Fr(3.10 m) | 539.9(20), 918.3(11), 983(4.0) |
| • 281.0 2 | | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 281.01 2 | >0.0007 | ⁸⁵ Kr(4.480 h) | 151.159(75.0), 129.820(0.300), 450.85(0.011) |
| 281.01 2 | †0.040 20 | ⁸⁵ Sr(67.63 m) | 151.159(†1272), 129.820(†15), 731.812(†1.45) |
| 281.03 9 | 5.1 7 | ¹²² In(10.8 s) | 1140.55(100), 1001.58(98.4), 103.74(81) |
| 281.03 5 | 0.0791 25 | ¹²³ I(13.27 h) | 158.97(83), 528.96(1.39), 440.02(0.428) |
| • 281.087 2 | 0.302 4 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 281.1 3 | 0.027 8 | ¹⁰¹ Tc(14.22 m) | 306.85(88), 545.06(6.0), 127.23(2.86) |
| 281.1 4 | †1 3 | ¹²⁹ Sb(17.7 m) | 759.8(†100.0), 657.78(†92), 433.76(†73) |
| 281.126 15 | 1.38 14 | ¹⁴⁰ Xe(13.60 s) | 805.52(20), 1413.66(12.2), 1315.05(8.2) |
| • 281.141 4 | 2.1×10 ⁻⁶ 3 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 281.2 2 | 3.1 3 | ¹²⁶ Ba(100 m) | 233.6(19.6), 257.6(7.6), 241.0(6.0) |
| 281.2 5 | 0.11 6 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 281.2 3 | †5.5 6 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| 281.22 8 | 0.138 13 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 281.25 4 | 0.252 16 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 281.26 5 | 0.165 5 | ¹²⁹ Te(69.6 m) | 27.81(16.3), 459.60(7.70), 487.39(1.42) |
| • 281.29 14 | †10.6 24 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| • 281.295 16 | 0.0074 3 | ¹⁴⁹ Pm(53.08 h) | 285.95(3.1), 859.46(0.109), 590.88(0.069) |
| • 281.295 16 | 0.0226 8 | ¹⁴⁹ Eu(93.1 d) | 327.526(4.03), 277.089(3.56), 22.510(2.32) |
| 281.34 18 | 16.5 10 | ⁷⁸ Zn(1.47 s) | 224.75(43.9), 181.68(28.1), 860.30(24.5) |
| 281.34 5 | 0.279 5 | ¹⁴³ Ba(14.33 s) | 211.475(25), 798.79(15.6), 980.45(11.55) |
| 281.38 13 | 0.17 4 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 281.4 2 | 0.16 | ⁷⁶ Br(16.2 h) | 559.101(74), 657.041(15.9), 1853.67(14.7) |
| 281.4 1 | >0.00015 | ¹²⁹ Te(69.6 m) | 27.81(16.3), 459.60(7.70), 487.39(1.42) |
| • 281.4 1 | >9.0×10 ⁻⁵ | ¹²⁹ Te(33.6 d) | 695.88(2.988), 729.57(0.70), 556.65(0.118) |
| • 281.4 3 | 0.046 25 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 281.4 | †18 | ¹⁴⁸ Cs(158 ms) | 141.7(†100), 687.2(†23), 545.5(†20) |
| • 281.4 2 | 0.0078 19 | ¹⁵⁶ Eu(15.19 d) | 811.79(9.70), 88.9667(8.4), 1230.68(7.98) |
| 281.4 1 | 0.071 5 | ²⁵¹ Fm(5.30 h) | 880.8(2.19), 453.1(1.45), 405.6(0.99) |
| • 281.44 5 | 0.00051 5 | ¹²⁹ Te(33.6 d) | 695.88(2.988), 729.57(0.70), 556.65(0.118) |
| • 281.441 9 | 0.006 | ²³⁵ U(7.038×10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| • 281.455 22 | 5.7 4 | ¹⁸² Re(64.0 h) | 229.3220(26), 67.75001(22.2), 1121.3007(22.0) |
| 281.49 4 | 0.09 3 | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 281.49 4 | 0.019 7 | ¹⁸⁶ Ir(2.0 h) | 137.155(27), 767.508(21.2), 630.354(18.0) |
| 281.5 1 | 0.70 7 | ¹⁸⁸ Tl(71 s) | 412.7(88), 592.0(61), 504.2(23.3) |
| 281.55 15 | 0.74 10 | ¹²⁵ Cd(0.57 s) | 1027.53(25.8), 1173.16(25.1), 736.65(12.6) |
| 281.59 8 | 0.44 | ¹⁸⁷ Pt(2.35 h) | 106.46(9), 201.52(6.4), 110.04(5.7) |
| 281.6 | 0.101 14 | ¹⁴¹ Ba(18.27 m) | 190.328(46.0), 304.194(25.4), 276.948(23.4) |
| 281.6 4 | †1.10 15 | ¹⁸² Ir(15 m) | 273.23(†100), 126.79(†77), 236.3(†21.0) |
| • 281.638 4 | 0.058 3 | ⁷⁷ As(38.83 h) | 238.996(1.6), 520.639(0.558), 249.786(0.394) |
| • 281.638 4 | 2.29 5 | ⁷⁷ Br(57.036 h) | 238.996(23), 520.639(22.4), 297.215(4.16) |
| 281.7 10 | | ⁷⁶ Zn(5.7 s) | 1030.6, 831.2, 755.0 |
| 281.7 1 | 0.0015 3 | ¹²⁹ Te(69.6 m) | 27.81(16.3), 459.60(7.70), 487.39(1.42) |
| 281.7 1 | †0.70 7 | ¹⁷¹ Ta(23.3 m) | 49.6(†100), 506.4(†54), 501.8(†22.6) |
| 281.70 15 | 0.186 17 | ¹⁷⁹ W(6.40 m) | 238.61(0.218), 222.5(0.057), 213.9(0.057) |
| 281.76 10 | 0.16 3 | ¹⁹³ Au(17.65 h) | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| 281.76 4 | 0.843 25 | ¹⁹³ Hg(11.8 h) | 257.97(61), 407.63(25), 573.25(14.2) |
| • 281.7873 9 | 14.1 3 | ¹⁷⁷ Lu(160.4 d) | 208.3664(57.7), 228.4838(37.0), 378.5029(29.7) |
| 281.8 2 | 0.013 5 | ¹³³ La(3.912 h) | 278.835(2.50), 302.353(1.648), 290.06(1.413) |
| 281.8 3 | 0.15 4 | ¹⁸⁸ Hg(3.25 m) | 66.7(63), 190.1(4.40), 82.7(2.6) |
| 281.92 5 | 0.064 5 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 281.92 5 | 1.28 7 | ²²⁸ Pa(22 h) | 911.205(4.19), 463.005(1.250), 964.770(4.25) |
| • 281.923 23 | 0.84 3 | ²⁰⁶ Po(8.8 d) | 1032.26(32.9), 511.36(24.1), 286.410(23.8) |
| 281.923 23 | | ²¹⁰ At(8.1 h) | 82.802(†480000), 106(†170000), 167(†110000) |
| 281.960 30 | 0.99 10 | ¹¹⁵ Te(5.8 m) | 723.569(30), 1380.58(23.0), 1326.83(22.7) |
| 282.0 2 | 0.27 3 | ⁹² Kr(1.840 s) | 142.307(64), 1218.6(60), 812.6(14.6) |
| 282.0 4 | 0.54 4 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 282.0 4 | 19.8 10 | ²³² Np(14.7 m) | 327.3(52), 819.187(33.3), 866.760(24.4) |
| 282.05 13 | 2.1 3 | ⁸⁰ Zn(0.545 s) | 712.53(45.1), 715.40(33.8), 964.93(15.6) |
| 282.1 2 | 0.060 18 | ⁸⁹ Br(4.40 s) | 1097.82(6.00), 997.93(4.26), 953.53(4.26) |
| 282.1 1 | | ¹²⁵ La(76 s) | 67.6(34), 43.6(3.5), 985.2 |
| 282.1 2 | †14 2 | ¹³⁵ Pm(49 s) | 198.5(†100), 207.2(†70), 463.5(†62) |
| 282.1 | 0.10 | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| • 282.1 2 | 0.0044 22 | ²²⁵ Ac(10.0 d) | 99.91(1.01), 150.04(0.80), 99.63(0.62) |
| • 282.131 6 | 0.242 3 | ¹²⁹ Cs(32.06 h) | 371.918(30.60), 411.490(22.31), 548.945(3.40) |
| 282.2 5 | 0.20 5 | ¹⁴⁸ Ho(9.59 s) | 1687.5(82.47), 660.8(58.94), 504.3(18.62) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| • 282.2 1 | 0.010 5 | ²³² Pa(1.31 d) | 969.315(41.6), 894.351(19.8), 150.059(10.8) |
| 282.27 9 | †0.26 2 | ¹⁸⁴ Ir(3.09 h) | 263.97(†100), 119.80(†45), 390.38(†38) |
| • 282.29 4 | 0.426 6 | ²⁰⁵ Bi(15.31 d) | 1764.36(1.368), 703.44(31), 987.62(0.585) |
| 282.3 8 | 0.77 6 | ¹⁹⁰ Au(42.8 m) | 295.78(71.0), 301.82(23.4), 597.67(9.4) |
| 282.34 7 | 2.4 4 | ¹⁸⁷ Pt(2.35 h) | 106.46(9), 201.52(6.4), 110.04(5.7) |
| 282.39 7 | 4.9 7 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 282.4 1 | 2.5 5 | ⁷¹ Br(21.4 s) | 260.5(8.0), 233.7(6.5), 171.6(6.2) |
| 282.4 | †1.4 | ¹⁴⁴ Gd(4.5 m) | 333.3(†100), 2432.6(†94.8), 629.5(†32.4) |
| 282.4 | 0.017 7 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| • 282.40 15 | | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 282.4 2 | 0.0084 16 | ¹⁶⁷ Yb(17.5 m) | 113.34(55.3), 106.18(22.5), 176.25(21) |
| 282.42 5 | 0.29 2 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| • 282.45 5 | 0.0184 19 | ¹²⁵ Sn(9.64 d) | 1067.10(10), 1089.15(4.59), 822.48(4.28) |
| 282.456 10 | 0.616 16 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 282.471 2 | 39.0 12 | ²³¹ Ac(7.5 m) | 307.063(30.4), 221.399(16.8), 185.712(16.4) |
| 282.5 2 | †0.082 18 | ¹⁶⁰ Ho(5.02 h) | 728.18(†100), 879.383(†65.9), 962.317(†59.1) |
| 282.5 2 | 0.038 9 | ¹⁶⁰ Ho(25.6 m) | 728.18(46.9), 879.383(26.6), 962.317(25.6) |
| 282.5 9 | 0.108 14 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 282.51 6 | 0.428 13 | ¹³⁸ Xe(14.08 m) | 258.411(31.5), 434.562(20.3), 1768.26(16.7) |
| 282.52 10 | 0.040 7 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| • 282.522 14 | 3.01 5 | ¹⁷⁵ Yb(4.185 d) | 396.329(6.40), 113.805(1.88), 144.863(0.328) |
| 282.6 1 | 0.97 11 | ²⁰⁶ Fr(15.9 s) | 575.3(12), 559.0(8.19), 628.6(3.6) |
| 282.67 10 | 0.30 8 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 282.7 5 | 0.090 18 | ¹⁰¹ Sr(118 ms) | 128.34(18.0), 1124.82(10.9), 510.73(8.5) |
| 282.7 4 | 0.20 10 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 282.72 11 | 0.160 20 | ¹⁰⁶ In(6.2 m) | 632.66(100), 861.16(92), 997.87(48) |
| 282.8 | 0.009 | ²²¹ Fr(4.9 m) | 218.19(11.6), 410.7(0.14), 99.5(0.11) |
| 282.83 20 | 0.36 4 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 282.864 8 | 11.3 4 | ¹⁶² Ho(67.0 m) | 185.005(28.6), 1220.0(22.5), 937.2(10.8) |
| 282.9 3 | 0.135 18 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| • 282.92 5 | 0.005 2 | ²³⁵ U(7.038×10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| 282.93 6 | 2.23 16 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| • 282.93 6 | 0.48 9 | ¹⁹⁰ Ir(11.78 d) | 186.718(52.4), 605.24(39.9), 518.55(34.0) |
| 282.956 2 | 12.2 3 | ⁶¹ Cu(3.333 h) | 656.008(10.77), 67.412(4.23), 1185.234(3.75) |
| 283.0 2 | †3.1 8 | ¹⁰⁵ Nb(2.95 s) | 94.8(†100), 246.9(†79), 309.9(†41.9) |
| 283 | | ¹³⁰ Pr(40.0 s) | 951.9, 499.0, 1405 |
| 283.0 5 | 0.08 4 | ¹⁴⁰ Xe(13.60 s) | 805.52(20), 1413.66(12.2), 1315.05(8.2) |
| 283.0 3 | 46 20 | ¹⁴⁸ Tm(0.7 s) | 646.6(100), 877.4(72), 1002.9(55) |
| 283.0 3 | 0.70 6 | ¹⁵⁸ Sm(5.30 m) | 189.4(15.2), 363.6(12.4), 324.5(10.6) |
| 283.0 5 | 0.056 19 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 283.05 4 | 0.53 5 | ¹⁴¹ Xe(1.73 s) | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| • 283.05 10 | 0.199 7 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 283.1 | 0.10 | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 283.13 7 | 0.147 12 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 283.14 11 | 0.8 | ⁵³ V(1.61 m) | 1006.14(90), 1289.59(10), 442.7(0.39) |
| • 283.15 20 | 0.10 5 | ¹⁸⁸ Pt(10.2 d) | 187.59(19.4), 195.05(18.6), 381.43(7.5) |
| • 283.2 2 | 0.51 5 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 283.2 3 | 0.16 4 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| • 283.2 1 | 0.00055 6 | ¹⁷⁷ Ta(56.56 h) | 112.9498(7.2), 208.3664(0.94), 1057.8(0.29) |
| 283.2 2 | †0.69 9 | ¹⁹⁶ Bi(240 s) | 1049.21(†21.1), 371.93(†20.8), 689.00(†19.2) |
| 283.2668 8 | | ¹⁹² Re(16 s) | 467.47(†100), 750.96(†25), 489.039 |
| • 283.2668 8 | 0.262 4 | ¹⁹² Ir(73.831 d) | 205.79549(3.300), 484.5780(3.184), 374.4852(0.721) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| 283.29 10 | 0.044 9 | ⁸¹ Rb(4.576 h) | 190.38(64.0), 446.15(23.2), 510.31(5.3) |
| 283.29 4 | 0.155 9 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| 283.3 2 | †1.1 5 | ¹⁷¹ Hf(12.1 h) | 122.0(†100), 662.2(†83), 347.18(†47) |
| 283.36 6 | | ²²³ Rn(23.2 m) | 591.8(†100), 635.2(†76), 416.0(†55) |
| 283.400 16 | 2.76 24 | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 283.4 1 | 0.83 10 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 283.4 2 | †8.7 9 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| • 283.4 | 7.0×10 ⁻⁶ | ²⁵³ Es(20.47 d) | 41.79(0.050), 389.11(0.0264), 387.1(0.00810) |
| 283.42 10 | 2.6 4 | ¹⁷⁰ Ho(2.76 m) | 258.2(37.0), 931.3(36.1), 181.6(23.8) |
| • 283.42 13 | 0.40 7 | ¹⁷⁷ Lu(160.4 d) | 208.3664(57.7), 228.4838(37.0), 378.5029(29.7) |
| 283.5 2 | †3.3 4 | ¹⁰¹ Nb(7.1 s) | 276.10(†100), 157.466(†32), 13.5(†32) |
| 283.5 2 | 0.29 8 | ¹⁴² Ba(10.6 m) | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| 283.55 3 | 5.95 25 | ¹⁶¹ Gd(3.66 m) | 360.94(0.59), 314.92(22.7), 102.315(13.9) |
| 283.6 4 | †1.9 7 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 234.0(†40.0) |
| 283.6 4 | 0.07 3 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 283.69 1 | 3.1 | ²²⁷ Ra(42.2 m) | 27.36(16), 300.07(4.6), 302.65(4.3) |
| • 283.69 1 | 1.7 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 283.70 12 | 0.16 3 | ⁹⁹ Sr(0.269 s) | 125.118(16.1), 536.12(14.0), 1198.12(9.2) |
| 283.7 2 | 12.2 12 | ¹¹⁸ Pd(1.9 s) | 125.4(34), 125.4(34), 224.2(20.1) |
| 283.7 1 | 0.21 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 283.7 | 0.6 | ¹⁹⁹ Po(4.13 m) | 1002.19(19), 1034.3(16), 362.01(7) |
| • 283.75 6 | | ²⁰⁶ Bi(6.243 d) | 803.10(99), 881.01(66.2), 516.18(40.7) |
| 283.75 7 | 0.051 4 | ²¹⁰ Rn(2.4 h) | 458.25(1.7), 648.70(0.843), 570.95(0.840) |
| 283.78 10 | 0.073 | ¹³⁷ I(24.5 s) | 1218.00(12.8), 601.05(4.80), 1302.64(4.42) |
| 283.80 20 | 0.041 4 | ¹¹² Sb(51.4 s) | 1257.05(96), 990.70(14.3), 670.0(3.7) |
| 283.86 13 | 0.30 4 | ¹⁵¹ Dy(17.9 m) | 386.10(19.4), 49.46(18.0), 546.31(14.3) |
| 283.91 2 | 6.7 4 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 283.92 20 | 1.6 6 | ¹⁶⁶ Hf(6.77 m) | 78.76(41), 341.82(4.7), 407.91(4.5) |
| 284 | | ¹¹⁵ I(1.3 m) | 709, 460, 275 |
| 284.00 5 | 87 | ¹²⁸ La(5.0 m) | 479.24(54), 643.65(14.7), 600.5(10.5) |
| 284.0 5 | †0.24 3 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 284.0 5 | †0.3 1 | ¹³⁶ Eu(3.3 s) | 254.9(†100), 431.4(†34), 458.0(†20) |
| 284.0 2 | 1.8 3 | ¹⁹⁴ Tl(32.8 m) | 636.5(99), 428.0(99), 748.9(76) |
| 284.09 3 | 2.21 11 | ¹⁹⁹ Tl(7.42 h) | 455.46(12.4), 208.20597(12.3), 247.26(9.3) |
| 284.1 1 | 0.088 6 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| 284.1 2 | †0.9 4 | ¹⁹⁴ Bi(92 s) | 965.4(†100.0), 575.1(†98.0), 280.1(†73.7) |
| 284.114 21 | 0.36 4 | ¹⁸³ Hf(1.067 h) | 783.754(66), 73.174(38), 459.069(27) |
| • 284.18 3 | 1.692 22 | ²⁰⁵ Bi(15.31 d) | 1764.36(1.368), 703.44(31), 987.62(0.585) |
| 284.2 2 | †2.0 8 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| 284.2 2 | †7 2 | ¹⁸⁷ Hg(1.9 m) | 233.38(†100), 376.34(†38), 240.26(†33) |
| 284.2 1 | 0.198 20 | ²²³ Ac(2.10 m) | 98.58(0.891), 191.3(0.58), 83.55(0.57) |
| • 284.21 5 | 0.031 9 | ²⁰⁵ Bi(15.31 d) | 1764.36(1.368), 703.44(31), 987.62(0.585) |
| • 284.25 15 | 1.0×10 ⁻⁵ 1 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 284.28 8 | 0.07 5 | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 284.3 4 | 2.7 3 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 284.3 5 | 0.037 12 | ¹³⁸ Nd(5.04 h) | 325.76(2.84), 199.50(0.53), 341.65(0.40) |
| 284.3 4 | †4.2 8 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 284.3 7 | 0.50 6 | ¹⁹⁹ Bi(27 m) | 560.1(22.0), 424.85(22), 841.7(11) |
| • 284.305 5 | 6.14 5 | ¹³¹ I(8.02070 d) | 364.489(81.7), 636.989(7.17), 80.185(2.62) |
| 284.314 30 | 0.15 3 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| 284.4 1 | 6.16 17 | ¹⁴² Gd(70.2 s) | 750.2(11.2), 178.90(11.20), 526.2(5.90) |
| • 284.40 20 | †1.6 8 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 284.46 17 | 0.140 14 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 284.48 20 | 44 6 | ¹³¹ In(0.32 s) | 4273.20(99), 2095.5(44), 173.185(29) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|----------------------|----------------------------|---|
| 284.5 3 | 0.22 11 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 284.5 3 | 2.73 9 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 284.53 1 | 8.14 12 | ¹⁴⁵ Ce(3.01 m) | 724.33(59), 62.54(13.33), 1148.03(9.15) |
| 284.56 5 | 1.77 17 | ⁷⁷ Zn(2.08 s) | 189.49(28.1), 473.94(19.7), 1832.0(12.4) |
| 284.58 9 | 0.009 9 | ¹⁸⁹ Pt(10.87 h) | 721.41(9.3), 94.33(7.6), 568.84(7.1) |
| 284.58 10 | 0.15 4 | ¹⁸⁹ Pt(10.87 h) | 721.41(9.3), 94.33(7.6), 568.84(7.1) |
| 284.6 2 | 0.122 16 | ¹⁵⁷ Er(18.65 m) | 53.05(24), 391.32(14.2), 121.57(10.1) |
| 284.655 2 | 0.043 7 | ¹⁶⁸ Ho(2.99 m) | 741.356(36.6), 821.164(34.5), 815.990(18.6) |
| • 284.655 2 | 0.087 4 | ¹⁶⁸ Tm(93.1 d) | 198.241(52.39), 815.990(48.99), 447.515(23.05) |
| 284.7 2 | 0.17 4 | ¹²³ In(5.98 s) | 1130.5(63), 1019.7(32), 618.8(2.6) |
| 284.7 1 | 0.047 13 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 284.70 10 | 0.37 7 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 284.7 2 | †5.0 5 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| • 284.72 3 | 0.0022 6 | ¹⁵¹ Gd(124 d) | 153.56(6.20), 243.28(5.60), 174.70(2.96) |
| 284.79 7 | 0.084 22 | ¹¹⁷ Cd(2.49 h) | 273.349(28), 1303.27(18.4), 344.459(17.9) |
| 284.8 3 | 0.5 1 | ¹²⁹ Sn(2.23 m) | 645.13(100), 80.5(6.6), 913.2(5.0) |
| 284.8 | 0.6 | ¹⁹⁰ Hg(20.0 m) | 142.6(68), 171.5(4.8), 154.7(2.5) |
| 284.8 1 | 0.07 4 | ²²¹ Rn(25 m) | 186.38(21.6), 150.04(4.5), 216.90(2.6) |
| • 284.8 1 | 0.0044 22 | ²²⁵ Ac(10.0 d) | 99.91(1.01), 150.04(0.80), 99.63(0.62) |
| • 284.83 10 | 0.10 5 | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 280.41(30.2), 644.55(11.1) |
| 284.83 7 | 1.2 | ¹⁸⁷ Pt(2.35 h) | 106.46(9), 201.52(6.4), 110.04(5.7) |
| 284.85 9 | 2.6 | ¹⁸⁷ Pt(2.35 h) | 106.46(9), 201.52(6.4), 110.04(5.7) |
| 284.89 13 | †21.6 10 | ¹⁹³ Tl(21.6 m) | 324.37(†100), 1044.7(†59), 676.10(†48) |
| 284.90 20 | 0.32 5 | ⁷³ Ga(4.86 h) | 297.32(79.8), 325.70(11.17), 739.42(4.23) |
| 284.9 2 | 0.77 10 | ¹¹⁹ Cd(2.20 m) | 1025.0(24.8), 2021.3(22.6), 720.7(17.9) |
| 284.9 3 | 0.41 12 | ¹²⁶ Ba(100 m) | 233.6(19.6), 257.6(7.6), 241.0(6.0) |
| 284.9 2 | 0.71 7 | ¹³² I(2.295 h) | 667.718(99), 772.60(75.6), 954.55(17.6) |
| 284.9 3 | †1.5 | ¹⁴⁹ Ce(5.3 s) | 57.7(†100), 380.0(†33.7), 86.4(†20.2) |
| 284.9 1 | †81.0 8 | ¹⁵² Pr(3.24 s) | 164.2(†100), 72.40(†38.9), 1363.8(†36.6) |
| 284.9 1 | 0.13 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 284.9 3 | 0.44 6 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| • 284.995 26 | 0.167 8 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| 285.0 2 | | ¹³¹ Sn(58.4 s) | 367.40, 62.9, 102.20 |
| 285.0 2 | †3.0 9 | ¹³¹ Sn(56.0 s) | 1226.03(†100), 450.03(†90), 798.50(†86) |
| • 285.00 9 | >0.0022 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 285.0 | †100 | ¹⁶² Ta(3.52 s) | 444.5(†40) |
| 285 | †30 | ¹⁷³ Os(16 s) | 177(†100), 187(†50), 276(†25) |
| 285.0 2 | †76 6 | ¹⁷³ Ir(2.20 s) | 49.6(†100), 296.4(†48), 147.7(†48) |
| 285.0 2 | †37 3 | ¹⁷³ Ir(9.8 s) | 49.6(†100), 91.6(†30), 147.7(†24) |
| 285.0 | 0.08 | ²⁰¹ Pb(9.33 h) | 331.19(79), 361.27(9.9), 945.96(7.4) |
| 285.0 2 | †4.3 10 | ²²⁹ Ac(62.7 m) | 164.522(†100), 569.1(†91), 261.92(†39) |
| 285.0 2 | 23 | ²⁴⁷ Am(23.0 m) | 227.0(5.8) |
| • 285.0 2 | 1.4 3 | ²⁵¹ Cf(898 y) | 176.6(17.7), 227.0(6.3), 61.5(0.56) |
| • 285 | 0.01 | ²⁵⁴ Es(275.7 d) | 63.0(2.0), 316(0.15), 304(0.07) |
| 285.01 5 | 1.7 | ¹⁸⁷ Pt(2.35 h) | 106.46(9), 201.52(6.4), 110.04(5.7) |
| 285.07 5 | 11.0 6 | ¹⁶⁶ Lu(1.41 m) | 228.12(15), 102.38(13), 830.06(10.2) |
| 285.1 | 0.08 | ²⁰¹ Pb(9.33 h) | 331.19(79), 361.27(9.9), 945.96(7.4) |
| 285.11 8 | 0.086 13 | ¹⁰⁰ Sr(202 ms) | 963.85(22.0), 898.50(18.9), 65.46(15.2) |
| 285.2 1 | 0.13 | ¹¹³ Ag(68.7 s) | 316.3(18), 392.3(11), 298.58(10) |
| 285.2 5 | 0.16 4 | ¹⁷³ Ta(3.14 h) | 172.2(18), 69.70(5.9), 90.3(5.0) |
| 285.2 1 | †16.1 6 | ²³⁰ Ra(93 m) | 72.0(†100), 63.0(†35.4), 202.8(†27.3) |
| 285.22 11 | 0.078 10 | ¹¹⁸ In(4.45 m) | 1229.68(96), 1050.69(81.0), 683.08(54.3) |
| 285.246 7 | 12.4 3 | ¹³¹ La(59 m) | 108.081(25.0), 417.783(18.0), 365.162(16.9) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|------------------------------|--|
| 285.3 | >0.08 | ⁸³ Zr(44 s) | 55.55(8), 104.97(5.70), 475.1(5.1) |
| 285.3 3 | 1.02 9 | ¹²⁹ In(0.61 s) | 2118.0(45), 1865.0(32), 769.3(9.1) |
| • 285.3 7 | 0.052 15 | ¹⁹⁴ Au(38.02 h) | 328.455(60), 293.545(10.2), 1468.91(6.3) |
| 285.32 11 | 0.0042 4 | ¹²³ I(13.27 h) | 158.97(83), 528.96(1.39), 440.02(0.428) |
| • 285.334 6 | 1.9×10^{-6} 4 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| • 285.362 6 | 0.611 17 | ¹⁷³ Lu(1.37 y) | 272.105(21.2), 78.63(11.87), 100.724(5.24) |
| 285.37 14 | †5.4 8 | ¹⁸¹ Pt(51 s) | 289.29(†100), 111.97(†100), 230.15(†92) |
| 285.39 7 | †21 2 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| 285.4 3 | 1.69 20 | ¹⁵⁸ Sm(5.30 m) | 189.4(15.2), 363.6(12.4), 324.5(10.6) |
| • 285.460 2 | 0.79 2 | ²³⁹ Np(2.3565 d) | 106.125(27.2), 277.599(14.38), 228.183(10.76) |
| 285.460 2 | 0.80 5 | ²³⁹ Am(11.9 h) | 277.599(15.0), 228.183(11.3), 209.753(3.50) |
| • 285.460 2 | 0.728 20 | ²⁴³ Cm(29.1 y) | 277.599(14.0), 228.183(10.6), 209.753(3.29) |
| 285.5 5 | 0.4 3 | ¹⁰⁴ Tc(18.3 m) | 358.0(89), 530.5(15.6), 535.1(14.7) |
| 285.5 3 | 0.108 9 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 285.5 1 | 0.80 8 | ¹⁴⁸ Ce(56 s) | 269.519(17.0), 291.724(16.7), 121.169(13.2) |
| • 285.50 9 | †3.2 7 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 285.5 3 | 0.021 | ²³³ Th(22.3 m) | 86.477(2.7), 29.374(2.5), 459.222(1.4) |
| 285.58 12 | 0.22 3 | ²⁰² Bi(1.72 h) | 960.67(99), 422.18(83.7), 657.49(60.6) |
| 285.584 12 | 0.83 16 | ¹⁶³ Tb(19.5 m) | 351.138(26), 389.734(24.3), 494.534(23) |
| 285.6 2 | 7 | ¹³² La(24.3 m) | 464.55(22), 663.07(11.6), 515.78(7) |
| 285.65 7 | 0.268 20 | ⁹³ Sr(7.423 m) | 590.238(67), 875.73(24.1), 888.13(21.8) |
| 285.67 4 | 3.5 4 | ¹³⁰ Sb(39.5 m) | 793.53(100), 839.49(100), 331.05(78) |
| 285.7 2 | | ¹⁴⁶ Dy(29 s) | 2156.8, 1915.7, 1876.7 |
| 285.7 3 | †15 3 | ¹⁵⁷ Yb(38.6 s) | 230.92(†100), 340.7(†90), 241.7(†74) |
| 285.7 5 | †0.65 13 | ¹⁸⁰ Au(8.1 s) | 153.3(†100), 524.3(†29), 257.6(†26) |
| 285.7 1 | 0.129 20 | ²²³ Ac(2.10 m) | 98.58(0.891), 191.3(0.58), 83.55(0.57) |
| 285.7 3 | 0.00039 4 | ²⁵⁵ Fm(20.07 h) | 81.477(0.81), 58.477(0.67), 80.92(0.27) |
| 285.80 30 | 3.5 14 | ¹⁰³ Zr(1.3 s) | 248(100), 164.05(94), 126.30(84) |
| 285.9 | >0.28 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| • 285.95 1 | 3.1 | ¹⁴⁹ Pm(53.08 h) | 859.46(0.109), 590.88(0.069), 22.510(>0.050) |
| • 285.95 1 | 0.0007 2 | ¹⁴⁹ Eu(93.1 d) | 327.526(4.03), 277.089(3.56), 22.510(2.32) |
| • 285.98 4 | 0.0111 10 | ¹⁵² Eu(13.542 y) | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| 286.0 3 | | ¹²² Ba(1.95 m) | 550.7, 388.7, 231.0 |
| 286.0 2 | 16.06 7 | ¹³⁷ Pm(2.4 m) | 177.5(40.29), 108.6(35), 233.6(29.57) |
| 286.0 1 | >0.24 | ¹⁴¹ Xe(1.73 s) | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| 286.01 8 | 1.02 16 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 286.02 2 | 0.63 4 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 286.03 15 | 0.031 4 | ¹⁶⁵ Yb(9.9 m) | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| • 286.06 6 | 0.089 3 | ¹⁵¹ Gd(124 d) | 153.56(6.20), 243.28(5.60), 174.70(2.96) |
| 286.1 2 | 0.182 23 | ¹²³ Cs(5.94 m) | 97.3(23), 596.7(10.1), 83.3(4.1) |
| 286.122 20 | 0.0045 9 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 286.122 20 | †102 8 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 286.2 1 | 0.901 23 | ⁷⁹ Rb(22.9 m) | 688.1(23), 182.77(19.2), 143.41(13.9) |
| • 286.2 2 | 0.0058 10 | ¹²⁵ Sn(9.64 d) | 1067.10(10), 1089.15(4.59), 822.48(4.28) |
| 286.2 2 | 2.1 | ¹⁴⁵ Ba(4.31 s) | 96.6(17), 91.9(7), 65.9(5) |
| 286.2 | >2.1 | ¹⁴⁵ Ba(4.31 s) | 96.6(17), 91.9(7), 65.9(5) |
| • 286.28 2 | 0.0133 5 | ¹⁴⁷ Eu(24.1 d) | 197.299(27), 121.220(22.9), 677.516(9.8) |
| • 286.293 15 | 0.099 14 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| • 286.293 15 | 0.07 3 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| • 286.293 15 | 0.06 4 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| 286.3 4 | 0.026 8 | ⁸⁹ Kr(3.15 m) | 220.948(20.1), 586.03(16.6), 904.27(7.2) |
| 286.30 20 | 0.028 5 | ¹⁰⁵ Ru(4.44 h) | 724.21(47), 469.37(17.5), 676.36(15.7) |
| 286.3 5 | 0.00014 4 | ¹⁰⁹ Pd(13.7012 h) | 88.04(1.171), 311.4(0.032), 647.3(0.024) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|----------------------------|--|---|
| 286.3 2 | 1.51 22 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| 286.3 1 | 1.11 8 | ¹⁴² Ba(10.6 m) | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| 286.3 1 | $\dagger 2.11 \times 10^3$ | ²⁵⁸ Er(2.29 h) | 71.91($\dagger 23300$), 386.84($\dagger 111000$), 248.58($\dagger 42000$) |
| • 286.30 15 | 0.33 7 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| • 286.30 20 | 0.0063 12 | ¹⁷² Tm(63.6 h) | 78.7435(6.5), 1093.657(6.0), 1387.093(5.6) |
| 286.34 5 | 0.031 3 | ¹³³ La(3.912 h) | 278.835(2.50), 302.353(1.648), 290.06(1.413) |
| 286.382 20 | 0.063 16 | ¹⁸² Os(22.10 h) | 510.056(52), 180.230(33.5), 263.285(6.71) |
| • 286.394 4 | 0.011 5 | ¹⁸³ Ta(5.1 d) | 246.0591(27), 353.9912(11.2), 107.9322(11.0) |
| 286.4 3 | 0.383 21 | ¹⁹⁰ Au(42.8 m) | 295.78(71.0), 301.82(23.4), 597.67(9.4) |
| 286.4 6 | $\dagger 3.5$ | ¹⁹⁵ Bi(183 s) | 807.6($\dagger 100$), 831.7($\dagger 100$), 776.2($\dagger 95$) |
| • 286.410 26 | 23.8 5 | ²⁰⁶ Po(8.8 d) | 1032.26(32.9), 511.36(24.1), 807.38(22.7) |
| • 286.476 2 | 0.0143 5 | ¹⁶¹ Tb(6.88 d) | 25.65150(23.2), 48.91562(17.0), 74.56711(10.2) |
| 286.5 2 | 0.008 | ¹⁷¹ Er(7.516 h) | 308.31(64.4), 295.901(28.9), 111.621(20.5) |
| 286.5 5 | $\dagger 1.9$ | ¹⁸³ Hg(9.4 s) | 60.5($\dagger 100$), 159.91($\dagger 21$), 172.70($\dagger 17$) |
| • 286.55 10 | 0.0100 15 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| • 286.554 20 | 7.0 5 | ¹⁸² Re(64.0 h) | 229.3220(26), 67.75001(22.2), 1121.3007(22.0) |
| 286.57 5 | 0.035 7 | ²⁰⁰ Pt(12.5 h) | 76.21(13), 135.90(3.24), 243.71(2.49) |
| 286.57 13 | 0.30 10 | ²⁰⁹ Rn(28.5 m) | 408.32(50.3), 745.78(22.8), 337.45(14.5) |
| 286.572 5 | 88 | ⁷⁵ Br(96.7 m) | 141.3147(6.6), 427.883(4.4), 377.385(3.93) |
| 286.6 1 | $\dagger 2.32$ | ¹²⁹ Ba(2.17 h) | 182.30($\dagger 100$), 1459.1($\dagger 50.0$), 202.38($\dagger 33.7$) |
| • 286.6 3 | >0.22 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 396.00(34.3), 929.01(20.2) |
| 286.6 | | ¹⁶⁸ Lu(6.7 m) | 198.82(28), 979.22(20), 896.12(15) |
| • 286.60 5 | 0.452 13 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 286.7 1 | 2.0 3 | ¹⁰⁵ Mo(35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 286.8 2 | 4.3 11 | ¹³⁶ Sm(47 s) | 114.4(36), 747.7(5.4), 485.3(5.0) |
| 286.80 22 | $\dagger 39$ | ¹⁸⁴ Tl(11 s) | 366.51($\dagger 100$), 340.0($\dagger 25$), 534.40($\dagger 16.8$) |
| 286.83 20 | 0.39 11 | ¹²⁵ Cd(0.57 s) | 1027.53(25.8), 1173.16(25.1), 736.65(12.6) |
| 286.84 4 | 0.298 22 | ²⁰⁷ At(1.80 h) | 814.41(44.5), 588.33(19.2), 300.654(12.8) |
| 286.9 6 | >0.010 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| • 286.999 4 | 0.317 6 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 287.0 10 | 0.075 11 | ⁹³ Y(10.18 h) | 266.9(7.3), 947.1(2.09), 1917.8(1.55) |
| 287.0 5 | $\dagger 4$ | ⁹⁹ Rb(59 ms) | 90.8($\dagger 100$), 125.2($\dagger 40$), 1071.6($\dagger 26$) |
| 287.00 20 | 0.025 6 | ¹⁵⁸ Tm(3.98 m) | 192.13(62), 335.10(16.8), 1149.83(7.6) |
| 287.03 2 | 5.4 4 | ⁵⁹ Mn(4.6 s) | 726.7(42), 472.71(29.0), 570.81(24.8) |
| 287.1 3 | 0.0011 4 | ¹⁶⁶ Tm(7.70 h) | 778.817(18.9), 2052.36(17.2), 184.410(16.1) |
| 287.146 4 | 0.0011 4 | ¹⁵⁵ Sm(22.3 m) | 104.3346(74.6), 245.771(3.7), 141.4428(1.98) |
| 287.16 5 | 3.82 4 | ¹²⁷ Cs(6.25 h) | 411.95(62.8), 124.70(11.37), 462.31(5.07) |
| 287.160 19 | $\dagger 17.1$ | ¹⁴² Xe(1.22 s) | 571.83($\dagger 100$), 657.05($\dagger 79$), 538.24($\dagger 77$) |
| 287.160 22 | 2.85 12 | ²⁰⁸ Rn(24.35 m) | 426.78(7.07), 251.05(5.02), 350.026(3.34) |
| 287.17 10 | 1.84 17 | ¹⁴⁸ Ce(56 s) | 269.519(17.0), 291.724(16.7), 121.169(13.2) |
| 287.18 3 | 1.420 22 | ⁶⁹ As(15.2 m) | 232.69(11), 145.95(4.96), 86.78(3.44) |
| 287.2 20 | 0.007 1 | ¹⁴⁵ Gd(23.0 m) | 1757.9(34.2), 1880.6(32.6), 1041.8(9.9) |
| 287.30 20 | 0.48 3 | ⁸⁸ Nb(7.8 m) | 1057.01(89.3), 1082.53(53.9), 399.41(45.7) |
| • 287.319 35 | 0.0213 25 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 287.357 10 | 28.3 9 | ¹⁵¹ Tb(17.609 h) | 251.863(26.3), 108.088(24.3), 587.46(15.6) |
| • 287.4 1 | >0.22 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 396.00(34.3), 929.01(20.2) |
| • 287.4 3 | 0.008 4 | ¹⁹⁵ Hg(41.6 h) | 261.75(30.9), 560.27(7), 387.87(2.15) |
| 287.4 3 | | ²⁴³ Np(1.8 m) | |
| • 287.4 3 | 2.0 3 | ²⁴⁷ Cm(1.56×10^7 y) | 402.6(72), 278.0(3.4), 344.5(1.3) |
| 287.5 4 | 1.3 3 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 287.57 9 | 0.65 5 | ¹⁰³ Tc(54.2 s) | 346.380(17.5), 136.079(16.6), 562.90(7.0) |
| 287.6 3 | 0.44 11 | ¹¹⁹ Cd(2.69 m) | 292.9(36.8), 343.0(16.9), 1609.7(10.9) |
| 287.6 3 | 0.077 20 | ¹¹⁹ Cd(2.20 m) | 1025.0(24.8), 2021.3(22.6), 720.7(17.9) |
| 287.6 4 | 2.1 4 | ¹⁴⁸ Er(4.6 s) | 1311.8(8.9), 244.0(7.1), 315.3(6.9) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| 287.65 7 | 0.52 13 | ⁹⁹ Ag(124 s) | 264.41(65), 832.29(13.5), 805.07(12.5) |
| 287.7 | 0.013 5 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 287.73 8 | 0.172 24 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 287.78 3 | 0.128 4 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 287.79 8 | 25 | ¹⁶³ Gd(68 s) | 214.0(11.5), 1562.1(9.0), 1684.5(8.0) |
| 287.8 2 | 0.13 3 | ⁷⁹ Ge(19.1 s) | 109.58(21), 1505.85(9.2), 100.48(2.70) |
| 287.8 2 | 1.1 3 | ⁷⁹ Ge(39.0 s) | 230.62(61), 542.27(32.6), 755(18) |
| 287.8 1 | 0.51 5 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 287.80 15 | 0.9 3 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 287.89 5 | 0.32 3 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 287.9 3 | 0.186 16 | ⁷⁷ Kr(74.4 m) | 129.64(81), 146.59(37.3), 312.0(3.7) |
| 287.97 11 | 1.47 24 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 287.997 2 | 1.54 7 | ¹⁷⁴ Tm(5.4 m) | 366.526(92), 992.128(87), 272.918(86) |
| 288 1 | 0.027 13 | ¹¹¹ Sn(35.3 m) | 1152.98(2.7), 1914.70(1.99), 761.97(1.48) |
| 288.0 3 | >0.043 | ²⁰⁷ Po(5.80 h) | 992.33(59.3), 742.64(28.2), 911.79(16.95) |
| 288 | †0.9 | ²²⁴ Ac(2.9 h) | 156.4(†100), 140.8(†55), 261.6(†28) |
| 288.023 19 | 0.096 14 | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| 288.033 5 | †2.9 6 | ²²⁹ Ac(62.7 m) | 164.522(†100), 569.1(†91), 261.92(†39) |
| • 288.033 5 | 0.00097 15 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 288.04 3 | 0.70 3 | ¹⁰³ Ag(65.7 m) | 118.72(31.2), 148.193(28.3), 266.86(13.3) |
| 288.07 7 | 0.31 4 | ²¹² Bi(60.55 m) | 39.858(1.091), 452.83(0.31), 327.96(0.139) |
| 288.1 7 | 0.7 2 | ⁴⁶ Ar(8.4 s) | 1944.30(100), 1020.3(0.8), 584.7(0.4) |
| 288.1 1 | 1.62 15 | ¹⁰⁹ In(4.2 h) | 203.5(74), 623.7(5.5), 1148.9(4.3) |
| 288.1 1 | 0.31 3 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| 288.13 15 | 2.11 20 | ¹⁰⁰ Cd(49.1 s) | 936.55(66), 139.71(6.7), 582.5(6.3) |
| • 288.141 13 | 12.51 9 | ¹⁴⁸ Pm(41.29 d) | 550.284(94.5), 629.987(89), 725.673(32.7) |
| • 288.141 13 | 0.347 8 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| 288.175 16 | †33.3 20 | ⁹⁴ Kr(0.20 s) | 629.2(†100), 764.5(†71), 219.466(†67.4) |
| • 288.18 3 | 0.158 4 | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 288.194 10 | 0.692 18 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 288.2 | †2.1 | ¹⁴⁴ Gd(4.5 m) | 333.3(†100), 2432.6(†94.8), 629.5(†32.4) |
| 288.2 2 | †5.8 7 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 234.0(†40.0) |
| 288.2 4 | | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 288.2 2 | †0.9 3 | ²³⁰ Ra(93 m) | 72.0(†100), 63.0(†35.4), 202.8(†27.3) |
| 288.22 10 | 0.47 3 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| • 288.22 10 | 1.64 14 | ¹⁹⁰ Ir(11.78 d) | 186.718(52.4), 605.24(39.9), 518.55(34.0) |
| 288.28 20 | 0.73 5 | ¹⁰⁷ Rh(21.7 m) | 302.77(66), 392.47(8.8), 312.21(4.8) |
| 288.29 23 | 1.2 3 | ¹⁸⁶ Tl(27.5 s) | 405.43(92), 402.72(45.9), 356.84(29.3) |
| 288.3 | †0.42 17 | ⁹³ Tc(43.5 m) | 2644.55(†42.7), 943.33(†8.7), 3129.0(†6.4) |
| 288.3 2 | †5.9 15 | ²²⁹ Ac(62.7 m) | 164.522(†100), 569.1(†91), 261.92(†39) |
| 288.33 12 | 0.133 14 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 288.36 8 | 0.065 10 | ¹⁸⁹ Pt(10.87 h) | 721.41(9.3), 94.33(7.6), 568.84(7.1) |
| 288.38 11 | 0.30 6 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 288.4 5 | †36 | ¹⁰⁰ Rb(51 ms) | 129.2(†100) |
| 288.4 1 | 0.124 12 | ¹⁴⁵ Ce(3.01 m) | 724.33(59), 62.54(13.33), 1148.03(9.15) |
| 288.4 7 | 0.39 4 | ¹⁹⁹ Bi(27 m) | 560.1(22.0), 424.85(22), 841.7(11) |
| 288.423 26 | 0.406 12 | ¹²² Xe(20.1 h) | 350.065(7.80), 148.612(2.62), 416.633(1.87) |
| 288.451 16 | 3.12 6 | ¹³⁵ I(6.57 h) | 1260.409(28.90), 1131.511(22.74), 1678.027(9.62) |
| 288.5 | 0.9 | ⁹⁶ Y(9.6 s) | 1750.42(89), 915.0(60), 617.1(56) |
| 288.5 3 | >0.19 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| 288.5 2 | 0.15 | ¹⁴⁵ La(24.8 s) | 70.0(11), 355.8(3.8), 118.2(3.6) |
| 288.6 7 | 0.29 6 | ²⁰¹ Bi(108 m) | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| 288.63 10 | | ¹⁹² Au(4.94 h) | 316.50791(58.0), 295.95827(22.3), 2236.89(5.6) |
| 288.64 4 | 0.59 5 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|---|--|
| 288.68 10 | 0.195 25 | ⁸⁸ Br(16.5 s) | 775.28(63), 802.14(13.13), 1440.69(4.72) |
| 288.7 3 | 0.0088 22 | ¹⁰⁰ Sr(202 ms) | 963.85(22.0), 898.50(18.9), 65.46(15.2) |
| 288.7 2 | †21.0 21 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 288.7 2 | 0.48 16 | ¹⁹⁶ Bi(308 s) | 1049.21(87), 689.00(35.5), 776.6(9.1) |
| 288.7 2 | †0.28 9 | ¹⁹⁶ Bi(240 s) | 1049.21(†21.1), 371.93(†20.8), 689.00(†19.2) |
| 288.786 13 | 0.0279 17 | ¹⁷³ Hf(23.6 h) | 123.672(83), 296.974(33.9), 139.634(12.7) |
| 288.79 15 | 0.57 5 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 288.80 12 | 0.07 3 | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| • 288.82 3 | 0.142 12 | ¹⁹³ Os(30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| 288.85 14 | 0.215 23 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 288.87 5 | 1.91 5 | ¹⁶⁶ Lu(2.65 m) | 228.12(77.3), 337.50(41), 367.95(31.4) |
| 288.9 | 13 | ¹³⁴ Nd(8.5 m) | 163.2(58), 216.8(12), 1000(4.1) |
| 288.9 4 | 1.48 16 | ¹⁷⁵ Ta(10.5 h) | 207.4(14.0), 348.5(12.0), 266.9(10.8) |
| 289 1 | >0.20 | ⁹⁶ Pd(122 s) | 124.70(65), 762.3(50.0), 499.7(17.9) |
| 289.0 2 | 0.152 14 | ¹⁴¹ Pm(20.90 m) | 1223.26(4.74), 886.22(2.44), 193.68(1.61) |
| 289.00 7 | 4.5 5 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 289.0 3 | †2.50 25 | ¹⁸² Ir(15 m) | 273.23(†100), 126.79(†77), 236.3(†21.0) |
| 289 | †9 4 | ¹⁹³ Hg(3.80 h) | 861.11(†100), 1118.84(†64), 789.21(†36) |
| 289.02 17 | 0.028 7 | ¹⁷⁹ W(6.40 m) | 238.61(0.218), 281.70(0.186), 222.5(0.057) |
| 289.1 2 | 1.36 14 | ¹⁷⁶ Tm(1.9 m) | 189.57(44.5), 1069.3(34), 381.8(21.8) |
| 289.1 | †4 | ²³⁸ Pa(2.3 m) | 1015.3(†<100), 1014.6(†<100), 635.18(†88) |
| 289.16 5 | 1.1 3 | ²⁰⁰ Pb(21.5 h) | 147.63(37.7), 257.17(4.46), 235.63(4.30) |
| • 289.18 7 | 0.13 4 | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 280.41(30.2), 644.55(11.1) |
| 289.2 1 | 0.198 20 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 289.2 | | ¹⁵⁷ Lu(5.0 s) | 967.5, 949.8, 880.5 |
| 289.21 10 | 0.017 4 | ²⁴⁰ Np(7.22 m) | 554.60(20.9), 597.40(11.7), 1496.9(1.33) |
| • 289.21 10 | 4.7×10 ⁻⁷ 15 | ²⁴⁴ Cm(18.10 y) | 42.824(.0044100), 98.860(.0001470), 152.63(<4.9×10 ⁻⁷) |
| 289.25 4 | 2.86 24 | ²⁰⁴ Bi(11.22 h) | 899.15(98), 374.72(82), 984.02(59) |
| 289.29 15 | 1.41 4 | ¹⁷² Ta(36.8 m) | 214.02(46), 95.23(17.5), 1109.27(12.4) |
| 289.29 14 | †100 15 | ¹⁸¹ Pt(51 s) | 111.97(†100), 230.15(†92), 243.11(†61) |
| 289.3 3 | 0.071 18 | ¹⁴⁹ Tb(4.118 h) | 352.24(29.43), 164.98(26.4), 388.57(18.37) |
| 289.3 2 | 0.0047 12 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 289.31 7 | 0.191 13 | ⁷² Ga(14.10 h) | 834.01(96), 2201.69(25.9), 629.95(24.8) |
| 289.4 1 | 1.7 10 | ⁹⁸ Rb(114 ms) | 144.224(24.5), 1693.3(5.9), 2171.7(5.7) |
| 289.4 1 | 68 8 | ⁹⁸ Rb(96 ms) | 144.224(73), 3010.5(23.4), 3030.5(17.7) |
| 289.4 1 | 270 | ⁹⁹ Rb(59 ms) | 144.224(†900), 1079.8(†90), 655.9(†81) |
| 289.4 2 | 4.9 4 | ¹⁵⁴ Ho(3.10 m) | 334.6(94), 412.4(79), 477.1(55) |
| 289.4 3 | 0.17 | ¹⁸¹ Au(11.4 s) | 198.60(4.4), 2022.4(4.2), 79.40(4.2) |
| 289.40 23 | †7.1 15 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 289.43 15 | 0.52 6 | ¹²¹ Cd(8.3 s) | 2059.41(21.0), 1020.89(18.9), 987.81(13.6) |
| 289.432 6 | 0.014 4 | ²⁰⁰ Au(48.4 m) | 367.943(19), 1225.479(10.7), 1262.950(3.12) |
| • 289.432 6 | 0.51 4 | ²⁰⁰ Tl(26.1 h) | 367.943(87), 1205.717(29.9), 579.298(13.8) |
| 289.5 4 | 18.8 8 | ⁵⁸ Cr(7.0 s) | 682.9(81), 126(75), 520.4(15.8) |
| 289.5 3 | 0.228 9 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 289.5 3 | | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| • 289.50 16 | 0.006 4 | ²²⁹ Th(7340 y) | 193.509(4.4), 210.853(2.8), 86.40(2.57) |
| • 289.56 4 | 0.007 | ²³⁵ U(7.038×10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| 289.63 5 | †10.0 8 | ¹⁰¹ Nb(7.1 s) | 276.10(†100), 157.466(†32), 13.5(†32) |
| 289.64 6 | 5.7 3 | ¹⁴⁸ Ce(56 s) | 269.519(17.0), 291.724(16.7), 121.169(13.2) |
| 289.7 2 | 1.20 19 | ¹⁰⁴ Ag(69.2 m) | 555.796(92.6), 767.72(65.7), 941.7(25.0) |
| 289.7 3 | 29 6 | ¹⁴⁶ Ho(3.6 s) | 682.9(100), 925.3(69), 673.7(55) |
| 289.7 2 | 0.135 18 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 289.71 15 | 1.49 5 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|----------------------|-----------------------------|--|
| 289.76 10 | 0.54 3 | ⁸⁹ Rb(15.15 m) | 1031.94(58), 1248.19(42.6), 2196.02(13.3) |
| 289.78 7 | 9.2 4 | ¹³⁹ Xe(39.68 s) | 218.59(56), 296.53(21.7), 174.97(11.3) |
| 289.80 7 | 0.102 8 | ¹¹¹ Pd(23.4 m) | 580.00(0.8), 70.44(0.78), 1459.0(0.56) |
| 289.80 7 | 1.04 10 | ¹¹¹ Pd(5.5 h) | 70.44(8.3), 391.25(5.4), 632.80(3.6) |
| 289.8 | 1.2 | ¹⁴⁷ Ce(56.4 s) | 268.80(7), 92.9(4.7), 374.23(3.5) |
| 289.8 3 | †4.0 6 | ¹⁷² W(6.6 m) | 38.9(†100), 423.3(†44), 89.8(†33.0) |
| 289.81 4 | 0.022 8 | ¹⁵⁵ Dy(9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| 289.81 16 | 0.92 12 | ¹⁷⁴ W(31 m) | 35.42(14.1), 428.83(12.7), 328.68(9.5) |
| 289.92 3 | 1.7 3 | ²⁰⁰ Pb(21.5 h) | 147.63(37.7), 257.17(4.46), 235.63(4.30) |
| 289.95 5 | 0.11 5 | ⁸¹ Sr(22.3 m) | 153.54(33.8), 147.76(30.1), 443.34(17.5) |
| 289.968 17 | 26.9 14 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 1680.244(13.0), 415.411(10.6) |
| 290.0 | 0.10 | ⁸³ Zr(44 s) | 55.55(8), 104.97(5.70), 475.1(5.1) |
| 290.0 9 | 0.8 6 | ¹⁰⁵ In(5.07 m) | 131.37(41), 260.21(15.7), 604.11(9.2) |
| • 290.0 | 0.00338 18 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| • 290 | >0.00047 | ¹⁹³ Os(30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| 290.03 6 | 0.55 4 | ⁸¹ Se(18.45 m) | 275.988(0.7), 828.27(0.280), 566.04(0.220) |
| • 290.04 10 | 0.44 3 | ⁸³ Sr(32.41 h) | 762.65(30), 381.53(14.1), 418.37(4.41) |
| 290.06 5 | 1.413 8 | ¹³³ La(3.912 h) | 278.835(2.50), 302.353(1.648), 632.765(0.98) |
| 290.1 1 | 0.052 4 | ⁶⁶ Ga(9.49 h) | 1039.30(37), 2752.01(23.38), 833.50(5.89) |
| 290.1 10 | | ⁷⁶ Zn(5.7 s) | 281.7, 1030.6, 831.2 |
| 290.1 7 | 0.0157 15 | ⁸¹ Se(18.45 m) | 275.988(0.7), 290.03(0.55), 828.27(0.280) |
| 290.2 4 | 0.44 12 | ⁷⁰ Se(41.1 m) | 49.51(35.8), 426.15(29), 376.65(9.43) |
| • 290.2 1 | 0.0020 8 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 290.254 3 | 1.88 9 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 290.27 4 | 0.306 17 | ¹³⁵ I(6.57 h) | 1260.409(28.90), 1131.511(22.74), 1678.027(9.62) |
| 290.27 17 | 0.0314 6 | ¹⁵⁹ Gd(18.479 h) | 363.55(11.4), 58.00(2.15), 348.16(0.234) |
| • 290.27 17 | 0.00014 5 | ¹⁵⁹ Dy(144.4 d) | 58.00(2.22), 348.16(0.00095), 79.45(0.00048) |
| • 290.3 2 | 0.101 15 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 290.3 4 | 0.39 8 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 290.3 1 | 36 5 | ¹⁹⁸ Pb(2.40 h) | 365.4(19), 173.4(18), 865.3(5.9) |
| 290.32 16 | 0.053 5 | ¹⁶⁵ Yb(9.9 m) | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 290.33 10 | 0.09 4 | ¹⁹³ Au(17.65 h) | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| 290.35 5 | 5.0 5 | ⁸¹ Ge(7.6 s) | 335.98(58.9), 792.94(34), 1495.53(19.9) |
| 290.35 5 | 6.5 5 | ⁸¹ Ge(7.6 s) | 93.10(26), 335.98(12.8), 197.30(12.3) |
| 290.35 4 | 0.38 4 | ¹⁶² Yb(18.87 m) | 163.35(40.0), 118.70(33.6), 576.10(3.24) |
| 290.40 15 | 0.44 9 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 290.48 6 | 3.70 10 | ⁹⁵ Ru(1.643 h) | 336.43(70.2), 1096.76(21.0), 626.77(17.8) |
| • 290.49 15 | 0.0087 19 | ¹⁵⁶ Eu(15.19 d) | 811.79(9.70), 88.9667(8.4), 1230.68(7.98) |
| 290.54 2 | 0.264 12 | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 290.57 10 | 0.44 4 | ¹⁴⁰ Xe(13.60 s) | 805.52(20), 1413.66(12.2), 1315.05(8.2) |
| 290.6 3 | 0.58 7 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| • 290.61 3 | 0.014 4 | ¹⁶⁶ Dy(81.6 h) | 82.471(14), 28.242(1.13), 54.2400(0.81) |
| • 290.64 20 | 0.11 4 | ¹⁸⁸ Pt(10.2 d) | 187.59(19.4), 195.05(18.6), 381.43(7.5) |
| • 290.669 13 | 0.402 12 | ¹⁸⁸ W(69.4 d) | 227.083(0.221), 63.582(0.109), 207.849(0.0080) |
| 290.67 14 | 0.22 13 | ¹³³ Sb(2.5 m) | 1096.22(43.0), 817.8(18.5), 2755(12.5) |
| 290.68 14 | 0.38 6 | ¹⁵⁶ Tm(83.8 s) | 344.55(86), 452.85(17.2), 585.93(14.6) |
| 290.7 2 | 0.8 | ¹⁴⁹ Dy(0.490 s) | 361.4(0.8), 786.6(0.8), 630.2(0.7) |
| 290.74 5 | 0.62 3 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| • 290.75 1 | 0.83 7 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 290.75 5 | 1.6 3 | ¹⁹³ Hg(11.8 h) | 257.97(61), 407.63(25), 573.25(14.2) |
| • 290.76 10 | 0.11 4 | ¹⁹⁴ Au(38.02 h) | 328.455(60), 293.545(10.2), 1468.91(6.3) |
| 290.80 20 | 0.049 10 | ¹¹⁴ Sb(3.49 m) | 1299.90(99), 887.60(17.4), 327.18(7.0) |
| 290.8 3 | 0.53 12 | ¹²⁶ Ba(100 m) | 233.6(19.6), 257.6(7.6), 241.0(6.0) |
| • 290.8 5 | 2.01 11 | ¹²⁷ Sb(3.85 d) | 685.7(37), 473.0(25.7), 783.7(15.0) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-----------------------------|--|---|
| 290.8 3 | | ²¹⁹ Ra(10 ms) | 805.2, 592.0, 489 |
| 290.89 6 | 0.058 7 | ¹⁶⁷ Yb(17.5 m) | 113.34(55.3), 106.18(22.5), 176.25(21) |
| 290.9 1 | †8.8 13 | ¹⁵² Pr(3.24 s) | 164.2(†100), 284.9(†81.0), 72.40(†38.9) |
| 290.9 4 | †7.2 10 | ²⁰⁶ Rn(5.67 m) | 497.7(†100), 324.5(†96), 386.6(†61) |
| 290.95 11 | 1.13 10 | ¹⁹⁷ Pb(43 m) | 385.85(74), 387.72(25.1), 222.45(24.6) |
| 291.0 15 | 0.17 6 | ⁷⁷ Rb(3.75 m) | 66.52(57), 178.99(22.2), 393.37(9.7) |
| 291.00 | | ¹³¹ Sn(56.0 s) | 1226.03(†100), 450.03(†90), 798.50(†86) |
| 291.0 8 | 2.7 10 | ¹⁵⁶ Sm(9.4 h) | 87.4897(24), 203.818(20.6), 165.8452(12.7) |
| 291.0 3 | †1.67 24 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| • 291.0 3 | 0.4 2 | ²⁵¹ Cf(898 y) | 176.6(17.7), 227.0(6.3), 285.0(1.4) |
| 291.1 1 | 0.07 2 | ¹⁰⁷ Tc(21.2 s) | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| 291.1 5 | 16 4 | ¹⁷² Ho(25 s) | 133.6(36), 178.0(23), 757.2(18) |
| • 291.1 5 | 3.5×10^{-5} 4 | ²⁵³ Es(20.47 d) | 41.79(0.050), 389.11(0.0264), 387.1(0.00810) |
| 291.17 5 | 0.435 8 | ¹³³ La(3.912 h) | 278.835(2.50), 302.353(1.648), 290.06(1.413) |
| 291.17 5 | †0.090 15 | ¹⁵³ Pm(5.4 m) | 35.842(†100), 127.298(†75), 28.309(†34.6) |
| • 291.190 11 | 0.00430 14 | ¹⁶⁹ Yb(32.026 d) | 63.12077(44.2), 197.95788(35.8), 177.21402(22.16) |
| 291.2 1 | 0.12 4 | ¹⁰⁷ Tc(21.2 s) | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| 291.2 2 | †3.2 8 | ¹⁵⁵ Nd(8.9 s) | 180.574(†100), 418.99(†75), 955.08(†50) |
| • 291.20 10 | 0.0066 24 | ¹⁹⁴ Au(38.02 h) | 328.455(60), 293.545(10.2), 1468.91(6.3) |
| • 291.2 | | ²³⁵ U(7.038×10^8 y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| 291.23 16 | 0.25 14 | ⁶⁶ Ge(2.26 h) | 43.89(28.7), 381.85(28), 272.97(10.4) |
| • 291.233 3 | 0.445 16 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| 291.25 20 | 0.63 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 291.287 20 | 8.09 8 | ¹⁴³ Ba(14.33 s) | 211.475(25), 798.79(15.6), 980.45(11.55) |
| • 291.3 3 | 0.0108 14 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| 291.3 4 | †1.3 7 | ¹⁵⁵ Nd(8.9 s) | 180.574(†100), 418.99(†75), 955.08(†50) |
| 291.3 3 | 1.3 | ¹⁷⁰ Hf(16.01 h) | 164.78(33), 620.7(23), 120.17(19) |
| • 291.30 20 | $\dagger 3.1 \times 10^4$ 3 | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000 $\times 10^9$), 33.195(†6000 $\times 10^8$) |
| 291.33 16 | 0.36 5 | ¹⁸⁴ Au(53.0 s) | 162.97(50), 272.98(40), 362.47(17.5) |
| 291.354 4 | †9.3 16 | ²²⁹ Ac(62.7 m) | 164.522(†100), 569.1(†91), 261.92(†39) |
| • 291.354 4 | 0.00537 5 | ²³³ U(1.592×10^5 y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 291.36 10 | 0.95 12 | ²⁰⁴ Bi(11.22 h) | 899.15(98), 374.72(82), 984.02(59) |
| 291.4 2 | 1.1 | ¹⁴⁵ La(24.8 s) | 70.0(11), 355.8(3.8), 118.2(3.6) |
| 291.42 5 | 1.35 14 | ⁷⁷ Zn(2.08 s) | 189.49(28.1), 473.94(19.7), 1832.0(12.4) |
| • 291.42 10 | 1.02 7 | ¹⁷⁷ Lu(160.4 d) | 208.3664(57.7), 228.4838(37.0), 378.5029(29.7) |
| 291.430 4 | 7.5 4 | ¹⁰⁹ Rh(80 s) | 326.868(54), 426.135(7.7), 178.034(7.6) |
| 291.5 1 | 4.1 5 | ¹⁰⁷ Tc(21.2 s) | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| 291.5 3 | 0.98 17 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 291.55 5 | 0.73 6 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| • 291.60 15 | 0.056 19 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 291.6 4 | 0.046 23 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| • 291.65 3 | 0.038 5 | ²³⁵ U(7.038×10^8 y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| • 291.67 4 | 0.0056 5 | ⁹⁵ Tc(61 d) | 204.117(63.25), 582.082(29.96), 835.149(26.63) |
| 291.69 7 | 0.022 6 | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| 291.7 2 | 0.26 5 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| • 291.7 2 | 0.20 4 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 396.00(34.3), 929.01(20.2) |
| 291.7 1 | 3.5 3 | ¹⁸⁸ Tl(71 s) | 412.7(88), 592.0(61), 504.2(23.3) |
| 291.7 2 | †1.7 1 | ²⁰³ At(7.4 m) | 639.4(†100), 641.5(†55.8), 738.1(†38.4) |
| • 291.7 1 | $\dagger 9 \times 10^{06}$ | ²⁰⁸ Po(2.898 y) | 570.4(†5 $\times 10^{06}$), 601.6(†4.1 $\times 10^{06}$), 861.9(†2.8 $\times 10^{06}$) |
| 291.72 9 | 0.59 4 | ¹⁰¹ Sr(118 ms) | 128.34(18.0), 1124.82(10.9), 510.73(8.5) |
| 291.72 15 | 0.21 5 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 291.72 15 | 2.35 7 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 291.724 17 | 16.7 8 | ¹⁴⁸ Ce(56 s) | 269.519(17.0), 121.169(13.2), 98.99(12.4) |
| • 291.7238 5 | 3.73 11 | ¹⁸³ Ta(5.1 d) | 246.0591(27), 353.9912(11.2), 107.9322(11.0) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|----------------------------|---|
| • 291.7238 5 | 3.05 16 | ¹⁸³ Re(70.0 d) | 162.3219(23.3), 46.4839(7.97), 208.8057(2.95) |
| 291.9 3 | 1.78 20 | ⁶⁹ Se(27.4 s) | 97.98(66), 66.4(24.8), 691.8(16.6) |
| 291.95 7 | †17.5 10 | ¹⁴² Xe(1.22 s) | 571.83(†100), 657.05(†79), 538.24(†77) |
| 291.96 4 | 0.220 9 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| 292.0 | 1.3 6 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 292 | | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 292.0 2 | 0.024 16 | ¹⁹⁰ Tl(2.6 m) | 416.4(79), 625.4(11.1), 683.5(8.7) |
| 292.04 7 | †14.8 15 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| 292.05 3 | 0.64 8 | ¹¹⁷ Cd(2.49 h) | 273.349(28), 1303.27(18.4), 344.459(17.9) |
| 292.05 3 | 0.1 1 | ¹¹⁷ Cd(3.36 h) | 1997.33(26), 1065.98(23.1), 564.397(14.7) |
| 292.06 5 | 0.26 4 | ²⁰² Bi(1.72 h) | 960.67(99), 422.18(83.7), 657.49(60.6) |
| 292.1 | 0.6 | ¹⁴⁷ Ce(56.4 s) | 268.80(7), 92.9(4.7), 374.23(3.5) |
| 292.15 11 | 0.062 15 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 292.15 16 | 3.5 5 | ¹⁸⁶ Ta(10.5 m) | 197.93(50), 214.87(42.3), 510.82(37.5) |
| 292.16 10 | 0.34 4 | ¹⁵¹ Dy(17.9 m) | 386.10(19.4), 49.46(18.0), 546.31(14.3) |
| 292.2 3 | †4.4 22 | ¹⁷¹ Hf(12.1 h) | 122.0(†100), 662.2(†83), 347.18(†47) |
| 292.3 5 | 0.06 3 | ⁸⁸ Nb(7.8 m) | 1057.01(89.3), 1082.53(53.9), 399.41(45.7) |
| 292.3 | 0.5 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 292.38 6 | 0.71 5 | ¹⁴⁶ La(6.27 s) | 258.47(64), 924.58(7.45), 702.28(6.43) |
| 292.38 6 | 1.0 | ¹⁴⁶ La(10.0 s) | 258.47(93), 409.86(81), 514.75(31) |
| 292.4 5 | 0.20 5 | ¹³⁶ Nd(50.65 m) | 108.90(32), 40.2(18.9), 574.8(10.4) |
| • 292.4 3 | 0.011 7 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 292.4 2 | †36 4 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| • 292.409 1 | 0.058 3 | ¹⁶¹ Tb(6.88 d) | 25.65150(23.2), 48.91562(17.0), 74.56711(10.2) |
| 292.409 1 | | ¹⁶¹ Ho(2.48 h) | 25.65150(27), 103.062(3.9), 77.414(1.91) |
| • 292.410 14 | 1.27 4 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| • 292.41 9 | †4.4 12 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| • 292.47 4 | 0.0250 20 | ¹⁴⁵ Eu(5.93 d) | 893.73(66), 653.512(15.0), 1658.53(14.9) |
| 292.5 12 | 0.29 18 | ¹⁰⁴ In(1.8 m) | 658.0(100), 834.1(99), 878.1(29.4) |
| 292.5 3 | †1.0 1 | ¹⁶⁰ Lu(36.1 s) | 243.2(†100), 395.4(†21.0), 577.2(†10.7) |
| 292.5 | >0.019 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| • 292.51 10 | 0.82 5 | ¹⁷⁷ Lu(160.4 d) | 208.3664(57.7), 228.4838(37.0), 378.5029(29.7) |
| • 292.55 20 | 0.0049 5 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| • 292.70 20 | 0.0057 3 | ¹⁰³ Ru(39.26 d) | 497.080(90.9), 610.33(5.75), 443.799(3.27) |
| 292.7 3 | †13.0 24 | ¹⁴⁷ Ho(5.8 s) | 189.1(†100), 883.9(†100), 486.7(†61) |
| 292.7 1 | | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 292.7 5 | †0.7 3 | ¹⁹⁸ Tl(1.87 h) | 636.4(†202), 411.8044(†202), 587.2(†185) |
| 292.70 5 | 0.275 17 | ²⁰⁰ Pt(12.5 h) | 76.21(13), 135.90(3.24), 243.71(2.49) |
| • 292.70 10 | 0.0060 7 | ²²⁴ Ra(3.66 d) | 240.987(3.97), 645.50(0.0052), 422.04(0.0029) |
| 292.70 10 | †39 2 | ²²⁰ At(224 s) | 240.987(†100), 422.04(†23), 645.50(†6) |
| • 292.77 6 | 0.0025 7 | ²³⁷ U(6.75 d) | 59.537(34.5), 208.00(21.14), 26.345(2.43) |
| • 292.77 6 | †1.42×10 ⁵ 5 | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| 292.8 2 | †8.8 31 | ⁹⁴ Kr(0.20 s) | 629.2(†100), 764.5(†71), 219.466(†67.4) |
| • 292.8 3 | 0.022 9 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| • 292.80 3 | 0.043 3 | ²⁰⁶ Po(8.8 d) | 1032.26(32.9), 511.36(24.1), 286.410(23.8) |
| 292.80 3 | | ²¹⁰ At(8.1 h) | 82.802(†480000), 106(†170000), 167(†110000) |
| 292.80 1 | 0.429 7 | ²¹³ Bi(45.59 m) | 440.46(26.1), 807.36(0.292), 1100.16(0.29) |
| 292.82 3 | 0.36 3 | ²⁰⁷ At(1.80 h) | 814.41(44.5), 588.33(19.2), 300.654(12.8) |
| 292.83 19 | >2 | ¹⁸⁶ Ta(10.5 m) | 197.93(50), 214.87(42.3), 510.82(37.5) |
| 292.844 4 | 2.67 13 | ⁷⁵ Br(96.7 m) | 286.572(88), 141.3147(6.6), 427.883(4.4) |
| 292.88 8 | 0.090 6 | ⁹³ Kr(1.286 s) | 253.42(41.2), 323.89(24.1), 266.83(20.6) |
| 292.88 10 | 0.039 4 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 292.9 1 | 36.8 18 | ¹¹⁹ Cd(2.69 m) | 343.0(16.9), 1609.7(10.9), 1763.7(9.2) |
| 292.9 1 | 0.112 15 | ¹¹⁹ Cd(2.20 m) | 1025.0(24.8), 2021.3(22.6), 720.7(17.9) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 292.90 10 | 0.42 4 | ¹²³ Cd(1.82 s) | 1165.86(25.7), 1027.45(22.6), 2102.81(12.5) |
| 292.9 4 | 1.28 12 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 292.9 2 | 0.09 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 292.9 4 | | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 292.9 1 | †3.8 5 | ²³⁰ Ra(93 m) | 72.0(†100), 63.0(†35.4), 202.8(†27.3) |
| 292.9 1 | 0.296 4 | ²³⁵ Th(7.1 m) | 417.0(2), 727.2(0.87), 696.1(0.64) |
| • 292.91 12 | | ²²⁹ Th(7340 y) | 193.509(4.4), 210.853(2.8), 86.40(2.57) |
| 292.98 20 | | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 292.98 6 | 0.84 5 | ¹⁹⁴ Pb(12.0 m) | 581.82(18.8), 1519.45(16.4), 203.82(16.2) |
| 293.0 3 | †0.3 | ¹¹¹ Rh(11 s) | 275.4(†100.0), 411.8(†9.42), 230.0(†8.9) |
| 293.0 3 | †0.29 3 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 293.0 2 | 4 1 | ¹³² Sb(4.10 m) | 696.8(100), 973.9(100), 150.6(66) |
| 293.0 3 | 0.060 3 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 293.0 1 | 3.4 3 | ¹⁷⁶ Tm(1.9 m) | 189.57(44.5), 1069.3(34), 381.8(21.8) |
| 293 | 0.6 | ²²¹ Ra(28 s) | 149.0(9.0), 93.1(2.1), 174.1(1.6) |
| 293.0 | †12 | ²³⁸ Pa(2.3 m) | 1015.3(†<100), 1014.6(†<100), 635.18(†88) |
| 293.1 5 | >0.35 | ¹³⁷ Pm(2.4 m) | 177.5(40.29), 108.6(35), 233.6(29.57) |
| 293.1 3 | 0.06 | ¹⁵⁴ Pm(1.73 m) | 2057.76(17.1), 1393.9(14.4), 81.99(12.6) |
| 293.1 3 | 0.34 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 293.1 | >0.14 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 293.15 5 | 0.0033 3 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| 293.17 11 | 0.025 5 | ¹³³ La(3.912 h) | 278.835(2.50), 302.353(1.648), 290.06(1.413) |
| 293.18 20 | 0.50 12 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 293.2 4 | 1.03 4 | ⁸⁶ Se(15.3 s) | 2441.1(43.0), 2660.0(21.6), 48.3(15.4) |
| 293.2 1 | 0.436 20 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 293.20 2 | 0.264 12 | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| • 293.2 1 | 0.10 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 396.00(34.3), 929.01(20.2) |
| 293.2 | | ¹⁹⁰ Bi(6.3 s) | |
| 293.2 5 | 0.017 9 | ²⁴⁵ Pu(10.5 h) | 327.428(25.4), 560.13(5.4), 308.222(4.9) |
| 293.25 5 | 0.045 13 | ¹⁸³ Os(13.0 h) | 381.768(89.6), 114.463(20.63), 167.844(8.81) |
| • 293.266 2 | 42.80 13 | ¹⁴³ Ce(33.039 h) | 57.356(11.7), 664.571(5.69), 721.929(5.39) |
| 293.27 6 | 0.062 3 | ¹²¹ I(2.12 h) | 212.189(84), 532.08(6.07), 598.74(1.47) |
| 293.3 5 | †16.7 17 | ⁸⁸ Se(1.52 s) | 159.2(†100), 259.2(†82), 1903.7(†64) |
| 293.3 4 | 1.31 22 | ⁹⁹ Pd(21.4 m) | 136.00(73), 263.60(15.2), 673.38(6.9) |
| • 293.3 9 | 0.29 15 | ¹²⁷ Sb(3.85 d) | 685.7(37), 473.0(25.7), 783.7(15.0) |
| 293.3 2 | 2.0 10 | ¹⁴¹ Gd(14 s) | 215.8(54), 525.9(17), 336.2(17.1) |
| 293.3 1 | 16.8 17 | ¹⁴¹ Tb(3.5 s) | 343.6(16.3), 198.4(14.8), 136.7(14.3) |
| 293.34 10 | †17.5 10 | ¹⁵⁹ Yb(1.58 m) | 166.16(†500), 177.12(†159), 390.20(†113) |
| 293.37 15 | 0.0044 12 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 293.40 8 | 0.0096 15 | ¹⁶⁶ Tm(7.70 h) | 778.817(18.9), 2052.36(17.2), 184.410(16.1) |
| 293.47 10 | 2.34 13 | ¹²¹ Ag(0.78 s) | 314.55(32.1), 353.43(19.9), 500.61(9.3) |
| 293.47 2 | 2.84 19 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 293.48 20 | >0.0050 | ¹³⁰ I(12.36 h) | 536.09(99), 668.54(96), 739.48(82) |
| 293.5 5 | †100 25 | ¹³⁴ Pr(11 m) | 299.0(†100), 1196.8(†100), 1125.4(†100) |
| 293.54 13 | 1.025 23 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 293.54 4 | †100 7 | ²¹⁵ Bi(7.6 m) | 271.23(†5.5), 517.63(†1.9), 833(†1.4) |
| 293.54 4 | 0.073 4 | ²¹⁹ Rn(3.96 s) | 271.23(10.8), 401.81(6.37), 130.59(0.119) |
| 293.545 13 | 2.55 10 | ¹⁹⁴ Ir(19.15 h) | 328.455(13.1), 645.157(1.17), 938.70(0.599) |
| • 293.545 13 | 10.2 5 | ¹⁹⁴ Au(38.02 h) | 328.455(60), 1468.91(6.3), 2043.67(3.54) |
| 293.56 10 | 0.47 | ¹¹⁵ Pd(25 s) | 342.71(8), 303.87(7), 396.56(6) |
| 293.59 9 | 2.82 9 | ⁷⁰ Se(41.1 m) | 49.51(35.8), 426.15(29), 376.65(9.43) |
| 293.59 22 | †2.5 4 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| 293.60 21 | 0.010 | ¹¹⁵ Sb(32.1 m) | 497.358(98), 489.27(1.3), 1236.52(0.58) |
| 293.6 | | ¹⁶¹ Er(3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| • 293.61 6 | 0.0114 12 | ¹⁷² Tm(63.6 h) | 78.7435(6.5), 1093.657(6.0), 1387.093(5.6) |
| 293.79 5 | 2.99 21 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 293.8 1 | 0.27 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| • 293.8 2 | 0.07 | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 293.81 11 | †2 1 | ¹⁰¹ Nb(7.1 s) | 276.10(†100), 157.466(†32), 13.5(†32) |
| 293.9 5 | 4.0 8 | ⁷⁸ Ge(88.0 m) | 277.3(96) |
| 293.9 3 | | ¹⁶¹ Eu(26 s) | 314.3, 163.7, 91.9 |
| • 293.91 4 | 0.00013 2 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 294.0 3 | †6.3 | ¹⁴⁹ Ce(5.3 s) | 57.7(†100), 380.0(†33.7), 86.4(†20.2) |
| 294.00 4 | 0.439 24 | ¹⁶¹ Er(3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| 294.0 4 | 0.16 4 | ¹⁷⁵ Ta(10.5 h) | 207.4(14.0), 348.5(12.0), 266.9(10.8) |
| 294.0 7 | 0.86 9 | ¹⁹⁹ Bi(27 m) | 560.1(22.0), 424.85(22), 841.7(11) |
| 294.07 5 | 1.06 6 | ²⁰⁸ At(1.63 h) | 686.527(98), 660.040(89), 177.595(48.6) |
| 294.08 25 | †4.3 5 | ¹⁹³ Tl(21.6 m) | 324.37(†100), 1044.7(†59), 676.10(†48) |
| 294.1 4 | 0.9 4 | ¹³² Pm(6.3 s) | 212.5(88), 397.2(23), 610.4(12.3) |
| 294.1 1 | 0.98 7 | ²⁴⁷ Cf(3.11 h) | 447.8(0.55), 417.9(0.34), 407.0(0.190) |
| 294.2 5 | 0.19 4 | ⁷⁰ As(52.6 m) | 1039.20(81), 1114.1(21.8), 668.3(21.8) |
| 294.2 10 | 0.24 3 | ¹¹⁸ Ag(3.76 s) | 487.77(60), 677.13(11.9), 2788.7(11.8) |
| 294.2 10 | 1.59 16 | ¹¹⁸ Ag(2.0 s) | 487.77(57), 677.13(53), 1058.39(14.8) |
| 294.2 2 | †100 | ¹³⁴ Pm(24 s) | 494.7(†60), 459.3(†15), 631.3(†10) |
| 294.2 5 | 1.0 4 | ¹⁹⁵ Pb(15.0 m) | 383.64(106.9), 394.21(44), 878.40(24.2) |
| 294.2 5 | 0.0013 7 | ²³⁰ Ac(122 s) | 454.95(8), 508.20(5.15), 1243.9(3.50) |
| • 294.2 5 | 0.038 16 | ²³⁰ Pa(17.4 d) | 951.95(1.65), 918.48(8.2), 454.95(6.27) |
| 294.23 5 | 0.498 24 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| • 294.264 15 | †5.4×10 ⁴ 4 | ¹³⁴ Ce(75.9 h) | 162.306(†230000), 130.414(†209000), 39.08(†>150000) |
| 294.3 4 | †2.0 10 | ¹⁵⁵ Nd(8.9 s) | 180.574(†100), 418.99(†75), 955.08(†50) |
| 294.3 1 | †6.7 10 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| • 294.3 1 | 0.033 | ²³⁵ U(7.038×10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| 294.38 15 | 1.3 3 | ¹²⁵ Cd(0.65 s) | 436.29(37), 1099.48(22.3), 2147.19(19.1) |
| 294.4 | 0.07 4 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 294.4 2 | 0.9 3 | ²⁰⁰ Bi(36.4 m) | 1026.5(100), 462.34(98), 419.70(91) |
| 294.5 2 | 0.091 23 | ¹²³ Cs(5.94 m) | 97.3(23), 596.7(10.1), 83.3(4.1) |
| 294.50 30 | 0.060 3 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 294.5 4 | †89 3 | ¹⁷¹ W(2.38 m) | 184.2(†100), 478.7(†83), 52.1(†51) |
| • 294.515 20 | 0.166 3 | ¹³¹ Ba(11.50 d) | 496.326(47), 123.805(28.97), 216.078(19.66) |
| 294.52 17 | >0.17 | ¹⁸¹ Au(11.4 s) | 198.60(4.4), 2022.4(4.2), 79.40(4.2) |
| 294.52 11 | 0.24 3 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| • 294.54 11 | 0.00097 25 | ¹⁶⁹ Yb(32.026 d) | 63.12077(44.2), 197.95788(35.8), 177.21402(22.16) |
| 294.59 4 | †5 2 | ¹⁰¹ Nb(7.1 s) | 276.10(†100), 157.466(†32), 13.5(†32) |
| 294.6 2 | 0.66 8 | ¹³⁶ Nd(50.65 m) | 108.90(32), 40.2(18.9), 574.8(10.4) |
| 294.6 2 | 3.8 3 | ¹⁵² Nd(11.4 m) | 278.5(32), 250.1(21.8), 16.0(8.0) |
| 294.6 6 | †4.9 | ¹⁷⁷ Os(2.8 m) | 84.7(†100), 125.4(†63), 195.8(†61) |
| 294.65 5 | 7.1 4 | ¹⁶⁴ Tb(3.0 m) | 168.838(25.4), 754.80(23.3), 215.07(21) |
| 294.66 13 | 0.932 23 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 294.7 1 | 5.3 4 | ¹¹⁷ Xe(61 s) | 28.5(7.0), 221.3(10.0), 32.3(7.6) |
| 294.7 2 | >0.06 | ¹⁴⁶ La(6.27 s) | 258.47(64), 924.58(7.45), 702.28(6.43) |
| 294.7 1 | 0.050 6 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| 294.72 11 | 0.09 5 | ¹⁰³ Tc(54.2 s) | 346.380(17.5), 136.079(16.6), 562.90(7.0) |
| 294.75 15 | >0.0048 | ¹³¹ Te(25.0 m) | 149.716(69), 452.323(18.18), 1146.96(4.95) |
| • 294.75 15 | 0.0013 5 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 294.75 12 | 1.43 12 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| 294.75 12 | 1.29 12 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| • 294.75 12 | 6.6 7 | ¹⁹⁰ Ir(11.78 d) | 186.718(52.4), 605.24(39.9), 518.55(34.0) |
| 294.8 4 | 0.08 3 | ⁹⁷ Zr(16.91 h) | 743.36(93), 507.64(5.03), 1147.97(2.61) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|--|
| 294.8 6 | $\dagger 8$ 1 | $^{119}\text{Xe}(5.8 \text{ m})$ | 231.8($\dagger 100$), 98.5($\dagger 95$), 461.5($\dagger 91$) |
| 294.8 4 | 0.048 20 | $^{140}\text{Xe}(13.60 \text{ s})$ | 805.52(20), 1413.66(12.2), 1315.05(8.2) |
| 294.8 3 | $\dagger 11.4$ 14 | $^{143}\text{Tb}(12 \text{ s})$ | 45.1($\dagger 100$), 686.1($\dagger 48$), 462.8($\dagger 45$) |
| 294.8 3 | 0.39 8 | $^{166}\text{Lu}(2.65 \text{ m})$ | 228.12(77.3), 337.50(41), 367.95(31.4) |
| 294.8 3 | 0.0019 4 | $^{240}\text{U}(14.1 \text{ h})$ | 44.10(1.05), 189.7(0.24), 66.5(0.154) |
| 294.802 10 | 0.570 16 | $^{149}\text{Nd}(1.728 \text{ h})$ | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 294.82 13 | 0.22 6 | $^{133}\text{Te}(55.4 \text{ m})$ | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| • 294.84 9 | 0.014 5 | $^{151}\text{Pm}(28.40 \text{ h})$ | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 294.89 5 | 0.048 3 | $^{155}\text{Dy}(9.9 \text{ h})$ | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| 294.9 5 | 0.6 4 | $^{104}\text{Tc}(18.3 \text{ m})$ | 358.0(89), 530.5(15.6), 535.1(14.7) |
| 294.9 3 | 5.45 18 | $^{146}\text{Ba}(2.22 \text{ s})$ | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 294.93 6 | 0.092 6 | $^{119}\text{I}(19.1 \text{ m})$ | 257.52(87), 635.86(2.69), 320.53(2.17) |
| 294.94 10 | 0.052 5 | $^{199}\text{Tl}(7.42 \text{ h})$ | 455.46(12.4), 208.20597(12.3), 247.26(9.3) |
| 294.959 14 | 0.48 7 | $^{184}\text{Ta}(8.7 \text{ h})$ | 414.03(72), 252.848(43), 920.932(32.0) |
| • 294.959 14 | 0.022 4 | $^{184}\text{Re}(38.0 \text{ d})$ | 903.279(37.9), 792.071(37.5), 111.208(17.1) |
| • 294.978 20 | 0.303 5 | $^{103}\text{Ru}(39.26 \text{ d})$ | 497.080(90.9), 610.33(5.75), 443.799(3.27) |
| • 294.978 20 | 0.00280 7 | $^{103}\text{Pd}(16.991 \text{ d})$ | 39.757(0.07), 357.47(0.0221), 497.080(0.00396) |
| 295.0 3 | 0.19 4 | $^{76}\text{Kr}(14.8 \text{ h})$ | 315.7(39), 270.2(21.1), 45.48(19.5) |
| 295.0 3 | 0.044 18 | $^{101}\text{Tc}(14.22 \text{ m})$ | 306.85(88), 545.06(6.0), 127.23(2.86) |
| • 295.0 3 | 0.73 22 | $^{101}\text{Rh}(3.3 \text{ y})$ | 127.23(73), 197.6(70.8), 324.8(13.4) |
| • 295.00 30 | 0.016 9 | $^{153}\text{Tb}(2.34 \text{ d})$ | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 295.07 9 | 6.67 11 | $^{148}\text{La}(1.05 \text{ s})$ | 158.468(55.6), 989.85(9.3), 760.30(8.6) |
| 295.1 2 | 0.315 21 | $^{187}\text{Au}(8.4 \text{ m})$ | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 295.1 2 | 0.024 6 | $^{212}\text{Bi}(60.55 \text{ m})$ | 39.858(1.091), 452.83(0.31), 288.07(0.31) |
| 295.11 10 | 10.3 13 | $^{184}\text{Hg}(30.6 \text{ s})$ | 236.18(64), 156.24(58), 392.42(7.1) |
| 295.14 20 | 0.50 12 | $^{149}\text{Pr}(2.26 \text{ m})$ | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 295.14 20 | 0.14 4 | $^{195}\text{Tl}(1.16 \text{ h})$ | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| • 295.15 20 | 0.0045 5 | $^{170}\text{Lu}(2.00 \text{ d})$ | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 295.17 | 0.0016 | $^{123}\text{I}(13.27 \text{ h})$ | 158.97(83), 528.96(1.39), 440.02(0.428) |
| 295.2 4 | $\dagger 2.60$ 26 | $^{182}\text{Ir}(15 \text{ m})$ | 273.23($\dagger 100$), 126.79($\dagger 77$), 236.3($\dagger 21.0$) |
| • 295.2 5 | 2.1×10^{-5} 5 | $^{233}\text{U}(1.592 \times 10^5 \text{ y})$ | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 295.2 1 | 0.44 6 | $^{240}\text{Np}(61.9 \text{ m})$ | 566.34(25.3), 973.9(23.8), 600.57(18.4) |
| 295.213 8 | 18.5 3 | $^{214}\text{Pb}(26.8 \text{ m})$ | 351.921(35.8), 241.981(7.50), 53.226(1.11) |
| 295.22 8 | 0.172 20 | $^{183}\text{Hf}(1.067 \text{ h})$ | 783.754(66), 73.174(38), 459.069(27) |
| 295.3 1 | 0.0076 13 | $^{110}\text{Ag}(24.6 \text{ s})$ | 657.7622(4.5), 815.35(0.0382), 1125.700(0.0153) |
| 295.3 1 | 0.039 6 | $^{110}\text{In}(69.1 \text{ m})$ | 657.7622(98), 2129.53(2.13), 2211.49(1.76) |
| • 295.3 3 | 0.0025 17 | $^{172}\text{Er}(49.3 \text{ h})$ | 610.062(44.2), 407.338(42.1), 68.107(3.29) |
| • 295.40 6 | 0.0032 5 | $^{147}\text{Eu}(24.1 \text{ d})$ | 197.299(27), 121.220(22.9), 677.516(9.8) |
| • 295.4 1 | 0.016 5 | $^{151}\text{Pm}(28.40 \text{ h})$ | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 295.4 3 | 0.539 22 | $^{159}\text{Ho}(33.05 \text{ m})$ | 121.012(36.2), 131.973(23.6), 309.594(17.2) |
| 295.5 7 | 0.016 12 | $^{89}\text{Kr}(3.15 \text{ m})$ | 220.948(20.1), 586.03(16.6), 904.27(7.2) |
| 295.5 6 | 1.03 9 | $^{129}\text{Sb}(4.40 \text{ h})$ | 812.8(43), 914.6(20.0), 544.7(17.9) |
| 295.5 | 1.7 | $^{134}\text{Nd}(8.5 \text{ m})$ | 163.2(58), 288.9(13), 216.8(12) |
| 295.5 3 | 0.40 7 | $^{207}\text{Rn}(9.25 \text{ m})$ | 344.53(46), 747.15(14.2), 402.68(11.9) |
| 295.5 1 | $\dagger 7$ 1 | $^{227}\text{Rn}(22.5 \text{ s})$ | 162.14($\dagger 100$), 739.2($\dagger 65$), 686.2($\dagger 62$) |
| 295.53 7 | $\dagger 1.00$ 8 | $^{188}\text{Au}(8.84 \text{ m})$ | 265.63($\dagger 100$), 340.04($\dagger 23.9$), 605.5($\dagger 16.3$) |
| 295.59 6 | $\dagger 43$ 9 | $^{171}\text{Hf}(12.1 \text{ h})$ | 122.0($\dagger 100$), 662.2($\dagger 83$), 347.18($\dagger 47$) |
| 295.597 3 | 0.32 5 | $^{109}\text{Rh}(80 \text{ s})$ | 326.868(54), 426.135(7.7), 178.034(7.6) |
| 295.6 2 | 1.13 13 | $^{120}\text{Xe}(40 \text{ m})$ | 25.1(30), 72.6(9), 178.1(6.8) |
| 295.6 5 | | $^{153}\text{Ho}(9.3 \text{ m})$ | 108.7($\dagger 100$), 365.9($\dagger 92$), 161.5($\dagger 83$) |
| 295.6 5 | $\dagger 1.9$ 7 | $^{155}\text{Er}(5.3 \text{ m})$ | 110.12($\dagger 100$), 241.5($\dagger 65$), 234.0($\dagger 40.0$) |
| 295.68 16 | 0.24 5 | $^{75}\text{Kr}(4.3 \text{ m})$ | 132.43(67), 154.66(20.8), 153.15(8.0) |
| • 295.70 10 | 1.15 10 | $^{99}\text{Rh}(16.1 \text{ d})$ | 528.24(33), 353.05(30.0), 89.65(29.0) |
| 295.70 30 | 0.014 9 | $^{105}\text{Cd}(55.5 \text{ m})$ | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------------|-----------------------------|---|
| • 295.7 | 0.00239 14 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| • 295.70 7 | 0.21 8 | ¹⁸² Re(64.0 h) | 229.3220(26), 67.75001(22.2), 1121.3007(22.0) |
| 295.7 10 | 0.103 22 | ²⁰¹ Bi(108 m) | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| 295.7 | 0.3 1 | ²²⁴ Th(1.05 s) | 178.1(9), 410(0.8), 234.4(0.4) |
| 295.72 2 | 0.22 7 | ²⁴⁵ Am(2.05 h) | 252.80(6), 240.86(0.34), 42.88(0.06) |
| • 295.72 2 | | ²⁴⁵ Bk(4.94 d) | 252.80(29.1), 380.8(2.40), 385.0(0.57) |
| • 295.72 2 | 0.136 6 | ²⁴⁹ Cf(351 y) | 388.16(66), 333.37(14.6), 252.80(2.50) |
| 295.78 4 | 71.0 14 | ¹⁹⁰ Au(42.8 m) | 301.82(23.4), 597.67(9.4), 2382.6(5.1) |
| 295.8 2 | 1.43 10 | ¹²¹ Cs(155 s) | 153.9(15.2), 239.6(7.7), 427.1(3.63) |
| 295.8 2 | 0.44 5 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 295.80 14 | >3.2 | ¹³¹ Sb(23.03 m) | 943.4(47), 933.1(26.1), 642.30(23) |
| • 295.8 2 | 0.0018 8 | ¹³¹ I(8.02070 d) | 364.489(81.7), 636.989(7.17), 284.305(6.14) |
| 295.8 1 | 67 | ¹⁵³ Ho(2.0 m) | 637.0(5.36), 688.5(3.7), 1276.5(3.3) |
| 295.901 13 | 28.9 8 | ¹⁷¹ Er(7.516 h) | 308.31(64.4), 111.621(20.5), 124.015(9.1) |
| 295.91 8 | 0.144 21 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 295.933 22 | 0.687 25 | ²⁰⁸ Rn(24.35 m) | 426.78(7.07), 251.05(5.02), 350.026(3.34) |
| • 295.939 8 | 0.44 1 | ¹⁵² Eu(13.542 y) | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| • 295.95827 12 | 28.67 9 | ¹⁹² Ir(73.831 d) | 316.50791(82.81), 468.07152(47.83), 308.45692(30.00) |
| 295.95827 12 | | ¹⁹² Ir(1.45 m) | 612.46564, 316.50791 |
| 295.95827 122.3 3 | | ¹⁹² Au(4.94 h) | 316.50791(58.0), 2236.89(5.6), 612.46564(4.34) |
| 295.96 3 | $\dagger 1.47 \times 10^4$ 17 | ¹⁵⁸ Er(2.29 h) | 71.91($\dagger 23300$), 386.84($\dagger 111000$), 248.58($\dagger 42000$) |
| 296 | | ¹⁰⁹ Tc(0.87 s) | 194.6($\dagger 100$), 128.7($\dagger 51$), 96.2($\dagger 48$) |
| 296.0 5 | 0.4 4 | ¹¹⁷ I(2.22 m) | 325.9(75), 274.4(20.4), 661.5(5.1) |
| 296.0 1 | 2.1 3 | ¹²⁹ Sn(2.23 m) | 645.13(100), 80.5(6.6), 913.2(5.0) |
| 296.00 12 | | ¹³² Ce(3.51 h) | 182.11(77), 155.37(10.5), 216.83(4.95) |
| 296.0 1 | 0.06 3 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| • 296 | 0.0014 11 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 296.0 | | ¹⁶¹ Er(3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| 296 | $\dagger > 15$ | ¹⁷³ Ir(2.20 s) | 49.6($\dagger 100$), 285.0($\dagger 76$), 296.4($\dagger 48$) |
| 296 | $\dagger > 7$ | ¹⁷³ Ir(9.8 s) | 49.6($\dagger 100$), 285.0($\dagger 37$), 91.6($\dagger 30$) |
| 296.0 4 | 0.08 | ²⁰³ Bi(11.76 h) | 820.3(30), 825.2(14.6), 896.9(13) |
| 296 10 | | ²⁵⁷ Rf(4.7 s) | 117.0, 47.4, 63.2 |
| 296.04 5 | 0.36 6 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 296.06 21 | 0.29 7 | ⁸³ Se(22.3 m) | 356.687(70), 510.17(43), 224.8(32.7) |
| 296.09 13 | 0.21 7 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| 296.1 3 | $\dagger 1.93$ 16 | ²⁰¹ Po(15.3 m) | 890.1($\dagger 100$), 240.1($\dagger 71.0$), 904.2($\dagger 54.8$) |
| 296.1 2 | $\dagger 1.06$ 18 | ²³⁰ Ra(93 m) | 72.0($\dagger 100$), 63.0($\dagger 35.4$), 202.8($\dagger 27.3$) |
| 296.11 17 | 0.37 6 | ¹⁷⁵ Tm(15.2 m) | 514.868(65), 941.23(15), 363.942(12.7) |
| • 296.119 9 | 3.88 9 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 296.12 5 | 3.3 | ¹³⁵ Pr(24 m) | 296.12(24), 82.64(13.7), 213.45(13.0) |
| 296.12 5 | 24 3 | ¹³⁵ Pr(24 m) | 82.64(13.7), 213.45(13.0), 538.2(8.1) |
| 296.20 20 | $\dagger 86$ 8 | ¹¹² Te(2.0 m) | 372.70($\dagger 100$), 418.9($\dagger 57$), 350.9($\dagger 36$) |
| • 296.2 2 | 0.012 10 | ²²⁹ Th(7340 y) | 193.509(4.4), 210.853(2.8), 86.40(2.57) |
| • 296.21 7 | 0.055 3 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| 296.242 25 | 2.60 7 | ¹⁵⁷ Pm(10.56 s) | 160.61(35), 188.052(13.5), 571.27(5.39) |
| • 296.28 5 | 0.027 7 | ¹⁸⁹ Re(24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| 296.29 3 | 19 | ¹⁰¹ Pd(8.47 h) | 590.44(12.06), 269.67(6.43), 24.46(3.90) |
| 296.3 | | ¹⁶⁷ Ta(1.4 m) | 278.0, 214.2, 139.5 |
| 296.363 18 | 8.9 5 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 296.4 1 | $\dagger 48$ 6 | ¹⁷³ Ir(2.20 s) | 49.6($\dagger 100$), 285.0($\dagger 76$), 147.7($\dagger 48$) |
| 296.4 2 | $\dagger < 1.5$ | ¹⁸² Au(21 s) | 154.76($\dagger 100$), 264.33($\dagger 40.0$), 855.41($\dagger 14.5$) |
| 296.40 6 | 0.488 11 | ¹⁹⁴ Pb(12.0 m) | 581.82(18.8), 1519.45(16.4), 203.82(16.2) |
| • 296.4581 6 | 5.08 14 | ¹⁷⁷ Lu(160.4 d) | 208.3664(57.7), 228.4838(37.0), 378.5029(29.7) |
| 296.46 9 | 0.69 10 | ¹⁸⁴ Ta(8.7 h) | 414.03(72), 252.848(43), 920.932(32.0) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|--------------------------|----------------------------|---|
| 296.5 2 | 17 | ¹¹⁵ Rh(0.99 s) | 127.9(64.6), 125.6(33.3), 164.5(17) |
| 296.5 | 0.11 7 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 296.51 5 | 0.00048 6 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 296.51 5 | †30 4 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| • 296.526 3 | 4.46 3 | ¹⁵⁶ Tb(5.35 d) | 534.318(66.6), 199.2132(40.9), 1222.36(31.00) |
| 296.53 7 | 21.7 5 | ¹³⁹ Xe(39.68 s) | 218.59(56), 174.97(11.3), 289.78(9.2) |
| 296.53 5 | 0.41 4 | ²²⁸ Fr(39 s) | 473.7(10.2), 474.0(7.6), 410.40(6.3) |
| • 296.59 25 | 0.0067 15 | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 296.6 2 | 8.9 9 | ¹⁴⁰ Gd(15.8 s) | 174.8(76), 749.9(70), 379.0(38) |
| 296.6 1 | 0.069 6 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| 296.6 4 | 0.32 4 | ²⁰⁹ Rn(28.5 m) | 408.32(50.3), 745.78(22.8), 337.45(14.5) |
| 296.611 12 | | ¹⁰² Nb(1.3 s) | 948.85, 397.69, 847.37 |
| 296.611 12 | 79 8 | ¹⁰² Nb(4.3 s) | 1633.10(41), 551.54(30), 447.13(19.6) |
| 296.67 10 | 9.9 9 | ⁷⁴ Kr(11.50 m) | 89.65(31), 203.0(18.0), 62.84(9.6) |
| 296.69 5 | 1.04 8 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 296.7 6 | 0.09 4 | ¹⁰³ Cd(7.3 m) | 1461.81(12), 1448.70(5.55), 1079.90(5.44) |
| 296.70 20 | 0.18 5 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| • 296.70 20 | 0.0076 7 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 296.7 5 | †1.5 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 296.7 1 | 0.032 16 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| • 296.7 2 | †5.4 9 | ²⁵⁸ Md(51.5 d) | 367.8(†100), 447.9(†37), 276.8(†20.2) |
| 296.8 4 | †1.5 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 296.84 8 | >0.0015 | ²³⁹ U(23.45 m) | 74.664(48), 43.533(4.14), 662.24(0.18) |
| 296.88 3 | 1.3 4 | ⁹⁷ Y(3.75 s) | 3287.6(18.1), 3401.3(14.1), 1996.6(7.4) |
| 296.88 3 | 1.4 4 | ⁹⁷ Y(1.17 s) | 1103.0(92.6), 161.4(71.8), 1091(56) |
| • 296.911 14 | 4.9×10 ⁻⁵ 16 | ¹⁸⁶ Re(90.64 h) | 137.155(8.22), 767.508(0.0255), 630.354(0.0230) |
| 296.911 14 | 64.0 15 | ¹⁸⁶ Ir(16.64 h) | 137.155(42), 434.849(34.4), 773.276(9.1) |
| 296.911 14 | 9.9 13 | ¹⁸⁶ Ir(2.0 h) | 137.155(27), 767.508(21.2), 630.354(18.0) |
| 296.974 9 | 33.9 7 | ¹⁷³ Hf(23.6 h) | 123.672(83), 139.634(12.7), 311.239(10.75) |
| 297.0 1 | 97 5 | ¹³⁴ Sb(10.43 s) | 1279.1(100), 706.3(57), 115.2(49) |
| 297.00 10 | †1.67×10 ³ 19 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| 297.0 3 | 0.11 4 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| 297.0 1 | 0.19 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 297.0 4 | 0.033 16 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 297.07 6 | 0.35 4 | ¹⁹⁹ Tl(7.42 h) | 455.46(12.4), 208.20597(12.3), 247.26(9.3) |
| 297.09 5 | 0.007 5 | ¹³¹ Te(25.0 m) | 149.716(69), 452.323(18.18), 1146.96(4.95) |
| 297.09 5 | 0.043 5 | ¹³¹ Te(25.0 m) | 149.716(69), 452.323(18.18), 1146.96(4.95) |
| • 297.09 5 | 0.066 10 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 297.1 4 | 0.44 9 | ⁷⁰ Se(41.1 m) | 49.51(35.8), 426.15(29), 376.65(9.43) |
| 297.10 20 | 0.234 24 | ⁹¹ Tc(3.14 m) | 2450.90(13.5), 1639.90(9.2), 1605.20(7.77) |
| 297.1 5 | 0.33 17 | ⁹⁷ Rh(46.2 m) | 189.21(49), 2245.6(14), 421.55(12.7) |
| 297.1 3 | 0.20 4 | ¹⁸⁸ Hg(3.25 m) | 66.7(63), 190.1(4.40), 82.7(2.6) |
| 297.14 15 | 0.049 7 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 297.2 3 | 0.066 11 | ⁹⁷ Zr(16.91 h) | 743.36(93), 507.64(5.03), 1147.97(2.61) |
| 297.2 1 | 3.7 3 | ¹⁵¹ Er(0.58 s) | 789.4(5.1), 597.4(4.4), 414.1(2.7) |
| 297.2 10 | 0.052 9 | ¹⁵⁷ Dy(8.14 h) | 326.16(92), 182.20(1.84), 83.01(0.62) |
| • 297.215 4 | 4.16 18 | ⁷⁷ Br(57.036 h) | 238.996(23), 520.639(22.4), 249.786(2.98) |
| • 297.24 8 | 0.010 5 | ¹⁶⁰ Tb(72.3 d) | 879.383(30.01), 298.580(25.51), 966.171(25.21) |
| 297.24 8 | †3.64 23 | ¹⁶⁰ Ho(5.02 h) | 728.18(†100), 879.383(†65.9), 962.317(†59.1) |
| 297.24 8 | 1.70 11 | ¹⁶⁰ Ho(25.6 m) | 728.18(46.9), 879.383(26.6), 962.317(25.6) |
| • 297.26 3 | 4.5 4 | ¹²⁶ Sb(12.46 d) | 695.03(100), 666.331(100), 414.81(83.3) |
| 297.3 | | ⁹⁸ Y(0.548 s) | 1223.0(36.0), 2941.3(16.7), 1590.9(14.7) |
| • 297.3 2 | 0.50 20 | ¹²⁶ Sb(12.46 d) | 695.03(100), 666.331(100), 414.81(83.3) |
| 297.3 5 | 0.6 | ¹³⁶ Te(17.5 s) | 2077.9(22), 333.99(19), 578.75(18) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|-----------------------------|---|
| 297.3 | 0.012 7 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 297.32 5 | 79.8 16 | ⁷³ Ga(4.86 h) | 325.70(11.17), 739.42(4.23), 767.8(1.44) |
| • 297.369 6 | 12.71 25 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 806.372(9.5) |
| • 297.4 2 | 0.35 6 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 396.00(34.3), 929.01(20.2) |
| 297.44 21 | 0.955 19 | ²⁰⁷ Po(5.80 h) | 992.33(59.3), 742.64(28.2), 911.79(16.95) |
| • 297.450 6 | 4.98×10^{-5} 8 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 297.5 5 | $\dagger 14.5$ 25 | ¹⁸⁹ Au(28.7 m) | 713.17($\dagger 100$), 812.68($\dagger 63$), 447.65($\dagger 55$) |
| 297.5 2 | $\dagger 2.5$ | ²⁵⁶ Es(7.6 h) | 861.8($\dagger 100$), 231.1($\dagger 61$), 172.6($\dagger 49$) |
| 297.6 5 | | ¹³² La(24.3 m) | 464.55(22), 663.07(11.6), 285.6(7) |
| 297.6 1 | $\dagger 13.2$ 6 | ¹⁵² Pr(3.24 s) | 164.2($\dagger 100$), 284.9($\dagger 81.0$), 72.40($\dagger 38.9$) |
| 297.6 2 | $\dagger 0.44$ 18 | ²³⁰ Ra(93 m) | 72.0($\dagger 100$), 63.0($\dagger 35.4$), 202.8($\dagger 27.3$) |
| 297.61 6 | 0.396 5 | ¹⁴³ Ba(14.33 s) | 211.475(25), 798.79(15.6), 980.45(11.55) |
| 297.67 13 | $\dagger 34.3$ | ¹⁸⁹ Hg(7.6 m) | 320.99($\dagger 100$), 78.21($\dagger 63$), 565.42($\dagger 48$) |
| 297.7 3 | 0.22 4 | ¹⁴⁹ Dy(4.20 m) | 100.8(15.2), 789.4(11.8), 1776.3(11.1) |
| 297.7 2 | $\dagger 1.81$ 19 | ¹⁶⁸ Re(4.4 s) | 199.3($\dagger 100$), 363.2($\dagger 95$), 479.8($\dagger 62.8$) |
| • 297.70 20 | 0.0038 5 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| • 297.7 1 | 0.00132 9 | ¹⁷⁷ Ta(56.56 h) | 112.9498(7.2), 208.3664(0.94), 1057.8(0.29) |
| 297.7 | > 0.032 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| 297.72 12 | 0.31 8 | ²⁰⁴ At(9.2 m) | 684.341(95), 516.318(90), 426.253(67.5) |
| 297.77 25 | 0.014 5 | ¹⁶⁸ Ho(2.99 m) | 741.356(36.6), 821.164(34.5), 815.990(18.6) |
| 297.8 1 | $\dagger 1.04$ 9 | ¹²³ La(17 s) | 92.5($\dagger 100$), 937.3($\dagger 43$), 153.6($\dagger 43$) |
| • 297.80 5 | 0.038 5 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 297.87 3 | 0.478 17 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 297.88 10 | 0.012 | ¹⁶³ Er(75.0 m) | 1113.5(0.0490), 436.1(0.0285), 439.94(0.0276) |
| 297.90 7 | 22.2 17 | ⁶¹ Fe(5.98 m) | 1205.07(44), 1027.42(42.7), 1645.95(7.0) |
| 297.9 3 | $\dagger 0.29$ 3 | ¹²⁹ Ba(2.17 h) | 182.30($\dagger 100$), 1459.1($\dagger 50.0$), 202.38($\dagger 33.7$) |
| 297.9 3 | 0.05 5 | ¹⁴² La(91.1 m) | 641.285(47), 2397.8(13.3), 2542.7(10.00) |
| 297.9 1 | $\dagger 1.00$ 23 | ¹⁶⁰ Ho(5.02 h) | 728.18($\dagger 100$), 879.383($\dagger 65.9$), 962.317($\dagger 59.1$) |
| 298.00 7 | 0.119 9 | ¹³⁷ Xe(3.818 m) | 455.490(31), 848.95(0.62), 1783.43(0.415) |
| 298.0 1 | 4.26 10 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 298.0 3 | 0.048 9 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 298 1 | 79 10 | ²¹⁰ Tl(1.30 m) | 799.7(99), 1316(21), 1210(17) |
| 298 1 | 5.2×10^{-5} 17 | ²¹⁴ Po(164.3 us) | 799.7(0.0104) |
| 298.0 3 | 0.0049 25 | ²³⁰ Ac(122 s) | 454.95(8), 508.20(5.15), 1243.9(3.50) |
| • 298.0 3 | 0.044 22 | ²³⁰ Pa(17.4 d) | 951.95(1.65), 918.48(8.2), 454.95(6.27) |
| 298.0 1 | 0.56 4 | ²⁴⁹ Es(102.2 m) | 379.5(40.4), 813.2(9.2), 375.1(3.3) |
| 298.061 14 | 0.116 20 | ¹⁵⁰ Pm(2.68 h) | 333.971(68), 1324.51(17.5), 1165.739(15.8) |
| • 298.061 14 | 0.644 9 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| 298.09 21 | $\dagger 12.3$ | ¹⁶⁴ Tm(2.0 m) | 91.40($\dagger 1500$), 1154.66($\dagger 366$), 768.91($\dagger 279$) |
| 298.1 1 | 21.1 12 | ¹¹⁷ Ag(5.34 s) | 135.4(48), 386.8(39.9), 522.1(9.4) |
| 298.1 1 | 0.46 11 | ¹¹⁷ Ag(72.8 s) | 135.4(23), 337.7(10.3), 157.1(7.9) |
| 298.1 2 | $\dagger 2.0$ 4 | ¹⁸⁵ Pt(33.0 m) | 229.60($\dagger 100$), 135.3($\dagger 80$), 197.4($\dagger 74$) |
| 298.1 2 | 2.05 23 | ¹⁹⁴ Tl(32.8 m) | 636.5(99), 428.0(99), 748.9(76) |
| • 298.1 3 | $\dagger 1.9$ 6 | ²⁵⁸ Md(51.5 d) | 367.8($\dagger 100$), 447.9($\dagger 37$), 276.8($\dagger 20.2$) |
| 298.2 3 | 0.049 18 | ¹⁹⁹ Pt(30.80 m) | 542.993(15), 493.772(5.59), 317.056(4.95) |
| 298.207 20 | 0.180 4 | ¹⁶⁶ Tm(7.70 h) | 778.817(18.9), 2052.36(17.2), 184.410(16.1) |
| 298.22 8 | < 0.5 | ¹⁶ C(0.747 s) | 120.42(0.67), 276.85(< 0.07), 397.27(< 0.03) |
| • 298.3 5 | 0.025 7 | ⁶⁹ Ge(39.05 h) | 1107.01(36), 574.17(13.3), 872.14(11.9) |
| • 298.3 4 | 0.028 12 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 298.38 10 | 0.109 20 | ²¹⁰ At(8.1 h) | 1181.39(99.3), 245.31(79), 1483.39(46.5) |
| 298.4 2 | 0.26 5 | ⁹⁷ Rb(169.9 ms) | 167.1(26), 585.2(21.0), 600.5(10.6) |
| 298.4 1 | 4.5 6 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| 298.43 6 | 0.153 9 | ¹⁰³ Ag(65.7 m) | 118.72(31.2), 148.193(28.3), 266.86(13.3) |
| 298.46 15 | 1.35 8 | ¹⁶¹ Yb(4.2 m) | 78.20(34), 599.88(25.9), 631.45(13.9) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|--------------------------|-----------------------------|---|
| 298.5 | 0.06 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 298.5 | 0.21 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 298.5 2 | †10.6 21 | ¹⁸⁷ Hg(1.9 m) | 233.38(†100), 376.34(†38), 240.26(†33) |
| 298.52 12 | 0.16 4 | ¹⁰¹ Sr(118 ms) | 128.34(18.0), 1124.82(10.9), 510.73(8.5) |
| • 298.57 5 | 0.079 20 | ²⁴¹ Cm(32.8 d) | 471.805(71), 430.634(4.06), 132.413(3.86) |
| • 298.57 5 | | ²⁴⁵ Bk(4.94 d) | 205.879(0.040), 471.805(0.026), 164.8(0.0084) |
| 298.58 2 | 10 | ¹¹³ Ag(5.37 h) | 258.8(1.64), 316.3(1.343), 672.3(0.87) |
| 298.58 2 | 10 | ¹¹³ Ag(68.7 s) | 316.3(18), 392.3(11), 583.8(3.6) |
| • 298.580 2 | 25.51 12 | ¹⁶⁰ Tb(72.3 d) | 879.383(30.01), 966.171(25.21), 1177.962(15.07) |
| 298.580 2 | †3.36 23 | ¹⁶⁰ Ho(5.02 h) | 728.18(†100), 879.383(†65.9), 962.317(†59.1) |
| 298.58 9 | 0.29 4 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 298.6 2 | 0.11 3 | ¹⁰⁴ Tc(18.3 m) | 358.0(89), 530.5(15.6), 535.1(14.7) |
| 298.6 7 | 0.032 13 | ¹¹¹ Sn(35.3 m) | 1152.98(2.7), 1914.70(1.99), 761.97(1.48) |
| 298.6 | 10 | ¹⁴⁴ Dy(9.1 s) | 196.5(11), 475.5(5.0), 321.5(2.2) |
| • 298.6 5 | 0.006 3 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 298.6 4 | 0.08 4 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| • 298.634 5 | 28.6 7 | ¹⁴⁹ Gd(9.28 d) | 149.735(48.2), 346.651(23.9), 748.601(8.22) |
| 298.67 14 | 25.4 12 | ¹⁸⁶ Au(10.7 m) | 191.56(62), 764.89(10.5), 415.61(8.5) |
| 298.70 4 | | ¹⁶⁸ Lu(5.5 m) | 1483.65(†100), 228.58(†97), 111.8(†68) |
| 298.70 4 | 2.6 3 | ¹⁶⁸ Lu(6.7 m) | 198.82(28), 979.22(20), 896.12(15) |
| 298.7 | 0.093 10 | ²⁰⁸ Fr(59.1 s) | 635.8(10), 778.5(6.8), 325.3(5.2) |
| 298.76 | <0.02 | ²¹⁴ Pb(26.8 m) | 351.921(35.8), 295.213(18.5), 241.981(7.50) |
| 298.77 20 | 1.3 4 | ¹⁶⁶ Hf(6.77 m) | 78.76(41), 341.82(4.7), 407.91(4.5) |
| 298.8 5 | 0.40 8 | ⁷⁰ As(52.6 m) | 1039.20(81), 1114.1(21.8), 668.3(21.8) |
| 298.8 4 | 0.017 9 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| 298.8 2 | †7.6 9 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 234.0(†40.0) |
| 298.81 14 | 0.72 6 | ¹⁴⁸ La(1.05 s) | 158.468(55.6), 989.85(9.3), 760.30(8.6) |
| • 298.82 3 | 0.186 16 | ¹⁹³ Os(30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| • 298.89 20 | 0.035 | ²³³ Pa(26.967 d) | 312.17(38.6), 300.34(6.62), 340.81(4.47) |
| 298.89 20 | 0.44 5 | ²³³ Np(36.2 m) | 312.17(0.7), 546.9(0.280), 506.5(0.154) |
| • 298.89 20 | †7.85×10 ⁶ 20 | ²³⁷ Pu(45.2 d) | 280.40(†870000), 320.75(†6.48×10 ⁶), 228.56(†3.93×10 ⁶) |
| 298.91 14 | †12.2 | ¹⁸¹ Pt(51 s) | 289.29(†100), 111.97(†100), 230.15(†92) |
| 298.96 20 | 0.28 5 | ¹⁹⁷ Pb(43 m) | 385.85(74), 387.72(25.1), 222.45(24.6) |
| • 298.97 3 | 0.0025 10 | ¹⁵¹ Gd(124 d) | 153.56(6.20), 243.28(5.60), 174.70(2.96) |
| 299.0 5 | †100 40 | ¹³⁴ Pr(11 m) | 293.5(†100), 1196.8(†100), 1125.4(†100) |
| 299.03 5 | 1.23 9 | ¹⁰⁰ Sr(202 ms) | 963.85(22.0), 898.50(18.9), 65.46(15.2) |
| • 299.0506 171.80 5 | | ¹⁷⁷ Lu(160.4 d) | 208.3664(57.7), 228.4838(37.0), 378.5029(29.7) |
| 299.06 15 | 1.04 15 | ¹²¹ Cd(13.5 s) | 324.976(49.5), 1040.26(16.8), 349.937(12.9) |
| 299.1 2 | 0.86 12 | ⁷⁶ Kr(14.8 h) | 315.7(39), 270.2(21.1), 45.48(19.5) |
| • 299.1 3 | 0.089 18 | ¹⁴⁸ Pm(41.29 d) | 550.284(94.5), 629.987(89), 725.673(32.7) |
| 299.1 2 | 0.030 10 | ²²³ Ac(2.10 m) | 98.58(0.891), 191.3(0.58), 83.55(0.57) |
| 299.1 2 | 0.013 5 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 299.1 2 | †6.4×10 ² 13 | ²³⁴ Pa(1.17 m) | 1001.03(†837000), 766.38(†294000), 742.81(†80000) |
| • 299.1 2 | 0.021 2 | ²³⁴ Np(4.4 d) | 1558.31(18.72), 1527.21(11.2), 1601.80(9.1) |
| • 299.1 2 | 4.8×10 ⁻⁸ 13 | ²³⁸ Pu(87.74 y) | 43.498(0.0395), 99.853(0.00735), 152.720(0.000937) |
| 299.11 3 | 1.25 13 | ¹³⁵ Ce(17.7 h) | 265.56(41.8), 300.07(23.5), 606.76(18.8) |
| 299.20 10 | 0.17 6 | ¹⁰⁶ Tc(35.6 s) | 270.07(56), 2239.30(13.6), 1969.40(8.9) |
| 299.2 3 | 49 6 | ¹³² In(0.201 s) | 374.3(62), 4040.8(61), 2379.7(29) |
| 299.2 2 | 0.106 18 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 299.2 1 | 0.83 16 | ²²⁵ Th(8.72 m) | 321.4(23), 246.0(5.06), 359.0(4.1) |
| 299.24 25 | †0.77 8 | ¹⁸² Ir(15 m) | 273.23(†100), 126.79(†77), 236.3(†21.0) |
| 299.3 4 | 2.2 4 | ¹³⁶ Sm(47 s) | 114.4(36), 747.7(5.4), 485.3(5.0) |
| 299.3 4 | 0.7 | ¹³⁶ Sm(47 s) | 114.4(36), 747.7(5.4), 485.3(5.0) |
| 299.3 1 | 6 | ¹⁵³ Tm(1.48 s) | 765.5(1.92), 965.3(0.82), 205.2(0.61) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 299.33 5 | 0.81 4 | ¹⁴³ Cs(1.78 s) | 195.554(13), 232.421(8.32), 306.424(6.80) |
| 299.34 4 | †24 | ¹⁹⁷ Ir(5.8 m) | 469.72(†100), 430.56(†61), 815.92(†45) |
| 299.34 | 0.12 | ²⁰³ Bi(11.76 h) | 820.3(30), 825.2(14.6), 896.9(13) |
| • 299.34 6 | 0.030 8 | ²⁴⁶ Pu(10.84 d) | 43.81(25.0), 223.75(23.5), 179.94(9.7) |
| 299.377 3 | 0.24 4 | ⁷⁵ Br(96.7 m) | 286.572(88), 141.3147(6.6), 427.883(4.4) |
| 299.4 4 | 0.07 3 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 299.45 10 | 0.45 8 | ¹¹⁷ Cd(3.36 h) | 1997.33(26), 1065.98(23.1), 564.397(14.7) |
| 299.5 5 | 3.8 18 | ¹³⁹ Eu(17.9 s) | 267.3(31), 155.3(31), 190.1(25) |
| 299.5 3 | †100 5 | ¹⁸⁷ Pb(15.2 s) | 617.2(†2.67), 493.6(†2.67), 448.7(†1.33) |
| 299.5 5 | 1.0 3 | ¹⁹⁴ Tl(32.8 m) | 636.5(99), 428.0(99), 748.9(76) |
| • 299.53 10 | 1.54 8 | ⁷⁹ Kr(35.04 h) | 261.29(13), 397.54(9.3), 606.09(8.12) |
| 299.55 5 | 0.0477 22 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| • 299.57 8 | 0.133 16 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 299.6 2 | 0.028 9 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| 299.6 2 | 0.061 17 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| 299.6 3 | †1.9 8 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| 299.6 3 | 0.14 4 | ¹⁸⁸ Hg(3.25 m) | 66.7(63), 190.1(4.40), 82.7(2.6) |
| 299.6 2 | 0.97 9 | ²⁵⁰ Es(8.6 h) | 828.82(72), 303.41(21.6), 349.4(19.8) |
| 299.667 8 | 4.56 9 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 299.70 6 | 0.242 15 | ¹⁰⁰ Sr(202 ms) | 963.85(22.0), 898.50(18.9), 65.46(15.2) |
| 299.7 3 | 2.10 22 | ¹⁵⁸ Sm(5.30 m) | 189.4(15.2), 363.6(12.4), 324.5(10.6) |
| 299.7 2 | 3.0 3 | ¹⁷⁶ Tm(1.9 m) | 189.57(44.5), 1069.3(34), 381.8(21.8) |
| 299.73 10 | 0.20 1 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| 299.77 3 | 0.47 5 | ¹⁸⁴ Ta(8.7 h) | 414.03(72), 252.848(43), 920.932(32.0) |
| 299.8 5 | †9.3 10 | ¹⁰³ Mo(67.5 s) | 83.4(†100), 423.91(†69), 45.8(†57) |
| 299.8 4 | 0.07 3 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 299.8 2 | 0.013 1 | ²⁴⁰ U(14.1 h) | 44.10(1.05), 189.7(0.24), 66.5(0.154) |
| 299.8 7 | 0.017 9 | ²⁴⁵ Pu(10.5 h) | 327.428(25.4), 560.13(5.4), 308.222(4.9) |
| 299.82 4 | 0.40 8 | ¹⁹³ Hg(11.8 h) | 257.97(61), 407.63(25), 573.25(14.2) |
| 299.90 20 | 0.18 3 | ¹²³ Cd(1.82 s) | 1165.86(25.7), 1027.45(22.6), 2102.81(12.5) |
| 299.9 12 | 0.49 14 | ¹⁸⁶ Pt(2.0 h) | 276.7(0), 611.5(6.0), 635.6(>3.8) |
| 299.9 | >0.06 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| 299.94 6 | 0.039 5 | ¹³¹ Te(25.0 m) | 149.716(69), 452.323(18.18), 1146.96(4.95) |
| • 299.95 3 | 1.3 3 | ¹⁸² Re(64.0 h) | 229.3220(26), 67.75001(22.2), 1121.3007(22.0) |
| 300.0 4 | †12 1 | ¹¹⁶ Xe(56 s) | 104.5(†100), 310.7(†42), 247.7(†40) |
| 300.00 16 | 0.23 4 | ¹⁵¹ Dy(17.9 m) | 386.10(19.4), 49.46(18.0), 546.31(14.3) |
| 300.0 4 | †19 1 | ¹⁷¹ W(2.38 m) | 184.2(†100), 294.5(†89), 478.7(†83) |
| 300.0 | 5.2 5 | ¹⁷⁹ Pt(21.2 s) | 171.7(16), 193.1(14.2), 99.8(13.2) |
| 300 | †3.6 | ²²⁴ Ac(2.9 h) | 156.4(†100), 140.8(†55), 261.6(†28) |
| 300.00 3 | 0.0225 15 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 300.00 3 | †154 11 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| • 300.00 3 | †23 3 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 300.0 1 | 0.15 3 | ²³⁶ Pa(9.1 m) | 642.35(37.0), 687.59(9.9), 1762.7(6.0) |
| 300.07 2 | 23.5 3 | ¹³⁵ Ce(17.7 h) | 265.56(41.8), 606.76(18.8), 518.05(13.6) |
| 300.07 1 | 4.6 | ²²⁷ Ra(42.2 m) | 27.36(16), 302.65(4.3), 283.69(3.1) |
| • 300.07 1 | 2.46 7 | ²³¹ Pa(32760 y) | 27.36(10.3), 302.65(2.2), 283.69(1.7) |
| 300.087 10 | 3.28 3 | ²¹² Pb(10.64 h) | 238.632(43.3), 115.183(0.592), 415.2(0.143) |
| 300.1 7 | 0.44 4 | ¹⁹⁹ Bi(27 m) | 560.1(22.0), 424.85(22), 841.7(11) |
| • 300.13 6 | | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| 300.15 15 | †7.8 10 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| • 300.19 6 | 0.0206 8 | ¹⁷² Er(49.3 h) | 610.062(44.2), 407.338(42.1), 68.107(3.29) |
| 300.2 3 | 0.24 6 | ¹¹⁷ Xe(61 s) | 28.5(7.0), 221.3(10.0), 32.3(7.6) |
| 300.2 2 | †29 | ¹⁷⁷ Os(2.8 m) | 84.7(†100), 125.4(†63), 195.8(†61) |
| • 300.219 10 | 0.797 11 | ⁶⁷ Cu(61.83 h) | 184.577(48.7), 93.311(16.1), 91.266(7.0) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| • 300.219 10 | 16.80 22 | ⁶⁷ Ga(3.2612 d) | 93.311(39.2), 184.577(21.2), 393.529(4.68) |
| 300.3 2 | 0.43 12 | ⁷⁶ Kr(14.8 h) | 315.7(39), 270.2(21.1), 45.48(19.5) |
| 300.3 5 | 0.49 19 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 300.3 2 | 0.25 5 | ¹¹⁸ Cs(14 s) | 337.4(100), 472.8(37.4), 586.6(15.4) |
| 300.3 2 | 0.65 7 | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 300.31 10 | 1.10 9 | ¹⁸⁷ Pt(2.35 h) | 106.46(9), 201.52(6.4), 110.04(5.7) |
| • 300.34 2 | 6.62 6 | ²³³ Pa(26.967 d) | 312.17(38.6), 340.81(4.47), 86.814(1.97) |
| 300.34 2 | 0.12 4 | ²³³ Np(36.2 m) | 312.17(0.7), 298.89(0.44), 546.9(0.280) |
| • 300.39 4 | 1.7 4 | ¹⁸² Re(64.0 h) | 229.3220(26), 67.75001(22.2), 1121.3007(22.0) |
| 300.4 3 | 0.87 12 | ⁷⁴ Kr(11.50 m) | 89.65(31), 203.0(18.0), 296.67(9.9) |
| • 300.4 5 | | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 300.4 5 | 0.065 22 | ¹⁵⁰ Tb(3.48 h) | 638.05(72), 496.3(14.8), 792.5(4.39) |
| 300.45 15 | 0.160 24 | ¹⁰⁷ In(32.4 m) | 204.97(47), 505.51(11.9), 320.92(10.2) |
| 300.47 12 | 0.56 7 | ¹⁵⁷ Pm(10.56 s) | 160.61(35), 188.052(13.5), 571.27(5.39) |
| 300.5 3 | | ¹⁸⁰ Hg(2.8 s) | 300.5(†100), 381.2(†69), 479.9(†23.0) |
| 300.5 3 | †100 | ¹⁸⁰ Hg(2.8 s) | 381.2(†69), 479.9(†23.0), 405.0(†17) |
| 300.50 4 | 3.72 19 | ¹⁸⁹ Pt(10.87 h) | 721.41(9.3), 94.33(7.6), 568.84(7.1) |
| 300.54 10 | 0.24 4 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 300.58 2 | 2.03 6 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 300.6 2 | †7.6 3 | ¹³⁶ Pm(107 s) | 373.8(†100), 602.7(†38.4), 857.2(†23.4) |
| 300.6 2 | 13.7 6 | ¹³⁶ Pm(107 s) | 373.8(15.0), 602.7(12.3), 857.2(12.72) |
| • 300.60 20 | 0.0045 5 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 300.60 5 | 2.40 16 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| • 300.65 7 | 0.055 4 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| 300.654 12 | 12.8 6 | ²⁰⁷ At(1.80 h) | 814.41(44.5), 588.33(19.2), 467.12(7.1) |
| 300.7 10 | 0.09 5 | ⁷⁹ Rb(22.9 m) | 688.1(23), 182.77(19.2), 143.41(13.9) |
| 300.7 5 | 0.24 6 | ⁹⁶ Rh(9.90 m) | 832.57(100), 685.49(95.7), 631.71(74.5) |
| 300.7 2 | 2.58 19 | ¹²¹ Xe(40.1 m) | 252.7(13), 132.8(10.9), 445.2(7.7) |
| 300.7 1 | 8.9 18 | ¹⁴¹ Gd(24.5 s) | 351.1(89), 223.9(64), 574.9(51) |
| 300.742 14 | 0.348 14 | ¹⁹⁴ Ir(19.15 h) | 328.455(13.1), 293.545(2.55), 645.157(1.17) |
| • 300.742 14 | 0.83 6 | ¹⁹⁴ Au(38.02 h) | 328.455(60), 293.545(10.2), 1468.91(6.3) |
| • 300.762 9 | 3.732 22 | ¹⁶⁶ Ho(1.20×10 ³ y) | 184.410(72.6), 810.276(58.08), 711.683(55.32) |
| 300.8 2 | 3.7 8 | ¹¹⁸ Pd(1.9 s) | 125.4(34), 125.4(34), 224.2(20.1) |
| 300.8 3 | 0.045 9 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| • 300.884 15 | 88000 7 | ¹³⁴ Ce(75.9 h) | 162.306(†230000), 130.414(†209000), 39.08(†>150000) |
| 300.9 1 | 0.00267 17 | ¹⁰⁷ Cd(6.50 h) | 93.124(1.45), 828.93(0.17), 796.462(0.0665) |
| 300.92 5 | 1.18 16 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 301.0 1 | 0.027 4 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| 301 1 | 0.018 | ¹⁶¹ Er(3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| 301.05 16 | 0.38 5 | ¹⁹⁷ Pb(43 m) | 385.85(74), 387.72(25.1), 222.45(24.6) |
| 301.11 6 | 2.11 6 | ⁹⁵ Ru(1.643 h) | 336.43(70.2), 1096.76(21.0), 626.77(17.8) |
| 301.128 14 | 0.376 10 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 301.2 1 | 4.8 3 | ¹⁸⁸ Tl(71 s) | 412.7(88), 592.0(61), 504.2(23.3) |
| • 301.25 | 0.0103 4 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 301.30 3 | 1.45 7 | ⁸¹ Sr(22.3 m) | 153.54(33.8), 147.76(30.1), 443.34(17.5) |
| 301.3 | †19 | ¹⁰⁷ Mo(3.5 s) | 400.3(†100), 65.7(†>92), 384.4(†57.6) |
| 301.4 3 | 2.4 5 | ¹³¹ Sb(23.03 m) | 943.4(47), 933.1(26.1), 642.30(23) |
| 301.4 3 | 0.21 4 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| • 301.4 3 | 0.012 1 | ²³⁸ Np(2.117 d) | 984.45(27.8), 1028.54(20.3), 1025.87(9.6) |
| 301.4 3 | 0.50 4 | ²³⁸ Am(98 m) | 962.77(28), 918.69(23.0), 561.11(10.9) |
| 301.42 10 | 0.50 7 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 301.5 12 | †22 12 | ¹⁹⁶ Tl(1.41 h) | 426.0(†540), 635.5(†304), 695.6(†243) |
| 301.59 12 | 0.68 13 | ¹⁸⁶ Ir(2.0 h) | 137.155(27), 767.508(21.2), 630.354(18.0) |
| • 301.6 2 | >0.0047 | ¹⁶⁹ Yb(32.026 d) | 63.12077(44.2), 197.95788(35.8), 177.21402(22.16) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| 301.6 10 | 0.97 23 | ¹⁹¹ Hg(50.8 m) | 252.5(57), 420.1(18.6), 578.6(17.6) |
| 301.61 6 | | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 301.62 70 | 0.034 9 | ¹⁷⁴ Ta(1.05 h) | 206.50(58), 91.00(16.0), 1205.92(4.9) |
| 301.7 4 | 0.12 4 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 301.702 16 | 61 3 | ¹⁴⁸ Pr(2.27 m) | 1357.78(5.5), 1023.18(4.8), 721.43(4.3) |
| 301.702 16 | 95 8 | ¹⁴⁸ Pr(2.0 m) | 450.58(50), 697.61(40), 1556.7(4.9) |
| • 301.741 3 | 0.005 | ²³⁵ U(7.038×10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| 301.8 4 | 0.35 9 | ⁷⁰ Se(41.1 m) | 49.51(35.8), 426.15(29), 376.65(9.43) |
| 301.8 3 | 0.08 4 | ¹⁰⁰ Rh(20.8 h) | 539.59(78.4), 2376.1(35.3), 1553.4(21) |
| 301.8 3 | 1.0 5 | ¹⁵⁰ Tb(5.8 m) | 638.05(100), 650.4(70), 438.37(42) |
| 301.8 2 | 0.071 19 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| • 301.8 2 | 0.014 5 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 301.8 2 | †0.13 5 | ¹⁵⁸ Ho(11.3 m) | 218.21(†100.0), 98.91(†70), 945.7(†37) |
| 301.8 | †2 | ²³⁸ Pa(2.3 m) | 1015.3(†<100), 1014.6(†<100), 635.18(†88) |
| 301.82 3 | 23.4 7 | ¹⁹⁰ Au(42.8 m) | 295.78(71.0), 597.67(9.4), 2382.6(5.1) |
| • 301.85 20 | 0.0058 7 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 301.9 2 | 0.157 10 | ¹¹² Sb(51.4 s) | 1257.05(96), 990.70(14.3), 670.0(3.7) |
| 301.9 12 | 0.49 14 | ¹⁸⁶ Pt(2.0 h) | 276.7(0), 611.5(6.0), 635.6(>3.8) |
| 301.98 7 | 0.0014 | ²³⁹ U(23.45 m) | 74.664(48), 43.533(4.14), 662.24(0.18) |
| 302.0 7 | >0.020 | ¹³² I(2.295 h) | 667.718(99), 772.60(75.6), 954.55(17.6) |
| 302 1 | 0.031 19 | ¹³³ Te(12.5 m) | 312.072(62), 407.63(27.1), 1333.21(10.67) |
| • 302.0 3 | 0.18 4 | ¹⁴⁴ Pm(363 d) | 696.510(99), 618.01(98.6), 476.8(42.0) |
| 302 | †26 | ¹⁷⁴ Os(44 s) | 118(†100), 325(†43), 138(†25) |
| • 302.0 4 | 0.012 | ²³⁰ Pa(17.4 d) | 951.95(1.65), 918.48(8.2), 454.95(6.27) |
| 302.0 2 | †4.1 | ²⁵⁶ Es(7.6 h) | 861.8(†100), 231.1(†61), 172.6(†49) |
| 302.1 3 | †51 7 | ²⁰⁶ Rn(5.67 m) | 497.7(†100), 324.5(†96), 386.6(†61) |
| • 302.2 2 | 0.0090 14 | ⁷⁶ As(26.32 h) | 559.101(45), 657.041(6.2), 1216.104(3.42) |
| 302.2 2 | 0.34 6 | ¹⁵⁷ Er(18.65 m) | 53.05(24), 391.32(14.2), 121.57(10.1) |
| 302.2 5 | 3.8 11 | ¹⁹⁶ Pb(37 m) | 253.1(27.0), 502.1(26.5), 366.5(11.1) |
| 302.3 3 | 0.66 9 | ¹⁰⁰ Rh(20.8 h) | 539.59(78.4), 2376.1(35.3), 1553.4(21) |
| 302.3 3 | 0.108 9 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 302.30 15 | 1.58 25 | ¹⁶² Gd(8.4 m) | 442.12(51), 403.00(43.3), 39.0(5.1) |
| 302.35 73 | †3.0 15 | ¹⁶⁴ Tm(2.0 m) | 91.40(†1500), 1154.66(†366), 768.91(†279) |
| 302.353 8 | 1.648 17 | ¹³³ La(3.912 h) | 278.835(2.50), 290.06(1.413), 632.765(0.98) |
| 302.4 5 | 0.16 7 | ⁷⁹ Rb(22.9 m) | 688.1(23), 182.77(19.2), 143.41(13.9) |
| • 302.4 2 | 0.0047 6 | ¹³¹ I(8.02070 d) | 364.489(81.7), 636.989(7.17), 284.305(6.14) |
| 302.4 3 | >0.06 | ¹⁴⁶ La(6.27 s) | 258.47(64), 924.58(7.45), 702.28(6.43) |
| 302.4 3 | †13.9 6 | ¹⁹⁴ Bi(92 s) | 965.4(†100.0), 575.1(†98.0), 280.1(†73.7) |
| 302.46 11 | | ¹⁸⁹ Au(28.7 m) | 713.17(†100), 812.68(†63), 447.65(†55) |
| 302.49 6 | 0.013 5 | ¹³⁰ I(12.36 h) | 536.09(99), 668.54(96), 739.48(82) |
| 302.5 2 | 3 1 | ¹⁵¹ Er(23.5 s) | 638.3(36), 667.2(17), 256.4(15.9) |
| 302.51 5 | 0.491 25 | ¹⁴³ Cs(1.78 s) | 195.554(13), 232.421(8.32), 306.424(6.80) |
| 302.52 3 | 2.48 20 | ⁶⁶ Ge(2.26 h) | 43.89(28.7), 381.85(28), 272.97(10.4) |
| 302.52 15 | 0.49 7 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 302.52 15 | 0.26 7 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 302.57 5 | 0.16 6 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| • 302.60 20 | >0.00031 | ¹²⁹ Cs(32.06 h) | 371.918(30.60), 411.490(22.31), 548.945(3.40) |
| 302.6 7 | 0.132 22 | ¹⁹⁹ Bi(27 m) | 560.1(22.0), 424.85(22), 841.7(11) |
| • 302.61 9 | 0.025 5 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 302.65 1 | 4.3 | ²²⁷ Ra(42.2 m) | 27.36(16), 300.07(4.6), 283.69(3.1) |
| • 302.65 1 | 2.2 3 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 283.69(1.7) |
| • 302.65 5 | 0.68 10 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| • 302.67 9 | 0.027 7 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 302.70 20 | 0.70 7 | ¹¹⁵ Ag(20.0 m) | 229.08(18), 212.80(4.4), 472.70(4.0) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|--------------------------|---|--|
| • 302.7 2 | 0.051 15 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 302.7 1 | 80 5 | ¹³⁸ Pr(2.12 h) | 1037.8(101), 788.742(100), 390.9(6.1) |
| 302.7 4 | 0.56 9 | ¹³⁹ Nd(5.50 h) | 113.94(40), 737.96(35), 982.2(26.4) |
| 302.7 | | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 302.7 2 | †5.5 10 | ¹⁵⁹ Yb(1.58 m) | 166.16(†500), 177.12(†159), 390.20(†113) |
| 302.7 4 | 0.011 3 | ²⁰¹ Pb(9.33 h) | 331.19(79), 361.27(9.9), 945.96(7.4) |
| 302.77 20 | 66 5 | ¹⁰⁷ Rh(21.7 m) | 392.47(8.8), 312.21(4.8), 348.21(2.27) |
| 302.79 25 | 0.21 | ¹⁰⁸ In(58.0 m) | 875.46(100), 632.96(100), 242.84(41) |
| 302.8 3 | 0.11 4 | ¹⁰⁰ Cd(49.1 s) | 936.55(66), 139.71(6.7), 582.5(6.3) |
| 302.8 2 | 4.5 6 | ¹⁰⁴ Sn(20.8 s) | 132.7(56), 912.6(42), 401.2(16.2) |
| 302.85 10 | 0.56 14 | ²⁰⁹ Rn(28.5 m) | 408.32(50.3), 745.78(22.8), 337.45(14.5) |
| • 302.853 1 | 0.0048 3 | ¹³³ Xe(5.243 d) | 80.997(38.0), 79.623(0.27), 160.613(0.066) |
| • 302.853 1 | 18.33 6 | ¹³³ Ba(10.52 y) | 356.017(62.05), 80.997(34.06), 383.851(8.94) |
| 302.880 20 | 0.38 4 | ¹⁶² Ho(67.0 m) | 185.005(28.6), 1220.0(22.5), 282.864(11.3) |
| 302.89 3 | 0.17 3 | ²⁰⁰ Pb(21.5 h) | 147.63(37.7), 257.17(4.46), 235.63(4.30) |
| • 302.89 10 | 6.4×10 ⁻⁵ 10 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| • 302.9 2 | †0.03 1 | ¹³⁶ Cs(13.16 d) | 818.514(†100), 1048.073(†80), 340.547(†42.3) |
| • 302.9 | 0.047 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 302.90 15 | †28 4 | ¹⁶³ Lu(238 s) | 163.08(†100), 54.00(†88), 396.34(†63) |
| 302.9 2 | †3.5 3 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| • 302.909 5 | 5.1×10 ⁻⁶ 4 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 302.945 17 | 0.43 3 | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 302.945 17 | 0.143 22 | ¹⁸⁶ Ir(2.0 h) | 137.155(27), 767.508(21.2), 630.354(18.0) |
| 302.96 15 | 1.65 14 | ¹²⁵ Cd(0.65 s) | 436.29(37), 1099.48(22.3), 2147.19(19.1) |
| 302.96 5 | 0.0069 7 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 302.98 3 | 0.11 4 | ⁷⁴ Ga(8.12 m) | 595.847(91), 2353.46(44.5), 608.353(14.3) |
| 302.98 7 | 1.00 4 | ²⁴⁰ Np(7.22 m) | 554.60(20.9), 597.40(11.7), 1496.9(1.33) |
| • 302.98 7 | 0.009 2 | ²⁴⁰ Am(50.8 h) | 987.76(73.2), 888.80(25.1), 98.860(1.5) |
| • 302.98 7 | 1.67×10 ⁻⁵ 15 | ²⁴⁴ Cm(18.10 y) | 42.824(.0044100), 98.860(.0001470), 152.63(<4.9×10 ⁻⁷) |
| 302.994 28 | 0.067 10 | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| 303.0 | 0.06 | ⁴³ Ar(5.37 m) | 975.0(34), 738.1(15), 1439.5(13) |
| 303.0 3 | †5.2 10 | ¹³¹ Ce(10.3 m) | 169.42(†100), 414.25(†68), 119.18(†44) |
| 303.00 5 | 1.35 4 | ¹⁵¹ Dy(17.9 m) | 386.10(19.4), 49.46(18.0), 546.31(14.3) |
| 303 1 | >0.034 | ¹⁶⁷ Ho(3.1 h) | 346.547(56), 321.336(23.5), 237.873(5.0) |
| 303.06 9 | 0.071 7 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 303.1 4 | 2.7 9 | ¹¹⁵ Te(6.7 m) | 770.40(34.2), 723.569(18), 1071.70(12.9) |
| 303.1 5 | 0.036 14 | ¹⁵⁰ Tb(3.48 h) | 638.05(72), 496.3(14.8), 792.5(4.39) |
| 303.10 20 | 0.61 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| • 303.1 1 | 0.0023 15 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 303.1 3 | 0.17 10 | ¹⁹² Hg(4.85 h) | 274.8(50.4), 157.2(7), 306.5(5.4) |
| 303.12 4 | 2.09 15 | ¹³² Ce(3.51 h) | 182.11(77), 155.37(10.5), 216.83(4.95) |
| 303.13 8 | 0.0005 3 | ¹⁸⁷ W(23.72 h) | 685.774(27.3), 479.531(21.8), 72.001(11.14) |
| 303.16 4 | †0.224 22 | ¹⁵³ Pm(5.4 m) | 35.842(†100), 127.298(†75), 28.309(†34.6) |
| 303.16 14 | 0.024 4 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 303.192 9 | 0.0066 3 | ¹⁴⁵ Pr(5.984 h) | 748.278(0.5250), 675.795(0.514), 72.500(0.261) |
| 303.2 1 | 0.22 3 | ¹⁰⁰ Zr(7.1 s) | 504.25(31), 400.48(19.2), 498.0(0.72) |
| 303.2 2 | 1.21 22 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 303.2 2 | 3.1 | ¹⁴⁵ Ba(4.31 s) | 96.6(17), 91.9(7), 65.9(5) |
| 303.2 3 | †2.6 8 | ¹⁵² Pr(3.24 s) | 164.2(†100), 284.9(†81.0), 72.40(†38.9) |
| 303.2 3 | †6.8 20 | ¹⁵⁵ Nd(8.9 s) | 180.574(†100), 418.99(†75), 955.08(†50) |
| • 303.20 20 | 0.0040 5 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 303.3 2 | 1.13 8 | ¹¹⁷ I(2.22 m) | 325.9(75), 274.4(20.4), 661.5(5.1) |
| 303.36 5 | >0.11 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 303.38 19 | 3.2 3 | ⁷⁸ Zn(1.47 s) | 224.75(43.9), 181.68(28.1), 860.30(24.5) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 303.4 5 | 0.12 4 | ¹²⁶ Ba(100 m) | 233.6(19.6), 257.6(7.6), 241.0(6.0) |
| 303.41 7 | 0.27 8 | ¹⁹³ Au(17.65 h) | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| 303.41 18 | 2.2 2 | ²⁰⁰ Bi(36.4 m) | 1026.5(100), 462.34(98), 419.70(91) |
| 303.41 3 | 21.6 11 | ²⁵⁰ Es(8.6 h) | 828.82(72), 349.4(19.8), 383.7(13.6) |
| 303.43 3 | 5.8 6 | ¹³⁰ Sb(39.5 m) | 793.53(100), 839.49(100), 331.05(78) |
| 303.50 4 | 0.34 4 | ¹⁶¹ Er(3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| • 303.517 30 | 0.87 6 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 303.53 4 | 0.63 4 | ¹⁰⁷ In(32.4 m) | 204.97(47), 505.51(11.9), 320.92(10.2) |
| 303.55 15 | 0.0227 22 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| • 303.59 3 | 0.038 4 | ¹⁴⁸ Pm(5.370 d) | 1465.12(22), 550.284(22.00), 914.85(11.46) |
| 303.6 4 | 3.9 7 | ⁷³ Kr(27.0 s) | 177.8(65.8), 62.5(19.1), 454.8(15) |
| 303.6 3 | 1.47 9 | ¹⁴⁴ La(40.8 s) | 397.440(94.3), 541.20(39.2), 844.8(22.3) |
| 303.6 1 | 1.24 11 | ¹⁵⁷ Er(18.65 m) | 53.05(24), 391.32(14.2), 121.57(10.1) |
| 303.61 15 | 0.20 6 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 303.64 5 | 0.29 6 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 303.68 3 | 0.163 11 | ²⁰⁰ Pt(12.5 h) | 76.21(13), 135.90(3.24), 243.71(2.49) |
| 303.7 4 | 0.06 3 | ¹⁵² Tb(4.2 m) | 344.281(20.8), 411.115(18.8), 471.9(12.2) |
| 303.7 1 | †7 1 | ²²⁷ Rn(22.5 s) | 162.14(†100), 739.2(†65), 686.2(†62) |
| • 303.790 5 | 1.178 23 | ⁷⁷ Br(57.036 h) | 238.996(23), 520.639(22.4), 297.215(4.16) |
| 303.8 1 | 2.0 5 | ¹⁰⁵ Mo(35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 303.8 2 | †100 2 | ¹¹¹ Ru(2.12 s) | 211.7(†77.7), 382.0(†41.3), 1515.9(†28) |
| 303.80 7 | 0.118 17 | ¹¹⁶ In(54.41 m) | 1293.54(84.4), 1097.3(56.2), 416.86(28.9) |
| 303.87 10 | 7 | ¹¹⁵ Pd(25 s) | 342.71(8), 396.56(6), 556.3(6) |
| • 303.9 2 | 0.051 10 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 303.9 3 | 0.29 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| • 303.9252 171.312 9 | | ⁷⁵ Se(119.779 d) | 264.6584(58.50), 136.0008(58.3), 279.5441(24.79) |
| 303.96 3 | 0.00230 23 | ²⁵⁰ Bk(3.217 h) | 989.12(45), 1031.85(35.6), 1028.65(4.91) |
| 303.977 4 | 0.0062 13 | ¹⁷⁹ Lu(4.59 h) | 214.335(11.3), 214.930(0.46), 123.3790(0.45) |
| 304.0 2 | 0.104 18 | ⁷⁹ Rb(22.9 m) | 688.1(23), 182.77(19.2), 143.41(13.9) |
| 304.0 3 | †49 3 | ¹²¹ La(5.3 s) | 139.3(†100), 134.4(†73), 97.8(†57) |
| 304.0 2 | 0.68 11 | ¹²³ Cs(5.94 m) | 97.3(23), 596.7(10.1), 83.3(4.1) |
| • 304.0 2 | | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| • 304 2 | 0.07 1 | ²⁵⁴ Es(275.7 d) | 63.0(2.0), 316(0.15), 385(0.05) |
| 304.02 2 | 0.387 25 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 304.03 6 | 1.08 7 | ¹⁶⁵ Yb(9.9 m) | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| • 304.1 1 | 0.0020 6 | ⁵⁷ Ni(35.60 h) | 1377.63(81.7), 127.164(16.7), 1919.52(12.26) |
| 304.1 3 | | ¹²² Ba(1.95 m) | 550.7, 388.7, 231.0 |
| 304.1 3 | 0.38 | ¹⁷⁰ Hf(16.01 h) | 164.78(33), 620.7(23), 120.17(19) |
| 304.1 4 | | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 304.13 4 | | ²⁵⁰ Bk(3.217 h) | 989.12(45), 1031.85(35.6), 1028.65(4.91) |
| 304.17 10 | 0.0017 | ²³⁹ U(23.45 m) | 74.664(48), 43.533(4.14), 662.24(0.18) |
| 304.194 19 | 25.4 8 | ¹⁴¹ Ba(18.27 m) | 190.328(46.0), 276.948(23.4), 343.673(14.4) |
| 304.2 6 | 0.016 8 | ¹¹¹ Sn(35.3 m) | 1152.98(2.7), 1914.70(1.99), 761.97(1.48) |
| 304.2 2 | 1.01 8 | ¹⁴³ Gd(112 s) | 271.94(84), 588.00(15.7), 798.89(10.7) |
| 304.2 2 | 0.67 19 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 304.21 4 | 4.05 23 | ⁸³ Zr(44 s) | 55.55(8), 104.97(5.70), 475.1(5.1) |
| • 304.21 20 | †1.01×10 ⁴ | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| 304.3 4 | †1.8 5 | ¹⁴² Xe(1.22 s) | 571.83(†100), 657.05(†79), 538.24(†77) |
| 304.3 1 | 1.50 7 | ¹⁴⁸ Ho(9.59 s) | 1687.5(82.47), 660.8(58.94), 504.3(18.62) |
| 304.3 3 | 0.19 6 | ¹⁷⁷ W(135 m) | 115.65(50), 426.98(13.2), 1036.4(10.3) |
| 304.3 4 | 0.21 11 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 304.33 3 | | ¹³¹ Sn(58.4 s) | 367.40, 285.0, 62.9 |
| 304.33 3 | †32.0 40 | ¹³¹ Sn(56.0 s) | 1226.03(†100), 450.03(†90), 798.50(†86) |
| 304.43 12 | 0.033 11 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|--------------------------|---|---|
| 304.5 7 | 1.05 24 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 304.5 2 | 0.9 4 | ¹⁴⁰ Gd(15.8 s) | 174.8(76), 749.9(70), 379.0(38) |
| 304.5 1 | 0.48 4 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 304.5 2 | 0.35 8 | ²⁴² U(16.8 m) | 67.60(9.6), 55.58(3.90), 585.0(1.92) |
| 304.519 20 | 0.0096 9 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 304.519 20 | †81 24 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| • 304.530 18 | 0.00050 8 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 304.58 4 | 0.063 4 | ¹³⁵ Ce(17.7 h) | 265.56(41.8), 300.07(23.5), 606.76(18.8) |
| 304.59 9 | 0.127 24 | ²⁰⁴ Bi(11.22 h) | 899.15(98), 374.72(82), 984.02(59) |
| 304.6 4 | 0.17 7 | ¹¹⁹ Cd(2.20 m) | 1025.0(24.8), 2021.3(22.6), 720.7(17.9) |
| 304.66 7 | 0.094 6 | ¹⁴⁵ Ce(3.01 m) | 724.33(59), 62.54(13.33), 1148.03(9.15) |
| 304.67 20 | 0.131 20 | ¹⁶³ Yb(11.05 m) | 860.28(10.1), 63.62(6.5), 123.21(1.98) |
| 304.7 7 | 0.022 12 | ⁸⁹ Kr(3.15 m) | 220.948(20.1), 586.03(16.6), 904.27(7.2) |
| 304.71 8 | 4.3 4 | ¹⁸⁷ Pt(2.35 h) | 106.46(9), 201.52(6.4), 110.04(5.7) |
| 304.75 12 | 1.42 4 | ¹⁵⁴ Tb(22.7 h) | 247.925(79), 346.643(69), 1419.81(46) |
| 304.8 | 0.40 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| • 304.82 4 | 0.218 22 | ¹⁶⁶ Ho(1.20×10 ³ y) | 184.410(72.6), 810.276(58.08), 711.683(55.32) |
| • 304.849 3 | 4.30 5 | ¹⁴⁰ Ba(12.752 d) | 537.261(24.39), 29.9640(14.1), 162.660(6.21) |
| 304.87 2 | | ⁸⁵ Br(2.90 m) | 802.41(2.56), 924.63(1.63), 919.06(0.65) |
| 304.88 9 | 0.289 16 | ⁶² Zn(9.186 h) | 596.56(26), 40.84(25.5), 548.35(15.3) |
| 304.896 6 | 31 | ²⁰⁶ Hg(8.15 m) | 649.42(2.6), 344.52(0.7) |
| • 304.896 6 | | ²¹⁰ Bi(5.013 d) | 265.832 |
| • 304.896 6 | 28 | ²¹⁰ Bi(3.04×10 ⁶ y) | 265.832(50), 649.42(3.8), 344.52(0.7) |
| 304.9 3 | 0.168 24 | ¹⁴¹ Xe(1.73 s) | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| 304.9 3 | 0.048 13 | ¹⁸⁸ Hg(3.25 m) | 66.7(63), 190.1(4.40), 82.7(2.6) |
| 304.91 13 | 0.032 3 | ¹³⁵ I(6.57 h) | 1260.409(28.90), 1131.511(22.74), 1678.027(9.62) |
| 304.94 14 | 0.284 21 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 304.964 12 | 3.26 12 | ²⁰⁴ Po(3.53 h) | 883.984(29.9), 270.068(27.8), 1016.31(24.1) |
| 305.0 1 | 0.039 6 | ¹³⁹ Xe(39.68 s) | 218.59(56), 296.53(21.7), 174.97(11.3) |
| 305.0 2 | †1.5 4 | ¹⁵⁵ Tm(21.6 s) | 226.8(†100), 531.7(†20), 88.1(†17) |
| 305.0 | 0.07 4 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 305.0 1 | †2.0 5 | ¹⁹⁴ Bi(92 s) | 965.4(†100.0), 575.1(†98.0), 280.1(†73.7) |
| 305.10 18 | 0.055 12 | ⁹⁰ Kr(32.32 s) | 1118.69(39.0), 121.82(35.5), 539.49(30.8) |
| 305.1 9 | 0.028 19 | ⁹⁷ Zr(16.91 h) | 743.36(93), 507.64(5.03), 1147.97(2.61) |
| 305.1 1 | 0.45 7 | ¹⁵⁷ Er(18.65 m) | 53.05(24), 391.32(14.2), 121.57(10.1) |
| 305.1 | | ¹⁶¹ Er(3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| 305.1 4 | 0.20 10 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| • 305.131 9 | 0.0030 13 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| • 305.14 | 0.0306 11 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 305.14 16 | †16 3 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 305.2 | 1.3 6 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 305.2 3 | 0.16 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 305.2 3 | 0.0089 14 | ²⁴⁷ Cf(3.11 h) | 294.1(0.98), 447.8(0.55), 417.9(0.34) |
| • 305.22 8 | 0.00257 15 | ¹⁴⁹ Pm(53.08 h) | 285.95(3.1), 859.46(0.109), 590.88(0.069) |
| 305.3 1 | 0.088 6 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| 305.3 2 | 15.5 16 | ¹⁹⁰ Tl(3.7 m) | 416.4(91), 625.4(82), 731.1(37) |
| 305.4 2 | 4 | ¹¹⁵ Rh(0.99 s) | 127.9(64.6), 125.6(33.3), 296.5(17) |
| 305.4 3 | 0.19 6 | ¹⁷⁶ Tm(1.9 m) | 189.57(44.5), 1069.3(34), 381.8(21.8) |
| 305.4 5 | 0.03 1 | ²¹⁴ Pb(26.8 m) | 351.921(35.8), 295.213(18.5), 241.981(7.50) |
| • 305.4 2 | †3.15×10 ⁵ 10 | ²³⁷ Pu(45.2 d) | 280.40(†870000), 298.89(†7.85×10 ⁶), 320.75(†6.48×10 ⁶) |
| 305.42 10 | †13.7 13 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| 305.5 5 | 0.15 7 | ⁹⁸ Sr(0.653 s) | 119.353(73), 444.628(39), 428.4(31) |
| 305.5 2 | †0.9 3 | ¹⁰¹ Nb(7.1 s) | 276.10(†100), 157.466(†32), 13.5(†32) |
| 305.5 2 | <0.038 | ¹⁰¹ Pd(8.47 h) | 296.29(19), 590.44(12.06), 269.67(6.43) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|-----------------------------|---|
| 305.5 8 | 1.1 9 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 305.5 30 | 0.007 2 | ¹⁴⁵ Gd(23.0 m) | 1757.9(34.2), 1880.6(32.6), 1041.8(9.9) |
| 305.5 2 | | ¹⁴⁶ Dy(29 s) | 2156.8, 1915.7, 1876.7 |
| 305.5 1 | 0.178 20 | ²²³ Ac(2.10 m) | 98.58(0.891), 191.3(0.58), 83.55(0.57) |
| • 305.5028 | 141.82 5 | ¹⁷⁷ Lu(160.4 d) | 208.3664(57.7), 228.4838(37.0), 378.5029(29.7) |
| 305.55 14 | 0.0601 11 | ¹⁵⁹ Gd(18.479 h) | 363.55(11.4), 58.00(2.15), 348.16(0.234) |
| • 305.55 14 | 1.08×10^{-6} 8 | ¹⁵⁹ Dy(144.4 d) | 58.00(2.22), 348.16(0.00095), 79.45(0.00048) |
| 305.59 11 | | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 305.6 5 | | ¹⁷³ Ta(3.14 h) | 172.2(18), 69.70(5.9), 90.3(5.0) |
| 305.63 5 | 0.127 10 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 305.66 10 | 0.0077 20 | ¹⁶³ Tb(19.5 m) | 351.138(26), 389.734(24.3), 494.534(23) |
| 305.67 15 | 0.91 10 | ¹⁹⁵ Pb(15.0 m) | 383.64(106.9), 394.21(44), 878.40(24.2) |
| 305.68 3 | 0.109 20 | ¹⁵⁰ Pm(2.68 h) | 333.971(68), 1324.51(17.5), 1165.739(15.8) |
| 305.68 3 | 0.0032 | ¹⁵⁰ Eu(12.8 h) | 333.971(4.0), 406.52(2.81), 1165.739(0.257) |
| • 305.68 3 | 0.034 6 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| • 305.7 | 0.009 | ⁷⁹ Kr(35.04 h) | 261.29(13), 397.54(9.3), 606.09(8.12) |
| 305.7 | | ¹⁵⁷ Lu(5.0 s) | 967.5, 949.8, 880.5 |
| 305.7 10 | 0.103 22 | ²⁰¹ Bi(108 m) | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| 305.75 20 | 0.060 6 | ¹⁴⁷ Pr(13.4 m) | 77.9921(15), 314.675(13.2), 641.380(10.0) |
| 305.8 3 | 86 7 | ¹⁷⁰ Re(8.0 s) | 156.7(57), 413.2(51) |
| 305.82 8 | 0.068 12 | ¹⁵⁸ Tm(3.98 m) | 192.13(62), 335.10(16.8), 1149.83(7.6) |
| 305.83 9 | 0.096 3 | ¹³⁵ I(6.57 h) | 1260.409(28.90), 1131.511(22.74), 1678.027(9.62) |
| 305.83 13 | †4.0 8 | ¹⁸⁷ Hg(1.9 m) | 233.38(†100), 376.34(†38), 240.26(†33) |
| 305.85 10 | 0.50 7 | ¹³² La(4.8 h) | 464.55(76), 567.14(15.7), 1909.91(9.0) |
| 305.85 20 | 0.57 8 | ¹⁷⁷ W(135 m) | 115.65(50), 426.98(13.2), 1036.4(10.3) |
| 305.9 4 | 0.08 4 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 305.9 4 | †6.0 15 | ¹⁶⁴ Tm(2.0 m) | 91.40(†1500), 1154.66(†366), 768.91(†279) |
| 305.9 1 | 4.1 4 | ²²⁵ Th(8.72 m) | 321.4(23), 246.0(5.06), 359.0(4.1) |
| 305.94 5 | 5.9 6 | ⁷⁷ Zn(2.08 s) | 189.49(28.1), 473.94(19.7), 1832.0(12.4) |
| 306.0 3 | 0.0210 19 | ⁷² Ga(14.10 h) | 834.01(96), 2201.69(25.9), 629.95(24.8) |
| 306.0 2 | 0.13 | ¹⁴⁰ Sm(14.82 m) | 225.5(>10), 225.4(10), 140.0(5.0) |
| 306.0 | 0.8 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 306.0 3 | 0.0012 7 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 306.1 2 | †16 2 | ¹³⁵ Pm(49 s) | 198.5(†100), 207.2(†70), 463.5(†62) |
| 306.2 5 | 0.030 | ²⁰³ Bi(11.76 h) | 820.3(30), 825.2(14.6), 896.9(13) |
| 306.2 2 | 0.032 16 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| • 306.217 25 | 0.025 3 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 306.243 7 | 1.6 3 | ¹⁵¹ Pr(18.90 s) | 880.19(13), 189.057(11.8), 484.501(11.3) |
| • 306.25 3 | 5.1 3 | ¹⁰⁵ Rh(35.36 h) | 319.14(19), 280.41(0.167), 442.37(0.042) |
| • 306.25 3 | 0.88 6 | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 280.41(30.2), 644.55(11.1) |
| • 306.25 | | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 280.41(30.2), 644.55(11.1) |
| 306.25 3 | 12800 14 | ¹⁰⁵ Ag(7.23 m) | 319.14(†63000), 442.37(†5900), 929.12(†4000) |
| • 306.25 11 | 0.007 3 | ¹⁸⁹ Re(24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| 306.4 1 | †14 2 | ²²⁷ Rn(22.5 s) | 162.14(†100), 739.2(†65), 686.2(†62) |
| 306.409 4 | 0.036 24 | ¹⁷⁸ Lu(28.4 m) | 93.180(6.0), 1340.8(3.22), 1310.05(1.40) |
| 306.424 58 | 6.80 25 | ¹⁴³ Cs(1.78 s) | 195.554(13), 232.421(8.32), 660.06(4.79) |
| 306.43 25 | 0.29 17 | ⁷⁷ Rb(3.75 m) | 66.52(57), 178.99(22.2), 393.37(9.7) |
| • 306.47 10 | 2.6 1 | ⁷⁹ Kr(35.04 h) | 261.29(13), 397.54(9.3), 606.09(8.12) |
| 306.48 10 | 1.3 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 306.5 6 | 4.8 3 | ³⁰ Na(48 ms) | 1482.1(42), 1978.1(10.4), 4966.3(6.8) |
| 306.5 6 | †13 14 | ³¹ Na(17.0 ms) | 1482.1(†100), 1978.1(†22), 1820.1(†20) |
| 306.5 1 | †6.7 9 | ¹⁷¹ Hf(12.1 h) | 122.0(†100), 662.2(†83), 347.18(†47) |
| 306.5 3 | 5.4 6 | ¹⁹² Hg(4.85 h) | 274.8(50.4), 157.2(7), 186.4(3.3) |
| • 306.5 5 | 2.7×10^{-5} 3 | ²⁵³ Es(20.47 d) | 41.79(0.050), 389.11(0.0264), 387.1(0.00810) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|--|---|
| 306.51 10 | 9.3 9 | ⁷⁴ Kr(11.50 m) | 89.65(31), 203.0(18.0), 296.67(9.9) |
| 306.51 5 | †100.0 5 | ⁸³ Ge(1.85 s) | 1193.77(†20.5), 1525.50(†13.6), 1434.87(†11.8) |
| 306.569 8 | 6.42 14 | ¹⁷³ Hf(23.6 h) | 123.672(83), 296.974(33.9), 139.634(12.7) |
| 306.6 4 | 0.58 11 | ¹³⁶ Sm(47 s) | 114.4(36), 747.7(5.4), 485.3(5.0) |
| 306.60 15 | 10.0 5 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 781.6(9.3) |
| 306.66 12 | 0.080 10 | ¹⁰⁵ Ru(4.44 h) | 724.21(47), 469.37(17.5), 676.36(15.7) |
| 306.7 4 | 0.099 20 | ¹³² I(2.295 h) | 667.718(99), 772.60(75.6), 954.55(17.6) |
| 306.7 2 | 28.5 18 | ¹³⁹ Sm(2.57 m) | 273.7(37), 596.3(8.0), 782.0(6.9) |
| 306.76 6 | 1.0 3 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| • 306.76 6 | 0.239 14 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 306.77 4 | 0.92 9 | ²⁰⁸ Rn(24.35 m) | 426.78(7.07), 251.05(5.02), 350.026(3.34) |
| • 306.78 4 | 94 | ¹⁷⁶ Lu(3.78×10 ¹⁰ y) | 201.83(86), 88.34(13.3), 400.99(0.329) |
| 306.79 20 | 0.027 3 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 306.8 3 | †10 2 | ⁷³ Cu(3.9 s) | 449.7(†100), 199.2(†17), 502.0(†12) |
| 306.8 2 | 0.32 3 | ⁹² Ru(3.65 m) | 213.81(96), 259.32(92), 134.57(65.5) |
| 306.8 4 | 1.7 4 | ¹⁶⁶ Hf(6.77 m) | 78.76(41), 341.82(4.7), 407.91(4.5) |
| 306.8 2 | †0.7 1 | ¹⁸² Ir(15 m) | 273.23(†100), 126.79(†77), 236.3(†21.0) |
| 306.8 1 | 0.39 5 | ²⁴⁰ Np(61.9 m) | 566.34(25.3), 973.9(23.8), 600.57(18.4) |
| 306.85 5 | 88 4 | ¹⁰¹ Tc(14.22 m) | 545.06(6.0), 127.23(2.86), 184.10(1.69) |
| • 306.85 5 | 0.06 | ¹⁰¹ Rh(3.3 y) | 127.23(73), 197.6(70.8), 324.8(13.4) |
| • 306.85 5 | †115 6 | ¹⁰¹ Rh(4.34 d) | 545.06(†6.1), 127.23(†0.85), 179.62(†0.77) |
| 306.86 18 | 0.063 14 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 306.89 10 | | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| 306.89 10 | 0.318 19 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| • 306.9 2 | 0.020 5 | ¹⁴⁰ La(1.6781 d) | 1596.210(95), 487.021(45.5), 815.772(23.28) |
| 306.9 2 | 0.151 15 | ¹⁴⁰ Pr(3.39 m) | 1596.210(0.50), 751.637(0.032), 925.189(0.0260) |
| 306.9 1 | 0.81 7 | ¹⁴² Gd(70.2 s) | 750.2(11.2), 178.90(11.20), 284.4(6.16) |
| 306.9 3 | 1.12 16 | ¹⁹⁶ Bi(308 s) | 1049.21(87), 689.00(35.5), 776.6(9.1) |
| 306.9 3 | †0.019 5 | ¹⁹⁶ Bi(240 s) | 1049.21(†21.1), 371.93(†20.8), 689.00(†19.2) |
| 306.9 3 | †0.14 5 | ¹⁹⁶ Bi(240 s) | 1049.21(†21.1), 371.93(†20.8), 689.00(†19.2) |
| 306.96 8 | 15.1 17 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| 306.98 16 | 0.113 21 | ⁷⁹ Ge(19.1 s) | 109.58(21), 1505.85(9.2), 100.48(2.70) |
| 306.98 16 | 0.86 18 | ⁷⁹ Ge(39.0 s) | 230.62(61), 542.27(32.6), 755(18) |
| 307.00 10 | 3.46 8 | ⁸⁶ Y(14.74 h) | 1076.64(83), 627.72(32.6), 1153.01(30.5) |
| 307.0 5 | †4 | ⁹⁹ Rb(59 ms) | 90.8(†100), 125.2(†40), 1071.6(†26) |
| 307.0 1 | 3.9 5 | ¹²³ Cs(5.94 m) | 97.3(23), 596.7(10.1), 83.3(4.1) |
| 307.0 4 | 0.08 4 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 307.04 7 | 0.030 6 | ¹⁸⁹ Pt(10.87 h) | 721.41(9.3), 94.33(7.6), 568.84(7.1) |
| 307.063 2 | 30.4 12 | ²³¹ Ac(7.5 m) | 282.471(39.0), 221.399(16.8), 185.712(16.4) |
| • 307.067 11 | 0.158 4 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 307.1 2 | 10 1 | ⁹⁷ Sr(426 ms) | 1905.0(25), 953.8(21.4), 652.2(11.4) |
| 307.1 5 | | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| • 307.15 10 | 0.0101 21 | ¹⁷² Er(49.3 h) | 610.062(44.2), 407.338(42.1), 68.107(3.29) |
| 307.2 1 | 2.2 5 | ¹¹⁷ Ag(5.34 s) | 135.4(48), 386.8(39.9), 298.1(21.1) |
| 307.2 1 | 1.86 23 | ¹¹⁷ Ag(72.8 s) | 135.4(23), 337.7(10.3), 157.1(7.9) |
| • 307.2 5 | 0.018 9 | ¹²⁴ I(4.18 d) | 602.730(60), 1690.980(10.41), 722.786(9.98) |
| 307.2 2 | †<0.15 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 307.2 2 | 0.35 5 | ¹²⁹ La(11.6 m) | 278.6(25), 110.5(16.9), 457.0(8.0) |
| 307.2 1 | 0.62 20 | ¹⁵¹ Er(0.58 s) | 789.4(5.1), 597.4(4.4), 297.2(3.7) |
| 307.2 | >0.039 | ¹⁹⁷ Tl(2.84 h) | 425.84(12.9), 152.22(7.2), 1411.34(4.5) |
| 307.3 5 | †11 2 | ¹¹⁹ Xe(5.8 m) | 231.8(†100), 98.5(†95), 461.5(†91) |
| 307.3 | | ¹³⁰ Ce(25 m) | 1072.6(†100), 997.7(†100), 920.5(†100) |
| 307.30 6 | 0.93 4 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 307.30 6 | 2.74 6 | ¹⁴⁶ Cs(0.343 s) | 181.02(57.0), 557.76(9.18), 332.38(6.44) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-----------------------------|-----------------------------|--|
| 307.3 3 | 0.33 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 307.3 1 | 0.080 5 | ²¹⁰ Rn(2.4 h) | 458.25(1.7), 648.70(0.843), 570.95(0.840) |
| 307.384 9 | 0.010 3 | ¹⁵⁵ Sm(22.3 m) | 104.3346(74.6), 245.771(3.7), 141.4428(1.98) |
| 307.4 2 | 0.35 4 | ¹³⁹ Pm(4.15 m) | 402.8(15), 463.1(4.1), 367.8(3.52) |
| 307.4 2 | †3.4 4 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 307.4 4 | 0.86 20 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 307.4 1 | 0.035 3 | ²⁵¹ Fm(5.30 h) | 880.8(2.19), 453.1(1.45), 405.6(0.99) |
| 307.47 8 | 9.6 5 | ¹⁸⁶ Ta(10.5 m) | 197.93(50), 214.87(42.3), 510.82(37.5) |
| 307.48 8 | 0.37 4 | ¹⁵¹ Dy(17.9 m) | 386.10(19.4), 49.46(18.0), 546.31(14.3) |
| 307.50 20 | 0.39 9 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| • 307.51 8 | 1.035 25 | ¹⁵¹ Gd(124 d) | 153.56(6.20), 243.28(5.60), 174.70(2.96) |
| 307.6 3 | 1.50 19 | ¹²² Cs(4.5 m) | 331.1(94), 497.1(79), 638.5(63) |
| 307.6 2 | †1.5 6 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| 307.60 10 | 0.56 3 | ²⁰⁷ Po(5.80 h) | 992.33(59.3), 742.64(28.2), 911.79(16.95) |
| 307.7 3 | 0.33 7 | ¹⁵⁹ Er(36 m) | 624.5(33), 649.1(23.4), 205.92(9.7) |
| 307.7 | >0.6 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| • 307.73757 9 | 0.05 7 | ¹⁶⁹ Yb(32.026 d) | 63.12077(44.2), 197.95788(35.8), 177.21402(22.16) |
| 307.79 6 | 0.96 6 | ¹⁴⁸ Ba(0.607 s) | 56.08(29.20), 133.53(3.88), 415.78(3.59) |
| 307.79 7 | 0.265 18 | ¹⁴⁹ Tb(4.118 h) | 352.24(29.43), 164.98(26.4), 388.57(18.37) |
| 307.8 10 | 0.056 23 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| 307.8 2 | 1.4 3 | ¹⁹⁷ Tl(2.84 h) | 425.84(12.9), 152.22(7.2), 1411.34(4.5) |
| • 307.807 12 | 5.5×10^{-6} 4 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 307.830 30 | 0.84 6 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| 307.9 1 | 0.28 6 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 307.9 | 0.9 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 307.9 2 | 3.0 4 | ¹⁹⁷ Pb(43 m) | 385.85(74), 387.72(25.1), 222.45(24.6) |
| 307.92 5 | 0.0138 9 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| 307.93 2 | 0.0347 9 | ⁹⁵ Tc(20.0 h) | 765.794(93.82), 1073.71(3.74), 947.67(1.951) |
| 307.95 2 | 0.392 18 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| • 308.0 1 | 0.0001 1 | ¹⁴⁹ Eu(93.1 d) | 327.526(4.03), 277.089(3.56), 22.510(2.32) |
| 308.0 2 | 1.9 4 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 308 | †3.4 | ¹⁷⁵ Os(1.4 m) | 125.0(†100), 181(†10.8), 248(†8.6) |
| 308.0 3 | †0.15 3 | ¹⁸⁴ Ir(3.09 h) | 263.97(†100), 119.80(†45), 390.38(†38) |
| • 308 | >0.006 | ¹⁹¹ Pt(2.9 d) | 538.90(13.7), 409.44(8.0), 359.90(6.0) |
| 308.0 4 | 0.43 8 | ¹⁹⁶ Os(34.9 m) | 407.9(5.9), 126.2(5.3), 315.4(2.5) |
| 308.0 4 | 0.17 4 | ²⁰⁷ Rn(9.25 m) | 344.53(46), 747.15(14.2), 402.68(11.9) |
| 308.07 5 | 0.0119 19 | ¹²⁷ Cs(6.25 h) | 411.95(62.8), 124.70(11.37), 462.31(5.07) |
| 308.1 4 | 0.14 6 | ¹¹¹ Pd(5.5 h) | 70.44(8.3), 391.25(5.4), 632.80(3.6) |
| 308.1 1 | 0.063 6 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| • 308.2 | 0.0024 6 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 308.2 3 | †3.2 7 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 234.0(†40.0) |
| 308.2 2 | 0.37 9 | ¹⁵⁷ Er(18.65 m) | 53.05(24), 391.32(14.2), 121.57(10.1) |
| 308.22 28 | 0.056 11 | ⁹⁴ Y(18.7 m) | 918.74(56), 1138.88(6.0), 550.88(4.9) |
| 308.222 8 | 4.9 5 | ²⁴⁵ Pu(10.5 h) | 327.428(25.4), 560.13(5.4), 376.676(3.2) |
| 308.222 | | ²⁴⁵ Pu(10.5 h) | 327.428(25.4), 560.13(5.4), 308.222(4.9) |
| • 308.222 8 | $\dagger 1.5 \times 10^4$ 4 | ²⁴⁹ Bk(320 d) | 327.428(†83000) |
| 308.23 9 | †3.10 14 | ¹⁴⁴ Cs(1.01 s) | 199.326(†100.0), 639.00(†21.2), 758.96(†20.6) |
| • 308.240 35 | 0.0115 16 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| • 308.240 35 | 0.0082 16 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 308.24 16 | 0.41 3 | ¹⁸⁶ Au(10.7 m) | 191.56(62), 298.67(25.4), 764.89(10.5) |
| 308.242 11 | 3.22 13 | ¹³³ Sb(2.5 m) | 1096.22(43.0), 817.8(18.5), 2755(12.5) |
| 308.242 11 | 1.08 13 | ¹³³ Sb(2.5 m) | 1096.22(43.0), 817.8(18.5), 2755(12.5) |
| 308.25 5 | 100 | ⁴⁸ Cr(21.56 h) | 112.36(96.0), 420.5(<0.03) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|------------------------------|---|
| 308.25 9 | 0.93 13 | ¹⁷⁷ W(135 m) | 115.65(50), 426.98(13.2), 1036.4(10.3) |
| • 308.3 5 | | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 308.31 3 | 64.4 16 | ¹⁷¹ Er(7.516 h) | 295.901(28.9), 111.621(20.5), 124.015(9.1) |
| 308.4 2 | 0.0092 8 | ¹¹¹ Pd(23.4 m) | 580.00(0.8), 70.44(0.78), 1459.0(0.56) |
| 308.40 9 | 0.0138 9 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 308.40 9 | †0.89 24 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| • 308.45 10 | 0.075 7 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| • 308.45692 30.00 8 | | ¹⁹² Ir(73.831 d) | 316.50791(82.81), 468.07152(47.83), 295.95827(28.67) |
| 308.45692 33.45 6 | | ¹⁹² Au(4.94 h) | 316.50791(58.0), 295.95827(22.3), 2236.89(5.6) |
| 308.47 9 | 0.306 22 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 308.48 17 | †0.86 14 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| 308.5 5 | †3.9 3 | ¹⁰³ Mo(67.5 s) | 83.4(†100), 423.91(†69), 45.8(†57) |
| 308.5 2 | †100 19 | ¹¹⁴ Xe(10.0 s) | 161.6(†64), 103.1(†48) |
| • 308.5 3 | 0.0059 14 | ¹⁹⁵ Hg(41.6 h) | 261.75(30.9), 560.27(7), 387.87(2.15) |
| 308.55 7 | †27.2 15 | ¹⁴² Xe(1.22 s) | 571.83(†100), 657.05(†79), 538.24(†77) |
| 308.6 | 0.08 | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 308.6 2 | 2.2 4 | ¹⁹⁷ Tl(2.84 h) | 425.84(12.9), 152.22(7.2), 1411.34(4.5) |
| 308.6 2 | 0.021 5 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 308.67 2 | 0.34 4 | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 308.7 2 | 0.09 | ¹⁴⁰ Sm(14.82 m) | 225.5(>10), 225.4(10), 140.0(5.0) |
| 308.70 15 | 0.163 19 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 308.7 1 | 0.42 5 | ²³⁶ Th(37.5 m) | 110.8(4.2), 646.6(0.72), 196.0(0.69) |
| • 308.74 5 | 0.00039 4 | ²³¹ Th(25.52 h) | 25.646(14.5), 84.216(6.6), 89.944(0.94) |
| 308.75 5 | 0.132 11 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 308.8 2 | 0.07 2 | ²⁴¹ Np(13.9 m) | 174.94(3.1), 132.99(0.86), 518.8(0.40) |
| 308.9 3 | 1.3 3 | ⁷⁹ Sr(2.25 m) | 39.41(28), 105.00(21.8), 413.8(7.6) |
| 308.9 2 | | ¹⁰⁶ In(6.2 m) | 632.66(100), 861.16(92), 997.87(48) |
| 308.9 2 | | ¹⁰⁶ In(5.2 m) | 632.66(92), 1714.90(17.1), 861.16(10.6) |
| 308.9 3 | 0.33 8 | ¹²⁶ Ba(100 m) | 233.6(19.6), 257.6(7.6), 241.0(6.0) |
| 308.9 3 | 2.6 | ¹⁷⁰ Hf(16.01 h) | 164.78(33), 620.7(23), 120.17(19) |
| 308.9 4 | 0.14 5 | ¹⁷⁵ Ta(10.5 h) | 207.4(14.0), 348.5(12.0), 266.9(10.8) |
| 308.9 4 | | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 308.95 6 | 0.092 5 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| 308.96 15 | 0.040 6 | ²⁰¹ Pb(9.33 h) | 331.19(79), 361.27(9.9), 945.96(7.4) |
| 308.966 3 | 3.3 5 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 309 | >0.009 | ⁹⁰ Nb(14.60 h) | 1129.224(92.7), 2318.968(82.03), 141.178(66.8) |
| • 309.00 8 | 0.081 9 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 309.0 | 3.3 5 | ¹⁷⁹ Pt(21.2 s) | 171.7(16), 193.1(14.2), 99.8(13.2) |
| 309.0 2 | †14 3 | ¹⁸¹ Ir(4.90 m) | 107.64(†100), 1639.6(†52), 318.9(†46) |
| 309.0 2 | †2.33 21 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 309.07 9 | 0.136 12 | ⁹⁰ Kr(32.32 s) | 1118.69(39.0), 121.82(35.5), 539.49(30.8) |
| 309.08 5 | 1.80 11 | ¹⁶⁴ Tb(3.0 m) | 168.838(25.4), 754.80(23.3), 215.07(21) |
| 309.1 5 | 1.9 | ¹⁰¹ Cd(1.2 m) | 98.0(47), 1722.5(11), 1259.3(8) |
| 309.1 5 | 0.0049 15 | ¹⁰⁹ Pd(13.7012 h) | 88.04(1.171), 311.4(0.032), 647.3(0.024) |
| 309.1 3 | †100 13 | ¹³⁴ Pr(11 m) | 293.5(†100), 299.0(†100), 1196.8(†100) |
| 309.1 2 | 0.34 3 | ¹³⁶ I(83.4 s) | 1313.02(67), 1321.08(24.8), 2289.6(10.4) |
| 309.1 1 | 3.8 3 | ¹⁴⁵ Ho(2.4 s) | 339.8(15), 312.9(14.3), 334.1(13.5) |
| 309.1 3 | 0.072 21 | ¹⁶¹ Er(3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| 309.1 4 | 3.4 7 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 309.1 2 | 1.02 9 | ²¹² Fr(20.0 m) | 1273.8(46), 227.72(43), 1185.6(14.1) |
| • 309.1 3 | 0.00027 | ²³⁷ U(6.75 d) | 59.537(34.5), 208.00(21.14), 26.345(2.43) |
| • 309.1 3 | †1.4×10 ⁴ | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| 309.14 10 | 2.25 25 | ¹⁸⁶ Ta(10.5 m) | 197.93(50), 214.87(42.3), 510.82(37.5) |
| 309.15 8 | 0.19 3 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|---|---|
| 309.15 17 | 0.56 5 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| • 309.194 5 | 0.26 4 | ²⁰⁰ Tl(26.1 h) | 367.943(87), 1205.717(29.9), 579.298(13.8) |
| 309.2 2 | 0.14 | ⁷⁶ Br(16.2 h) | 559.101(74), 657.041(15.9), 1853.67(14.7) |
| 309.2 3 | 0.076 25 | ⁸⁸ Br(16.5 s) | 775.28(63), 802.14(13.13), 1440.69(4.72) |
| 309.2 | †0.99 17 | ⁹³ Tc(43.5 m) | 2644.55(†42.7), 943.33(†8.7), 3129.0(†6.4) |
| 309.2 | 1.7 | ¹³⁴ Nd(8.5 m) | 163.2(58), 288.9(13), 216.8(12) |
| 309.2 1 | 2.58 8 | ¹⁴² Ba(10.6 m) | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| 309.2 3 | †40 4 | ¹⁴³ Tb(12 s) | 45.1(†100), 686.1(†48), 462.8(†45) |
| • 309.21 3 | 0.0048 8 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 309.3 4 | 0.165 3 | ⁷³ Se(39.8 m) | 67.03(2.59), 253.70(2.356), 84.0(2.03) |
| 309.3 2 | †21 4 | ¹⁵⁹ Yb(1.58 m) | 166.16(†500), 177.12(†159), 390.20(†113) |
| 309.3 4 | 1.5 5 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 309.323 3 | 0.088 18 | ⁷⁵ Br(96.7 m) | 286.572(88), 141.3147(6.6), 427.883(4.4) |
| • 309.4 3 | | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 309.4 3 | †1.33 7 | ¹⁸⁷ Pb(15.2 s) | 299.5(†100), 617.2(†2.67), 493.6(†2.67) |
| • 309.47 6 | 0.49 5 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 309.50 20 | †5.8 8 | ¹⁰⁶ Mo(8.4 s) | 465.70(†100), 54.00(†54), 618.60(†25) |
| 309.5 | 1.0 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 309.5 | 0.11 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 309.5 2 | 3.8 3 | ¹⁵⁴ Ho(3.10 m) | 334.6(94), 412.4(79), 477.1(55) |
| • 309.5 2 | 6.6×10 ⁻⁵ 10 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 309.51 8 | 0.5 3 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 309.56 5 | 0.0138 12 | ¹³³ La(3.912 h) | 278.835(2.50), 302.353(1.648), 290.06(1.413) |
| • 309.561 15 | 0.862 6 | ¹⁶⁰ Tb(72.3 d) | 879.383(30.01), 298.580(25.51), 966.171(25.21) |
| 309.561 15 | †1.00 14 | ¹⁶⁰ Ho(5.02 h) | 728.18(†100), 879.383(†65.9), 962.317(†59.1) |
| 309.594 18 | 17.2 6 | ¹⁵⁹ Ho(33.05 m) | 121.012(36.2), 131.973(23.6), 252.963(13.7) |
| 309.6 3 | 0.58 9 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 309.6 5 | †5.0 18 | ¹⁸⁹ Au(28.7 m) | 713.17(†100), 812.68(†63), 447.65(†55) |
| 309.64 12 | 0.48 16 | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 309.65 4 | 0.96 9 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 309.66 3 | 0.55 5 | ²⁰⁴ Po(3.53 h) | 883.984(29.9), 270.068(27.8), 1016.31(24.1) |
| 309.68 6 | 0.83 5 | ¹⁰⁰ Sr(202 ms) | 963.85(22.0), 898.50(18.9), 65.46(15.2) |
| 309.7 2 | 0.61 8 | ¹⁰⁸ Tc(5.17 s) | 242.25(82), 465.6(14.3), 707.81(11.4) |
| 309.70 4 | 2.24 14 | ¹²² In(10.3 s) | 1140.55(98), 1001.58(50.7), 1190.58(20.5) |
| 309.8 2 | 2.6 3 | ⁷⁶ Kr(14.8 h) | 315.7(39), 270.2(21.1), 45.48(19.5) |
| 309.9 1 | †41.9 23 | ¹⁰⁵ Nb(2.95 s) | 94.8(†100), 246.9(†79), 137.9(†38.8) |
| 309.9 3 | 0.36 10 | ¹⁸¹ Os(105 m) | 238.75(44), 826.77(20), 118.03(12.9) |
| • 309.96 10 | 4.21 18 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 396.00(34.3), 929.01(20.2) |
| 309.99 9 | 0.044 4 | ²⁴⁰ Np(7.22 m) | 554.60(20.9), 597.40(11.7), 1496.9(1.33) |
| 310.0 3 | 28.5 7 | ⁷² Kr(17.2 s) | 415.1(34.7), 162.2(16.3), 576.5(12.1) |
| 310.0 2 | †2.7 4 | ¹⁰¹ Y(448 ms) | 98.3(†100), 133.8(†18.8), 232.1(†11.9) |
| 310 3 | 1.0 7 | ¹¹⁴ Rh(1.85 s) | 332.9(87), 519.8(48.4), 618.7(31) |
| 310.0 5 | 0.07 | ¹¹⁷ Cd(2.49 h) | 273.349(28), 1303.27(18.4), 344.459(17.9) |
| • 310.0 7 | 0.26 11 | ¹²⁷ Sb(3.85 d) | 685.7(37), 473.0(25.7), 783.7(15.0) |
| 310.0 8 | 0.64 13 | ¹³² I(1.387 h) | 600.1(14.0), 173.7(8.8), 614.0(2.5) |
| 310.0 3 | †4.8 | ¹⁷⁹ Os(6.5 m) | 65.39(†100), 218.6(†17), 32.3(†17) |
| 310.0 10 | 0.24 | ²⁰⁸ At(1.63 h) | 686.527(98), 660.040(89), 177.595(48.6) |
| 310 | 3.6 12 | ²²⁷ U(1.1 m) | 247(20), 259(3.0), 209(2.8) |
| 310 | †42 | ²²⁸ Pa(22 h) | 95(†100), 240(†23), 280(†20) |
| • 310.0 1 | 0.0015 5 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 310.1 4 | 0.089 20 | ¹³² I(2.295 h) | 667.718(99), 772.60(75.6), 954.55(17.6) |
| 310.1 30 | 0.011 2 | ¹⁴⁵ Gd(23.0 m) | 1757.9(34.2), 1880.6(32.6), 1041.8(9.9) |
| • 310.10 30 | 0.019 9 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|---|---|
| 310.1 1 | 0.30 4 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| • 310.14 10 | 0.148 3 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| • 310.14 3 | 0.10 3 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| 310.15 12 | †8.5 13 | ¹⁸¹ Pt(51 s) | 289.29(†100), 111.97(†100), 230.15(†92) |
| 310.2 1 | 0.072 10 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 310.2 2 | 1.74 24 | ²³⁷ Pa(8.7 m) | 853.6(34), 865.1(15.5), 529.26(14.9) |
| 310.26 15 | 0.50 10 | ¹¹⁷ Cd(3.36 h) | 1997.33(26), 1065.98(23.1), 564.397(14.7) |
| 310.26 12 | 25.0 14 | ¹⁶⁷ Dy(6.20 m) | 569.7(48), 259.33(27.9), 250.03(9.6) |
| 310.3 10 | 2.6 6 | ⁹⁰ Tc(49.2 s) | 1054.3(100), 948.1(100), 944.7(36.6) |
| 310.3 3 | 0.15 15 | ¹⁰⁹ Sn(18.0 m) | 1099.4(30), 649.90(28.0), 1321.3(11.9) |
| 310.3 3 | 0.45 8 | ¹⁶¹ Yb(4.2 m) | 78.20(34), 599.88(25.9), 631.45(13.9) |
| 310.3 3 | 1.2 | ²⁰⁷ Hg(2.9 m) | 351.059(77), 997.1(69), 1637.1(30) |
| 310.308 17 | 0.6 3 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 310.39 5 | 0.27 3 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 310.4 4 | 0.089 20 | ¹³² I(2.295 h) | 667.718(99), 772.60(75.6), 954.55(17.6) |
| 310.40 11 | 0.033 12 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| • 310.40 3 | 0.104 3 | ²⁰⁵ Bi(15.31 d) | 1764.36(1.368), 703.44(31), 987.62(0.585) |
| 310.41 45 | 0.024 9 | ¹³⁷ Pr(1.28 h) | 836.7(1.8), 433.9(1.28), 514.0(1.08) |
| 310.48 20 | 0.15 3 | ¹²⁸ In(0.84 s) | 1168.80(40), 935.20(6.5), 1089.53(6.0) |
| 310.5 | 0.17 | ⁸³ Zr(44 s) | 55.55(8), 104.97(5.70), 475.1(5.1) |
| 310.5 2 | 5.4 5 | ¹²¹ Xe(40.1 m) | 252.7(13), 132.8(10.9), 445.2(7.7) |
| • 310.5 1 | 0.017 5 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 310.5 | 0.6 3 | ¹⁶⁸ Lu(6.7 m) | 198.82(28), 979.22(20), 896.12(15) |
| 310.5 3 | 0.12 | ¹⁷⁰ Hf(16.01 h) | 164.78(33), 620.7(23), 120.17(19) |
| 310.52 10 | 0.000134 14 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 310.52 10 | †87 10 | ²³⁴ Pa(1.17 m) | 1001.03(†837000), 766.38(†294000), 742.81(†80000) |
| • 310.52 10 | 0.039 4 | ²³⁴ Np(4.4 d) | 1558.31(18.72), 1527.21(11.2), 1601.80(9.1) |
| 310.6 3 | 2.90 15 | ⁶⁵ Co(1.20 s) | 1141.7(4.0), 963.7(2.6), 1210.9(1.62) |
| 310.6 3 | 1.63 25 | ⁹⁷ Sr(426 ms) | 1905.0(25), 953.8(21.4), 652.2(11.4) |
| 310.6 4 | 13 3 | ¹⁸⁵ Au(4.25 m) | 243.1(6.6), 77.7(6), 332.0(5.5) |
| • 310.69 6 | 0.004 | ²³⁵ U(7.038×10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| 310.7 1 | †6.6 10 | ⁷⁵ Ga(126 s) | 253.0(†100), 574.8(†31.6), 885.6(†11.1) |
| 310.7 4 | †42 5 | ¹¹⁶ Xe(56 s) | 104.5(†100), 247.7(†40), 191.6(†38) |
| 310.7 | 0.028 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 310.72 7 | 1.27 8 | ⁸⁰ Ge(29.5 s) | 265.36(27.0), 110.4(6.5), 1564.3(4.9) |
| • 310.73 4 | 0.030 6 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| 310.74 3 | †2.46×10 ⁴ 8 | ¹⁵⁸ Er(2.29 h) | 71.91(†23300), 386.84(†111000), 248.58(†42000) |
| 310.8 | 5.0 | ⁶⁴ Fe(2.0 s) | |
| 310.8 4 | 0.45 11 | ¹¹³ Rh(2.72 s) | 189.7(17.0), 409.3(15.9), 219.6(3.88) |
| 310.8 10 | 4.9 20 | ¹³² In(0.201 s) | 374.3(62), 4040.8(61), 299.2(49) |
| • 310.85 9 | 0.036 7 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 310.87 6 | 0.369 8 | ¹⁴³ Ba(14.33 s) | 211.475(25), 798.79(15.6), 980.45(11.55) |
| 310.9 5 | 0.77 12 | ⁷⁴ Kr(11.50 m) | 89.65(31), 203.0(18.0), 296.67(9.9) |
| 310.9 3 | 1.16 13 | ⁸³ As(13.4 s) | 734.60(43), 1113.10(14.7), 2076.70(11.9) |
| • 310.90 30 | 0.016 9 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 310.90 4 | 1.06 17 | ¹⁷⁴ Ta(1.05 h) | 206.50(58), 91.00(16.0), 1205.92(4.9) |
| 310.9 7 | †13.5 19 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 310.979 13 | 0.510 13 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 310.98 13 | 0.186 19 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 311.0 3 | †1.3 | ¹⁴⁹ Ce(5.3 s) | 57.7(†100), 380.0(†33.7), 86.4(†20.2) |
| 311.0 | | ¹⁶⁵ Ta(31.0 s) | 199.4, 162.8, 94.1 |
| • 311.00 3 | 0.0029 2 | ²³¹ Th(25.52 h) | 25.646(14.5), 84.216(6.6), 89.944(0.94) |
| 311.09 3 | 4.13 21 | ²⁰⁵ At(26.2 m) | 719.30(31), 669.41(8.6), 628.88(5.6) |
| 311.1 3 | 0.081 9 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|------------------------------|--|
| 311.1 1 | 3.1 4 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| 311.11 | 0.07 | ²⁰³ Bi(11.76 h) | 820.3(30), 825.2(14.6), 896.9(13) |
| • 311.15 15 | 0.0041 16 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 311.18 16 | 0.033 3 | ¹⁵⁵ Dy(9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| 311.2 5 | 0.07 5 | ¹²⁵ Sn(9.52 m) | 332.10(97.2), 1404.0(0.70), 589.6(0.20) |
| 311.239 8 | 10.75 20 | ¹⁷³ Hf(23.6 h) | 123.672(83), 296.974(33.9), 139.634(12.7) |
| 311.25 3 | 1.37 20 | ⁸⁶ Nb(88 s) | 751.74(97.8), 914.81(78.1), 1003.24(37.4) |
| 311.277 6 | 0.54 7 | ¹⁷⁵ Tm(15.2 m) | 514.868(65), 941.23(15), 363.942(12.7) |
| 311.28 9 | 1.38 14 | ¹⁷⁷ W(135 m) | 115.65(50), 426.98(13.2), 1036.4(10.3) |
| • 311.3 1 | 0.0087 10 | ¹²⁵ Sn(9.64 d) | 1067.10(10), 1089.15(4.59), 822.48(4.28) |
| 311.3 1 | †41 4 | ¹³⁰ Sn(1.7 m) | 144.9(†100), 899.2(†49), 84.7(†42) |
| 311.33 5 | 0.24 4 | ¹⁰¹ Tc(14.22 m) | 306.85(88), 545.06(6.0), 127.23(2.86) |
| • 311.33 5 | 0.044 | ¹⁰¹ Rh(3.3 y) | 127.23(73), 197.6(70.8), 324.8(13.4) |
| • 311.33 5 | †0.046 11 | ¹⁰¹ Rh(4.34 d) | 306.85(†115), 545.06(†6.1), 127.23(†0.85) |
| 311.39 3 | | ¹¹⁹ Cd(2.69 m) | 292.9(36.8), 343.0(16.9), 1609.7(10.9) |
| 311.39 3 | | ¹¹⁹ Cd(2.20 m) | 1025.0(24.8), 2021.3(22.6), 720.7(17.9) |
| 311.4 1 | 0.032 3 | ¹⁰⁹ Pd(13.7012 h) | 88.04(1.171), 647.3(0.024), 781.4(0.0112) |
| 311.4 2 | 0.25 | ¹⁴⁰ Sm(14.82 m) | 225.5(>10), 225.4(10), 140.0(5.0) |
| 311.4 4 | 0.08 3 | ¹⁵² Tb(4.2 m) | 344.281(20.8), 411.115(18.8), 471.9(12.2) |
| 311.5 2 | 1.01 7 | ¹⁰⁸ In(39.6 m) | 632.96(76), 1986.8(12.4), 3452.2(9.2) |
| 311.5 5 | †1.9 4 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 311.5 2 | 1.36 13 | ²¹² Fr(20.0 m) | 1273.8(46), 227.72(43), 1185.6(14.1) |
| • 311.56 3 | 4.24 9 | ²⁰⁶ Po(8.8 d) | 1032.26(32.9), 511.36(24.1), 286.410(23.8) |
| • 311.570 20 | 3.90 4 | ¹⁴⁸ Pm(41.29 d) | 550.284(94.5), 629.987(89), 725.673(32.7) |
| • 311.570 20 | 1.79 4 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| 311.60 20 | 1.4 3 | ¹⁰² Sr(69 ms) | 243.80(53), 150.15(18.0), 93.89(13.4) |
| 311.6 5 | 0.60 6 | ¹⁰⁹ Sn(18.0 m) | 1099.4(30), 649.90(28.0), 1321.3(11.9) |
| 311.60 14 | 0.046 10 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 311.6 3 | †0.60 17 | ¹⁵⁵ Tm(21.6 s) | 226.8(†100), 531.7(†20), 88.1(†17) |
| 311.62 19 | 0.062 13 | ¹⁰⁰ Sr(202 ms) | 963.85(22.0), 898.50(18.9), 65.46(15.2) |
| • 311.64 7 | 0.060 7 | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 280.41(30.2), 644.55(11.1) |
| 311.65 5 | 1.85 18 | ¹⁸⁷ Pt(2.35 h) | 106.46(9), 201.52(6.4), 110.04(5.7) |
| 311.69 3 | 0.107 7 | ⁸⁸ Kr(2.84 h) | 2392.11(34.6), 196.301(25.98), 2195.842(13.18) |
| 311.70 6 | 97.3 35 | ⁹⁴ Rh(25.8 s) | 756.23(100), 1430.50(100), 146.11(75) |
| 311.70 6 | 12 3 | ⁹⁴ Rh(70.6 s) | 1430.50(100), 756.23(51), 1072.50(30.7) |
| 311.70 6 | | ⁹⁵ Pd(13.3 s) | 146.11, 756.23, 1430.50 |
| 311.7 5 | 0.30 8 | ⁹⁷ Rh(30.7 m) | 421.55(75), 840.13(12.0), 878.80(9.0) |
| 311.70 2 | 0.0170 20 | ²³⁹ Am(11.9 h) | 277.599(15.0), 228.183(11.3), 209.753(3.50) |
| • 311.70 2 | 0.0170 20 | ²⁴³ Cm(29.1 y) | 277.599(14.0), 228.183(10.6), 209.753(3.29) |
| 311.7 3 | 0.52 5 | ²⁵¹ Cm(16.8 m) | 542.7(10.9), 530.0(1.62), 389.7(1.28) |
| • 311.729 12 | 2.58×10^{-5} 7 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 311.8 5 | 1.42 21 | ¹⁶⁴ Tb(3.0 m) | 168.838(25.4), 754.80(23.3), 215.07(21) |
| 311.8 3 | 28.2 11 | ¹⁶⁶ Ta(34.4 s) | 158.5(53), 810.1(9.8), 651.4(8.5) |
| • 311.80 20 | 0.0072 7 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 311.84 5 | 0.228 16 | ¹⁹⁴ Pb(12.0 m) | 581.82(18.8), 1519.45(16.4), 203.82(16.2) |
| 311.85 3 | 0.54 5 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 311.86 15 | | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 311.9 4 | †0.67 19 | ¹⁶⁸ Re(4.4 s) | 199.3(†100), 363.2(†95), 479.8(†62.8) |
| • 311.9 2 | 0.00049 9 | ¹⁷⁷ Ta(56.56 h) | 112.9498(7.2), 208.3664(0.94), 1057.8(0.29) |
| 311.9 2 | †1.18 8 | ¹⁹² Tl(9.6 m) | 422.8(†100), 634.8(†75.9), 786.3(†31.7) |
| 312.0 2 | 3.7 5 | ⁷⁷ Kr(74.4 m) | 129.64(81), 146.59(37.3), 276.0(2.92) |
| 312.0 3 | †1.3 | ¹¹¹ Rh(11 s) | 275.4(†100.0), 411.8(†9.42), 230.0(†8.9) |
| 312.0 2 | 0.69 20 | ¹³² Sb(2.79 m) | 973.9(99), 696.8(86), 989.6(14.9) |
| 312.0 2 | 0.15 | ¹⁴⁵ La(24.8 s) | 70.0(11), 355.8(3.8), 118.2(3.6) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|---|---|
| 312.0 2 | 0.30 5 | $^{184}\text{Au}(53.0 \text{ s})$ | 162.97(50), 272.98(40), 362.47(17.5) |
| • 312.0 5 | 2.5×10^{-5} 10 | $^{233}\text{U}(1.592 \times 10^5 \text{ y})$ | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 312.02 4 | 0.0046 10 | $^{188}\text{Re}(16.98 \text{ h})$ | 155.032(14.9), 632.99(1.25), 477.99(1.0) |
| • 312.02 4 | 0.197 19 | $^{188}\text{Ir}(41.5 \text{ h})$ | 155.032(29.7), 2214.62(18.7), 632.99(18) |
| 312.05 3 | 0.005 | $^{239}\text{U}(23.45 \text{ m})$ | 74.664(48), 43.533(4.14), 662.24(0.18) |
| 312.06 15 | 6.9 6 | $^{80}\text{Zn}(0.545 \text{ s})$ | 712.53(45.1), 715.40(33.8), 964.93(15.6) |
| 312.072 3 | 62 | $^{133}\text{Te}(12.5 \text{ m})$ | 407.63(27.1), 1333.21(10.67), 719.71(8.9) |
| 312.072 3 | 2.21 17 | $^{133}\text{Te}(55.4 \text{ m})$ | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| • 312.17 2 | 38.6 4 | $^{233}\text{Pa}(26.967 \text{ d})$ | 300.34(6.62), 340.81(4.47), 86.814(1.97) |
| 312.17 2 | 0.7 | $^{233}\text{Np}(36.2 \text{ m})$ | 298.89(0.44), 546.9(0.280), 506.5(0.154) |
| 312.2 | 2.3 13 | $^{147}\text{Cs}(0.225 \text{ s})$ | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 312.21 20 | 4.8 4 | $^{107}\text{Rh}(21.7 \text{ m})$ | 302.77(66), 392.47(8.8), 348.21(2.27) |
| 312.25 30 | 0.040 7 | $^{165}\text{Yb}(9.9 \text{ m})$ | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| • 312.26 | 0.0187 14 | $^{154}\text{Eu}(8.593 \text{ y})$ | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 312.3 1 | 5.9 6 | $^{117}\text{Ag}(72.8 \text{ s})$ | 135.4(23), 337.7(10.3), 157.1(7.9) |
| 312.3 | †87 21 | $^{152}\text{Lu}(0.7 \text{ s})$ | 1531.2(†100), 358.7(†89) |
| 312.30 17 | 0.266 21 | $^{187}\text{Au}(8.4 \text{ m})$ | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 312.3 7 | 0.028 11 | $^{199}\text{Pb}(90 \text{ m})$ | 366.90(44.2), 353.39(9.5), 1135.04(7.8) |
| 312.31 21 | 0.0091 17 | $^{139}\text{Cs}(9.27 \text{ m})$ | 1283.23(8.3), 627.24(1.78), 1420.66(0.91) |
| • 312.327 12 | 0.465 25 | $^{165}\text{Tm}(30.06 \text{ h})$ | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 312.4 2 | 0.17 | $^{140}\text{Sm}(14.82 \text{ m})$ | 225.5(>10), 225.4(10), 140.0(5.0) |
| 312.4 4 | 0.26 9 | $^{156}\text{Tm}(83.8 \text{ s})$ | 344.55(86), 452.85(17.2), 585.93(14.6) |
| 312.5 2 | 0.64 4 | $^{205}\text{At}(26.2 \text{ m})$ | 719.30(31), 669.41(8.6), 628.88(5.6) |
| 312.52 6 | 0.32 5 | $^{163}\text{Yb}(11.05 \text{ m})$ | 860.28(10.1), 63.62(6.5), 123.21(1.98) |
| 312.56 15 | 0.31 5 | $^{183}\text{Au}(42.0 \text{ s})$ | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 312.58 20 | 0.0011 6 | $^{166}\text{Tm}(7.70 \text{ h})$ | 778.817(18.9), 2052.36(17.2), 184.410(16.1) |
| 312.6 | 0.336 20 | $^{42}\text{K}(12.360 \text{ h})$ | 1524.70(18), 899.43(0.0515), 1922.18(0.041) |
| 312.6 | 0.0074 11 | $^{42}\text{Sc}(681.3 \text{ ms})$ | 1524.70(0.0074) |
| 312.6 8 | 0.22 15 | $^{95}\text{Ru}(1.643 \text{ h})$ | 336.43(70.2), 1096.76(21.0), 626.77(17.8) |
| 312.6 4 | 0.148 18 | $^{135}\text{Te}(19.0 \text{ s})$ | 603.5(37.0), 266.8(10.36), 870.3(7.73) |
| • 312.6 4 | 0.012 6 | $^{153}\text{Tb}(2.34 \text{ d})$ | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 312.6 4 | †28 2 | $^{183}\text{Pt}(43 \text{ s})$ | 629.3(†100), 316.7(†53), 328.8(†36) |
| 312.63 3 | 0.27 3 | $^{151}\text{Nd}(12.44 \text{ m})$ | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 312.64 26 | 0.23 6 | $^{70}\text{Se}(41.1 \text{ m})$ | 49.51(35.8), 426.15(29), 376.65(9.43) |
| 312.69 9 | 0.0177 12 | $^{223}\text{Fr}(21.8 \text{ m})$ | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 312.69 9 | †32 5 | $^{227}\text{Th}(18.72 \text{ d})$ | 235.971(†813), 50.13(†528), 256.25(†463) |
| 312.7 3 | 0.065 14 | $^{79}\text{Rb}(22.9 \text{ m})$ | 688.1(23), 182.77(19.2), 143.41(13.9) |
| 312.7 1 | †0.3 1 | $^{172}\text{Ir}(2.0 \text{ s})$ | 227.8(†100.0), 378.4(†62.0), 448.4(†40.5) |
| 312.71 4 | 0.19 5 | $^{163}\text{Yb}(11.05 \text{ m})$ | 860.28(10.1), 63.62(6.5), 123.21(1.98) |
| 312.76 6 | 0.93 15 | $^{148}\text{Ba}(0.607 \text{ s})$ | 56.08(29.20), 133.53(3.88), 415.78(3.59) |
| • 312.8 | 4.0×10^{-6} 2 | $^{253}\text{Es}(20.47 \text{ d})$ | 41.79(0.050), 389.11(0.0264), 387.1(0.00810) |
| • 312.83 4 | 0.025 9 | $^{205}\text{Bi}(15.31 \text{ d})$ | 1764.36(1.368), 703.44(31), 987.62(0.585) |
| 312.87 10 | 0.28 3 | $^{101}\text{Sr}(118 \text{ ms})$ | 128.34(18.0), 1124.82(10.9), 510.73(8.5) |
| 312.9 4 | 0.038 21 | $^{135}\text{Ce}(17.7 \text{ h})$ | 265.56(41.8), 300.07(23.5), 606.76(18.8) |
| 312.9 1 | 14.3 8 | $^{145}\text{Ho}(2.4 \text{ s})$ | 339.8(15), 334.1(13.5), 401.8(12.8) |
| • 312.92 4 | 0.102 3 | $^{231}\text{Pa}(32760 \text{ y})$ | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 312.99 23 | †3.1 5 | $^{142}\text{Xe}(1.22 \text{ s})$ | 571.83(†100), 657.05(†79), 538.24(†77) |
| 313.0 5 | †0.16 2 | $^{188}\text{Au}(8.84 \text{ m})$ | 265.63(†100), 340.04(†23.9), 605.5(†16.3) |
| 313.0 2 | †8 1 | $^{191}\text{Pb}(2.18 \text{ m})$ | 387.1(†100), 712.2(†46), 613.5(†40) |
| • 313.0158 5 | 3.32 16 | $^{183}\text{Ta}(5.1 \text{ d})$ | 246.0591(27), 353.9912(11.2), 107.9322(11.0) |
| • 313.0158 5 | 0.415 9 | $^{183}\text{Re}(70.0 \text{ d})$ | 162.3219(23.3), 46.4839(7.97), 291.7238(3.05) |
| 313.08 6 | 5.0 8 | $^{183}\text{Au}(42.0 \text{ s})$ | 161.18(9.4), 214.13(5.9), 179.54(4.6) |
| 313.088 14 | 0.85 10 | $^{149}\text{Pr}(2.26 \text{ m})$ | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 313.1 2 | | $^{191}\text{Tl}(5.22 \text{ m})$ | 452.6(†100), 470.1(†98), 391.6(†96) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 313.12 6 | 2.36 17 | ⁷⁷ Zn(2.08 s) | 189.49(28.1), 473.94(19.7), 1832.0(12.4) |
| 313.13 5 | 0.112 15 | ¹⁹⁴ Pb(12.0 m) | 581.82(18.8), 1519.45(16.4), 203.82(16.2) |
| 313.2 | †10.6 11 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 313.22 12 | 7.0 4 | ¹⁹⁵ Pb(15.0 m) | 383.64(106.9), 394.21(44), 878.40(24.2) |
| • 313.27 3 | 4.2 4 | ¹⁸³ Ta(5.1 d) | 246.0591(27), 353.9912(11.2), 107.9322(11.0) |
| 313.30 7 | 0.0205 5 | ⁷⁷ Ge(11.30 h) | 264.44(54), 211.03(30.8), 215.50(28.6) |
| 313.3 1 | †0.96 9 | ¹²³ La(17 s) | 92.5(†100), 937.3(†43), 153.6(†43) |
| • 313.34 20 | †3.02×10 ⁶ | ¹³⁷ Pu(45.2 d) | 280.40(†870000), 298.89(†7.85×10 ⁶), 320.75(†6.48×10 ⁶) |
| • 313.39 4 | 0.034 9 | ²⁰⁵ Bi(15.31 d) | 1764.36(1.368), 703.44(31), 987.62(0.585) |
| 313.4 2 | †2.0 4 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 313.47 20 | 0.63 13 | ¹²⁵ Cd(0.57 s) | 1027.53(25.8), 1173.16(25.1), 736.65(12.6) |
| 313.5 10 | 0.84 9 | ¹²⁹ Sb(4.40 h) | 812.8(43), 914.6(20.0), 544.7(17.9) |
| 313.50 15 | 0.77 13 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| 313.5 3 | 8.4 18 | ¹⁴⁰ Gd(15.8 s) | 174.8(76), 749.9(70), 379.0(38) |
| 313.50 15 | 0.55 11 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 313.5 4 | 0.19 10 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 313.5 1 | 0.103 10 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 313.58 16 | 0.35 7 | ¹⁵⁶ Ho(56 m) | 266.35(54.7), 137.83(51), 366.25(10.73) |
| 313.59 9 | 0.031 4 | ²¹¹ Pb(36.1 m) | 404.853(3.78), 832.01(3.52), 427.088(1.76) |
| 313.6 1 | 3.2 7 | ⁷⁵ Rb(19.0 s) | 178.98(<63), 178.97(>51), 187.21(8.7) |
| 313.6 2 | | ¹²¹ Cd(13.5 s) | 324.976(49.5), 1040.26(16.8), 349.937(12.9) |
| 313.6 2 | 4.7 11 | ¹³⁶ Sm(47 s) | 114.4(36), 747.7(5.4), 485.3(5.0) |
| 313.6 2 | 0.14 | ¹⁴⁵ Ba(4.31 s) | 96.6(17), 91.9(7), 65.9(5) |
| • 313.66 4 | 0.359 10 | ²⁰⁶ Bi(6.243 d) | 803.10(99), 881.01(66.2), 516.18(40.7) |
| 313.7 4 | †22 4 | ¹⁶⁴ Hf(111 s) | 122.1(†100), 153.3(†47), 31.4(†12) |
| 313.7 3 | 1.37 18 | ¹⁹⁰ Tl(3.7 m) | 416.4(91), 625.4(82), 731.1(37) |
| • 313.7251 | 211.26 5 | ¹⁷⁷ Lu(160.4 d) | 208.3664(57.7), 228.4838(37.0), 378.5029(29.7) |
| • 313.7251 | 210.00071 9 | ¹⁷⁷ Ta(56.56 h) | 112.9498(7.2), 208.3664(0.94), 1057.8(0.29) |
| 313.78 12 | †3.0 5 | ¹⁶⁵ Lu(10.74 m) | 132.49(†100), 120.60(†100), 174.25(†47.0) |
| 313.8 4 | 0.024 24 | ¹¹⁷ Cd(3.36 h) | 1997.33(26), 1065.98(23.1), 564.397(14.7) |
| 313.83 15 | †24 3 | ¹⁶³ Lu(238 s) | 163.08(†100), 54.00(†88), 396.34(†63) |
| 313.9 4 | 0.13 7 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| • 313.978 10 | 0.80 5 | ¹⁸² Re(64.0 h) | 229.3220(26), 67.75001(22.2), 1121.3007(22.0) |
| 314.0 1 | 0.30 2 | ¹⁰⁷ Tc(21.2 s) | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| 314.0 5 | 6.8 5 | ¹¹⁹ Cs(43.0 s) | 176.05(29.7), 225.13(26), 257.9(17.4) |
| 314.0 5 | †47 4 | ¹¹⁹ Cs(30.4 s) | 169.3(†>100), 245.9(†40) |
| 314.0 1 | 0.44 4 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 314.00 4 | 0.127 9 | ²⁰⁰ Pt(12.5 h) | 76.21(13), 135.90(3.24), 243.71(2.49) |
| 314.0 1 | 0.38 3 | ²¹⁰ Rn(2.4 h) | 458.25(1.7), 648.70(0.843), 570.95(0.840) |
| 314.05 5 | 0.84 3 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| 314.1 4 | †2.5 15 | ¹⁵⁹ Yb(1.58 m) | 166.16(†500), 177.12(†159), 390.20(†113) |
| 314.12 2 | 61 3 | ¹²⁸ Sb(9.01 h) | 753.82(100), 743.22(100), 526.57(45) |
| 314.12 2 | 89 5 | ¹²⁸ Sb(10.4 m) | 753.82(96.4), 743.22(96), 787.86(7.1) |
| • 314.13 3 | 0.045 3 | ¹⁴⁵ Eu(5.93 d) | 893.73(66), 653.512(15.0), 1658.53(14.9) |
| 314.2 2 | 5.9 16 | ¹⁰³ Zr(1.3 s) | 248(100), 164.05(94), 126.30(84) |
| 314.2 2 | 0.90 9 | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 314.2 4 | 0.08 2 | ²¹⁴ Pb(26.8 m) | 351.921(35.8), 295.213(18.5), 241.981(7.50) |
| 314.24 16 | 0.39 6 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 314.3 3 | 0.066 22 | ¹⁰⁰ Y(735 ms) | 212.531(73), 118.59(15.4), 665.98(7.7) |
| • 314.3 | 0.025 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 314.3 3 | | ¹⁶¹ Eu(26 s) | 163.7, 91.9, 71.9 |
| 314.31 30 | 0.048 7 | ¹⁶⁵ Yb(9.9 m) | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 314.337 71 | 0.074 14 | ⁹⁶ Nb(23.35 h) | 778.224(96.45), 568.80(58.0), 459.88(26.62) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|------------------------|-----------------------------|--|
| • 314.337 71 | 2.43 24 | ⁹⁶ Tc(4.28 d) | 778.224(100), 849.929(98), 812.581(82) |
| 314.34 12 | 0.47 7 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 314.4 4 | 0.08 6 | ¹¹⁷ Cd(2.49 h) | 273.349(28), 1303.27(18.4), 344.459(17.9) |
| 314.4 2 | 0.66 9 | ¹¹⁷ Cs(8.4 s) | 204.8(15.0), 29.7(9.9), 205.6(6.8) |
| 314.4 4 | †0.57 19 | ¹⁶⁸ Re(4.4 s) | 199.3(†100), 363.2(†95), 479.8(†62.8) |
| 314.45 13 | | ¹³¹ Sn(56.0 s) | 3267.5, 2470.5, 2039.25 |
| 314.45 13 | †2.8 6 | ¹³¹ Sn(56.0 s) | 1226.03(†100), 450.03(†90), 798.50(†86) |
| 314.5 3 | 0.83 4 | ⁹⁰ Rb(258 s) | 831.69(94), 1375.36(16.7), 3317.00(14.4) |
| 314.5 3 | 0.0062 6 | ⁹⁰ Rb(158 s) | 831.69(28), 1060.70(6.69), 4365.90(5.6) |
| 314.5 3 | 0.19 4 | ¹²¹ Xe(40.1 m) | 252.7(13), 132.8(10.9), 445.2(7.7) |
| 314.5 | >0.013 | ¹⁹⁷ Tl(2.84 h) | 425.84(12.9), 152.22(7.2), 1411.34(4.5) |
| 314.53 20 | 0.031 4 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 314.55 10 | 32.1 10 | ¹²¹ Ag(0.78 s) | 353.43(19.9), 500.61(9.3), 1195.10(6.7) |
| 314.6 2 | | ¹⁰⁶ In(6.2 m) | 632.66(100), 861.16(92), 997.87(48) |
| 314.6 2 | | ¹⁰⁶ In(5.2 m) | 632.66(92), 1714.90(17.1), 861.16(10.6) |
| 314.6 3 | 0.091 17 | ¹⁵² Pm(4.1 m) | 121.7824(15.7), 841.586(2.17), 961.06(1.92) |
| 314.6 1 | 1.17 23 | ¹⁵⁹ Er(36 m) | 624.5(33), 649.1(23.4), 205.92(9.7) |
| 314.675 4 | 13.2 7 | ¹⁴⁷ Pr(13.4 m) | 77.9921(15), 641.380(10.0), 577.95(8.5) |
| 314.7 | 0.6 | ⁹⁶ Y(9.6 s) | 1750.42(89), 915.0(60), 617.1(56) |
| 314.7 3 | 0.19 5 | ¹⁰⁴ Tc(18.3 m) | 358.0(89), 530.5(15.6), 535.1(14.7) |
| 314.70 15 | 2.66 10 | ¹⁶¹ Yb(4.2 m) | 78.20(34), 599.88(25.9), 631.45(13.9) |
| 314.75 12 | 0.7 3 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 314.77 4 | 2.49 10 | ¹⁶¹ Er(3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| 314.78 9 | 0.0018 3 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 314.78 9 | †29 4 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| • 314.8 3 | >0.07 | ¹⁹² Ir(73.831 d) | 205.79549(3.300), 484.5780(3.184), 374.4852(0.721) |
| • 314.8 3 | >0.07 | ¹⁹² Ir(73.831 d) | 316.50791(82.81), 468.07152(47.83), 308.45692(30.00) |
| • 314.8 3 | 0.094 12 | ²³⁰ Pa(17.4 d) | 366.56(0.076), 383.6(0.036), 51.72(0.026) |
| 314.81 7 | 1.02 7 | ⁵⁵ V(6.54 s) | 517.71(73), 880.70(18.1), 921.10(4.6) |
| • 314.85 15 | 0.00028 3 | ¹⁴⁹ Pm(53.08 h) | 285.95(3.1), 859.46(0.109), 590.88(0.069) |
| 314.87 13 | 0.88 8 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 314.9 2 | 0.037 9 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| 314.92 2 | 22.7 9 | ¹⁶¹ Gd(3.66 m) | 360.94(0.59), 102.315(13.9), 283.55(5.95) |
| • 314.94 11 | 0.0039 4 | ¹²⁵ Sb(2.7582 y) | 427.875(30), 600.600(17.86), 635.954(11.31) |
| 314.95 7 | †3.9×10 ³ 4 | ¹⁵⁸ Er(2.29 h) | 71.91(†23300), 386.84(†111000), 248.58(†42000) |
| • 314.96 10 | 0.063 7 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 314.97 5 | 10 | ¹⁶⁴ Tm(5.1 m) | 208.08(14.6), 240.49(7.5), 547.17(4.44) |
| 315.0 | 1.9 | ¹⁴⁴ Tb(4.25 s) | 743.0(12), 1001.6(7), 959.36(4.7) |
| • 315.0 2 | 0.017 6 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| 315.0 6 | | ¹⁷³ Ta(3.14 h) | 172.2(18), 69.70(5.9), 90.3(5.0) |
| 315.023 4 | 0.14 | ¹⁸² Hf(61.5 m) | 942.80(18.8), 799.64(9.4), 114.3152(6.2) |
| 315.1 2 | 1.2 3 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| 315.1 2 | 1.8 3 | ¹⁴⁵ Ho(2.4 s) | 339.8(15), 312.9(14.3), 334.1(13.5) |
| 315.1 | 0.09 | ¹⁴⁷ Ce(56.4 s) | 268.80(7), 92.9(4.7), 374.23(3.5) |
| • 315.173 17 | 0.0507 13 | ¹⁵² Eu(13.542 y) | 344.281(26.58), 778.91(12.96), 411.115(2.231) |
| 315.173 17 | †20.5 14 | ¹⁵² Tb(17.5 h) | 344.281(†1500), 586.294(†223), 271.135(†203) |
| 315.173 17 | 0.14 3 | ¹⁵² Tb(4.2 m) | 344.281(20.8), 411.115(18.8), 471.9(12.2) |
| • 315.175 3 | 0.00055 12 | ¹⁶¹ Tb(6.88 d) | 25.65150(23.2), 48.91562(17.0), 74.56711(10.2) |
| 315.18 14 | 0.154 24 | ¹⁰³ Tc(54.2 s) | 346.380(17.5), 136.079(16.6), 562.90(7.0) |
| 315.20 20 | †4.8 7 | ¹⁰⁶ Mo(8.4 s) | 465.70(†100), 54.00(†54), 618.60(†25) |
| 315.2 2 | †1.1 9 | ¹⁵⁵ Tm(21.6 s) | 226.8(†100), 531.7(†20), 88.1(†17) |
| 315.2 2 | †10 5 | ¹⁵⁵ Tm(45 s) | 88.1(†100), 323.2(†65), 507.0(†40) |
| 315.2 4 | 0.24 3 | ¹⁵⁷ Sm(482 s) | 197.870(56.00), 196.461(16.8), 394.351(11.93) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 315.2 | | ¹⁷³ Er(1.4 m) | 895.2(54), 199.2(48), 192.8(47) |
| 315.2 3 | 0.45 10 | ¹⁸⁴ Au(53.0 s) | 162.97(50), 272.98(40), 362.47(17.5) |
| 315.2 1 | 0.063 6 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| 315.2 3 | 0.010 | ²²³ Ac(2.10 m) | 98.58(0.891), 191.3(0.58), 83.55(0.57) |
| • 315.24 8 | 0.47 5 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 315.24 10 | 100 | ¹⁶⁷ Hf(2.05 m) | 175.4(6), 139.9(3.8) |
| 315.3 3 | †28 3 | ¹²⁹ In(1.23 s) | 1222.0(†2.5), 906.7(†1.6), 1288.5(†1.00) |
| 315.3 1 | 6.9 5 | ¹⁴⁸ Er(4.6 s) | 1311.8(8.9), 244.0(7.1), 609.5(5.8) |
| 315.3 2 | †10.3 11 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 315.302 13 | | ¹¹⁷ Cd(2.49 h) | 273.349(28), 1303.27(18.4), 344.459(17.9) |
| 315.302 13 | | ¹¹⁷ Cd(3.36 h) | 1997.33(26), 1065.98(23.1), 564.397(14.7) |
| 315.31 25 | 1.5 5 | ¹⁰³ In(65 s) | 187.97(55), 720.32(13.9), 739.95(10.1) |
| • 315.34 9 | 0.0079 22 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 315.37 16 | †30 3 | ¹⁶⁴ Tm(2.0 m) | 91.40(†1500), 1154.66(†366), 768.91(†279) |
| 315.4 | 0.024 8 | ⁴⁰ Cl(1.35 m) | 1460.830(79), 2839.8(30.4), 2621.5(15.4) |
| 315.4 1 | 0.63 7 | ¹⁰⁷ Tc(21.2 s) | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| 315.40 5 | 0.251 9 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| • 315.4 | 0.0074 14 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 315.4 3 | 0.14 | ¹⁷⁰ Hf(16.01 h) | 164.78(33), 620.7(23), 120.17(19) |
| 315.4 2 | 2.5 1 | ¹⁹⁶ Os(34.9 m) | 407.9(5.9), 126.2(5.3), 207.1(2.4) |
| 315.43 12 | 0.73 17 | ¹⁶⁷ Ho(3.1 h) | 346.547(56), 321.336(23.5), 237.873(5.0) |
| • 315.45 8 | 0.0025 8 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 315.45 8 | 0.200 24 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 315.48 5 | 0.22 3 | ²⁰⁰ Pb(21.5 h) | 147.63(37.7), 257.17(4.46), 235.63(4.30) |
| 315.498 5 | 0.61 6 | ⁷⁵ Br(96.7 m) | 286.572(88), 141.3147(6.6), 427.883(4.4) |
| 315.5 3 | 0.08 3 | ⁹⁷ Rb(169.9 ms) | 167.1(26), 585.2(21.0), 600.5(10.6) |
| 315.5 2 | †4.5 5 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| • 315.5 5 | †0.020 18 | ¹³⁶ Cs(13.16 d) | 818.514(†100), 1048.073(†80), 340.547(†42.3) |
| 315.50 15 | 0.081 11 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 315.55 13 | 0.81 3 | ⁶⁶ Ge(2.26 h) | 43.89(28.7), 381.85(28), 272.97(10.4) |
| 315.56 8 | 1.01 6 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| 315.57 5 | 0.30 7 | ¹⁸⁴ Ta(8.7 h) | 414.03(72), 252.848(43), 920.932(32.0) |
| 315.57 15 | 1.50 25 | ¹⁸⁶ Ta(10.5 m) | 197.93(50), 214.87(42.3), 510.82(37.5) |
| 315.6 | 10 | ¹³³ Pr(6.5 m) | 134.3(14), 74.0(10), 465.0(7) |
| 315.6 | 2.1 | ¹³³ Pr(6.5 m) | 134.3(14), 74.0(10), 315.6(10) |
| 315.7 2 | 39 4 | ⁷⁶ Kr(14.8 h) | 270.2(21.1), 45.48(19.5), 406.5(12.1) |
| 315.7 2 | 1.39 22 | ¹³⁹ Sm(2.57 m) | 273.7(37), 306.7(28.5), 596.3(8.0) |
| 315.72 6 | 0.087 7 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 315.77 20 | 0.012 | ¹⁵⁴ Pm(1.73 m) | 2057.76(17.1), 1393.9(14.4), 81.99(12.6) |
| 315.77 20 | 0.68 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 315.8 2 | 0.9 3 | ¹⁰⁵ Mo(35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 315.8 1 | 1.65 15 | ¹¹⁷ Xe(61 s) | 28.5(7.0), 221.3(10.0), 32.3(7.6) |
| 315.8 3 | 0.171 18 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 315.8 6 | 0.55 10 | ¹²⁸ La(5.0 m) | 284.00(87), 479.24(54), 643.65(14.7) |
| 315.8 8 | 0.09 | ¹⁷⁴ Tm(5.4 m) | 366.526(92), 992.128(87), 272.918(86) |
| 315.82 4 | | ²¹⁹ Ra(10 ms) | 805.2, 592.0, 489 |
| 315.869 12 | 1.23 12 | ¹⁸³ Hf(1.067 h) | 783.754(66), 73.174(38), 459.069(27) |
| • 315.879 2 | 1.60 3 | ²³⁹ Np(2.3565 d) | 106.125(27.2), 277.599(14.38), 228.183(10.76) |
| 315.879 2 | 0.0032 5 | ²³⁹ Am(11.9 h) | 277.599(15.0), 228.183(11.3), 209.753(3.50) |
| • 315.879 2 | 0.0179 20 | ²⁴³ Cm(29.1 y) | 277.599(14.0), 228.183(10.6), 209.753(3.29) |
| 315.9 | | ¹⁵² Ho(49.5 s) | 78, 237.8 |
| 315.93 5 | 11.6 10 | ¹²⁶ In(1.64 s) | 1141.11(100), 908.58(99), 111.79(88) |
| 316.0 15 | 1.05 12 | ⁸⁰ Sr(106.3 m) | 589.0(39), 175.4(10.1), 553.4(6.9) |
| 316.0 2 | 0.08 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|----------------------------|-------------------------------------|--|
| 316.0 2 | $\dagger 286$ 15 | $^{202}\text{Po}(44.7 \text{ m})$ | 688.6($\dagger 1000$), 165.7($\dagger 174$), 790.5($\dagger 145$) |
| • 316 2 | 0.15 2 | $^{254}\text{Es}(275.7 \text{ d})$ | 63.0(2.0), 304(0.07), 385(0.05) |
| • 316.08 9 | 0.41 4 | $^{153}\text{Tb}(2.34 \text{ d})$ | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| • 316.200 20 | 0.00248 10 | $^{115}\text{Cd}(44.6 \text{ d})$ | 933.8(2.000), 1290.580(0.890), 484.470(0.290) |
| • 316.2 2 | 0.0021 13 | $^{152}\text{Eu}(13.542 \text{ y})$ | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| 316.2 7 | 0.165 22 | $^{199}\text{Bi}(27 \text{ m})$ | 560.1(22.0), 424.85(22), 841.7(11) |
| 316.2 4 | 0.10 3 | $^{202}\text{Bi}(1.72 \text{ h})$ | 960.67(99), 422.18(83.7), 657.49(60.6) |
| 316.236 10 | 2.70 10 | $^{149}\text{Pr}(2.26 \text{ m})$ | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 316.27 10 | 0.09 4 | $^{195}\text{Tl}(1.16 \text{ h})$ | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| 316.271 87 | 0.061 9 | $^{96}\text{Nb}(23.35 \text{ h})$ | 778.224(96.45), 568.80(58.0), 459.88(26.62) |
| • 316.271 87 | 1.40 20 | $^{96}\text{Tc}(4.28 \text{ d})$ | 778.224(100), 849.929(98), 812.581(82) |
| 316.28 20 | 0.087 | $^{137}\text{I}(24.5 \text{ s})$ | 1218.00(12.8), 601.05(4.80), 1302.64(4.42) |
| 316.30 20 | 0.98 4 | $^{88}\text{Nb}(7.8 \text{ m})$ | 1057.01(89.3), 1082.53(53.9), 399.41(45.7) |
| 316.3 1 | 1.343 20 | $^{113}\text{Ag}(5.37 \text{ h})$ | 298.58(10), 258.8(1.64), 672.3(0.87) |
| 316.3 1 | 18 | $^{113}\text{Ag}(68.7 \text{ s})$ | 392.3(11), 298.58(10), 583.8(3.6) |
| 316.3 3 | 0.35 10 | $^{118}\text{Cs}(14 \text{ s})$ | 337.4(100), 472.8(37.4), 586.6(15.4) |
| 316.3 | 0.6 | $^{145}\text{Ba}(4.31 \text{ s})$ | 96.6(17), 91.9(7), 65.9(5) |
| 316.3 1 | 2.67 16 | $^{146}\text{Ba}(2.22 \text{ s})$ | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 316.3 2 | 0.10 3 | $^{177}\text{W}(135 \text{ m})$ | 115.65(50), 426.98(13.2), 1036.4(10.3) |
| 316.305 13 | 8.3 8 | $^{163}\text{Tb}(19.5 \text{ m})$ | 351.138(26), 389.734(24.3), 494.534(23) |
| 316.4 2 | 1.42 14 | $^{130}\text{Sn}(3.72 \text{ m})$ | 192.5(70), 779.8(59), 70.0(35.5) |
| 316.4 1 | $\dagger 0.88$ 18 | $^{230}\text{Ra}(93 \text{ m})$ | 72.0($\dagger 100$), 63.0($\dagger 35.4$), 202.8($\dagger 27.3$) |
| 316.4 2 | $\dagger 5.1$ | $^{256}\text{Es}(7.6 \text{ h})$ | 861.8($\dagger 100$), 231.1($\dagger 61$), 172.6($\dagger 49$) |
| 316.44 15 | 11.1 4 | $^{105}\text{Ru}(4.44 \text{ h})$ | 724.21(47), 469.37(17.5), 676.36(15.7) |
| • 316.440 6 | 1.32×10^{-5} 4 | $^{239}\text{Pu}(24110 \text{ y})$ | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 316.46 8 | 1.11 11 | $^{208}\text{Rn}(24.35 \text{ m})$ | 426.78(7.07), 251.05(5.02), 350.026(3.34) |
| • 316.50791 13 | 182.81 21 | $^{192}\text{Ir}(73.831 \text{ d})$ | 468.07152(47.83), 308.45692(30.00), 295.95827(28.67) |
| 316.50791 13 | 182.81 21 | $^{192}\text{Ir}(1.45 \text{ m})$ | 612.46564, 295.95827 |
| 316.50791 13 | 182.81 21 | $^{192}\text{Au}(4.94 \text{ h})$ | 295.95827(22.3), 2236.89(5.6), 612.46564(4.34) |
| 316.53 9 | $\dagger 0.95$ 9 | $^{188}\text{Au}(8.84 \text{ m})$ | 265.63($\dagger 100$), 340.04($\dagger 23.9$), 605.5($\dagger 16.3$) |
| 316.56 7 | 0.052 10 | $^{151}\text{Nd}(12.44 \text{ m})$ | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 316.575 14 | 0.87 4 | $^{131}\text{La}(59 \text{ m})$ | 108.081(25.0), 417.783(18.0), 365.162(16.9) |
| 316.6 1 | 1.14 21 | $^{135}\text{Nd}(12.4 \text{ m})$ | 204.02(52), 41.43(23), 441.2(14.9) |
| 316.6 2 | 1.2 3 | $^{145}\text{Ho}(2.4 \text{ s})$ | 339.8(15), 312.9(14.3), 334.1(13.5) |
| 316.61 6 | 12.9 4 | $^{180}\text{Lu}(5.7 \text{ m})$ | 407.94(43.0), 1199.7(24.3), 1106.00(22.7) |
| 316.7 4 | 0.128 20 | $^{132}\text{I}(2.295 \text{ h})$ | 667.718(99), 772.60(75.6), 954.55(17.6) |
| 316.7 3 | >0.06 | $^{146}\text{La}(6.27 \text{ s})$ | 258.47(64), 924.58(7.45), 702.28(6.43) |
| 316.7 4 | $\dagger 53$ 4 | $^{183}\text{Pt}(43 \text{ s})$ | 629.3($\dagger 100$), 328.8($\dagger 36$), 312.6($\dagger 28$) |
| 316.7 1 | 0.103 10 | $^{234}\text{Pa}(6.70 \text{ h})$ | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 316.7 1 | $\dagger 180$ 50 | $^{234}\text{Pa}(1.17 \text{ m})$ | 1001.03($\dagger 837000$), 766.38($\dagger 294000$), 742.81($\dagger 80000$) |
| 316.72 9 | 0.241 19 | $^{93}\text{Kr}(1.286 \text{ s})$ | 253.42(41.2), 323.89(24.1), 266.83(20.6) |
| 316.74 3 | 56 3 | $^{146}\text{Ce}(13.52 \text{ m})$ | 218.23(20.8), 264.56(9.0), 133.52(8.1) |
| 316.8 1 | 5.8 3 | $^{92}\text{Kr}(1.840 \text{ s})$ | 142.307(64), 1218.6(60), 812.6(14.6) |
| 316.8 12 | 0.42 | $^{186}\text{Pt}(2.0 \text{ h})$ | 276.7(0), 611.5(6.0), 635.6(>3.8) |
| 316.8 2 | 0.0054 14 | $^{230}\text{Ac}(122 \text{ s})$ | 454.95(8), 508.20(5.15), 1243.9(3.50) |
| • 316.8 2 | 0.16 3 | $^{230}\text{Pa}(17.4 \text{ d})$ | 951.95(1.65), 918.48(8.2), 454.95(6.27) |
| • 316.8 2 | $\dagger >5.0 \times 10^2$ | $^{241}\text{Am}(432.2 \text{ y})$ | 59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$) |
| 316.81 19 | 0.0184 17 | $^{111}\text{Pd}(23.4 \text{ m})$ | 580.00(0.8), 70.44(0.78), 1459.0(0.56) |
| 316.81 19 | 0.037 | $^{111}\text{Pd}(5.5 \text{ h})$ | 70.44(8.3), 391.25(5.4), 632.80(3.6) |
| 316.82 5 | 0.249 9 | $^{105}\text{Cd}(55.5 \text{ m})$ | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| 316.9 1 | $\dagger 3.3$ 7 | $^{75}\text{Ga}(126 \text{ s})$ | 253.0($\dagger 100$), 574.8($\dagger 31.6$), 885.6($\dagger 11.1$) |
| 316.9 2 | $\dagger 7$ 1 | $^{152}\text{Yb}(3.1 \text{ s})$ | 482.4($\dagger 100$), 141.7($\dagger 13$), 949.2($\dagger 0.7$) |
| 316.9 4 | 1.5 5 | $^{183}\text{Lu}(58 \text{ s})$ | 1125.3(25.0), 1056.8(16.5), 168.1(7.5) |
| 316.99 9 | 0.169 10 | $^{210}\text{At}(8.1 \text{ h})$ | 1181.39(99.3), 245.31(79), 1483.39(46.5) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|-------------------------|---|---|
| 317.0 3 | 22.3 6 | ¹¹⁴ Rh(1.85 s) | 332.9(87), 519.8(48.4), 618.7(31) |
| 317.0 3 | †2.2 5 | ¹³¹ Ce(5.0 m) | 230.43(†100), 436.85(†7.3), 462.9(†6.9) |
| 317.00 20 | †11 3 | ¹⁶³ Lu(238 s) | 163.08(†100), 54.00(†88), 396.34(†63) |
| • 317 | 0.0010 3 | ¹⁹³ Os(30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| 317.0 10 | 0.184 21 | ²⁰⁵ At(26.2 m) | 719.30(31), 669.41(8.6), 628.88(5.6) |
| 317.0 | †7 | ²³⁸ Pa(2.3 m) | 1015.3(†<100), 1014.6(†<100), 635.18(†88) |
| 317.010 8 | 4.3 4 | ²⁰⁴ Po(3.53 h) | 883.984(29.9), 270.068(27.8), 1016.31(24.1) |
| 317.04 15 | 0.09 3 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| 317.056 3 | 4.95 18 | ¹⁹⁹ Pt(30.80 m) | 542.993(15), 493.772(5.59), 185.768(3.32) |
| • 317.062 12 | 0.001 | ²³⁵ U(7.038×10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| 317.1 | | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| • 317.16 10 | 0.032 6 | ¹²⁸ Ba(2.43 d) | 273.44(15), 374.99(0.309), 229.50(0.106) |
| 317.16 1 | †23 3 | ²²⁹ Ac(62.7 m) | 164.522(†100), 569.1(†91), 261.92(†39) |
| • 317.16 1 | 0.00776 7 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 317.2 4 | 0.47 16 | ⁷⁶ Kr(14.8 h) | 315.7(39), 270.2(21.1), 45.48(19.5) |
| 317.2 3 | 0.207 18 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 317.2 3 | †0.9 3 | ¹⁵⁵ Tm(21.6 s) | 226.8(†100), 531.7(†20), 88.1(†17) |
| • 317.30 9 | 0.060 6 | ¹⁵⁶ Eu(15.19 d) | 811.79(9.70), 88.9667(8.4), 1230.68(7.98) |
| 317.30 16 | 0.49 10 | ²⁰⁶ At(30.0 m) | 700.66(98), 477.10(86), 395.54(48) |
| 317.4 4 | 0.42 10 | ¹²¹ Cd(8.3 s) | 2059.41(21.0), 1020.89(18.9), 987.81(13.6) |
| 317.4 | 0.062 18 | ¹⁴⁹ Tb(4.118 h) | 352.24(29.43), 164.98(26.4), 388.57(18.37) |
| 317.46 7 | 1.30 8 | ¹⁵⁷ Sm(482 s) | 197.870(56.00), 196.461(16.8), 394.351(11.93) |
| 317.49 13 | 0.203 21 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 317.5 4 | 0.0220 19 | ⁷² Ga(14.10 h) | 834.01(96), 2201.69(25.9), 629.95(24.8) |
| 317.50 6 | 0.275 25 | ¹³¹ La(59 m) | 108.081(25.0), 417.783(18.0), 365.162(16.9) |
| 317.5 | †100 10 | ¹⁸⁹ Tl(1.4 m) | 215.6(†90), 335(†63), 228.4(†50) |
| 317.59 28 | 0.12 4 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| 317.6 3 | 0.10 5 | ¹²⁷ In(1.09 s) | 1597.7(49), 646.1(6.2), 805.1(5.6) |
| 317.6 2 | 0.51 6 | ¹⁵⁷ Er(18.65 m) | 53.05(24), 391.32(14.2), 121.57(10.1) |
| 317.60 7 | 1.56 8 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 317.63 2 | 0.59 4 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 317.63 20 | 0.64 12 | ¹⁴⁸ Ba(0.607 s) | 56.08(29.20), 133.53(3.88), 415.78(3.59) |
| 317.67 3 | 3.26 17 | ¹⁸⁹ Pt(10.87 h) | 721.41(9.3), 94.33(7.6), 568.84(7.1) |
| 317.7 2 | 3 1 | ¹²⁸ Sb(9.01 h) | 753.82(100), 743.22(100), 314.12(61) |
| 317.70 5 | 0.580 11 | ¹⁹⁴ Pb(12.0 m) | 581.82(18.8), 1519.45(16.4), 203.82(16.2) |
| 317.7 5 | †0.3 2 | ¹⁹⁵ Bi(183 s) | 807.6(†100), 831.7(†100), 776.2(†95) |
| • 317.72 5 | 6.0×10 ⁻⁵ | ¹⁰³ Ru(39.26 d) | 497.080(90.9), 610.33(5.75), 443.799(3.27) |
| • 317.72 5 | 1.50×10 ⁻⁵ 7 | ¹⁰³ Pd(16.991 d) | 39.757(0.07), 357.47(0.0221), 497.080(0.00396) |
| 317.72 4 | 0.123 8 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 317.73 | 0.23 5 | ¹⁹³ Au(17.65 h) | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| 317.75 10 | 0.56 9 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 317.75 9 | 0.57 6 | ¹⁷⁷ W(135 m) | 115.65(50), 426.98(13.2), 1036.4(10.3) |
| 317.76 6 | 5.0 8 | ⁷⁹ Sr(2.25 m) | 39.41(28), 105.00(21.8), 413.8(7.6) |
| • 317.77 22 | 0.019 9 | ¹⁰³ Ru(39.26 d) | 497.080(90.9), 610.33(5.75), 443.799(3.27) |
| 317.8 2 | 0.15 3 | ¹⁰⁰ Y(735 ms) | 212.531(73), 118.59(15.4), 665.98(7.7) |
| 317.8 10 | 0.8 | ²²² Fr(14.2 m) | 206.15(51), 111.12(12.5), 242.12(1.89) |
| 317.82 6 | 0.078 4 | ¹²¹ I(2.12 h) | 212.189(84), 532.08(6.07), 598.74(1.47) |
| 317.85 21 | 0.17 7 | ¹⁵⁶ Ho(56 m) | 266.35(54.7), 137.83(51), 366.25(10.73) |
| 317.9 3 | 0.40 9 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| • 317.9 1 | 0.002 1 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 317.9 2 | †37.5 | ¹⁹⁸ Bi(693 s) | 1063.5(†100), 197.6(†80), 562.4(†79) |
| 317.912 15 | 2.1 4 | ¹⁵¹ Pr(18.90 s) | 880.19(13), 189.057(11.8), 484.501(11.3) |
| 317.94 17 | †2.9 6 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 317.947 18 | 0.208 8 | ¹⁵⁵ Dy(9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| • 317.95 4 | 0.00008 1 | ²³¹ Th(25.52 h) | 25.646(14.5), 84.216(6.6), 89.944(0.94) |
| 318.0 5 | †7 | ⁹⁹ Rb(59 ms) | 90.8(†100), 125.2(†40), 1071.6(†26) |
| 318.0 8 | 0.023 12 | ¹⁰³ Cd(7.3 m) | 1461.81(12), 1448.70(5.55), 1079.90(5.44) |
| 318.0 3 | 0.42 7 | ¹¹⁹ Cd(2.20 m) | 1025.0(24.8), 2021.3(22.6), 720.7(17.9) |
| 318.0 3 | 0.05 5 | ¹⁴² La(91.1 m) | 641.285(47), 2397.8(13.3), 2542.7(10.00) |
| 318.0 3 | †6.0 20 | ¹⁶³ Lu(238 s) | 163.08(†100), 54.00(†88), 396.34(†63) |
| 318.012 6 | 22.8 6 | ¹⁸⁴ Ta(8.7 h) | 414.03(72), 252.848(43), 920.932(32.0) |
| • 318.012 6 | 5.75 8 | ¹⁸⁴ Re(169 d) | 252.848(10.7), 216.548(9.43), 920.932(8.14) |
| 318.04 5 | 0.235 17 | ¹⁰¹ Mo(14.61 m) | 191.92(19), 590.91(16.4), 1012.47(12.8) |
| • 318.088 16 | 0.0776 16 | ¹³¹ I(8.02070 d) | 364.489(81.7), 636.989(7.17), 284.305(6.14) |
| • 318.1 7 | 0.0034 17 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| • 318.14 8 | 0.25 7 | ¹⁹⁴ Au(38.02 h) | 328.455(60), 293.545(10.2), 1468.91(6.3) |
| • 318.180 2 | 2.45 3 | ¹²⁹ Cs(32.06 h) | 371.918(30.60), 411.490(22.31), 548.945(3.40) |
| 318.18 5 | 0.10 3 | ²⁰² Bi(1.72 h) | 960.67(99), 422.18(83.7), 657.49(60.6) |
| 318.2 3 | 0.009 4 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 318.2 1 | †2.3 5 | ¹⁷¹ Hf(12.1 h) | 122.0(†100), 662.2(†83), 347.18(†47) |
| • 318.27 10 | 0.0010 4 | ⁹⁵ Tc(61 d) | 204.117(63.25), 582.082(29.96), 835.149(26.63) |
| 318.3 3 | 0.044 14 | ⁸⁹ Kr(3.15 m) | 220.948(20.1), 586.03(16.6), 904.27(7.2) |
| 318.355 4 | 0.56 17 | ¹⁸² Hf(61.5 m) | 942.80(18.8), 799.64(9.4), 114.3152(6.2) |
| 318.4 2 | 0.13 | ⁷⁶ Br(16.2 h) | 559.101(74), 657.041(15.9), 1853.67(14.7) |
| 318.4 1 | 2.03 12 | ¹²⁹ La(11.6 m) | 278.6(25), 110.5(16.9), 457.0(8.0) |
| • 318.46 19 | †0.41 16 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 318.5 2 | †3.8 3 | ²⁰³ At(7.4 m) | 639.4(†100), 641.5(†55.8), 738.1(†38.4) |
| 318.55 18 | 1.1 3 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| 318.6 2 | 0.51 4 | ¹³⁶ I(46.9 s) | 1313.02(100), 381.359(100), 197.316(78) |
| • 318.60 10 | 2.18 8 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 396.00(34.3), 929.01(20.2) |
| 318.60 3 | 0.379 14 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 318.6 5 | 0.020 6 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| • 318.6 2 | 0.065 12 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 318.60 10 | 0.00086 14 | ¹⁹⁵ Hg(9.9 h) | 779.80(7), 61.46(6.2), 585.13(1.99) |
| • 318.60 10 | 0.0176 20 | ¹⁹⁵ Hg(41.6 h) | 261.75(30.9), 560.27(7), 387.87(2.15) |
| 318.63 18 | 0.64 5 | ¹⁶¹ Yb(4.2 m) | 78.20(34), 599.88(25.9), 631.45(13.9) |
| • 318.646 15 | 0.090 4 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| 318.666 6 | 0.0138 3 | ¹⁴⁵ Pr(5.984 h) | 748.278(0.5250), 675.795(0.514), 72.500(0.261) |
| 318.69 5 | 0.642 13 | ¹⁹⁴ Pb(12.0 m) | 581.82(18.8), 1519.45(16.4), 203.82(16.2) |
| 318.7 4 | 0.11 3 | ¹²⁵ In(2.36 s) | 1335.04(71), 1031.75(9.6), 617.88(7.4) |
| 318.7 4 | 0.09 5 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 318.7 4 | †2.5 5 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 318.71 3 | 0.0012 2 | ⁶⁹ Zn(56.4 m) | 872.14(0.00025) |
| • 318.71 3 | 1.55 11 | ⁶⁹ Ge(39.05 h) | 1107.01(36), 574.17(13.3), 872.14(11.9) |
| 318.710 8 | 2.89 14 | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| • 318.75 23 | 0.0055 15 | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 318.76 2 | 0.47 6 | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 318.8 5 | 0.22 11 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 318.8 1 | 0.032 5 | ¹⁴³ Ba(14.33 s) | 211.475(25), 798.79(15.6), 980.45(11.55) |
| 318.8 3 | 0.0113 22 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 318.82 8 | 0.035 4 | ¹³⁵ Ce(17.7 h) | 265.56(41.8), 300.07(23.5), 606.76(18.8) |
| • 318.84 7 | 0.0110 25 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| • 318.9 6 | 0.17 4 | ¹⁷⁵ Hf(70 d) | 343.40(84), 89.36(2.40), 433.0(1.436) |
| 318.9 2 | †46 5 | ¹⁸¹ Ir(4.90 m) | 107.64(†100), 1639.6(†52), 231.6(†30) |
| 318.9 4 | 0.05 3 | ¹⁹⁸ Tl(5.3 h) | 411.8044(82), 675.8874(11), 636.4(10.1) |
| 318.94 9 | 0.67 10 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 318.94 6 | 4.7 3 | ¹⁹⁰ Au(42.8 m) | 295.78(71.0), 301.82(23.4), 597.67(9.4) |
| 319 | 2 1 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|--|
| 319.03 7 | 0.31 3 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 319.09 4 | 4.39 8 | ¹⁷² Ta(36.8 m) | 214.02(46), 95.23(17.5), 1109.27(12.4) |
| 319.1 2 | †4.1 5 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| 319.1 3 | †3.6 9 | ¹⁵⁹ Yb(1.58 m) | 166.16(†500), 177.12(†159), 390.20(†113) |
| 319.1 3 | †2 | ²²³ Rn(23.2 m) | 591.8(†100), 635.2(†76), 416.0(†55) |
| • 319.1 5 | 3.7×10^{-5} 4 | ²⁵³ Es(20.47 d) | 41.79(0.050), 389.11(0.0264), 387.1(0.00810) |
| • 319.14 6 | 19 | ¹⁰⁵ Rh(35.36 h) | 306.25(5.1), 280.41(0.167), 442.37(0.042) |
| • 319.14 6 | 4.35 21 | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 280.41(30.2), 644.55(11.1) |
| 319.14 6 | 63000 7 | ¹⁰⁵ Ag(7.23 m) | 306.25(†12800), 442.37(†5900), 929.12(†4000) |
| 319.15 12 | †6.7 13 | ¹⁸⁷ Hg(1.9 m) | 233.38(†100), 376.34(†38), 240.26(†33) |
| • 319.174 22 | 0.134 9 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 319.2 | 0.46 | ⁸³ Zr(44 s) | 55.55(8), 104.97(5.70), 475.1(5.1) |
| 319.2 3 | 0.62 18 | ¹³⁹ Sm(2.57 m) | 273.7(37), 306.7(28.5), 596.3(8.0) |
| 319.2 4 | 0.09 3 | ¹⁹⁹ Pb(90 m) | 366.90(44.2), 353.39(9.5), 1135.04(7.8) |
| 319.20 14 | 0.501 15 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 319.20 14 | †2.11 24 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 319.25 16 | 0.044 5 | ⁸¹ Rb(4.576 h) | 190.38(64.0), 446.15(23.2), 510.31(5.3) |
| • 319.270 20 | 0.155 4 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| • 319.29 11 | 0.009 1 | ²³⁸ Np(2.117 d) | 984.45(27.8), 1028.54(20.3), 1025.87(9.6) |
| 319.3 | 2 1 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 319.3 | 0.09 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| • 319.3 | 0.047 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 319.3 3 | †32 5 | ¹⁵⁶ Nd(5.47 s) | 150.4(†100), 157.3(†78), 84.6(†63) |
| • 319.3 1 | 0.0023 3 | ¹⁷⁷ Ta(56.56 h) | 112.9498(7.2), 208.3664(0.94), 1057.8(0.29) |
| 319.37 15 | 0.76 10 | ¹⁶⁶ Lu(2.65 m) | 228.12(77.3), 337.50(41), 367.95(31.4) |
| 319.4 1 | 0.029 6 | ¹⁴⁵ Ce(3.01 m) | 724.33(59), 62.54(13.33), 1148.03(9.15) |
| • 319.4 | >0.0005 | ¹⁷³ Lu(1.37 y) | 272.105(21.2), 78.63(11.87), 100.724(5.24) |
| 319.4 | | ¹⁸⁰ Os(21.5 m) | 20.1(†100), 717.4, 667.0 |
| • 319.411 18 | 1.95 11 | ¹⁴⁷ Nd(10.98 d) | 91.105(28), 531.016(13.1), 439.895(1.20) |
| 319.45 8 | 0.45 4 | ⁸⁰ Ge(29.5 s) | 265.36(27.0), 110.4(6.5), 1564.3(4.9) |
| 319.46 10 | †4.2 6 | ¹⁶⁵ Lu(10.74 m) | 132.49(†100), 120.60(†100), 174.25(†47.0) |
| 319.546 5 | 0.27 5 | ¹⁷⁴ Tm(5.4 m) | 366.526(92), 992.128(87), 272.918(86) |
| 319.6 4 | 0.85 17 | ¹⁰⁶ Rh(131 m) | 511.842(85), 1045.83(30.4), 717.24(28.9) |
| 319.6 1 | | ¹²¹ I(2.12 h) | 212.189(84), 532.08(6.07), 598.74(1.47) |
| • 319.673 1 | 0.00330 24 | ¹⁶¹ Tb(6.88 d) | 25.65150(23.2), 48.91562(17.0), 74.56711(10.2) |
| 319.673 1 | 0.00066 23 | ¹⁶¹ Ho(2.48 h) | 25.65150(27), 103.062(3.9), 77.414(1.91) |
| 319.765 3 | 0.097 18 | ⁷⁵ Br(96.7 m) | 286.572(88), 141.3147(6.6), 427.883(4.4) |
| • 319.8 3 | 0.00631 24 | ⁹⁹ Mo(65.94 h) | 739.50(12.1), 181.063(6.08), 140.511(4.52) |
| 319.80 10 | 3.9 8 | ¹⁹⁴ Tl(32.8 m) | 636.5(99), 428.0(99), 748.9(76) |
| • 319.802 4 | 4.8×10^{-6} 5 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 319.81 6 | 0.47 4 | ¹³⁴ I(52.6 m) | 847.025(95.4), 884.090(64.9), 1072.547(15.0) |
| 319.84 2 | 1.50 4 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 319.883 18 | 0.0440 13 | ¹⁶⁶ Tm(7.70 h) | 778.817(18.9), 2052.36(17.2), 184.410(16.1) |
| 319.90 4 | 0.94 4 | ¹²¹ I(2.12 h) | 212.189(84), 532.08(6.07), 598.74(1.47) |
| 319.90 7 | 9.4 5 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| • 319.911 8 | †0.50 5 | ¹³⁶ Cs(13.16 d) | 818.514(†100), 1048.073(†80), 340.547(†42.3) |
| • 319.95 5 | 0.288 25 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 320.0 1 | †30 4 | ⁸⁴ Zr(25.9 m) | 112.5(†100), 44.9(†48), 372.9(†41) |
| 320.0 3 | 1.75 15 | ⁹⁸ Sr(0.653 s) | 119.353(73), 444.628(39), 428.4(31) |
| 320 1 | 0.05 3 | ¹⁰⁹ Rh(80 s) | 326.868(54), 426.135(7.7), 178.034(7.6) |
| • 320 1 | 0.0010 7 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 320.00 15 | 1.43 13 | ¹⁶⁰ Yb(4.8 m) | 173.74(42.0), 215.78(20.2), 140.35(9.3) |
| 320 1 | †3.6 | ¹⁷⁸ Os(5.0 m) | 968.7(†100), 1331.1(†94), 594.6(†72) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|----------------------------|---|--|
| 320.0 3 | 0.040 7 | $^{181}\text{Au}(11.4 \text{ s})$ | 198.60(4.4), 2022.4(4.2), 79.40(4.2) |
| 320 | 0.7 | $^{221}\text{Ra}(28 \text{ s})$ | 149.0(9.0), 93.1(2.1), 174.1(1.6) |
| • 320.03 15 | 0.0017 6 | $^{152}\text{Eu}(13.542 \text{ y})$ | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| 320.04 | | $^{11}\text{Li}(8.5 \text{ ms})$ | |
| 320.057 18 | 0.309 13 | $^{163}\text{Tm}(1.810 \text{ h})$ | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 320.0842 9 | 93 | $^{51}\text{Ti}(5.76 \text{ m})$ | 928.6(6.9), 608.6(1.18) |
| • 320.0842 9 | 10 | $^{51}\text{Cr}(27.702 \text{ d})$ | |
| 320.09 3 | 0.68 4 | $^{151}\text{Nd}(12.44 \text{ m})$ | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 320.1 3 | $\dagger 2.0 5$ | $^{136}\text{Eu}(3.3 \text{ s})$ | 254.9($\dagger 100$), 431.4($\dagger 34$), 458.0($\dagger 20$) |
| 320.1 4 | 0.074 20 | $^{140}\text{Xe}(13.60 \text{ s})$ | 805.52(20), 1413.66(12.2), 1315.05(8.2) |
| 320.13 5 | 3.12 18 | $^{202}\text{Bi}(1.72 \text{ h})$ | 960.67(99), 422.18(83.7), 657.49(60.6) |
| 320.2 3 | 0.076 23 | $^{79}\text{Rb}(22.9 \text{ m})$ | 688.1(23), 182.77(19.2), 143.41(13.9) |
| 320.2 5 | 0.36 5 | $^{97}\text{Rh}(30.7 \text{ m})$ | 421.55(75), 840.13(12.0), 878.80(9.0) |
| 320.2 5 | >0.06 | $^{141}\text{Xe}(1.73 \text{ s})$ | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| 320.2 1 | $\dagger 3.81 \times 10^3$ | $^{105}\text{Ho}(12.6 \text{ m})$ | 279.97($\dagger 47600$), 341.16($\dagger 37000$), 193.41($\dagger 15200$) |
| 320.2 4 | 0.13 7 | $^{185}\text{Au}(4.25 \text{ m})$ | 310.6(13), 243.1(6.6), 77.7(6) |
| 320.2 5 | $\dagger 0.13 2$ | $^{188}\text{Au}(8.84 \text{ m})$ | 265.63($\dagger 100$), 340.04($\dagger 23.9$), 605.5($\dagger 16.3$) |
| 320.2 4 | 11.8 24 | $^{189}\text{Au}(4.59 \text{ m})$ | 166.40(59), 19.0, 6.22 |
| • 320.209 18 | 0.00011 1 | $^{231}\text{Th}(25.52 \text{ h})$ | 25.646(14.5), 84.216(6.6), 89.944(0.94) |
| 320.3 10 | 0.055 11 | $^{199}\text{Bi}(27 \text{ m})$ | 560.1(22.0), 424.85(22), 841.7(11) |
| 320.37 20 | 0.30 3 | $^{121}\text{Ag}(0.78 \text{ s})$ | 314.55(32.1), 353.43(19.9), 500.61(9.3) |
| 320.4 2 | $\dagger 33 2$ | $^{113}\text{I}(6.6 \text{ s})$ | 462.5($\dagger 100$), 622.4($\dagger 74$), 351.5($\dagger 43$) |
| 320.4 4 | 0.207 20 | $^{114}\text{Sb}(3.49 \text{ m})$ | 1299.90(99), 887.60(17.4), 327.18(7.0) |
| 320.4 3 | 0.7 3 | $^{121}\text{Cs}(122 \text{ s})$ | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 320.4 1 | 0.052 6 | $^{234}\text{Pa}(6.70 \text{ h})$ | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 320.49 12 | 0.51 5 | $^{184}\text{Pt}(17.3 \text{ m})$ | 154.90(31), 191.97(27), 548.36(23.1) |
| 320.5 6 | $\dagger 12 2$ | $^{119}\text{Xe}(5.8 \text{ m})$ | 231.8($\dagger 100$), 98.5($\dagger 95$), 461.5($\dagger 91$) |
| 320.5 5 | 0.08 4 | $^{126}\text{Ba}(100 \text{ m})$ | 233.6(19.6), 257.6(7.6), 241.0(6.0) |
| 320.5 | 1.0 | $^{134}\text{Nd}(8.5 \text{ m})$ | 163.2(58), 288.9(13), 216.8(12) |
| 320.5 2 | 3.5 5 | $^{152}\text{Ho}(49.5 \text{ s})$ | 647.2(92), 613.8(88.4), 683.3(88) |
| 320.53 8 | 0.815 9 | $^{73}\text{Se}(39.8 \text{ m})$ | 67.03(2.59), 253.70(2.356), 84.0(2.03) |
| 320.53 4 | 2.17 9 | $^{119}\text{I}(19.1 \text{ m})$ | 257.52(87), 635.86(2.69), 557.24(1.77) |
| 320.54 10 | | $^{158}\text{Ho}(21.3 \text{ m})$ | 406.14($\dagger 100$), 838.9($\dagger 84.3$), 1484.1($\dagger 66.2$) |
| 320.54 10 | $\dagger 11.1 19$ | $^{158}\text{Ho}(11.3 \text{ m})$ | 218.21($\dagger 100.0$), 98.91($\dagger 70$), 945.7($\dagger 37$) |
| 320.541 5 | $\dagger 6.5 12$ | $^{229}\text{Ac}(62.7 \text{ m})$ | 164.522($\dagger 100$), 569.1($\dagger 91$), 261.92($\dagger 39$) |
| • 320.541 5 | 0.00290 3 | $^{233}\text{U}(1.592 \times 10^5 \text{ y})$ | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 320.57 2 | 0.55 11 | $^{147}\text{La}(4.015 \text{ s})$ | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 320.6 2 | 0.195 23 | $^{96}\text{Rb}(0.199 \text{ s})$ | 815.0(78.00), 692.0(8.0), 813.2(7.0) |
| 320.6 1 | 0.21 5 | $^{242}\text{U}(16.8 \text{ m})$ | 67.60(9.6), 55.58(3.90), 585.0(1.92) |
| • 320.64 11 | 0.00061 9 | $^{129}\text{Te}(33.6 \text{ d})$ | 695.88(2.988), 729.57(0.70), 556.65(0.118) |
| 320.68 8 | 0.221 13 | $^{165}\text{Yb}(9.9 \text{ m})$ | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 320.7 2 | 1.7 6 | $^{129}\text{Sn}(6.9 \text{ m})$ | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| 320.72 10 | 0.13 3 | $^{133}\text{Ce}(4.9 \text{ h})$ | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 320.72 3 | $\dagger 15.19 18$ | $^{162}\text{Lu}(1.37 \text{ m})$ | 166.82($\dagger 100$), 631.87($\dagger 26.6$), 798.76($\dagger 16.9$) |
| 320.74 4 | 0.56 3 | $^{101}\text{Pd}(8.47 \text{ h})$ | 296.29(19), 590.44(12.06), 269.67(6.43) |
| 320.75 12 | $\dagger 3.4 6$ | $^{131}\text{Sn}(56.0 \text{ s})$ | 1226.03($\dagger 100$), 450.03($\dagger 90$), 798.50($\dagger 86$) |
| 320.75 20 | 0.069 5 | $^{233}\text{Np}(36.2 \text{ m})$ | 312.17(0.7), 298.89(0.44), 546.9(0.280) |
| • 320.75 20 | $\dagger 6.48 \times 10^6$ | $^{237}\text{Pu}(45.2 \text{ d})$ | 280.40($\dagger 870000$), 298.89($\dagger 7.85 \times 10^6$), 228.56($\dagger 3.93 \times 10^6$) |
| 320.772 15 | 0.058 9 | $^{183}\text{Os}(13.0 \text{ h})$ | 381.768(89.6), 114.463(20.63), 167.844(8.81) |
| 320.8 3 | 0.69 4 | $^{170}\text{Ta}(6.76 \text{ m})$ | 100.8(21.0), 221.2(15.7), 860.4(7.39) |
| 320.839 43 | $\dagger 25.7 16$ | $^{94}\text{Kr}(0.20 \text{ s})$ | 629.2($\dagger 100$), 764.5($\dagger 71$), 219.466($\dagger 67.4$) |
| 320.84 11 | 0.508 14 | $^{144}\text{Ba}(11.5 \text{ s})$ | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| • 320.865 10 | 5.42×10^{-5} | $^{239}\text{Pu}(24110 \text{ y})$ | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 320.89 11 | 0.135 24 | $^{204}\text{Bi}(11.22 \text{ h})$ | 899.15(98), 374.72(82), 984.02(59) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 320.9 3 | 2.6 3 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 320.92 3 | 10.2 3 | ¹⁰⁷ In(32.4 m) | 204.97(47), 505.51(11.9), 1268.33(5.43) |
| 320.99 12 | †100 12 | ¹⁸⁹ Hg(7.6 m) | 78.21(†63), 565.42(†48), 434.52(†47) |
| • 321.0 3 | 0.0068 11 | ⁹⁹ Mo(65.94 h) | 739.50(12.1), 181.063(6.08), 140.511(4.52) |
| 321.0 3 | 3.0 6 | ¹¹⁸ Pd(1.9 s) | 125.4(34), 125.4(34), 224.2(20.1) |
| 321.0 1 | 1.40 10 | ²³⁷ Am(73.0 m) | 280.23(47.3), 438.4(8.3), 473.5(4.3) |
| • 321.03 4 | 0.411 3 | ¹²⁵ Sb(2.7582 y) | 427.875(30), 600.600(17.86), 635.954(11.31) |
| 321.06 5 | 0.222 15 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 321.07 4 | 0.0185 12 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 321.1 5 | 0.0023 10 | ¹⁶⁷ Yb(17.5 m) | 113.34(55.3), 106.18(22.5), 176.25(21) |
| 321.1 1 | 0.63 3 | ²⁰⁹ At(5.41 h) | 545.0(91), 781.9(83.5), 790.2(63.5) |
| 321.129 8 | 2.50 2 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 321.13 3 | †0.47 3 | ¹⁵³ Pm(5.4 m) | 35.842(†100), 127.298(†75), 28.309(†34.6) |
| 321.16 19 | | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 321.17 11 | 0.196 20 | ¹⁹⁷ Pb(43 m) | 385.85(74), 387.72(25.1), 222.45(24.6) |
| 321.2 2 | 3.2 4 | ¹⁰⁴ In(1.8 m) | 658.0(100), 834.1(99), 878.1(29.4) |
| 321.2 4 | †4.0 6 | ¹⁷² W(6.6 m) | 38.9(†100), 423.3(†44), 89.8(†33.0) |
| 321.22 7 | 10.5 7 | ¹²⁸ In(0.72 s) | 831.54(100), 1168.80(100), 120.54(11.1) |
| • 321.24 3 | 0.063 3 | ²⁴⁹ Cf(351 y) | 388.16(66), 333.37(14.6), 252.80(2.50) |
| 321.3 3 | 8.3 4 | ¹⁵⁸ Sm(5.30 m) | 189.4(15.2), 363.6(12.4), 324.5(10.6) |
| 321.3 | 0.05 3 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| 321.3 | 0.17 5 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| 321.31 6 | 0.68 4 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| • 321.3162 160.219 11 | | ¹⁷⁷ Lu(6.734 d) | 208.3664(11.0), 112.9498(6.4), 249.6741(0.212) |
| • 321.3162 161.20 6 | | ¹⁷⁷ Lu(160.4 d) | 208.3664(57.7), 228.4838(37.0), 378.5029(29.7) |
| • 321.3162 160.022 3 | | ¹⁷⁷ Ta(56.56 h) | 112.9498(7.2), 208.3664(0.94), 1057.8(0.29) |
| 321.336 24 | 23.5 8 | ¹⁶⁷ Ho(3.1 h) | 346.547(56), 237.873(5.0), 207.801(4.9) |
| 321.4 1 | †2.0 4 | ⁷⁵ Ga(126 s) | 253.0(†100), 574.8(†31.6), 885.6(†11.1) |
| 321.4 2 | 0.28 3 | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 321.4 2 | †7.4 7 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 321.4 1 | 23 | ²²⁵ Th(8.72 m) | 246.0(5.06), 359.0(4.1), 305.9(4.1) |
| 321.50 3 | 11.1 16 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 159.528(10.2) |
| 321.5 3 | 0.05 5 | ¹²⁷ In(1.09 s) | 1597.7(49), 646.1(6.2), 805.1(5.6) |
| 321.5 | 0.028 14 | ¹⁴¹ Ba(18.27 m) | 190.328(46.0), 304.194(25.4), 276.948(23.4) |
| 321.5 | 2.2 | ¹⁴⁴ Dy(9.1 s) | 196.5(11), 298.6(10), 475.5(5.0) |
| 321.5 2 | 0.11 7 | ¹⁶³ Tb(19.5 m) | 351.138(26), 389.734(24.3), 494.534(23) |
| 321.54 5 | 1.306 13 | ¹²⁷ Cs(6.25 h) | 411.95(62.8), 124.70(11.37), 462.31(5.07) |
| 321.6 2 | 0.60 9 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 321.6 2 | 0.5 1 | ¹⁵⁹ Er(36 m) | 624.5(33), 649.1(23.4), 205.92(9.7) |
| • 321.64 4 | 1.28 6 | ¹⁹³ Os(30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| 321.646 9 | 0.234 13 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 321.7 1 | 1.17 22 | ¹⁰⁵ Mo(35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 321.7 1 | 1.23 22 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| • 321.700 25 | 0.070 6 | ¹²⁹ Cs(32.06 h) | 371.918(30.60), 411.490(22.31), 548.945(3.40) |
| 321.71 15 | 0.0012 | ²³⁹ U(23.45 m) | 74.664(48), 43.533(4.14), 662.24(0.18) |
| • 321.75 20 | 0.0013 6 | ²³⁸ Np(2.117 d) | 984.45(27.8), 1028.54(20.3), 1025.87(9.6) |
| 321.763 25 | 0.095 16 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| 321.78 10 | 0.26 3 | ¹⁵⁷ Sm(482 s) | 197.870(56.00), 196.461(16.8), 394.351(11.93) |
| 321.81 8 | 0.76 8 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| • 321.82 11 | 0.0036 6 | ¹⁷² Tm(63.6 h) | 78.7435(6.5), 1093.657(6.0), 1387.093(5.6) |
| 321.84 20 | 2.26 16 | ¹⁰⁷ Rh(21.7 m) | 302.77(66), 392.47(8.8), 312.21(4.8) |
| 321.87 10 | 0.48 7 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 321.9 | 0.018 9 | ¹⁴⁹ Tb(4.118 h) | 352.24(29.43), 164.98(26.4), 388.57(18.37) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------------|------------------------------|---|
| 321.9 6 | 0.15 | ^{203}Bi (11.76 h) | 820.3(30), 825.2(14.6), 896.9(13) |
| • 321.926 3 | 0.181 8 | ^{155}Tb (5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 321.93 20 | 3.3 4 | ^{78}Zn (1.47 s) | 224.75(43.9), 181.68(28.1), 860.30(24.5) |
| 321.943 16 | 0.0016 | ^{162}Tb (7.60 m) | 260.070(37.2), 807.53(42.8), 888.20(38.7) |
| 321.943 16 | 0.084 20 | ^{162}Ho (67.0 m) | 185.005(28.6), 1220.0(22.5), 282.864(11.3) |
| • 321.95 10 | 0.097 11 | ^{151}Pm (28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 322.0 6 | 0.20 4 | ^{83}Se (22.3 m) | 356.687(70), 510.17(43), 224.8(32.7) |
| 322.0 1 | \dagger 0.9 3 | ^{172}Ir (2.0 s) | 227.8(\dagger 100.0), 378.4(\dagger 62.0), 448.4(\dagger 40.5) |
| 322.0 | | ^{238}Pa (2.3 m) | 1015.3(\dagger <100), 1014.6(\dagger <100), 635.18(\dagger 88) |
| • 322.01 5 | 0.0665 18 | ^{154}Eu (8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 322.01 4 | 0.13 4 | ^{179}Re (19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 322.05 15 | 0.053 18 | ^{101}Tc (14.22 m) | 306.85(88), 545.06(6.0), 127.23(2.86) |
| 322.08 11 | \dagger 12 1 | ^{159}Yb (1.58 m) | 166.16(\dagger 500), 177.12(\dagger 159), 390.20(\dagger 113) |
| 322.1 1 | 7.0 6 | ^{117}Ag (5.34 s) | 135.4(48), 386.8(39.9), 298.1(21.1) |
| 322.1 3 | \dagger 4.2 16 | ^{131}Pr (1.53 m) | 266.13(\dagger 100), 72.82(\dagger 64), 387.56(\dagger 38) |
| 322.1 2 | | ^{146}Dy (29 s) | 2156.8, 1915.7, 1876.7 |
| • 322.1 5 | 0.019 10 | ^{148}Eu (54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| 322.2 3 | 0.03 3 | ^{83}Se (70.1 s) | 1030.86(21.2), 356.687(18), 987.96(16.1) |
| 322.2 1 | 3.4 4 | ^{105}Mo (35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 322.2 4 | 3.8 5 | ^{116}Cs (3.84 s) | 393.5(<0.09), 524.3(76), 615.1(30.4) |
| 322.2 2 | 0.35 6 | ^{146}Ba (2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 322.2 3 | 0.0276 23 | ^{243}Pu (4.956 h) | 84.0(23), 41.8(0.76), 381.7(0.56) |
| 322.21 22 | 0.048 3 | ^{151}Tb (17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| • 322.264 3 | 0.0052 | ^{239}Np (2.3565 d) | 106.125(27.2), 277.599(14.38), 228.183(10.76) |
| 322.264 3 | 0.0026 3 | ^{239}Am (11.9 h) | 277.599(15.0), 228.183(11.3), 209.753(3.50) |
| • 322.264 3 | 0.0070 10 | ^{243}Cm (29.1 y) | 277.599(14.0), 228.183(10.6), 209.753(3.29) |
| 322.27 4 | 0.027 3 | ^{155}Dy (9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| 322.3 2 | 3 1 | ^{128}Sb (9.01 h) | 753.82(100), 743.22(100), 314.12(61) |
| 322.3 4 | 0.20 10 | ^{185}Au (4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 322.3 10 | 0.19 4 | ^{201}Bi (108 m) | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| 322.37 15 | 1.6 5 | ^{105}Tc (7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 322.4 1 | \dagger 100 | ^{120}Cs (64 s) | 473.5(\dagger 30), 553.4(\dagger 19.1), 601.2(\dagger 10.9) |
| 322.4 2 | 0.11 6 | ^{133}Te (55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 322.4 3 | \dagger 7.2 | ^{149}Ce (5.3 s) | 57.7(\dagger 100), 380.0(\dagger 33.7), 86.4(\dagger 20.2) |
| 322.41 8 | 0.000097 5 | ^{99}Tc (6.01 h) | 232.72(8.5×10^{-6}), 89.65 |
| • 322.41 8 | 5.4 3 | ^{99}Rh (16.1 d) | 528.24(33), 353.05(30.0), 89.65(29.0) |
| 322.41 8 | 0.88 11 | ^{99}Rh (4.7 h) | 340.71(70), 617.8(12.0), 1261.2(11) |
| 322.42 15 | 0.077 11 | ^{201}Pb (9.33 h) | 331.19(79), 361.27(9.9), 945.96(7.4) |
| 322.5 1 | 1.20 12 | ^{107}Tc (21.2 s) | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| 322.5 4 | 0.126 18 | ^{120}Xe (40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 322.5 | 0.07 3 | ^{185}Au (4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 322.5 2 | 0.43 | ^{212}Fr (20.0 m) | 1273.8(46), 227.72(43), 1185.6(14.1) |
| • 322.52 3 | \dagger 0.518 $\times 10^6$ | ^{241}Am (432.2 y) | 59.537(\dagger 60), 26.345(\dagger 1000 $\times 10^9$), 33.195(\dagger 6000 $\times 10^8$) |
| • 322.52 | | ^{241}Am (432.2 y) | 59.537(\dagger 60), 26.345(\dagger 1000 $\times 10^9$), 33.195(\dagger 6000 $\times 10^8$) |
| 322.6 10 | 0.62 21 | ^{135}Nd (12.4 m) | 204.02(52), 41.43(23), 441.2(14.9) |
| 322.6 3 | 0.91 18 | ^{139}Sm (2.57 m) | 273.7(37), 306.7(28.5), 596.3(8.0) |
| 322.63 17 | | ^{186}Ir (16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 322.7 2 | \dagger 10.8 11 | ^{185}Hg (21.6 s) | 222.8(\dagger 100.0), 258.7(\dagger 98), 212.5(\dagger 58) |
| 322.7 4 | \dagger 1.9 | ^{191}Tl (5.22 m) | 452.6(\dagger 100), 470.1(\dagger 98), 391.6(\dagger 96) |
| 322.8 2 | \dagger 2 | ^{87}Nb (2.6 m) | 200.95(\dagger 100), 470.63(\dagger 73), 1066.8(\dagger 37) |
| • 322.81 3 | 0.123 7 | ^{206}Po (8.8 d) | 1032.26(32.9), 511.36(24.1), 286.410(23.8) |
| 322.9 3 | \dagger 3.9 9 | ^{155}Er (5.3 m) | 110.12(\dagger 100), 241.5(\dagger 65), 234.0(\dagger 40.0) |
| 322.9 2 | \dagger 11.8 24 | ^{187}Hg (1.9 m) | 233.38(\dagger 100), 376.34(\dagger 38), 240.26(\dagger 33) |
| 322.9 2 | \dagger 3.5 8 | ^{229}Ac (62.7 m) | 164.522(\dagger 100), 569.1(\dagger 91), 261.92(\dagger 39) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|---|--|
| 322.92 2 | 0.0166 5 | ¹⁸⁸ Re(16.98 h) | 155.032(14.9), 632.99(1.25), 477.99(1.0) |
| • 322.92 2 | 1.62 13 | ¹⁸⁸ Ir(41.5 h) | 155.032(29.7), 2214.62(18.7), 632.99(18) |
| 323.0 1 | 0.088 6 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| 323.1 4 | 0.13 4 | ¹⁵¹ Dy(17.9 m) | 386.10(19.4), 49.46(18.0), 546.31(14.3) |
| 323.1 2 | 0.39 3 | ²³⁰ Fr(19.1 s) | 711.0(13.6), 129.1(11.0), 728.4(7.3) |
| 323.15 7 | 0.250 9 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| 323.17 7 | 1.03 6 | ¹⁹⁰ Au(42.8 m) | 295.78(71.0), 301.82(23.4), 597.67(9.4) |
| 323.20 18 | 6.3 5 | ⁹⁰ Mo(5.67 h) | 257.34(78), 122.370(64.2), 203.13(6.4) |
| 323.2 | 0.30 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 323.2 5 | †65 7 | ¹⁵⁵ Tm(45 s) | 88.1(†100), 507.0(†40), 247.0(†28) |
| 323.21 42 | 0.12 4 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| 323.34 2 | 1.03 6 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| • 323.39 3 | 1.75 13 | ¹⁸² Re(64.0 h) | 229.3220(26), 67.75001(22.2), 1121.3007(22.0) |
| 323.4 | | ⁹⁹ Y(1.470 s) | 121.761(33), 724.30(14.9), 536.2(6.6) |
| • 323.4 2 | | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 323.4 4 | | ¹⁹⁹ Pb(12.2 m) | 366.90(7), 382.8, 2751.9 |
| • 323.42 5 | 0.00077 12 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 323.5 5 | 0.0035 10 | ¹⁶⁷ Yb(17.5 m) | 113.34(55.3), 106.18(22.5), 176.25(21) |
| 323.51 8 | | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| • 323.519 4 | 0.023 8 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| • 323.57 5 | 0.345 11 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| • 323.59 5 | †1.56×10 ⁴ | ¹³⁴ Ce(75.9 h) | 162.306(†230000), 130.414(†209000), 39.08(†>150000) |
| 323.6 12 | 0.6 | ¹⁸⁶ Pt(2.0 h) | 276.7(0), 611.5(6.0), 635.6(>3.8) |
| 323.6 4 | †2.4 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 323.6 2 | †56 9 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 323.63 12 | 0.76 6 | ¹⁴⁸ Ba(0.607 s) | 56.08(29.20), 133.53(3.88), 415.78(3.59) |
| 323.663 3 | 0.32 6 | ¹⁹⁹ Pt(30.80 m) | 542.993(15), 493.772(5.59), 317.056(4.95) |
| 323.665 20 | 1.18 3 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 323.7 4 | | ¹⁰⁹ Tc(0.87 s) | 194.6(†100), 128.7(†51), 96.2(†48) |
| 323.7 4 | 0.15 3 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| • 323.7 4 | 0.02 1 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 323.7 5 | | ¹⁶⁷ Ho(3.1 h) | 346.547(56), 321.336(23.5), 237.873(5.0) |
| • 323.7 5 | 0.0021 5 | ¹⁶⁷ Tm(9.25 d) | 207.801(41), 57.0723(4.6), 531.54(1.6) |
| 323.7 2 | †2.51 14 | ¹⁹² Tl(9.6 m) | 422.8(†100), 634.8(†75.9), 786.3(†31.7) |
| 323.7 | | ¹⁹² Pb(3.5 m) | 1195.4(47), 608.2(17.9), 167.5(13.6) |
| • 323.71 4 | 0.010 3 | ¹⁸⁹ Re(24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| 323.8 3 | 0.14 3 | ⁶⁶ Ge(2.26 h) | 43.89(28.7), 381.85(28), 272.97(10.4) |
| 323.8 4 | 1.2 4 | ¹³¹ Sb(23.03 m) | 943.4(47), 933.1(26.1), 642.30(23) |
| 323.8 10 | 0.28 9 | ¹⁴⁹ Er(8.9 s) | 1171.0(9.4), 171.5(6.5), 343.9(6.3) |
| 323.8 | 0.015 7 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 323.81 5 | †0.16 2 | ²¹³ Bi(45.59 m) | 544.9(†0.016), 868.0(†0.012) |
| 323.84 3 | 0.06 3 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 323.85 8 | 0.61 9 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| • 323.853 4 | 5.39×10 ⁻⁵ 7 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| • 323.871 10 | 3.93 7 | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 144.232(3.22) |
| • 323.889 15 | 1.500 25 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 323.89 5 | 24.1 12 | ⁹³ Kr(1.286 s) | 253.42(41.2), 266.83(20.6), 252.51(19.5) |
| 323.9 2 | †37 4 | ¹¹⁷ Pd(4.3 s) | 247.5(†100), 649.9(†41), 625.9(†28) |
| 323.9 4 | 0.053 20 | ¹²⁶ In(1.60 s) | 1141.11(55.9), 3344.61(21.6), 969.61(14.9) |
| 323.9 4 | 0.25 10 | ¹²⁶ In(1.64 s) | 1141.11(100), 908.58(99), 111.79(88) |
| 323.9 4 | †1.9 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 323.9 1 | †3.2 1 | ²⁰⁰ At(43 s) | 665.9(†100), 611.1(†85.0), 484.5(†49.8) |
| • 323.94 1 | 1.22 9 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| • 323.95 9 | 0.00152 15 | ¹⁴⁹ Pm(53.08 h) | 285.95(3.1), 859.46(0.109), 590.88(0.069) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| • 323.98 9 | 0.016 1 | ²³⁸ Np(2.117 d) | 984.45(27.8), 1028.54(20.3), 1025.87(9.6) |
| 323.98 9 | 0.062 8 | ²³⁸ Am(98 m) | 962.77(28), 918.69(23.0), 561.11(10.9) |
| 324.0 1 | 0.8 3 | ¹⁴⁶ Tb(23 s) | 1579.4(100), 1078.6(51.6), 1417.2(17.2) |
| 324.0 | †2.5 | ¹⁹³ Pb(5.8 m) | 365.2(†100), 392.2(†20.7), 716.4(†6.7) |
| • 324.0 5 | 2 | ¹⁹⁴ Ir(171 d) | 482.833(97), 328.455(93), 600.5(62) |
| 324.03 6 | 5.3 8 | ⁷⁹ Sr(2.25 m) | 39.41(28), 105.00(21.8), 413.8(7.6) |
| 324.1 1 | †0.51 5 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 324.1 | | ¹⁶⁸ Hf(25.95 m) | 183.8(†100), 157.2(†68), 248.4 |
| 324.1 | 0.019 9 | ²²¹ Fr(4.9 m) | 218.19(11.6), 410.7(0.14), 99.5(0.11) |
| 324.22 5 | 2.77 8 | ²²² Ra(38.0 s) | 328.9(0.0043), 472.5(0.0040), 840.2(0.0025) |
| 324.26 15 | >0.028 | ¹⁶⁴ Yb(75.8 m) | 40.928(1.147), 675.41(0.38), 390.6(0.31) |
| 324.3 2 | 0.050 12 | ¹³³ Te(12.5 m) | 312.072(62), 407.63(27.1), 1333.21(10.67) |
| 324.3 5 | 0.02 1 | ²¹⁴ Pb(26.8 m) | 351.921(35.8), 295.213(18.5), 241.981(7.50) |
| 324.35 8 | †34 3 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| 324.37 10 | †100 | ¹⁹³ Tl(21.6 m) | 1044.7(†59), 676.10(†48), 1579.3(†45) |
| 324.4 1 | 0.48 5 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 324.4 3 | 0.37 7 | ¹⁰⁹ In(4.2 h) | 203.5(74), 623.7(5.5), 1148.9(4.3) |
| 324.41 2 | 0.79 5 | ²⁰⁷ At(1.80 h) | 814.41(44.5), 588.33(19.2), 300.654(12.8) |
| 324.43 18 | 0.48 10 | ¹⁸¹ Os(105 m) | 238.75(44), 826.77(20), 118.03(12.9) |
| • 324.48 3 | 10.79 17 | ⁹⁷ Ru(2.9 d) | 215.718(86), 569.31(0.873), 460.57(0.121) |
| 324.49 5 | | ¹⁷³ W(7.5 m) | 457.68(†100), 130.19(†31.5), 174.8(†29.1) |
| 324.5 3 | 10.6 5 | ¹⁵⁸ Sm(5.30 m) | 189.4(15.2), 363.6(12.4), 224.1(8.5) |
| 324.5 2 | 6.4 7 | ¹⁷⁹ Yb(8.0 m) | 592.1(75), 612.3(35.4), 381.4(9.6) |
| 324.5 5 | †17 3 | ¹⁸⁰ Au(8.1 s) | 153.3(†100), 524.3(†29), 257.6(†26) |
| 324.5 2 | †96 | ²⁰⁶ Rn(5.67 m) | 497.7(†100), 386.6(†61), 773.1(†57) |
| 324.54 11 | †3.4 6 | ¹⁶⁵ Lu(10.74 m) | 132.49(†100), 120.60(†100), 174.25(†47.0) |
| • 324.55 25 | 0.008 4 | ¹⁹⁵ Hg(41.6 h) | 261.75(30.9), 560.27(7), 387.87(2.15) |
| 324.56 17 | 0.32 7 | ¹⁷⁵ Tm(15.2 m) | 514.868(65), 941.23(15), 363.942(12.7) |
| 324.6 | 0.6 | ⁸³ Zr(44 s) | 55.55(8), 104.97(5.70), 475.1(5.1) |
| 324.6 5 | 0.22 15 | ⁹⁷ Rh(30.7 m) | 421.55(75), 840.13(12.0), 878.80(9.0) |
| 324.6 4 | 0.0013 5 | ¹⁴¹ La(3.92 h) | 1354.52(1.64), 1693.3(0.074), 2267.0(0.0413) |
| 324.6 1 | 2.5 3 | ¹⁴¹ Sm(10.2 m) | 403.8(43), 438.8(37.7), 1292.6(6.8) |
| • 324.63 25 | 0.0069 13 | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 324.650 4 | 0.11 4 | ⁷⁵ Br(96.7 m) | 286.572(88), 141.3147(6.6), 427.883(4.4) |
| • 324.651 25 | 0.0212 25 | ¹³¹ I(8.02070 d) | 364.489(81.7), 636.989(7.17), 284.305(6.14) |
| 324.67 8 | †42 4 | ¹⁶⁸ Lu(5.5 m) | 1483.65(†100), 228.58(†97), 111.8(†68) |
| 324.68 2 | 0.53 3 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 324.7 2 | †0.4 1 | ²²⁵ Fr(4.0 m) | 182.3(†100), 31.50(†91), 225.1(†55) |
| • 324.73 4 | 0.098 6 | ²⁰⁶ Po(8.8 d) | 1032.26(32.9), 511.36(24.1), 286.410(23.8) |
| 324.76 10 | 0.0080 12 | ¹³³ La(3.912 h) | 278.835(2.50), 302.353(1.648), 290.06(1.413) |
| • 324.789 5 | 0.0751 21 | ¹⁵² Eu(13.542 y) | 344.281(26.58), 778.91(12.96), 411.115(2.231) |
| 324.789 5 | †>1.5 | ¹⁵² Tb(17.5 h) | 344.281(†1500), 586.294(†223), 271.135(†203) |
| • 324.8 2 | 13.4 11 | ¹⁰¹ Rh(3.3 y) | 127.23(73), 197.6(70.8), 295.0(0.73) |
| 324.8 5 | 0.24 8 | ¹²⁶ Ba(100 m) | 233.6(19.6), 257.6(7.6), 241.0(6.0) |
| 324.8 2 | | ¹⁴⁶ Dy(29 s) | 2156.8, 1915.7, 1876.7 |
| 324.81 3 | 0.0314 15 | ¹⁰⁷ Cd(6.50 h) | 93.124(1.45), 828.93(0.17), 796.462(0.0665) |
| 324.82 7 | 0.124 15 | ¹³² Ce(3.51 h) | 182.11(77), 155.37(10.5), 216.83(4.95) |
| 324.85 5 | 7.6 3 | ¹⁴⁸ Ce(56 s) | 269.519(17.0), 291.724(16.7), 121.169(13.2) |
| 324.89 5 | 0.35 6 | ¹⁹³ Au(17.65 h) | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| 324.9 2 | 0.39 | ¹³⁵ Pr(24 m) | 296.12(24), 82.64(13.7), 213.45(13.0) |
| 324.90 8 | 0.290 18 | ¹³⁸ Cs(33.41 m) | 1435.795(76.3), 462.796(30.7), 1009.78(29.8) |
| 324.90 8 | 1.18 19 | ¹³⁸ Cs(2.91 m) | 1435.795(19), 462.796(18.6), 191.96(15.4) |
| 324.9 4 | >0.11 | ²⁰⁹ Rn(28.5 m) | 408.32(50.3), 745.78(22.8), 337.45(14.5) |
| 324.9 10 | >0.006 | ²¹⁹ Rn(3.96 s) | 271.23(10.8), 401.81(6.37), 130.59(0.119) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|----------------------|---|---|
| • 324.92 6 | 0.017 4 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| • 324.94 19 | †0.33 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 324.976 13 | 49.5 20 | ¹²¹ Cd(13.5 s) | 1040.26(16.8), 349.937(12.9), 1483.23(8.2) |
| 324.980 23 | 0.81 3 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 325.0 2 | 0.023 9 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| 325.0 2 | 0.18 4 | ¹¹⁹ Ag(2.1 s) | 626.4(13), 366.2(12.1), 399.1(10.9) |
| 325.0 5 | 0.071 22 | ¹⁴² Cs(1.70 s) | 359.598(27.2), 1326.46(12.92), 966.89(9.0) |
| 325 | †43 | ¹⁷⁴ Os(44 s) | 118(†100), 302(†26), 138(†25) |
| 325.0 2 | †27 1 | ¹⁹¹ Pb(2.18 m) | 387.1(†100), 712.2(†46), 613.5(†40) |
| 325.0 4 | 0.09 3 | ¹⁹⁸ Tl(5.3 h) | 411.8044(82), 675.8874(11), 636.4(10.1) |
| • 325.079 5 | 0.023 5 | ⁷⁷ Br(57.036 h) | 238.996(23), 520.639(22.4), 297.215(4.16) |
| 325.1 3 | 88 8 | ⁹⁶ Ag(5.1 s) | 1415.4(100), 683.8(96), 106.4(40) |
| 325.1 5 | 2.91 7 | ¹³⁷ Pm(2.4 m) | 177.5(40.29), 108.6(35), 233.6(29.57) |
| 325.1 2 | 2.5 3 | ²⁵⁷ Md(5.52 h) | 371.4(11.7), 181.3(0.41), 388.5(0.07) |
| 325.18 10 | 0.75 9 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 325.2 2 | 2.1 | ¹⁴⁵ Ba(4.31 s) | 96.6(17), 91.9(7), 65.9(5) |
| • 325.2 3 | 0.015 3 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 325.2 2 | †11.6 12 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| • 325.26 7 | 0.16 5 | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 280.41(30.2), 644.55(11.1) |
| 325.284 4 | 1.5 3 | ¹⁰⁹ Rh(80 s) | 326.868(54), 426.135(7.7), 178.034(7.6) |
| 325.293 16 | 2.13 9 | ²⁰⁸ Rn(24.35 m) | 426.78(7.07), 251.05(5.02), 350.026(3.34) |
| 325.3 2 | 0.13 5 | ¹¹⁷ Cd(3.36 h) | 1997.33(26), 1065.98(23.1), 564.397(14.7) |
| 325.3 4 | †0.6 3 | ¹²⁶ Cd(0.506 s) | 260.09(†100), 428.11(†83.7), 688.23(†5.9) |
| 325.3 3 | 0.023 8 | ¹³⁸ Xe(14.08 m) | 258.411(31.5), 434.562(20.3), 1768.26(16.7) |
| 325.3 | †>1.5 | ¹⁵² Tb(17.5 h) | 344.281(†1500), 586.294(†223), 271.135(†203) |
| 325.3 1 | 5.2 4 | ²⁰⁸ Fr(59.1 s) | 635.8(10), 778.5(6.8), 553.1(3.04) |
| 325.3 1 | 0.050 20 | ²²³ Ac(2.10 m) | 98.58(0.891), 191.3(0.58), 83.55(0.57) |
| 325.32 5 | 0.94 5 | ²²⁴ Fr(3.30 m) | 215.985(33.1), 131.613(16.3), 836.90(9.8) |
| 325.40 2 | 2.75 13 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| • 325.488 6 | 0.0045 13 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 325.49 30 | 0.10 4 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| 325.50 8 | 0.246 21 | ⁷⁹ Ge(19.1 s) | 109.58(21), 1505.85(9.2), 100.48(2.70) |
| 325.50 8 | 2.09 18 | ⁷⁹ Ge(39.0 s) | 230.62(61), 542.27(32.6), 755(18) |
| 325.5 7 | 0.034 13 | ¹¹¹ Sn(35.3 m) | 1152.98(2.7), 1914.70(1.99), 761.97(1.48) |
| 325.5 2 | †100 5 | ¹³² Pr(1.6 m) | 496.9(†25), 822.4(†17.3), 533.1(†15.2) |
| • 325.50 30 | 0.043 16 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 325.5 5 | 0.07 | ²⁰³ Bi(11.76 h) | 820.3(30), 825.2(14.6), 896.9(13) |
| 325.53 13 | 0.39 7 | ¹⁰⁵ In(5.07 m) | 131.37(41), 260.21(15.7), 604.11(9.2) |
| 325.562 4 | 94.1 11 | ¹⁷⁸ Lu(23.1 m) | 426.383(97.0), 213.440(81.4), 88.867(64.4) |
| 325.562 4 | 94.1 11 | ¹⁷⁸ Ta(2.36 h) | 426.383(97.0), 213.440(81.4), 88.867(64.4) |
| 325.6 15 | 0.027 8 | ⁷⁷ Ge(11.30 h) | 264.44(54), 211.03(30.8), 215.50(28.6) |
| 325.6 1 | 13.7 14 | ¹⁰⁸ In(58.0 m) | 875.46(100), 632.96(100), 242.84(41) |
| 325.61 8 | 0.0059 10 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 325.69 25 | | ¹⁸² Au(21 s) | 154.76(†100), 264.33(†40.0), 855.41(†14.5) |
| 325.70 7 | 11.17 24 | ⁷³ Ga(4.86 h) | 297.32(79.8), 739.42(4.23), 767.8(1.44) |
| 325.7 10 | 0.17 3 | ²⁰¹ Bi(108 m) | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| 325.76 5 | 2.84 7 | ¹³⁸ Nd(5.04 h) | 199.50(0.53), 341.65(0.40), 215.31(0.28) |
| • 325.789 4 | 0.274 21 | ¹³¹ I(8.02070 d) | 364.489(81.7), 636.989(7.17), 284.305(6.14) |
| 325.8 2 | 0.27 3 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| • 325.80 10 | 0.0004 | ²³⁵ U(7.038×10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| • 325.85 10 | 0.106 14 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 325.85 14 | 0.66 8 | ¹⁹⁵ Pb(15.0 m) | 383.64(106.9), 394.21(44), 878.40(24.2) |
| 325.9 3 | 75 | ¹¹⁷ I(2.22 m) | 274.4(20.4), 661.5(5.1), 684.0(3.23) |
| 325.9 | 1.3 6 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 325.9 2 | 0.23 7 | ¹⁵⁹ Er(36 m) | 624.5(33), 649.1(23.4), 205.92(9.7) |
| 325.9 1 | 0.038 6 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| 326.00 20 | 0.39 7 | ⁹⁹ Ag(124 s) | 264.41(65), 832.29(13.5), 805.07(12.5) |
| 326.0 10 | †13 4 | ¹⁰⁶ Sn(115 s) | 386.8(†100), 477.5(†62), 253.30(†57) |
| 326.0 4 | 0.28 11 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 326.0 2 | 0.0023 17 | ¹³⁵ I(6.57 h) | 1260.409(28.90), 1131.511(22.74), 1678.027(9.62) |
| 326.00 10 | 0.24 3 | ¹⁵⁶ Tm(83.8 s) | 344.55(86), 452.85(17.2), 585.93(14.6) |
| 326.0 | †0.54 25 | ¹⁷⁸ Ir(12 s) | 266.1(†100.0), 131.6(†79), 363.1(†39.9) |
| 326 | | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 326.0 | 0.15 4 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| 326.0 | 0.022 16 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| • 326.0 4 | 0.024 5 | ²⁵² Es(471.7 d) | 52.33(0.55), 64.42(0.274), 418.5(0.220) |
| 326.04 20 | 0.034 5 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 326.10 10 | 2.03 22 | ¹¹⁵ Ag(20.0 m) | 229.08(18), 212.80(4.4), 472.70(4.0) |
| 326.1 3 | †52 | ¹¹⁹ Pd(0.92 s) | 129.9(†100), 256.6(†63), 69.9(†12) |
| 326.1 3 | 0.068 20 | ¹⁴⁰ Xe(13.60 s) | 805.52(20), 1413.66(12.2), 1315.05(8.2) |
| 326.1 5 | 0.042 9 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| • 326.11 10 | †1.6 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 326.14 10 | 1.06 12 | ¹⁰⁵ Ru(4.44 h) | 724.21(47), 469.37(17.5), 676.36(15.7) |
| 326.16 20 | 92 | ¹⁵⁷ Dy(8.14 h) | 182.20(1.84), 83.01(0.62), 60.82(0.5) |
| 326.1748 220.13 3 | | ⁷⁵ Br(96.7 m) | 286.572(88), 141.3147(6.6), 427.883(4.4) |
| 326.2 4 | 1.2 6 | ¹³¹ Sb(23.03 m) | 943.4(47), 933.1(26.1), 642.30(23) |
| 326.2 | 0.013 | ¹³⁵ Ce(17.7 h) | 265.56(41.8), 300.07(23.5), 606.76(18.8) |
| 326.2 3 | 4.7 8 | ¹⁵⁴ Ho(11.76 m) | 334.6(84), 412.4(15.0), 873.4(12.5) |
| 326.20 7 | 1.57 6 | ¹⁶³ Yb(11.05 m) | 860.28(10.1), 63.62(6.5), 123.21(1.98) |
| 326.2 5 | †>0.26 | ¹⁸⁰ Au(8.1 s) | 153.3(†100), 524.3(†29), 257.6(†26) |
| 326.28 20 | 0.10 | ¹¹³ Pd(93 s) | 95.74(3.3), 643.7(3.0), 739.63(2.4) |
| 326.30 19 | 0.54 3 | ¹⁰⁹ In(4.2 h) | 203.5(74), 623.7(5.5), 1148.9(4.3) |
| 326.3 5 | 0.039 | ¹²² Xe(20.1 h) | 350.065(7.80), 148.612(2.62), 416.633(1.87) |
| 326.3 2 | 0.34 10 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 326.3 2 | 0.031 10 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 326.3 3 | 0.058 10 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 326.30 4 | 0.0167 14 | ¹⁵⁹ Ho(33.05 m) | 121.012(36.2), 131.973(23.6), 309.594(17.2) |
| 326.3 3 | 0.19 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 326.3 3 | †<2 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 326.3 2 | †74 4 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 326.32 9 | 0.31 5 | ⁹⁸ Nb(2.86 s) | 787.374(13), 1023.73(6.1), 1432.22(3.4) |
| 326.32 9 | 0.047 9 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| • 326.349 4 | 0.050 11 | ¹⁹⁶ Au(6.183 d) | 355.684(87), 332.983(22.9), 521.175(0.389) |
| 326.37 18 | 0.28 22 | ¹⁸¹ Os(105 m) | 238.75(44), 826.77(20), 118.03(12.9) |
| 326.4 5 | 0.50 11 | ¹⁸⁰ Ir(1.5 m) | 276.4(56), 132.2(38.1), 699.0(13.4) |
| 326.41 17 | †2.1 3 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| • 326.51 10 | 0.0144 6 | ¹³⁴ Cs(2.062 y) | 604.699(97.56), 795.845(85.44), 569.315(15.43) |
| 326.517 | >0.016 | ³⁹ Cl(55.6 m) | 1267.185(54), 250.332(46.3), 1517.508(39.2) |
| 326.55 21 | | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 326.554 10 | 4.56 10 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 326.60 20 | †7.9 9 | ¹⁰⁶ Mo(8.4 s) | 465.70(†100), 54.00(†54), 618.60(†25) |
| 326.6 4 | 0.08 4 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 326.6 3 | 0.75 25 | ¹⁸⁶ Ta(10.5 m) | 197.93(50), 214.87(42.3), 510.82(37.5) |
| 326.64 15 | †53 4 | ¹⁰² Y(0.36 s) | 151.73(†100), 1091.3(†42), 579.4(†35) |
| 326.64 15 | †8.6 9 | ¹⁰² Y(0.30 s) | 151.73(†100), 1211.08(†40), 1059.21(†29) |
| 326.7 3 | †4.1×10 ³ 7 | ¹⁵⁸ Er(2.29 h) | 71.91(†23300), 386.84(†111000), 248.58(†42000) |
| 326.7 2 | †7 | ²⁵⁶ Es(7.6 h) | 861.8(†100), 231.1(†61), 172.6(†49) |
| • 326.785 15 | 3.034 25 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 326.8 2 | 0.37 10 | ¹²¹ Cs(155 s) | 153.9(15.2), 239.6(7.7), 427.1(3.63) |
| 326.8 4 | 0.090 6 | ¹³⁹ Xe(39.68 s) | 218.59(56), 296.53(21.7), 174.97(11.3) |
| 326.8 3 | 2.06 14 | ¹⁵⁸ Sm(5.30 m) | 189.4(15.2), 363.6(12.4), 324.5(10.6) |
| 326.868 4 | 54 | ¹⁰⁹ Rh(80 s) | 426.135(7.7), 178.034(7.6), 291.430(7.5) |
| 326.9 2 | 1.89 16 | ¹⁰¹ Ag(11.1 m) | 261.0(53), 588.0(10.0), 667.3(9.8) |
| 326.9 2 | †5.5 16 | ¹³¹ Ce(10.3 m) | 169.42(†100), 414.25(†68), 119.18(†44) |
| 326.9 6 | 0.023 7 | ¹³⁸ Nd(5.04 h) | 325.76(2.84), 199.50(0.53), 341.65(0.40) |
| 326.9 1 | 9.4 4 | ¹⁸⁸ Tl(71 s) | 412.7(88), 592.0(61), 504.2(23.3) |
| 326.95 20 | 0.81 6 | ¹⁸⁶ Au(10.7 m) | 191.56(62), 298.67(25.4), 764.89(10.5) |
| 327 1 | 0.12 5 | ¹⁰⁰ Nb(1.5 s) | 535.60(45.7), 528.24(9.1), 159.547(8.8) |
| 327.0 | | ¹¹² Ru(1.75 s) | 244.6, 82.4 |
| 327.0 10 | †>3.3 | ¹⁵⁸ Ho(11.3 m) | 218.21(†100.0), 98.91(†70), 945.7(†37) |
| 327.05 30 | 0.0140 22 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 327.06 32 | 0.10 4 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| 327.1 5 | 0.066 24 | ¹⁰¹ Zr(2.1 s) | 119.3(10.8), 205.6(6.0), 912.2(3.48) |
| 327.1 10 | 0.28 | ¹⁴⁹ Er(8.9 s) | 1171.0(9.4), 171.5(6.5), 343.9(6.3) |
| 327.14 7 | 0.27 | ²²⁷ Ra(42.2 m) | 27.36(16), 300.07(4.6), 302.65(4.3) |
| • 327.14 7 | 0.038 4 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 327.18 8 | 7.0 5 | ¹¹⁴ Sb(3.49 m) | 1299.90(99), 887.60(17.4), 717.30(4.6) |
| 327.2 1 | 1.13 16 | ¹¹⁷ Ag(72.8 s) | 135.4(23), 337.7(10.3), 157.1(7.9) |
| • 327.20 5 | 0.19 4 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 327.3 3 | 52 | ²³² Np(14.7 m) | 819.187(33.3), 866.760(24.4), 863.89(20.3) |
| 327.32 | 0.112 21 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 327.32 | 2.2 3 | ²²⁸ Pa(22 h) | 911.205(4.19), 463.005(1.250), 964.770(4.25) |
| 327.4 2 | 0.8 | ¹⁴⁵ La(24.8 s) | 70.0(11), 355.8(3.8), 118.2(3.6) |
| • 327.4 10 | 0.085 16 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 396.00(34.3), 929.01(20.2) |
| 327.428 8 | 25.4 25 | ²⁴⁵ Pu(10.5 h) | 560.13(5.4), 308.222(4.9), 376.676(3.2) |
| • 327.428 8 | 83000 14 | ²⁴⁹ Bk(320 d) | 308.222(†15000) |
| 327.43 15 | >0.028 | ¹⁶⁴ Yb(75.8 m) | 40.928(1.147), 675.41(0.38), 390.6(0.31) |
| • 327.526 10 | 0.00372 19 | ¹⁴⁹ Pm(53.08 h) | 285.95(3.1), 859.46(0.109), 590.88(0.069) |
| • 327.526 10 | 4.03 12 | ¹⁴⁹ Eu(93.1 d) | 277.089(3.56), 22.510(2.32), 254.566(0.636) |
| 327.55 4 | 3.32 24 | ²⁰⁴ At(9.2 m) | 684.341(95), 516.318(90), 426.253(67.5) |
| 327.6 3 | 5.3 9 | ¹⁰⁸ Rh(6.0 m) | 433.937(88), 581.1(60), 947.27(49) |
| 327.60 15 | 2.35 17 | ¹⁶⁰ Yb(4.8 m) | 173.74(42.0), 215.78(20.2), 140.35(9.3) |
| 327.67 10 | 0.212 15 | ¹⁰¹ Mo(14.61 m) | 191.92(19), 590.91(16.4), 1012.47(12.8) |
| • 327.6829 7 | 18.1 5 | ¹⁷⁷ Lu(160.4 d) | 208.3664(57.7), 228.4838(37.0), 378.5029(29.7) |
| 327.69 8 | | ¹³² Ce(3.51 h) | 182.11(77), 155.37(10.5), 216.83(4.95) |
| 327.7 | 3.8 5 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 327.8 5 | 0.29 4 | ²⁰⁸ At(1.63 h) | 686.527(98), 660.040(89), 177.595(48.6) |
| 327.81 17 | 0.0030 10 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 327.9 3 | 0.6 | ¹³⁰ La(8.7 m) | 357.4(81.0), 550.7(25.9), 908.0(17.0) |
| 327.9 4 | †0.28 13 | ¹⁵⁵ Tm(21.6 s) | 226.8(†100), 531.7(†20), 88.1(†17) |
| 327.9 1 | †1.0 3 | ¹⁷² Ir(2.0 s) | 227.8(†100.0), 378.4(†62.0), 448.4(†40.5) |
| 327.96 10 | 0.139 11 | ²¹² Bi(60.55 m) | 39.858(1.091), 452.83(0.31), 288.07(0.31) |
| 327.995 2 | 2.95 16 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 327.995 2 | 1.90 14 | ²²⁸ Pa(22 h) | 911.205(4.19), 463.005(1.250), 964.770(4.25) |
| • 327.995 2 | 0.00282 5 | ²³² U(68.9 y) | 57.762(0.200), 129.065(0.0686), 270.243(0.00316) |
| 328.0 2 | 1.8 5 | ¹²¹ Cd(13.5 s) | 324.976(49.5), 1040.26(16.8), 349.937(12.9) |
| 328.0 1 | †3.1 3 | ¹²³ La(17 s) | 92.5(†100), 937.3(†43), 153.6(†43) |
| 328 | †0.8 | ²²⁴ Ac(2.9 h) | 156.4(†100), 140.8(†55), 261.6(†28) |
| 328.0 5 | 0.00023 4 | ²⁵⁵ Fm(20.07 h) | 81.477(0.81), 58.477(0.67), 80.92(0.27) |
| • 328.1 3 | 0.002 1 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 328.1 1 | 2.62 14 | ²⁰⁰ Po(11.5 m) | 671.0(34.0), 617.7(19.7), 434.4(9.3) |
| 328.12 10 | 0.00140 14 | ²⁰⁷ Tl(4.77 m) | 897.80(0.260), 569.702(0.00159) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|--|---|
| • 328.12 10 | 0.00067 8 | ²⁰⁷ Bi(31.55 y) | 569.702(97.74), 1063.662(74.5), 1770.237(6.87) |
| 328.12 10 | 0.0033 11 | ²¹¹ Po(0.516 s) | 897.80(0.561), 569.702(0.5) |
| 328.18 3 | 0.0297 15 | ¹³³ La(3.912 h) | 278.835(2.50), 302.353(1.648), 290.06(1.413) |
| 328.24 | 1.0 4 | ⁴² Sc(61.7 s) | 436.92(100), 1524.70(99.70), 1227.66(99.0) |
| 328.3 | 2.6 3 | ³⁸ Ca(440 ms) | 1567.9(21), 3211.2(0.29) |
| 328.3 2 | 2.08 20 | ¹²⁶ Ba(100 m) | 233.6(19.6), 257.6(7.6), 241.0(6.0) |
| 328.3 2 | 0.022 11 | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| • 328.32 6 | 0.0825 25 | ¹⁵¹ Gd(124 d) | 153.56(6.20), 243.28(5.60), 174.70(2.96) |
| 328.331 21 | †17.2 14 | ²²⁴ Rn(107 m) | 260.581(†100), 265.806(†93), 202.21(†21.9) |
| • 328.38 10 | 0.0033 5 | ¹¹⁵ Cd(53.46 h) | 336.240(45.9), 527.900(27.45), 492.3(8.03) |
| 328.4 1 | †0.54 5 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| • 328.40 3 | 0.206 7 | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 328.45 | >0.7 | ⁵⁰ Ca(13.9 s) | 256.894(98), 1519.30(62.0), 71.552(52) |
| 328.455 11 | 13.1 4 | ¹⁹⁴ Ir(19.15 h) | 293.545(2.55), 645.157(1.17), 938.70(0.599) |
| • 328.455 11 | 93 5 | ¹⁹⁴ Ir(171 d) | 482.833(97), 600.5(62), 687.7(59) |
| • 328.455 11 | 60 3 | ¹⁹⁴ Au(38.02 h) | 293.545(10.2), 1468.91(6.3), 2043.67(3.54) |
| 328.460 20 | 1.20 17 | ¹⁰⁶ Rh(131 m) | 511.842(85), 1045.83(30.4), 717.24(28.9) |
| • 328.460 20 | 1.14 5 | ¹⁰⁶ Ag(8.28 d) | 511.842(88), 1045.83(29.6), 717.24(28.9) |
| 328.5 5 | 3.29 7 | ¹³⁷ Pm(2.4 m) | 177.5(40.29), 108.6(35), 233.6(29.57) |
| • 328.537 11 | 6.0×10^{-5} 9 | ²³³ U(1.592×10^5 y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 328.6 3 | 22 5 | ¹¹⁶ Rh(0.9 s) | 340.5(90), 639.4(52), 538.4(40) |
| 328.6 3 | †104 19 | ¹⁴⁰ Tb(2.4 s) | 627.8(†54), 507.6 |
| 328.6 3 | | ¹⁴¹ Dy(0.9 s) | 507.6 |
| • 328.6 4 | 0.022 12 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 328.6 4 | †0.20 10 | ¹⁵⁵ Tm(21.6 s) | 226.8(†100), 531.7(†20), 88.1(†17) |
| 328.6 1 | †1.3 3 | ²²⁵ Fr(4.0 m) | 182.3(†100), 31.50(†91), 225.1(†55) |
| • 328.61 6 | 0.15 7 | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 280.41(30.2), 644.55(11.1) |
| 328.68 7 | 9.5 7 | ¹⁷⁴ W(31 m) | 35.42(14.1), 428.83(12.7), 378.54(8.3) |
| 328.7 1 | 9.3 6 | ⁹⁵ Rb(377.5 ms) | 352.02(49), 204.02(15.1), 680.7(14.8) |
| 328.7 1 | †71 | ⁹⁶ Rb(0.199 s) | 352.02(†700), 204.02(†200), 680.7(†121) |
| 328.7 2 | †12.7 15 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 234.0(†40.0) |
| 328.75 3 | 0.0519 19 | ⁹⁶ Y(5.34 s) | 1750.42(2.350), 2225.93(0.322), 475.33(0.188) |
| 328.75 3 | 0.5 | ⁹⁶ Y(9.6 s) | 1750.42(89), 915.0(60), 617.1(56) |
| • 328.762 8 | 20.3 3 | ¹⁴⁰ La(1.6781 d) | 1596.210(95), 487.021(45.5), 815.772(23.28) |
| 328.8 4 | †36 3 | ¹⁸³ Pt(43 s) | 629.3(†100), 316.7(†53), 312.6(†28) |
| • 328.828 13 | 0.0368 11 | ¹⁴⁷ Eu(24.1 d) | 197.299(27), 121.220(22.9), 677.516(9.8) |
| 328.83 8 | 1.12 11 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 328.84 5 | 2.58 12 | ¹⁴⁷ Pr(13.4 m) | 77.9921(15), 314.675(13.2), 641.380(10.0) |
| 328.85 2 | 0.38 4 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 328.9 3 | † $>7 \times 10^2$ | ¹⁵⁸ Er(2.29 h) | 71.91(†23300), 386.84(†111000), 248.58(†42000) |
| 328.9 2 | 0.0043 5 | ²²² Ra(38.0 s) | 324.22(2.77), 472.5(0.0040), 840.2(0.0025) |
| 328.97 16 | 2.2 3 | ¹⁸⁴ Au(53.0 s) | 162.97(50), 272.98(40), 362.47(17.5) |
| 329.0 2 | 0.18 3 | ¹³⁷ Pr(1.28 h) | 836.7(1.8), 433.9(1.28), 514.0(1.08) |
| • 329.0 8 | 0.014 7 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 329.0 | | ¹⁸⁰ Os(21.5 m) | 20.1(†100), 717.4, 667.0 |
| 329.058 16 | 0.123 4 | ⁹⁰ Nb(14.60 h) | 1129.224(92.7), 2318.968(82.03), 141.178(66.8) |
| 329.1 4 | 2.8 5 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 329.16 10 | 0.21 3 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 329.16 13 | 0.22 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 329.18 | 0.021 10 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 329.2 4 | 4.6 13 | ⁷³ Kr(27.0 s) | 177.8(65.8), 62.5(19.1), 454.8(15) |
| 329.2 2 | †14.6 19 | ¹⁹⁵ Bi(183 s) | 807.6(†100), 831.7(†100), 776.2(†95) |
| 329.3 3 | 0.24 12 | ¹⁶² Yb(18.87 m) | 163.35(40.0), 118.70(33.6), 576.10(3.24) |
| • 329.3 2 | 0.0112 9 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|--|---|
| • 329.312 9 | 0.0185 11 | ¹⁹² Ir(73.831 d) | 205.79549(3.300), 484.5780(3.184), 374.4852(0.721) |
| 329.33 3 | 12.2 11 | ¹¹⁸ I(8.5 m) | 605.71(99), 600.71(92), 614.42(65) |
| 329.38 17 | 0.0026 6 | ¹²³ I(13.27 h) | 158.97(83), 528.96(1.39), 440.02(0.428) |
| • 329.39 5 | 0.136 11 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 329.4 5 | 0.015 8 | ¹³⁸ Xe(14.08 m) | 258.411(31.5), 434.562(20.3), 1768.26(16.7) |
| 329.4 4 | 0.055 12 | ¹⁶² Ho(67.0 m) | 185.005(28.6), 1220.0(22.5), 282.864(11.3) |
| 329.4 3 | 5.1 11 | ¹⁸¹ Lu(3.5 m) | 652.5(22.0), 205.94(16.1), 574.9(15.4) |
| 329.433 17 | 0.125 25 | ¹⁵² Pm(4.1 m) | 121.7824(15.7), 841.586(2.17), 961.06(1.92) |
| • 329.433 17 | 0.1232 21 | ¹⁵² Eu(13.542 y) | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| 329.45 5 | 3.0 3 | ²⁰⁷ Rn(9.25 m) | 344.53(46), 747.15(14.2), 402.68(11.9) |
| 329.48 5 | 0.160 16 | ¹⁹⁴ Pb(12.0 m) | 581.82(18.8), 1519.45(16.4), 203.82(16.2) |
| 329.5 3 | 0.60 8 | ⁸³ Se(22.3 m) | 356.687(70), 510.17(43), 224.8(32.7) |
| 329.5 4 | 0.18 7 | ¹³⁹ Sm(2.57 m) | 273.7(37), 306.7(28.5), 596.3(8.0) |
| 329.5 | 1.82 13 | ¹⁵⁰ Pr(6.19 s) | 130.2(32), 722.5(7.0), 852.7(6.1) |
| 329.5 | | ²³⁸ Pa(2.3 m) | 1015.3(\dagger <100), 1014.6(\dagger <100), 635.18(\dagger 88) |
| 329.6 2 | \dagger 1 | ¹³⁹ I(2.29 s) | 527.7(\dagger 100), 571.2(\dagger 98), 536.6(\dagger 67) |
| 329.6 5 | 0.33 5 | ¹⁹⁶ Tl(1.84 h) | 426.0(84), 610.5(11.9), 635.5(9.8) |
| 329.64 4 | 2.32 15 | ¹³² Ce(3.51 h) | 182.11(77), 155.37(10.5), 216.83(4.95) |
| 329.67 14 | 0.22 4 | ¹⁸⁶ Ir(2.0 h) | 137.155(27), 767.508(21.2), 630.354(18.0) |
| • 329.7 10 | >0.030 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 396.00(34.3), 929.01(20.2) |
| 329.7 1 | 0.78 5 | ²⁴² U(16.8 m) | 67.60(9.6), 55.58(3.90), 585.0(1.92) |
| 329.71 23 | 79.9 26 | ⁹² Tc(4.23 m) | 1509.48(101), 773.04(100), 147.80(71) |
| 329.72 10 | 0.70 9 | ¹⁸⁷ Pt(2.35 h) | 106.46(9), 201.52(6.4), 110.04(5.7) |
| • 329.75 2 | 0.221 14 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 329.8 5 | \dagger 9 3 | ¹⁸⁹ Au(28.7 m) | 713.17(\dagger 100), 812.68(\dagger 63), 447.65(\dagger 55) |
| 329.851 20 | 0.0270 21 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 329.851 20 | \dagger 178 18 | ²²⁷ Th(18.72 d) | 235.971(\dagger 813), 50.13(\dagger 528), 256.25(\dagger 463) |
| 329.87 14 | 0.0032 10 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 329.9 1 | \dagger 1329 61 | ¹⁴⁵ Gd(85 s) | 386.6(\dagger 1220), 716.0(\dagger 341) |
| 329.9 1 | 2.7 2 | ¹⁴⁵ Gd(23.0 m) | 1757.9(34.2), 1880.6(32.6), 1041.8(9.9) |
| • 329.920 4 | 0.0092 5 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 329.920 4 | 0.196 20 | ¹⁵⁴ Tb(9.4 h) | 123.071(30), 247.925(22.1), 540.18(20) |
| 329.920 4 | | ¹⁵⁴ Tb(21.5 h) | 123.071(26), 1274.436(10.5), 2187.10(9.9) |
| 329.920 4 | | ¹⁵⁴ Tb(22.7 h) | 247.925(79), 346.643(69), 1419.81(46) |
| 330.0 5 | 1.25 13 | ¹⁸⁰ Lu(5.7 m) | 407.94(43.0), 1199.7(24.3), 1106.00(22.7) |
| • 330 7 | | ²⁴⁷ Cm(1.56×10^7 y) | 402.6(72), 278.0(3.4), 287.4(2.0) |
| 330.0 5 | 0.00044 8 | ²⁵⁵ Fm(20.07 h) | 81.477(0.81), 58.477(0.67), 80.92(0.27) |
| 330.06 1 | 2.7 | ²²⁷ Ra(42.2 m) | 27.36(16), 300.07(4.6), 302.65(4.3) |
| • 330.06 1 | 1.396 20 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 330.1 2 | 0.108 22 | ¹⁵⁰ Tb(3.48 h) | 638.05(72), 496.3(14.8), 792.5(4.39) |
| 330.10 24 | 2.75 17 | ¹⁶¹ Yb(4.2 m) | 78.20(34), 599.88(25.9), 631.45(13.9) |
| • 330.13 6 | 0.6 | ²¹⁰ Bi(3.04×10^6 y) | 265.832(50), 304.896(28), 649.42(3.8) |
| 330.2 2 | 8.6 5 | ¹²³ Xe(2.08 h) | 148.9(49), 178.1(14.9), 1093.4(2.79) |
| 330.2 2 | \dagger 15.1 15 | ¹⁸⁵ Hg(21.6 s) | 222.8(\dagger 100.0), 258.7(\dagger 98), 212.5(\dagger 58) |
| 330.22 22 | \dagger 2.3 3 | ¹⁴² Xe(1.22 s) | 571.83(\dagger 100), 657.05(\dagger 79), 538.24(\dagger 77) |
| 330.22 17 | 0.20 4 | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 330.24 8 | \dagger 100 7 | ¹⁵⁹ Yb(1.58 m) | 166.16(\dagger 500), 177.12(\dagger 159), 390.20(\dagger 113) |
| 330.24 4 | 1.10 7 | ²⁰⁰ Pt(12.5 h) | 76.21(13), 135.90(3.24), 243.71(2.49) |
| 330.27 5 | 0.0069 6 | ¹²⁷ Cs(6.25 h) | 411.95(62.8), 124.70(11.37), 462.31(5.07) |
| 330.30 11 | 0.39 5 | ⁹⁹ Sr(0.269 s) | 125.118(16.1), 536.12(14.0), 1198.12(9.2) |
| 330.3 4 | \dagger 2.3 3 | ¹⁸⁹ Hg(7.6 m) | 320.99(\dagger 100), 78.21(\dagger 63), 565.42(\dagger 48) |
| 330.30 10 | 0.246 15 | ²⁰⁷ Po(5.80 h) | 992.33(59.3), 742.64(28.2), 911.79(16.95) |
| 330.32 17 | 0.11 3 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 330.37 10 | 0.112 9 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-------------------------------------|--|
| 330.4 1 | 0.32 6 | $^{142}\text{Gd}(70.2 \text{ s})$ | 750.2(11.2), 178.90(11.20), 284.4(6.16) |
| 330.40 5 | 0.31 | $^{234}\text{Pa}(6.70 \text{ h})$ | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 330.40 4 | 0.46 | $^{234}\text{Pa}(6.70 \text{ h})$ | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 330.43 19 | 0.143 15 | $^{97}\text{Zr}(16.91 \text{ h})$ | 743.36(93), 507.64(5.03), 1147.97(2.61) |
| 330.5 5 | 0.46 18 | $^{104}\text{In}(1.8 \text{ m})$ | 658.0(100), 834.1(99), 878.1(29.4) |
| 330.5 7 | 12 5 | $^{139}\text{Eu}(17.9 \text{ s})$ | 267.3(31), 155.3(31), 190.1(25) |
| 330.50 10 | $\dagger 11 4$ | $^{159}\text{Yb}(1.58 \text{ m})$ | 166.16($\dagger 500$), 177.12($\dagger 159$), 390.20($\dagger 113$) |
| 330.5 2 | 8.3 6 | $^{176}\text{Tm}(1.9 \text{ m})$ | 189.57(44.5), 1069.3(34), 381.8(21.8) |
| 330.5 3 | 0.013 3 | $^{195}\text{Hg}(9.9 \text{ h})$ | 779.80(7), 61.46(6.2), 585.13(1.99) |
| • 330.54 10 | 0.0075 10 | $^{152}\text{Eu}(13.542 \text{ y})$ | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| 330.6 1 | 0.64 7 | $^{161}\text{Tm}(33 \text{ m})$ | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| • 330.619 21 | 0.52 4 | $^{172}\text{Lu}(6.70 \text{ d})$ | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 330.7 2 | $\dagger 0.8 3$ | $^{103}\text{Nb}(1.5 \text{ s})$ | 102.64($\dagger 100$), 641.1($\dagger 55$), 538.5($\dagger 34.0$) |
| 330.70 8 | 0.0116 6 | $^{123}\text{I}(13.27 \text{ h})$ | 158.97(83), 528.96(1.39), 440.02(0.428) |
| 330.7 2 | 0.114 21 | $^{183}\text{Ir}(58 \text{ m})$ | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 330.76 5 | $\dagger 4.98 19$ | $^{188}\text{Au}(8.84 \text{ m})$ | 265.63($\dagger 100$), 340.04($\dagger 23.9$), 605.5($\dagger 16.3$) |
| • 330.777 10 | 0.088 5 | $^{165}\text{Tm}(30.06 \text{ h})$ | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 330.78 10 | 0.37 8 | $^{204}\text{Bi}(11.22 \text{ h})$ | 899.15(98), 374.72(82), 984.02(59) |
| 330.8 | 6 | $^{133}\text{Pr}(6.5 \text{ m})$ | 134.3(14), 74.0(10), 315.6(10) |
| 330.85 10 | 0.67 8 | $^{105}\text{Ru}(4.44 \text{ h})$ | 724.21(47), 469.37(17.5), 676.36(15.7) |
| • 330.885 10 | 0.114 5 | $^{165}\text{Tm}(30.06 \text{ h})$ | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 330.9 5 | $\dagger 2.6 3$ | $^{103}\text{Mo}(67.5 \text{ s})$ | 83.4($\dagger 100$), 423.91($\dagger 69$), 45.8($\dagger 57$) |
| 330.90 23 | 0.46 10 | $^{105}\text{In}(5.07 \text{ m})$ | 131.37(41), 260.21(15.7), 604.11(9.2) |
| 330.9 5 | 0.45 8 | $^{166}\text{Lu}(2.65 \text{ m})$ | 228.12(77.3), 337.50(41), 367.95(31.4) |
| 330.9 2 | $\dagger 7 1$ | $^{181}\text{Hg}(3.6 \text{ s})$ | 147.8($\dagger 100$), 42.5($\dagger 25$), 1986.7($\dagger 17$) |
| 330.93 5 | $\dagger 8.9 2$ | $^{144}\text{Cs}(1.01 \text{ s})$ | 199.326($\dagger 100.0$), 639.00($\dagger 21.2$), 758.96($\dagger 20.6$) |
| 331.0 5 | $\dagger 13$ | $^{99}\text{Rb}(59 \text{ ms})$ | 90.8($\dagger 100$), 125.2($\dagger 40$), 1071.6($\dagger 26$) |
| 331.0 3 | 0.31 3 | $^{118}\text{I}(13.7 \text{ m})$ | 605.71(86.0), 545.12(10.9), 600.71(10.2) |
| 331.0 2 | 0.34 4 | $^{140}\text{Xe}(13.60 \text{ s})$ | 805.52(20), 1413.66(12.2), 1315.05(8.2) |
| 331.00 10 | 0.150 24 | $^{153}\text{Dy}(6.4 \text{ h})$ | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 331.0 3 | 0.0063 13 | $^{251}\text{Fm}(5.30 \text{ h})$ | 425.4(0.95), 480.4(0.392), 358.3(0.315) |
| 331.05 2 | 78 4 | $^{130}\text{Sb}(39.5 \text{ m})$ | 793.53(100), 839.49(100), 182.36(65) |
| 331.06 11 | 0.12 3 | $^{184}\text{Ta}(8.7 \text{ h})$ | 414.03(72), 252.848(43), 920.932(32.0) |
| 331.08 23 | 0.833 25 | $^{86}\text{Y}(14.74 \text{ h})$ | 1076.64(83), 627.72(32.6), 1153.01(30.5) |
| 331.1 2 | 9.7 4 | $^{109}\text{Sn}(18.0 \text{ m})$ | 1099.4(30), 649.90(28.0), 1321.3(11.9) |
| 331.1 2 | 48 | $^{122}\text{Cs}(21.0 \text{ s})$ | 512.0(3.8), 817.9(3.09), 843.0(1.90) |
| 331.1 2 | 94 | $^{122}\text{Cs}(4.5 \text{ m})$ | 497.1(79), 638.5(63), 560.3(14.0) |
| 331.1 6 | 0.056 24 | $^{175}\text{Ta}(10.5 \text{ h})$ | 207.4(14.0), 348.5(12.0), 266.9(10.8) |
| 331.1 2 | $\dagger 6 1$ | $^{227}\text{Rn}(22.5 \text{ s})$ | 162.14($\dagger 100$), 739.2($\dagger 65$), 686.2($\dagger 62$) |
| 331.12 10 | 0.00021 6 | $^{163}\text{Er}(75.0 \text{ m})$ | 1113.5(0.0490), 436.1(0.0285), 439.94(0.0276) |
| 331.19 3 | 79 5 | $^{201}\text{Pb}(9.33 \text{ h})$ | 361.27(9.9), 945.96(7.4), 907.56(5.7) |
| 331.2 4 | 2.86 16 | $^{51}\text{Sc}(12.4 \text{ s})$ | 1437.3(52), 2144.1(31.8), 1567.5(14.9) |
| • 331.2 6 | 0.040 15 | $^{131}\text{Te}(30 \text{ h})$ | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| • 331.220 4 | 0.067 7 | $^{77}\text{Br}(57.036 \text{ h})$ | 238.996(23), 520.639(22.4), 297.215(4.16) |
| 331.3 3 | 0.10 3 | $^{97}\text{Rb}(169.9 \text{ ms})$ | 167.1(26), 585.2(21.0), 600.5(10.6) |
| 331.355 19 | 0.232 7 | $^{163}\text{Tm}(1.810 \text{ h})$ | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 331.39 9 | 0.0025 8 | $^{95}\text{Ru}(1.643 \text{ h})$ | 336.43(70.2), 1096.76(21.0), 626.77(17.8) |
| • 331.4 2 | 0.0016 8 | $^{71}\text{As}(65.28 \text{ h})$ | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 331.4 2 | 0.32 5 | $^{117}\text{Cs}(8.4 \text{ s})$ | 204.8(15.0), 29.7(9.9), 205.6(6.8) |
| 331.4 4 | 0.162 18 | $^{120}\text{Xe}(40 \text{ m})$ | 25.1(30), 72.6(9), 178.1(6.8) |
| 331.4 4 | $\dagger 0.40 12$ | $^{155}\text{Tm}(21.6 \text{ s})$ | 226.8($\dagger 100$), 531.7($\dagger 20$), 88.1($\dagger 17$) |
| 331.4 3 | $\dagger 75 4$ | $^{187}\text{Pb}(18.3 \text{ s})$ | 393.4($\dagger 100$), 343.5($\dagger 75$), 331.4($\dagger 60$) |
| 331.4 3 | $\dagger 60 3$ | $^{187}\text{Pb}(18.3 \text{ s})$ | 393.4($\dagger 100$), 331.4($\dagger 75$), 343.5($\dagger 75$) |
| 331.4 5 | $\dagger 38 6$ | $^{191}\text{Hg}(49 \text{ m})$ | 252.5($\dagger 100$), 196.3($\dagger 65$), 224.7($\dagger 60$) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 331.4 1 | 0.072 10 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| • 331.479 44 | 0.020 3 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 331.5 2 | 0.12 4 | ¹³³ Te(12.5 m) | 312.072(62), 407.63(27.1), 1333.21(10.67) |
| 331.5 2 | †0.5 2 | ¹⁹² Bi(37 s) | 853.8(†100.0), 501.8(†80), 504.3(†39) |
| • 331.51 7 | 4.10 21 | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 280.41(30.2), 644.55(11.1) |
| 331.51 7 | †<106 | ¹⁰⁵ Ag(7.23 m) | 319.14(†63000), 306.25(†12800), 442.37(†5900) |
| 331.58 15 | 3.6 5 | ¹³¹ In(0.35 s) | 1654.6(0.56) |
| 331.6 2 | 1.57 20 | ⁹⁵ Rb(377.5 ms) | 352.02(49), 204.02(15.1), 680.7(14.8) |
| 331.6 2 | †14 | ⁹⁶ Rb(0.199 s) | 352.02(†700), 204.02(†200), 680.7(†121) |
| 331.6 9 | 4.3 11 | ¹⁹¹ Hg(50.8 m) | 252.5(57), 420.1(18.6), 578.6(17.6) |
| 331.6 2 | 0.59 8 | ¹⁹⁸ Tl(5.3 h) | 411.8044(82), 675.8874(11), 636.4(10.1) |
| 331.613 9 | 11.4 6 | ¹⁷⁸ Lu(23.1 m) | 426.383(97.0), 325.562(94.1), 213.440(81.4) |
| 331.613 9 | 31.19 19 | ¹⁷⁸ Ta(2.36 h) | 426.383(97.0), 325.562(94.1), 213.440(81.4) |
| 331.64 16 | 0.47 20 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 331.7 4 | 0.18 7 | ¹¹⁹ Cd(2.69 m) | 292.9(36.8), 343.0(16.9), 1609.7(10.9) |
| 331.7 4 | 0.47 4 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 331.7 6 | | ¹³¹ Sn(56.0 s) | 3267.5, 2470.5, 2039.25 |
| 331.7 6 | | ¹³¹ Sn(58.4 s) | 367.40, 285.0, 62.9 |
| 331.7 6 | †0.8 4 | ¹³¹ Sn(56.0 s) | 1226.03(†100), 450.03(†90), 798.50(†86) |
| 331.7 4 | †6.9 8 | ¹⁷² W(6.6 m) | 38.9(†100), 423.3(†44), 89.8(†33.0) |
| 331.7 2 | †2.2 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 331.7 3 | 0.017 3 | ²¹⁰ Rn(2.4 h) | 458.25(1.7), 648.70(0.843), 570.95(0.840) |
| 331.75 10 | 0.84 9 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 331.8 6 | †58 9 | ¹³⁴ Pr(11 m) | 293.5(†100), 299.0(†100), 1196.8(†100) |
| 331.8 6 | 0.21 | ²⁰³ Bi(11.76 h) | 820.3(30), 825.2(14.6), 896.9(13) |
| 331.88 12 | 0.114 21 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 331.91 10 | 51 5 | ²¹ Mg(122 ms) | 1384.1(10.1), 1715.9(0.65) |
| 331.94 14 | 1.3 4 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| 331.98 5 | 0.009 3 | ¹⁸³ Os(13.0 h) | 381.768(89.6), 114.463(20.63), 167.844(8.81) |
| 332 | | ¹⁰⁹ Tc(0.87 s) | 194.6(†100), 128.7(†51), 96.2(†48) |
| 332.0 4 | 0.024 11 | ¹¹³ Sb(6.67 m) | 497.96(80), 332.41(14.8), 88.25(2.7) |
| 332 1 | | ¹²² Ba(1.95 m) | 550.7, 388.7, 231.0 |
| 332 1 | 0.17 8 | ¹⁶⁷ Ho(3.1 h) | 346.547(56), 321.336(23.5), 237.873(5.0) |
| 332.0 4 | 5.5 11 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 332.00 5 | 0.153 17 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 332.0 2 | 0.015 6 | ²³⁰ Ac(122 s) | 454.95(8), 508.20(5.15), 1243.9(3.50) |
| • 332.0 2 | 0.055 16 | ²³⁰ Pa(17.4 d) | 951.95(1.65), 918.48(8.2), 454.95(6.27) |
| 332.0 4 | <0.0033 | ²⁵⁵ Fm(20.07 h) | 81.477(0.81), 58.477(0.67), 80.92(0.27) |
| 332.04 7 | 0.35 3 | ⁹³ Sr(7.423 m) | 590.238(67), 875.73(24.1), 888.13(21.8) |
| 332.1 1 | 0.035 9 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| • 332.10 5 | 1.41 5 | ¹²⁵ Sn(9.64 d) | 1067.10(10), 1089.15(4.59), 822.48(4.28) |
| 332.10 5 | 97.2 19 | ¹²⁵ Sn(9.52 m) | 1404.0(0.70), 589.6(0.20), 1483.9(0.18) |
| 332.1 4 | 0.05 5 | ¹⁴² La(91.1 m) | 641.285(47), 2397.8(13.3), 2542.7(10.00) |
| 332.1 2 | †2.0 6 | ²²⁹ Ac(62.7 m) | 164.522(†100), 569.1(†91), 261.92(†39) |
| • 332.16 7 | 0.0087 6 | ¹⁵¹ Gd(124 d) | 153.56(6.20), 243.28(5.60), 174.70(2.96) |
| 332.27 5 | 1.75 12 | ¹²² In(10.3 s) | 1140.55(98), 1001.58(50.7), 1190.58(20.5) |
| 332.30 20 | 0.13 4 | ¹⁶⁵ Yb(9.9 m) | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 332.3 2 | †7 1 | ²²⁷ Rn(22.5 s) | 162.14(†100), 739.2(†65), 686.2(†62) |
| 332.36 8 | 0.130 18 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| • 332.36 4 | 1.195 20 | ²³⁷ U(6.75 d) | 59.537(34.5), 208.00(21.14), 26.345(2.43) |
| • 332.36 4 | †0.490×10 ⁶ | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| 332.373 4 | 0.37 5 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 332.373 4 | 1.64 15 | ²²⁸ Pa(22 h) | 911.205(4.19), 463.005(1.250), 964.770(4.25) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|------------------------|---|--|
| • 332.373 4 | 4.9×10^{-5} 3 | ^{232}U (68.9 y) | 57.762(0.200), 129.065(0.0686), 270.243(0.00316) |
| 332.38 5 | 6.44 11 | ^{146}Cs (0.343 s) | 181.02(57.0), 557.76(9.18), 738.97(3.02) |
| 332.4 3 | 0.41 4 | ^{188}Hg (3.25 m) | 66.7(63), 190.1(4.40), 82.7(2.6) |
| 332.41 5 | 14.8 6 | ^{113}Sb (6.67 m) | 497.96(80), 88.25(2.7), 940.63(2.62) |
| 332.47 20 | 1.3 3 | ^{80}Zn (0.545 s) | 712.53(45.1), 715.40(33.8), 964.93(15.6) |
| • 332.5 2 | $\dagger 0.037$ 7 | ^{101}Rh (4.34 d) | 306.85($\dagger 115$), 545.06($\dagger 6.1$), 127.23($\dagger 0.85$) |
| 332.5 | | ^{129}Sb (4.40 h) | 812.8(43), 914.6(20.0), 544.7(17.9) |
| 332.50 10 | 0.150 24 | ^{153}Dy (6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 332.5 5 | $\dagger 3.8$ 12 | ^{189}Au (28.7 m) | 713.17($\dagger 100$), 812.68($\dagger 63$), 447.65($\dagger 55$) |
| 332.6 4 | 0.99 13 | ^{69}Se (27.4 s) | 97.98(66), 66.4(24.8), 691.8(16.6) |
| 332.6 2 | 0.044 9 | ^{94}Rb (2.702 s) | 1309.1(87), 836.9(87.10), 1577.5(31.8) |
| 332.6 2 | 0.00014 | ^{104}Rh (4.34 m) | 555.796(0.13), 767.72(0.0065), 1237.2(0.0042) |
| • 332.62 5 | 0.072 7 | ^{188}Ir (41.5 h) | 155.032(29.7), 2214.62(18.7), 632.99(18) |
| 332.66 10 | 0.151 16 | ^{204}Bi (11.22 h) | 899.15(98), 374.72(82), 984.02(59) |
| 332.7 3 | 0.75 11 | ^{113}Rh (2.72 s) | 189.7(17.0), 409.3(15.9), 219.6(3.88) |
| 332.7 1 | 1.50 15 | ^{148}Ce (56 s) | 269.519(17.0), 291.724(16.7), 121.169(13.2) |
| • 332.70 10 | 0.09 | ^{153}Tb (2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| • 332.70 10 | 0.07 | ^{153}Tb (2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 332.78 2 | 0.77 4 | ^{151}Nd (12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 332.81 11 | 0.26 5 | ^{187}Pt (2.35 h) | 106.46(9), 201.52(6.4), 110.04(5.7) |
| • 332.842 2 | 0.000494 3 | ^{239}Pu (24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| • 332.90 3 | 0.090 4 | ^{82}Br (35.30 h) | 776.517(83.5), 554.348(70.8), 619.106(43.4) |
| 332.9 5 | 56 8 | ^{114}Rh (1.85 s) | 361.9(20), 694.4(13), 783.0(5.6) |
| 332.9 5 | 87 5 | ^{114}Rh (1.85 s) | 519.8(48.4), 618.7(31), 647.8(28) |
| • 332.9 1 | 0.017 7 | ^{189}Re (24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| • 332.91 13 | 0.0101 22 | ^{148}Eu (54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| 332.91 5 | 2.56 16 | ^{228}Fr (39 s) | 473.7(10.2), 474.0(7.6), 410.40(6.3) |
| 332.944 13 | 6.15 30 | ^{149}Pr (2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 332.983 24 | 4.35 19 | ^{196}Ir (52 s) | 355.684(19), 779.630(10.4), 446.613(4.5) |
| • 332.983 24 | 22.9 5 | ^{196}Au (6.183 d) | 355.684(87), 521.175(0.389), 1091.331(0.149) |
| 333.0 4 | 0.22 4 | ^{61}Fe (5.98 m) | 1205.07(44), 1027.42(42.7), 297.90(22.2) |
| 333.0 3 | 0.120 24 | ^{141}Xe (1.73 s) | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| 333.0 | $\dagger > 0.26$ | ^{196}Ir (1.40 h) | 393.346($\dagger 105.2$), 521.175($\dagger 104$), 447.1($\dagger 102.1$) |
| • 333.0 10 | | ^{247}Cm (1.56×10^7 y) | 402.6(72), 278.0(3.4), 287.4(2.0) |
| 333.1 1 | 0.598 9 | ^{113}Ag (5.37 h) | 298.58(10), 258.8(1.64), 316.3(1.343) |
| 333.1 6 | 0.18 7 | ^{117}Ag (72.8 s) | 135.4(23), 337.7(10.3), 157.1(7.9) |
| 333.1 1 | | ^{191}Tl (5.22 m) | 452.6($\dagger 100$), 470.1($\dagger 98$), 391.6($\dagger 96$) |
| 333.1 2 | 0.30 3 | ^{230}Fr (19.1 s) | 711.0(13.6), 129.1(11.0), 728.4(7.3) |
| 333.1 3 | 0.034 17 | ^{245}Pu (10.5 h) | 327.428(25.4), 560.13(5.4), 308.222(4.9) |
| 333.17 26 | 0.19 4 | ^{151}Dy (17.9 m) | 386.10(19.4), 49.46(18.0), 546.31(14.3) |
| 333.20 26 | 1.15 18 | ^{159}Sm (11.37 s) | 189.79(46), 861.97(18.2), 254.43(9.8) |
| 333.2 | $\dagger 30$ | ^{182}Tl (3.1 s) | 351.8($\dagger 100$), 261.8($\dagger 60$), 413.6($\dagger 20$) |
| • 333.2 3 | 0.0028 16 | ^{193}Os (30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| 333.2 5 | 0.08 3 | ^{195}Ir (3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 333.2 2 | $\dagger 2$ | ^{256}Es (7.6 h) | 861.8($\dagger 100$), 231.1($\dagger 61$), 172.6($\dagger 49$) |
| 333.25 2 | 0.58 8 | ^{147}La (4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 333.28 20 | 0.6 3 | ^{105}Tc (7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 333.3 2 | $\dagger 100$ | ^{144}Gd (4.5 m) | 2432.6($\dagger 94.8$), 629.5($\dagger 32.4$), 347.1($\dagger 27.9$) |
| • 333.37 2 | 14.6 4 | ^{249}Cf (351 y) | 388.16(66), 252.80(2.50), 266.62(0.69) |
| 333.4 5 | 0.045 19 | ^{92}Kr (1.840 s) | 142.307(64), 1218.6(60), 812.6(14.6) |
| 333.4 4 | 0.44 15 | ^{139}Sm (2.57 m) | 273.7(37), 306.7(28.5), 596.3(8.0) |
| • 333.4 4 | 0.000058 16 | ^{186}Re (90.64 h) | 137.155(8.22), 767.508(0.0255), 630.354(0.0230) |
| 333.5 | 0.23 11 | ^{185}Au (4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 333.5 1 | 0.11 4 | ^{223}Ac (2.10 m) | 98.58(0.891), 191.3(0.58), 83.55(0.57) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 333.5 5 | †8.8 13 | ²⁴⁴ Bk(4.35 h) | 891.5(†100), 217.6(†88), 921.5(†19) |
| 333.6 2 | 0.038 3 | ¹³⁵ I(6.57 h) | 1260.409(28.90), 1131.511(22.74), 1678.027(9.62) |
| 333.61 12 | 0.07 4 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| 333.66 6 | 0.78 4 | ¹⁰¹ Mo(14.61 m) | 191.92(19), 590.91(16.4), 1012.47(12.8) |
| 333.67 3 | 2.10 12 | ²⁰⁸ At(1.63 h) | 686.527(98), 660.040(89), 177.595(48.6) |
| 333.7 2 | 0.23 5 | ¹²³ Cs(5.94 m) | 97.3(23), 596.7(10.1), 83.3(4.1) |
| 333.7 | †100 13 | ¹⁸⁹ Tl(2.3 m) | 942.2(†69), 451.0(†49), 522.3(†27) |
| 333.7 1 | 0.82 4 | ²³⁶ Pa(9.1 m) | 642.35(37.0), 687.59(9.9), 1762.7(6.0) |
| 333.8 3 | 0.63 9 | ¹⁰⁴ Tc(18.3 m) | 358.0(89), 530.5(15.6), 535.1(14.7) |
| 333.8 2 | †6.8 13 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 234.0(†40.0) |
| 333.8 1 | †1.0 5 | ¹⁷² Ir(2.0 s) | 227.8(†100.0), 378.4(†62.0), 448.4(†40.5) |
| 333.86 16 | 0.089 15 | ¹³⁸ Cs(33.41 m) | 1435.795(76.3), 462.796(30.7), 1009.78(29.8) |
| 333.90 19 | 0.7 4 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 333.9 1 | 0.090 11 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| 333.9 2 | 0.44 3 | ¹²⁹ Ba(2.23 h) | 6.545(23.7), 214.30(13.4), 220.83(8.54) |
| 333.93 4 | 1.76 9 | ¹⁹⁹ Tl(7.42 h) | 455.46(12.4), 208.20597(12.3), 247.26(9.3) |
| • 333.965 13 | 0.00179 14 | ¹⁶⁹ Yb(32.026 d) | 63.12077(44.2), 197.95788(35.8), 177.21402(22.16) |
| 333.971 12 | 68 | ¹⁵⁰ Pm(2.68 h) | 1324.51(17.5), 1165.739(15.8), 831.92(11.9) |
| 333.971 12 | 4.0 3 | ¹⁵⁰ Eu(12.8 h) | 406.52(2.81), 1165.739(0.257), 921.17(0.210) |
| • 333.971 12 | 96 | ¹⁵⁰ Eu(35.8 y) | 439.401(80.4), 584.274(52.6), 737.455(9.60) |
| 333.99 6 | 19 | ¹³⁶ Te(17.5 s) | 2077.9(22), 578.75(18), 2569.4(15) |
| 333.99 6 | | ¹³⁷ Te(2.49 s) | 738.2, 630.7, 578.75 |
| • 333.99 5 | 0.100 6 | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 334.0 3 | 35 | ⁸⁷ Se(5.85 s) | 242.5(37), 573.2(19), 468.0(18) |
| 334.0 10 | | ¹⁵¹ Ho(35.2 s) | 527.4(63), 775.53(9.2), 209.5(5.69) |
| 334 | | ²¹⁷ At(32.3 ms) | 258.5(0.056), 593.1(0.0120), 455 |
| 334.01 8 | †1.06 8 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 334.02 17 | 0.11 3 | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 334.03 5 | 0.80 8 | ¹²³ Cd(1.82 s) | 1165.86(25.7), 1027.45(22.6), 2102.81(12.5) |
| 334.05 5 | 1.3 4 | ¹²³ Ag(0.309 s) | 263.87(35.9), 409.79(13.2), 591.30(8.2) |
| 334.06 6 | 1.09 15 | ⁵⁵ V(6.54 s) | 517.71(73), 880.70(18.1), 921.10(4.6) |
| 334.061 10 | 0.31 3 | ¹⁶² Ho(67.0 m) | 185.005(28.6), 1220.0(22.5), 282.864(11.3) |
| 334.1 1 | 13.5 3 | ¹⁴⁵ Ho(2.4 s) | 339.8(15), 312.9(14.3), 401.8(12.8) |
| 334.1 4 | 0.056 21 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 334.2 6 | †73 10 | ¹³⁴ Pr(11 m) | 293.5(†100), 299.0(†100), 1196.8(†100) |
| 334.245 5 | 3.32 11 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| • 334.263 15 | >0.006 | ¹⁷³ Lu(1.37 y) | 272.105(21.2), 78.63(11.87), 100.724(5.24) |
| • 334.27 1 | 12.49 15 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 334.27 4 | | ¹³³ Sb(2.5 m) | 1096.22(43.0), 817.8(18.5), 2755(12.5) |
| 334.3 2 | 0.050 10 | ²¹⁰ At(8.1 h) | 1181.39(99.3), 245.31(79), 1483.39(46.5) |
| • 334.309 2 | 2.07 3 | ²³⁹ Np(2.3565 d) | 106.125(27.2), 277.599(14.38), 228.183(10.76) |
| 334.309 2 | 0.0042 5 | ²³⁹ Am(11.9 h) | 277.599(15.0), 228.183(11.3), 209.753(3.50) |
| • 334.309 2 | 0.0239 20 | ²⁴³ Cm(29.1 y) | 277.599(14.0), 228.183(10.6), 209.753(3.29) |
| • 334.321 11 | 0.109 4 | ¹⁷³ Lu(1.37 y) | 272.105(21.2), 78.63(11.87), 100.724(5.24) |
| • 334.34 10 | 0.0149 21 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 334.381 20 | 0.0099 9 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 334.381 20 | †69 7 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 334.4 1 | 9.0 13 | ⁶⁰ Zn(2.38 m) | 670.3(64), 61.4(26), 273.4(10.9) |
| 334.4 2 | 0.38 | ¹⁴⁵ Ba(4.31 s) | 96.6(17), 91.9(7), 65.9(5) |
| 334.441 10 | 0.83 6 | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| • 334.5 5 | 0.07 4 | ¹⁰¹ Rh(3.3 y) | 127.23(73), 197.6(70.8), 324.8(13.4) |
| 334.5 4 | 3.7 13 | ¹⁸¹ Lu(3.5 m) | 652.5(22.0), 205.94(16.1), 574.9(15.4) |
| 334.5 | >0.026 | ¹⁹⁷ Tl(2.84 h) | 425.84(12.9), 152.22(7.2), 1411.34(4.5) |
| 334.52 4 | 0.40 3 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 334.6 1 | 94 | ¹⁵⁴ Ho(3.10 m) | 412.4(79), 477.1(55), 406.9(19.0) |
| 334.6 1 | 84 | ¹⁵⁴ Ho(11.76 m) | 412.4(15.0), 873.4(12.5), 569(11.1) |
| 334.6 3 | 0.20 8 | ¹⁸¹ Os(105 m) | 238.75(44), 826.77(20), 118.03(12.9) |
| 334.65 14 | 0.053 18 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 334.69 15 | †16 3 | ¹⁸⁷ Hg(1.9 m) | 233.38(†100), 376.34(†38), 240.26(†33) |
| 334.7 5 | 0.47 | ¹⁰¹ Cd(1.2 m) | 98.0(47), 1722.5(11), 1259.3(8) |
| 334.7 2 | 1.6 4 | ¹⁰³ Zr(1.3 s) | 248(100), 164.05(94), 126.30(84) |
| 334.7 3 | 0.06 4 | ¹⁹³ Au(17.65 h) | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| 334.71 3 | 0.145 7 | ⁸⁸ Kr(2.84 h) | 2392.11(34.6), 196.301(25.98), 2195.842(13.18) |
| 334.73 10 | †12.3 8 | ¹⁴² Xe(1.22 s) | 571.83(†100), 657.05(†79), 538.24(†77) |
| 334.78 14 | 0.47 5 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| • 334.8 2 | 0.27 1 | ⁵⁹ Fe(44.503 d) | 1099.251(56.5), 1291.596(43.2), 192.349(3.08) |
| 334.80 15 | 0.28 7 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 334.83 2 | 0.36 5 | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 334.9 5 | 0.033 17 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| 334.9 2 | 0.028 3 | ²⁴⁷ Cf(3.11 h) | 294.1(0.98), 447.8(0.55), 417.9(0.34) |
| 334.95 10 | †19 2 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| 334.963 19 | 0.122 4 | ¹⁵⁵ Dy(9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| 335.0 2 | 0.6 2 | ¹⁰⁴ Mo(60 s) | 68.8(55), 69.7(17.8), 36.3(14) |
| 335 | 2 | ¹²⁵ Cs(45 m) | 526(24), 111.8(9), 412(5) |
| 335.0 1 | 1.466 12 | ¹⁴² Ba(10.6 m) | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| 335 1 | 0.22 | ¹⁴² Gd(70.2 s) | 750.2(11.2), 178.90(11.20), 284.4(6.16) |
| 335 | †63 | ¹⁸⁹ Tl(1.4 m) | 317.5(†100), 215.6(†90), 228.4(†50) |
| 335.02 8 | 0.29 4 | ¹⁶² Yb(18.87 m) | 163.35(40.0), 118.70(33.6), 576.10(3.24) |
| 335.03 8 | 0.18 4 | ²⁰⁵ Po(1.66 h) | 872.39(37), 1001.21(28.8), 849.83(25.5) |
| 335.04 5 | 1.00 4 | ²²⁴ Fr(3.30 m) | 215.985(33.1), 131.613(16.3), 836.90(9.8) |
| 335.10 3 | 16.8 15 | ¹⁵⁸ Tm(3.98 m) | 192.13(62), 1149.83(7.6), 628.03(6.7) |
| 335.1 1 | 1.2 5 | ²⁰⁸ Fr(59.1 s) | 635.8(10), 778.5(6.8), 325.3(5.2) |
| • 335.1 5 | 0.000149 15 | ²⁵³ Es(20.47 d) | 41.79(0.050), 389.11(0.0264), 387.1(0.00810) |
| 335.11 10 | †26.1 11 | ¹⁹³ Tl(21.6 m) | 324.37(†100), 1044.7(†59), 676.10(†48) |
| 335.2 4 | 0.58 5 | ¹⁷² Ta(36.8 m) | 214.02(46), 95.23(17.5), 1109.27(12.4) |
| 335.219 12 | 0.591 15 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 335.23 3 | 3.53 25 | ²⁰⁴ At(9.2 m) | 684.341(95), 516.318(90), 426.253(67.5) |
| 335.258 20 | 9.53 19 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| 335.28 9 | 0.107 10 | ¹³⁸ Xe(14.08 m) | 258.411(31.5), 434.562(20.3), 1768.26(16.7) |
| • 335.38 3 | 0.095 2 | ²³⁷ U(6.75 d) | 59.537(34.5), 208.00(21.14), 26.345(2.43) |
| • 335.38 3 | †0.960×10 ⁶ | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| 335.4 1 | 1.30 13 | ¹⁰⁷ Tc(21.2 s) | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| 335.4 7 | 0.048 24 | ¹⁴¹ Xe(1.73 s) | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| 335.4 6 | †0.8 | ¹⁷⁹ Os(6.5 m) | 65.39(†100), 218.6(†17), 32.3(†17) |
| 335.4 5 | †2.8 3 | ¹⁸² Ir(15 m) | 273.23(†100), 126.79(†77), 236.3(†21.0) |
| 335.4 2 | †13.5 20 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 335.4 2 | | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 335.4 4 | 0.12 6 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| • 335.44 7 | 0.18 3 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 335.46 8 | 0.27 3 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 335.5 2 | 0.050 | ¹⁴⁰ Sm(14.82 m) | 225.5(>10), 225.4(10), 140.0(5.0) |
| 335.5 5 | †>1.5 | ¹⁵² Tb(17.5 h) | 344.281(†1500), 586.294(†223), 271.135(†203) |
| 335.55 10 | 0.22 5 | ²⁰² Pb(3.53 h) | 490.47(9.1), 459.72(8.6), 389.94(6.2) |
| 335.59 11 | †28 4 | ¹⁸¹ Pt(51 s) | 289.29(†100), 111.97(†100), 230.15(†92) |
| 335.6 2 | 0.22 4 | ¹⁴⁰ Xe(13.60 s) | 805.52(20), 1413.66(12.2), 1315.05(8.2) |
| • 335.69 11 | 0.0102 14 | ¹⁵⁶ Eu(15.19 d) | 811.79(9.70), 88.9667(8.4), 1230.68(7.98) |
| 335.7 2 | 0.011 3 | ¹²¹ I(2.12 h) | 212.189(84), 532.08(6.07), 598.74(1.47) |
| 335.700 5 | 3.12 18 | ¹⁴⁷ Pr(13.4 m) | 77.9921(15), 314.675(13.2), 641.380(10.0) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|----------------------------|--|---|
| • 335.7 1 | 0.036 14 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| 335.76 10 | 0.47 7 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 335.77 14 | 0.28 5 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 335.8 | 0.27 | ⁹⁶ Y(9.6 s) | 1750.42(89), 915.0(60), 617.1(56) |
| • 335.8 1 | 0.078 10 | ¹²⁴ Sb(60.20 d) | 602.730(97.8), 1690.980(47.3), 722.786(10.76) |
| • 335.8 1 | 0.018 9 | ¹²⁴ I(4.18 d) | 602.730(60), 1690.980(10.41), 722.786(9.98) |
| 335.8 2 | 0.26 6 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 335.9 5 | 5.3 13 | ⁷⁶ Ga(32.6 s) | 562.93(66), 545.51(26.0), 1108.41(15.8) |
| 335.9 2 | 1.04 14 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 335.98 5 | 58.9 21 | ⁸¹ Ge(7.6 s) | 792.94(34), 1495.53(19.9), 93.10(13) |
| 335.98 5 | 12.8 23 | ⁸¹ Ge(7.6 s) | 93.10(26), 197.30(12.3), 737.74(10.5) |
| 336 1 | 2.65 17 | ³⁰ Na(48 ms) | 1040(10.6), 1638.0(0.80), 2211.3(0.50) |
| 336.0 1 | 10.4 4 | ⁷³ Br(3.4 m) | 64.9(37.0), 699.8(9.1), 125.6(7.55) |
| 336. 3 | 2.3 8 | ¹¹⁴ Rh(1.85 s) | 332.9(87), 519.8(48.4), 618.7(31) |
| 336.0 1 | 1.7 2 | ¹²⁹ Sn(2.23 m) | 645.13(100), 80.5(6.6), 913.2(5.0) |
| 336.0 | 0.41 | ¹³⁴ Nd(8.5 m) | 163.2(58), 288.9(13), 216.8(12) |
| 336.0 3 | 0.47 10 | ¹³⁶ Nd(50.65 m) | 108.90(32), 40.2(18.9), 574.8(10.4) |
| 336 1 | 0.06 | ¹⁴² Gd(70.2 s) | 750.2(11.2), 178.90(11.20), 284.4(6.16) |
| 336.02 3 | 0.46 5 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 336.1 5 | 0.98 20 | ⁹⁶ Pd(122 s) | 124.70(65), 762.3(50.0), 499.7(17.9) |
| 336.1 1 | 0.0107 13 | ¹²⁷ Cs(6.25 h) | 411.95(62.8), 124.70(11.37), 462.31(5.07) |
| 336.1 1 | $\dagger 1.56 \times 10^3$ | ²⁵⁸ Er(2.29 h) | 71.91($\dagger 23300$), 386.84($\dagger 111000$), 248.58($\dagger 42000$) |
| • 336.113 12 | 0.000112 2 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 336.2 1 | 17.1 20 | ¹⁴¹ Gd(14 s) | 215.8(54), 525.9(17), 120.6(9.3) |
| 336.2 2 | 0.231 22 | ²³⁰ Fr(19.1 s) | 711.0(13.6), 129.1(11.0), 728.4(7.3) |
| • 336.240 12 | 45.9 1 | ¹¹⁵ Cd(53.46 h) | 527.900(27.45), 492.3(8.03), 260.890(1.94) |
| • 336.240 12 | 0.00494 16 | ¹¹⁵ Cd(44.6 d) | 933.8(2.000), 1290.580(0.890), 484.470(0.290) |
| 336.3 3 | 0.06 | ¹¹³ Pd(93 s) | 95.74(3.3), 643.7(3.0), 739.63(2.4) |
| 336.3 2 | $\dagger 50$ 3 | ¹⁹¹ Tl(5.22 m) | 452.6($\dagger 100$), 470.1($\dagger 98$), 391.6($\dagger 96$) |
| 336.34 9 | 0.058 12 | ²⁰⁴ Bi(11.22 h) | 899.15(98), 374.72(82), 984.02(59) |
| • 336.38 15 | 0.00025 3 | ²³⁸ Np(2.117 d) | 984.45(27.8), 1028.54(20.3), 1025.87(9.6) |
| • 336.38 15 | 6.8×10^{-7} 24 | ²⁴² Cm(162.8 d) | 44.08(0.0325), 101.90(0.0025), 157.42(0.0014) |
| 336.4 | | ¹³¹ La(59 m) | 108.081(25.0), 417.783(18.0), 365.162(16.9) |
| 336.43 3 | 70.2 5 | ⁹⁵ Ru(1.643 h) | 1096.76(21.0), 626.77(17.8), 1178.66(5.16) |
| 336.45 24 | 0.60 6 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| • 336.472 2 | 0.0326 25 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 336.5 4 | 0.08 3 | ¹⁹⁸ Tl(5.3 h) | 411.8044(82), 675.8874(11), 636.4(10.1) |
| 336.5 1 | 0.141 14 | ¹⁹⁹ Tl(7.42 h) | 455.46(12.4), 208.20597(12.3), 247.26(9.3) |
| 336.55 12 | 0.98 11 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 336.59 22 | $\dagger 2.4$ 5 | ¹⁸⁷ Hg(1.9 m) | 233.38($\dagger 100$), 376.34($\dagger 38$), 240.26($\dagger 33$) |
| • 336.61 2 | 0.00054 8 | ²³³ U(1.592×10^5 y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| • 336.620 4 | 0.00909 14 | ¹⁶⁹ Yb(32.026 d) | 63.12077(44.2), 197.95788(35.8), 177.21402(22.16) |
| 336.63 4 | 0.107 3 | ⁷² Ga(14.10 h) | 834.01(96), 2201.69(25.9), 629.95(24.8) |
| 336.7 2 | $\dagger 32$ 3 | ¹⁸⁵ Hg(21.6 s) | 222.8($\dagger 100.0$), 258.7($\dagger 98$), 212.5($\dagger 58$) |
| 336.7 2 | $\dagger 40$ 3 | ²⁰² Po(44.7 m) | 688.6($\dagger 1000$), 316.0($\dagger 286$), 165.7($\dagger 174$) |
| 336.8 4 | 0.138 13 | ²⁰⁷ At(1.80 h) | 814.41(44.5), 588.33(19.2), 300.654(12.8) |
| 336.9 1 | 1.13 23 | ¹¹⁷ Cs(8.4 s) | 204.8(15.0), 29.7(9.9), 205.6(6.8) |
| 336.98 17 | 0.083 17 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| • 337.0 3 | $\dagger 0.045$ 8 | ¹⁰¹ Rh(4.34 d) | 306.85($\dagger 115$), 545.06($\dagger 6.1$), 127.23($\dagger 0.85$) |
| 337.1 5 | $\dagger 2.1$ 5 | ¹⁴² Xe(1.22 s) | 571.83($\dagger 100$), 657.05($\dagger 79$), 538.24($\dagger 77$) |
| 337.12 16 | 0.046 13 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 337.2 3 | 0.23 10 | ¹²¹ Cs(155 s) | 153.9(15.2), 239.6(7.7), 427.1(3.63) |
| 337.2 3 | 0.18 8 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 337.29 7 | $\dagger 7.04$ 19 | ¹⁹⁶ Bi(240 s) | 1049.21($\dagger 21.1$), 371.93($\dagger 20.8$), 689.00($\dagger 19.2$) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------------|-------------------------------------|--|
| 337.3 1 | 0.65 7 | $^{107}\text{Tc}(21.2 \text{ s})$ | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| 337.3 5 | 0.006 | $^{247}\text{Cf}(3.11 \text{ h})$ | 294.1(0.98), 447.8(0.55), 417.9(0.34) |
| • 337.3 5 | 5.4×10^{-5} 5 | $^{253}\text{Es}(20.47 \text{ d})$ | 41.79(0.050), 389.11(0.0264), 387.1(0.00810) |
| 337.32 20 | 0.02 | $^{113}\text{Pd}(93 \text{ s})$ | 95.74(3.3), 643.7(3.0), 739.63(2.4) |
| • 337.32 3 | 0.338 4 | $^{160}\text{Tb}(72.3 \text{ d})$ | 879.383(30.01), 298.580(25.51), 966.171(25.21) |
| 337.32 3 | $\dagger 0.32$ 14 | $^{160}\text{Ho}(5.02 \text{ h})$ | 728.18($\dagger 100$), 879.383($\dagger 65.9$), 962.317($\dagger 59.1$) |
| 337.32 3 | 0.15 6 | $^{160}\text{Ho}(25.6 \text{ m})$ | 728.18(46.9), 879.383(26.6), 962.317(25.6) |
| 337.34 10 | 0.62 12 | $^{79}\text{Rb}(22.9 \text{ m})$ | 688.1(23), 182.77(19.2), 143.41(13.9) |
| 337.4 6 | 0.42 18 | $^{104}\text{In}(1.8 \text{ m})$ | 658.0(100), 834.1(99), 878.1(29.4) |
| 337.4 3 | 100 | $^{118}\text{Cs}(14 \text{ s})$ | 472.8(37.4), 586.6(15.4), 590.6(11.0) |
| 337.45 4 | 14.5 4 | $^{209}\text{Rn}(28.5 \text{ m})$ | 408.32(50.3), 745.78(22.8), 689.26(9.7) |
| 337.50 15 | 0.025 8 | $^{90}\text{Nb}(14.60 \text{ h})$ | 1129.224(92.7), 2318.968(82.03), 141.178(66.8) |
| 337.50 20 | 1.13 19 | $^{91}\text{Tc}(3.14 \text{ m})$ | 2450.90(13.5), 1639.90(9.2), 1605.20(7.77) |
| 337.5 3 | $\dagger 27.9$ 24 | $^{113}\text{Ru}(0.80 \text{ s})$ | 263.2($\dagger 100$), 211.7($\dagger 31.0$), 657.9($\dagger 24.0$) |
| 337.5 1 | | $^{137}\text{Sm}(45 \text{ s})$ | 380.5($\dagger 100$), 163.7($\dagger 85$), 408.3($\dagger 40$) |
| 337.50 3 | 41 | $^{166}\text{Lu}(2.65 \text{ m})$ | 228.12(77.3), 367.95(31.4), 102.38(25.2) |
| 337.51 18 | 0.085 14 | $^{162}\text{Tm}(21.70 \text{ m})$ | 102.00(17.5), 798.68(8.4), 227.52(7) |
| 337.51 18 | 1.6 3 | $^{162}\text{Tm}(24.3 \text{ s})$ | 811.52(6.5), 798.68(5.2), 227.52(5) |
| 337.51 20 | 0.0124 16 | $^{176}\text{Ta}(8.09 \text{ h})$ | 1159.28(25), 88.34(12), 1224.93(6) |
| 337.54 20 | 0.033 11 | $^{137}\text{Pr}(1.28 \text{ h})$ | 836.7(1.8), 433.9(1.28), 514.0(1.08) |
| 337.6 3 | 0.55 7 | $^{119}\text{Cd}(2.69 \text{ m})$ | 292.9(36.8), 343.0(16.9), 1609.7(10.9) |
| 337.6 3 | 0.097 12 | $^{119}\text{Cd}(2.20 \text{ m})$ | 1025.0(24.8), 2021.3(22.6), 720.7(17.9) |
| 337.6 4 | 0.13 9 | $^{207}\text{Rn}(9.25 \text{ m})$ | 344.53(46), 747.15(14.2), 402.68(11.9) |
| 337.63 6 | 0.232 5 | $^{77}\text{Ge}(11.30 \text{ h})$ | 264.44(54), 211.03(30.8), 215.50(28.6) |
| 337.7 1 | 9.3 14 | $^{117}\text{Ag}(5.34 \text{ s})$ | 135.4(48), 386.8(39.9), 298.1(21.1) |
| 337.7 1 | 10.3 6 | $^{117}\text{Ag}(72.8 \text{ s})$ | 135.4(23), 157.1(7.9), 426.2(6.9) |
| 337.7 2 | 0.310 23 | $^{142}\text{Ba}(10.6 \text{ m})$ | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| • 337.7 5 | 0.0010 8 | $^{193}\text{Os}(30.5 \text{ h})$ | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| 337.7 5 | 0.17 | $^{203}\text{Bi}(11.76 \text{ h})$ | 820.3(30), 825.2(14.6), 896.9(13) |
| 337.7 10 | 0.0086 22 | $^{219}\text{Rn}(3.96 \text{ s})$ | 271.23(10.8), 401.81(6.37), 130.59(0.119) |
| • 337.7 2 | 0.0089 5 | $^{237}\text{U}(6.75 \text{ d})$ | 59.537(34.5), 208.00(21.14), 26.345(2.43) |
| • 337.7 2 | $\dagger 4.3 \times 10^4$ 3 | $^{241}\text{Am}(432.2 \text{ y})$ | 59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$) |
| 337.713 5 | 0.181 19 | $^{179}\text{Lu}(4.59 \text{ h})$ | 214.335(11.3), 214.930(0.46), 123.3790(0.45) |
| 337.76 20 | $\dagger 0.60$ 5 | $^{184}\text{Ir}(3.09 \text{ h})$ | 263.97($\dagger 100$), 119.80($\dagger 45$), 390.38($\dagger 38$) |
| 337.8 1 | $\dagger 1.28$ 12 | $^{129}\text{Ba}(2.17 \text{ h})$ | 182.30($\dagger 100$), 1459.1($\dagger 50.0$), 202.38($\dagger 33.7$) |
| 337.80 10 | 0.50 4 | $^{151}\text{Dy}(17.9 \text{ m})$ | 386.10(19.4), 49.46(18.0), 546.31(14.3) |
| • 337.8 2 | 0.00016 8 | $^{193}\text{Os}(30.5 \text{ h})$ | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| • 337.85 9 | 0.046 7 | $^{172}\text{Lu}(6.70 \text{ d})$ | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 337.9 | 0.044 | $^{147}\text{Ba}(0.893 \text{ s})$ | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 337.9 2 | 0.31 10 | $^{154}\text{Tb}(9.4 \text{ h})$ | 123.071(30), 247.925(22.1), 540.18(20) |
| 337.9 2 | 1.2 4 | $^{154}\text{Tb}(22.7 \text{ h})$ | 247.925(79), 346.643(69), 1419.81(46) |
| 338.0 4 | 0.0046 11 | $^{75}\text{Ge}(82.78 \text{ m})$ | 264.6584(11), 198.6031(1.19), 468.8(0.223) |
| 338.0 2 | $\dagger 14$ | $^{138}\text{Eu}(12.1 \text{ s})$ | 346.6($\dagger 100$), 544.2($\dagger 55$), 685.4($\dagger 41$) |
| 338.05 3 | 8.6 6 | $^{66}\text{Ge}(2.26 \text{ h})$ | 43.89(28.7), 381.85(28), 272.97(10.4) |
| 338.07 2 | 1.68 10 | $^{161}\text{Gd}(3.66 \text{ m})$ | 360.94(0.59), 314.92(22.7), 102.315(13.9) |
| 338.1 2 | | $^{146}\text{Dy}(29 \text{ s})$ | 2156.8, 1915.7, 1876.7 |
| 338.1 8 | $\dagger 1.12 \times 10^3$ 23 | $^{234}\text{Pa}(1.17 \text{ m})$ | 1001.03($\dagger 837000$), 766.38($\dagger 294000$), 742.81($\dagger 80000$) |
| • 338.17 10 | 0.032 5 | $^{195}\text{Hg}(41.6 \text{ h})$ | 261.75(30.9), 560.27(7), 387.87(2.15) |
| 338.20 10 | 0.34 3 | $^{89}\text{Kr}(3.15 \text{ m})$ | 220.948(20.1), 586.03(16.6), 904.27(7.2) |
| 338.2 1 | 0.48 6 | $^{101}\text{Zr}(2.1 \text{ s})$ | 119.3(10.8), 205.6(6.0), 912.2(3.48) |
| 338.2 2 | 0.18 4 | $^{150}\text{Tb}(3.48 \text{ h})$ | 638.05(72), 496.3(14.8), 792.5(4.39) |
| 338.22 | 0.268 12 | $^{133}\text{Te}(12.5 \text{ m})$ | 312.072(62), 407.63(27.1), 1333.21(10.67) |
| 338.28 8 | 0.134 9 | $^{163}\text{Tm}(1.810 \text{ h})$ | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| • 338.281 10 | 2.79 6 | $^{223}\text{Ra}(11.435 \text{ d})$ | 269.459(13.7), 154.21(5.62), 323.871(3.93) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|--------------------------|--|---|
| • 338.3 2 | 0.0009 4 | ¹⁴³ Ce(33.039 h) | 293.266(42.80), 57.356(11.7), 664.571(5.69) |
| 338.3 3 | 0.144 22 | ¹⁸¹ Au(11.4 s) | 198.60(4.4), 2022.4(4.2), 79.40(4.2) |
| 338.322 2 | 11.3 3 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 964.770(5.11) |
| 338.322 2 | 5.3 3 | ²²⁸ Pa(22 h) | 911.205(4.19), 463.005(1.250), 964.770(4.25) |
| • 338.322 2 | 3.70×10^{-5} 13 | ²³² U(68.9 y) | 57.762(0.200), 129.065(0.0686), 270.243(0.00316) |
| • 338.37 3 | 0.053 3 | ¹⁴⁵ Eu(5.93 d) | 893.73(66), 653.512(15.0), 1658.53(14.9) |
| 338.370 18 | 0.085 9 | ¹⁸³ Os(13.0 h) | 381.768(89.6), 114.463(20.63), 167.844(8.81) |
| 338.37 15 | 0.42 9 | ²⁰⁴ At(9.2 m) | 684.341(95), 516.318(90), 426.253(67.5) |
| 338.4 3 | 1.2 3 | ⁹⁷ Rh(46.2 m) | 189.21(49), 2245.6(14), 421.55(12.7) |
| 338.4 7 | 0.209 22 | ¹⁹⁹ Bi(27 m) | 560.1(22.0), 424.85(22), 841.7(11) |
| 338.44 20 | 7.9 10 | ¹⁰³ Zr(1.3 s) | 248(100), 164.05(94), 126.30(84) |
| • 338.44 3 | 19.2 4 | ²⁰⁶ Po(8.8 d) | 1032.26(32.9), 511.36(24.1), 286.410(23.8) |
| 338.5 3 | †0.2 2 | ¹⁰¹ Nb(7.1 s) | 276.10(†100), 157.466(†32), 13.5(†32) |
| • 338.50 9 | 0.0016 3 | ¹⁵¹ Gd(124 d) | 153.56(6.20), 243.28(5.60), 174.70(2.96) |
| 338.5 6 | >0.010 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| 338.545 13 | 4.5 5 | ¹⁶³ Tb(19.5 m) | 351.138(26), 389.734(24.3), 494.534(23) |
| 338.58 6 | 2.9 5 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 338.6 3 | 3.7 3 | ¹⁵⁸ Sm(5.30 m) | 189.4(15.2), 363.6(12.4), 324.5(10.6) |
| 338.629 30 | 0.80 7 | ¹⁵⁹ Ho(33.05 m) | 121.012(36.2), 131.973(23.6), 309.594(17.2) |
| 338.66 4 | 0.668 16 | ⁷⁷ Ge(11.30 h) | 264.44(54), 211.03(30.8), 215.50(28.6) |
| • 338.791 11 | 0.026 9 | ²⁰⁰ Tl(26.1 h) | 367.943(87), 1205.717(29.9), 579.298(13.8) |
| 338.8 1 | †100 10 | ¹⁵¹ Yb(1.6 s) | 1050.2(†100), 1245.6(†100), 624.8(†100) |
| 338.8 6 | | ¹⁷³ Ta(3.14 h) | 172.2(18), 69.70(5.9), 90.3(5.0) |
| • 338.8 2 | 55 3 | ¹⁹⁴ Ir(171 d) | 482.833(97), 328.455(93), 600.5(62) |
| 338.86 7 | 0.622 11 | ¹³⁹ Xe(39.68 s) | 218.59(56), 296.53(21.7), 174.97(11.3) |
| • 338.9 5 | 0.028 16 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| • 338.9 5 | 7.0×10^{-6} 3 | ²³³ U(1.592×10^5 y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 338.9 3 | 0.110 22 | ²³⁰ Fr(19.1 s) | 711.0(13.6), 129.1(11.0), 728.4(7.3) |
| 338.95 7 | 0.060 6 | ⁸⁸ Rb(17.78 m) | 1836.063(21.40), 898.042(14.04), 2677.892(1.96) |
| 338.98 15 | 1.2 6 | ¹⁶⁶ Hf(6.77 m) | 78.76(41), 341.82(4.7), 407.91(4.5) |
| 339 1 | | ⁷⁷ Ge(11.30 h) | 264.44(54), 211.03(30.8), 215.50(28.6) |
| 339.0 5 | 0.52 8 | ¹²⁷ Cd(0.43 s) | 1235.07(8.3), 376.28(7.5), 523.60(5.15) |
| 339.0 3 | †4.5 10 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| 339.0 9 | 0.115 22 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 339.03 5 | 0.98 6 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| • 339.06 3 | 5.6 4 | ¹⁸² Re(64.0 h) | 229.3220(26), 67.75001(22.2), 1121.3007(22.0) |
| 339.1 4 | >0.19 | ¹¹³ Rh(2.72 s) | 189.7(17.0), 409.3(15.9), 219.6(3.88) |
| 339.1 2 | 0.22 5 | ¹²⁹ La(11.6 m) | 278.6(25), 110.5(16.9), 457.0(8.0) |
| 339.1 | 0.025 8 | ¹³⁵ Ce(17.7 h) | 265.56(41.8), 300.07(23.5), 606.76(18.8) |
| 339.1 3 | 0.178 22 | ²⁰⁷ At(1.80 h) | 814.41(44.5), 588.33(19.2), 300.654(12.8) |
| 339.2 2 | †44 6 | ¹⁸⁰ Yb(2.4 m) | 172.9(†100), 375.0(†87), 419.8(†56) |
| 339.2 5 | 0.14 | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 339.2 5 | 0.16 | ²⁰³ Bi(11.76 h) | 820.3(30), 825.2(14.6), 896.9(13) |
| 339.24 24 | 0.50 25 | ¹⁸⁶ Ta(10.5 m) | 197.93(50), 214.87(42.3), 510.82(37.5) |
| • 339.25 20 | 0.0109 16 | ²⁰⁵ Bi(15.31 d) | 1764.36(1.368), 703.44(31), 987.62(0.585) |
| 339.3 2 | 0.017 9 | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| 339.3 | | ¹⁸² Hg(10.83 s) | 129.3(†100), 217.7(†75), 413.5(†53) |
| 339.32 21 | †5 | ¹⁹⁷ Ir(5.8 m) | 469.72(†100), 430.56(†61), 815.92(†45) |
| 339.33 29 | 0.21 3 | ¹⁷⁴ Ta(1.05 h) | 206.50(58), 91.00(16.0), 1205.92(4.9) |
| 339.35 4 | 0.041 4 | ¹³³ La(3.912 h) | 278.835(2.50), 302.353(1.648), 290.06(1.413) |
| 339.40 20 | 0.014 5 | ¹⁰⁵ Ru(4.44 h) | 724.21(47), 469.37(17.5), 676.36(15.7) |
| 339.4 1 | 0.638 10 | ¹¹³ Ag(5.37 h) | 298.58(10), 258.8(1.64), 316.3(1.343) |
| 339.4 2 | 0.26 5 | ¹³⁶ I(46.9 s) | 1313.02(100), 381.359(100), 197.316(78) |
| 339.4 4 | 0.0066 25 | ¹³⁹ Cs(9.27 m) | 1283.23(8.3), 627.24(1.78), 1420.66(0.91) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|----------------------|---|--|
| 339.4 | $\dagger > 1.5$ | $^{164}\text{Tm}(2.0 \text{ m})$ | 91.40($\dagger 1500$), 1154.66($\dagger 366$), 768.91($\dagger 279$) |
| 339.411 16 | 7.97 9 | $^{59}\text{Cu}(81.5 \text{ s})$ | 1301.46(14.78), 877.97(11.40), 465.02(5.87) |
| 339.42 4 | 0.19 4 | $^{184}\text{Ta}(8.7 \text{ h})$ | 414.03(72), 252.848(43), 920.932(32.0) |
| • 339.45 20 | 0.0031 5 | $^{170}\text{Lu}(2.00 \text{ d})$ | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 339.5 4 | 0.09 5 | $^{142}\text{La}(91.1 \text{ m})$ | 641.285(47), 2397.8(13.3), 2542.7(10.00) |
| 339.50 6 | 0.070 5 | $^{223}\text{Fr}(21.8 \text{ m})$ | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| 339.54 18 | 0.171 17 | $^{57}\text{Mn}(87.2 \text{ s})$ | 122.0614(13.9), 14.41300(10.56), 692.03(5.50) |
| • 339.54 18 | 0.0139 3 | $^{57}\text{Co}(271.79 \text{ d})$ | 122.0614(85.60), 136.4743(10.68), 14.41300(9.16) |
| 339.54 5 | $\dagger 213 44$ | $^{105}\text{Ag}(7.23 \text{ m})$ | 319.14($\dagger 63000$), 306.25($\dagger 12800$), 442.37($\dagger 5900$) |
| 339.6 | 0.039 | $^{148}\text{Dy}(3.1 \text{ m})$ | 620.24(96), 1247.2(1.4), 178.3(0.5) |
| 339.6 3 | $\dagger 5.3 14$ | $^{155}\text{Er}(5.3 \text{ m})$ | 110.12($\dagger 100$), 241.5($\dagger 65$), 234.0($\dagger 40.0$) |
| 339.61 15 | $\dagger 0.95 19$ | $^{189}\text{Hg}(7.6 \text{ m})$ | 320.99($\dagger 100$), 78.21($\dagger 63$), 565.42($\dagger 48$) |
| 339.65 6 | 5.6 5 | $^{182}\text{Hf}(61.5 \text{ m})$ | 942.80(18.8), 799.64(9.4), 114.3152(6.2) |
| 339.67 20 | 0.070 23 | $^{165}\text{Yb}(9.9 \text{ m})$ | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 339.68 20 | 0.70 | $^{154}\text{Pm}(2.68 \text{ m})$ | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 339.7 2 | 0.9 2 | $^{129}\text{Sn}(2.23 \text{ m})$ | 645.13(100), 80.5(6.6), 913.2(5.0) |
| 339.7 6 | $\dagger 3.7$ | $^{177}\text{Os}(2.8 \text{ m})$ | 84.7($\dagger 100$), 125.4($\dagger 63$), 195.8($\dagger 61$) |
| 339.7 10 | 0.14 3 | $^{201}\text{Bi}(108 \text{ m})$ | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| • 339.74 3 | 0.161 6 | $^{166}\text{Ho}(1.20 \times 10^3 \text{ y})$ | 184.410(72.6), 810.276(58.08), 711.683(55.32) |
| 339.76 9 | 3.4 4 | $^{174}\text{W}(31 \text{ m})$ | 35.42(14.1), 428.83(12.7), 328.68(9.5) |
| 339.8 4 | 0.071 17 | $^{84}\text{Br}(31.80 \text{ m})$ | 881.610(42), 1897.761(14.7), 3927.5(6.8) |
| 339.8 1 | 1.8 | $^{140}\text{Sm}(14.82 \text{ m})$ | 225.5(> 10), 225.4(10), 140.0(5.0) |
| 339.8 1 | 0.10 | $^{140}\text{Sm}(14.82 \text{ m})$ | 225.5(> 10), 225.4(10), 140.0(5.0) |
| 339.8 1 | 15 | $^{145}\text{Ho}(2.4 \text{ s})$ | 312.9(14.3), 334.1(13.5), 401.8(12.8) |
| • 339.8 10 | | $^{227}\text{Th}(18.72 \text{ d})$ | 235.971($\dagger 813$), 50.13($\dagger 528$), 256.25($\dagger 463$) |
| • 339.85 6 | | $^{206}\text{Bi}(6.243 \text{ d})$ | 803.10(99), 881.01(66.2), 516.18(40.7) |
| 339.92 15 | 0.058 7 | $^{81}\text{Rb}(4.576 \text{ h})$ | 190.38(64.0), 446.15(23.2), 510.31(5.3) |
| 339.94 30 | 0.110 20 | $^{124}\text{In}(3.17 \text{ s})$ | 1131.64(68), 3214.15(21.5), 997.79(21.1) |
| 339.94 30 | 0.70 10 | $^{124}\text{In}(2.4 \text{ s})$ | 1131.64(100), 969.94(52), 1072.85(47) |
| 339.95 10 | 0.00333 12 | $^{163}\text{Er}(75.0 \text{ m})$ | 1113.5(0.0490), 436.1(0.0285), 439.94(0.0276) |
| 340.0 3 | 0.58 6 | $^{65}\text{Co}(1.20 \text{ s})$ | 1141.7(4.0), 310.6(2.90), 963.7(2.6) |
| 340 | | $^{126}\text{La}(54 \text{ s})$ | 625, 460, 256.10 |
| 340.0 3 | $\dagger 25 3$ | $^{184}\text{Tl}(11 \text{ s})$ | 366.51($\dagger 100$), 286.80($\dagger 39$), 534.40($\dagger 16.8$) |
| 340.04 5 | $\dagger 23.9 8$ | $^{188}\text{Au}(8.84 \text{ m})$ | 265.63($\dagger 100$), 605.5($\dagger 16.3$), 405.49($\dagger 9.1$) |
| • 340.08 1 | 23 | $^{151}\text{Pm}(28.40 \text{ h})$ | 167.75(8.3), 275.21(6.8), 717.72(4.05) |
| 340.1 2 | 0.32 5 | $^{123}\text{Cs}(5.94 \text{ m})$ | 97.3(23), 596.7(10.1), 83.3(4.1) |
| 340.10 25 | $\dagger 1.8 4$ | $^{165}\text{Lu}(10.74 \text{ m})$ | 132.49($\dagger 100$), 120.60($\dagger 100$), 174.25($\dagger 47.0$) |
| 340.1 1 | 0.67 9 | $^{236}\text{Th}(37.5 \text{ m})$ | 110.8(4.2), 646.6(0.72), 196.0(0.69) |
| 340.16 18 | 0.45 5 | $^{83}\text{Se}(22.3 \text{ m})$ | 356.687(70), 510.17(43), 224.8(32.7) |
| 340.16 25 | $\dagger 4.7$ | $^{197}\text{Ir}(5.8 \text{ m})$ | 469.72($\dagger 100$), 430.56($\dagger 61$), 815.92($\dagger 45$) |
| 340.2 4 | 0.24 6 | $^{109}\text{Sn}(18.0 \text{ m})$ | 1099.4(30), 649.90(28.0), 1321.3(11.9) |
| 340.2 3 | 0.47 8 | $^{144}\text{La}(40.8 \text{ s})$ | 397.440(94.3), 541.20(39.2), 844.8(22.3) |
| 340.2 7 | $\dagger 3.0 15$ | $^{159}\text{Yb}(1.58 \text{ m})$ | 166.16($\dagger 500$), 177.12($\dagger 159$), 390.20($\dagger 113$) |
| 340.2 2 | $\dagger 1.3 5$ | $^{171}\text{Hf}(12.1 \text{ h})$ | 122.0($\dagger 100$), 662.2($\dagger 83$), 347.18($\dagger 47$) |
| 340.2 2 | $\dagger 2.7 3$ | $^{185}\text{Hg}(21.6 \text{ s})$ | 222.8($\dagger 100.0$), 258.7($\dagger 98$), 212.5($\dagger 58$) |
| 340.2 1 | 0.040 8 | $^{234}\text{Pa}(6.70 \text{ h})$ | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 340.2 1 | $\dagger 70 30$ | $^{234}\text{Pa}(1.17 \text{ m})$ | 1001.03($\dagger 837000$), 766.38($\dagger 294000$), 742.81($\dagger 80000$) |
| 340.22 10 | 0.0200 22 | $^{125}\text{Xe}(16.9 \text{ h})$ | 188.418(54), 243.378(30.1), 54.968(6.81) |
| 340.3 4 | 0.45 4 | $^{137}\text{Pm}(2.4 \text{ m})$ | 177.5(40.29), 108.6(35), 233.6(29.57) |
| 340.30 10 | 0.043 8 | $^{153}\text{Dy}(6.4 \text{ h})$ | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 340.3 4 | 0.79 16 | $^{185}\text{Au}(4.25 \text{ m})$ | 310.6(13), 243.1(6.6), 77.7(6) |
| 340.34 5 | 0.153 17 | $^{191}\text{Au}(3.18 \text{ h})$ | 586.45(17), 277.88(7.2), 674.19(6.8) |
| • 340.38 4 | 0.156 14 | $^{150}\text{Eu}(35.8 \text{ y})$ | 333.971(96), 439.401(80.4), 584.274(52.6) |
| 340.4 4 | 0.42 10 | $^{121}\text{Cd}(8.3 \text{ s})$ | 2059.41(21.0), 1020.89(18.9), 987.81(13.6) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|--------------------------|-----------------------------|---|
| • 340.45 | 0.00165 33 | ²³⁷ U(6.75 d) | 59.537(34.5), 208.00(21.14), 26.345(2.43) |
| 340.48 17 | | ¹⁵² Pm(13.8 m) | 229.9, 200.6, 63.51 |
| 340.48 17 | 31.3 20 | ¹⁵² Pm(7.52 m) | 244.6989(78), 121.7824(45), 1097.1(28.7) |
| • 340.48 17 | 0.027 6 | ¹⁵² Eu(13.542 y) | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| 340.48 17 | 0.0051 19 | ¹⁵² Eu(9.274 h) | 841.586(14.6), 963.37(12.01), 121.7824(7.21) |
| 340.5 2 | 6 | ¹¹⁵ Rh(0.99 s) | 127.9(64.6), 125.6(33.3), 296.5(17) |
| 340.5 3 | 45 9 | ¹¹⁶ Rh(0.68 s) | 398.1(16), 738.1(12) |
| 340.5 3 | 90 18 | ¹¹⁶ Rh(0.9 s) | 639.4(52), 538.4(40), 726.2(38) |
| 340.5 5 | †<0.5 | ¹³² Pr(1.6 m) | 325.5(†100), 496.9(†25), 822.4(†17.3) |
| 340.5 1 | 0.61 9 | ¹³⁹ Nd(5.50 h) | 113.94(40), 737.96(35), 982.2(26.4) |
| 340.5 7 | 0.025 20 | ¹⁴² Ba(10.6 m) | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| 340.5 3 | †39 4 | ¹⁴³ Tb(12 s) | 45.1(†100), 686.1(†48), 462.8(†45) |
| 340.5 5 | †7.1×10 ⁻² 24 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| 340.53 5 | 49 | ¹³² Sn(39.7 s) | 85.58(48.2), 899.04(44.8), 246.87(42.3) |
| • 340.53 12 | 0.236 25 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| • 340.547 8 | †42.3 13 | ¹³⁶ Cs(13.16 d) | 818.514(†100), 1048.073(†80), 1235.362(†20.1) |
| 340.56 13 | 0.0340 24 | ¹⁴¹ Cs(24.94 s) | 48.53(7.90), 561.63(4.7), 1194.02(3.95) |
| • 340.56 8 | †4.3×10 ⁻⁴ | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| 340.59 15 | 0.119 24 | ²⁰⁴ Bi(11.22 h) | 899.15(98), 374.72(82), 984.02(59) |
| 340.66 4 | 0.39 4 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| 340.66 4 | 0.07 3 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| • 340.690 1 | 1.182 23 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 340.7 | 1.3 6 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 340.7 3 | †90 10 | ¹⁵⁷ Yb(38.6 s) | 230.92(†100), 241.7(†74), 353.94(†57) |
| 340.7 4 | †1.67 21 | ¹⁹⁶ Ir(1.40 h) | 393.346(†105.2), 521.175(†104), 447.1(†102.1) |
| 340.70 10 | 0.060 6 | ²⁴⁰ Np(7.22 m) | 554.60(20.9), 597.40(11.7), 1496.9(1.33) |
| • 340.70 10 | 1.7×10 ⁻⁶ 7 | ²⁴⁴ Cm(18.10 y) | 42.824(.0044100), 98.860(.0001470), 152.63(<4.9×10 ⁻⁷) |
| 340.71 13 | 70 3 | ⁹⁹ Rh(4.7 h) | 617.8(12.0), 1261.2(11), 936.7(2.20) |
| • 340.74 5 | 0.181 3 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 340.76 5 | 0.234 9 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| 340.8 | 0.22 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 340.81 12 | 0.21 3 | ⁹⁹ Sr(0.269 s) | 125.118(16.1), 536.12(14.0), 1198.12(9.2) |
| • 340.81 3 | 4.47 4 | ²³³ Pa(26.967 d) | 312.17(38.6), 300.34(6.62), 86.814(1.97) |
| 340.81 3 | 0.055 3 | ²³³ Np(36.2 m) | 312.17(0.7), 298.89(0.44), 546.9(0.280) |
| 340.9 5 | 0.45 8 | ¹¹⁷ I(2.22 m) | 325.9(75), 274.4(20.4), 661.5(5.1) |
| • 340.9 1 | 0.074 18 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| • 340.90 15 | 0.0152 7 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 340.91 15 | 0.38 3 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 340.973 5 | 0.378 21 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 340.973 5 | 1.61 13 | ²²⁸ Pa(22 h) | 911.205(4.19), 463.005(1.250), 964.770(4.25) |
| 341 1 | 0.031 12 | ¹³³ Te(12.5 m) | 312.072(62), 407.63(27.1), 1333.21(10.67) |
| 341 1 | 0.44 | ¹⁷⁵ Tm(15.2 m) | 514.868(65), 941.23(15), 363.942(12.7) |
| 341.0 | 0.05 3 | ²²³ Ac(2.10 m) | 98.58(0.891), 191.3(0.58), 83.55(0.57) |
| 341.00 20 | 0.101 17 | ²⁴⁵ Pu(10.5 h) | 327.428(25.4), 560.13(5.4), 308.222(4.9) |
| 341.08 12 | 0.037 15 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| 341.1 2 | 2.0 5 | ¹¹⁷ Ag(5.34 s) | 135.4(48), 386.8(39.9), 298.1(21.1) |
| 341.1 2 | †12.5 14 | ¹³⁷ Te(2.49 s) | 243.3(†100), 554.0(†34), 469.1(†21) |
| 341.1 1 | 0.20 | ²²⁷ Ra(42.2 m) | 27.36(16), 300.07(4.6), 302.65(4.3) |
| 341.16 6 | 37000 4 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 193.41(†15200), 86.55(†12200) |
| • 341.20 20 | 0.0021 4 | ¹¹⁰ Ag(249.79 d) | 657.7622(94.0), 884.685(72.2), 937.493(34.13) |
| 341.2 2 | †20 1 | ¹⁹¹ Pb(2.18 m) | 387.1(†100), 712.2(†46), 613.5(†40) |
| 341.26 7 | 1.52 12 | ⁷⁸ Rb(5.74 m) | 454.97(81), 664.44(38.3), 1109.72(13.12) |
| 341.26 13 | 0.90 8 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|--------------------------|----------------------------|--|
| 341.3 2 | 2.13 21 | ¹³⁰ Sn(3.72 m) | 192.5(70), 779.8(59), 70.0(35.5) |
| 341.3 2 | 0.21 | ¹⁴⁰ Sm(14.82 m) | 225.5(>10), 225.4(10), 140.0(5.0) |
| 341.3 6 | †4.3 | ¹⁷⁷ Os(2.8 m) | 84.7(†100), 125.4(†63), 195.8(†61) |
| 341.31 9 | 0.25 | ¹⁸⁶ Ta(10.5 m) | 197.93(50), 214.87(42.3), 510.82(37.5) |
| • 341.320 2 | 0.0035 3 | ¹⁶¹ Tb(6.88 d) | 25.65150(23.2), 48.91562(17.0), 74.56711(10.2) |
| 341.320 2 | | ¹⁶¹ Ho(2.48 h) | 25.65150(27), 103.062(3.9), 77.414(1.91) |
| 341.34 8 | 0.73 8 | ¹²⁵ Cd(0.57 s) | 1027.53(25.8), 1173.16(25.1), 736.65(12.6) |
| • 341.380 7 | 0.017 9 | ²⁰⁰ Tl(26.1 h) | 367.943(87), 1205.717(29.9), 579.298(13.8) |
| 341.4 2 | †3.5 4 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 341.42 10 | 2.70 25 | ¹⁶² Gd(8.4 m) | 442.12(51), 403.00(43.3), 39.0(5.1) |
| 341.5 5 | 0.0443 15 | ⁹³ Y(10.18 h) | 266.9(7.3), 947.1(2.09), 1917.8(1.55) |
| 341.5 2 | 0.30 5 | ¹²⁹ La(11.6 m) | 278.6(25), 110.5(16.9), 457.0(8.0) |
| 341.5 | | ¹⁶⁵ Dy(1.257 m) | 515.467(1.53), 361.68(0.534), 153.803(0.242) |
| • 341.510 2 | 6.62×10 ⁻⁵ 14 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 341.52 8 | 0.103 14 | ²⁰¹ Pb(9.33 h) | 331.19(79), 361.27(9.9), 945.96(7.4) |
| 341.58 6 | †1.33×10 ⁴ 22 | ¹⁵⁸ Er(2.29 h) | 71.91(†23300), 386.84(†111000), 248.58(†42000) |
| 341.6 3 | †3.7 6 | ¹⁸¹ Pt(51 s) | 289.29(†100), 111.97(†100), 230.15(†92) |
| 341.6 7 | 0.209 22 | ¹⁹⁹ Bi(27 m) | 560.1(22.0), 424.85(22), 841.7(11) |
| • 341.6432 101 | 0.69 6 | ¹⁷⁷ Lu(160.4 d) | 208.3664(57.7), 228.4838(37.0), 378.5029(29.7) |
| 341.65 5 | 0.40 4 | ¹³⁸ Nd(5.04 h) | 325.76(2.84), 199.50(0.53), 215.31(0.28) |
| • 341.65 5 | 0.079 5 | ¹⁴⁹ Gd(9.28 d) | 149.735(48.2), 298.634(28.6), 346.651(23.9) |
| 341.7 4 | 0.05 5 | ¹⁴² La(91.1 m) | 641.285(47), 2397.8(13.3), 2542.7(10.00) |
| 341.74 2 | 0.119 20 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 341.8 2 | 0.30 8 | ¹⁰⁵ Mo(35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 341.8 3 | | ¹²² Ba(1.95 m) | 550.7, 388.7, 231.0 |
| • 341.8 5 | 0.172 16 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 396.00(34.3), 929.01(20.2) |
| 341.82 10 | 4.7 4 | ¹⁶⁶ Hf(6.77 m) | 78.76(41), 407.91(4.5), 483.05(4.1) |
| 341.9 4 | 3.3 9 | ¹⁸¹ Lu(3.5 m) | 652.5(22.0), 205.94(16.1), 574.9(15.4) |
| 341.9 3 | 0.16 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 341.91 4 | 2.17 18 | ¹⁹³ Hg(11.8 h) | 257.97(61), 407.63(25), 573.25(14.2) |
| 341.93 11 | †8.8 16 | ¹⁸⁹ Au(28.7 m) | 713.17(†100), 812.68(†63), 447.65(†55) |
| 341.95 7 | 0.065 12 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 342.0 1 | †19 2 | ¹³⁵ Pm(49 s) | 198.5(†100), 207.2(†70), 463.5(†62) |
| 342.0 5 | >0.26 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| 342.00 10 | 0.070 10 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 342.0 2 | | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| • 342 2 | 0.009 2 | ²⁵⁴ Es(275.7 d) | 63.0(2.0), 316(0.15), 304(0.07) |
| • 342.011 5 | 0.0062 12 | ⁷⁷ Br(57.036 h) | 238.996(23), 520.639(22.4), 297.215(4.16) |
| • 342.033 22 | 1.05 8 | ¹⁸² Re(64.0 h) | 229.3220(26), 67.75001(22.2), 1121.3007(22.0) |
| 342.08 5 | 0.43 6 | ²⁰² Bi(1.72 h) | 960.67(99), 422.18(83.7), 657.49(60.6) |
| 342.1 3 | 0.25 4 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| • 342.118 7 | 7 | ¹¹¹ Ag(7.45 d) | 245.422(1.24), 96.73(0.20), 620.3(0.019) |
| 342.118 7 | 0.006 | ¹¹¹ Ag(64.8 s) | 245.422(0.50), 620.3(0.121), 171.28(0.12) |
| 342.2 6 | 2.7 10 | ⁷⁸ Zn(1.47 s) | 224.75(43.9), 181.68(28.1), 860.30(24.5) |
| 342.3 1 | 2.12 12 | ⁹² Kr(1.840 s) | 142.307(64), 1218.6(60), 812.6(14.6) |
| 342.3 8 | 0.41 19 | ¹⁰⁴ In(1.8 m) | 658.0(100), 834.1(99), 878.1(29.4) |
| 342.3 2 | 12.3 11 | ¹⁰⁴ Sn(20.8 s) | 132.7(56), 912.6(42), 401.2(16.2) |
| 342.3 3 | 0.017 4 | ¹¹² Ag(3.130 h) | 617.27(43), 1387.67(5.4), 606.49(3.1) |
| 342.3 1 | 0.81 6 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 342.41 6 | 2.2 3 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 342.48 15 | 0.27 3 | ¹⁶⁴ Lu(3.14 m) | 123.3(34.0), 740.52(12.2), 262.22(10.8) |
| 342.5 | 0.17 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 342.50 12 | | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 342.5 1 | 0.069 6 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 342.50 9 | 0.0135 12 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 342.50 9 | †26 6 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 342.51 19 | 1.46 20 | ²⁰⁶ At(30.0 m) | 700.66(98), 477.10(86), 395.54(48) |
| 342.52 12 | 0.0009 6 | ¹³⁵ I(6.57 h) | 1260.409(28.90), 1131.511(22.74), 1678.027(9.62) |
| 342.54 5 | 0.0085 8 | ¹²⁹ Te(69.6 m) | 27.81(16.3), 459.60(7.70), 487.39(1.42) |
| • 342.56 4 | 0.170 14 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| 342.6 3 | †100 | ⁹⁹ Cd(16 s) | 671.8(†31), 1583.3(†28), 975.4(†11) |
| • 342.647 4 | 0.0078 20 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 342.65 9 | 0.118 20 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 342.67 6 | 0.048 4 | ¹⁵⁵ Dy(9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| 342.71 10 | 8 | ¹¹⁵ Pd(25 s) | 303.87(7), 396.56(6), 556.3(6) |
| 342.8 3 | 0.50 6 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 342.81 10 | 0.083 18 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 342.87 8 | 0.52 3 | ²⁰⁹ At(5.41 h) | 545.0(91), 781.9(83.5), 790.2(63.5) |
| 342.88 5 | 0.0493 4 | ¹²⁹ Te(69.6 m) | 27.81(16.3), 459.60(7.70), 487.39(1.42) |
| 342.88 6 | 0.262 22 | ²²⁸ Fr(39 s) | 473.7(10.2), 474.0(7.6), 410.40(6.3) |
| 342.9 5 | 0.49 13 | ⁵⁷ Cr(21.1 s) | 83.16(8.3), 850.2(8.2), 1752.1(5) |
| 342.9 4 | 0.07 3 | ⁹³ Sr(7.423 m) | 590.238(67), 875.73(24.1), 888.13(21.8) |
| • 342.90 4 | 0.219 14 | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 342.91 4 | 0.035 5 | ²¹¹ Pb(36.1 m) | 404.853(3.78), 832.01(3.52), 427.088(1.76) |
| • 342.92 5 | 0.51 15 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 342.945 4 | 0.701 7 | ¹³¹ Te(25.0 m) | 149.716(69), 452.323(18.18), 1146.96(4.95) |
| • 342.945 4 | | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 343.0 1 | 16.9 15 | ¹¹⁹ Cd(2.69 m) | 292.9(36.8), 1609.7(10.9), 1763.7(9.2) |
| 343.0 1 | 0.099 22 | ¹¹⁹ Cd(2.20 m) | 1025.0(24.8), 2021.3(22.6), 720.7(17.9) |
| 343 | | ¹³⁰ Pr(40.0 s) | 951.9, 499.0, 1405 |
| 343.0 5 | †>2.1 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 343.0 2 | †2.5 | ²⁵⁶ Es(7.6 h) | 861.8(†100), 231.1(†61), 172.6(†49) |
| 343.01 4 | 0.105 8 | ¹³⁵ Ce(17.7 h) | 265.56(41.8), 300.07(23.5), 606.76(18.8) |
| 343.07 10 | 25 2 | ¹⁵⁰ Tb(5.8 m) | 638.05(100), 650.4(70), 438.37(42) |
| 343.10 8 | 0.12 3 | ¹⁸⁹ Pt(10.87 h) | 721.41(9.3), 94.33(7.6), 568.84(7.1) |
| 343.1 2 | †1.89 40 | ¹⁹² Tl(9.6 m) | 422.8(†100), 634.8(†75.9), 786.3(†31.7) |
| 343.1 3 | | ¹⁹² Pb(3.5 m) | 1195.4(47), 608.2(17.9), 167.5(13.6) |
| 343.2 4 | 0.30 7 | ¹²¹ Cs(155 s) | 153.9(15.2), 239.6(7.7), 427.1(3.63) |
| 343.2 3 | †0.81 10 | ¹⁸² Ir(15 m) | 273.23(†100), 126.79(†77), 236.3(†21.0) |
| 343.2 4 | 0.22 11 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 343.2 2 | †16 5 | ¹⁹⁴ Bi(106 s) | 1308.3(†100), 671.8(†55), 965.4(†41) |
| 343.2 2 | †0.051 21 | ¹⁹⁴ Bi(92 s) | 965.4(†100.0), 575.1(†98.0), 280.1(†73.7) |
| 343.2 5 | 0.0015 | ²⁴³ Pu(4.956 h) | 84.0(23), 41.8(0.76), 381.7(0.56) |
| 343.29 8 | 0.034 4 | ¹⁶⁷ Yb(17.5 m) | 113.34(55.3), 106.18(22.5), 176.25(21) |
| 343.30 20 | 0.028 5 | ¹⁰⁵ Ru(4.44 h) | 724.21(47), 469.37(17.5), 676.36(15.7) |
| 343.3 6 | 1.5 6 | ¹⁹¹ Hg(50.8 m) | 252.5(57), 420.1(18.6), 578.6(17.6) |
| 343.38 20 | 0.037 4 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 343.40 20 | >0.028 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| 343.4 1 | †0.26 5 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| • 343.40 8 | 84 | ¹⁷⁵ Hf(70 d) | 89.36(2.40), 433.0(1.436), 229.6(0.683) |
| 343.44 2 | 0.83 4 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| • 343.45 5 | 0.044 7 | ¹⁸⁹ Re(24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| • 343.45 5 | 0.055 4 | ¹⁸⁹ Ir(13.2 d) | 245.09(6), 69.537(3.5), 59.053(1.20) |
| 343.46 12 | 4.04 19 | ¹⁰³ Tc(54.2 s) | 346.380(17.5), 136.079(16.6), 562.90(7.0) |
| • 343.46 8 | 0.013 4 | ¹⁹¹ Pt(2.9 d) | 538.90(13.7), 409.44(8.0), 359.90(6.0) |
| 343.47 16 | 0.29 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 343.479 19 | 0.062 22 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 343.5 1 | 58 4 | ⁸² As(13.6 s) | 654.6(72), 1895.4(39), 1731.3(28) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| 343.5 2 | 6.2 5 | ¹⁷⁶ Tm(1.9 m) | 189.57(44.5), 1069.3(34), 381.8(21.8) |
| 343.5 3 | †75 4 | ¹⁸⁷ Pb(18.3 s) | 393.4(†100), 331.4(†75), 331.4(†60) |
| 343.5 10 | | ²⁰⁷ At(1.80 h) | 814.41(44.5), 588.33(19.2), 300.654(12.8) |
| • 343.5 2 | 0.003 | ²³⁵ U(7.038×10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| • 343.51 3 | 23.4 3 | ²⁰⁶ Bi(6.243 d) | 803.10(99), 881.01(66.2), 516.18(40.7) |
| • 343.52 3 | 0.055 14 | ¹⁶⁶ Dy(81.6 h) | 82.471(14), 28.242(1.13), 54.2400(0.81) |
| 343.6 1 | 16.3 17 | ¹⁴¹ Tb(3.5 s) | 293.3(16.8), 198.4(14.8), 136.7(14.3) |
| • 343.664 2 | 0.0133 10 | ¹⁶¹ Tb(6.88 d) | 25.65150(23.2), 48.91562(17.0), 74.56711(10.2) |
| 343.673 17 | 14.4 4 | ¹⁴¹ Ba(18.27 m) | 190.328(46.0), 304.194(25.4), 276.948(23.4) |
| 343.7 4 | 0.089 20 | ¹³² I(2.295 h) | 667.718(99), 772.60(75.6), 954.55(17.6) |
| 343.7 | 1.0 | ¹⁴⁵ Ba(4.31 s) | 96.6(17), 91.9(7), 65.9(5) |
| 343.7 3 | 0.156 14 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| • 343.7 10 | 0.049 5 | ²⁴⁰ Am(50.8 h) | 987.76(73.2), 888.80(25.1), 98.860(1.5) |
| 343.73 14 | 0.0042 4 | ¹²³ I(13.27 h) | 158.97(83), 528.96(1.39), 440.02(0.428) |
| 343.74 10 | 0.0019 | ²³⁹ U(23.45 m) | 74.664(48), 43.533(4.14), 662.24(0.18) |
| 343.79 6 | 0.12 3 | ¹⁸⁹ Pt(10.87 h) | 721.41(9.3), 94.33(7.6), 568.84(7.1) |
| 343.8 2 | 0.034 7 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 343.85 15 | 0.67 6 | ⁷⁰ Se(41.1 m) | 49.51(35.8), 426.15(29), 376.65(9.43) |
| 343.9 1 | 0.062 25 | ¹³³ Te(12.5 m) | 312.072(62), 407.63(27.1), 1333.21(10.67) |
| 343.9 1 | 4.0 | ¹⁴⁹ Er(4 s) | 1748.4(71), 1577.9(20), 171.5(14) |
| 343.9 1 | 6.3 8 | ¹⁴⁹ Er(8.9 s) | 1171.0(9.4), 171.5(6.5), 1530.9(4.4) |
| 343.9 1 | | ¹⁵⁰ Tm(2.2 s) | 436.7, 171.5 |
| 343.9 1 | | ¹⁵³ Tm(1.48 s) | 171.5 |
| 343.9 1 | | ¹⁵³ Tm(2.5 s) | 171.5 |
| 343.93 25 | 3.9 12 | ⁷⁸ Zn(1.47 s) | 224.75(43.9), 181.68(28.1), 860.30(24.5) |
| 343.93 4 | 0.0257 10 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| • 343.97 4 | 0.059 18 | ²⁰⁶ Po(8.8 d) | 1032.26(32.9), 511.36(24.1), 286.410(23.8) |
| 343.98 5 | 0.0571 19 | ¹²⁷ Cs(6.25 h) | 411.95(62.8), 124.70(11.37), 462.31(5.07) |
| 343.99 10 | †41.7 18 | ¹⁹³ Tl(21.6 m) | 324.37(†100), 1044.7(†59), 676.10(†48) |
| • 344.0 4 | 0.22 7 | ¹⁰¹ Rh(3.3 y) | 127.23(73), 197.6(70.8), 324.8(13.4) |
| • 344.0 9 | 0.008 8 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 344.0 7 | 0.036 14 | ¹⁹⁹ Pb(90 m) | 366.90(44.2), 353.39(9.5), 1135.04(7.8) |
| 344.09 10 | 1.21 6 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| 344.1 5 | 0.29 7 | ⁹⁸ Sr(0.653 s) | 119.353(73), 444.628(39), 428.4(31) |
| 344.1 5 | 0.056 20 | ¹⁴⁰ Xe(13.60 s) | 805.52(20), 1413.66(12.2), 1315.05(8.2) |
| 344.1 9 | 0.026 12 | ¹⁹³ Au(17.65 h) | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| 344.18 8 | 0.7 1 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 344.2 | | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 344.2 2 | 0.17 7 | ¹⁵⁹ Er(36 m) | 624.5(33), 649.1(23.4), 205.92(9.7) |
| 344.281 2 | 2.44 3 | ¹⁵² Eu(9.274 h) | 1314.67(0.956), 970.38(0.604), 271.135(0.076) |
| • 344.281 2 | 26.58 19 | ¹⁵² Eu(13.542 y) | 778.91(12.96), 411.115(2.231), 1089.700(1.710) |
| 344.281 2 | 1500 | ¹⁵² Tb(17.5 h) | 586.294(†223), 271.135(†203), 778.91(†137) |
| 344.281 2 | 20.8 11 | ¹⁵² Tb(4.2 m) | 411.115(18.8), 471.9(12.2), 519.4(4.9) |
| • 344.3 2 | 8.0×10 ⁻⁶ 1 | ¹¹⁵ Cd(53.46 h) | 336.240(45.9), 527.900(27.45), 492.3(8.03) |
| • 344.3 2 | 4.0×10 ⁻⁵ 2 | ¹¹⁵ Cd(44.6 d) | 933.8(2.000), 1290.580(0.890), 484.470(0.290) |
| 344.35 19 | 0.36 6 | ¹⁸¹ Os(105 m) | 238.75(44), 826.77(20), 118.03(12.9) |
| 344.360 11 | 0.45 11 | ¹⁶³ Tb(19.5 m) | 351.138(26), 389.734(24.3), 494.534(23) |
| 344.39 5 | 0.72 11 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 344.4 7 | 0.7 3 | ¹⁰⁵ In(5.07 m) | 131.37(41), 260.21(15.7), 604.11(9.2) |
| 344.4 2 | 0.5 | ²⁰⁰ Bi(36.4 m) | 1026.5(100), 462.34(98), 419.70(91) |
| 344.459 10 | 17.9 4 | ¹¹⁷ Cd(2.49 h) | 273.349(28), 1303.27(18.4), 1576.62(11.19) |
| 344.459 10 | | ¹¹⁷ Cd(3.36 h) | 1997.33(26), 1065.98(23.1), 564.397(14.7) |
| 344.48 15 | 0.044 4 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| 344.5 4 | 1.3 9 | ¹⁴⁰ Gd(15.8 s) | 174.8(76), 749.9(70), 379.0(38) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|--|
| 344.50 25 | 0.09 5 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| • 344.5 5 | 1.3 | ²⁴⁷ Cm(1.56×10 ⁷ y) | 402.6(72), 278.0(3.4), 287.4(2.0) |
| • 344.520 21 | 41 | ¹⁰⁵ Ag(41.29 d) | 280.41(30.2), 644.55(11.1), 443.37(10.5) |
| 344.520 21 | | ¹⁰⁵ Ag(7.23 m) | 319.14(†63000), 306.25(†12800), 442.37(†5900) |
| 344.52 17 | 0.7 | ²⁰⁶ Hg(8.15 m) | 304.896(31), 649.42(2.6) |
| • 344.52 17 | 0.7 | ²¹⁰ Bi(3.04×10 ⁶ y) | 265.832(50), 304.896(28), 649.42(3.8) |
| 344.522 25 | †>50 | ¹⁰⁵ Ag(7.23 m) | 319.14(†63000), 306.25(†12800), 442.37(†5900) |
| 344.53 5 | 46 | ²⁰⁷ Rn(9.25 m) | 747.15(14.2), 402.68(11.9), 674.00(8) |
| 344.53 | | ²⁰⁷ Rn(9.25 m) | 344.53(46), 747.15(14.2), 402.68(11.9) |
| 344.55 7 | 86 | ¹⁵⁶ Tm(83.8 s) | 452.85(17.2), 585.93(14.6), 585.9(>15) |
| 344.6 | 0.06 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 344.61 6 | 0.035 7 | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| 344.68 18 | †6.0 10 | ¹⁸² Au(21 s) | 154.76(†100), 264.33(†40.0), 855.41(†14.5) |
| • 344.71 10 | 0.236 19 | ⁷⁹ Kr(35.04 h) | 261.29(13), 397.54(9.3), 606.09(8.12) |
| 344.72 10 | 2.4 2 | ¹³⁶ I(83.4 s) | 1313.02(67), 1321.08(24.8), 2289.6(10.4) |
| 344.72 28 | 1.44 13 | ¹⁶¹ Yb(4.2 m) | 78.20(34), 599.88(25.9), 631.45(13.9) |
| 344.8 5 | 5.3 11 | ¹⁶⁴ Tb(3.0 m) | 168.838(25.4), 754.80(23.3), 215.07(21) |
| 344.8 4 | 0.108 25 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 344.8 | >0.028 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| • 344.817 17 | 0.627 17 | ¹⁷² Er(49.3 h) | 610.062(44.2), 407.338(42.1), 68.107(3.29) |
| 344.9 2 | 1.0 | ¹⁴⁰ Sm(14.82 m) | 225.5(>10), 225.4(10), 140.0(5.0) |
| • 344.90 1 | 2.11 11 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 344.9 3 | †4.6 16 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 234.0(†40.0) |
| 344.9 1 | 0.63 8 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 344.9 2 | 35.2 14 | ¹⁸⁴ Hf(4.12 h) | 139.1(44.6), 181.0(13.8), 41.4(9.2) |
| 344.9 10 | 2 | ¹⁹⁶ Tl(1.84 h) | 426.0(84), 610.5(11.9), 635.5(9.8) |
| • 344.92 10 | 0.0092 13 | ¹⁴⁵ Eu(5.93 d) | 893.73(66), 653.512(15.0), 1658.53(14.9) |
| • 344.95 20 | 0.0030 3 | ⁶⁵ Zn(244.26 d) | 1115.546(50.60), 770.6(0.0030) |
| 344.98 10 | 0.17 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 344.99 10 | 0.044 10 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 345 | | ¹³⁶ I(46.9 s) | 1686.1(†100), 1689.0(†85), 240.5(†74) |
| • 345 1 | 0.0025 6 | ¹⁵¹ Gd(124 d) | 153.56(6.20), 243.28(5.60), 174.70(2.96) |
| 345.0 6 | 0.44 11 | ¹⁶⁶ Lu(1.41 m) | 228.12(15), 102.38(13), 285.07(11.0) |
| 345.00 4 | 0.43 5 | ¹⁹³ Hg(11.8 h) | 257.97(61), 407.63(25), 573.25(14.2) |
| 345 | †9 | ²²⁸ Pa(22 h) | 95(†100), 310(†42), 240(†23) |
| • 345.000 4 | >5.0×10 ⁻⁵ | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 345.008 6 | | ²³⁵ Pa(24.5 m) | 652.053, 659.3, 645.896 |
| • 345.008 6 | 0.000556 5 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 345.03 10 | 1.19 8 | ⁸⁹ Kr(3.15 m) | 220.948(20.1), 586.03(16.6), 904.27(7.2) |
| 345.04 5 | 0.285 24 | ²⁰¹ Pb(9.33 h) | 331.19(79), 361.27(9.9), 945.96(7.4) |
| 345.1 4 | 0.015 13 | ¹³³ La(3.912 h) | 278.835(2.50), 302.353(1.648), 290.06(1.413) |
| 345.1 | 0.23 6 | ¹⁴⁸ Ba(0.607 s) | 56.08(29.20), 133.53(3.88), 415.78(3.59) |
| 345.12 4 | 0.0030 | ²³⁹ U(23.45 m) | 74.664(48), 43.533(4.14), 662.24(0.18) |
| 345.13 16 | 0.23 4 | ¹⁵¹ Dy(17.9 m) | 386.10(19.4), 49.46(18.0), 546.31(14.3) |
| 345.2 5 | <0.23 | ⁸⁵ Se(31.7 s) | 3396.6(7.4), 1427.2(7.0), 1207.9(4.4) |
| 345.2 8 | 0.030 10 | ¹¹⁶ In(54.41 m) | 1293.54(84.4), 1097.3(56.2), 416.86(28.9) |
| 345.2 2 | †18 4 | ¹⁵³ Nd(28.9 s) | 418.3(†100), 105.4(†36), 475.2(†33) |
| 345.2 2 | †0.53 5 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 345.2 3 | 0.29 3 | ¹⁸⁸ Hg(3.25 m) | 66.7(63), 190.1(4.40), 82.7(2.6) |
| 345.29 8 | 2.01 5 | ²⁰⁷ Po(5.80 h) | 992.33(59.3), 742.64(28.2), 911.79(16.95) |
| 345.3 2 | 0.25 5 | ¹²³ Cs(5.94 m) | 97.3(23), 596.7(10.1), 83.3(4.1) |
| 345.3 1 | †0.22 5 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 345.37 18 | †1.7 4 | ¹⁶⁵ Lu(10.74 m) | 132.49(†100), 120.60(†100), 174.25(†47.0) |
| 345.4 2 | 0.16 3 | ⁹⁶ Rb(0.199 s) | 815.0(78.00), 692.0(8.0), 813.2(7.0) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| 345.4 6 | 0.65 19 | $^{162}\text{Tm}(24.3 \text{ s})$ | 811.52(6.5), 798.68(5.2), 227.52(5) |
| • 345.4 1 | <0.07 | $^{235}\text{U}(7.038 \times 10^8 \text{ y})$ | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| 345.43 5 | 0.104 17 | $^{133}\text{I}(20.8 \text{ h})$ | 529.872(87.0), 875.329(4.51), 1298.223(2.35) |
| 345.46 4 | 0.78 8 | $^{193}\text{Hg}(11.8 \text{ h})$ | 257.97(61), 407.63(25), 573.25(14.2) |
| • 345.47 4 | 0.49 5 | $^{182}\text{Re}(64.0 \text{ h})$ | 229.3220(26), 67.75001(22.2), 1121.3007(22.0) |
| 345.51 10 | >0.07 | $^{118}\text{Ag}(3.76 \text{ s})$ | 487.77(60), 677.13(11.9), 2788.7(11.8) |
| 345.52 3 | 8.3 4 | $^{91}\text{Rb}(58.4 \text{ s})$ | 93.628(33.7), 2564.19(12.5), 3599.67(10.4) |
| 345.53 10 | 0.084 19 | $^{98}\text{Nb}(51.3 \text{ m})$ | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| 345.569 15 | 0.459 11 | $^{166}\text{Tm}(7.70 \text{ h})$ | 778.817(18.9), 2052.36(17.2), 184.410(16.1) |
| 345.6 1 | 0.014 4 | $^{131}\text{Te}(25.0 \text{ m})$ | 149.716(69), 452.323(18.18), 1146.96(4.95) |
| 345.6 4 | 0.22 17 | $^{133}\text{Te}(55.4 \text{ m})$ | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 345.6 1 | 0.39 16 | $^{206}\text{Fr}(15.9 \text{ s})$ | 575.3(12), 559.0(8.19), 628.6(3.6) |
| 345.608 9 | 1.096 24 | $^{163}\text{Tm}(1.810 \text{ h})$ | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 345.62 12 | | $^{187}\text{W}(23.72 \text{ h})$ | 685.774(27.3), 479.531(21.8), 72.001(11.14) |
| 345.64 10 | 0.51 6 | $^{121}\text{Ag}(0.78 \text{ s})$ | 314.55(32.1), 353.43(19.9), 500.61(9.3) |
| 345.70 19 | 0.287 21 | $^{187}\text{Au}(8.4 \text{ m})$ | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 345.76 26 | 5.2 8 | $^{78}\text{Ga}(5.09 \text{ s})$ | 619.40(77), 1186.42(20.1), 567.06(18.2) |
| 345.86 8 | 0.55 7 | $^{125}\text{Cd}(0.57 \text{ s})$ | 1027.53(25.8), 1173.16(25.1), 736.65(12.6) |
| • 345.89 12 | 0.87 10 | $^{102}\text{Rh}(2.9 \text{ y})$ | 475.070(95), 631.28(55.9), 697.49(43.9) |
| 345.9 5 | 0.25 10 | $^{105}\text{Mo}(35.6 \text{ s})$ | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 345.9 4 | 1.2 3 | $^{116}\text{Cs}(3.84 \text{ s})$ | 393.5(<0.09), 524.3(76), 615.1(30.4) |
| • 345.9 3 | 0.13 4 | $^{131}\text{Te}(30 \text{ h})$ | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 345.9 4 | 0.30 15 | $^{149}\text{Pr}(2.26 \text{ m})$ | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 345.9 3 | 0.10 3 | $^{153}\text{Dy}(6.4 \text{ h})$ | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| • 345.90 3 | 0.038 5 | $^{235}\text{U}(7.038 \times 10^8 \text{ y})$ | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| • 345.916 25 | 15.12 10 | $^{181}\text{Hf}(42.39 \text{ d})$ | 482.182(80.50), 133.024(43.3), 136.266(5.85) |
| 345.955 19 | 0.44 5 | $^{150}\text{Pm}(2.68 \text{ h})$ | 333.971(68), 1324.51(17.5), 1165.739(15.8) |
| • 345.955 19 | 0.398 14 | $^{150}\text{Eu}(35.8 \text{ y})$ | 333.971(96), 439.401(80.4), 584.274(52.6) |
| 346.0 1 | 6.0 6 | $^{76}\text{Rb}(39.1 \text{ s})$ | 2571.3(47), 424.0(43.4), 355.6(8.2) |
| • 346.0 1 | 0.038 9 | $^{151}\text{Pm}(28.40 \text{ h})$ | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 346.0 5 | †2.8 19 | $^{195}\text{Pb}(15 \text{ m})$ | 883.1(†100), 393.7(†42), 871.0(†36) |
| • 346.02 4 | †0.987 17 | $^{52}\text{Mn}(5.591 \text{ d})$ | 1434.068(†100.0), 935.538(†94.9), 744.233(†90.6) |
| • 346.059 2 | 0.0065 10 | $^{155}\text{Tb}(5.32 \text{ d})$ | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 346.06 7 | 0.080 6 | $^{87}\text{Br}(55.60 \text{ s})$ | 1419.71(22.0), 1476.04(7.9), 1577.60(6.0) |
| 346.1 2 | 0.5 1 | $^{150}\text{Er}(18.5 \text{ s})$ | 475.8(100), 130.0(2.6), 1014.0(0.9) |
| 346.1 2 | 0.47 19 | $^{231}\text{Ac}(7.5 \text{ m})$ | 282.471(39.0), 307.063(30.4), 221.399(16.8) |
| 346.2 2 | 0.24 6 | $^{101}\text{Zr}(2.1 \text{ s})$ | 119.3(10.8), 205.6(6.0), 912.2(3.48) |
| 346.29 7 | 0.280 19 | $^{146}\text{La}(6.27 \text{ s})$ | 258.47(64), 924.58(7.45), 702.28(6.43) |
| 346.29 3 | 0.08 3 | $^{179}\text{Re}(19.5 \text{ m})$ | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 346.3 3 | 0.094 23 | $^{69}\text{Cu}(2.85 \text{ m})$ | 1007.5(23.4), 834.4(13.1), 531.2(6.0) |
| 346.3 5 | †2.2 5 | $^{106}\text{Mo}(8.4 \text{ s})$ | 465.70(†100), 54.00(†54), 618.60(†25) |
| 346.3 1 | | $^{107}\text{Tc}(21.2 \text{ s})$ | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| • 346.3 3 | 2.13 8 | $^{147}\text{Gd}(38.06 \text{ h})$ | 229.32(63), 396.00(34.3), 929.01(20.2) |
| 346.3 2 | 0.58 7 | $^{148}\text{Ce}(56 \text{ s})$ | 269.519(17.0), 291.724(16.7), 121.169(13.2) |
| • 346.3 5 | 0.000172 17 | $^{253}\text{Es}(20.47 \text{ d})$ | 41.79(0.050), 389.11(0.0264), 387.1(0.00810) |
| • 346.31 15 | 0.059 9 | $^{153}\text{Tb}(2.34 \text{ d})$ | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 346.35 5 | 0.126 4 | $^{123}\text{I}(13.27 \text{ h})$ | 158.97(83), 528.96(1.39), 440.02(0.428) |
| 346.380 10 | 17.5 9 | $^{103}\text{Tc}(54.2 \text{ s})$ | 136.079(16.6), 562.90(7.0), 210.21(6.8) |
| 346.39 5 | 4.16 8 | $^{133}\text{Ce}(4.9 \text{ h})$ | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 346.4 2 | >0.07 | $^{129}\text{La}(11.6 \text{ m})$ | 278.6(25), 110.5(16.9), 457.0(8.0) |
| 346.44 13 | 0.022 3 | $^{153}\text{Dy}(6.4 \text{ h})$ | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| • 346.45 10 | †0.65 24 | $^{227}\text{Th}(18.72 \text{ d})$ | 235.971(†813), 50.13(†528), 256.25(†463) |
| 346.47 6 | 4.6 3 | $^{202}\text{Bi}(1.72 \text{ h})$ | 960.67(99), 422.18(83.7), 657.49(60.6) |
| 346.49 5 | 3.23 17 | $^{93}\text{Sr}(7.423 \text{ m})$ | 590.238(67), 875.73(24.1), 888.13(21.8) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-------------------------------------|---|
| 346.5 1 | $\dagger 5.9$ 7 | $^{103}\text{Nb}(1.5 \text{ s})$ | 102.64($\dagger 100$), 641.1($\dagger 55$), 538.5($\dagger 34.0$) |
| 346.5 1 | 5.11 25 | $^{129}\text{La}(11.6 \text{ m})$ | 278.6(25), 110.5(16.9), 457.0(8.0) |
| 346.5 3 | 1.28 18 | $^{190}\text{Tl}(3.7 \text{ m})$ | 416.4(91), 625.4(82), 731.1(37) |
| 346.5 2 | | $^{197}\text{Ir}(5.8 \text{ m})$ | 469.72($\dagger 100$), 430.56($\dagger 61$), 815.92($\dagger 45$) |
| • 346.5 4 | >0.027 | $^{230}\text{Pa}(17.4 \text{ d})$ | 951.95(1.65), 918.48(8.2), 454.95(6.27) |
| 346.547 15 56 | | $^{167}\text{Ho}(3.1 \text{ h})$ | 321.336(23.5), 237.873(5.0), 207.801(4.9) |
| • 346.547 15 | 0.025 3 | $^{167}\text{Tm}(9.25 \text{ d})$ | 207.801(41), 57.0723(4.6), 531.54(1.6) |
| 346.6 2 | $\dagger 100$ | $^{138}\text{Eu}(12.1 \text{ s})$ | 544.2($\dagger 55$), 685.4($\dagger 41$), 399.0($\dagger 23$) |
| 346.6 3 | 9.9 7 | $^{154}\text{Ho}(3.10 \text{ m})$ | 334.6(94), 412.4(79), 477.1(55) |
| 346.6 3 | 1.0 1 | $^{154}\text{Ho}(11.76 \text{ m})$ | 334.6(84), 412.4(15.0), 873.4(12.5) |
| • 346.643 5 | 0.0292 11 | $^{154}\text{Eu}(8.593 \text{ y})$ | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 346.643 5 | 1.56 20 | $^{154}\text{Tb}(9.4 \text{ h})$ | 123.071(30), 247.925(22.1), 540.18(20) |
| 346.643 5 | 69 5 | $^{154}\text{Tb}(22.7 \text{ h})$ | 247.925(79), 1419.81(46), 123.071(43) |
| • 346.651 3 | 23.9 3 | $^{149}\text{Gd}(9.28 \text{ d})$ | 149.735(48.2), 298.634(28.6), 748.601(8.22) |
| 346.7 3 | 4.2 4 | $^{74}\text{Zn}(96 \text{ s})$ | 56.7(70), 49.4(33.4), 143.5(21.7) |
| 346.7 2 | 0.07 | $^{161}\text{Er}(3.21 \text{ h})$ | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| 346.7 1 | 0.49 5 | $^{186}\text{Hg}(1.38 \text{ m})$ | 112.1(63), 251.5(55), 191.6(3.7) |
| • 346.7 | | $^{188}\text{Ir}(41.5 \text{ h})$ | 155.032(29.7), 2214.62(18.7), 632.99(18) |
| 346.8 2 | 0.133 12 | $^{142}\text{Ba}(10.6 \text{ m})$ | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| 346.8 | 0.06 | $^{185}\text{Ir}(14.4 \text{ h})$ | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 346.8 4 | 0.11 5 | $^{185}\text{Au}(4.25 \text{ m})$ | 310.6(13), 243.1(6.6), 77.7(6) |
| • 346.8 3 | 0.18 | $^{223}\text{Ra}(11.435 \text{ d})$ | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 346.81 10 | 3.01 18 | $^{136}\text{I}(46.9 \text{ s})$ | 1313.02(100), 381.359(100), 197.316(78) |
| • 346.825 11 | 0.220 7 | $^{165}\text{Tm}(30.06 \text{ h})$ | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 346.870 20 | 4.20 4 | $^{105}\text{Cd}(55.5 \text{ m})$ | 961.84(4.69), 1302.459(3.98), 607.220(3.74) |
| 346.89 8 | 0.133 14 | $^{199}\text{Tl}(7.42 \text{ h})$ | 455.46(12.4), 208.20597(12.3), 247.26(9.3) |
| 346.9 2 | $\dagger 18$ 2 | $^{114}\text{Te}(15.2 \text{ m})$ | 90.28($\dagger 100$), 83.8($\dagger 67$), 1417.6($\dagger 32$) |
| 346.9 3 | 0.54 9 | $^{120}\text{Xe}(40 \text{ m})$ | 25.1(30), 72.6(9), 178.1(6.8) |
| 346.9 3 | $\dagger 2.0$ 5 | $^{129}\text{Sb}(17.7 \text{ m})$ | 759.8($\dagger 100.0$), 657.78($\dagger 92$), 433.76($\dagger 73$) |
| 346.9 2 | 0.11 | $^{176}\text{Ta}(8.09 \text{ h})$ | 1159.28(25), 88.34(12), 1224.93(6) |
| • 346.93 7 | 0.0076 5 | $^{60}\text{Co}(5.2714 \text{ y})$ | 1332.501(99.9820), 1173.237(99.90), 826.06(0.0076) |
| • 346.933 11 | 2.88 11 | $^{165}\text{Tm}(30.06 \text{ h})$ | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 347.1 3 | 0.0033 15 | $^{133}\text{La}(3.912 \text{ h})$ | 278.835(2.50), 302.353(1.648), 290.06(1.413) |
| 347.1 2 | $\dagger 27.9$ | $^{144}\text{Gd}(4.5 \text{ m})$ | 333.3($\dagger 100$), 2432.6($\dagger 94.8$), 629.5($\dagger 32.4$) |
| 347.1 2 | $\dagger 190$ 95 | $^{157}\text{Ho}(12.6 \text{ m})$ | 279.97($\dagger 47600$), 341.16($\dagger 37000$), 193.41($\dagger 15200$) |
| 347.13 2 | 0.44 3 | $^{151}\text{Nd}(12.44 \text{ m})$ | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 347.17 1 | 0.773 12 | $^{145}\text{Ce}(3.01 \text{ m})$ | 724.33(59), 62.54(13.33), 1148.03(9.15) |
| 347.18 10 | 78 | $^{98}\text{Cd}(9.2 \text{ s})$ | 1176.1(66.3), 107.28(43.7), 60.55(35.1) |
| 347.18 10 | $\dagger 47$ 6 | $^{171}\text{Hf}(12.1 \text{ h})$ | 122.0($\dagger 100$), 662.2($\dagger 83$), 1071.8($\dagger 46$) |
| 347.2 10 | 2.4 3 | $^{147}\text{Tb}(1.7 \text{ h})$ | 1152.4(100), 694.4(43), 139.9(27.46) |
| • 347.2 5 | 0.00018 2 | $^{253}\text{Es}(20.47 \text{ d})$ | 41.79(0.050), 389.11(0.0264), 387.1(0.00810) |
| 347.210 14 | 0.34 11 | $^{163}\text{Tb}(19.5 \text{ m})$ | 351.138(26), 389.734(24.3), 494.534(23) |
| 347.23 15 | 2.11 20 | $^{100}\text{Cd}(49.1 \text{ s})$ | 936.55(66), 139.71(6.7), 582.5(6.3) |
| 347.25 10 | 0.029 9 | $^{162}\text{Ho}(67.0 \text{ m})$ | 185.005(28.6), 1220.0(22.5), 282.864(11.3) |
| 347.251 18 | 0.205 16 | $^{227}\text{Fr}(2.47 \text{ m})$ | 90.035(39), 585.804(29.5), 64.267(14.5) |
| 347.26 4 | 0.0240 12 | $^{246}\text{Am}(25.0 \text{ m})$ | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 347.28 9 | $\dagger 0.40$ 3 | $^{184}\text{Ir}(3.09 \text{ h})$ | 263.97($\dagger 100$), 119.80($\dagger 45$), 390.38($\dagger 38$) |
| 347.3 2 | 0.29 4 | $^{96}\text{Rb}(0.199 \text{ s})$ | 815.0(78.00), 692.0(8.0), 813.2(7.0) |
| 347.3 3 | 0.012 | $^{233}\text{Th}(22.3 \text{ m})$ | 86.477(2.7), 29.374(2.5), 459.222(1.4) |
| 347.3 | | $^{238}\text{Pa}(2.3 \text{ m})$ | 1015.3($\dagger < 100$), 1014.6($\dagger < 100$), 635.18($\dagger 88$) |
| 347.31 4 | 0.66 6 | $^{133}\text{Te}(55.4 \text{ m})$ | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 347.38 6 | 3.9 4 | $^{123}\text{Ag}(0.309 \text{ s})$ | 263.87(35.9), 409.79(13.2), 591.30(8.2) |
| 347.48 8 | 3.0 5 | $^{123}\text{Cd}(2.10 \text{ s})$ | 371.32(51), 1052.28(24.8), 1438.13(8.3) |
| 347.5 10 | 0.044 24 | $^{89}\text{Nb}(1.9 \text{ h})$ | 1627.20(3.4), 1833.46(3.16), 3092.7(3.0) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|------------------------------|---|
| 347.5 1 | 2.13 15 | ^{109}In (4.2 h) | 203.5(74), 623.7(5.5), 1148.9(4.3) |
| 347.5 2 | \dagger 12.9 13 | ^{185}Hg (21.6 s) | 222.8(\dagger 100.0), 258.7(\dagger 98), 212.5(\dagger 58) |
| 347.54 5 | 0.54 5 | ^{191}Au (3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 347.6 1 | \dagger 1.16 4 | ^{95}Pd (13.3 s) | 1350.9(\dagger 105), 716.6(\dagger 70.63), 381.8(\dagger 50.8) |
| 347.6 | | ^{126}Ba (100 m) | 233.6(19.6), 257.6(7.6), 241.0(6.0) |
| 347.6 1 | 0.45 7 | ^{142}Gd (70.2 s) | 750.2(11.2), 178.90(11.20), 284.4(6.16) |
| 347.6 4 | 0.37 7 | ^{146}Ba (2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 347.61 10 | 0.098 9 | ^{101}Mo (14.61 m) | 191.92(19), 590.91(16.4), 1012.47(12.8) |
| 347.65 10 | 2.3 5 | ^{157}Tm (3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 347.7 | 0.132 18 | ^{149}Tb (4.118 h) | 352.24(29.43), 164.98(26.4), 388.57(18.37) |
| 347.7 1 | 1.60 13 | ^{157}Er (18.65 m) | 53.05(24), 391.32(14.2), 121.57(10.1) |
| 347.75 8 | 2.6 4 | ^{183}Ir (58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 347.8 3 | 0.05 5 | ^{81}Sr (22.3 m) | 153.54(33.8), 147.76(30.1), 443.34(17.5) |
| 347.8 3 | 1.0 3 | ^{176}Tm (1.9 m) | 189.57(44.5), 1069.3(34), 381.8(21.8) |
| 347.843 18 | 0.161 5 | ^{149}Nd (1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 347.896 17 | 6.2 6 | ^{163}Tb (19.5 m) | 351.138(26), 389.734(24.3), 494.534(23) |
| 347.94 10 | 0.224 19 | ^{98}Nb (51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| • 348 2 | 0.007 1 | ^{254}Es (275.7 d) | 63.0(2.0), 316(0.15), 304(0.07) |
| • 348.04 6 | 0.0168 12 | ^{172}Tm (63.6 h) | 78.7435(6.5), 1093.657(6.0), 1387.093(5.6) |
| • 348.04 6 | 0.015 8 | ^{172}Lu (6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 348.06 11 | \dagger 4.0 3 | ^{144}Cs (1.01 s) | 199.326(\dagger 100.0), 639.00(\dagger 21.2), 758.96(\dagger 20.6) |
| 348.06 12 | \dagger 24 4 | ^{181}Pt (51 s) | 289.29(\dagger 100), 111.97(\dagger 100), 230.15(\dagger 92) |
| 348.14 11 | \dagger 43 3 | ^{189}Au (28.7 m) | 713.17(\dagger 100), 812.68(\dagger 63), 447.65(\dagger 55) |
| 348.16 7 | 0.234 5 | ^{159}Gd (18.479 h) | 363.55(11.4), 58.00(2.15), 226.01(0.215) |
| • 348.16 7 | 0.00095 10 | ^{159}Dy (144.4 d) | 58.00(2.22), 79.45(0.00048), 290.27(0.00014) |
| 348.18 10 | \dagger 22 | ^{168}Lu (5.5 m) | 1483.65(\dagger 100), 228.58(\dagger 97), 111.8(\dagger 68) |
| 348.20 10 | 0.208 10 | ^{95}Ru (1.643 h) | 336.43(70.2), 1096.76(21.0), 626.77(17.8) |
| 348.2 4 | \dagger 20 10 | ^{157}Yb (38.6 s) | 230.92(\dagger 100), 340.7(\dagger 90), 241.7(\dagger 74) |
| 348.21 20 | 2.27 16 | ^{107}Rh (21.7 m) | 302.77(66), 392.47(8.8), 312.21(4.8) |
| 348.21 2 | 0.22 4 | ^{145}Cs (0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 348.23 5 | 0.16 3 | ^{200}Pb (21.5 h) | 147.63(37.7), 257.17(4.46), 235.63(4.30) |
| • 348.270 45 | 0.048 7 | ^{71}As (65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 348.3 | 0.8 | ^{100}Ag (2.01 m) | 665.54(99), 750.67(78), 773.20(24.2) |
| 348.3 5 | 0.26 7 | ^{119}Cd (2.69 m) | 292.9(36.8), 343.0(16.9), 1609.7(10.9) |
| 348.30 9 | \dagger 64 | ^{168}Lu (5.5 m) | 1483.65(\dagger 100), 228.58(\dagger 97), 111.8(\dagger 68) |
| 348.32 7 | 3.4 5 | ^{159}Tm (9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 348.33 17 | 2.5 3 | ^{200}Bi (36.4 m) | 1026.5(100), 462.34(98), 419.70(91) |
| • 348.371 3 | 0.00057 8 | ^{161}Tb (6.88 d) | 25.65150(23.2), 48.91562(17.0), 74.56711(10.2) |
| 348.371 3 | | ^{161}Ho (2.48 h) | 25.65150(27), 103.062(3.9), 77.414(1.91) |
| 348.395 8 | 0.26 13 | ^{174}Tm (5.4 m) | 366.526(92), 992.128(87), 272.918(86) |
| 348.4 4 | 0.50 4 | ^{127}Sn (2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 348.4 3 | 0.085 10 | ^{153}Dy (6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 348.40 15 | 8.4 14 | ^{157}Tm (3.63 m) | 455.00(9.3), 385.5(8.8), 110.35(8.2) |
| 348.4 | \dagger 64 | ^{178}Yb (74 m) | 390.8(\dagger 100), 42.4(\dagger 6.7) |
| 348.4 3 | 3.63 20 | ^{231}Np (48.8 m) | 370.9(10), 263.8(2.84), 484.7(1.6) |
| 348.42 10 | 1.4 5 | ^{168}Lu (6.7 m) | 198.82(28), 979.22(20), 896.12(15) |
| 348.5 1 | \dagger 17.4 16 | ^{105}Nb (2.95 s) | 94.8(\dagger 100), 246.9(\dagger 79), 309.9(\dagger 41.9) |
| 348.5 6 | 0.83 19 | ^{113}Rh (2.72 s) | 189.7(17.0), 409.3(15.9), 219.6(3.88) |
| 348.5 2 | 0.73 16 | ^{126}Ba (100 m) | 233.6(19.6), 257.6(7.6), 241.0(6.0) |
| 348.50 25 | >0.26 | ^{137}Nd (38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| 348.5 5 | 12.0 6 | ^{175}Ta (10.5 h) | 207.4(14.0), 266.9(10.8), 81.5(6) |
| • 348.5 1 | 0.0033 11 | ^{225}Ac (10.0 d) | 99.91(1.01), 150.04(0.80), 99.63(0.62) |
| • 348.5 5 | \dagger 0.41 16 | ^{227}Th (18.72 d) | 235.971(\dagger 813), 50.13(\dagger 528), 256.25(\dagger 463) |
| • 348.523 2 | 0.340 4 | ^{168}Tm (93.1 d) | 198.241(52.39), 815.990(48.99), 447.515(23.05) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 348.56 4 | 2.37 8 | ¹⁵⁷ Pm(10.56 s) | 160.61(35), 188.052(13.5), 571.27(5.39) |
| 348.58 2 | 5.1 5 | ¹³⁰ Sb(6.3 m) | 839.49(100), 793.53(86), 182.36(41) |
| • 348.58 15 | 0.047 9 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 348.6 3 | †0.48 6 | ¹²⁰ Cs(64 s) | 322.4(†100), 473.5(†30), 553.4(†19.1) |
| 348.6 | †0.8 2 | ¹⁷⁸ Ir(12 s) | 266.1(†100.0), 131.6(†79), 363.1(†39.9) |
| 348.7 | | ⁴¹ Cl(38.4 s) | 1353, 834, 515 |
| 348.70 21 | 33 4 | ¹¹² Rh(3.8 s) | 388.20(4), 777.5(3.6), 737.20(1.8) |
| 348.70 21 | 87 5 | ¹¹² Rh(6.8 s) | 560.5(49), 1098.6(39), 359.7(30) |
| 348.7 2 | 1.0 2 | ¹²⁹ Sn(2.23 m) | 645.13(100), 80.5(6.6), 913.2(5.0) |
| 348.7 1 | 1.58 15 | ¹²⁹ La(11.6 m) | 278.6(25), 110.5(16.9), 457.0(8.0) |
| 348.7 4 | 0.24 12 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| • 348.702 7 | 0.0136 19 | ¹⁵⁶ Eu(15.19 d) | 811.79(9.70), 88.9667(8.4), 1230.68(7.98) |
| 348.71 7 | 0.040 3 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| 348.73 5 | 0.60 20 | ²⁰² Bi(1.72 h) | 960.67(99), 422.18(83.7), 657.49(60.6) |
| 348.782 9 | 0.96 10 | ²⁴⁵ Pu(10.5 h) | 327.428(25.4), 560.13(5.4), 308.222(4.9) |
| 348.8 5 | 0.080 20 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| 348.803 25 | 0.079 8 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| 348.82 5 | 0.381 17 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| • 348.83 22 | 0.009 7 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 348.9 3 | 0.0047 11 | ⁴⁵ K(17.3 m) | 174.276(74.4), 1705.6(53), 2353.6(14.12) |
| 348.9 5 | 0.79 19 | ¹¹³ Rh(2.72 s) | 189.7(17.0), 409.3(15.9), 219.6(3.88) |
| • 348.9 3 | 0.007 3 | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 348.93 20 | †0.46 4 | ¹⁸⁴ Ir(3.09 h) | 263.97(†100), 119.80(†45), 390.38(†38) |
| • 348.96 10 | 0.096 24 | ¹⁴⁹ Gd(9.28 d) | 149.735(48.2), 298.634(28.6), 346.651(23.9) |
| 348.97 15 | 0.75 4 | ¹⁵⁶ Ho(56 m) | 266.35(54.7), 137.83(51), 366.25(10.73) |
| 348.99 3 | 0.70 4 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 349 1 | †3.4 6 | ¹¹⁷ Pd(4.3 s) | 247.5(†100), 649.9(†41), 323.9(†37) |
| 349.0 3 | †5.8 12 | ¹⁴² Xe(1.22 s) | 571.83(†100), 657.05(†79), 538.24(†77) |
| 349 | | ¹⁴⁵ Ce(3.01 m) | 724.33(59), 62.54(13.33), 1148.03(9.15) |
| 349.0 3 | 1.4 | ¹⁷⁰ Hf(16.01 h) | 164.78(33), 620.7(23), 120.17(19) |
| 349.0 2 | †18.7 19 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 349.0 5 | 0.13 | ²⁰³ Bi(11.76 h) | 820.3(30), 825.2(14.6), 896.9(13) |
| 349.1 3 | 0.09 5 | ¹⁰⁴ Tc(18.3 m) | 358.0(89), 530.5(15.6), 535.1(14.7) |
| • 349.1 9 | 0.0010 4 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 349.1 1 | 0.50 6 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 349.1 | | ¹⁸⁰ Os(21.5 m) | 20.1(†100), 717.4, 667.0 |
| 349.1 1 | 0.94 13 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| 349.16 5 | †0.112 15 | ¹⁵³ Pm(5.4 m) | 35.842(†100), 127.298(†75), 28.309(†34.6) |
| 349.2 | 0.86 6 | ¹⁵⁰ Pr(6.19 s) | 130.2(32), 722.5(7.0), 852.7(6.1) |
| • 349.20 11 | 0.0092 22 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 349.231 9 | 1.38 4 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 349.29 17 | 1.30 8 | ¹⁸⁶ Au(10.7 m) | 191.56(62), 298.67(25.4), 764.89(10.5) |
| 349.3 2 | 2.5 3 | ¹⁰⁴ Tc(18.3 m) | 358.0(89), 530.5(15.6), 535.1(14.7) |
| 349.3 7 | 0.17 5 | ¹⁰⁷ In(32.4 m) | 204.97(47), 505.51(11.9), 320.92(10.2) |
| 349.40 4 | | ¹²⁶ Pr(3.1 s) | 495.88, 169.55 |
| 349.4 2 | 0.10 5 | ¹²⁹ La(11.6 m) | 278.6(25), 110.5(16.9), 457.0(8.0) |
| 349.4 2 | †5.6 11 | ¹⁸⁷ Hg(1.9 m) | 233.38(†100), 376.34(†38), 240.26(†33) |
| 349.4 1 | 19.8 9 | ²⁵⁰ Es(8.6 h) | 828.82(72), 303.41(21.6), 383.7(13.6) |
| 349.421 5 | 0.35 13 | ¹⁷⁴ Tm(5.4 m) | 366.526(92), 992.128(87), 272.918(86) |
| • 349.43 5 | 0.0276 20 | ¹⁴⁵ Eu(5.93 d) | 893.73(66), 653.512(15.0), 1658.53(14.9) |
| 349.434 4 | 0.18 4 | ⁷⁵ Br(96.7 m) | 286.572(88), 141.3147(6.6), 427.883(4.4) |
| 349.44 7 | 0.42 4 | ¹⁶² Yb(18.87 m) | 163.35(40.0), 118.70(33.6), 576.10(3.24) |
| 349.5 | 0.230 18 | ¹⁴¹ Ba(18.27 m) | 190.328(46.0), 304.194(25.4), 276.948(23.4) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 349.5 3 | 0.71 9 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 349.5 3 | 0.20 6 | ¹⁵⁷ Er(18.65 m) | 53.05(24), 391.32(14.2), 121.57(10.1) |
| 349.5 2 | 4.8 5 | ¹⁷⁴ Re(2.40 m) | 243.4(37), 113.0(19.8), 1002.9(5.62) |
| • 349.59 3 | 0.563 9 | ²⁰⁵ Bi(15.31 d) | 1764.36(1.368), 703.44(31), 987.62(0.585) |
| 349.60 13 | 0.45 3 | ⁶² Zn(9.186 h) | 596.56(26), 40.84(25.5), 548.35(15.3) |
| 349.6 2 | 8.4 10 | ¹¹⁸ Pd(1.9 s) | 125.4(34), 125.4(34), 224.2(20.1) |
| 349.6 5 | †1.25 21 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| • 349.6 5 | 0.000140 15 | ²⁵³ Es(20.47 d) | 41.79(0.050), 389.11(0.0264), 387.1(0.00810) |
| 349.7 3 | 0.16 4 | ⁶¹ Fe(5.98 m) | 1205.07(44), 1027.42(42.7), 297.90(22.2) |
| 349.7 2 | 0.23 4 | ²³⁶ Pa(9.1 m) | 642.35(37.0), 687.59(9.9), 1762.7(6.0) |
| • 349.81 3 | 0.142 14 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| • 349.85 4 | 0.00329 19 | ¹⁵¹ Gd(124 d) | 153.56(6.20), 243.28(5.60), 174.70(2.96) |
| 349.9 3 | | ¹²² Ba(1.95 m) | 550.7, 388.7, 231.0 |
| 349.9 1 | 0.82 4 | ²⁵¹ Fm(5.30 h) | 880.8(2.19), 453.1(1.45), 405.6(0.99) |
| • 349.92 11 | 0.0150 9 | ¹⁶⁰ Tb(72.3 d) | 879.383(30.01), 298.580(25.51), 966.171(25.21) |
| 349.937 16 | 12.9 10 | ¹²¹ Cd(13.5 s) | 324.976(49.5), 1040.26(16.8), 1483.23(8.2) |
| 349.96 10 | 0.289 14 | ¹⁰⁵ Ru(4.44 h) | 724.21(47), 469.37(17.5), 676.36(15.7) |
| 350.0 5 | 0.38 13 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| 350.0 5 | 0.17 7 | ¹⁵⁶ Tm(83.8 s) | 344.55(86), 452.85(17.2), 585.93(14.6) |
| 350.0 4 | 0.08 4 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| • 350.0 | 0.24 4 | ¹⁸⁸ Ir(41.5 h) | 155.032(29.7), 2214.62(18.7), 632.99(18) |
| 350.00 15 | 0.64 13 | ²⁰⁴ At(9.2 m) | 684.341(95), 516.318(90), 426.253(67.5) |
| • 350.016 10 | 0.00034 | ¹⁴⁹ Pm(53.08 h) | 285.95(3.1), 859.46(0.109), 590.88(0.069) |
| • 350.016 10 | 0.367 12 | ¹⁴⁹ Eu(93.1 d) | 327.526(4.03), 277.089(3.56), 22.510(2.32) |
| 350.026 21 | 3.34 12 | ²⁰⁸ Rn(24.35 m) | 426.78(7.07), 251.05(5.02), 287.160(2.85) |
| 350.03 11 | 0.074 16 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 350.04 19 | 0.017 7 | ⁸⁸ Kr(2.84 h) | 2392.11(34.6), 196.301(25.98), 2195.842(13.18) |
| 350.05 2 | 1.54 4 | ⁹⁶ Nb(23.35 h) | 778.224(96.45), 568.80(58.0), 459.88(26.62) |
| • 350.05 2 | 0.020 10 | ⁹⁶ Tc(4.28 d) | 778.224(100), 849.929(98), 812.581(82) |
| 350.05 2 | 0.057 3 | ⁹⁶ Tc(51.5 m) | 778.224(1.9), 1200.231(1.08), 480.705(0.311) |
| 350.053 19 | 1.54 4 | ⁹⁶ Nb(23.35 h) | 778.224(96.45), 568.80(58.0), 459.88(26.62) |
| • 350.053 19 | 0.070 20 | ⁹⁶ Tc(4.28 d) | 778.224(100), 849.929(98), 812.581(82) |
| 350.065 10 | 7.80 16 | ¹²² Xe(20.1 h) | 148.612(2.62), 416.633(1.87), 90.596(0.563) |
| 350.10 15 | 0.0167 11 | ⁷⁷ Ge(11.30 h) | 264.44(54), 211.03(30.8), 215.50(28.6) |
| 350.1 3 | 0.55 14 | ²⁰⁷ Rn(9.25 m) | 344.53(46), 747.15(14.2), 402.68(11.9) |
| • 350.163 6 | 0.376 4 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 350.18 10 | 1.02 12 | ¹⁰⁵ Ru(4.44 h) | 724.21(47), 469.37(17.5), 676.36(15.7) |
| 350.18 20 | 0.08 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 350.2 2 | 0.11 4 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 350.2 3 | 0.43 5 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 350.2 | 1.5 8 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 350.2 2 | †4.1 6 | ¹⁵² Pr(3.24 s) | 164.2(†100), 284.9(†81.0), 72.40(†38.9) |
| 350.2 2 | †5.1 5 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| • 350.2 2 | 0.0071 24 | ¹⁹³ Os(30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| 350.3 1 | 0.27 3 | ⁹² Kr(1.840 s) | 142.307(64), 1218.6(60), 812.6(14.6) |
| 350.3 3 | >0.047 | ¹⁴² La(91.1 m) | 641.285(47), 2397.8(13.3), 2542.7(10.00) |
| 350.4 2 | 0.077 11 | ¹⁶¹ Er(3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| 350.4 3 | 0.35 12 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| • 350.41 5 | | ¹⁵⁶ Tb(5.35 d) | 534.318(66.6), 199.2132(40.9), 1222.36(31.00) |
| 350.42 10 | 0.17 6 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| • 350.43 9 | †7.5 12 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 350.5 3 | 0.76 18 | ¹³⁶ Sm(47 s) | 114.4(36), 747.7(5.4), 485.3(5.0) |
| 350.5 2 | 0.16 6 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 350.5 1 | †55 13 | ¹⁷² Re(15 s) | 253.9(†100), 123.2(†45), 419.3(†10) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|--|
| 350.5 1 | $\dagger > 3.7$ | ¹⁷² Re(55 s) | 123.2($\dagger 100$), 253.9($\dagger 74$), 743.0($\dagger 19$) |
| 350.5 2 | $\dagger 7$ | ¹⁸¹ Ir(4.90 m) | 107.64($\dagger 100$), 1639.6($\dagger 52$), 318.9($\dagger 46$) |
| 350.5 1 | 0.40 3 | ²¹¹ Rn(14.6 h) | 674.1(45), 1362.9(32.5), 678.4(28.9) |
| • 350.5 1 | 0.076 7 | ²⁴⁵ Bk(4.94 d) | 252.80(29.1), 380.8(2.40), 385.0(0.57) |
| 350.52 5 | 0.40 8 | ¹⁰⁸ In(58.0 m) | 875.46(100), 632.96(100), 242.84(41) |
| 350.6 1 | 7.23 14 | ⁷⁹ Rb(22.9 m) | 688.1(23), 182.77(19.2), 143.41(13.9) |
| 350.6 4 | 0.08 3 | ¹⁹⁸ Tl(5.3 h) | 411.8044(82), 675.8874(11), 636.4(10.1) |
| • 350.619 3 | 3.23 3 | ¹⁴³ Ce(33.039 h) | 293.266(42.80), 57.356(11.7), 664.571(5.69) |
| 350.70 20 | $\dagger 39$ 2 | ¹⁰⁶ Nb(1.02 s) | 171.548($\dagger 100$), 714.00($\dagger 30$), 725.10($\dagger 17$) |
| 350.7 4 | 0.07 3 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 350.7 3 | $\dagger 12.2$ 19 | ²⁰⁶ Rn(5.67 m) | 497.7($\dagger 100$), 324.5($\dagger 96$), 386.6($\dagger 61$) |
| • 350.71 7 | 0.00149 9 | ¹⁴⁹ Pm(53.08 h) | 285.95(3.1), 859.46(0.109), 590.88(0.069) |
| 350.72 6 | 99 | ²¹ F(4.158 s) | 1396(17.0), 1745.5(0.855), 4334(0.0526) |
| 350.72 6 | 5.0 1 | ²¹ Na(22.49 s) | |
| • 350.774 18 | 0.301 11 | ¹⁷³ Lu(1.37 y) | 272.105(21.2), 78.63(11.87), 100.724(5.24) |
| 350.78 12 | 0.047 19 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| 350.8 8 | 0.44 25 | ¹⁵¹ Ho(35.2 s) | 527.4(63), 775.53(9.2), 209.5(5.69) |
| 350.8 10 | $\dagger 22$ | ¹⁷⁸ Os(5.0 m) | 968.7($\dagger 100$), 1331.1($\dagger 94$), 594.6($\dagger 72$) |
| • 350.8 3 | 1.8×10^{-6} 4 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 350.85 5 | 0.197 16 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| 350.9 2 | $\dagger 36$ 3 | ¹¹² Te(2.0 m) | 372.70($\dagger 100$), 296.20($\dagger 86$), 418.9($\dagger 57$) |
| 350.9 | 2.54 3 | ¹⁴⁵ Ce(3.01 m) | 724.33(59), 62.54(13.33), 1148.03(9.15) |
| 350.9 | 0.909 12 | ¹⁴⁵ Ce(3.01 m) | 724.33(59), 62.54(13.33), 1148.03(9.15) |
| 350.90 10 | 1.00 14 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 350.9 7 | 0.198 22 | ¹⁹⁹ Bi(27 m) | 560.1(22.0), 424.85(22), 841.7(11) |
| 350.92 10 | 0.383 19 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| 350.94 | 0.897 12 | ¹⁴⁵ Ce(3.01 m) | 724.33(59), 62.54(13.33), 1148.03(9.15) |
| • 350.95 5 | 0.264 10 | ¹²⁵ Sn(9.64 d) | 1067.10(10), 1089.15(4.59), 822.48(4.28) |
| 351.0 4 | 0.21 3 | ⁷³ Ga(4.86 h) | 297.32(79.8), 325.70(11.17), 739.42(4.23) |
| 351.0 4 | 0.37 5 | ⁹⁷ Rh(30.7 m) | 421.55(75), 840.13(12.0), 878.80(9.0) |
| 351 | > 0.09 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 351.0 10 | 0.105 21 | ¹³⁸ Pr(2.12 h) | 1037.8(101), 788.742(100), 302.7(80) |
| 351.0 | 1.5 8 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 351.0 3 | 2.0 5 | ¹⁵² Ho(49.5 s) | 647.2(92), 613.8(88.4), 683.3(88) |
| 351.001 20 | 0.80 12 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 351.059 20 | 77 | ²⁰⁷ Hg(2.9 m) | 997.1(69), 1637.1(30), 1756.3(16) |
| 351.059 20 | 12.91 11 | ²¹¹ Bi(2.14 m) | |
| • 351.06 5 | 0.033 17 | ¹⁸⁹ Re(24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| • 351.07 5 | 0.0091 10 | ¹⁸² Ta(114.43 d) | 67.75001(41.2), 1121.3007(34.9), 1221.4066(26.98) |
| • 351.07 5 | 10.3 8 | ¹⁸² Re(64.0 h) | 229.3220(26), 67.75001(22.2), 1121.3007(22.0) |
| 351.08 10 | 0.50 6 | ¹³⁴ I(52.6 m) | 847.025(95.4), 884.090(64.9), 1072.547(15.0) |
| 351.1 8 | 0.051 25 | ¹⁰³ Ag(65.7 m) | 118.72(31.2), 148.193(28.3), 266.86(13.3) |
| 351.1 1 | 89 9 | ¹⁴¹ Gd(24.5 s) | 223.9(64), 574.9(51), 361.2(37) |
| 351.11 8 | 0.13 3 | ¹⁸⁹ Pt(10.87 h) | 721.41(9.3), 94.33(7.6), 568.84(7.1) |
| 351.138 13 | 26 3 | ¹⁶³ Tb(19.5 m) | 389.734(24.3), 494.534(23), 421.860(11.5) |
| • 351.196 24 | 0.091 3 | ¹³¹ Ba(11.50 d) | 496.326(47), 123.805(28.97), 216.078(19.66) |
| 351.20 7 | 2.73 15 | ⁹⁹ Nb(2.6 m) | 97.785(7), 253.50(3.64), 2641.3(3.64) |
| 351.2 4 | $\dagger 13$ 3 | ¹¹³ Ru(0.80 s) | 263.2($\dagger 100$), 211.7($\dagger 31.0$), 337.5($\dagger 27.9$) |
| 351.21 9 | > 1.8 | ¹⁷⁶ Re(5.3 m) | 240.17(48), 109.08(25.0), 848.7(4.0) |
| • 351.21 8 | 3.36 16 | ¹⁹¹ Pt(2.9 d) | 538.90(13.7), 409.44(8.0), 359.90(6.0) |
| • 351.3 1 | 0.273 25 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 351.31 25 | 0.7 4 | ¹⁶⁷ Ho(3.1 h) | 346.547(56), 321.336(23.5), 237.873(5.0) |
| 351.4 2 | | ¹⁰² Ag(7.7 m) | 556.52(48), 1834.7(9.8), 2054.4(6.6) |
| 351.47 16 | $\dagger 4.8$ 14 | ¹⁸⁹ Hg(7.6 m) | 320.99($\dagger 100$), 78.21($\dagger 63$), 565.42($\dagger 48$) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|--|---|
| 351.48 7 | 0.023 4 | ¹³¹ Te(25.0 m) | 149.716(69), 452.323(18.18), 1146.96(4.95) |
| 351.49 17 | 0.162 16 | ⁷⁸ As(90.7 m) | 613.725(54), 694.916(16.7), 1308.59(13.0) |
| 351.49 13 | 2.30 11 | ¹⁴⁶ Ce(13.52 m) | 316.74(56), 218.23(20.8), 264.56(9.0) |
| 351.5 2 | †43 2 | ¹¹³ I(6.6 s) | 462.5(†100), 622.4(†74), 567.4(†36) |
| 351.5 1 | †80 5 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 351.51 4 | 2.92 19 | ²⁰⁴ At(9.2 m) | 684.341(95), 516.318(90), 426.253(67.5) |
| • 351.51 7 | 0.0073 14 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 351.595 15 | †2.4 3 | ¹⁰¹ Nb(7.1 s) | 276.10(†100), 157.466(†32), 13.5(†32) |
| 351.6 5 | 1.03 21 | ¹³⁵ Nd(12.4 m) | 204.02(52), 41.43(23), 441.2(14.9) |
| 351.6 3 | †0.7 1 | ¹⁸² Ir(15 m) | 273.23(†100), 126.79(†77), 236.3(†21.0) |
| • 351.67 4 | 0.0090 6 | ¹⁵² Eu(13.542 y) | 344.281(26.58), 778.91(12.96), 411.115(2.231) |
| 351.67 4 | †5.5 8 | ¹⁵² Tb(17.5 h) | 344.281(†1500), 586.294(†223), 271.135(†203) |
| 351.67 4 | 1.89 12 | ¹⁵² Tb(4.2 m) | 344.281(20.8), 411.115(18.8), 471.9(12.2) |
| 351.69 5 | | ²²³ Rn(23.2 m) | 591.8(†100), 635.2(†76), 416.0(†55) |
| 351.7 2 | 0.70 5 | ¹⁰¹ Sr(118 ms) | 128.34(18.0), 1124.82(10.9), 510.73(8.5) |
| 351.7 3 | 2.5 3 | ¹¹⁸ I(13.7 m) | 605.71(86.0), 545.12(10.9), 600.71(10.2) |
| 351.7 2 | 5.7 14 | ¹⁷⁹ Yb(8.0 m) | 592.1(75), 612.3(35.4), 381.4(9.6) |
| • 351.7 | | ¹⁸⁸ Ir(41.5 h) | 155.032(29.7), 2214.62(18.7), 632.99(18) |
| 351.74 11 | 0.066 7 | ⁹³ Rb(5.84 s) | 432.61(17.4), 986.05(6.8), 213.429(6.7) |
| 351.74 9 | 1.2 4 | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 351.74 11 | 0.36 12 | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 351.77 11 | 0.82 4 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 351.8 4 | 0.079 20 | ¹³² I(2.295 h) | 667.718(99), 772.60(75.6), 954.55(17.6) |
| 351.8 2 | 1.7 | ¹⁴⁵ Ba(4.31 s) | 96.6(17), 91.9(7), 65.9(5) |
| 351.8 4 | 0.0033 12 | ¹⁶⁷ Yb(17.5 m) | 113.34(55.3), 106.18(22.5), 176.25(21) |
| 351.8 | †100 | ¹⁸² Tl(3.1 s) | 261.8(†60), 333.2(†30), 413.6(†20) |
| 351.8 3 | 0.220 25 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| • 351.81 1 | 4.1×10^{-5} 7 | ²³³ U(1.592×10^5 y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| • 351.84 4 | 0.00007 1 | ²³¹ Th(25.52 h) | 25.646(14.5), 84.216(6.6), 89.944(0.94) |
| 351.9 1 | 0.127 10 | ¹⁴³ Ba(14.33 s) | 211.475(25), 798.79(15.6), 980.45(11.55) |
| 351.9 | †4 | ¹⁴⁸ Cs(158 ms) | 141.7(†100), 687.2(†23), 545.5(†20) |
| 351.9 5 | 2.6 5 | ¹⁷⁸ Re(13.2 m) | 237.3(45), 105.9(23.0), 939.1(8.9) |
| 351.9 5 | 0.070 10 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| 351.9 1 | 0.41 3 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 351.921 8 | 35.8 5 | ²¹⁴ Pb(26.8 m) | 295.213(18.5), 241.981(7.50), 53.226(1.11) |
| 351.960 12 | 1.26 8 | ¹⁰⁰ Y(735 ms) | 212.531(73), 118.59(15.4), 665.98(7.7) |
| 351.960 12 | †33 4 | ¹⁰⁰ Y(0.94 s) | 212.531(†100), 878.54(†18), 665.98(†13) |
| 352.0 2 | | ¹¹⁵ Pd(25 s) | 342.71(8), 303.87(7), 396.56(6) |
| 352.0 | 0.9 | ¹³⁴ Nd(8.5 m) | 163.2(58), 288.9(13), 216.8(12) |
| 352.0 1 | 0.38 4 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 352.0 | 0.50 25 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 352.0 5 | †2.2 10 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 234.0(†40.0) |
| 352.0 10 | 0.29 15 | ¹⁵⁶ Er(19.5 m) | 35.3(18), 29.9(3.1), 133.6(0.8) |
| 352.0 | | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 352 | | ²¹⁹ Fr(20 ms) | 530, 493, 189 |
| 352.02 8 | 49 | ⁹⁵ Rb(377.5 ms) | 204.02(15.1), 680.7(14.8), 328.7(9.3) |
| 352.02 8 | 700 | ⁹⁶ Rb(0.199 s) | 204.02(†200), 680.7(†121), 328.7(†71) |
| 352.07 15 | 0.13 6 | ¹³¹ La(59 m) | 108.081(25.0), 417.783(18.0), 365.162(16.9) |
| 352.08 9 | 0.32 3 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 352.1 1 | 0.78 14 | ⁷⁵ Zn(10.2 s) | 228.67(28.9), 432.29(20.2), 155.94(17.2) |
| • 352.1 3 | 0.019 16 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 352.18 15 | 0.55 8 | ¹⁸⁴ Au(53.0 s) | 162.97(50), 272.98(40), 362.47(17.5) |
| 352.2 3 | 1.00 15 | ⁹⁷ Sr(426 ms) | 1905.0(25), 953.8(21.4), 652.2(11.4) |
| 352.2 6 | 0.0059 25 | ¹¹¹ Pd(23.4 m) | 580.00(0.8), 70.44(0.78), 1459.0(0.56) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 352.2 2 | 1.01 10 | ¹⁶⁷ Dy(6.20 m) | 569.7(48), 259.33(27.9), 310.26(25.0) |
| 352.2 3 | †1.8 2 | ¹⁶⁸ W(51 s) | 178.5(†100), 145.5(†<2), 181.8(†1.7) |
| 352.20 25 | 1.7 3 | ¹⁹⁴ Tl(32.8 m) | 636.5(99), 428.0(99), 748.9(76) |
| 352.2 1 | †3.1 4 | ¹⁹⁴ Bi(92 s) | 965.4(†100.0), 575.1(†98.0), 280.1(†73.7) |
| 352.24 2 | 29.43 9 | ¹⁴⁹ Tb(4.118 h) | 164.98(26.4), 388.57(18.37), 652.12(16.25) |
| 352.27 20 | 0.0011 3 | ¹³⁰ I(9.0 m) | 536.09(16), 586.05(1.07), 1614.10(0.447) |
| 352.3 7 | 3.4 5 | ⁹⁸ Ag(46.7 s) | 863.1(100), 678.5(85), 570.93(53) |
| 352.3 3 | 1.30 4 | ¹³⁷ Pm(2.4 m) | 177.5(40.29), 108.6(35), 233.6(29.57) |
| • 352.3 3 | 0.016 5 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 352.30 20 | 0.043 19 | ¹⁵⁸ Tm(3.98 m) | 192.13(62), 335.10(16.8), 1149.83(7.6) |
| 352.36 1 | 2.09 6 | ⁵⁷ Mn(87.2 s) | 122.0614(13.9), 14.41300(10.56), 692.03(5.50) |
| • 352.36 1 | 0.0132 3 | ⁵⁷ Co(271.79 d) | 122.0614(85.60), 136.4743(10.68), 14.41300(9.16) |
| 352.4 23 | 0.17 | ⁵¹ Ca(10.0 s) | 861.6(35), 1394.0(27), 1167.5(23) |
| 352.4 1 | 0.65 13 | ⁹⁹ Ag(124 s) | 264.41(65), 832.29(13.5), 805.07(12.5) |
| 352.4 2 | 0.12 6 | ¹⁴⁰ Eu(1.51 s) | 530.7(29), 1068.0(3.2), 459.9(3.19) |
| 352.4 2 | 1.77 20 | ¹⁴⁸ Ce(56 s) | 269.519(17.0), 291.724(16.7), 121.169(13.2) |
| 352.4 1 | †3.1 3 | ¹⁷¹ Ta(23.3 m) | 49.6(†100), 506.4(†54), 501.8(†22.6) |
| 352.4 6 | | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 352.42 5 | 0.23 5 | ²⁰¹ Au(26 m) | 542.6(1.2), 517.0(0.83), 613.2(0.77) |
| 352.47 11 | 0.014 3 | ¹⁵⁵ Dy(9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| 352.481 5 | 0.0367 5 | ¹⁴⁵ Pr(5.984 h) | 748.278(0.5250), 675.795(0.514), 72.500(0.261) |
| 352.5 1 | 0.74 7 | ⁷⁵ Kr(4.3 m) | 132.43(67), 154.66(20.8), 153.15(8.0) |
| 352.5 2 | 0.054 9 | ⁹² Sr(2.71 h) | 1383.93(90), 953.31(3.52), 430.49(3.28) |
| 352.5 2 | 1.5 4 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| 352.5 2 | 4.6 4 | ¹⁵² Ho(49.5 s) | 647.2(92), 613.8(88.4), 683.3(88) |
| • 352.55 4 | 0.064 9 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 352.55 10 | | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 352.555 28 | 0.83 4 | ⁹⁶ Nb(23.35 h) | 778.224(96.45), 568.80(58.0), 459.88(26.62) |
| • 352.555 28 | 0.020 10 | ⁹⁶ Tc(4.28 d) | 778.224(100), 849.929(98), 812.581(82) |
| 352.555 28 | 0.056 3 | ⁹⁶ Tc(51.5 m) | 778.224(1.9), 1200.231(1.08), 480.705(0.311) |
| 352.61 9 | 0.00021 12 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 352.61 9 | †0.81 24 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 352.63 15 | 0.16 3 | ¹⁸⁹ Pt(10.87 h) | 721.41(9.3), 94.33(7.6), 568.84(7.1) |
| • 352.7 | | ¹⁸⁸ Ir(41.5 h) | 155.032(29.7), 2214.62(18.7), 632.99(18) |
| 352.74 6 | †12.7 14 | ¹⁴² Xe(1.22 s) | 571.83(†100), 657.05(†79), 538.24(†77) |
| 352.78 3 | 0.054 3 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 352.79 12 | 0.6 3 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 352.8 2 | †4 1 | ¹⁸¹ Ir(4.90 m) | 107.64(†100), 1639.6(†52), 318.9(†46) |
| • 352.81 2 | 0.042 3 | ¹⁴⁹ Gd(9.28 d) | 149.735(48.2), 298.634(28.6), 346.651(23.9) |
| 352.874 22 | 0.0016 6 | ¹⁸⁷ W(23.72 h) | 685.774(27.3), 479.531(21.8), 72.001(11.14) |
| • 352.9 3 | 0.0025 | ⁹⁹ Mo(65.94 h) | 739.50(12.1), 181.063(6.08), 140.511(4.52) |
| 352.9 6 | 1.02 7 | ¹⁰⁰ Ag(2.01 m) | 665.54(99), 750.67(78), 773.20(24.2) |
| 352.9 1 | 0.24 4 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 352.95 10 | 0.73 4 | ¹⁶³ Yb(11.05 m) | 860.28(10.1), 63.62(6.5), 123.21(1.98) |
| 352.97 7 | 0.20 6 | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 353.0 5 | 0.0205 23 | ⁷⁵ Ge(82.78 m) | 264.6584(11), 198.6031(1.19), 468.8(0.223) |
| 353.0 1 | 0.141 13 | ¹⁰¹ Mo(14.61 m) | 191.92(19), 590.91(16.4), 1012.47(12.8) |
| 353.0 5 | 0.45 8 | ¹¹⁷ I(2.22 m) | 325.9(75), 274.4(20.4), 661.5(5.1) |
| • 353.05 6 | 30.0 8 | ⁹⁹ Rh(16.1 d) | 528.24(33), 89.65(29.0), 322.41(5.4) |
| 353.08 5 | 0.108 24 | ⁸⁹ Br(4.40 s) | 1097.82(6.00), 997.93(4.26), 953.53(4.26) |
| 353.1 3 | 0.48 19 | ¹¹⁷ Ag(5.34 s) | 135.4(48), 386.8(39.9), 298.1(21.1) |
| 353.1 3 | 0.53 7 | ¹¹⁷ Ag(72.8 s) | 135.4(23), 337.7(10.3), 157.1(7.9) |
| 353.2 3 | †3.0 10 | ¹³¹ Ce(10.3 m) | 169.42(†100), 414.25(†68), 119.18(†44) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| • 353.2 5 | 0.009 9 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 353.28 4 | 0.0235 15 | ¹³³ La(3.912 h) | 278.835(2.50), 302.353(1.648), 290.06(1.413) |
| • 353.3 6 | 0.00012 | ¹¹⁵ Cd(44.6 d) | 933.8(2.000), 1290.580(0.890), 484.470(0.290) |
| 353.3 4 | 0.12 4 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 353.3 | | ¹⁴⁴ Gd(4.5 m) | 333.3(†100), 2432.6(†94.8), 629.5(†32.4) |
| • 353.3 2 | 0.228 17 | ¹⁷⁵ Hf(70 d) | 343.40(84), 89.36(2.40), 433.0(1.436) |
| 353.3 | | ²³⁸ Pa(2.3 m) | 1015.3(†<100), 1014.6(†<100), 635.18(†88) |
| 353.35 16 | 0.11 7 | ¹⁶³ Tb(19.5 m) | 351.138(26), 389.734(24.3), 494.534(23) |
| • 353.36 10 | 0.106 11 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 353.39 6 | 9.5 5 | ¹⁹⁹ Pb(90 m) | 366.90(44.2), 1135.04(7.8), 720.24(6.5) |
| 353.4 1 | †5.0 6 | ¹⁰³ Nb(1.5 s) | 102.64(†100), 641.1(†55), 538.5(†34.0) |
| 353.43 10 | 19.9 10 | ¹²¹ Ag(0.78 s) | 314.55(32.1), 500.61(9.3), 1195.10(6.7) |
| • 353.46 11 | 0.00031 3 | ¹⁴⁹ Pm(53.08 h) | 285.95(3.1), 859.46(0.109), 590.88(0.069) |
| 353.479 24 | 0.94 7 | ¹³¹ La(59 m) | 108.081(25.0), 417.783(18.0), 365.162(16.9) |
| 353.49 9 | 0.19 11 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 353.5 2 | 0.114 23 | ¹²³ Cs(5.94 m) | 97.3(23), 596.7(10.1), 83.3(4.1) |
| 353.5 3 | 0.53 12 | ¹²⁶ Ba(100 m) | 233.6(19.6), 257.6(7.6), 241.0(6.0) |
| 353.5 3 | 0.39 5 | ¹²⁷ In(1.09 s) | 1597.7(49), 646.1(6.2), 805.1(5.6) |
| • 353.5 3 | 0.10 5 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 353.54 6 | 0.0037 5 | ¹⁴⁵ Pr(5.984 h) | 748.278(0.5250), 675.795(0.514), 72.500(0.261) |
| 353.57 17 | 0.10 4 | ¹⁶² Yb(18.87 m) | 163.35(40.0), 118.70(33.6), 576.10(3.24) |
| 353.58 9 | 0.019 4 | ¹³¹ Te(25.0 m) | 149.716(69), 452.323(18.18), 1146.96(4.95) |
| 353.6 2 | 0.78 8 | ¹¹⁷ Xe(61 s) | 28.5(7.0), 221.3(10.0), 32.3(7.6) |
| 353.6 4 | 0.54 8 | ¹⁴⁸ Ho(9.59 s) | 1687.5(82.47), 660.8(58.94), 504.3(18.62) |
| 353.6 | 0.4 | ²⁰⁰ Bi(36.4 m) | 1026.5(100), 462.34(98), 419.70(91) |
| 353.61 2 | 1.80 12 | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 353.63 7 | 3.6 4 | ¹²³ Cd(2.10 s) | 371.32(51), 1052.28(24.8), 1438.13(8.3) |
| 353.63 7 | 0.051 20 | ¹²³ Cd(1.82 s) | 1165.86(25.7), 1027.45(22.6), 2102.81(12.5) |
| 353.64 6 | 0.14 6 | ¹⁸⁴ Ta(8.7 h) | 414.03(72), 252.848(43), 920.932(32.0) |
| • 353.66 4 | 0.128 3 | ¹⁵¹ Gd(124 d) | 153.56(6.20), 243.28(5.60), 174.70(2.96) |
| 353.67 | 0.017 12 | ⁴⁴ K(22.13 m) | 1157.031(58), 2150.76(22.7), 2518.95(9.69) |
| 353.68 18 | 0.024 4 | ¹⁵⁹ Ho(33.05 m) | 121.012(36.2), 131.973(23.6), 309.594(17.2) |
| 353.7 3 | 0.98 18 | ¹⁰⁴ Tc(18.3 m) | 358.0(89), 530.5(15.6), 535.1(14.7) |
| 353.70 20 | 0.39 11 | ¹⁰⁶ Tc(35.6 s) | 270.07(56), 2239.30(13.6), 1969.40(8.9) |
| 353.7 2 | 0.58 6 | ¹³⁷ Pr(1.28 h) | 836.7(1.8), 433.9(1.28), 514.0(1.08) |
| 353.7 1 | †2.0 10 | ¹⁷² Ir(2.0 s) | 227.8(†100.0), 378.4(†62.0), 448.4(†40.5) |
| 353.73 21 | 0.44 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| 353.8 2 | 3.0 3 | ¹³² Sb(2.79 m) | 973.9(99), 696.8(86), 989.6(14.9) |
| 353.80 10 | †457 48 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| 353.8 2 | 1.30 12 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 353.8 3 | 0.20 5 | ¹⁶³ Yb(11.05 m) | 860.28(10.1), 63.62(6.5), 123.21(1.98) |
| 353.89 2 | 3.11 20 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 353.9 4 | 1.02 9 | ¹⁰⁹ Sn(18.0 m) | 1099.4(30), 649.90(28.0), 1321.3(11.9) |
| 353.9 2 | 40 | ¹²⁴ Cs(30.8 s) | 914.8(4.0), 492.6(3.6), 846.9(1.19) |
| 353.9 3 | 0.035 5 | ¹⁸¹ Au(11.4 s) | 198.60(4.4), 2022.4(4.2), 79.40(4.2) |
| 353.91 12 | 0.042 9 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| 353.94 15 | †57 5 | ¹⁵⁷ Yb(38.6 s) | 230.92(†100), 340.7(†90), 241.7(†74) |
| 353.96 20 | 0.55 12 | ¹⁶⁶ Lu(2.65 m) | 228.12(77.3), 337.50(41), 367.95(31.4) |
| • 353.9912 5 | 11.2 3 | ¹⁸³ Ta(5.1 d) | 246.0591(27), 107.9322(11.0), 161.3467(8.9) |
| • 353.9912 5 | 0.536 9 | ¹⁸³ Re(70.0 d) | 162.3219(23.3), 46.4839(7.97), 291.7238(3.05) |
| 354.0 2 | †0.80 8 | ¹⁰⁴ Nb(0.92 s) | 192.2(†100), 368.4(†20), 620.2(†19.2) |
| • 354.0 | 0.007 | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 280.41(30.2), 644.55(11.1) |
| 354.00 10 | 0.0118 24 | ¹³⁹ Pr(4.41 h) | 1347.33(0.47), 1630.67(0.343), 255.11(0.236) |
| 354.0 4 | 0.0025 12 | ¹⁶⁷ Yb(17.5 m) | 113.34(55.3), 106.18(22.5), 176.25(21) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|---|---|
| 354.0 4 | 0.026 13 | $^{185}\text{Au}(4.25 \text{ m})$ | 310.6(13), 243.1(6.6), 77.7(6) |
| • 354.03 3 | 5.3×10^{-5} 8 | $^{233}\text{U}(1.592 \times 10^5 \text{ y})$ | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| • 354.031 6 | 7.0×10^{-7} 3 | $^{239}\text{Pu}(24110 \text{ y})$ | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 354.1 8 | 0.34 11 | $^{77}\text{Rb}(3.75 \text{ m})$ | 66.52(57), 178.99(22.2), 393.37(9.7) |
| 354.1 4 | 0.13 3 | $^{89}\text{Kr}(3.15 \text{ m})$ | 220.948(20.1), 586.03(16.6), 904.27(7.2) |
| 354.2 3 | 7.3 11 | $^{78}\text{Zn}(1.47 \text{ s})$ | 224.75(43.9), 181.68(28.1), 860.30(24.5) |
| • 354.20 9 | 0.0146 19 | $^{156}\text{Eu}(15.19 \text{ d})$ | 811.79(9.70), 88.9667(8.4), 1230.68(7.98) |
| 354.21 12 | 0.017 9 | $^{151}\text{Tb}(17.609 \text{ h})$ | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 354.247 17 | 4.6 5 | $^{163}\text{Tb}(19.5 \text{ m})$ | 351.138(26), 389.734(24.3), 494.534(23) |
| 354.32 19 | 0.15 4 | $^{131}\text{La}(59 \text{ m})$ | 108.081(25.0), 417.783(18.0), 365.162(16.9) |
| 354.4 4 | 1.20 8 | $^{97}\text{Pd}(3.10 \text{ m})$ | 265.26(56), 475.2(26.7), 792.70(13.8) |
| 354.4 3 | 0.14 4 | $^{141}\text{Eu}(40.0 \text{ s})$ | 394.0(9), 384.5(5.6), 382.9(2.97) |
| • 354.4 | 0.025 | $^{153}\text{Tb}(2.34 \text{ d})$ | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 354.45 6 | 0.0064 10 | $^{246}\text{Am}(25.0 \text{ m})$ | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 354.47 5 | 0.7 | $^{227}\text{Ra}(42.2 \text{ m})$ | 27.36(16), 300.07(4.6), 302.65(4.3) |
| • 354.47 5 | 0.100 3 | $^{231}\text{Pa}(32760 \text{ y})$ | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 354.5 1 | 2.50 25 | $^{107}\text{Tc}(21.2 \text{ s})$ | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| 354.5 3 | 0.13 4 | $^{109}\text{Ru}(34.5 \text{ s})$ | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 354.5 4 | 0.48 10 | $^{185}\text{Au}(4.25 \text{ m})$ | 310.6(13), 243.1(6.6), 77.7(6) |
| 354.5 5 | 1.25 19 | $^{196}\text{Tl}(1.84 \text{ h})$ | 426.0(84), 610.5(11.9), 635.5(9.8) |
| 354.510 60 | $\dagger 27.8$ 19 | $^{94}\text{Kr}(0.20 \text{ s})$ | 629.2($\dagger 100$), 764.5($\dagger 71$), 219.466($\dagger 67.4$) |
| • 354.59 5 | 0.0171 19 | $^{205}\text{Bi}(15.31 \text{ d})$ | 1764.36(1.368), 703.44(31), 987.62(0.585) |
| 354.6 3 | 0.24 4 | $^{157}\text{Er}(18.65 \text{ m})$ | 53.05(24), 391.32(14.2), 121.57(10.1) |
| 354.6 3 | 0.46 8 | $^{160}\text{Yb}(4.8 \text{ m})$ | 173.74(42.0), 215.78(20.2), 140.35(9.3) |
| 354.6 6 | 0.58 19 | $^{162}\text{Tm}(24.3 \text{ s})$ | 811.52(6.5), 798.68(5.2), 227.52(5) |
| 354.67 13 | 0.171 24 | $^{183}\text{Au}(42.0 \text{ s})$ | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 354.70 19 | 0.29 4 | $^{84}\text{Br}(31.80 \text{ m})$ | 881.610(42), 1897.761(14.7), 3927.5(6.8) |
| • 354.7 1 | 0.298 15 | $^{131}\text{Te}(30 \text{ h})$ | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 354.7 5 | 0.049 16 | $^{142}\text{Ba}(10.6 \text{ m})$ | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| 354.735 25 | 1.89 22 | $^{78}\text{As}(90.7 \text{ m})$ | 613.725(54), 694.916(16.7), 1308.59(13.0) |
| 354.76 3 | $\dagger 0.157$ 15 | $^{153}\text{Pm}(5.4 \text{ m})$ | 35.842($\dagger 100$), 127.298($\dagger 75$), 28.309($\dagger 34.6$) |
| 354.8 | $\dagger 9.6$ | $^{107}\text{Mo}(3.5 \text{ s})$ | 400.3($\dagger 100$), 65.7($\dagger > 92$), 384.4($\dagger 57.6$) |
| 354.8 2 | 13.1 5 | $^{120}\text{In}(47.3 \text{ s})$ | 1171.3(100), 1023.1(97.4), 197.3(80.6) |
| 354.8 1 | $\dagger < 5$ | $^{129}\text{Ba}(2.17 \text{ h})$ | 182.30($\dagger 100$), 1459.1($\dagger 50.0$), 202.38($\dagger 33.7$) |
| 354.8 2 | 0.025 9 | $^{221}\text{Rn}(25 \text{ m})$ | 186.38(21.6), 150.04(4.5), 216.90(2.6) |
| • 354.8 2 | 0.0016 4 | $^{225}\text{Ac}(10.0 \text{ d})$ | 99.91(1.01), 150.04(0.80), 99.63(0.62) |
| • 354.87 4 | 0.395 16 | $^{206}\text{Po}(8.8 \text{ d})$ | 1032.26(32.9), 511.36(24.1), 286.410(23.8) |
| • 354.9 3 | 4.8×10^{-5} 19 | $^{85}\text{Sr}(64.84 \text{ d})$ | 514.0067(96), 868.5(0.0120), 151.159(0.0012) |
| 354.9 2 | | $^{146}\text{Dy}(29 \text{ s})$ | 2156.8, 1915.7, 1876.7 |
| • 354.90 10 | 0.186 22 | $^{153}\text{Tb}(2.34 \text{ d})$ | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 354.90 20 | 0.17 | $^{154}\text{Pm}(1.73 \text{ m})$ | 2057.76(17.1), 1393.9(14.4), 81.99(12.6) |
| 354.90 20 | 0.68 | $^{154}\text{Pm}(2.68 \text{ m})$ | 184.810(32), 81.99(15.4), 546.66(14.5) |
| • 354.9 1 | 0.0019 3 | $^{177}\text{Ta}(56.56 \text{ h})$ | 112.9498(7.2), 208.3664(0.94), 1057.8(0.29) |
| 354.9 | $\dagger 3.7$ | $^{205}\text{Rn}(2.8 \text{ m})$ | 264.9($\dagger 100$), 464.5($\dagger 25$), 620.2($\dagger 25$) |
| 354.94 14 | 0.29 3 | $^{187}\text{Au}(8.4 \text{ m})$ | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 354.97 11 | 0.673 14 | $^{144}\text{Ba}(11.5 \text{ s})$ | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 354.97 11 | 1.96 21 | $^{174}\text{W}(31 \text{ m})$ | 35.42(14.1), 428.83(12.7), 328.68(9.5) |
| 355.0 1 | | $^{106}\text{Sn}(115 \text{ s})$ | 386.8($\dagger 100$), 477.5($\dagger 62$), 253.30($\dagger 57$) |
| 355.00 22 | $\dagger 14.9$ 15 | $^{164}\text{Tm}(2.0 \text{ m})$ | 91.40($\dagger 1500$), 1154.66($\dagger 366$), 768.91($\dagger 279$) |
| 355.07 26 | 0.099 25 | $^{86}\text{Y}(14.74 \text{ h})$ | 1076.64(83), 627.72(32.6), 1153.01(30.5) |
| 355.1 3 | 0.37 18 | $^{119}\text{Cd}(2.69 \text{ m})$ | 292.9(36.8), 343.0(16.9), 1609.7(10.9) |
| 355.1 3 | 0.32 12 | $^{119}\text{Cd}(2.20 \text{ m})$ | 1025.0(24.8), 2021.3(22.6), 720.7(17.9) |
| 355.1 5 | 1.1 5 | $^{166}\text{Hf}(6.77 \text{ m})$ | 78.76(41), 341.82(4.7), 407.91(4.5) |
| 355.11 4 | 0.24 4 | $^{122}\text{Xe}(20.1 \text{ h})$ | 350.065(7.80), 148.612(2.62), 416.633(1.87) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| 355.2 | 0.06 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 355.2 2 | †1.7 4 | ¹⁹⁴ Bi(92 s) | 965.4(†100.0), 575.1(†98.0), 280.1(†73.7) |
| 355.244 17 | 0.650 13 | ¹⁸³ Os(13.0 h) | 381.768(89.6), 114.463(20.63), 167.844(8.81) |
| 355.3 2 | 4.7 8 | ⁷⁶ Kr(14.8 h) | 315.7(39), 270.2(21.1), 45.48(19.5) |
| 355.3 2 | 2.73 21 | ⁹⁷ Rb(169.9 ms) | 167.1(26), 585.2(21.0), 600.5(10.6) |
| 355.3 1 | 0.223 13 | ¹⁰¹ Pd(8.47 h) | 296.29(19), 590.44(12.06), 269.67(6.43) |
| 355.3 3 | >0.047 | ¹⁴² La(91.1 m) | 641.285(47), 2397.8(13.3), 2542.7(10.00) |
| 355.36 4 | 0.83 4 | ¹¹⁶ In(54.41 m) | 1293.54(84.4), 1097.3(56.2), 416.86(28.9) |
| 355.36 4 | 0.012 | ¹¹⁶ Sb(15.8 m) | 1293.54(85), 931.800(24.7), 2225.33(14.2) |
| 355.40 9 | 2.09 9 | ⁹⁷ Zr(16.91 h) | 743.36(93), 507.64(5.03), 1147.97(2.61) |
| 355.4 1 | 0.65 4 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| • 355.48 6 | 0.043 3 | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 355.48 15 | 0.30 5 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 355.50 9 | 0.033 3 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| 355.5 3 | †0.8 3 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| • 355.54 5 | †8.8×10 ³ 9 | ¹³⁴ Ce(75.9 h) | 162.306(†230000), 130.414(†209000), 39.08(†>150000) |
| 355.6 1 | 8.2 9 | ⁷⁶ Rb(39.1 s) | 2571.3(47), 424.0(43.4), 1803.3(7.6) |
| 355.6 3 | 1.01 6 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 355.6 3 | 0.20 3 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 355.624 13 | 0.478 13 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 355.64 13 | 0.53 5 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 355.67 15 | 0.60 12 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 355.684 2 | 19 | ¹⁹⁶ Ir(52 s) | 779.630(10.4), 446.613(4.5), 332.983(4.35) |
| 355.684 2 | †102 3 | ¹⁹⁶ Ir(1.40 h) | 393.346(†105.2), 521.175(†104), 447.1(†102.1) |
| • 355.684 2 | 87 | ¹⁹⁶ Au(6.183 d) | 332.983(22.9), 521.175(0.389), 1091.331(0.149) |
| 355.7 3 | †0.8 3 | ¹⁰¹ Nb(7.1 s) | 276.10(†100), 157.466(†32), 13.5(†32) |
| 355.73 18 | †7.6 10 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| 355.8 2 | 3.8 | ¹⁴⁵ La(24.8 s) | 70.0(11), 118.2(3.6), 447.4(3.2) |
| 355.8 5 | †1.04 21 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 355.9 3 | 0.030 9 | ¹¹² Ag(3.130 h) | 617.27(43), 1387.67(5.4), 606.49(3.1) |
| 355.9 2 | 2.33 13 | ¹²¹ Cs(155 s) | 153.9(15.2), 239.6(7.7), 427.1(3.63) |
| 355.97 3 | 0.0297 15 | ¹³³ La(3.912 h) | 278.835(2.50), 302.353(1.648), 290.06(1.413) |
| 355.97 19 | †2.7 3 | ¹⁸² Au(21 s) | 154.76(†100), 264.33(†40.0), 855.41(†14.5) |
| 356.00 20 | 0.11 4 | ⁹⁰ Kr(32.32 s) | 1118.69(39.0), 121.82(35.5), 539.49(30.8) |
| 356.0 2 | 0.54 8 | ⁹⁶ Sr(1.07 s) | 122.297(76.50), 809.401(71.9), 931.7(11.8) |
| 356.0 1 | 0.36 23 | ²⁰⁶ Fr(15.9 s) | 575.3(12), 559.0(8.19), 628.6(3.6) |
| 356 10 | 4.0 20 | ²¹⁰ Tl(1.30 m) | 799.7(99), 298(79), 1316(21) |
| • 356.017 2 | 62.05 19 | ¹³³ Ba(10.52 y) | 80.997(34.06), 302.853(18.33), 383.851(8.94) |
| • 356.03 5 | 0.005 | ²³⁵ U(7.038×10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| 356.1 | 1.6 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 356.10 20 | 0.068 19 | ¹⁵⁸ Tm(3.98 m) | 192.13(62), 335.10(16.8), 1149.83(7.6) |
| 356.1 4 | 0.077 7 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 356.16 9 | 4.16 22 | ⁸⁹ Kr(3.15 m) | 220.948(20.1), 586.03(16.6), 904.27(7.2) |
| 356.18 15 | 0.11 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 356.21 16 | 1.7 8 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| 356.23 11 | 0.220 25 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 356.27 19 | 0.132 24 | ⁸⁹ Br(4.40 s) | 1097.82(6.00), 997.93(4.26), 953.53(4.26) |
| 356.37 10 | 0.026 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 356.395 14 | 1.79 19 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 356.4 4 | 0.231 3 | ⁸⁹ Nb(1.9 h) | 1627.20(3.4), 1833.46(3.16), 3092.7(3.0) |
| 356.4 4 | 0.00035 5 | ¹⁰⁷ Cd(6.50 h) | 93.124(1.45), 828.93(0.17), 796.462(0.0665) |
| 356.4 5 | †<0.15 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 356.4 3 | 0.133 12 | ²⁴³ Pu(4.956 h) | 84.0(23), 41.8(0.76), 381.7(0.56) |
| • 356.426 5 | 13.61 7 | ¹⁵⁶ Tb(5.35 d) | 534.318(66.6), 199.2132(40.9), 1222.36(31.00) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 356.45 9 | 0.024 4 | ¹⁸² Hf(61.5 m) | 942.80(18.8), 799.64(9.4), 114.3152(6.2) |
| • 356.47 15 | 0.012 3 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| 356.5 1 | 0.047 5 | ¹⁴³ Ba(14.33 s) | 211.475(25), 798.79(15.6), 980.45(11.55) |
| 356.5 5 | 0.0070 20 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| • 356.519 12 | 2.75 8 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 356.6 2 | †1.7 4 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 356.687 30 | 70 | ⁸³ Se(22.3 m) | 510.17(43), 224.8(32.7), 718.10(15.0) |
| 356.687 30 | 18 | ⁸³ Se(70.1 s) | 1030.86(21.2), 987.96(16.1), 673.98(15.2) |
| 356.72 8 | 0.526 6 | ¹³⁹ Xe(39.68 s) | 218.59(56), 296.53(21.7), 174.97(11.3) |
| • 356.74 5 | 0.000140 6 | ¹⁶⁹ Yb(32.026 d) | 63.12077(44.2), 197.95788(35.8), 177.21402(22.16) |
| 356.78 6 | 2.1 | ¹³⁶ Te(17.5 s) | 2077.9(22), 333.99(19), 578.75(18) |
| 356.78 9 | 1.6 3 | ¹⁸¹ Os(105 m) | 238.75(44), 826.77(20), 118.03(12.9) |
| 356.8 3 | 0.124 13 | ⁹⁹ Nb(2.6 m) | 97.785(7), 253.50(3.64), 2641.3(3.64) |
| 356.8 5 | 0.082 25 | ¹⁴² Ba(10.6 m) | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| 356.8 3 | 0.113 13 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| 356.83 14 | 0.30 4 | ¹³³ Sb(2.5 m) | 1096.22(43.0), 817.8(18.5), 2755(12.5) |
| 356.84 16 | 29.3 8 | ¹⁸⁶ Tl(27.5 s) | 405.43(92), 402.72(45.9), 675.22(14.2) |
| 356.87 10 | 0.014 3 | ¹⁵⁵ Dy(9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| 356.9 2 | 1.7 5 | ¹¹⁰ Rh(3.2 s) | 373.80(54), 439.79(6.5), 796.83(5.3) |
| • 356.9 5 | 0.008 3 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| • 356.9 4 | 0.016 9 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 356.9 5 | 0.31 8 | ¹⁶⁰ Yb(4.8 m) | 173.74(42.0), 215.78(20.2), 140.35(9.3) |
| 356.90 25 | 0.0008 4 | ¹⁶⁵ Dy(2.334 h) | 94.700(3.58), 361.68(0.84), 633.415(0.568) |
| 356.9 4 | 4.8 10 | ¹⁹¹ Hg(50.8 m) | 252.5(57), 420.1(18.6), 578.6(17.6) |
| 356.93 10 | †8 2 | ¹⁶⁵ Lu(10.74 m) | 132.49(†100), 120.60(†100), 174.25(†47.0) |
| 356.93 10 | †12 2 | ¹⁶⁵ Lu(10.74 m) | 132.49(†100), 120.60(†100), 174.25(†47.0) |
| 356.94 10 | 0.0176 19 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 356.99 5 | 0.46 4 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| 356.996 15 | 0.466 19 | ¹⁷³ Hf(23.6 h) | 123.672(83), 296.974(33.9), 139.634(12.7) |
| 357.0 4 | 0.19 4 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 357.0 3 | 1.5 3 | ¹²⁸ Sb(9.01 h) | 753.82(100), 743.22(100), 314.12(61) |
| 357.00 2 | 0.43 3 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 357.0 5 | 0.21 4 | ¹⁵⁶ Ho(56 m) | 266.35(54.7), 137.83(51), 366.25(10.73) |
| 357.0 2 | 0.50 9 | ¹⁵⁷ Er(18.65 m) | 53.05(24), 391.32(14.2), 121.57(10.1) |
| 357.00 15 | 6.7 9 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 357 1 | 0.032 | ¹⁷⁵ Ta(10.5 h) | 207.4(14.0), 348.5(12.0), 266.9(10.8) |
| 357.01 16 | 0.0158 25 | ¹³⁹ Cs(9.27 m) | 1283.23(8.3), 627.24(1.78), 1420.66(0.91) |
| 357.03 4 | 0.047 3 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 357.1 2 | 0.77 13 | ¹⁰⁵ Mo(35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| • 357.10 20 | 0.047 23 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| 357.1 10 | †1.0 | ¹⁷⁹ Os(6.5 m) | 65.39(†100), 218.6(†17), 32.3(†17) |
| • 357.11 3 | 0.54 5 | ¹⁸² Re(64.0 h) | 229.3220(26), 67.75001(22.2), 1121.3007(22.0) |
| • 357.12 9 | 0.175 7 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 357.14 13 | 0.13 4 | ¹⁶² Yb(18.87 m) | 163.35(40.0), 118.70(33.6), 576.10(3.24) |
| 357.15 1 | 2.67 18 | ²⁰⁷ At(1.80 h) | 814.41(44.5), 588.33(19.2), 300.654(12.8) |
| 357.2 2 | 0.070 14 | ⁶³ Fe(6.1 s) | 994.8(14.0), 1427.2(4.6), 1299.0(1.23) |
| 357.2 3 | 0.024 10 | ⁹⁹ Sr(0.269 s) | 125.118(16.1), 536.12(14.0), 1198.12(9.2) |
| • 357.26 5 | 0.0048 6 | ¹⁵² Eu(13.542 y) | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| 357.3 4 | 0.27 7 | ¹⁴⁴ La(40.8 s) | 397.440(94.3), 541.20(39.2), 844.8(22.3) |
| 357.38 15 | 0.32 10 | ²⁰⁹ Rn(28.5 m) | 408.32(50.3), 745.78(22.8), 337.45(14.5) |
| 357.4 1 | 81.0 24 | ¹³⁰ La(8.7 m) | 550.7(25.9), 908.0(17.0), 544.5(16.2) |
| • 357.4 3 | 0.025 10 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 357.4 1 | 0.18 3 | ²²³ Ac(2.10 m) | 98.58(0.891), 191.3(0.58), 83.55(0.57) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|-------------------------------|-----------------------------|--|
| 357.425 14 | 1.34 8 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| • 357.45 16 | 0.0175 25 | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| • 357.47 5 | 0.0094 6 | ¹⁰³ Ru(39.26 d) | 497.080(90.9), 610.33(5.75), 443.799(3.27) |
| • 357.47 5 | 0.0221 7 | ¹⁰³ Pd(16.991 d) | 39.757(0.07), 497.080(0.00396), 294.978(0.00280) |
| • 357.48 20 | >0.00014 | ¹²⁹ Te(33.6 d) | 695.88(2.988), 729.57(0.70), 556.65(0.118) |
| 357.5 8 | 0.59 8 | ⁷⁷ Zn(2.08 s) | 189.49(28.1), 473.94(19.7), 1832.0(12.4) |
| 357.50 18 | 0.756 23 | ⁸¹ Rb(4.576 h) | 190.38(64.0), 446.15(23.2), 510.31(5.3) |
| 357.5 10 | $\dagger 7.9 \times 10^2$ 17 | ²³⁴ Pa(1.17 m) | 1001.03($\dagger 837000$), 766.38($\dagger 294000$), 742.81($\dagger 80000$) |
| • 357.518 62 | 0.0058 9 | ¹²⁹ Cs(32.06 h) | 371.918(30.60), 411.490(22.31), 548.945(3.40) |
| 357.6 3 | 1.70 11 | ¹¹³ Rh(2.72 s) | 189.7(17.0), 409.3(15.9), 219.6(3.88) |
| • 357.62 7 | 0.053 3 | ²³⁸ Np(2.117 d) | 984.45(27.8), 1028.54(20.3), 1025.87(9.6) |
| 357.62 7 | 2.10 14 | ²³⁸ Am(98 m) | 962.77(28), 918.69(23.0), 561.11(10.9) |
| • 357.62 7 | 6×10^{-7} 4 | ²⁴² Cm(162.8 d) | 44.08(0.0325), 101.90(0.0025), 157.42(0.0014) |
| 357.7 3 | $\dagger 6$ 2 | ¹¹² Te(2.0 m) | 372.70($\dagger 100$), 296.20($\dagger 86$), 418.9($\dagger 57$) |
| 357.7 | | ¹³⁵ Ce(17.7 h) | 265.56(41.8), 300.07(23.5), 606.76(18.8) |
| • 357.76 4 | 0.010 3 | ¹⁹³ Os(30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| • 357.8 2 | 0.00060 21 | ¹⁴³ Ce(33.039 h) | 293.266(42.80), 57.356(11.7), 664.571(5.69) |
| 357.8 2 | 4.3 8 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 357.84 20 | 0.41 3 | ¹⁰⁷ Rh(21.7 m) | 302.77(66), 392.47(8.8), 312.21(4.8) |
| 357.9 1 | 0.42 4 | ¹¹¹ Pd(5.5 h) | 70.44(8.3), 391.25(5.4), 632.80(3.6) |
| 357.9 1 | 0.036 10 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 357.90 20 | 0.063 17 | ²⁴⁵ Pu(10.5 h) | 327.428(25.4), 560.13(5.4), 308.222(4.9) |
| 358.0 3 | 1.22 14 | ⁸⁵ Zr(7.86 m) | 454.20(45), 416.3(27.0), 1198.4(4.8) |
| 358 | $\dagger 0.1$ | ⁹² Br(0.343 s) | 769($\dagger 100$), 1446($\dagger 10$), 1035($\dagger 6$) |
| 358.0 1 | 89 | ¹⁰⁴ Tc(18.3 m) | 530.5(15.6), 535.1(14.7), 884.4(10.9) |
| 358.0 1 | 0.0160 12 | ¹⁰⁴ Rh(42.3 s) | 630.3(0.0010) |
| 358.0 4 | $\dagger 15$ 5 | ¹⁶⁴ Tm(2.0 m) | 91.40($\dagger 1500$), 1154.66($\dagger 366$), 768.91($\dagger 279$) |
| 358.0 4 | 0.037 9 | ¹⁶⁴ Yb(75.8 m) | 40.928(1.147), 675.41(0.38), 390.6(0.31) |
| 358.02 9 | 6.4 13 | ⁷⁵ Rb(19.0 s) | 178.98(<63), 178.97(>51), 187.21(8.7) |
| 358.03 5 | 0.30 5 | ²⁰² Bi(1.72 h) | 960.67(99), 422.18(83.7), 657.49(60.6) |
| • 358.098 5 | 0.014 | ⁷⁶ As(26.32 h) | 559.101(45), 657.041(6.2), 1216.104(3.42) |
| 358.098 5 | 0.37 15 | ⁷⁶ Br(16.2 h) | 559.101(74), 657.041(15.9), 1853.67(14.7) |
| 358.1 | 1.7 | ¹⁴⁷ Ce(56.4 s) | 268.80(7), 92.9(4.7), 374.23(3.5) |
| 358.1 2 | 0.52 5 | ¹⁷⁴ Tm(5.4 m) | 366.526(92), 992.128(87), 272.918(86) |
| 358.1 3 | $\dagger 0.5$ 2 | ²²⁵ Fr(4.0 m) | 182.3($\dagger 100$), 31.50($\dagger 91$), 225.1($\dagger 55$) |
| 358.15 18 | 2.5 5 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 358.174 10 | 0.729 17 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 358.2 5 | 0.047 13 | ¹⁰¹ Mo(14.61 m) | 191.92(19), 590.91(16.4), 1012.47(12.8) |
| • 358.2 5 | | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 358.2 1 | $\dagger 100$ | ¹⁵⁸ Lu(10.4 s) | 477.0($\dagger 21$) |
| 358.2 | 0.21 | ²¹² Fr(20.0 m) | 1273.8(46), 227.72(43), 1185.6(14.1) |
| 358.21 3 | $\dagger 2.8 \times 10^4$ 3 | ¹⁵⁸ Er(2.29 h) | 71.91($\dagger 23300$), 386.84($\dagger 111000$), 248.58($\dagger 42000$) |
| • 358.25 20 | $\dagger 1.20 \times 10^4$ 24 | ²⁴¹ Am(432.2 y) | 59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$) |
| 358.3 6 | 0.076 25 | ¹⁰³ Ag(65.7 m) | 118.72(31.2), 148.193(28.3), 266.86(13.3) |
| 358.3 3 | $\dagger 49$ 33 | ¹⁷¹ Ho(53 s) | 903.3($\dagger 100$), 198.6($\dagger 88$), 279.2($\dagger 60$) |
| 358.3 1 | 0.315 20 | ²⁵¹ Fm(5.30 h) | 425.4(0.95), 480.4(0.392), 383.2(0.0196) |
| • 358.32 11 | 0.015 3 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 358.36 4 | 0.124 24 | ²⁰¹ Au(26 m) | 542.6(1.2), 517.0(0.83), 613.2(0.77) |
| 358.384 9 | 0.221 8 | ¹³⁵ Xe(9.14 h) | 249.770(90), 608.151(2.90), 408.009(0.359) |
| • 358.4 2 | 0.016 6 | ¹³¹ I(8.02070 d) | 364.489(81.7), 636.989(7.17), 284.305(6.14) |
| 358.4 2 | 0.112 20 | ¹⁴⁰ Xe(13.60 s) | 805.52(20), 1413.66(12.2), 1315.05(8.2) |
| 358.4 1 | 0.59 8 | ¹⁸¹ Au(11.4 s) | 198.60(4.4), 2022.4(4.2), 79.40(4.2) |
| 358.4 | 0.07 | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| • 358.45 3 | 0.121 6 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 358.49 10 | 0.010 5 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 358.50 12 | 0.58 24 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 358.5 | †27.5 | ¹⁰⁷ Mo(3.5 s) | 400.3(†100), 65.7(†>92), 384.4(†57.6) |
| 358.5 5 | 0.11 5 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| 358.5 3 | 1.63 20 | ¹¹⁴ Pd(2.42 m) | 232.0(4.90), 126.7(4.49), 136.7(0.90) |
| 358.6 2 | †18.8 17 | ¹³⁷ Te(2.49 s) | 243.3(†100), 554.0(†34), 469.1(†21) |
| 358.6 3 | †14.6 17 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 234.0(†40.0) |
| 358.7 2 | 0.24 7 | ¹⁰⁸ Tc(5.17 s) | 242.25(82), 465.6(14.3), 707.81(11.4) |
| 358.7 5 | 0.22 7 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 358.7 2 | 0.087 12 | ¹³³ Te(12.5 m) | 312.072(62), 407.63(27.1), 1333.21(10.67) |
| 358.7 | †89 12 | ¹⁵² Lu(0.7 s) | 1531.2(†100), 312.3(†87) |
| 358.72 20 | 0.10 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 358.75 10 | †1.5×10 ³ 3 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| 358.79 3 | 13.6 7 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 358.8 3 | †7.8 4 | ⁷¹ Se(4.74 m) | 147.50(†211), 1095.26(†43.6), 830.33(†43.2) |
| 358.8 2 | †39.4 24 | ⁹⁴ Kr(0.20 s) | 629.2(†100), 764.5(†71), 219.466(†67.4) |
| 358.8 2 | 0.32 11 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| 358.8 8 | 0.034 14 | ¹⁵⁰ Pm(2.68 h) | 333.971(68), 1324.51(17.5), 1165.739(15.8) |
| 358.80 20 | 0.41 9 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 358.8 1 | 0.18 4 | ²⁰⁵ Po(1.66 h) | 872.39(37), 1001.21(28.8), 849.83(25.5) |
| • 358.80 5 | >0.007 | ²⁴⁹ Cf(351 y) | 388.16(66), 333.37(14.6), 252.80(2.50) |
| • 358.86 6 | 0.0096 12 | ¹⁷² Tm(63.6 h) | 78.7435(6.5), 1093.657(6.0), 1387.093(5.6) |
| 358.9 5 | 0.24 6 | ¹⁴⁹ Dy(4.20 m) | 100.8(15.2), 789.4(11.8), 1776.3(11.1) |
| 358.931 15 | 0.30 3 | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| 359.0 1 | 4.1 5 | ²²⁵ Th(8.72 m) | 321.4(23), 246.0(5.06), 305.9(4.1) |
| 359.1 1 | 0.050 3 | ⁹¹ Sr(9.63 h) | 1024.3(33), 749.8(23.61), 652.9(8.0) |
| • 359.10 4 | 0.096 9 | ¹²⁸ Ba(2.43 d) | 273.44(15), 374.99(0.309), 229.50(0.106) |
| 359.1 2 | 0.35 7 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 359.10 20 | 0.062 25 | ¹⁵⁸ Tm(3.98 m) | 192.13(62), 335.10(16.8), 1149.83(7.6) |
| 359.1 | 0.037 19 | ²²¹ Fr(4.9 m) | 218.19(11.6), 410.7(0.14), 99.5(0.11) |
| 359.12 2 | 1.47 15 | ⁶⁷ Ge(18.9 m) | 167.01(84), 1472.48(4.9), 910.92(3.1) |
| 359.12 10 | †0.052 22 | ¹⁵³ Pm(5.4 m) | 35.842(†100), 127.298(†75), 28.309(†34.6) |
| 359.16 8 | 4.09 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 359.2 | 0.010 8 | ¹⁴¹ Ba(18.27 m) | 190.328(46.0), 304.194(25.4), 276.948(23.4) |
| 359.2 | 0.50 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 359.2 | | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 359.23 12 | †4.3 16 | ¹⁸⁹ Au(28.7 m) | 713.17(†100), 812.68(†63), 447.65(†55) |
| 359.26 5 | 0.17 3 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 359.27 15 | | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| 359.3 5 | †0.15 8 | ¹⁸⁸ Au(8.84 m) | 265.63(†100), 340.04(†23.9), 605.5(†16.3) |
| • 359.3 1 | 0.009 1 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 359.31 12 | 0.11 3 | ¹⁸⁴ Ta(8.7 h) | 414.03(72), 252.848(43), 920.932(32.0) |
| 359.31 15 | 4.5 3 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| • 359.38 7 | 0.166 9 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| 359.4 5 | 2.8 3 | ¹²⁹ Sb(4.40 h) | 812.8(43), 914.6(20.0), 544.7(17.9) |
| 359.4 1 | 0.24 20 | ¹³⁸ Pr(2.12 h) | 1037.8(101), 788.742(100), 302.7(80) |
| 359.5 2 | 0.94 13 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| • 359.57 7 | 0.00149 12 | ¹⁴⁹ Pm(53.08 h) | 285.95(3.1), 859.46(0.109), 590.88(0.069) |
| 359.598 14 | 27.2 5 | ¹⁴² Cs(1.70 s) | 1326.46(12.92), 966.89(9.0), 1175.93(4.16) |
| 359.6 3 | 0.10 5 | ¹²⁷ In(1.09 s) | 1597.7(49), 646.1(6.2), 805.1(5.6) |
| 359.60 35 | †0.8 4 | ¹³¹ Sn(56.0 s) | 1226.03(†100), 450.03(†90), 798.50(†86) |
| 359.6 2 | 0.38 8 | ¹⁴⁹ Dy(4.20 m) | 100.8(15.2), 789.4(11.8), 1776.3(11.1) |
| 359.7 3 | 30 3 | ¹¹² Rh(6.8 s) | 348.70(87), 560.5(49), 1098.6(39) |
| 359.7 3 | | ¹²² Ba(1.95 m) | 550.7, 388.7, 231.0 |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|--------------------------|-----------------------------|---|
| 359.72 4 | 1.66 20 | ⁸⁶ Nb(88 s) | 751.74(97.8), 914.81(78.1), 1003.24(37.4) |
| 359.74 4 | 0.12 | ²³³ Th(22.3 m) | 86.477(2.7), 29.374(2.5), 459.222(1.4) |
| 359.80 5 | 2.70 15 | ⁸³ Zr(44 s) | 55.55(8), 104.97(5.70), 475.1(5.1) |
| 359.9 3 | 0.27 8 | ¹⁰² Mo(11.3 m) | 211.66(3.8), 148.19(3.76), 223.83(1.44) |
| 359.9 5 | 0.24 12 | ¹²⁴ Cs(30.8 s) | 353.9(40), 914.8(4.0), 492.6(3.6) |
| 359.9 1 | 0.75 19 | ¹⁴⁹ Er(8.9 s) | 1171.0(9.4), 171.5(6.5), 343.9(6.3) |
| • 359.90 9 | 6.0 3 | ¹⁹¹ Pt(2.9 d) | 538.90(13.7), 409.44(8.0), 82.407(4.9) |
| 359.92 17 | 1.11 8 | ¹⁶¹ Yb(4.2 m) | 78.20(34), 599.88(25.9), 631.45(13.9) |
| 360.0 5 | 0.8 3 | ¹⁶⁴ Tm(5.1 m) | 208.08(14.6), 314.97(10), 240.49(7.5) |
| 360 8 | †10 | ¹⁸⁹ W(11.5 m) | 258(†100), 417(†96), 550(†28) |
| 360.00 7 | 0.049 3 | ²¹⁰ Rn(2.4 h) | 458.25(1.7), 648.70(0.843), 570.95(0.840) |
| 360.052 18 | 0.153 5 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 360.09 7 | 3.6 3 | ¹⁶⁶ Lu(2.65 m) | 228.12(77.3), 337.50(41), 367.95(31.4) |
| • 360.1 | | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 360.2 4 | 0.9 3 | ¹¹⁶ Cs(3.84 s) | 393.5(<0.09), 524.3(76), 615.1(30.4) |
| 360.2 3 | 0.20 7 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 360.20 19 | †5.7 10 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| 360.2 3 | 0.012 3 | ¹⁹⁵ Hg(9.9 h) | 779.80(7), 61.46(6.2), 585.13(1.99) |
| 360.22 5 | 0.65 4 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| • 360.23 8 | 0.0033 7 | ¹¹⁰ Ag(249.79 d) | 657.7622(94.0), 884.685(72.2), 937.493(34.13) |
| 360.3 2 | 3.7 4 | ¹⁰² Cd(5.5 m) | 481.0(63), 1036.6(12.8), 505.1(9.6) |
| 360.3 1 | 3.0 4 | ¹⁰⁷ Tc(21.2 s) | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| 360.3 2 | 1.02 15 | ¹¹⁹ Cd(2.20 m) | 1025.0(24.8), 2021.3(22.6), 720.7(17.9) |
| 360.32 10 | 0.1346 10 | ¹²⁷ Te(9.35 h) | 417.95(1.0), 202.860(0.0580), 215.17(0.0387) |
| 360.34 2 | 0.20 4 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 360.39 4 | 0.0566 22 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 360.4 5 | 4.5 9 | ¹⁵⁰ Tm(2.2 s) | 1578.9(91), 474.5(86), 207.6(82) |
| 360.4 3 | 0.37 18 | ¹⁵² Ho(49.5 s) | 647.2(92), 613.8(88.4), 683.3(88) |
| 360.4 3 | 0.145 13 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| 360.4 3 | †4 | ²²³ Rn(23.2 m) | 591.8(†100), 635.2(†76), 416.0(†55) |
| 360.5 3 | 0.18 8 | ¹²² In(10.3 s) | 1140.55(98), 1001.58(50.7), 1190.58(20.5) |
| 360.5 2 | 1.0 | ¹⁴⁵ La(24.8 s) | 70.0(11), 355.8(3.8), 118.2(3.6) |
| 360.51 5 | 0.31 6 | ¹⁹³ Hg(11.8 h) | 257.97(61), 407.63(25), 573.25(14.2) |
| 360.52 20 | 0.33 4 | ¹¹⁵ Ag(20.0 m) | 229.08(18), 212.80(4.4), 472.70(4.0) |
| 360.52 20 | †16.3 11 | ¹¹⁵ Ag(18.0 s) | 229.08(†100), 131.52(†77), 388.9(†52) |
| 360.54 10 | †1.24×10 ³ 14 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| 360.57 19 | 0.14 3 | ¹⁰¹ Sr(118 ms) | 128.34(18.0), 1124.82(10.9), 510.73(8.5) |
| 360.6 4 | 0.19 4 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 360.6 3 | 0.018 6 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 360.65 15 | 3.7 7 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| • 360.66 14 | 0.50 3 | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 280.41(30.2), 644.55(11.1) |
| 360.66 14 | †19 19 | ¹⁰⁵ Ag(7.23 m) | 319.14(†63000), 306.25(†12800), 442.37(†5900) |
| 360.66 12 | 0.20 6 | ¹³² La(4.8 h) | 464.55(76), 567.14(15.7), 1909.91(9.0) |
| 360.7 2 | | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 360.70 11 | 20 4 | ¹⁸¹ Re(19.9 h) | 365.57(56), 639.30(6.4), 953.42(3.6) |
| 360.78 3 | 0.44 5 | ¹⁹⁴ Pb(12.0 m) | 581.82(18.8), 1519.45(16.4), 203.82(16.2) |
| 360.80 10 | 108 | ⁷³ Se(7.15 h) | 67.03(78), 865.09(0.584), 510(0.296) |
| 360.8 1 | 0.09 4 | ¹⁰⁷ Tc(21.2 s) | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| 360.8 6 | 0.04 3 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| • 360.82 6 | | ²⁰⁶ Bi(6.243 d) | 803.10(99), 881.01(66.2), 516.18(40.7) |
| 360.86 5 | 0.1148 8 | ¹²⁶ Cs(1.64 m) | 388.633(41), 491.243(5.0), 925.24(4.56) |
| 360.87 7 | 0.81 5 | ⁸⁰ Ge(29.5 s) | 265.36(27.0), 110.4(6.5), 1564.3(4.9) |
| 360.9 6 | †3 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 234.0(†40.0) |
| 360.90 10 | †55 10 | ¹⁵⁷ Yb(38.6 s) | 230.92(†100), 340.7(†90), 241.7(†74) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 360.9 3 | 3.06 16 | ¹⁷¹ Re(15.2 s) | 568.4(16.1), 102.0(9.7), 1066.0(8.1) |
| 360.91 7 | 1.16 9 | ²⁰⁵ At(26.2 m) | 719.30(31), 669.41(8.6), 628.88(5.6) |
| 360.94 2 | 0.59 15 | ¹⁶¹ Gd(3.66 m) | 314.92(22.7), 102.315(13.9), 283.55(5.95) |
| • 360.95 11 | 0.011 3 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 360.96 10 | 0.094 24 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 360.98 36 | 0.19 4 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| 361 1 | 0.085 17 | ⁸⁹ Nb(1.9 h) | 1627.20(3.4), 1833.46(3.16), 3092.7(3.0) |
| 361.0 10 | †15 17 | ¹⁵² Pr(3.24 s) | 164.2(†100), 284.9(†81.0), 72.40(†38.9) |
| 361 | | ¹⁷⁵ Os(1.4 m) | 125.0(†100), 181(†10.8), 248(†8.6) |
| 361.0 8 | †1.2 | ¹⁷⁹ Os(6.5 m) | 65.39(†100), 218.6(†17), 32.3(†17) |
| 361.0 4 | 0.10 5 | ²⁰⁷ Rn(9.25 m) | 344.53(46), 747.15(14.2), 402.68(11.9) |
| 361.07 10 | †29.3 12 | ¹⁶⁵ Lu(10.74 m) | 132.49(†100), 120.60(†100), 174.25(†47.0) |
| 361.09 6 | 0.11 4 | ¹³³ I(20.8 h) | 529.872(87.0), 875.329(4.51), 1298.223(2.35) |
| 361.1 2 | 0.70 8 | ⁷⁷ Zn(2.08 s) | 189.49(28.1), 473.94(19.7), 1832.0(12.4) |
| 361.10 25 | 0.60 17 | ¹²⁵ Cd(0.65 s) | 436.29(37), 1099.48(22.3), 2147.19(19.1) |
| 361.1 3 | 0.09 | ¹⁴² La(91.1 m) | 641.285(47), 2397.8(13.3), 2542.7(10.00) |
| 361.1 3 | 0.48 | ¹⁴⁵ Ba(4.31 s) | 96.6(17), 91.9(7), 65.9(5) |
| 361.11 25 | †0.32 3 | ¹⁸⁴ Ir(3.09 h) | 263.97(†100), 119.80(†45), 390.38(†38) |
| 361.12 8 | 0.72 9 | ¹⁸⁷ Pt(2.35 h) | 106.46(9), 201.52(6.4), 110.04(5.7) |
| 361.136 6 | 14.5 9 | ¹⁹⁰ Re(3.1 m) | 186.718(48.4), 557.972(28.2), 223.811(26.0) |
| 361.136 6 | 12.1 10 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| • 361.136 6 | 13.0 4 | ¹⁹⁰ Ir(11.78 d) | 186.718(52.4), 605.24(39.9), 518.55(34.0) |
| 361.136 6 | 89.57 9 | ¹⁹⁰ Ir(3.25 h) | 616.08(93.10), 502.53(92.31), 186.718(66.3) |
| 361.17 27 | 0.47 10 | ²⁰⁴ At(9.2 m) | 684.341(95), 516.318(90), 426.253(67.5) |
| 361.2 1 | 37 4 | ¹⁴¹ Gd(24.5 s) | 351.1(89), 223.9(64), 574.9(51) |
| • 361.25 5 | 0.031 9 | ²⁰⁵ Bi(15.31 d) | 1764.36(1.368), 703.44(31), 987.62(0.585) |
| 361.27 5 | 9.9 5 | ²⁰¹ Pb(9.33 h) | 331.19(79), 945.96(7.4), 907.56(5.7) |
| • 361.30 20 | 0.16 4 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 361.3 1 | †9.4 9 | ¹⁵³ Yb(4.2 s) | 547.4(†100), 674.1(†61), 369.6(†32) |
| 361.3 2 | 0.25 3 | ¹⁹² Au(4.94 h) | 316.50791(58.0), 295.95827(22.3), 2236.89(5.6) |
| 361.30 10 | 0.88 6 | ²⁰⁸ Rn(24.35 m) | 426.78(7.07), 251.05(5.02), 350.026(3.34) |
| 361.4 3 | 0.22 7 | ¹⁰⁰ Cd(49.1 s) | 936.55(66), 139.71(6.7), 582.5(6.3) |
| 361.4 2 | 0.25 5 | ¹²³ Cs(5.94 m) | 97.3(23), 596.7(10.1), 83.3(4.1) |
| 361.4 | 0.006 3 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 361.4 2 | 0.8 | ¹⁴⁹ Dy(0.490 s) | 290.7(0.8), 786.6(0.8), 630.2(0.7) |
| 361.4 5 | 0.30 4 | ¹⁷⁵ Ta(10.5 h) | 207.4(14.0), 348.5(12.0), 266.9(10.8) |
| 361.4 4 | 0.11 5 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 361.4 6 | 0.34 11 | ¹⁹⁹ Pb(90 m) | 366.90(44.2), 353.39(9.5), 1135.04(7.8) |
| 361.4 2 | 0.038 | ²³³ Th(22.3 m) | 86.477(2.7), 29.374(2.5), 459.222(1.4) |
| 361.5 2 | 0.13 8 | ¹⁰⁵ Mo(35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 361.5 3 | 0.51 15 | ¹³⁹ Sm(2.57 m) | 273.7(37), 306.7(28.5), 596.3(8.0) |
| 361.5 3 | | ¹⁵² Pm(13.8 m) | 229.9, 200.6, 63.51 |
| 361.5 3 | †0.7 3 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 361.55 20 | 0.242 20 | ¹⁶³ Yb(11.05 m) | 860.28(10.1), 63.62(6.5), 123.21(1.98) |
| 361.55 14 | 0.53 6 | ¹⁸⁶ Ir(2.0 h) | 137.155(27), 767.508(21.2), 630.354(18.0) |
| 361.55 10 | 0.036 6 | ²⁴⁰ Np(7.22 m) | 554.60(20.9), 597.40(11.7), 1496.9(1.33) |
| 361.59 10 | 0.260 18 | ¹⁶⁵ Yb(9.9 m) | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 361.6 3 | | ¹⁰⁷ Sn(2.90 m) | 1129.2(†100), 678.5(†100), 1540.6(†30) |
| 361.6 | †0.4 | ¹⁴⁴ Gd(4.5 m) | 333.3(†100), 2432.6(†94.8), 629.5(†32.4) |
| 361.6 1 | †46 5 | ¹⁵⁵ Yb(1.75 s) | 236.2(†100), 174.9(†55), 378.0(†26) |
| 361.6 2 | †3.5 3 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 361.6 2 | †0.9 1 | ²⁰⁰ At(43 s) | 665.9(†100), 611.1(†85.0), 484.5(†49.8) |
| 361.61 6 | 0.102 17 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 361.68 2 | 0.84 4 | ¹⁶⁵ Dy(2.334 h) | 94.700(3.58), 633.415(0.568), 715.328(0.534) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|-----------------------------|--|
| 361.68 2 | 0.534 16 | ¹⁶⁵ Dy(1.257 m) | 515.467(1.53), 153.803(0.242), 95.931(0.039) |
| 361.7 3 | 0.20 7 | ¹²¹ Cs(155 s) | 153.9(15.2), 239.6(7.7), 427.1(3.63) |
| 361.7 3 | 0.16 5 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 361.7 3 | 6.6 4 | ¹⁵⁸ Sm(5.30 m) | 189.4(15.2), 363.6(12.4), 324.5(10.6) |
| 361.7 | | ¹⁶⁵ Dy(1.257 m) | 515.467(1.53), 361.68(0.534), 153.803(0.242) |
| 361.7 2 | 0.146 21 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 361.76 20 | 0.033 5 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 361.80 20 | 0.14 3 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 361.82 14 | 0.094 12 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| • 361.82 6 | 0.030 9 | ²⁰⁵ Bi(15.31 d) | 1764.36(1.368), 703.44(31), 987.62(0.585) |
| • 361.84 4 | 0.296 24 | ¹⁹³ Os(30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| • 361.841 12 | 1.22×10^{-5} 6 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 361.85 13 | 0.188 23 | ¹³⁵ I(6.57 h) | 1260.409(28.90), 1131.511(22.74), 1678.027(9.62) |
| 361.85 9 | 0.0121 15 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 361.87 17 | 0.328 25 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 361.88 10 | 3.88 16 | ¹²¹ Ag(0.78 s) | 314.55(32.1), 353.43(19.9), 500.61(9.3) |
| 361.9 3 | 20 3 | ¹¹⁴ Rh(1.85 s) | 332.9(56), 694.4(13), 783.0(5.6) |
| 361.9 3 | 17.0 20 | ¹¹⁴ Rh(1.85 s) | 332.9(87), 519.8(48.4), 618.7(31) |
| 361.9 4 | †26 3 | ¹²¹ La(5.3 s) | 139.3(†100), 134.4(†73), 97.8(†57) |
| 361.9 1 | †14.8 13 | ¹²³ La(17 s) | 92.5(†100), 937.3(†43), 153.6(†43) |
| 361.96 5 | 1.15 10 | ¹⁴¹ Xe(1.73 s) | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| 361.97 4 | 0.078 7 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 362 | <0.00026 | ²⁰⁶ Tl(4.199 m) | 803.10(0.0050) |
| 362.01 25 | 7 | ¹⁹⁹ Po(4.13 m) | 1002.19(19), 1034.3(16), 499.61(4.3) |
| • 362.06 2 | 0.045 3 | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 362.072 17 | 0.043 3 | ²¹¹ Pb(36.1 m) | 404.853(3.78), 832.01(3.52), 427.088(1.76) |
| 362.1 2 | 0.106 21 | ⁶³ Co(27.4 s) | 87.13(48.7), 981.7(2.11), 155.6(1.60) |
| 362.10 20 | 0.064 16 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 362.11 5 | 0.48 3 | ⁹⁹ Sr(0.269 s) | 125.118(16.1), 536.12(14.0), 1198.12(9.2) |
| 362.14 4 | 1.27 5 | ²⁰⁴ Po(3.53 h) | 883.984(29.9), 270.068(27.8), 1016.31(24.1) |
| 362.2 4 | †2.1 11 | ⁷¹ Se(4.74 m) | 147.50(†211), 1095.26(†43.6), 830.33(†43.2) |
| 362.2 4 | †6 1 | ¹³⁵ Pm(49 s) | 198.5(†100), 207.2(†70), 463.5(†62) |
| 362.2 | 0.6 | ¹⁴⁷ Ce(56.4 s) | 268.80(7), 92.9(4.7), 374.23(3.5) |
| 362.226 13 | 2.25 6 | ⁸⁸ Kr(2.84 h) | 2392.11(34.6), 196.301(25.98), 2195.842(13.18) |
| 362.3 2 | 1.3 3 | ¹⁰⁴ Ag(69.2 m) | 555.796(92.6), 767.72(65.7), 941.7(25.0) |
| 362.3 2 | 1.7 3 | ¹¹⁷ Ag(5.34 s) | 135.4(48), 386.8(39.9), 298.1(21.1) |
| • 362.3 4 | 0.10 5 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 362.30 3 | †0.119 15 | ¹⁵³ Pm(5.4 m) | 35.842(†100), 127.298(†75), 28.309(†34.6) |
| • 362.3 2 | | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 362.4 3 | †41 4 | ¹⁴³ Tb(12 s) | 45.1(†100), 686.1(†48), 462.8(†45) |
| 362.4 1 | 0.19 2 | ²⁴¹ Np(13.9 m) | 174.94(3.1), 132.99(0.86), 518.8(0.40) |
| 362.42 8 | 2.33 18 | ¹³⁹ Nd(5.50 h) | 113.94(40), 737.96(35), 982.2(26.4) |
| 362.47 9 | 17.5 20 | ¹⁸⁴ Au(53.0 s) | 162.97(50), 272.98(40), 777.13(6.6) |
| 362.5 4 | 0.127 20 | ¹³⁶ I(83.4 s) | 1313.02(67), 1321.08(24.8), 2289.6(10.4) |
| • 362.5 3 | 0.177 18 | ¹⁴⁸ Pm(41.29 d) | 550.284(94.5), 629.987(89), 725.673(32.7) |
| • 362.5 3 | 0.026 4 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| • 362.50 30 | 0.047 16 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| • 362.5 1 | 0.0065 22 | ²²⁵ Ac(10.0 d) | 99.91(1.01), 150.04(0.80), 99.63(0.62) |
| • 362.50 14 | †0.31 7 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 362.6 | 1.7 | ¹³³ Pr(6.5 m) | 134.3(14), 74.0(10), 315.6(10) |
| 362.6 | 1.1 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 362.7 4 | 0.43 4 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 362.7 2 | 0.025 10 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 362.7 3 | 0.021 5 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------------|-----------------------------|--|
| 362.73 5 | 2.5 2 | ¹²⁶ In(1.64 s) | 1141.11(100), 908.58(99), 111.79(88) |
| 362.74 15 | 1.9 3 | ¹⁹⁰ Pb(1.2 m) | 942.20(34), 151.19(8.92), 598.3(8.0) |
| 362.8 3 | 0.83 14 | ¹⁰² Zr(2.9 s) | 599.60(13.9), 535.30(10.6), 64.50(8.9) |
| • 362.8 2 | >0.022 | ¹⁴⁸ Pm(5.370 d) | 1465.12(22), 550.284(22.00), 914.85(11.46) |
| 362.8 10 | $\dagger 6.8 \times 10^2$ 15 | ²³⁴ Pa(1.17 m) | 1001.03($\dagger 837000$), 766.38($\dagger 294000$), 742.81($\dagger 80000$) |
| • 362.81 4 | 2.2×10^{-6} 4 | ⁸⁵ Kr(10.756 y) | 514.0067(0.43), 151.159(2.2×10^{-6}), 129.820($> 4.3 \times 10^{-7}$) |
| • 362.81 4 | >0.0010 | ⁸⁵ Sr(64.84 d) | 514.0067(96), 868.5(0.0120), 151.159(0.0012) |
| 362.84 19 | 0.21 2 | ¹⁶⁴ Yb(75.8 m) | 40.928(1.147), 675.41(0.38), 390.6(0.31) |
| 362.86 5 | 0.221 16 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| 362.9 3 | 0.019 9 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| 362.9 3 | 0.24 6 | ¹⁰⁹ Sn(18.0 m) | 1099.4(30), 649.90(28.0), 1321.3(11.9) |
| 362.9 | | ¹⁸² Hg(10.83 s) | 129.3($\dagger 100$), 217.7($\dagger 75$), 413.5($\dagger 53$) |
| 362.91 14 | 0.0197 11 | ¹⁷¹ Er(7.516 h) | 308.31(64.4), 295.901(28.9), 111.621(20.5) |
| 362.95 34 | 0.046 12 | ¹⁷⁴ Ta(1.05 h) | 206.50(58), 91.00(16.0), 1205.92(4.9) |
| 363.0 3 | >0.13 | ¹⁰⁸ Sn(10.30 m) | 396.44(64.3), 272.75(45.5), 669.08(22.6) |
| 363 1 | 0.43 | ¹²⁹ Sb(4.40 h) | 812.8(43), 914.6(20.0), 544.7(17.9) |
| 363 | | ¹³¹ Nd(27 s) | 87.8($\dagger 100$), 174.42($\dagger 34$), 164.09($\dagger 25$) |
| 363.05 7 | 1.45 7 | ⁵⁵ V(6.54 s) | 517.71(73), 880.70(18.1), 921.10(4.6) |
| 363.06 7 | 0.50 6 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 363.1 | $\dagger 13$ | ¹⁰¹ Rb(32 ms) | 271.2($\dagger 100$), 251.6($\dagger 31$), 1091.8($\dagger 25$) |
| 363.1 9 | $\dagger 39.9$ 8 | ¹⁷⁸ Ir(12 s) | 266.1($\dagger 100.0$), 131.6($\dagger 79$), 899.7($\dagger 16.9$) |
| 363.1 3 | $\dagger 2.0$ 3 | ¹⁸⁹ Hg(7.6 m) | 320.99($\dagger 100$), 78.21($\dagger 63$), 565.42($\dagger 48$) |
| 363.1 2 | 0.0008 | ²³⁹ U(23.45 m) | 74.664(48), 43.533(4.14), 662.24(0.18) |
| 363.2 2 | $\dagger 95$ | ¹⁶⁸ Re(4.4 s) | 199.3($\dagger 100$), 479.8($\dagger 62.8$), 558.2($\dagger 10.6$) |
| 363.22 26 | 0.063 9 | ¹¹⁶ Te(2.49 h) | 93.70(31.4), 628.63(3.22), 102.97(1.95) |
| 363.34 5 | 0.49 10 | ¹³² I(2.295 h) | 667.718(99), 772.60(75.6), 954.55(17.6) |
| • 363.34 5 | 0.0683 20 | ¹³² Cs(6.479 d) | 667.718(98), 630.19(0.95), 505.79(0.73) |
| 363.4 4 | 0.35 17 | ¹⁵⁴ Ho(11.76 m) | 334.6(84), 412.4(15.0), 873.4(12.5) |
| 363.46 7 | 0.089 20 | ¹³⁰ I(12.36 h) | 536.09(99), 668.54(96), 739.48(82) |
| 363.5 5 | 0.05 3 | ⁸⁸ Kr(2.84 h) | 2392.11(34.6), 196.301(25.98), 2195.842(13.18) |
| • 363.5 2 | 0.0029 5 | ¹²⁵ Sn(9.64 d) | 1067.10(10), 1089.15(4.59), 822.48(4.28) |
| • 363.5 9 | 0.27 5 | ¹²⁶ Sb(12.46 d) | 695.03(100), 666.331(100), 414.81(83.3) |
| 363.5 3 | 0.154 23 | ¹⁸¹ Au(11.4 s) | 198.60(4.4), 2022.4(4.2), 79.40(4.2) |
| 363.54 5 | 17.0 13 | ¹²⁴ In(2.4 s) | 1131.64(100), 969.94(52), 1072.85(47) |
| 363.55 4 | 11.4 6 | ¹⁵⁹ Gd(18.479 h) | 58.00(2.15), 348.16(0.234), 226.01(0.215) |
| • 363.55 4 | 0.000055 3 | ¹⁵⁹ Dy(144.4 d) | 58.00(2.22), 348.16(0.00095), 79.45(0.00048) |
| 363.57 6 | 0.140 7 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| 363.58 8 | 23 | ⁹⁶ Y(9.6 s) | 1750.42(89), 915.0(60), 617.1(56) |
| 363.58 30 | 0.092 13 | ¹⁶⁵ Yb(9.9 m) | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 363.6 4 | 1.25 25 | ⁹⁷ Sr(426 ms) | 1905.0(25), 953.8(21.4), 652.2(11.4) |
| 363.6 4 | 0.64 7 | ¹¹⁹ Cd(2.20 m) | 1025.0(24.8), 2021.3(22.6), 720.7(17.9) |
| 363.6 3 | 12.4 7 | ¹⁵⁸ Sm(5.30 m) | 189.4(15.2), 324.5(10.6), 224.1(8.5) |
| 363.6 4 | 0.056 10 | ¹⁶¹ Er(3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| 363.61 23 | $\dagger 2.9$ 6 | ¹⁸⁷ Hg(1.9 m) | 233.38($\dagger 100$), 376.34($\dagger 38$), 240.26($\dagger 33$) |
| 363.64 5 | 2.7 3 | ¹⁷⁴ Tm(5.4 m) | 366.526(92), 992.128(87), 272.918(86) |
| • 363.64 5 | 0.0157 10 | ¹⁷⁴ Lu(142 d) | 272.918(0.550), 992.128(0.546), 176.645(0.470) |
| 363.7 6 | 0.248 20 | ¹²³ Cd(2.10 s) | 371.32(51), 1052.28(24.8), 1438.13(8.3) |
| 363.75 7 | 0.267 25 | ¹⁵⁸ Tm(3.98 m) | 192.13(62), 335.10(16.8), 1149.83(7.6) |
| • 363.84 7 | 0.0078 7 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 363.87 18 | 0.22 4 | ¹³³ Sb(2.5 m) | 1096.22(43.0), 817.8(18.5), 2755(12.5) |
| 363.9 2 | 0.78 19 | ⁷³ Br(3.4 m) | 64.9(37.0), 336.0(10.4), 699.8(9.1) |
| 363.9 1 | $\dagger 0.45$ 14 | ¹⁶⁰ Ho(5.02 h) | 728.18($\dagger 100$), 879.383($\dagger 65.9$), 962.317($\dagger 59.1$) |
| 363.9 1 | 0.21 6 | ¹⁶⁰ Ho(25.6 m) | 728.18(46.9), 879.383(26.6), 962.317(25.6) |
| 363.9 3 | $\dagger 0.53$ 18 | ²³⁰ Ra(93 m) | 72.0($\dagger 100$), 63.0($\dagger 35.4$), 202.8($\dagger 27.3$) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 363.9 3 | 0.041 16 | ²³⁰ Ac(122 s) | 454.95(8), 508.20(5.15), 1243.9(3.50) |
| 363.9 2 | 0.0110 20 | ²⁴⁷ Cf(3.11 h) | 294.1(0.98), 447.8(0.55), 417.9(0.34) |
| 363.93 8 | 0.244 23 | ¹³⁸ Cs(33.41 m) | 1435.795(76.3), 462.796(30.7), 1009.78(29.8) |
| 363.94 4 | 0.041 16 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 363.942 6 | 12.7 7 | ¹⁷⁵ Tm(15.2 m) | 514.868(65), 941.23(15), 982.45(10.2) |
| • 363.95 10 | 0.0061 6 | ¹¹⁵ Cd(53.46 h) | 336.240(45.9), 527.900(27.45), 492.3(8.03) |
| 363.96 3 | 4.71 14 | ¹⁴² Ba(10.6 m) | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| 364 1 | >0.00025 | ¹⁰⁷ Cd(6.50 h) | 93.124(1.45), 828.93(0.17), 796.462(0.0665) |
| 364.0 3 | †2.5 12 | ¹⁵⁵ Nd(8.9 s) | 180.574(†100), 418.99(†75), 955.08(†50) |
| • 364.019 3 | 0.0115 20 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 364.10 5 | 0.24 10 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 364.19 14 | 0.0057 13 | ⁴⁵ Ti(184.8 m) | 720.22(0.154), 1408.6(0.085), 1662.4(0.041) |
| 364.19 4 | 1.25 3 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 364.2 3 | 0.59 8 | ⁷⁶ Kr(14.8 h) | 315.7(39), 270.2(21.1), 45.48(19.5) |
| 364.2 4 | 0.039 20 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 364.2 6 | 0.0061 11 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| 364.3 1 | 2.5 4 | ¹⁰⁵ Mo(35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 364.4 1 | 0.140 3 | ¹¹³ Ag(5.37 h) | 298.58(10), 258.8(1.64), 316.3(1.343) |
| 364.4 3 | 0.29 3 | ¹⁸⁸ Hg(3.25 m) | 66.7(63), 190.1(4.40), 82.7(2.6) |
| 364.47 4 | 1.66 13 | ¹⁹³ Hg(11.8 h) | 257.97(61), 407.63(25), 573.25(14.2) |
| • 364.489 5 | 81.7 6 | ¹³¹ I(8.02070 d) | 636.989(7.17), 284.305(6.14), 80.185(2.62) |
| 364.5 1 | 0.048 11 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| 364.5 1 | 2.5 5 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| 364.5 | 0.59 3 | ¹⁴¹ Ba(18.27 m) | 190.328(46.0), 304.194(25.4), 276.948(23.4) |
| 364.5 | 1.6 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 364.52 10 | 3.6 3 | ¹⁷⁴ W(31 m) | 35.42(14.1), 428.83(12.7), 328.68(9.5) |
| • 364.55 20 | 0.025 12 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 364.59 18 | 0.59 5 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 364.6 3 | 3.2 6 | ⁶⁰ Zn(2.38 m) | 670.3(64), 61.4(26), 273.4(10.9) |
| 364.60 20 | †6.2 9 | ¹⁰⁶ Mo(8.4 s) | 465.70(†100), 54.00(†54), 618.60(†25) |
| 364.6 1 | 0.035 6 | ¹⁴⁵ Ce(3.01 m) | 724.33(59), 62.54(13.33), 1148.03(9.15) |
| 364.60 9 | 0.83 6 | ²⁰⁵ At(26.2 m) | 719.30(31), 669.41(8.6), 628.88(5.6) |
| 364.67 10 | 0.25 | ¹⁵⁴ Pm(1.73 m) | 2057.76(17.1), 1393.9(14.4), 81.99(12.6) |
| 364.67 10 | 0.65 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 364.7 2 | 0.29 6 | ¹¹⁷ Cs(8.4 s) | 204.8(15.0), 29.7(9.9), 205.6(6.8) |
| 364.70 5 | 0.220 4 | ¹²⁶ Cs(1.64 m) | 388.633(41), 491.243(5.0), 925.24(4.56) |
| 364.7 2 | †11 3 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| • 364.7 5 | | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 364.70 7 | †1.66 12 | ¹⁸⁴ Ir(3.09 h) | 263.97(†100), 119.80(†45), 390.38(†38) |
| 364.7 | †2.5 | ²²⁴ Ac(2.9 h) | 156.4(†100), 140.8(†55), 261.6(†28) |
| 364.8 8 | †40 | ⁹¹ Br(0.541 s) | 262.7(†100), 803.3(†80), 185.6(†30) |
| 364.81 7 | 0.336 12 | ¹⁴³ Ba(14.33 s) | 211.475(25), 798.79(15.6), 980.45(11.55) |
| 364.81 25 | 0.00026 10 | ¹⁴⁵ Pr(5.984 h) | 748.278(0.5250), 675.795(0.514), 72.500(0.261) |
| 364.867 14 | 0.0411 13 | ¹⁹⁴ Ir(19.15 h) | 328.455(13.1), 293.545(2.55), 645.157(1.17) |
| • 364.867 14 | 1.48 8 | ¹⁹⁴ Au(38.02 h) | 328.455(60), 293.545(10.2), 1468.91(6.3) |
| 364.88 10 | 0.90 6 | ⁸⁹ Kr(3.15 m) | 220.948(20.1), 586.03(16.6), 904.27(7.2) |
| 364.9 2 | 1.06 3 | ⁷⁹ As(9.01 m) | 95.73(0.85), 432.1(0.850), 879.2(0.80) |
| 364.9 2 | 6 3 | ¹⁰³ Zr(1.3 s) | 248(100), 164.05(94), 126.30(84) |
| 364.925 23 | 0.0099 18 | ¹⁸³ Os(13.0 h) | 381.768(89.6), 114.463(20.63), 167.844(8.81) |
| 364.94 7 | 9.3 3 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| • 364.98 10 | 1.57 20 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 365.0 6 | 1.2 4 | ⁶⁹ Ni(11.4 s) | 1871.1(40.9), 679.7(39.7), 1213.0(39.3) |
| 365.0 7 | 0.09 3 | ⁷⁴ Ga(8.12 m) | 595.847(91), 2353.46(44.5), 608.353(14.3) |
| 365 | | ¹³⁸ Cs(33.41 m) | 1435.795(76.3), 462.796(30.7), 1009.78(29.8) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|---|---|
| 365.0 3 | 0.018 6 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 365.0 3 | | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 365.07 17 | 0.42 5 | ¹⁰³ Tc(54.2 s) | 346.380(17.5), 136.079(16.6), 562.90(7.0) |
| 365.1 | | ⁹⁹ Zr(2.1 s) | 469.140(55), 546.13(48.6), 593.990(27.4) |
| 365.1 3 | †100 8 | ¹⁴⁷ Dy(40 s) | 253.4(†80), 1388.0(†60), 100.7(†60) |
| 365.1 1 | †2.4×10 ² 14 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| • 365.1 2 | 0.00016 4 | ¹⁷⁷ Ta(56.56 h) | 112.9498(7.2), 208.3664(0.94), 1057.8(0.29) |
| 365.1 2 | †1.70 21 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 365.143 16 | 0.86 5 | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 365.162 8 | 16.9 3 | ¹³¹ La(59 m) | 108.081(25.0), 417.783(18.0), 285.246(12.4) |
| 365.2 4 | 0.0115 25 | ⁶³ Zn(38.47 m) | 669.62(8), 962.06(6.5), 1412.08(0.75) |
| 365.2 3 | 0.288 20 | ⁹⁹ Nb(2.6 m) | 97.785(7), 253.50(3.64), 2641.3(3.64) |
| 365.2 | †100 | ¹⁹³ Pb(5.8 m) | 392.2(†20.7), 716.4(†6.7), 735.8(†5.1) |
| • 365.2 10 | | ²⁴⁹ Cf(351 y) | 388.16(66), 333.37(14.6), 252.80(2.50) |
| 365.3 | 0.029 13 | ¹³⁵ Ce(17.7 h) | 265.56(41.8), 300.07(23.5), 606.76(18.8) |
| 365.31 4 | 0.71 4 | ¹⁰⁰ Sr(202 ms) | 963.85(22.0), 898.50(18.9), 65.46(15.2) |
| 365.31 4 | 3.82 14 | ¹⁰⁷ In(32.4 m) | 204.97(47), 505.51(11.9), 320.92(10.2) |
| 365.337 24 | 2.31 11 | ²⁰⁸ Rn(24.35 m) | 426.78(7.07), 251.05(5.02), 350.026(3.34) |
| 365.34 11 | 0.223 13 | ²⁰⁷ At(1.80 h) | 814.41(44.5), 588.33(19.2), 300.654(12.8) |
| 365.35 11 | 0.093 15 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 365.4 2 | 1.5 3 | ¹¹⁷ Ag(5.34 s) | 135.4(48), 386.8(39.9), 298.1(21.1) |
| 365.4 1 | 19 3 | ¹⁹⁸ Pb(2.40 h) | 290.3(36), 173.4(18), 865.3(5.9) |
| • 365.450 11 | 0.086 18 | ¹¹⁰ Ag(249.79 d) | 657.7622(94.0), 884.685(72.2), 937.493(34.13) |
| 365.48 7 | 0.17 6 | ¹⁸³ Os(9.9 h) | 1101.94(49.0), 1107.92(22.36), 1034.85(6.02) |
| 365.5 4 | 0.19 4 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 365.5 5 | 0.023 6 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 365.5 4 | †10.2 9 | ¹⁷² W(6.6 m) | 38.9(†100), 423.3(†44), 89.8(†33.0) |
| • 365.51 5 | 0.050 3 | ¹⁴⁵ Eu(5.93 d) | 893.73(66), 653.512(15.0), 1658.53(14.9) |
| 365.57 12 | 56 6 | ¹⁸¹ Re(19.9 h) | 360.70(20), 639.30(6.4), 953.42(3.6) |
| • 365.577 8 | 0.490 14 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 365.6 2 | †1.39 12 | ¹²⁰ Cs(64 s) | 322.4(†100), 473.5(†30), 553.4(†19.1) |
| 365.6 | 2.50 25 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 365.6 | 1.5 8 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| • 365.6111 5 | 0.493 19 | ¹⁸³ Ta(5.1 d) | 246.0591(27), 353.9912(11.2), 107.9322(11.0) |
| • 365.6111 5 | 0.079 4 | ¹⁸³ Re(70.0 d) | 162.3219(23.3), 46.4839(7.97), 291.7238(3.05) |
| 365.64 6 | 0.283 22 | ²²⁸ Fr(39 s) | 473.7(10.2), 474.0(7.6), 410.40(6.3) |
| 365.66 22 | 0.16 3 | ¹²¹ Ag(0.78 s) | 314.55(32.1), 353.43(19.9), 500.61(9.3) |
| 365.68 20 | †1.0 2 | ¹⁸² Au(21 s) | 154.76(†100), 264.33(†40.0), 855.41(†14.5) |
| 365.7 3 | 0.108 9 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 365.7 | 0.21 6 | ¹⁷⁵ Ta(10.5 h) | 207.4(14.0), 348.5(12.0), 266.9(10.8) |
| 365.7 2 | †2.7 6 | ²²⁹ Ac(62.7 m) | 164.522(†100), 569.1(†91), 261.92(†39) |
| 365.71 7 | 0.042 5 | ¹⁶⁸ Ho(2.99 m) | 741.356(36.6), 821.164(34.5), 815.990(18.6) |
| • 365.747 12 | 2.476 22 | ¹⁶⁶ Ho(1.20×10 ³ y) | 184.410(72.6), 810.276(58.08), 711.683(55.32) |
| • 365.79 1 | 0.00075 12 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 365.8 3 | 3.5 4 | ⁹⁷ Sr(426 ms) | 1905.0(25), 953.8(21.4), 652.2(11.4) |
| 365.8 | 0.029 18 | ¹⁴⁵ Ce(3.01 m) | 724.33(59), 62.54(13.33), 1148.03(9.15) |
| 365.8 4 | 0.12 6 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| • 365.8 1 | 0.36 3 | ²⁴⁵ Bk(4.94 d) | 252.80(29.1), 380.8(2.40), 385.0(0.57) |
| 365.82 20 | †2.3 6 | ¹²⁶ Cd(0.506 s) | 260.09(†100), 428.11(†83.7), 688.23(†5.9) |
| 365.86 8 | †1.66 15 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 365.86 8 | †0.51 8 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 365.9 10 | | ⁷⁶ Zn(5.7 s) | 281.7, 1030.6, 831.2 |
| 365.9 1 | 0.154 11 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| 365.9 2 | †92 | ¹⁵³ Ho(9.3 m) | 108.7(†100), 161.5(†83), 270.6(†72) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 365.9 2 | 2.0 5 | ¹⁵³ Ho(2.0 m) | 295.8(67), 637.0(5.36), 688.5(3.7) |
| 365.93 23 | 0.06 4 | ¹⁶² Yb(18.87 m) | 163.35(40.0), 118.70(33.6), 576.10(3.24) |
| 365.953 8 | 1.7 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 365.97 24 | 0.103 23 | ¹⁰¹ Sr(118 ms) | 128.34(18.0), 1124.82(10.9), 510.73(8.5) |
| 366.0 3 | 2.00 25 | ¹⁵¹ Ho(35.2 s) | 527.4(63), 775.53(9.2), 209.5(5.69) |
| 366.02 10 | 1.4 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| • 366.07 4 | 0.041 3 | ¹⁸⁹ Re(24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| 366.1 5 | 0.14 | ¹⁰¹ Cd(1.2 m) | 98.0(47), 1722.5(11), 1259.3(8) |
| 366.1 3 | 1.5 3 | ¹²⁸ Sb(9.01 h) | 753.82(100), 743.22(100), 314.12(61) |
| 366.1 4 | 0.271 18 | ¹⁷² Ta(36.8 m) | 214.02(46), 95.23(17.5), 1109.27(12.4) |
| 366.1 2 | 0.065 12 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 366.2 1 | 12.1 8 | ¹¹⁹ Ag(2.1 s) | 626.4(13), 399.1(10.9), 213.4(8.8) |
| 366.2 2 | 2.77 18 | ¹⁵² Ho(49.5 s) | 647.2(92), 613.8(88.4), 683.3(88) |
| 366.2 3 | 1.07 14 | ¹⁵⁴ Ho(11.76 m) | 334.6(84), 412.4(15.0), 873.4(12.5) |
| 366.2 2 | 0.22 7 | ¹⁵⁹ Er(36 m) | 624.5(33), 649.1(23.4), 205.92(9.7) |
| 366.2 3 | 0.44 10 | ¹⁶⁰ Yb(4.8 m) | 173.74(42.0), 215.78(20.2), 140.35(9.3) |
| 366.2 14 | 0.010 6 | ¹⁷⁴ Ta(1.05 h) | 206.50(58), 91.00(16.0), 1205.92(4.9) |
| 366.20 25 | 0.0130 16 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 366.25 8 | 10.73 10 | ¹⁵⁶ Ho(56 m) | 266.35(54.7), 137.83(51), 884.45(7.08) |
| 366.27 3 | 4.81 5 | ⁶⁵ Ni(2.5172 h) | 1481.84(24), 1115.546(15.43), 1623.42(0.498) |
| 366.30 10 | 0.72 3 | ¹⁶³ Yb(11.05 m) | 860.28(10.1), 63.62(6.5), 123.21(1.98) |
| 366.34 14 | 2.2 3 | ⁷⁹ Sr(2.25 m) | 39.41(28), 105.00(21.8), 413.8(7.6) |
| • 366.35 15 | 0.0242 9 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 366.4 3 | †2.3 4 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 366.4 3 | 0.66 8 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 366.4 2 | 0.0050 5 | ²⁵⁵ Fm(20.07 h) | 81.477(0.81), 58.477(0.67), 80.92(0.27) |
| • 366.421 1 | 1.20 4 | ⁹⁹ Mo(65.94 h) | 739.50(12.1), 181.063(6.08), 140.511(4.52) |
| 366.5 3 | 0.26 3 | ¹¹⁸ I(13.7 m) | 605.71(86.0), 545.12(10.9), 600.71(10.2) |
| 366.5 5 | 0.300 18 | ¹⁴⁷ Pr(13.4 m) | 77.9921(15), 314.675(13.2), 641.380(10.0) |
| 366.5 2 | >1.4 | ¹⁷⁶ Tm(1.9 m) | 189.57(44.5), 1069.3(34), 381.8(21.8) |
| 366.5 2 | 1.7 3 | ¹⁹⁴ Tl(32.8 m) | 636.5(99), 428.0(99), 748.9(76) |
| 366.5 5 | 11.1 16 | ¹⁹⁶ Pb(37 m) | 253.1(27.0), 502.1(26.5), 191.7(11.1) |
| 366.51 23 | †100 | ¹⁸⁴ Tl(11 s) | 286.80(†39), 340.0(†25), 534.40(†16.8) |
| 366.526 5 | 92 4 | ¹⁷⁴ Tm(5.4 m) | 992.128(87), 272.918(86), 176.645(66.2) |
| • 366.56 10 | 0.076 12 | ²³⁰ Pa(17.4 d) | 314.8(0.094), 383.6(0.036), 51.72(0.026) |
| 366.6 1 | 0.78 9 | ²³⁶ Pa(9.1 m) | 642.35(37.0), 687.59(9.9), 1762.7(6.0) |
| 366.634 14 | 0.541 16 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 366.68 7 | 0.242 19 | ¹⁴⁶ La(6.27 s) | 258.47(64), 924.58(7.45), 702.28(6.43) |
| • 366.684 24 | 0.288 11 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 366.7 3 | 0.40 6 | ¹¹⁸ I(8.5 m) | 605.71(99), 600.71(92), 614.42(65) |
| 366.7 4 | 2.3 5 | ¹⁸⁶ Pt(2.0 h) | 276.7(0), 611.5(6.0), 635.6(>3.8) |
| 366.75 1 | 0.40 3 | ⁵⁷ Mn(87.2 s) | 122.0614(13.9), 14.41300(10.56), 692.03(5.50) |
| • 366.75 1 | 0.0013 3 | ⁵⁷ Co(271.79 d) | 122.0614(85.60), 136.4743(10.68), 14.41300(9.16) |
| 366.8 2 | 0.086 16 | ⁹⁶ Rb(0.199 s) | 815.0(78.00), 692.0(8.0), 813.2(7.0) |
| 366.8 3 | 0.33 | ¹¹³ Pd(93 s) | 95.74(3.3), 643.7(3.0), 739.63(2.4) |
| 366.8 5 | 0.138 11 | ¹¹⁶ Te(2.49 h) | 93.70(31.4), 628.63(3.22), 102.97(1.95) |
| 366.8 5 | 4.7 | ¹⁴⁶ La(10.0 s) | 258.47(93), 409.86(81), 514.75(31) |
| 366.81 3 | 1.80 13 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 366.84 2 | 0.0319 3 | ¹³⁵ La(19.5 h) | 480.51(1.5), 874.51(0.164), 587.83(0.1108) |
| 366.9 3 | 0.030 12 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 366.9 2 | †9.3 10 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 366.90 6 | 44.2 22 | ¹⁹⁹ Pb(90 m) | 353.39(9.5), 1135.04(7.8), 720.24(6.5) |
| 366.90 6 | 7 | ¹⁹⁹ Pb(12.2 m) | 382.8, 2751.9, 2612.9 |
| 366.91 3 | 3.33 24 | ¹¹⁷ Cd(3.36 h) | 1997.33(26), 1065.98(23.1), 564.397(14.7) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|-----------------------------|--|
| 366.94 19 | 75 8 | ⁹⁴ Ru(51.8 m) | 891.68(25), 524.70(1.80), 75.5(>0.08) |
| 366.97 20 | 0.50 25 | ¹⁸⁴ Au(53.0 s) | 162.97(50), 272.98(40), 362.47(17.5) |
| 367.0 4 | †4.0 6 | ¹¹³ Ru(0.80 s) | 263.2(†100), 211.7(†31.0), 337.5(†27.9) |
| • 367.072 5 | 8.9×10 ⁻⁵ 2 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 367.1 3 | 0.40 16 | ¹³⁰ La(8.7 m) | 357.4(81.0), 550.7(25.9), 908.0(17.0) |
| 367.1 2 | †77 12 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 367.2 1 | †2.8 3 | ¹²³ La(17 s) | 92.5(†100), 937.3(†43), 153.6(†43) |
| 367.2 1 | †6.7×10 ² 14 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| • 367.225 2 | 1.48 18 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 367.3 3 | 0.64 5 | ⁹⁷ Rh(46.2 m) | 189.21(49), 2245.6(14), 421.55(12.7) |
| 367.30 20 | 0.69 20 | ¹⁰² Nb(4.3 s) | 296.611(79), 1633.10(41), 551.54(30) |
| 367.3 2 | 0.14 | ¹⁴² La(91.1 m) | 641.285(47), 2397.8(13.3), 2542.7(10.00) |
| 367.3 3 | 1.46 10 | ¹⁴⁴ La(40.8 s) | 397.440(94.3), 541.20(39.2), 844.8(22.3) |
| 367.3 | 0.08 | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 367.31 20 | 1.91 14 | ¹⁰⁷ Rh(21.7 m) | 302.77(66), 392.47(8.8), 312.21(4.8) |
| 367.40 3 | 14.0 3 | ⁷⁷ Ge(11.30 h) | 264.44(54), 211.03(30.8), 215.50(28.6) |
| 367.40 5 | | ¹³¹ Sn(58.4 s) | 285.0, 62.9, 102.20 |
| 367.40 5 | †7.6 11 | ¹³¹ Sn(56.0 s) | 1226.03(†100), 450.03(†90), 798.50(†86) |
| 367.4 2 | 4.2 6 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 367.5 2 | 0.92 23 | ⁹⁸ Y(2.0 s) | 1223.0(80), 620.505(63), 647.58(53) |
| 367.5 2 | 0.86 11 | ⁹⁸ Y(0.548 s) | 1223.0(36.0), 2941.3(16.7), 1590.9(14.7) |
| 367.52 4 | 4.24 20 | ¹⁷⁷ W(135 m) | 115.65(50), 426.98(13.2), 1036.4(10.3) |
| 367.54 20 | 5.2 9 | ¹⁰³ In(65 s) | 187.97(55), 720.32(13.9), 739.95(10.1) |
| 367.55 10 | 0.37 7 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 367.56 3 | 2.084 20 | ¹⁴³ Ba(14.33 s) | 211.475(25), 798.79(15.6), 980.45(11.55) |
| 367.6 5 | 109 22 | ¹⁸⁴ Lu(20 s) | 242.4(76), 481.9(65), 107.4(27) |
| 367.60 5 | 2.5 3 | ²⁰⁷ Rn(9.25 m) | 344.53(46), 747.15(14.2), 402.68(11.9) |
| • 367.638 2 | 0.78 13 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 367.71 2 | 1.05 4 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| • 367.788 4 | 0.83 17 | ¹⁵² Eu(13.542 y) | 344.281(26.58), 778.91(12.96), 411.115(2.231) |
| 367.788 4 | †8.5 9 | ¹⁵² Tb(17.5 h) | 344.281(†1500), 586.294(†223), 271.135(†203) |
| 367.80 5 | 0.091 4 | ¹²¹ I(2.12 h) | 212.189(84), 532.08(6.07), 598.74(1.47) |
| 367.8 2 | 3.52 22 | ¹³⁹ Pm(4.15 m) | 402.8(15), 463.1(4.1), 756.5(1.99) |
| 367.8 3 | 0.64 10 | ¹⁴⁹ Dy(4.20 m) | 100.8(15.2), 789.4(11.8), 1776.3(11.1) |
| 367.80 20 | 0.034 8 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 367.80 10 | 8.1 7 | ¹⁹⁴ Pb(12.0 m) | 581.82(18.8), 1519.45(16.4), 203.82(16.2) |
| • 367.8 1 | †100 7 | ²⁵⁸ Md(51.5 d) | 447.9(†37), 276.8(†20.2), 71.1(†8.0) |
| 367.9 7 | 0.11 3 | ¹⁰¹ Mo(14.61 m) | 191.92(19), 590.91(16.4), 1012.47(12.8) |
| 367.9 4 | 0.039 20 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| • 367.929 1 | 0.050 5 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 367.943 10 | 19 | ²⁰⁰ Au(48.4 m) | 1225.479(10.7), 1262.950(3.12), 1570.270(0.41) |
| 367.943 10 | †123 | ²⁰⁰ Au(18.7 h) | 497.77(†123), 579.298(†121), 255.87(†119) |
| • 367.943 10 | 87 | ²⁰⁰ Tl(26.1 h) | 1205.717(29.9), 579.298(13.8), 828.320(10.8) |
| 367.95 3 | 31.4 9 | ¹⁶⁶ Lu(2.65 m) | 228.12(77.3), 337.50(41), 102.38(25.2) |
| 367.97 17 | 0.068 17 | ¹⁰³ Ag(65.7 m) | 118.72(31.2), 148.193(28.3), 266.86(13.3) |
| 368.0 | 0.013 | ⁸³ As(13.4 s) | 734.60(43), 1113.10(14.7), 2076.70(11.9) |
| 368.0 3 | 0.145 22 | ⁹⁹ Pd(21.4 m) | 136.00(73), 263.60(15.2), 673.38(6.9) |
| 368.0 3 | 0.13 4 | ¹³⁹ Nd(29.7 m) | 405.12(7), 1074.2(2.5), 669.0(1.52) |
| 368.0 3 | 0.0047 | ²³³ Th(22.3 m) | 86.477(2.7), 29.374(2.5), 459.222(1.4) |
| 368.03 20 | †0.24 2 | ¹⁸⁴ Ir(3.09 h) | 263.97(†100), 119.80(†45), 390.38(†38) |
| 368.1 4 | †19 2 | ¹²¹ La(5.3 s) | 139.3(†100), 134.4(†73), 97.8(†57) |
| • 368.15 23 | 0.0033 13 | ¹⁴⁵ Eu(5.93 d) | 893.73(66), 653.512(15.0), 1658.53(14.9) |
| 368.2 1 | †11.7 13 | ¹²³ La(17 s) | 92.5(†100), 937.3(†43), 153.6(†43) |
| 368.2 4 | 0.72 17 | ¹²⁷ Cd(0.43 s) | 1235.07(8.3), 376.28(7.5), 523.60(5.15) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|--------------------------|---|---|
| 368.21 | 2.25 4 | ⁴⁴ K(22.13 m) | 1157.031(58), 2150.76(22.7), 2518.95(9.69) |
| • 368.21 | 0.00299 14 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 368.3 3 | 0.0108 6 | ⁸¹ Rb(30.5 m) | 49.56(0.78), 643.6(0.115), 1194.9(0.112) |
| 368.3 2 | 0.5 1 | ¹²⁹ Sn(2.23 m) | 645.13(100), 80.5(6.6), 913.2(5.0) |
| • 368.30 20 | 0.0090 5 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 368.34 7 | >0.32 | ²⁰⁴ Bi(11.22 h) | 899.15(98), 374.72(82), 984.02(59) |
| • 368.360 12 | 0.0755 24 | ¹⁴⁷ Eu(24.1 d) | 197.299(27), 121.220(22.9), 677.516(9.8) |
| 368.4 1 | †20 2 | ¹⁰⁴ Nb(0.92 s) | 192.2(†100), 620.2(†19.2), 836.3(†18.4) |
| 368.4 3 | 0.29 11 | ¹³⁹ Sm(2.57 m) | 273.7(37), 306.7(28.5), 596.3(8.0) |
| 368.44 5 | 4.05 14 | ⁷⁷ Zn(2.08 s) | 189.49(28.1), 473.94(19.7), 1832.0(12.4) |
| 368.45 20 | 0.159 16 | ²⁰⁴ Bi(11.22 h) | 899.15(98), 374.72(82), 984.02(59) |
| • 368.48 12 | 0.047 16 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 368.50 | 0.016 8 | ⁴⁰ Cl(1.35 m) | 1460.830(79), 2839.8(30.4), 2621.5(15.4) |
| 368.5 3 | 0.16 5 | ⁷⁴ Br(46 m) | 634.78(91), 728.37(35.6), 634.26(16.4) |
| 368.5 5 | 1.6 5 | ⁹⁸ Y(2.0 s) | 1223.0(80), 620.505(63), 647.58(53) |
| 368.5 5 | 0.58 7 | ⁹⁸ Y(0.548 s) | 1223.0(36.0), 2941.3(16.7), 1590.9(14.7) |
| 368.5 2 | 0.11 6 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| • 368.5 1 | <0.07 | ²³⁵ U(7.038×10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| 368.51 5 | 1.13 8 | ¹³² Ce(3.51 h) | 182.11(77), 155.37(10.5), 216.83(4.95) |
| • 368.55 5 | 0.331 13 | ¹⁹⁵ Hg(41.6 h) | 261.75(30.9), 560.27(7), 387.87(2.15) |
| • 368.557 12 | 8.8×10 ⁻⁵ 2 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| • 368.59 4 | 0.040 2 | ²³⁷ U(6.75 d) | 59.537(34.5), 208.00(21.14), 26.345(2.43) |
| • 368.59 4 | †0.170×10 ⁶ 7 | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| 368.6 3 | 0.140 14 | ⁶³ Fe(6.1 s) | 994.8(14.0), 1427.2(4.6), 1299.0(1.23) |
| 368.6 2 | 7.0 14 | ¹³² Sb(4.10 m) | 696.8(100), 973.9(100), 150.6(66) |
| • 368.6 | 0.00015 | ²⁵³ Es(20.47 d) | 41.79(0.050), 389.11(0.0264), 387.1(0.00810) |
| 368.70 15 | 4.6 3 | ¹⁰⁰ Cd(49.1 s) | 936.55(66), 139.71(6.7), 582.5(6.3) |
| 368.70 10 | 0.19 4 | ¹⁰³ Tc(54.2 s) | 346.380(17.5), 136.079(16.6), 562.90(7.0) |
| 368.7 2 | †6.5 5 | ¹³⁶ Pm(107 s) | 373.8(†100), 602.7(†38.4), 857.2(†23.4) |
| 368.7 2 | †3.5 | ¹³⁶ Pm(47 s) | 373.8(†100), 862.5(†28), 488.7(†22) |
| 368.7 2 | 10.1 9 | ¹³⁶ Pm(107 s) | 373.8(15.0), 602.7(12.3), 857.2(12.72) |
| 368.7 4 | 0.022 8 | ¹³⁸ Cs(33.41 m) | 1435.795(76.3), 462.796(30.7), 1009.78(29.8) |
| 368.76 6 | 0.35 2 | ²⁴⁹ Cm(64.15 m) | 634.31(1.5), 560.45(0.84), 621.87(0.182) |
| • 368.76 6 | | ²⁵³ Es(20.47 d) | 41.79(0.050), 389.11(0.0264), 387.1(0.00810) |
| 368.8 3 | 0.13 3 | ¹⁰⁰ Nb(1.5 s) | 535.60(45.7), 528.24(9.1), 159.547(8.8) |
| • 368.8 1 | 0.0164 25 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 368.80 9 | 0.191 25 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 368.8 10 | 0.21 4 | ²⁰¹ Bi(108 m) | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| • 368.8 2 | 0.008 4 | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 368.8 2 | †0.8 3 | ²²⁵ Fr(4.0 m) | 182.3(†100), 31.50(†91), 225.1(†55) |
| 368.86 4 | 0.44 3 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 368.9 2 | 0.08 4 | ¹²⁴ Cs(30.8 s) | 353.9(40), 914.8(4.0), 492.6(3.6) |
| 368.9 2 | 0.09 4 | ¹³³ Te(12.5 m) | 312.072(62), 407.63(27.1), 1333.21(10.67) |
| 368.9 2 | 0.0079 17 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 368.9 3 | †9.4 7 | ¹⁹⁵ Bi(183 s) | 807.6(†100), 831.7(†100), 776.2(†95) |
| 368.934 2 | 14.4 8 | ²³¹ Ac(7.5 m) | 282.471(39.0), 307.063(30.4), 221.399(16.8) |
| 368.96 6 | 0.49 10 | ²⁰⁴ Bi(11.22 h) | 899.15(98), 374.72(82), 984.02(59) |
| 369.0 2 | †1.91 21 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 369 | 0.184 21 | ²⁰⁵ At(26.2 m) | 719.30(31), 669.41(8.6), 628.88(5.6) |
| • 369.08 4 | 0.172 11 | ²⁰⁶ Po(8.8 d) | 1032.26(32.9), 511.36(24.1), 286.410(23.8) |
| 369.09 12 | 1.62 22 | ¹⁴⁸ Ce(56 s) | 269.519(17.0), 291.724(16.7), 121.169(13.2) |
| 369.1 5 | | ¹⁰⁴ Nb(0.92 s) | 192.2(†100), 368.4(†20), 620.2(†19.2) |
| 369.1 1 | 0.010 5 | ¹¹³ Ag(5.37 h) | 298.58(10), 258.8(1.64), 316.3(1.343) |
| 369.10 10 | 0.56 11 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|----------------------|---|---|
| • 369.1 | >0.0006 | ¹⁸⁹ Ir(13.2 d) | 245.09(6), 69.537(3.5), 59.053(1.20) |
| • 369.12 13 | 0.014 3 | ¹³¹ Ba(11.50 d) | 496.326(47), 123.805(28.97), 216.078(19.66) |
| 369.15 5 | | ¹³² Ce(3.51 h) | 182.11(77), 155.37(10.5), 216.83(4.95) |
| 369.18 2 | 0.172 18 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| • 369.18 7 | 0.6 | ²¹⁰ Bi(3.04×10 ⁶ y) | 265.832(50), 304.896(28), 649.42(3.8) |
| 369.23 15 | 0.74 16 | ¹²⁵ Cd(0.65 s) | 436.29(37), 1099.48(22.3), 2147.19(19.1) |
| 369.23 10 | 0.174 11 | ¹⁴⁶ Ce(13.52 m) | 316.74(56), 218.23(20.8), 264.56(9.0) |
| 369.23 14 | 0.71 5 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| • 369.232 5 | 0.838 21 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| 369.26 10 | 0.21 3 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| 369.26 5 | 0.50 7 | ²⁰² Bi(1.72 h) | 960.67(99), 422.18(83.7), 657.49(60.6) |
| 369.30 10 | 1.39 8 | ⁸⁹ Kr(3.15 m) | 220.948(20.1), 586.03(16.6), 904.27(7.2) |
| 369.3 2 | †11.2 8 | ¹⁰⁵ Nb(2.95 s) | 94.8(†100), 246.9(†79), 309.9(†41.9) |
| 369.3 2 | 0.11 6 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 369.3 | 0.15 6 | ¹⁴⁸ Ba(0.607 s) | 56.08(29.20), 133.53(3.88), 415.78(3.59) |
| 369.30 10 | 0.25 13 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 369.3 2 | †19 4 | ¹⁵⁹ Lu(12.1 s) | 150.51(†100), 187.5(†25) |
| 369.33 10 | 5.59 19 | ¹²¹ Ag(0.78 s) | 314.55(32.1), 353.43(19.9), 500.61(9.3) |
| 369.33 10 | 0.48 3 | ¹²¹ Ag(0.78 s) | 314.55(32.1), 353.43(19.9), 500.61(9.3) |
| 369.35 5 | 0.103 5 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 369.35 5 | †0.41 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 369.41 5 | 0.0088 13 | ¹²⁷ Cs(6.25 h) | 411.95(62.8), 124.70(11.37), 462.31(5.07) |
| 369.45 12 | 0.047 10 | ¹⁰⁵ Ru(4.44 h) | 724.21(47), 469.37(17.5), 676.36(15.7) |
| 369.45 8 | 0.67 6 | ¹⁴⁸ La(1.05 s) | 158.468(55.6), 989.85(9.3), 760.30(8.6) |
| 369.5 1 | >0.10 | ¹⁴¹ Xe(1.73 s) | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| 369.5 1 | 1.92 10 | ¹⁴¹ Xe(1.73 s) | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| 369.5 2 | 1.62 12 | ¹⁴¹ Eu(40.0 s) | 394.0(9), 384.5(5.6), 382.9(2.97) |
| 369.5 2 | 0.30 5 | ¹⁴¹ Eu(2.7 s) | 394.0(0.60), 882.9(0.54), 518.8(0.45) |
| 369.5 1 | 1.40 12 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 369.5 2 | 9.7 8 | ¹⁶⁹ Hf(3.24 m) | 492.86(84), 123.5(3.9), 68.4(1.6) |
| • 369.5 | 0.021 | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 369.50 5 | 2.47 15 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 369.51 8 | 1.73 5 | ²⁰⁷ Po(5.80 h) | 992.33(59.3), 742.64(28.2), 911.79(16.95) |
| 369.6 1 | †32 3 | ¹⁵³ Yb(4.2 s) | 547.4(†100), 674.1(†61), 908.8(†25) |
| 369.669 8 | 3.16 17 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| 369.67 8 | 0.60 4 | ⁸⁰ Ge(29.5 s) | 265.36(27.0), 110.4(6.5), 1564.3(4.9) |
| 369.7 7 | 0.31 6 | ⁷⁴ Kr(11.50 m) | 89.65(31), 203.0(18.0), 296.67(9.9) |
| • 369.7 3 | 0.033 13 | ¹¹⁹ Te(4.70 d) | 153.59(66), 1212.73(66), 270.53(28.0) |
| 369.77 23 | †7.5 15 | ¹⁶⁴ Tm(2.0 m) | 91.40(†1500), 1154.66(†366), 768.91(†279) |
| • 369.80 15 | 0.0260 13 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 369.8 | 0.07 3 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 369.8 5 | †1.6 8 | ¹⁹³ Tl(21.6 m) | 324.37(†100), 1044.7(†59), 676.10(†48) |
| 369.813 23 | 17.5 10 | ¹³⁶ I(46.9 s) | 1313.02(100), 381.359(100), 197.316(78) |
| 369.9 2 | 0.19 4 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 369.9 2 | 0.061 15 | ¹⁹³ Au(17.65 h) | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| 370.0 2 | 2.0 4 | ¹³⁰ Sb(6.3 m) | 839.49(100), 793.53(86), 182.36(41) |
| • 370.0 1 | 17.2 6 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 396.00(34.3), 929.01(20.2) |
| 370.00 20 | 0.059 10 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 370.0 | 0.15 4 | ¹⁵⁹ Er(36 m) | 624.5(33), 649.1(23.4), 205.92(9.7) |
| 370.1 1 | †1.30 13 | ¹⁷¹ Ta(23.3 m) | 49.6(†100), 506.4(†54), 501.8(†22.6) |
| 370.1 | †<0.7 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 370.1 2 | †3.0 5 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 370.1 2 | 0.14 4 | ²⁴⁹ Es(102.2 m) | 379.5(40.4), 813.2(9.2), 375.1(3.3) |
| 370.12 15 | 0.16 4 | ¹⁰¹ Mo(14.61 m) | 191.92(19), 590.91(16.4), 1012.47(12.8) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------------|-----------------------------|---|
| • 370.17 6 | 0.73 5 | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 280.41(30.2), 644.55(11.1) |
| 370.17 6 | †69 56 | ¹⁰⁵ Ag(7.23 m) | 319.14(†63000), 306.25(†12800), 442.37(†5900) |
| 370.2 | 0.29 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 370.28 17 | 0.82 4 | ⁸⁶ Y(14.74 h) | 1076.64(83), 627.72(32.6), 1153.01(30.5) |
| 370.3 1 | >0.08 | ⁸³ Zr(44 s) | 55.55(8), 104.97(5.70), 475.1(5.1) |
| 370.3 2 | 0.21 | ¹⁴⁰ Sm(14.82 m) | 225.5(>10), 225.4(10), 140.0(5.0) |
| • 370.3 2 | 0.00122 25 | ¹⁷² Er(49.3 h) | 610.062(44.2), 407.338(42.1), 68.107(3.29) |
| 370.3 2 | 4.5 5 | ¹⁹⁰ Tl(3.7 m) | 416.4(91), 625.4(82), 731.1(37) |
| • 370.4 1 | 0.020 3 | ¹²⁴ Sb(60.20 d) | 602.730(97.8), 1690.980(47.3), 722.786(10.76) |
| 370.4 2 | 0.045 7 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 370.5 5 | 0.06 6 | ⁶⁶ Ge(2.26 h) | 43.89(28.7), 381.85(28), 272.97(10.4) |
| • 370.5 5 | | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 370.5 1 | 1.35 9 | ²¹¹ Rn(14.6 h) | 674.1(45), 1362.9(32.5), 678.4(28.9) |
| 370.509 8 | 11.0 6 | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 54.548(3.7) |
| 370.54 18 | †4.9 7 | ¹⁸¹ Pt(51 s) | 289.29(†100), 111.97(†100), 230.15(†92) |
| • 370.568 19 | 0.0056 11 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 370.6 3 | 0.42 20 | ¹⁰⁰ Rh(20.8 h) | 539.59(78.4), 2376.1(35.3), 1553.4(21) |
| 370.60 10 | 0.14 3 | ¹⁰³ Tc(54.2 s) | 346.380(17.5), 136.079(16.6), 562.90(7.0) |
| 370.6 1 | 3.45 25 | ¹¹⁹ Ag(2.1 s) | 626.4(13), 366.2(12.1), 399.1(10.9) |
| 370.6 | | ¹³⁶ I(46.9 s) | 1686.1(†100), 1689.0(†85), 240.5(†74) |
| 370.6 3 | 2.91 4 | ¹³⁷ Pm(2.4 m) | 177.5(40.29), 108.6(35), 233.6(29.57) |
| 370.6 3 | 0.049 24 | ¹⁶¹ Er(3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| 370.6 | 0.08 | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| • 370.61 7 | 8.0×10^{-6} 4 | ¹¹⁵ Cd(44.6 d) | 933.8(2.000), 1290.580(0.890), 484.470(0.290) |
| 370.7 1 | 5.0 7 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 370.70 10 | 0.067 4 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| 370.7 7 | 0.54 6 | ¹⁹⁹ Bi(27 m) | 560.1(22.0), 424.85(22), 841.7(11) |
| • 370.72 3 | 0.108 9 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| 370.721 25 | 0.088 14 | ¹⁵⁰ Pm(2.68 h) | 333.971(68), 1324.51(17.5), 1165.739(15.8) |
| • 370.721 25 | 0.108 9 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| • 370.721 5 | 0.228 6 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 370.8 6 | 0.070 23 | ¹⁰³ Cd(7.3 m) | 1461.81(12), 1448.70(5.55), 1079.90(5.44) |
| 370.8 | 0.31 | ¹³³ Pr(6.5 m) | 134.3(14), 74.0(10), 315.6(10) |
| 370.8 1 | 0.013 | ¹⁶¹ Er(3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| 370.8 3 | 0.29 4 | ¹⁹⁸ Tl(5.3 h) | 411.8044(82), 675.8874(11), 636.4(10.1) |
| 370.81 13 | 0.0042 10 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| • 370.85 5 | | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| • 370.856 8 | 0.0072 6 | ¹⁶⁹ Yb(32.026 d) | 63.12077(44.2), 197.95788(35.8), 177.21402(22.16) |
| 370.9 2 | 0.29 5 | ¹²² Cs(21.0 s) | 331.1(48), 512.0(3.8), 817.9(3.09) |
| 370.9 2 | 2.3 7 | ¹²² Cs(4.5 m) | 331.1(94), 497.1(79), 638.5(63) |
| 370.9 15 | >0.011 | ²¹⁹ Rn(3.96 s) | 271.23(10.8), 401.81(6.37), 130.59(0.119) |
| 370.9 3 | 10 | ²³¹ Np(48.8 m) | 348.4(3.63), 263.8(2.84), 484.7(1.6) |
| 370.94 10 | 0.6 1 | ¹⁵⁶ Pm(26.70 s) | 173.75(52.0), 1147.84(20.5), 117.42(13.8) |
| • 370.94 3 | 0.107 2 | ²³⁷ U(6.75 d) | 59.537(34.5), 208.00(21.14), 26.345(2.43) |
| • 370.94 3 | $\dagger 5.23 \times 10^5$ 5 | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| 371.0 5 | 0.65 18 | ¹³⁶ Sm(47 s) | 114.4(36), 747.7(5.4), 485.3(5.0) |
| 371.0 2 | 8 7 | ¹⁹² Pb(3.5 m) | 1195.4(47), 608.2(17.9), 167.5(13.6) |
| 371.05 13 | 0.13 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 371.07 5 | 0.77 4 | ¹⁵¹ Dy(17.9 m) | 386.10(19.4), 49.46(18.0), 546.31(14.3) |
| 371.07 9 | 0.045 6 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 371.09 10 | 0.26 4 | ¹⁸⁴ Ta(8.7 h) | 414.03(72), 252.848(43), 920.932(32.0) |
| 371.1 2 | †4.4 4 | ¹³⁶ Pm(107 s) | 373.8(†100), 602.7(†38.4), 857.2(†23.4) |
| 371.1 3 | 6.3 7 | ¹⁹¹ Hg(50.8 m) | 252.5(57), 420.1(18.6), 578.6(17.6) |
| 371.1 3 | †50 6 | ²⁰⁶ Rn(5.67 m) | 497.7(†100), 324.5(†96), 386.6(†61) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| • 371.14 8 | 0.096 12 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 371.2 2 | 0.45 6 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 371.260 5 | 21.6 13 | ¹⁹⁰ Re(3.1 m) | 186.718(48.4), 557.972(28.2), 223.811(26.0) |
| 371.260 5 | 10.3 6 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| • 371.260 5 | 23 | ¹⁹⁰ Ir(11.78 d) | 186.718(52.4), 605.24(39.9), 518.55(34.0) |
| 371.28 10 | 0.042 9 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| • 371.292 29 | 0.025 3 | ¹⁴³ Ce(33.039 h) | 293.266(42.80), 57.356(11.7), 664.571(5.69) |
| 371.3 3 | 0.20 7 | ⁹⁹ Ag(124 s) | 264.41(65), 832.29(13.5), 805.07(12.5) |
| 371.3 | | ¹⁶⁵ Dy(1.257 m) | 515.467(1.53), 361.68(0.534), 153.803(0.242) |
| 371.3 2 | 4.1 7 | ¹⁶⁸ Ta(2.0 m) | 124.0(35.6), 261.6(22.7), 751.4(7.3) |
| 371.307 8 | 1.80 7 | ⁹⁰ Nb(14.60 h) | 1129.224(92.7), 2318.968(82.03), 141.178(66.8) |
| 371.32 3 | 51 3 | ¹²³ Cd(2.10 s) | 1052.28(24.8), 1438.13(8.3), 1842.86(7.7) |
| 371.32 3 | 0.91 5 | ¹²³ Cd(1.82 s) | 1165.86(25.7), 1027.45(22.6), 2102.81(12.5) |
| 371.40 12 | †14 1 | ¹⁵⁹ Yb(1.58 m) | 166.16(†500), 177.12(†159), 390.20(†113) |
| • 371.4 | | ¹⁸⁸ Ir(41.5 h) | 155.032(29.7), 2214.62(18.7), 632.99(18) |
| 371.4 1 | 11.7 6 | ²⁵⁷ Md(5.52 h) | 325.1(2.5), 181.3(0.41), 388.5(0.07) |
| 371.44 5 | 0.501 25 | ¹³⁸ Xe(14.08 m) | 258.411(31.5), 434.562(20.3), 1768.26(16.7) |
| 371.50 14 | 0.14 9 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 371.5 2 | 0.067 10 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 371.6 8 | 0.18 5 | ¹⁰¹ Mo(14.61 m) | 191.92(19), 590.91(16.4), 1012.47(12.8) |
| 371.6 2 | †3.2 3 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 371.61 10 | 0.60 4 | ⁸³ Se(22.3 m) | 356.687(70), 510.17(43), 224.8(32.7) |
| 371.66 12 | 0.098 12 | ⁸³ Se(70.1 s) | 1030.86(21.2), 356.687(18), 987.96(16.1) |
| 371.68 65 | 0.020 8 | ¹⁷⁴ Ta(1.05 h) | 206.50(58), 91.00(16.0), 1205.92(4.9) |
| • 371.68 2 | 0.480 14 | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 371.7 2 | 1.1 7 | ¹²² Cs(4.5 m) | 331.1(94), 497.1(79), 638.5(63) |
| 371.70 3 | 0.90 3 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 371.7 3 | <0.36 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 371.73 10 | †62 10 | ¹⁶³ Lu(238 s) | 163.08(†100), 54.00(†88), 396.34(†63) |
| • 371.76 3 | 0.52 11 | ¹⁶⁶ Dy(81.6 h) | 82.471(14), 28.242(1.13), 54.2400(0.81) |
| 371.8 10 | 0.16 | ¹²¹ Ag(0.78 s) | 314.55(32.1), 353.43(19.9), 500.61(9.3) |
| 371.8 4 | 0.09 4 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| • 371.8 1 | <0.07 | ²³⁵ U(7.038×10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| 371.807 15 | 2.62 9 | ⁹⁶ Nb(23.35 h) | 778.224(96.45), 568.80(58.0), 459.88(26.62) |
| • 371.807 15 | 0.070 20 | ⁹⁶ Tc(4.28 d) | 778.224(100), 849.929(98), 812.581(82) |
| 371.807 15 | 0.0026 6 | ⁹⁶ Tc(51.5 m) | 778.224(1.9), 1200.231(1.08), 480.705(0.311) |
| 371.81 10 | | ¹⁶⁸ Lu(5.5 m) | 1483.65(†100), 228.58(†97), 111.8(†68) |
| 371.81 10 | | ¹⁶⁸ Lu(6.7 m) | 198.82(28), 979.22(20), 896.12(15) |
| 371.82 10 | 3.31 16 | ¹²¹ Ag(0.78 s) | 314.55(32.1), 353.43(19.9), 500.61(9.3) |
| 371.9 3 | 0.051 16 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 371.9 | 1.4 3 | ¹⁴⁵ Tb(29.5 s) | 257.8(39), 987.8(37), 537.0(23) |
| • 371.90 15 | 0.0305 18 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| • 371.918 2 | 30.60 9 | ¹²⁹ Cs(32.06 h) | 411.490(22.31), 548.945(3.40), 39.578(2.97) |
| 371.93 8 | †20.8 5 | ¹⁹⁶ Bi(240 s) | 1049.21(†21.1), 689.00(†19.2), 59.23(†14.4) |
| 371.96 9 | 0.257 10 | ¹⁷¹ Er(7.516 h) | 308.31(64.4), 295.901(28.9), 111.621(20.5) |
| 372.0 5 | 0.28 14 | ¹⁰² Zr(2.9 s) | 599.60(13.9), 535.30(10.6), 64.50(8.9) |
| 372.0 2 | 2.7 9 | ¹⁴⁰ Gd(15.8 s) | 174.8(76), 749.9(70), 379.0(38) |
| 372.00 13 | 0.012 3 | ¹⁵⁹ Ho(33.05 m) | 121.012(36.2), 131.973(23.6), 309.594(17.2) |
| 372 | †20 | ¹⁷⁴ Os(44 s) | 118(†100), 325(†43), 302(†26) |
| 372.0 5 | †0.39 13 | ¹⁸⁰ Au(8.1 s) | 153.3(†100), 524.3(†29), 257.6(†26) |
| 372.0 2 | 1.52 19 | ²³¹ Ac(7.5 m) | 282.471(39.0), 307.063(30.4), 221.399(16.8) |
| 372.0 1 | 1.22 8 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 372.05 15 | 0.010 5 | ¹³³ I(20.8 h) | 529.872(87.0), 875.329(4.51), 1298.223(2.35) |
| 372.06 5 | 0.63 3 | ²²⁴ Fr(3.30 m) | 215.985(33.1), 131.613(16.3), 836.90(9.8) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 372.081 14 | 0.171 4 | ¹²⁵ Xe(16.9 h) | 188.418(54), 243.378(30.1), 54.968(6.81) |
| 372.1 | 0.19 | ⁸³ As(13.4 s) | 734.60(43), 1113.10(14.7), 2076.70(11.9) |
| 372.1 2 | †17.0 9 | ¹¹⁰ Tc(0.92 s) | 240.67(†100), 613.0(†16.0), 619.2(†14) |
| 372.1 | 25.3 | ¹⁴⁹ Ho(58 s) | 1034.6(99.7), 1736.4(28.0), 1754.0(19.0) |
| 372.1 1 | 0.26 3 | ¹⁵⁷ Er(18.65 m) | 53.05(24), 391.32(14.2), 121.57(10.1) |
| 372.1 2 | †1.6 3 | ¹⁷¹ Hf(12.1 h) | 122.0(†100), 662.2(†83), 347.18(†47) |
| 372.1 | †2.4 4 | ¹⁷⁸ Ir(12 s) | 266.1(†100.0), 131.6(†79), 363.1(†39.9) |
| 372.20 10 | 2.09 23 | ¹¹⁵ Ag(20.0 m) | 229.08(18), 212.80(4.4), 472.70(4.0) |
| 372.2 4 | 0.0045 9 | ²⁵¹ Fm(5.30 h) | 425.4(0.95), 480.4(0.392), 358.3(0.315) |
| 372.3 3 | 0.12 3 | ⁹² Kr(1.840 s) | 142.307(64), 1218.6(60), 812.6(14.6) |
| 372.3 1 | 1.55 14 | ¹¹⁹ Ag(2.1 s) | 626.4(13), 366.2(12.1), 399.1(10.9) |
| 372.3 3 | 0.6 2 | ¹²⁹ Sn(2.23 m) | 645.13(100), 80.5(6.6), 913.2(5.0) |
| 372.3 10 | 0.103 22 | ²⁰¹ Bi(108 m) | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| 372.31 19 | 0.424 21 | ¹¹¹ Sn(35.3 m) | 1152.98(2.7), 1914.70(1.99), 761.97(1.48) |
| 372.4 3 | 0.138 12 | ¹⁴⁷ Pr(13.4 m) | 77.9921(15), 314.675(13.2), 641.380(10.0) |
| 372.4 2 | 9.1 18 | ¹⁵⁰ Tm(2.2 s) | 1578.9(91), 474.5(86), 207.6(82) |
| 372.40 4 | 0.0117 8 | ¹⁶⁶ Tm(7.70 h) | 778.817(18.9), 2052.36(17.2), 184.410(16.1) |
| 372.4 1 | 0.16 3 | ²²³ Ac(2.10 m) | 98.58(0.891), 191.3(0.58), 83.55(0.57) |
| 372.46 8 | 0.284 25 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 372.5 | | ¹¹⁵ Ag(18.0 s) | 229.08(†100), 131.52(†77), 388.9(†52) |
| 372.5 1 | 0.99 14 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| • 372.507 12 | 2.66 5 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 372.57 20 | 0.0069 16 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 372.6 1 | †15.3 16 | ¹³⁷ Te(2.49 s) | 243.3(†100), 554.0(†34), 469.1(†21) |
| 372.6 2 | 1.05 11 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 372.6 | †2.9 4 | ¹⁷⁸ Ir(12 s) | 266.1(†100.0), 131.6(†79), 363.1(†39.9) |
| 372.70 20 | †100 | ¹¹² Te(2.0 m) | 296.20(†86), 418.9(†57), 350.9(†36) |
| 372.7 3 | †18.3 18 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| • 372.728 25 | 0.239 9 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| 372.75 10 | | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 372.760 | 87 | ⁴³ K(22.3 h) | 617.490(79.2), 396.861(11.85), 593.390(11.26) |
| 372.760 | 23 | ⁴³ Sc(3.891 h) | 1931.3(0.0151), 1558.5(0.0084), 593.390(0.0022) |
| 372.77 12 | 0.19 4 | ¹⁶² Yb(18.87 m) | 163.35(40.0), 118.70(33.6), 576.10(3.24) |
| 372.8 1 | 2.33 21 | ¹³⁵ Nd(12.4 m) | 204.02(52), 41.43(23), 441.2(14.9) |
| • 372.8 4 | | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 372.9 1 | †41 4 | ⁸⁴ Zr(25.9 m) | 112.5(†100), 44.9(†48), 666.7(†39) |
| 372.92 10 | 4.0 | ¹¹⁵ Pd(25 s) | 342.71(8), 303.87(7), 396.56(6) |
| 372.97 10 | †12.8 6 | ¹⁶⁵ Lu(10.74 m) | 132.49(†100), 120.60(†100), 174.25(†47.0) |
| 373 2 | 1.3 | ⁷⁰ As(52.6 m) | 1039.20(81), 1114.1(21.8), 668.3(21.8) |
| 373.00 10 | 4.20 21 | ¹⁶⁰ Yb(4.8 m) | 173.74(42.0), 215.78(20.2), 140.35(9.3) |
| • 373 | | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 373 | †<6 | ²³⁸ Pa(2.3 m) | 1015.3(†<100), 1014.6(†<100), 635.18(†88) |
| 373.050 5 | 2.15 5 | ⁶¹ Cu(3.333 h) | 282.956(12.2), 656.008(10.77), 67.412(4.23) |
| 373.1 4 | 0.68 15 | ¹¹³ Rh(2.72 s) | 189.7(17.0), 409.3(15.9), 219.6(3.88) |
| 373.122 61 | 0.071 16 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| 373.13 10 | 0.015 3 | ¹³⁵ Xe(9.14 h) | 249.770(90), 608.151(2.90), 408.009(0.359) |
| 373.14 8 | 0.41 5 | ²⁰⁷ At(1.80 h) | 814.41(44.5), 588.33(19.2), 300.654(12.8) |
| 373.2 3 | 2.0 4 | ¹⁵¹ Pr(18.90 s) | 880.19(13), 189.057(11.8), 484.501(11.3) |
| 373.20 15 | 0.45 6 | ²⁰⁸ At(1.63 h) | 686.527(98), 660.040(89), 177.595(48.6) |
| 373.24 5 | 0.60 4 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| • 373.246 11 | 14.04 19 | ¹³¹ Ba(11.50 d) | 496.326(47), 123.805(28.97), 216.078(19.66) |
| 373.26 4 | 0.40 4 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 373.30 14 | 1.654 19 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 373.3 5 | †2.7 11 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 234.0(†40.0) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| • 373.3 | 0.049 | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 373.3 4 | †62 31 | ²³² Ra(250 s) | 470.9(†100), 97.7(†80), 478.5(†69) |
| • 373.36 15 | 0.012 12 | ¹²⁹ Cs(32.06 h) | 371.918(30.60), 411.490(22.31), 548.945(3.40) |
| 373.36 5 | 0.0207 12 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 373.37 15 | 6.3 5 | ¹⁶³ Gd(68 s) | 287.79(25), 214.0(11.5), 1562.1(9.0) |
| 373.39 4 | 0.262 15 | ¹⁹⁴ Pb(12.0 m) | 581.82(18.8), 1519.45(16.4), 203.82(16.2) |
| 373.39 15 | 1.0 3 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 373.4 5 | †0.9 4 | ¹⁴² Xe(1.22 s) | 571.83(†100), 657.05(†79), 538.24(†77) |
| 373.4 | 0.96 10 | ¹⁵⁰ Pr(6.19 s) | 130.2(32), 722.5(7.0), 852.7(6.1) |
| 373.40 20 | 0.55 14 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 373.5 5 | 0.014 3 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 373.5 3 | †0.25 8 | ¹⁸⁸ Au(8.84 m) | 265.63(†100), 340.04(†23.9), 605.5(†16.3) |
| 373.52 2 | 0.02 | ²³⁹ U(23.45 m) | 74.664(48), 43.533(4.14), 662.24(0.18) |
| 373.57 | 0.030 15 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 373.57 11 | 0.090 18 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 373.6 7 | 0.31 9 | ⁷⁴ Kr(11.50 m) | 89.65(31), 203.0(18.0), 296.67(9.9) |
| 373.6 3 | | ¹⁵⁹ Er(36 m) | 624.5(33), 649.1(23.4), 205.92(9.7) |
| 373.6 | 1.64 29 | ¹⁷³ Re(1.98 m) | 181.5(6.4), 190.7(1.71) |
| • 373.68 4 | 0.062 3 | ¹⁴⁵ Eu(5.93 d) | 893.73(66), 653.512(15.0), 1658.53(14.9) |
| 373.68 8 | 0.21 3 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 373.7 3 | 0.24 6 | ¹⁰⁹ Sn(18.0 m) | 1099.4(30), 649.90(28.0), 1321.3(11.9) |
| • 373.7 3 | | ¹⁷¹ Lu(8.24 d) | 739.78(47.8), 19.394(13.7), 667.404(11.04) |
| 373.75 17 | 0.041 10 | ¹¹⁵ Sb(32.1 m) | 497.358(98), 489.27(1.3), 1236.52(0.58) |
| 373.77 5 | 0.58 11 | ¹⁰⁸ In(58.0 m) | 875.46(100), 632.96(100), 242.84(41) |
| 373.80 7 | 91 10 | ¹¹⁰ Rh(28.5 s) | 546.90(42.4), 687.70(25.8), 838.22(25) |
| 373.80 7 | 54 5 | ¹¹⁰ Rh(3.2 s) | 439.79(6.5), 796.83(5.3), 813.56(2.3) |
| 373.80 7 | †<0.02 | ¹¹⁰ Ag(24.6 s) | |
| 373.8 3 | 0.37 7 | ¹²¹ Cs(155 s) | 153.9(15.2), 239.6(7.7), 427.1(3.63) |
| 373.8 2 | †100 2 | ¹³⁶ Pm(107 s) | 602.7(†38.4), 857.2(†23.4), 862.5(†19.0) |
| 373.8 2 | †100 | ¹³⁶ Pm(47 s) | 862.5(†28), 488.7(†22), 602.7(†17) |
| 373.8 2 | 15.0 4 | ¹³⁶ Pm(107 s) | 602.7(12.3), 857.2(12.72), 814.7(30.9) |
| 373.8 | 0.27 | ¹⁹⁰ Hg(20.0 m) | 142.6(68), 171.5(4.8), 154.7(2.5) |
| • 373.837 12 | 0.0853 25 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 373.87 10 | 0.54 6 | ¹⁴⁰ Xe(13.60 s) | 805.52(20), 1413.66(12.2), 1315.05(8.2) |
| 373.881 6 | 1.8 | ¹⁸² Hf(61.5 m) | 942.80(18.8), 799.64(9.4), 114.3152(6.2) |
| 373.9 2 | 0.36 6 | ¹⁰¹ Zr(2.1 s) | 119.3(10.8), 205.6(6.0), 912.2(3.48) |
| 373.91 5 | 0.0025 8 | ¹⁸⁷ W(23.72 h) | 685.774(27.3), 479.531(21.8), 72.001(11.14) |
| 373.93 3 | 0.448 11 | ⁶⁹ As(15.2 m) | 232.69(11), 145.95(4.96), 86.78(3.44) |
| 373.96 16 | 0.54 10 | ¹⁶⁴ Lu(3.14 m) | 123.3(34.0), 740.52(12.2), 262.22(10.8) |
| 374.00 10 | 5.30 21 | ¹²³ Ag(0.309 s) | 263.87(35.9), 409.79(13.2), 591.30(8.2) |
| 374.0 2 | | ¹⁹⁰ Bi(6.2 s) | |
| 374.0 1 | †7.0 1 | ²⁰⁰ At(43 s) | 665.9(†100), 611.1(†85.0), 484.5(†49.8) |
| 374.07 10 | †6.7 13 | ¹⁶⁸ Lu(5.5 m) | 1483.65(†100), 228.58(†97), 111.8(†68) |
| 374.1 2 | 0.26 5 | ¹¹⁷ Cs(8.4 s) | 204.8(15.0), 29.7(9.9), 205.6(6.8) |
| 374.1 4 | 0.4 2 | ¹²⁹ Sn(2.23 m) | 645.13(100), 80.5(6.6), 913.2(5.0) |
| 374.13 9 | 0.0082 12 | ¹³³ La(3.912 h) | 278.835(2.50), 302.353(1.648), 290.06(1.413) |
| 374.150 20 | 0.166 22 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 374.15 7 | 0.285 25 | ¹⁵⁸ Tm(3.98 m) | 192.13(62), 335.10(16.8), 1149.83(7.6) |
| • 374.2 2 | 0.022 5 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 374.2 2 | †7 | ²⁵⁶ Es(7.6 h) | 861.8(†100), 231.1(†61), 172.6(†49) |
| 374.23 6 | 3.5 | ¹⁴⁷ Ce(56.4 s) | 268.80(7), 92.9(4.7), 452.1(3.3) |
| 374.28 5 | 3.0 4 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| 374.3 2 | 0.025 2 | ¹¹³ Ag(5.37 h) | 298.58(10), 258.8(1.64), 316.3(1.343) |
| 374.3 1 | †2.35 22 | ¹²³ La(17 s) | 92.5(†100), 937.3(†43), 153.6(†43) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|--|
| 374.3 3 | 62 7 | ¹³² In(0.201 s) | 4040.8(61), 299.2(49), 2379.7(29) |
| 374.4 | 0.42 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| • 374.43 5 | 0.050 9 | ¹⁵⁶ Tb(5.35 d) | 534.318(66.6), 199.2132(40.9), 1222.36(31.00) |
| 374.46 13 | 0.27 3 | ¹⁰⁶ Rh(131 m) | 511.842(85), 1045.83(30.4), 717.24(28.9) |
| • 374.46 13 | 0.26 4 | ¹⁰⁶ Ag(8.28 d) | 511.842(88), 1045.83(29.6), 717.24(28.9) |
| 374.46 2 | 0.0184 6 | ¹³⁵ La(19.5 h) | 480.51(1.5), 874.51(0.164), 587.83(0.1108) |
| 374.47 5 | 3.17 22 | ¹¹⁵ Te(5.8 m) | 723.569(30), 1380.58(23.0), 1326.83(22.7) |
| • 374.4852 8 | 0.721 5 | ¹⁹² Ir(73.831 d) | 205.79549(3.300), 484.5780(3.184), 201.3112(0.472) |
| 374.5 2 | 0.148 23 | ⁹⁶ Rb(0.199 s) | 815.0(78.00), 692.0(8.0), 813.2(7.0) |
| 374.53 14 | 0.37 4 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| • 374.55 20 | 0.0045 5 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 374.58 22 | †7.6 9 | ¹⁹³ Tl(21.6 m) | 324.37(†100), 1044.7(†59), 676.10(†48) |
| 374.6 2 | †0.4 2 | ¹⁰¹ Nb(7.1 s) | 276.10(†100), 157.466(†32), 13.5(†32) |
| 374.6 2 | 0.006 4 | ¹⁰¹ Pd(8.47 h) | 296.29(19), 590.44(12.06), 269.67(6.43) |
| 374.6 1 | 0.087 18 | ¹⁵⁷ Er(18.65 m) | 53.05(24), 391.32(14.2), 121.57(10.1) |
| • 374.7 2 | 0.0029 3 | ¹¹¹ Ag(7.45 d) | 342.118(7), 245.422(1.24), 96.73(0.20) |
| 374.7 2 | 0.030 | ¹¹¹ Ag(64.8 s) | 245.422(0.50), 620.3(0.121), 171.28(0.12) |
| 374.7 3 | †12.0 25 | ¹⁵⁹ Yb(1.58 m) | 166.16(†500), 177.12(†159), 390.20(†113) |
| 374.70 14 | 0.19 5 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 374.72 7 | 82 4 | ²⁰⁴ Bi(11.22 h) | 899.15(98), 984.02(59), 911.78(13.5) |
| 374.77 | 0.19 5 | ⁴⁴ K(22.13 m) | 1157.031(58), 2150.76(22.7), 2518.95(9.69) |
| • 374.79 20 | †0.09 3 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 374.8 1 | 2.22 22 | ⁷³ Br(3.4 m) | 64.9(37.0), 336.0(10.4), 699.8(9.1) |
| • 374.8 7 | 0.00246 23 | ⁷⁵ Se(119.779 d) | 264.6584(58.50), 136.0008(58.3), 279.5441(24.79) |
| 374.8 | 0.7 | ⁸³ Zr(44 s) | 55.55(8), 104.97(5.70), 475.1(5.1) |
| 374.8 2 | 0.059 10 | ²²³ Ac(2.10 m) | 98.58(0.891), 191.3(0.58), 83.55(0.57) |
| 374.9 2 | 0.0051 6 | ⁹⁶ Tc(51.5 m) | 778.224(1.9), 1200.231(1.08), 480.705(0.311) |
| 374.9 1 | 0.74 16 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| 374.90 15 | 1.7 3 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| • 374.93 1 | 0.0049 7 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| • 374.99 2 | 0.309 15 | ¹²⁸ Ba(2.43 d) | 273.44(15), 229.50(0.106), 359.10(0.096) |
| 374.991 12 | 0.00030 20 | ¹²⁷ Te(9.35 h) | 417.95(1.0), 360.32(0.1346), 202.860(0.0580) |
| • 374.991 12 | 17.2 6 | ¹²⁷ Xe(36.4 d) | 202.860(68), 172.132(25.5), 145.252(4.29) |
| 375.0 2 | 0.68 15 | ¹⁴⁸ Ce(56 s) | 269.519(17.0), 291.724(16.7), 121.169(13.2) |
| 375.0 2 | 0.13 3 | ¹⁵⁹ Er(36 m) | 624.5(33), 649.1(23.4), 205.92(9.7) |
| 375 1 | 0.012 | ¹⁷⁵ Ta(10.5 h) | 207.4(14.0), 348.5(12.0), 266.9(10.8) |
| 375.0 2 | †87 15 | ¹⁸⁰ Yb(2.4 m) | 172.9(†100), 419.8(†56), 339.2(†44) |
| 375 | | ²¹⁷ At(32.3 ms) | 258.5(0.056), 593.1(0.0120), 334 |
| 375.0 | †<6 | ²³⁸ Pa(2.3 m) | 1015.3(†<100), 1014.6(†<100), 635.18(†88) |
| 375.045 6 | | ²³⁵ Pa(24.5 m) | 652.053, 659.3, 645.896 |
| • 375.045 6 | 0.001554 9 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 375.06 8 | 1.95 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 375.09 12 | 0.46 5 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 375.1 1 | 3.3 3 | ²⁴⁹ Es(102.2 m) | 379.5(40.4), 813.2(9.2), 1218.5(1.5) |
| 375.2 2 | 4.4 3 | ⁹⁷ Y(1.17 s) | 1103.0(92.6), 161.4(71.8), 1091(56) |
| 375.20 20 | 0.030 10 | ¹¹⁴ Sb(3.49 m) | 1299.90(99), 887.60(17.4), 327.18(7.0) |
| • 375.2 5 | 0.0020 6 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 375.2 2 | †16 2 | ¹⁸¹ Ir(4.90 m) | 107.64(†100), 1639.6(†52), 318.9(†46) |
| 375.2 2 | †0.87 6 | ¹⁹² Tl(9.6 m) | 422.8(†100), 634.8(†75.9), 786.3(†31.7) |
| • 375.2 1 | 0.0033 11 | ²²⁵ Ac(10.0 d) | 99.91(1.01), 150.04(0.80), 99.63(0.62) |
| 375.2 10 | 0.009 4 | ²³⁰ Ac(122 s) | 454.95(8), 508.20(5.15), 1243.9(3.50) |
| • 375.2 10 | 0.033 11 | ²³⁰ Pa(17.4 d) | 951.95(1.65), 918.48(8.2), 454.95(6.27) |
| • 375.2 10 | 0.011 | ²³⁰ Pa(17.4 d) | 951.95(1.65), 918.48(8.2), 454.95(6.27) |
| 375.35 5 | 0.453 6 | ¹²⁷ Cs(6.25 h) | 411.95(62.8), 124.70(11.37), 462.31(5.07) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 375.4 1 | 0.28 3 | ¹⁴² Gd(70.2 s) | 750.2(11.2), 178.90(11.20), 284.4(6.16) |
| 375.4 5 | 0.36 | ²⁰³ Bi(11.76 h) | 820.3(30), 825.2(14.6), 896.9(13) |
| 375.45 8 | 0.100 18 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| • 375.45 4 | 0.679 8 | ²³³ Pa(26.967 d) | 312.17(38.6), 300.34(6.62), 340.81(4.47) |
| 375.48 10 | 12.8 10 | ¹⁹⁷ Pb(8 m) | 385.85(50), 761.14(13.3), 1261.23(8.3) |
| 375.5 4 | 0.036 9 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 375.5 4 | 0.23 7 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 375.5 3 | †16 3 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 375.5 2 | 0.80 16 | ¹⁹⁶ Bi(308 s) | 1049.21(87), 689.00(35.5), 776.6(9.1) |
| 375.63 15 | †2.2 4 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| 375.65 13 | 0.101 11 | ¹⁴⁶ Ce(13.52 m) | 316.74(56), 218.23(20.8), 264.56(9.0) |
| • 375.70 8 | 0.0074 25 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 375.7 | †40 | ¹⁶³ Ta(10.6 s) | 396.0(†100), 451.1(†70), 448.7(†60) |
| 375.74 4 | 0.0035 8 | ¹⁸⁷ W(23.72 h) | 685.774(27.3), 479.531(21.8), 72.001(11.14) |
| 375.80 20 | 0.50 6 | ⁹¹ Tc(3.14 m) | 2450.90(13.5), 1639.90(9.2), 1605.20(7.77) |
| • 375.8 3 | 0.015 5 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 375.8 1 | 2.4 4 | ¹⁶⁰ Tm(74.5 s) | 264.1(9), 125.8(6.5), 738.7(1.08) |
| 375.8 2 | 0.64 7 | ²³⁰ Fr(19.1 s) | 711.0(13.6), 129.1(11.0), 728.4(7.3) |
| 375.8 2 | †0.27 9 | ²³⁰ Ra(93 m) | 72.0(†100), 63.0(†35.4), 202.8(†27.3) |
| 375.8 1 | 0.363 20 | ²⁵¹ Fm(5.30 h) | 880.8(2.19), 453.1(1.45), 405.6(0.99) |
| 375.83 7 | 0.091 20 | ¹⁸³ Hf(1.067 h) | 783.754(66), 73.174(38), 459.069(27) |
| 375.87 5 | 0.154 13 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 375.9 2 | 0.0068 16 | ¹⁶⁷ Yb(17.5 m) | 113.34(55.3), 106.18(22.5), 176.25(21) |
| 375.9 6 | †2.7 6 | ¹⁹⁸ Tl(1.87 h) | 636.4(†202), 411.8044(†202), 587.2(†185) |
| 375.91 7 | 0.045 3 | ¹³⁹ Cs(9.27 m) | 1283.23(8.3), 627.24(1.78), 1420.66(0.91) |
| 376.0 2 | 4.7 5 | ¹⁰⁴ Mo(60 s) | 68.8(55), 69.7(17.8), 36.3(14) |
| 376.0 2 | 0.63 20 | ¹⁰⁵ Mo(35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 376.0 3 | 0.10 5 | ¹²⁷ In(1.09 s) | 1597.7(49), 646.1(6.2), 805.1(5.6) |
| • 376.0 5 | 0.187 10 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 396.00(34.3), 929.01(20.2) |
| • 376.0 3 | 0.012 4 | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 376.07 3 | 0.54 3 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 376.1 2 | 0.09 | ¹⁰⁹ Sn(18.0 m) | 1099.4(30), 649.90(28.0), 1321.3(11.9) |
| 376.1 5 | 0.57 8 | ¹⁴⁸ Ho(9.59 s) | 1687.5(82.47), 660.8(58.94), 504.3(18.62) |
| • 376.10 25 | | ¹⁷¹ Lu(8.24 d) | 739.78(47.8), 19.394(13.7), 667.404(11.04) |
| 376.13 10 | 0.016 3 | ¹²⁵ Xe(16.9 h) | 188.418(54), 243.378(30.1), 54.968(6.81) |
| 376.2 1 | 0.071 7 | ²⁴⁷ Cf(3.11 h) | 294.1(0.98), 447.8(0.55), 417.9(0.34) |
| 376.28 10 | 7.5 4 | ¹²⁷ Cd(0.43 s) | 1235.07(8.3), 523.60(5.15), 1067.0(5.1) |
| 376.3 2 | †0.75 8 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| • 376.3 1 | | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 376.3 4 | 0.64 3 | ²³¹ Np(48.8 m) | 370.9(10), 348.4(3.63), 263.8(2.84) |
| 376.34 12 | †38 8 | ¹⁸⁷ Hg(1.9 m) | 233.38(†100), 240.26(†33), 103.55(†32) |
| 376.35 10 | 7.0 9 | ¹⁹⁰ Pb(1.2 m) | 942.20(34), 151.19(8.92), 598.3(8.0) |
| 376.36 11 | 0.36 3 | ¹⁸⁷ Pt(2.35 h) | 106.46(9), 201.52(6.4), 110.04(5.7) |
| 376.446 21 | 0.63 14 | ¹⁶³ Tb(19.5 m) | 351.138(26), 389.734(24.3), 494.534(23) |
| 376.47 11 | | ¹⁸⁷ Pt(2.35 h) | 106.46(9), 201.52(6.4), 110.04(5.7) |
| 376.5 5 | 0.13 4 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| • 376.5 2 | 0.00003 2 | ¹⁴⁹ Eu(93.1 d) | 327.526(4.03), 277.089(3.56), 22.510(2.32) |
| 376.5 3 | 0.53 4 | ¹⁵⁸ Sm(5.30 m) | 189.4(15.2), 363.6(12.4), 324.5(10.6) |
| 376.5 2 | †1.70 21 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 376.54 3 | 0.42 3 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 376.6 3 | 0.24 9 | ⁷⁶ Rb(39.1 s) | 2571.3(47), 424.0(43.4), 355.6(8.2) |
| 376.6 2 | 0.117 24 | ¹⁶¹ Er(3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| 376.6 6 | >0.0050 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| 376.65 8 | 9.43 9 | ⁷⁰ Se(41.1 m) | 49.51(35.8), 426.15(29), 202.73(4.89) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-----------------------------|-----------------------------|--|
| • 376.65 3 | $\dagger 0.383 \times 10^6$ | ^{241}Am (432.2 y) | 59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$) |
| 376.657 15 | 91 | ^{140}I (0.86 s) | 457.630(59), 936.7(16), 564.4(11) |
| 376.676 3 | 3.2 3 | ^{245}Pu (10.5 h) | 327.428(25.4), 560.13(5.4), 308.222(4.9) |
| 376.69 6 | 0.444 25 | ^{111}Pd (23.4 m) | 580.00(0.8), 70.44(0.78), 1459.0(0.56) |
| 376.69 6 | 0.88 12 | ^{111}Pd (5.5 h) | 70.44(8.3), 391.25(5.4), 632.80(3.6) |
| 376.7 3 | $\dagger 20.5 21$ | ^{109}Tc (0.87 s) | 194.6($\dagger 100$), 128.7($\dagger 51$), 96.2($\dagger 48$) |
| 376.7 3 | 0.9 | ^{133}Ce (97 m) | 97.261(< 0.22), 76.9(15.8), 557.7(11.3) |
| 376.70 11 | 0.29 3 | ^{157}Sm (482 s) | 197.870(56.00), 196.461(16.8), 394.351(11.93) |
| 376.70 15 | $\dagger 0.51 9$ | ^{188}Au (8.84 m) | 265.63($\dagger 100$), 340.04($\dagger 23.9$), 605.5($\dagger 16.3$) |
| 376.71 9 | 0.153 20 | ^{133}Ce (4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 376.75 10 | 0.9 1 | ^{156}Pm (26.70 s) | 173.75(52.0), 1147.84(20.5), 117.42(13.8) |
| 376.799 6 | 0.005 3 | ^{200}Au (48.4 m) | 367.943(19), 1225.479(10.7), 1262.950(3.12) |
| 376.8 1 | 0.22 6 | ^{133}Te (55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 376.8 1 | 22 2 | ^{164}Ta (14.2 s) | 211.05(74), 605.0(14), 862.0(10.0) |
| 376.8 3 | 0.13 4 | ^{181}Re (19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| 376.8 5 | 0.20 4 | ^{198}Tl (5.3 h) | 411.8044(82), 675.8874(11), 636.4(10.1) |
| • 376.8 4 | $\dagger 1.7 7$ | ^{258}Md (51.5 d) | 367.8($\dagger 100$), 447.9($\dagger 37$), 276.8($\dagger 20.2$) |
| • 376.869 5 | 0.00061 6 | ^{161}Tb (6.88 d) | 25.65150(23.2), 48.91562(17.0), 74.56711(10.2) |
| 376.869 5 | | ^{161}Ho (2.48 h) | 25.65150(27), 103.062(3.9), 77.414(1.91) |
| 376.90 20 | 0.11 6 | ^{106}Tc (35.6 s) | 270.07(56), 2239.30(13.6), 1969.40(8.9) |
| 376.9 | 0.008 4 | ^{149}Nd (1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| • 376.9 3 | 0.016 5 | ^{151}Pm (28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 376.96 7 | 0.348 24 | ^{100}Sr (202 ms) | 963.85(22.0), 898.50(18.9), 65.46(15.2) |
| 376.97 15 | $\dagger 0.28 3$ | ^{184}Ir (3.09 h) | 263.97($\dagger 100$), 119.80($\dagger 45$), 390.38($\dagger 38$) |
| 377.0 7 | 0.15 7 | ^{103}Cd (7.3 m) | 1461.81(12), 1448.70(5.55), 1079.90(5.44) |
| 377.0 3 | $\dagger < 0.5$ | ^{111}Rh (11 s) | 275.4($\dagger 100.0$), 411.8($\dagger 9.42$), 230.0($\dagger 8.9$) |
| 377.0 6 | 0.056 11 | ^{112}Sb (51.4 s) | 1257.05(96), 990.70(14.3), 670.0(3.7) |
| 377.0 4 | 0.90 18 | ^{136}Sm (47 s) | 114.4(36), 747.7(5.4), 485.3(5.0) |
| 377.0 2 | 1.3 | ^{145}La (24.8 s) | 70.0(11), 355.8(3.8), 118.2(3.6) |
| 377 | $\dagger 0.8$ | ^{224}Ac (2.9 h) | 156.4($\dagger 100$), 140.8($\dagger 55$), 261.6($\dagger 28$) |
| 377.0 3 | 1.25 10 | ^{232}Np (14.7 m) | 327.3(52), 819.187(33.3), 866.760(24.4) |
| 377.0 3 | 0.038 | ^{233}Th (22.3 m) | 86.477(2.7), 29.374(2.5), 459.222(1.4) |
| 377 | $\dagger < 6$ | ^{238}Pa (2.3 m) | 1015.3($\dagger < 100$), 1014.6($\dagger < 100$), 635.18($\dagger 88$) |
| • 377 2 | 0.015 2 | ^{254}Es (275.7 d) | 63.0(2.0), 316(0.15), 304(0.07) |
| 377.03 7 | 0.77 5 | ^{167}Lu (51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 377.04 10 | 5.0 4 | ^{174}W (31 m) | 35.42(14.1), 428.83(12.7), 328.68(9.5) |
| 377.1 | | ^{107}Sn (2.90 m) | 1129.2($\dagger 100$), 678.5($\dagger 100$), 1540.6($\dagger 30$) |
| 377.1 2 | 0.49 6 | ^{161}Tm (33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 377.1 1 | | ^{171}Ta (23.3 m) | 49.6($\dagger 100$), 506.4($\dagger 54$), 501.8($\dagger 22.6$) |
| 377.10 3 | 0.51 7 | ^{193}Au (17.65 h) | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| 377.12 20 | 0.051 7 | ^{187}Ir (10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| 377.2 2 | $\dagger 3.5 8$ | ^{132}Pr (1.6 m) | 325.5($\dagger 100$), 496.9($\dagger 25$), 822.4($\dagger 17.3$) |
| 377.2 2 | 0.0027 10 | ^{246}Am (25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 377.22 17 | 0.19 3 | ^{184}Pt (17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 377.25 17 | $\dagger 1.9 5$ | ^{131}Pr (1.53 m) | 266.13($\dagger 100$), 72.82($\dagger 64$), 387.56($\dagger 38$) |
| 377.35 5 | 4.65 20 | ^{177}W (135 m) | 115.65(50), 426.98(13.2), 1036.4(10.3) |
| 377.36 6 | 1.46 9 | ^{93}Sr (7.423 m) | 590.238(67), 875.73(24.1), 888.13(21.8) |
| 377.385 4 | 3.93 4 | ^{75}Br (96.7 m) | 286.572(88), 141.3147(6.6), 427.883(4.4) |
| • 377.4 2 | | ^{165}Tm (30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 377.4 4 | 0.37 8 | ^{166}Lu (2.65 m) | 228.12(77.3), 337.50(41), 367.95(31.4) |
| 377.4 3 | 0.33 9 | ^{183}Os (13.0 h) | 381.768(89.6), 114.463(20.63), 167.844(8.81) |
| • 377.4 3 | 0.122 15 | ^{252}Es (471.7 d) | 52.33(0.55), 64.42(0.274), 418.5(0.220) |
| • 377.44 9 | 0.071 8 | ^{193}Os (30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| 377.5 1 | 1.18 6 | ^{146}Ba (2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 377.5 | 1.0 5 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 377.5 2 | †3.5 3 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 377.5 3 | †6 3 | ¹⁹⁴ Bi(106 s) | 1308.3(†100), 671.8(†55), 965.4(†41) |
| 377.5 3 | †0.021 10 | ¹⁹⁴ Bi(92 s) | 965.4(†100.0), 575.1(†98.0), 280.1(†73.7) |
| 377.5 2 | 0.049 11 | ²²⁸ Fr(39 s) | 473.7(10.2), 474.0(7.6), 410.40(6.3) |
| • 377.540 8 | 3.35 6 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| • 377.560 20 | 0.16 4 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| 377.6 3 | 1.11 19 | ¹¹⁷ Ag(5.34 s) | 135.4(48), 386.8(39.9), 298.1(21.1) |
| 377.6 2 | 0.100 25 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 377.6 5 | 4.0 11 | ¹⁶⁶ Hf(6.77 m) | 78.76(41), 341.82(4.7), 407.91(4.5) |
| 377.7 1 | †14 5 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| 377.7 2 | 0.210 21 | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 377.71 6 | 0.0008 | ¹⁷³ Hf(23.6 h) | 123.672(83), 296.974(33.9), 139.634(12.7) |
| 377.72 5 | 0.049 3 | ¹⁵⁵ Dy(9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| • 377.728 27 | 0.113 8 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| 377.73 9 | 0.061 13 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 377.738 5 | 1.68 4 | ⁵² Fe(8.275 h) | 168.684(99.2), 1039.902 |
| 377.77 30 | 0.032 | ¹³⁷ I(24.5 s) | 1218.00(12.8), 601.05(4.80), 1302.64(4.42) |
| 377.77 24 | †3.0 15 | ¹⁶⁴ Tm(2.0 m) | 91.40(†1500), 1154.66(†366), 768.91(†279) |
| • 377.8 3 | >0.051 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 377.8 | 0.07 | ¹⁴⁷ Ce(56.4 s) | 268.80(7), 92.9(4.7), 374.23(3.5) |
| 377.83 2 | 0.276 12 | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 377.84 5 | 6.9 6 | ⁷⁵ Zn(10.2 s) | 228.67(28.9), 432.29(20.2), 155.94(17.2) |
| 377.88 9 | 42 | ⁵³ Fe(8.51 m) | 1619.9(0.50), 2273.5(0.38), 2748.8(0.14) |
| 377.9 5 | 0.16 4 | ¹⁰¹ Mo(14.61 m) | 191.92(19), 590.91(16.4), 1012.47(12.8) |
| 377.9 5 | 0.98 20 | ¹⁰⁴ In(1.8 m) | 658.0(100), 834.1(99), 878.1(29.4) |
| 377.9 2 | †10 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 377.9 2 | 0.69 14 | ²⁰⁷ Rn(9.25 m) | 344.53(46), 747.15(14.2), 402.68(11.9) |
| 377.919 24 | 0.41 3 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 377.92 2 | 0.027 10 | ²⁰⁰ Pb(21.5 h) | 147.63(37.7), 257.17(4.46), 235.63(4.30) |
| 377.99 10 | 0.025 3 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 378.0 1 | 0.46 5 | ¹⁰⁷ Tc(21.2 s) | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| 378.00 10 | 0.044 10 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 378.0 2 | †26 6 | ¹⁵⁵ Yb(1.75 s) | 236.2(†100), 174.9(†55), 361.6(†46) |
| 378.0 3 | 0.16 | ¹⁷⁰ Hf(16.01 h) | 164.78(33), 620.7(23), 120.17(19) |
| 378.0 4 | 0.033 16 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| • 378 | 0.0016 4 | ¹⁹³ Os(30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| 378.02 10 | 0.10 3 | ¹⁰³ Tc(54.2 s) | 346.380(17.5), 136.079(16.6), 562.90(7.0) |
| 378.05 14 | †7.6 10 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| • 378.05 13 | 0.0033 6 | ²³⁸ Np(2.117 d) | 984.45(27.8), 1028.54(20.3), 1025.87(9.6) |
| 378.07 2 | 0.011 | ²³⁹ U(23.45 m) | 74.664(48), 43.533(4.14), 662.24(0.18) |
| 378.129 9 | 0.9 3 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 378.191 5 | 1.24 11 | ¹⁰⁹ Rh(80 s) | 326.868(54), 426.135(7.7), 178.034(7.6) |
| 378.3 4 | 0.29 | ²⁰³ Bi(11.76 h) | 820.3(30), 825.2(14.6), 896.9(13) |
| 378.32 5 | †38 | ¹⁹⁷ Ir(5.8 m) | 469.72(†100), 430.56(†61), 815.92(†45) |
| 378.40 5 | 0.399 17 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| 378.4 1 | | ¹⁷² Ir(4.4 s) | 475.0, 227.8 |
| 378.4 1 | †62.0 13 | ¹⁷² Ir(2.0 s) | 227.8(†100.0), 448.4(†40.5), 582.3(†20.2) |
| 378.4 2 | 0.0023 3 | ²⁵⁵ Fm(20.07 h) | 81.477(0.81), 58.477(0.67), 80.92(0.27) |
| • 378.402 7 | 0.060 5 | ⁷⁷ Br(57.036 h) | 238.996(23), 520.639(22.4), 297.215(4.16) |
| 378.48 5 | 0.79 8 | ⁷⁷ Zn(2.08 s) | 189.49(28.1), 473.94(19.7), 1832.0(12.4) |
| 378.5 1 | 0.124 18 | ¹⁴⁹ Tb(4.118 h) | 352.24(29.43), 164.98(26.4), 388.57(18.37) |
| • 378.5029 7 | 29.7 12 | ¹⁷⁷ Lu(160.4 d) | 208.3664(57.7), 228.4838(37.0), 418.5391(21.3) |
| 378.54 9 | 8.3 6 | ¹⁷⁴ W(31 m) | 35.42(14.1), 428.83(12.7), 328.68(9.5) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| • 378.624 5 | 2.11 5 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| 378.65 25 | †0.19 2 | ¹⁸⁴ Ir(3.09 h) | 263.97(†100), 119.80(†45), 390.38(†38) |
| 378.8 5 | 4.2 4 | ⁸⁰ Sr(106.3 m) | 589.0(39), 175.4(10.1), 553.4(6.9) |
| 378.80 20 | †5.8 8 | ¹⁰⁶ Mo(8.4 s) | 465.70(†100), 54.00(†54), 618.60(†25) |
| 378.8 2 | 4.1 | ¹⁴⁵ Ba(4.31 s) | 96.6(17), 91.9(7), 65.9(5) |
| 378.8 2 | >4.1 | ¹⁴⁵ Ba(4.31 s) | 96.6(17), 91.9(7), 65.9(5) |
| 378.8 5 | 0.14 7 | ¹⁵⁰ Tb(3.48 h) | 638.05(72), 496.3(14.8), 792.5(4.39) |
| 378.8 3 | †19 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 378.9 4 | 0.19 4 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| • 378.9 1 | 0.010 5 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 378.93 4 | 0.029 7 | ¹⁰⁰ Tc(15.8 s) | 539.59(7), 590.83(5.7), 1512.1(0.44) |
| 378.93 4 | 0.06 3 | ¹⁰⁰ Rh(20.8 h) | 539.59(78.4), 2376.1(35.3), 1553.4(21) |
| 378.93 2 | 1.70 6 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 378.93 17 | 1.4 3 | ¹⁸⁴ Au(53.0 s) | 162.97(50), 272.98(40), 362.47(17.5) |
| 378.932 38 | 3.9 4 | ¹⁴⁸ La(1.05 s) | 158.468(55.6), 989.85(9.3), 760.30(8.6) |
| • 378.944 7 | 0.009 7 | ⁷⁷ Br(57.036 h) | 238.996(23), 520.639(22.4), 297.215(4.16) |
| 378.96 9 | 0.18 3 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 379.0 2 | 1.48 10 | ⁹⁷ Rb(169.9 ms) | 167.1(26), 585.2(21.0), 600.5(10.6) |
| 379.0 1 | 0.28 5 | ¹¹⁹ Ag(2.1 s) | 626.4(13), 366.2(12.1), 399.1(10.9) |
| 379.0 1 | 38 6 | ¹⁴⁰ Gd(15.8 s) | 174.8(76), 749.9(70), 191.2(34) |
| 379.0 2 | 0.054 11 | ²²⁸ Fr(39 s) | 473.7(10.2), 474.0(7.6), 410.40(6.3) |
| • 379.04 15 | 0.014 4 | ¹⁹³ Os(30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| 379.1 | 1.0 | ¹³⁴ Nd(8.5 m) | 163.2(58), 288.9(13), 216.8(12) |
| 379.1 2 | †2.4 7 | ¹⁵⁵ Tm(21.6 s) | 226.8(†100), 531.7(†20), 88.1(†17) |
| 379.1 2 | †10 | ¹⁵⁵ Tm(45 s) | 88.1(†100), 323.2(†65), 507.0(†40) |
| 379.1 3 | 0.43 5 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 379.1 1 | 0.041 10 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 379.12 8 | †314 33 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| 379.15 10 | 0.095 16 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| • 379.165 4 | 0.007 2 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 379.17 19 | 0.032 6 | ⁹⁹ Rh(4.7 h) | 340.71(70), 617.8(12.0), 1261.2(11) |
| 379.19 8 | 1.1 4 | ¹⁸³ Os(13.0 h) | 381.768(89.6), 114.463(20.63), 167.844(8.81) |
| 379.2 1 | 0.487 24 | ⁷³ Ga(4.86 h) | 297.32(79.8), 325.70(11.17), 739.42(4.23) |
| 379.2 1 | 4.9 5 | ¹⁴¹ Tb(3.5 s) | 293.3(16.8), 343.6(16.3), 198.4(14.8) |
| 379.229 10 | 0.74 7 | ¹⁸² Os(22.10 h) | 510.056(52), 180.230(33.5), 263.285(6.71) |
| • 379.28 30 | 0.028 9 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| • 379.286 18 | 0.00122 18 | ¹⁶⁹ Yb(32.026 d) | 63.12077(44.2), 197.95788(35.8), 177.21402(22.16) |
| 379.3 3 | 0.32 5 | ¹⁰¹ Mo(14.61 m) | 191.92(19), 590.91(16.4), 1012.47(12.8) |
| 379.3 3 | †38 3 | ¹²¹ La(5.3 s) | 139.3(†100), 134.4(†73), 97.8(†57) |
| • 379.3 3 | 0.025 10 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 379.30 10 | 0.060 10 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 379.3 | | ¹⁵⁵ Dy(9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| 379.35 7 | 0.42 | ²²⁷ Ra(42.2 m) | 27.36(16), 300.07(4.6), 302.65(4.3) |
| • 379.35 7 | 0.0503 15 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| • 379.36 18 | 0.00083 21 | ¹⁵² Eu(13.542 y) | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| 379.39 4 | 5.9 3 | ¹⁵¹ Tb(25 s) | 830.81(3.10), 522.77(1.43), 504.4(0.48) |
| 379.4 1 | 0.576 12 | ¹⁴² Ba(10.6 m) | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| 379.4 3 | 0.72 6 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| • 379.41 8 | 0.0150 9 | ¹⁶⁰ Tb(72.3 d) | 879.383(30.01), 298.580(25.51), 966.171(25.21) |
| 379.5 2 | †13 2 | ¹¹⁴ Te(15.2 m) | 90.28(†100), 83.8(†67), 1417.6(†32) |
| 379.5 2 | 14.6 24 | ¹¹⁸ Pd(1.9 s) | 125.4(34), 125.4(34), 224.2(20.1) |
| 379.5 4 | 0.45 4 | ¹³⁷ Pm(2.4 m) | 177.5(40.29), 108.6(35), 233.6(29.57) |
| 379.5 1 | 40.4 25 | ²⁴⁹ Es(102.2 m) | 813.2(9.2), 375.1(3.3), 1218.5(1.5) |
| 379.55 23 | 3.6 6 | ⁷² Br(78.6 s) | 862.03(70), 1316.70(17.3), 454.70(13.1) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|--|
| • 379.6 | | ¹⁸⁸ Ir(41.5 h) | 155.032(29.7), 2214.62(18.7), 632.99(18) |
| 379.67 12 | 0.21 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 379.74 17 | 0.177 20 | ⁹⁹ Nb(2.6 m) | 97.785(7), 253.50(3.64), 2641.3(3.64) |
| 379.79 3 | 1.55 4 | ¹³⁵ Ce(17.7 h) | 265.56(41.8), 300.07(23.5), 606.76(18.8) |
| 379.79 20 | 0.75 6 | ¹⁷² Ta(36.8 m) | 214.02(46), 95.23(17.5), 1109.27(12.4) |
| 379.847 15 | 1.85 6 | ²⁰⁸ Rn(24.35 m) | 426.78(7.07), 251.05(5.02), 350.026(3.34) |
| 379.85 10 | 0.0043 14 | ¹⁶⁷ Yb(17.5 m) | 113.34(55.3), 106.18(22.5), 176.25(21) |
| • 379.86 3 | 0.94 7 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 379.89 8 | 1.01 5 | ¹⁰¹ Sr(118 ms) | 128.34(18.0), 1124.82(10.9), 510.73(8.5) |
| 379.9 3 | 3.6 6 | ⁷² Br(78.6 s) | 862.03(70), 1316.70(17.3), 454.70(13.1) |
| 379.9 1 | 0.147 3 | ⁹¹ Sr(9.63 h) | 1024.3(33), 749.8(23.61), 652.9(8.0) |
| 379.90 8 | †10.3 6 | ¹⁴² Xe(1.22 s) | 571.83(†100), 657.05(†79), 538.24(†77) |
| 379.9 5 | 7 | ¹⁴⁶ La(10.0 s) | 258.47(93), 409.86(81), 514.75(31) |
| 379.9 | | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 379.9 | 0.40 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 379.9 4 | 0.077 14 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 379.905 9 | 0.26 3 | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| • 379.94 2 | 0.0670 16 | ⁵⁷ Ni(35.60 h) | 1377.63(81.7), 127.164(16.7), 1919.52(12.26) |
| 380.0 1 | †0.74 9 | ¹²³ La(17 s) | 92.5(†100), 937.3(†43), 153.6(†43) |
| 380.0 3 | 0.72 11 | ¹³⁶ Sm(47 s) | 114.4(36), 747.7(5.4), 485.3(5.0) |
| 380.0 5 | 0.066 23 | ¹⁴² Ba(10.6 m) | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| 380.0 3 | †33.7 | ¹⁴⁹ Ce(5.3 s) | 57.7(†100), 86.4(†20.2), 892.7(†8.0) |
| 380 1 | 0.04 3 | ¹⁷⁵ Ta(10.5 h) | 207.4(14.0), 348.5(12.0), 266.9(10.8) |
| 380 | 3.2×10 ⁻⁵ | ²¹⁹ Rn(3.96 s) | 271.23(10.8), 401.81(6.37), 130.59(0.119) |
| 380.0 2 | †2 | ²⁵⁶ Es(7.6 h) | 861.8(†100), 231.1(†61), 172.6(†49) |
| 380.01 6 | | ¹⁶⁸ Lu(5.5 m) | 1483.65(†100), 228.58(†97), 111.8(†68) |
| 380.01 6 | 0.6 3 | ¹⁶⁸ Lu(6.7 m) | 198.82(28), 979.22(20), 896.12(15) |
| • 380.03 12 | 2.03 9 | ¹⁹⁰ Ir(11.78 d) | 186.718(52.4), 605.24(39.9), 518.55(34.0) |
| • 380.08 6 | 0.0082 16 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 380.1 3 | 0.27 7 | ¹²¹ Cs(155 s) | 153.9(15.2), 239.6(7.7), 427.1(3.63) |
| 380.1 3 | 0.34 7 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 380.1 2 | 0.036 13 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 380.1 3 | †1.3 3 | ¹⁵⁵ Tm(21.6 s) | 226.8(†100), 531.7(†20), 88.1(†17) |
| • 380.10 25 | | ¹⁷¹ Lu(8.24 d) | 739.78(47.8), 19.394(13.7), 667.404(11.04) |
| 380.10 20 | 0.060 5 | ²⁰⁷ Po(5.80 h) | 992.33(59.3), 742.64(28.2), 911.79(16.95) |
| 380.1 | 0.060 14 | ²⁰⁷ Po(5.80 h) | 992.33(59.3), 742.64(28.2), 911.79(16.95) |
| • 380.133 79 | 0.0091 4 | ⁹⁹ Mo(65.94 h) | 739.50(12.1), 181.063(6.08), 140.511(4.52) |
| 380.14 7 | 0.15 1 | ⁸⁷ Br(55.60 s) | 1419.71(22.0), 1476.04(7.9), 1577.60(6.0) |
| 380.15 10 | 0.0098 25 | ²³⁰ Ac(122 s) | 454.95(8), 508.20(5.15), 1243.9(3.50) |
| • 380.15 10 | 0.30 6 | ²³⁰ Pa(17.4 d) | 951.95(1.65), 918.48(8.2), 454.95(6.27) |
| 380.173 2 | | ²³⁵ Pa(24.5 m) | 652.053, 659.3, 645.896 |
| • 380.173 2 | 0.000305 6 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 380.2 1 | 0.0185 17 | ¹²¹ I(2.12 h) | 212.189(84), 532.08(6.07), 598.74(1.47) |
| 380.2 5 | 0.071 14 | ¹⁶² Tm(21.70 m) | 102.00(17.5), 798.68(8.4), 227.52(7) |
| 380.2 3 | 0.163 25 | ¹⁸¹ Au(11.4 s) | 198.60(4.4), 2022.4(4.2), 79.40(4.2) |
| • 380.22 4 | 0.024 7 | ¹⁸⁹ Re(24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| • 380.29 13 | 0.012 1 | ²³⁸ Np(2.117 d) | 984.45(27.8), 1028.54(20.3), 1025.87(9.6) |
| 380.29 13 | 0.045 8 | ²³⁸ Am(98 m) | 962.77(28), 918.69(23.0), 561.11(10.9) |
| 380.3 7 | 0.15 | ¹⁰³ Ag(65.7 m) | 118.72(31.2), 148.193(28.3), 266.86(13.3) |
| 380.3 7 | 0.08 3 | ¹⁰³ Ag(65.7 m) | 118.72(31.2), 148.193(28.3), 266.86(13.3) |
| 380.3 3 | †43 4 | ¹⁴³ Tb(12 s) | 45.1(†100), 686.1(†48), 462.8(†45) |
| 380.3 2 | 0.053 14 | ¹⁷³ Ta(3.14 h) | 172.2(18), 69.70(5.9), 90.3(5.0) |
| 380.3 6 | 0.27 9 | ²⁰⁷ Rn(9.25 m) | 344.53(46), 747.15(14.2), 402.68(11.9) |
| • 380.3 10 | 0.00038 12 | ²⁵³ Es(20.47 d) | 41.79(0.050), 389.11(0.0264), 387.1(0.00810) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| • 380.340 18 | 0.0050 13 | ¹⁸⁴ Re(38.0 d) | 903.279(37.9), 792.071(37.5), 111.208(17.1) |
| 380.356 10 | 4.81 17 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 380.4 3 | 0.45 3 | ⁸⁶ Y(14.74 h) | 1076.64(83), 627.72(32.6), 1153.01(30.5) |
| 380.4 5 | 0.16 5 | ⁹⁶ Rh(9.90 m) | 832.57(100), 685.49(95.7), 631.71(74.5) |
| 380.4 2 | 0.50 15 | ¹⁰⁵ Mo(35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 380.4 4 | 0.6 1 | ¹⁵⁶ Pm(26.70 s) | 173.75(52.0), 1147.84(20.5), 117.42(13.8) |
| 380.45 12 | 0.037 9 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| • 380.452 8 | 1.516 12 | ¹²⁵ Sb(2.7582 y) | 427.875(30), 600.600(17.86), 635.954(11.31) |
| 380.48 20 | 0.13 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 380.5 3 | †100 10 | ¹³⁷ Sm(45 s) | 163.7(†85), 408.3(†40), 531.2(†37) |
| 380.5 3 | 1.37 23 | ¹⁹⁴ Tl(32.8 m) | 636.5(99), 428.0(99), 748.9(76) |
| 380.57 17 | 0.035 7 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 380.6 3 | †12 4 | ¹⁹⁵ Bi(183 s) | 807.6(†100), 831.7(†100), 776.2(†95) |
| 380.68 15 | 0.56 17 | ²⁰⁹ Rn(28.5 m) | 408.32(50.3), 745.78(22.8), 337.45(14.5) |
| 380.7 | 0.009 | ⁸³ As(13.4 s) | 734.60(43), 1113.10(14.7), 2076.70(11.9) |
| 380.7 3 | 0.046 12 | ⁸⁹ Kr(3.15 m) | 220.948(20.1), 586.03(16.6), 904.27(7.2) |
| 380.7 5 | 0.040 20 | ¹²⁴ Cs(30.8 s) | 353.9(40), 914.8(4.0), 492.6(3.6) |
| 380.7 2 | 0.074 20 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 380.7 4 | 0.08 4 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 380.79 7 | | ⁸⁷ Zr(1.68 h) | 1227(1.0), 1209.8(0.33), 1024(0.28) |
| 380.79 7 | 0.052 3 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| • 380.8 1 | 2.40 17 | ²⁴⁵ Bk(4.94 d) | 252.80(29.1), 385.0(0.57), 103.1(0.39) |
| 380.81 21 | 0.78 10 | ²⁰⁶ At(30.0 m) | 700.66(98), 477.10(86), 395.54(48) |
| • 380.83 6 | | ²⁰⁶ Bi(6.243 d) | 803.10(99), 881.01(66.2), 516.18(40.7) |
| 380.9 3 | 0.31 5 | ¹⁴⁹ Dy(4.20 m) | 100.8(15.2), 789.4(11.8), 1776.3(11.1) |
| 380.9 1 | 0.66 19 | ¹⁴⁹ Er(8.9 s) | 1171.0(9.4), 171.5(6.5), 343.9(6.3) |
| 381.0 1 | 1.86 19 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 381 | †10 | ¹⁶³ Lu(238 s) | 163.08(†100), 54.00(†88), 396.34(†63) |
| 381.0 3 | 0.0015 5 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 381.03 14 | 1.65 8 | ¹⁶¹ Yb(4.2 m) | 78.20(34), 599.88(25.9), 631.45(13.9) |
| • 381.06 3 | 0.0053 5 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| • 381.1 5 | 0.0056 5 | ²⁵³ Es(20.47 d) | 41.79(0.050), 389.11(0.0264), 387.1(0.00810) |
| • 381.134 8 | 0.663 12 | ¹⁵⁶ Tb(5.35 d) | 534.318(66.6), 199.2132(40.9), 1222.36(31.00) |
| • 381.16 16 | 0.025 14 | ⁶⁹ Ge(39.05 h) | 1107.01(36), 574.17(13.3), 872.14(11.9) |
| • 381.17 3 | 2.49 24 | ⁸³ Sr(32.41 h) | 762.65(30), 381.53(14.1), 418.37(4.41) |
| 381.2 4 | 0.038 8 | ¹⁰¹ Pd(8.47 h) | 296.29(19), 590.44(12.06), 269.67(6.43) |
| 381.2 4 | 0.024 24 | ¹¹⁷ Cd(3.36 h) | 1997.33(26), 1065.98(23.1), 564.397(14.7) |
| 381.2 3 | 0.65 8 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| • 381.2 3 | 0.020 7 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 381.2 4 | | ¹⁸⁰ Hg(2.8 s) | 300.5(†100), 381.2(†69), 479.9(†23.0) |
| 381.2 4 | †69 14 | ¹⁸⁰ Hg(2.8 s) | 300.5(†100), 479.9(†23.0), 405.0(†17) |
| • 381.22 4 | 0.177 11 | ²⁰⁶ Po(8.8 d) | 1032.26(32.9), 511.36(24.1), 286.410(23.8) |
| 381.23 14 | 0.305 23 | ¹⁰¹ Mo(14.61 m) | 191.92(19), 590.91(16.4), 1012.47(12.8) |
| 381.24 8 | 0.273 6 | ⁷² Ga(14.10 h) | 834.01(96), 2201.69(25.9), 629.95(24.8) |
| 381.3 23 | †>2 | ⁸⁷ Nb(2.6 m) | 200.95(†100), 470.63(†73), 1066.8(†37) |
| 381.3 | | ¹⁵⁷ Lu(5.0 s) | 967.5, 949.8, 880.5 |
| 381.359 7 | 0.93 9 | ¹³⁶ I(83.4 s) | 1313.02(67), 1321.08(24.8), 2289.6(10.4) |
| 381.359 7 | 100 6 | ¹³⁶ I(46.9 s) | 1313.02(100), 197.316(78), 369.813(17.5) |
| 381.38 15 | 0.229 13 | ²⁰¹ Pb(9.33 h) | 331.19(79), 361.27(9.9), 945.96(7.4) |
| 381.4 1 | 0.26 6 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 381.4 4 | 0.042 3 | ¹²³ Sn(40.06 m) | 160.33(86), 541.8(0.020), 552.5(0.0103) |
| 381.4 4 | 0.11 4 | ¹³⁹ Sm(2.57 m) | 273.7(37), 306.7(28.5), 596.3(8.0) |
| 381.4 | 0.120 18 | ¹⁴¹ Ba(18.27 m) | 190.328(46.0), 304.194(25.4), 276.948(23.4) |
| 381.4 2 | 9.6 7 | ¹⁷⁹ Yb(8.0 m) | 592.1(75), 612.3(35.4), 653.7(9.2) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 381.43 11 | 0.58 5 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| • 381.43 10 | 7.5 4 | ¹⁸⁸ Pt(10.2 d) | 187.59(19.4), 195.05(18.6), 423.34(4.36) |
| 381.43 12 | 0.0014 | ²³⁹ U(23.45 m) | 74.664(48), 43.533(4.14), 662.24(0.18) |
| 381.5 3 | 0.066 19 | ¹⁰⁷ In(32.4 m) | 204.97(47), 505.51(11.9), 320.92(10.2) |
| 381.5 2 | 0.099 25 | ¹²⁹ La(11.6 m) | 278.6(25), 110.5(16.9), 457.0(8.0) |
| 381.5 4 | 0.44 9 | ¹⁸⁸ Tl(71 s) | 412.7(88), 592.0(61), 504.2(23.3) |
| 381.5 9 | 0.046 | ¹⁹² Au(4.94 h) | 316.50791(58.0), 295.95827(22.3), 2236.89(5.6) |
| • 381.53 3 | 14.1 5 | ⁸³ Sr(32.41 h) | 762.65(30), 418.37(4.41), 381.17(2.49) |
| 381.53 15 | 0.17 9 | ¹⁸⁴ Ta(8.7 h) | 414.03(72), 252.848(43), 920.932(32.0) |
| 381.556 15 | 2.01 15 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| 381.57 19 | 2.02 17 | ⁹⁴ Y(18.7 m) | 918.74(56), 1138.88(6.0), 550.88(4.9) |
| 381.59 7 | 0.045 4 | ¹³³ I(20.8 h) | 529.872(87.0), 875.329(4.51), 1298.223(2.35) |
| 381.6 3 | 0.54 10 | ¹²¹ Cd(13.5 s) | 324.976(49.5), 1040.26(16.8), 349.937(12.9) |
| 381.6 3 | 0.7 3 | ¹⁵² Ho(49.5 s) | 647.2(92), 613.8(88.4), 683.3(88) |
| 381.6 5 | †0.08 2 | ¹⁸⁸ Au(8.84 m) | 265.63(†100), 340.04(†23.9), 605.5(†16.3) |
| 381.60 4 | | ¹⁹³ Hg(3.80 h) | 861.11(†100), 1118.84(†64), 789.21(†36) |
| 381.60 4 | 0.35 8 | ¹⁹³ Hg(11.8 h) | 257.97(61), 407.63(25), 573.25(14.2) |
| 381.66 15 | 1.82 18 | ¹⁹⁰ Pb(1.2 m) | 942.20(34), 151.19(8.92), 598.3(8.0) |
| 381.67 19 | 0.020 4 | ¹⁶⁸ Ho(2.99 m) | 741.356(36.6), 821.164(34.5), 815.990(18.6) |
| 381.7 2 | 0.13 4 | ¹⁰³ Cd(7.3 m) | 1461.81(12), 1448.70(5.55), 1079.90(5.44) |
| • 381.7 5 | 0.0169 12 | ¹²⁴ I(4.18 d) | 602.730(60), 1690.980(10.41), 722.786(9.98) |
| • 381.7 2 | 0.0035 7 | ¹⁴⁹ Eu(93.1 d) | 327.526(4.03), 277.089(3.56), 22.510(2.32) |
| 381.7 2 | 0.059 12 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 381.70 15 | †0.82 6 | ¹⁸⁴ Ir(3.09 h) | 263.97(†100), 119.80(†45), 390.38(†38) |
| 381.7 3 | 0.56 5 | ²⁴³ Pu(4.956 h) | 84.0(23), 41.8(0.76), 67(0.23) |
| 381.710 10 | 0.209 22 | ¹⁸⁴ Ta(8.7 h) | 414.03(72), 252.848(43), 920.932(32.0) |
| • 381.710 10 | 0.063 8 | ¹⁸⁴ Re(169 d) | 252.848(10.7), 216.548(9.43), 920.932(8.14) |
| 381.768 12 | 89.6 9 | ¹⁸³ Os(13.0 h) | 114.463(20.63), 167.844(8.81), 851.474(4.56) |
| 381.8 3 | †50.8 15 | ⁹⁵ Pd(13.3 s) | 1350.9(†105), 716.6(†70.63), 913.2(†13.6) |
| 381.8 2 | 21.8 10 | ¹⁷⁶ Tm(1.9 m) | 189.57(44.5), 1069.3(34), 82.13(11.6) |
| 381.8 5 | †3.9 13 | ¹⁸⁰ Au(8.1 s) | 153.3(†100), 524.3(†29), 257.6(†26) |
| 381.8 5 | †1.5 4 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 381.8 4 | 1.3 | ²⁰³ Bi(11.76 h) | 820.3(30), 825.2(14.6), 896.9(13) |
| 381.8 1 | 0.15 4 | ²⁰⁵ Po(1.66 h) | 872.39(37), 1001.21(28.8), 849.83(25.5) |
| 381.8 | 0.037 19 | ²²¹ Fr(4.9 m) | 218.19(11.6), 410.7(0.14), 99.5(0.11) |
| 381.8 2 | 0.34 7 | ²²⁵ Th(8.72 m) | 321.4(23), 246.0(5.06), 359.0(4.1) |
| 381.85 5 | 28 | ⁶⁶ Ge(2.26 h) | 43.89(28.7), 272.97(10.4), 108.85(10.4) |
| 381.86 20 | 0.65 5 | ¹⁰⁷ Rh(21.7 m) | 302.77(66), 392.47(8.8), 312.21(4.8) |
| 381.9 4 | 0.23 11 | ¹²² In(10.3 s) | 1140.55(98), 1001.58(50.7), 1190.58(20.5) |
| • 381.990 26 | 0.112 8 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| 382.0 5 | 0.23 5 | ⁷⁹ Rb(22.9 m) | 688.1(23), 182.77(19.2), 143.41(13.9) |
| 382.0 3 | †41.3 15 | ¹¹¹ Ru(2.12 s) | 303.8(†100), 211.7(†77.7), 1515.9(†28) |
| 382.00 15 | 1.02 13 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| 382.0 | 0.25 13 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 382.0 8 | †0.21 11 | ¹⁴⁸ Tb(60 m) | 784.430(†119.0), 489.049(†28.0), 1079.025(†16.2) |
| 382.00 15 | 0.04 3 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 382.0 1 | 5.6 7 | ¹⁹⁸ Pb(2.40 h) | 290.3(36), 365.4(19), 173.4(18) |
| 382 10 | 3.0 20 | ²¹⁰ Tl(1.30 m) | 799.7(99), 298(79), 1316(21) |
| • 382.025 7 | 0.0100 4 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 382.025 7 | 1.04 8 | ¹⁵⁴ Tb(9.4 h) | 123.071(30), 247.925(22.1), 540.18(20) |
| 382.025 7 | 0.55 17 | ¹⁵⁴ Tb(22.7 h) | 247.925(79), 346.643(69), 1419.81(46) |
| 382.03 19 | 0.58 8 | ⁸⁴ Br(31.80 m) | 881.610(42), 1897.761(14.7), 3927.5(6.8) |
| 382.08 14 | 0.00062 23 | ¹²⁹ Te(69.6 m) | 27.81(16.3), 459.60(7.70), 487.39(1.42) |
| 382.1 1 | 0.145 3 | ¹¹³ Ag(5.37 h) | 298.58(10), 258.8(1.64), 316.3(1.343) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|--|
| • 382.1 10 | 0.053 5 | ²⁴⁰ Am(50.8 h) | 987.76(73.2), 888.80(25.1), 98.860(1.5) |
| 382.15 25 | 0.50 25 | ¹⁸⁶ Ta(10.5 m) | 197.93(50), 214.87(42.3), 510.82(37.5) |
| 382.2 | 0.07 | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 382.25 4 | 0.472 25 | ¹²¹ I(2.12 h) | 212.189(84), 532.08(6.07), 598.74(1.47) |
| 382.3 1 | 7.9 8 | ¹³² Sb(2.79 m) | 973.9(99), 696.8(86), 989.6(14.9) |
| 382.3 1 | 7 | ¹³² Sb(4.10 m) | 696.8(100), 973.9(100), 150.6(66) |
| 382.3 2 | 0.69 5 | ¹⁷⁷ W(135 m) | 115.65(50), 426.98(13.2), 1036.4(10.3) |
| 382.32 21 | 0.27 9 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| • 382.35 10 | 0.0582 22 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 382.37 17 | 0.063 14 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 382.4 3 | 7.7 4 | ⁸⁶ Se(15.3 s) | 2441.1(43.0), 2660.0(21.6), 48.3(15.4) |
| 382.4 10 | 0.08 5 | ⁹⁷ Rb(169.9 ms) | 167.1(26), 585.2(21.0), 600.5(10.6) |
| 382.4 4 | 0.00051 9 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 382.4 4 | †0.41 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 382.47 4 | 4.3 3 | ¹⁹³ Hg(11.8 h) | 257.97(61), 407.63(25), 573.25(14.2) |
| • 382.48 24 | 0.018 3 | ⁵⁹ Fe(44.503 d) | 1099.251(56.5), 1291.596(43.2), 192.349(3.08) |
| 382.49 20 | 0.031 4 | ¹⁶⁵ Yb(9.9 m) | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 382.5 3 | 1.25 13 | ¹²⁹ In(0.61 s) | 2118.0(45), 1865.0(32), 769.3(9.1) |
| • 382.5 4 | 0.019 9 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| • 382.50 25 | | ¹⁷¹ Lu(8.24 d) | 739.78(47.8), 19.394(13.7), 667.404(11.04) |
| 382.5 2 | 0.017 5 | ¹⁷³ Ta(3.14 h) | 172.2(18), 69.70(5.9), 90.3(5.0) |
| 382.50 5 | 0.463 23 | ²²⁴ Fr(3.30 m) | 215.985(33.1), 131.613(16.3), 836.90(9.8) |
| • 382.60 20 | 0.0046 21 | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 280.41(30.2), 644.55(11.1) |
| 382.6 1 | 0.30 4 | ¹⁰⁷ Tc(21.2 s) | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| • 382.6 4 | >0.000060 | ¹¹³ Sn(115.09 d) | 391.690(64), 255.06(1.82), 638.03(0.00095) |
| 382.6 4 | 0.34 4 | ¹⁷² Ta(36.8 m) | 214.02(46), 95.23(17.5), 1109.27(12.4) |
| 382.62 2 | 0.216 24 | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 382.65 5 | 3 | ⁹⁸ Rh(3.5 m) | 652.43(96), 745.36(78), 1144.52(8.5) |
| 382.7 | 2.76 13 | ¹⁴⁸ Ho(9.59 s) | 1687.5(82.47), 660.8(58.94), 504.3(18.62) |
| 382.7 7 | 0.143 22 | ¹⁹⁹ Bi(27 m) | 560.1(22.0), 424.85(22), 841.7(11) |
| 382.71 25 | 0.024 4 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 382.75 7 | 0.064 4 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| • 382.75 5 | 0.000259 5 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 382.772 20 | 0.181 6 | ¹⁵⁵ Dy(9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| 382.8 1 | 0.47 6 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 382.8 2 | †8 3 | ¹⁹² Bi(37 s) | 853.8(†100.0), 501.8(†80), 504.3(†39) |
| 382.8 3 | | ¹⁹⁹ Pb(12.2 m) | 366.90(7), 2751.9, 2612.9 |
| • 382.8 3 | 0.014 4 | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 382.85 11 | 0.82 5 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 382.87 5 | 0.360 18 | ⁸⁹ Br(4.40 s) | 1097.82(6.00), 997.93(4.26), 953.53(4.26) |
| 382.88 14 | 0.56 6 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 382.9 | 0.5 | ⁴⁴ Ar(11.87 m) | 182.6(66), 1703.4(57), 1886.0(31) |
| 382.9 1 | †0.97 16 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 382.9 2 | 2.97 21 | ¹⁴¹ Eu(40.0 s) | 394.0(9), 384.5(5.6), 593.1(2.95) |
| 382.9 2 | †1.70 21 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| • 382.96 4 | 0.034 7 | ¹⁸⁹ Re(24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| 382.97 4 | 3.08 20 | ¹⁶⁶ Lu(2.65 m) | 228.12(77.3), 337.50(41), 367.95(31.4) |
| 383.0 4 | 0.9 9 | ¹⁰⁹ Sn(18.0 m) | 1099.4(30), 649.90(28.0), 1321.3(11.9) |
| 383 1 | 1.7 5 | ¹⁴⁸ Er(4.6 s) | 1311.8(8.9), 244.0(7.1), 315.3(6.9) |
| 383.02 28 | 3.63 12 | ⁸⁶ Y(14.74 h) | 1076.64(83), 627.72(32.6), 1153.01(30.5) |
| 383.1 2 | >0.06 | ¹⁴⁶ La(6.27 s) | 258.47(64), 924.58(7.45), 702.28(6.43) |
| 383.17 3 | 0.070 11 | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| 383.2 3 | 0.16 5 | ⁹⁷ Rb(169.9 ms) | 167.1(26), 585.2(21.0), 600.5(10.6) |
| 383.2 5 | †1.2 5 | ¹⁰³ Mo(67.5 s) | 83.4(†100), 423.91(†69), 45.8(†57) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------------|---|--|
| 383.2 2 | 0.0009 3 | $^{108}\text{Ag}(2.37 \text{ m})$ | 433.937(0.50), 618.84(0.261), 1007.22(0.0139) |
| 383.2 3 | $\dagger 1.3 3$ | $^{131}\text{Sn}(56.0 \text{ s})$ | 1226.03($\dagger 100$), 450.03($\dagger 90$), 798.50($\dagger 86$) |
| 383.2 3 | 0.027 12 | $^{151}\text{Nd}(12.44 \text{ m})$ | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 383.2 | >0.21 | $^{190}\text{Au}(42.8 \text{ m})$ | 295.78(71.0), 301.82(23.4), 597.67(9.4) |
| 383.2 3 | 0.0196 20 | $^{251}\text{Fm}(5.30 \text{ h})$ | 425.4(0.95), 480.4(0.392), 358.3(0.315) |
| 383.28 11 | 0.43 6 | $^{132}\text{La}(4.8 \text{ h})$ | 464.55(76), 567.14(15.7), 1909.91(9.0) |
| 383.3 3 | >0.24 | $^{195}\text{Ir}(3.8 \text{ h})$ | 98.85(10), 684.88(9.4), 432.86(9) |
| 383.4 4 | 0.023 12 | $^{193}\text{Au}(17.65 \text{ h})$ | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| • 383.414 7 | 0.026 4 | $^{155}\text{Tb}(5.32 \text{ d})$ | 86.545(32.0), 105.305(25), 180.103(7.45) |
| • 383.428 9 | 0.052 17 | $^{200}\text{Tl}(26.1 \text{ h})$ | 367.943(87), 1205.717(29.9), 579.298(13.8) |
| • 383.46 8 | 0.035 6 | $^{188}\text{Ir}(41.5 \text{ h})$ | 155.032(29.7), 2214.62(18.7), 632.99(18) |
| • 383.47 8 | $8.7 \times 10^{-5} 13$ | $^{233}\text{U}(1.592 \times 10^5 \text{ y})$ | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| • 383.5 1 | 0.047 19 | $^{146}\text{Gd}(48.27 \text{ d})$ | 154.57(47), 115.51(44.0), 114.71(44.0) |
| 383.5 5 | $\dagger 2.3$ | $^{154}\text{Nd}(25.9 \text{ s})$ | 151.703($\dagger 800$), 799.55($\dagger 600$), 180.693($\dagger 510$) |
| • 383.501 4 | 2.35 5 | $^{172}\text{Er}(49.3 \text{ h})$ | 610.062(44.2), 407.338(42.1), 68.107(3.29) |
| • 383.52 9 | $\dagger 3.1 7$ | $^{227}\text{Th}(18.72 \text{ d})$ | 235.971($\dagger 813$), 50.13($\dagger 528$), 256.25($\dagger 463$) |
| 383.566 21 | 0.27 4 | $^{149}\text{Pr}(2.26 \text{ m})$ | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| • 383.595 15 | 0.075 12 | $^{169}\text{Lu}(34.06 \text{ h})$ | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| 383.6 2 | 0.040 11 | $^{101}\text{Tc}(14.22 \text{ m})$ | 306.85(88), 545.06(6.0), 127.23(2.86) |
| 383.6 2 | 0.052 5 | $^{176}\text{Ta}(8.09 \text{ h})$ | 1159.28(25), 88.34(12), 1224.93(6) |
| 383.60 3 | 0.27 3 | $^{194}\text{Pb}(12.0 \text{ m})$ | 581.82(18.8), 1519.45(16.4), 203.82(16.2) |
| • 383.6 5 | 0.036 3 | $^{230}\text{Pa}(17.4 \text{ d})$ | 314.8(0.094), 366.56(0.076), 51.72(0.026) |
| 383.62 8 | 0.051 4 | $^{168}\text{Ho}(2.99 \text{ m})$ | 741.356(36.6), 821.164(34.5), 815.990(18.6) |
| 383.64 12 | | $^{195}\text{Pb}(15 \text{ m})$ | 883.1($\dagger 100$), 393.7($\dagger 42$), 871.0($\dagger 36$) |
| 383.64 12 | 106.9 18 | $^{195}\text{Pb}(15.0 \text{ m})$ | 394.21(44), 878.40(24.2), 707.67(14.0) |
| 383.7 1 | 13.6 7 | $^{250}\text{Es}(8.6 \text{ h})$ | 828.82(72), 303.41(21.6), 349.4(19.8) |
| 383.73 6 | 0.0185 20 | $^{246}\text{Am}(25.0 \text{ m})$ | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 383.74 5 | 0.27 3 | $^{153}\text{Dy}(6.4 \text{ h})$ | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| • 383.75 10 | 0.042 5 | $^{234}\text{Np}(4.4 \text{ d})$ | 1558.31(18.72), 1527.21(11.2), 1601.80(9.1) |
| 383.8 3 | 0.23 9 | $^{65}\text{Co}(1.20 \text{ s})$ | 1141.7(4.0), 310.6(2.90), 963.7(2.6) |
| 383.8 1 | 0.168 16 | $^{145}\text{Cs}(0.594 \text{ s})$ | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 383.80 20 | 0.084 17 | $^{189}\text{Pt}(10.87 \text{ h})$ | 721.41(9.3), 94.33(7.6), 568.84(7.1) |
| • 383.81 3 | $\dagger 2.82 \times 10^5 5$ | $^{241}\text{Am}(432.2 \text{ y})$ | 59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$) |
| 383.85 10 | 0.23 11 | $^{163}\text{Tb}(19.5 \text{ m})$ | 351.138(26), 389.734(24.3), 494.534(23) |
| • 383.851 3 | 0.0024 2 | $^{133}\text{Xe}(5.243 \text{ d})$ | 80.997(38.0), 79.623(0.27), 160.613(0.066) |
| • 383.851 3 | 8.94 3 | $^{133}\text{Ba}(10.52 \text{ y})$ | 356.017(62.05), 80.997(34.06), 302.853(18.33) |
| • 383.90 7 | 0.26 4 | $^{131}\text{Te}(30 \text{ h})$ | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 383.9 4 | $\dagger 1.8 6$ | $^{191}\text{Tl}(5.22 \text{ m})$ | 452.6($\dagger 100$), 470.1($\dagger 98$), 391.6($\dagger 96$) |
| 383.9 2 | $\dagger 2.52 14$ | $^{192}\text{Tl}(9.6 \text{ m})$ | 422.8($\dagger 100$), 634.8($\dagger 75.9$), 786.3($\dagger 31.7$) |
| 383.9 4 | $\dagger < 1.0$ | $^{192}\text{Bi}(37 \text{ s})$ | 853.8($\dagger 100.0$), 501.8($\dagger 80$), 504.3($\dagger 39$) |
| 383.95 14 | 0.99 10 | $^{155}\text{Ho}(48 \text{ m})$ | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 384.0 5 | 0.15 7 | $^{98}\text{Sr}(0.653 \text{ s})$ | 119.353(73), 444.628(39), 428.4(31) |
| 384.0 7 | 0.17 11 | $^{133}\text{Te}(55.4 \text{ m})$ | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 384.0 5 | $\dagger 0.4 2$ | $^{136}\text{Eu}(3.3 \text{ s})$ | 254.9($\dagger 100$), 431.4($\dagger 34$), 458.0($\dagger 20$) |
| 384.0 2 | $\dagger 1$ | $^{139}\text{I}(2.29 \text{ s})$ | 527.7($\dagger 100$), 571.2($\dagger 98$), 536.6($\dagger 67$) |
| • 384 | 0.006 | $^{210}\text{Bi}(3.04 \times 10^6 \text{ y})$ | 265.832(50), 304.896(28), 649.42(3.8) |
| • 384.0 5 | $1.4 \times 10^{-5} 2$ | $^{233}\text{U}(1.592 \times 10^5 \text{ y})$ | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 384.03 25 | 0.12 3 | $^{128}\text{In}(0.84 \text{ s})$ | 1168.80(40), 935.20(6.5), 1089.53(6.0) |
| 384.03 25 | 0.36 10 | $^{128}\text{In}(0.72 \text{ s})$ | 831.54(100), 1168.80(100), 120.54(11.1) |
| 384.059 3 | 0.894 7 | $^{131}\text{Te}(25.0 \text{ m})$ | 149.716(69), 452.323(18.18), 1146.96(4.95) |
| 384.08 5 | 0.27 3 | $^{153}\text{Dy}(6.4 \text{ h})$ | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 384.1 3 | 4.7 5 | $^{64}\text{Ge}(63.7 \text{ s})$ | 427.03(37.4), 666.94(16.9), 128.2(10.7) |
| 384.1 1 | 1.18 7 | $^{79}\text{Rb}(22.9 \text{ m})$ | 688.1(23), 182.77(19.2), 143.41(13.9) |
| 384.17 7 | 0.266 25 | $^{179}\text{Re}(19.5 \text{ m})$ | 430.221(28), 289.968(26.9), 1680.244(13.0) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 384.2 3 | 3.31 9 | ¹⁰⁹ Sn(18.0 m) | 1099.4(30), 649.90(28.0), 1321.3(11.9) |
| 384.2 3 | | ¹¹¹ Rh(11 s) | 275.4(†100.0), 411.8(†9.42), 230.0(†8.9) |
| 384.25 5 | 0.27 3 | ¹³³ Te(12.5 m) | 312.072(62), 407.63(27.1), 1333.21(10.67) |
| 384.254 10 | 12.5 4 | ¹⁸⁴ Ta(8.7 h) | 414.03(72), 252.848(43), 920.932(32.0) |
| • 384.254 10 | >0.005 | ¹⁸⁴ Re(38.0 d) | 903.279(37.9), 792.071(37.5), 111.208(17.1) |
| • 384.254 10 | 3.13 5 | ¹⁸⁴ Re(169 d) | 252.848(10.7), 216.548(9.43), 920.932(8.14) |
| 384.3 4 | 0.07 3 | ⁹¹ Kr(8.57 s) | 108.788(43.5), 506.592(19.1), 612.87(7.7) |
| 384.3 5 | 0.049 13 | ¹⁰¹ Mo(14.61 m) | 191.92(19), 590.91(16.4), 1012.47(12.8) |
| 384.30 21 | 1.9 3 | ¹⁸⁶ Au(10.7 m) | 191.56(62), 298.67(25.4), 764.89(10.5) |
| 384.348 8 | 1.80 15 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| 384.38 14 | †9.5 10 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| 384.4 | †57.6 | ¹⁰⁷ Mo(3.5 s) | 400.3(†100), 65.7(†>92), 483.6(†41.6) |
| 384.4 2 | 1.42 14 | ¹³⁰ Sn(3.72 m) | 192.5(70), 779.8(59), 70.0(35.5) |
| 384.4 4 | †22 3 | ¹³⁴ Pr(11 m) | 293.5(†100), 299.0(†100), 1196.8(†100) |
| 384.4 4 | †22 3 | ¹³⁴ Pr(17 m) | 1964.1(†100), 1904.3(†100), 1579.9(†100) |
| 384.4 3 | 0.43 7 | ¹⁵⁰ Tb(3.48 h) | 638.05(72), 496.3(14.8), 792.5(4.39) |
| 384.4 10 | 0.125 24 | ²⁰¹ Bi(108 m) | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| 384.45 11 | 0.29 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 384.5 5 | 0.005 5 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| 384.5 3 | †0.30 6 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 384.5 2 | 5.6 3 | ¹⁴¹ Eu(40.0 s) | 394.0(9), 382.9(2.97), 593.1(2.95) |
| 384.5 3 | 0.07 | ¹⁵⁴ Pm(1.73 m) | 2057.76(17.1), 1393.9(14.4), 81.99(12.6) |
| 384.5 | †0.62 12 | ¹⁷⁸ Ir(12 s) | 266.1(†100.0), 131.6(†79), 363.1(†39.9) |
| 384.5 5 | †1.5 4 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 384.5 2 | †14.8 15 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 384.5 | 0.2 | ¹⁹⁰ Hg(20.0 m) | 142.6(68), 171.5(4.8), 154.7(2.5) |
| 384.53 34 | 0.12 4 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| • 384.539 10 | 0.0762 24 | ¹⁴⁹ Gd(9.28 d) | 149.735(48.2), 298.634(28.6), 346.651(23.9) |
| 384.55 14 | 0.092 15 | ¹⁰⁰ Sr(202 ms) | 963.85(22.0), 898.50(18.9), 65.46(15.2) |
| • 384.55 4 | 0.153 18 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 384.6 3 | 0.34 4 | ⁸⁸ Nb(7.8 m) | 1057.01(89.3), 1082.53(53.9), 399.41(45.7) |
| 384.6 | >0.07 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 384.6 2 | | ¹⁴⁶ Dy(29 s) | 2156.8, 1915.7, 1876.7 |
| 384.60 2 | 0.180 24 | ²⁰¹ Au(26 m) | 542.6(1.2), 517.0(0.83), 613.2(0.77) |
| 384.61 14 | 1.22 6 | ²⁰⁵ At(26.2 m) | 719.30(31), 669.41(8.6), 628.88(5.6) |
| 384.61 | | ²⁰⁵ At(26.2 m) | 719.30(31), 669.41(8.6), 628.88(5.6) |
| 384.61 14 | 0.0024 5 | ²⁰⁹ Rn(28.5 m) | 143.166(0.0102), 154.198(0.0073), 230.12(0.00061) |
| 384.62 10 | 0.225 15 | ¹⁶³ Yb(11.05 m) | 860.28(10.1), 63.62(6.5), 123.21(1.98) |
| 384.63 20 | 0.0069 16 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 384.67 7 | 1.03 6 | ¹⁸⁶ Ir(2.0 h) | 137.155(27), 767.508(21.2), 630.354(18.0) |
| 384.687 16 | 0.267 8 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 384.7 1 | | ¹³² Ce(3.51 h) | 182.11(77), 155.37(10.5), 216.83(4.95) |
| 384.7 12 | 0.6 | ¹⁸⁶ Pt(2.0 h) | 276.7(0), 611.5(6.0), 635.6(>3.8) |
| • 384.70 7 | 0.0037 5 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 384.71 6 | | ¹⁶⁸ Lu(5.5 m) | 1483.65(†100), 228.58(†97), 111.8(†68) |
| 384.71 6 | 0.6 3 | ¹⁶⁸ Lu(6.7 m) | 198.82(28), 979.22(20), 896.12(15) |
| 384.76 10 | | ¹⁶⁸ Lu(5.5 m) | 1483.65(†100), 228.58(†97), 111.8(†68) |
| 384.76 10 | 0.6 3 | ¹⁶⁸ Lu(6.7 m) | 198.82(28), 979.22(20), 896.12(15) |
| 384.8 2 | †2.12 21 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 384.84 9 | 0.049 10 | ¹⁸⁹ Pt(10.87 h) | 721.41(9.3), 94.33(7.6), 568.84(7.1) |
| 384.85 24 | 0.10 4 | ¹⁶² Yb(18.87 m) | 163.35(40.0), 118.70(33.6), 576.10(3.24) |
| • 384.85 15 | 0.0143 7 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 384.9 3 | 1.6 3 | ¹⁵¹ Pr(18.90 s) | 880.19(13), 189.057(11.8), 484.501(11.3) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 384.92 9 | 0.28 3 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| • 384.976 7 | 0.836 23 | ⁷⁷ Br(57.036 h) | 238.996(23), 520.639(22.4), 297.215(4.16) |
| 384.99 10 | 0.049 10 | ¹⁸⁹ Pt(10.87 h) | 721.41(9.3), 94.33(7.6), 568.84(7.1) |
| 385.0 3 | 0.94 11 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 385.0 2 | | ¹²⁵ La(76 s) | 67.6(34), 43.6(3.5), 985.2 |
| 385.0 2 | †2.9 9 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| 385.0 4 | 2.9 6 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| • 385.0 1 | 0.57 4 | ²⁴⁵ Bk(4.94 d) | 252.80(29.1), 380.8(2.40), 103.1(0.39) |
| • 385 2 | 0.05 1 | ²⁵⁴ Es(275.7 d) | 63.0(2.0), 316(0.15), 304(0.07) |
| • 385.0304 9 | 3.13 12 | ¹⁷⁷ Lu(160.4 d) | 208.3664(57.7), 228.4838(37.0), 378.5029(29.7) |
| 385.11 5 | 0.288 18 | ⁸⁹ Br(4.40 s) | 1097.82(6.00), 997.93(4.26), 953.53(4.26) |
| 385.15 7 | 0.46 | ¹³⁷ I(24.5 s) | 1218.00(12.8), 601.05(4.80), 1302.64(4.42) |
| 385.15 7 | 0.06 | ¹³⁸ I(6.49 s) | 601.05(1.1) |
| 385.15 20 | 0.40 3 | ¹⁸⁷ Pt(2.35 h) | 106.46(9), 201.52(6.4), 110.04(5.7) |
| 385.156 10 | 1.04 3 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 385.20 5 | 0.0929 19 | ¹²⁷ Cs(6.25 h) | 411.95(62.8), 124.70(11.37), 462.31(5.07) |
| 385.2 2 | 0.160 19 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 385.28 7 | 0.0174 16 | ⁶² Zn(9.186 h) | 596.56(26), 40.84(25.5), 548.35(15.3) |
| 385.295 14 | 0.0775 25 | ¹³³ La(3.912 h) | 278.835(2.50), 302.353(1.648), 290.06(1.413) |
| 385.3 2 | 0.54 4 | ⁵⁵ Co(17.53 h) | 931.3(75), 477.2(20.2), 1408.4(16.88) |
| 385.3 3 | 0.44 8 | ⁹⁷ Rb(169.9 ms) | 167.1(26), 585.2(21.0), 600.5(10.6) |
| 385.3 7 | †3.0 15 | ¹⁶⁴ Tm(2.0 m) | 91.40(†1500), 1154.66(†366), 768.91(†279) |
| 385.3 2 | 0.030 3 | ²⁵¹ Fm(5.30 h) | 880.8(2.19), 453.1(1.45), 405.6(0.99) |
| 385.31 13 | 0.060 10 | ⁹³ Mo(6.85 h) | 949.82(0.120), 689.07(0.070), 541.32(0.060) |
| • 385.31 25 | | ¹⁷¹ Lu(8.24 d) | 739.78(47.8), 19.394(13.7), 667.404(11.04) |
| 385.33 3 | 0.28 3 | ¹⁹⁴ Pb(12.0 m) | 581.82(18.8), 1519.45(16.4), 203.82(16.2) |
| 385.38 15 | 0.0134 22 | ¹⁵⁹ Ho(33.05 m) | 121.012(36.2), 131.973(23.6), 309.594(17.2) |
| 385.40 14 | 0.54 4 | ¹⁰³ Ag(65.7 m) | 118.72(31.2), 148.193(28.3), 266.86(13.3) |
| 385.4 1 | 0.37 6 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 385.4 1 | 0.041 10 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| • 385.46 5 | 0.235 22 | ¹⁸⁸ Ir(41.5 h) | 155.032(29.7), 2214.62(18.7), 632.99(18) |
| 385.5 4 | 0.036 | ¹¹⁷ Cd(2.49 h) | 273.349(28), 1303.27(18.4), 344.459(17.9) |
| 385.5 5 | 0.07 4 | ¹⁵⁰ Tb(3.48 h) | 638.05(72), 496.3(14.8), 792.5(4.39) |
| 385.5 | | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| 385.5 1 | 8.8 9 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 348.40(8.4), 110.35(8.2) |
| 385.5 | >0.042 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| 385.5 3 | 0.176 22 | ²³⁰ Fr(19.1 s) | 711.0(13.6), 129.1(11.0), 728.4(7.3) |
| 385.51 25 | 0.69 14 | ¹⁶⁴ Tm(5.1 m) | 208.08(14.6), 314.97(10), 240.49(7.5) |
| • 385.52 17 | 0.0050 6 | ¹⁵² Eu(13.542 y) | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| 385.527 12 | >0.0017 | ¹⁸⁴ Ta(8.7 h) | 414.03(72), 252.848(43), 920.932(32.0) |
| • 385.527 12 | >0.005 | ¹⁸⁴ Re(38.0 d) | 903.279(37.9), 792.071(37.5), 111.208(17.1) |
| • 385.527 12 | >0.0020 | ¹⁸⁴ Re(169 d) | 252.848(10.7), 216.548(9.43), 920.932(8.14) |
| 385.532 3 | 0.43 8 | ²³¹ Ac(7.5 m) | 282.471(39.0), 307.063(30.4), 221.399(16.8) |
| 385.54 4 | 0.0144 6 | ¹⁶⁶ Tm(7.70 h) | 778.817(18.9), 2052.36(17.2), 184.410(16.1) |
| 385.55 9 | 0.59 5 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 385.60 20 | 0.52 13 | ⁹⁹ Ag(124 s) | 264.41(65), 832.29(13.5), 805.07(12.5) |
| 385.6 3 | 0.14 5 | ¹²² Cs(21.0 s) | 331.1(48), 512.0(3.8), 817.9(3.09) |
| 385.6 3 | 0.75 19 | ¹²² Cs(4.5 m) | 331.1(94), 497.1(79), 638.5(63) |
| 385.6 | | ¹⁴⁴ Gd(4.5 m) | 333.3(†100), 2432.6(†94.8), 629.5(†32.4) |
| 385.6 3 | †25 8 | ¹⁸⁰ Yb(2.4 m) | 172.9(†100), 375.0(†87), 419.8(†56) |
| 385.6 2 | †6 1 | ¹⁸¹ Hg(3.6 s) | 147.8(†100), 42.5(†25), 1986.7(†17) |
| 385.6 2 | †3.2 10 | ¹⁹² Bi(37 s) | 853.8(†100.0), 501.8(†80), 504.3(†39) |
| 385.61 8 | 0.23 | ²⁰¹ Au(26 m) | 542.6(1.2), 517.0(0.83), 613.2(0.77) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| • 385.69 10 | 0.0024 5 | ¹⁴⁷ Eu(24.1 d) | 197.299(27), 121.220(22.9), 677.516(9.8) |
| 385.69 10 | 0.11 7 | ¹⁶³ Tb(19.5 m) | 351.138(26), 389.734(24.3), 494.534(23) |
| 385.7 5 | †0.5 2 | ¹⁵⁵ Tm(21.6 s) | 226.8(†100), 531.7(†20), 88.1(†17) |
| 385.8 1 | †2.7 3 | ¹²³ La(17 s) | 92.5(†100), 937.3(†43), 153.6(†43) |
| 385.8 1 | 1.50 21 | ¹³⁵ Nd(12.4 m) | 204.02(52), 41.43(23), 441.2(14.9) |
| 385.8 1 | 3.3 3 | ¹⁸⁸ Tl(71 s) | 412.7(88), 592.0(61), 504.2(23.3) |
| 385.8 5 | | ¹⁹¹ Hg(50.8 m) | 252.5(57), 420.1(18.6), 578.6(17.6) |
| 385.85 10 | 50 | ¹⁹⁷ Pb(8 m) | 761.14(13.3), 375.48(12.8), 1261.23(8.3) |
| 385.85 10 | 74 | ¹⁹⁷ Pb(43 m) | 387.72(25.1), 222.45(24.6), 774.26(14.1) |
| 385.86 4 | 100 | ⁸⁰ Y(35 s) | 595.06(39), 1185.20(20), 756.53(13) |
| • 385.9 1 | 0.08 4 | ¹²⁴ Sb(60.20 d) | 602.730(97.8), 1690.980(47.3), 722.786(10.76) |
| 385.9 3 | 0.7 2 | ¹²⁹ Sn(2.23 m) | 645.13(100), 80.5(6.6), 913.2(5.0) |
| 385.9 3 | 0.8 3 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| 385.9 | 0.17 | ¹⁴⁷ Ce(56.4 s) | 268.80(7), 92.9(4.7), 374.23(3.5) |
| • 385.9 6 | 0.014 7 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| 385.9 1 | 3.40 19 | ¹⁵² Tb(4.2 m) | 344.281(20.8), 411.115(18.8), 471.9(12.2) |
| 385.9 3 | †4.4 10 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 234.0(†40.0) |
| 386.0 3 | 4.4 4 | ⁹⁸ Sr(0.653 s) | 119.353(73), 444.628(39), 428.4(31) |
| 386.0 4 | 0.087 10 | ¹²⁵ Sn(9.52 m) | 332.10(97.2), 1404.0(0.70), 589.6(0.20) |
| 386.0 3 | 1.65 13 | ¹²⁸ La(5.0 m) | 284.00(87), 479.24(54), 643.65(14.7) |
| 386.0 6 | 0.60 6 | ¹⁷⁵ Ta(10.5 h) | 207.4(14.0), 348.5(12.0), 266.9(10.8) |
| 386 1 | †>0.26 | ¹⁸⁰ Au(8.1 s) | 153.3(†100), 524.3(†29), 257.6(†26) |
| • 386.0 5 | 0.0013 5 | ²⁵³ Es(20.47 d) | 41.79(0.050), 389.11(0.0264), 387.1(0.00810) |
| 386.08 10 | 0.044 7 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 386.09 6 | 0.084 9 | ⁸¹ Rb(4.576 h) | 190.38(64.0), 446.15(23.2), 510.31(5.3) |
| 386.1 3 | 0.25 4 | ⁹² Rb(4.492 s) | 814.98(33), 2820.6(6.2), 569.8(5.6) |
| 386.1 2 | 0.9 4 | ⁹⁸ Y(0.548 s) | 1223.0(36.0), 2941.3(16.7), 1590.9(14.7) |
| 386.10 2 | 19.4 4 | ¹⁵¹ Dy(17.9 m) | 49.46(18.0), 546.31(14.3), 176.40(10.60) |
| 386.1 2 | 0.024 3 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 386.15 42 | 0.12 4 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| 386.20 22 | 1.8 3 | ⁷⁸ Zn(1.47 s) | 224.75(43.9), 181.68(28.1), 860.30(24.5) |
| • 386.20 7 | 0.516 10 | ²⁰⁶ Bi(6.243 d) | 803.10(99), 881.01(66.2), 516.18(40.7) |
| 386.25 3 | 2.2 | ¹⁸² Hf(61.5 m) | 942.80(18.8), 799.64(9.4), 114.3152(6.2) |
| 386.28 5 | 93 | ⁷¹ Zn(3.96 h) | 487.38(62), 620.18(57), 511.56(28.4) |
| 386.3 1 | 0.98 9 | ¹⁰⁷ Tc(21.2 s) | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| 386.3 3 | 0.22 6 | ¹¹⁵ Te(5.8 m) | 723.569(30), 1380.58(23.0), 1326.83(22.7) |
| • 386.3 9 | 0.20 5 | ¹²⁶ Sb(12.46 d) | 695.03(100), 666.331(100), 414.81(83.3) |
| 386.30 20 | 1.26 13 | ¹⁶⁰ Yb(4.8 m) | 173.74(42.0), 215.78(20.2), 140.35(9.3) |
| 386.3 5 | 0.85 21 | ¹⁶⁴ Tb(3.0 m) | 168.838(25.4), 754.80(23.3), 215.07(21) |
| 386.3 3 | 5.6 6 | ¹⁸⁰ Ir(1.5 m) | 276.4(56), 132.2(38.1), 699.0(13.4) |
| • 386.33 24 | 0.037 16 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 386.36 6 | 2.06 13 | ²⁰⁹ Rn(28.5 m) | 408.32(50.3), 745.78(22.8), 337.45(14.5) |
| 386.4 1 | 3.36 17 | ¹⁶⁷ Ho(3.1 h) | 346.547(56), 321.336(23.5), 237.873(5.0) |
| • 386.40 15 | 0.27 3 | ¹⁹⁵ Hg(41.6 h) | 261.75(30.9), 560.27(7), 387.87(2.15) |
| 386.4 10 | 0.200 16 | ²²⁴ Fr(3.30 m) | 215.985(33.1), 131.613(16.3), 836.90(9.8) |
| • 386.45 20 | 0.0090 7 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 386.48 9 | 0.129 12 | ⁹⁰ Kr(32.32 s) | 1118.69(39.0), 121.82(35.5), 539.49(30.8) |
| 386.490 26 | 4.5 5 | ¹⁶³ Tb(19.5 m) | 351.138(26), 389.734(24.3), 494.534(23) |
| 386.5 4 | 8 3 | ⁷⁰ Cu(47 s) | 884.9(100), 901.7(87), 1251.7(57) |
| 386.55 4 | 1.64 9 | ⁸¹ Sr(22.3 m) | 153.54(33.8), 147.76(30.1), 443.34(17.5) |
| • 386.6 2 | 0.0049 10 | ¹²⁵ Sn(9.64 d) | 1067.10(10), 1089.15(4.59), 822.48(4.28) |
| 386.6 3 | †1220 61 | ¹⁴⁵ Gd(85 s) | 329.9(†1329), 716.0(†341) |
| 386.6 2 | †61 6 | ²⁰⁶ Rn(5.67 m) | 497.7(†100), 324.5(†96), 773.1(†57) |
| • 386.673 13 | 0.000340 11 | ¹⁶⁹ Yb(32.026 d) | 63.12077(44.2), 197.95788(35.8), 177.21402(22.16) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|----------------------|-----------------------------|---|
| 386.7 4 | 1.83 9 | ⁵¹ Sc(12.4 s) | 1437.3(52), 2144.1(31.8), 1567.5(14.9) |
| 386.70 10 | 2.84 25 | ⁹⁹ Pd(21.4 m) | 136.00(73), 263.60(15.2), 673.38(6.9) |
| 386.7 4 | 0.24 4 | ¹⁰¹ Ag(11.1 m) | 261.0(53), 588.0(10.0), 667.3(9.8) |
| 386.7 1 | †0.85 14 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 386.7 6 | 0.29 12 | ¹⁶⁶ Lu(2.65 m) | 228.12(77.3), 337.50(41), 367.95(31.4) |
| 386.72 | 0.064 16 | ²⁰⁴ Bi(11.22 h) | 899.15(98), 374.72(82), 984.02(59) |
| 386.73 20 | 2.06 13 | ²⁰⁹ Rn(28.5 m) | 408.32(50.3), 745.78(22.8), 337.45(14.5) |
| 386.74 8 | 2.6 3 | ²⁰⁶ At(30.0 m) | 700.66(98), 477.10(86), 395.54(48) |
| 386.8 3 | †100 14 | ¹⁰⁶ Sn(115 s) | 477.5(†62), 253.30(†57), 1190.0(†33) |
| 386.8 1 | 39.9 24 | ¹¹⁷ Ag(5.34 s) | 135.4(48), 298.1(21.1), 522.1(9.4) |
| 386.8 1 | 1.54 11 | ¹¹⁷ Ag(72.8 s) | 135.4(23), 337.7(10.3), 157.1(7.9) |
| 386.84 4 | 111000 4 | ¹⁵⁸ Er(2.29 h) | 71.91(†23300), 248.58(†42000), 45.5(†35800) |
| 386.85 5 | 0.059 4 | ¹³³ I(20.8 h) | 529.872(87.0), 875.329(4.51), 1298.223(2.35) |
| 386.9 2 | 0.14 | ¹¹³ Pd(93 s) | 95.74(3.3), 643.7(3.0), 739.63(2.4) |
| 386.91 2 | 3.60 24 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 386.97 7 | 3.60 12 | ¹⁰³ Cd(7.3 m) | 1461.81(12), 1448.70(5.55), 1079.90(5.44) |
| 387.0 1 | 0.31 8 | ⁷⁷ Zn(2.08 s) | 189.49(28.1), 473.94(19.7), 1832.0(12.4) |
| 387.0 2 | 2.1 3 | ¹⁰⁵ Mo(35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 387.00 6 | 0.60 5 | ¹⁴¹ Xe(1.73 s) | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| 387.0 4 | 0.0023 10 | ¹⁶⁷ Yb(17.5 m) | 113.34(55.3), 106.18(22.5), 176.25(21) |
| 387.0 3 | 1.1 3 | ¹⁸⁶ Au(10.7 m) | 191.56(62), 298.67(25.4), 764.89(10.5) |
| 387.0 3 | 0.29 4 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| • 387.0 1 | 0.00049 17 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 387.03 5 | 0.139 20 | ²⁰² Bi(1.72 h) | 960.67(99), 422.18(83.7), 657.49(60.6) |
| • 387.075 9 | 0.08 4 | ¹¹⁰ Ag(249.79 d) | 657.7622(94.0), 884.685(72.2), 937.493(34.13) |
| 387.1 4 | 0.20 10 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 387.10 12 | 0.87 8 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| 387.1 2 | †100 | ¹⁹¹ Pb(2.18 m) | 712.2(†46), 613.5(†40), 936.8(†37) |
| 387.1 2 | 0.31 3 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 387.1 1 | | ¹⁹⁹ Pb(12.2 m) | 366.90(7), 382.8, 2751.9 |
| • 387.1 5 | 0.00810 18 | ²⁵³ Es(20.47 d) | 41.79(0.050), 389.11(0.0264), 42.98(0.009) |
| 387.19 4 | 0.33 6 | ¹⁷⁴ Tm(5.4 m) | 366.526(92), 992.128(87), 272.918(86) |
| 387.2 2 | †0.7 3 | ¹⁰³ Nb(1.5 s) | 102.64(†100), 641.1(†55), 538.5(†34.0) |
| 387.2 10 | 0.09 | ¹⁰³ Cd(7.3 m) | 1461.81(12), 1448.70(5.55), 1079.90(5.44) |
| 387.2 3 | 0.26 8 | ¹¹⁷ Cs(8.4 s) | 204.8(15.0), 29.7(9.9), 205.6(6.8) |
| 387.2 5 | †1.25 21 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 387.3 3 | 0.19 3 | ¹¹⁸ Cs(14 s) | 337.4(100), 472.8(37.4), 586.6(15.4) |
| 387.3 1 | 0.035 10 | ¹⁴³ Ba(14.33 s) | 211.475(25), 798.79(15.6), 980.45(11.55) |
| 387.30 15 | 1.9 3 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 387.3 10 | 0.082 17 | ²⁰¹ Bi(108 m) | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| • 387.305 42 | 0.0123 16 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 387.345 5 | 0.0076 19 | ²⁰⁰ Au(48.4 m) | 367.943(19), 1225.479(10.7), 1262.950(3.12) |
| • 387.345 5 | 0.16 3 | ²⁰⁰ Tl(26.1 h) | 367.943(87), 1205.717(29.9), 579.298(13.8) |
| • 387.35 | 0.025 | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 387.4 2 | 1.68 24 | ⁷¹ Br(21.4 s) | 260.5(8.0), 233.7(6.5), 171.6(6.2) |
| 387.4 1 | 0.0110 17 | ¹²¹ I(2.12 h) | 212.189(84), 532.08(6.07), 598.74(1.47) |
| 387.4 | 0.06 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 387.42 10 | 8.0 5 | ⁹⁹ Zr(2.1 s) | 469.140(55), 546.13(48.6), 593.990(27.4) |
| 387.5 10 | 0.008 5 | ⁹³ Y(10.18 h) | 266.9(7.3), 947.1(2.09), 1917.8(1.55) |
| 387.5 | †10 | ¹⁷⁴ Os(44 s) | 118(†100), 325(†43), 302(†26) |
| 387.5 2 | 0.26 4 | ¹⁸⁸ Tl(71 s) | 412.7(88), 592.0(61), 504.2(23.3) |
| • 387.50 4 | 1.26 6 | ¹⁹³ Os(30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| 387.52 15 | 1.2 1 | ¹²⁶ In(1.64 s) | 1141.11(100), 908.58(99), 111.79(88) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|------------------------------|--|--|
| 387.55 12 | $\dagger 36$ 3 | ^{189}Hg (7.6 m) | 320.99($\dagger 100$), 78.21($\dagger 63$), 565.42($\dagger 48$) |
| 387.56 8 | $\dagger 38$ 3 | ^{131}Pr (1.53 m) | 266.13($\dagger 100$), 72.82($\dagger 64$), 324.35($\dagger 34$) |
| 387.6 4 | $\dagger 1.3$ 4 | ^{131}Sn (56.0 s) | 1226.03($\dagger 100$), 450.03($\dagger 90$), 798.50($\dagger 86$) |
| 387.6 2 | 2.3 8 | ^{145}Ho (2.4 s) | 339.8(15), 312.9(14.3), 334.1(13.5) |
| 387.60 9 | 0.38 5 | ^{193}Au (17.65 h) | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| 387.6 8 | $\dagger 9.5 \times 10^2$ 16 | ^{234}Pa (1.17 m) | 1001.03($\dagger 837000$), 766.38($\dagger 294000$), 742.81($\dagger 80000$) |
| 387.7 1 | $\dagger 88$ 3 | ^{148}Er (4.6 s) | 1653.4($\dagger 100$), 197.1($\dagger 71$), 256.9($\dagger 65$) |
| 387.70 16 | $\dagger 0.68$ 12 | ^{162}Lu (1.37 m) | 166.82($\dagger 100$), 631.87($\dagger 26.6$), 798.76($\dagger 16.9$) |
| 387.7 | $\dagger > 1.5$ | ^{164}Tm (2.0 m) | 91.40($\dagger 1500$), 1154.66($\dagger 366$), 768.91($\dagger 279$) |
| 387.72 11 | 25.1 23 | ^{197}Pb (43 m) | 385.85(74), 222.45(24.6), 774.26(14.1) |
| 387.77 8 | 1.31 7 | ^{101}Sr (118 ms) | 128.34(18.0), 1124.82(10.9), 510.73(8.5) |
| 387.78 18 | | ^{106}In (5.2 m) | 632.66(92), 1714.90(17.1), 861.16(10.6) |
| 387.8 3 | 0.0007 4 | ^{152}Eu (9.274 h) | 841.586(14.6), 963.37(12.01), 121.7824(7.21) |
| 387.8 2 | $\dagger 9.8$ 9 | ^{152}Tb (17.5 h) | 344.281($\dagger 1500$), 586.294($\dagger 223$), 271.135($\dagger 203$) |
| 387.81 3 | 0.606 13 | ^{135}Ce (17.7 h) | 265.56(41.8), 300.07(23.5), 606.76(18.8) |
| • 387.82 3 | 0.038 5 | ^{235}U (7.038 $\times 10^8$ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| • 387.87 5 | 2.15 8 | ^{195}Hg (41.6 h) | 261.75(30.9), 560.27(7), 200.38(0.79) |
| 387.88 4 | 0.29 7 | ^{245}Pu (10.5 h) | 327.428(25.4), 560.13(5.4), 308.222(4.9) |
| • 387.884 4 | 7.0 3 | ^{232}Pa (1.31 d) | 969.315(41.6), 894.351(19.8), 150.059(10.8) |
| 387.9 3 | 0.30 5 | ^{132}I (2.295 h) | 667.718(99), 772.60(75.6), 954.55(17.6) |
| 387.9 2 | 0.7 | ^{145}La (24.8 s) | 70.0(11), 355.8(3.8), 118.2(3.6) |
| • 387.90 8 | 0.00292 21 | ^{152}Eu (13.542 y) | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| 387.92 10 | 1.39 6 | ^{148}La (1.05 s) | 158.468(55.6), 989.85(9.3), 760.30(8.6) |
| 387.93 12 | 0.20 30 | ^{149}Pr (2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 387.93 18 | | ^{186}Ir (16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 387.94 6 | 0.00071 4 | ^{234}Pa (6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 387.94 6 | $\dagger 465$ 20 | ^{234}Pa (1.17 m) | 1001.03($\dagger 837000$), 766.38($\dagger 294000$), 742.81($\dagger 80000$) |
| • 387.94 6 | 0.208 12 | ^{234}Np (4.4 d) | 1558.31(18.72), 1527.21(11.2), 1601.80(9.1) |
| 387.96 4 | 0.31 6 | ^{117}Cd (2.49 h) | 273.349(28), 1303.27(18.4), 344.459(17.9) |
| 388.00 20 | 0.063 11 | ^{153}Dy (6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 388.0 5 | $\dagger 0.5$ 3 | ^{180}Au (8.1 s) | 153.3($\dagger 100$), 524.3($\dagger 29$), 257.6($\dagger 26$) |
| • 388.0 5 | 0.015 6 | ^{223}Ra (11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 388.06 20 | 0.030 3 | ^{176}Ta (8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 388.1 10 | 0.7 4 | ^{124}Cs (30.8 s) | 353.9(40), 914.8(4.0), 492.6(3.6) |
| 388.1 3 | $\dagger 2.5$ 5 | ^{187}Hg (1.9 m) | 233.38($\dagger 100$), 376.34($\dagger 38$), 240.26($\dagger 33$) |
| 388.1 3 | 1.0 2 | ^{202}Au (28.8 s) | 439.59(10.0), 1125.20(2.30), 1306.38(2.25) |
| 388.13 15 | 5.4 5 | ^{86}Nb (88 s) | 751.74(97.8), 914.81(78.1), 1003.24(37.4) |
| • 388.16 2 | 66 | ^{249}Cf (351 y) | 333.37(14.6), 252.80(2.50), 266.62(0.69) |
| 388.19 17 | 0.86 10 | ^{81}As (33.3 s) | 467.72(20), 491.20(8.5), 521.10(1.40) |
| 388.19 6 | 13.49 5 | ^{144}Ba (11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 388.20 21 | 4 3 | ^{112}Rh (3.8 s) | 348.70(33), 777.5(3.6), 737.20(1.8) |
| 388.20 21 | 29 4 | ^{112}Rh (6.8 s) | 348.70(87), 560.5(49), 1098.6(39) |
| 388.25 2 | 0.576 24 | ^{147}La (4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 388.3 4 | 0.21 7 | ^{79}Rb (22.9 m) | 688.1(23), 182.77(19.2), 143.41(13.9) |
| 388.3 2 | $\dagger 3.0$ 3 | ^{185}Hg (21.6 s) | 222.8($\dagger 100.0$), 258.7($\dagger 98$), 212.5($\dagger 58$) |
| 388.3 1 | 0.098 8 | ^{230}Ac (122 s) | 454.95(8), 508.20(5.15), 1243.9(3.50) |
| 388.4 1 | $\dagger 952$ 95 | ^{157}Ho (12.6 m) | 279.97($\dagger 47600$), 341.16($\dagger 37000$), 193.41($\dagger 15200$) |
| • 388.46 10 | 0.007 3 | ^{189}Re (24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| 388.5 3 | $\dagger 1.3$ | ^{111}Rh (11 s) | 275.4($\dagger 100.0$), 411.8($\dagger 9.42$), 230.0($\dagger 8.9$) |
| 388.5 2 | 0.35 9 | ^{146}Ba (2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 388.5 3 | 0.063 6 | ^{186}Hg (1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| 388.5 15 | 0.07 | ^{257}Md (5.52 h) | 371.4(11.7), 325.1(2.5), 181.3(0.41) |
| • 388.531 3 | 82 | ^{87}Y (79.8 h) | 484.805(89.7) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 388.57 2 | 18.37 13 | ¹⁴⁹ Tb(4.118 h) | 352.24(29.43), 164.98(26.4), 652.12(16.25) |
| 388.59 9 | 2.22 14 | ¹⁰³ Tc(54.2 s) | 346.380(17.5), 136.079(16.6), 562.90(7.0) |
| 388.6 4 | 0.0018 6 | ¹⁰⁸ Ag(2.37 m) | 433.937(0.50), 618.84(0.261), 1007.22(0.0139) |
| 388.6 1 | 0.062 6 | ¹³⁹ Xe(39.68 s) | 218.59(56), 296.53(21.7), 174.97(11.3) |
| • 388.633 11 | 34.1 7 | ¹²⁶ I(13.11 d) | 491.243(2.85), 879.876(0.754) |
| 388.633 11 | 41 | ¹²⁶ Cs(1.64 m) | 491.243(5.0), 925.24(4.56), 879.876(1.29) |
| 388.7 2 | †5 | ⁸⁷ Nb(2.6 m) | 200.95(†100), 470.63(†73), 1066.8(†37) |
| 388.7 3 | | ¹²² Ba(1.95 m) | 550.7, 231.0, 65.8 |
| 388.7 1 | 0.89 6 | ²⁴⁰ Np(61.9 m) | 566.34(25.3), 973.9(23.8), 600.57(18.4) |
| 388.71 5 | 0.0113 13 | ¹²⁷ Cs(6.25 h) | 411.95(62.8), 124.70(11.37), 462.31(5.07) |
| 388.8 3 | 0.69 17 | ¹²⁷ Cd(0.43 s) | 1235.07(8.3), 376.28(7.5), 523.60(5.15) |
| 388.8 1 | 0.224 22 | ¹⁴² Tb(597 ms) | 515.0(25), 465.0(2.7), 853.1(2.42) |
| • 388.80 10 | 0.090 3 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 388.8 1 | 1.69 10 | ¹⁷⁷ W(135 m) | 115.65(50), 426.98(13.2), 1036.4(10.3) |
| 388.8 4 | 0.033 16 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 388.80 7 | 0.70 9 | ¹⁸⁷ Pt(2.35 h) | 106.46(9), 201.52(6.4), 110.04(5.7) |
| 388.8 1 | 0.49 3 | ²⁰⁹ At(5.41 h) | 545.0(91), 781.9(83.5), 790.2(63.5) |
| 388.815 12 | 0.88 4 | ¹⁴⁷ Pr(13.4 m) | 77.9921(15), 314.675(13.2), 641.380(10.0) |
| 388.89 7 | 0.455 23 | ⁸¹ Rb(4.576 h) | 190.38(64.0), 446.15(23.2), 510.31(5.3) |
| 388.90 30 | 0.47 5 | ¹¹⁵ Ag(20.0 m) | 229.08(18), 212.80(4.4), 472.70(4.0) |
| 388.9 2 | †52 3 | ¹¹⁵ Ag(18.0 s) | 229.08(†100), 131.52(†77), 360.52(†16.3) |
| 388.9 1 | 0.76 4 | ¹⁴³ Cs(1.78 s) | 195.554(13), 232.421(8.32), 306.424(6.80) |
| 388.9 2 | †8.7 10 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 234.0(†40.0) |
| 388.9 3 | 0.0048 7 | ²⁴³ Pu(4.956 h) | 84.0(23), 41.8(0.76), 381.7(0.56) |
| • 388.92 20 | 0.0066 13 | ¹⁴⁵ Eu(5.93 d) | 893.73(66), 653.512(15.0), 1658.53(14.9) |
| 388.96 10 | 0.129 18 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| • 388.97 10 | 1.51 8 | ⁷⁹ Kr(35.04 h) | 261.29(13), 397.54(9.3), 606.09(8.12) |
| 389.0 1 | 1.8 3 | ¹⁴¹ Tb(3.5 s) | 293.3(16.8), 343.6(16.3), 198.4(14.8) |
| 389.00 10 | 0.60 8 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 389.0 8 | †2.0 9 | ¹⁶⁰ Tm(9.4 m) | 125.8(†100), 728.5(†37), 264.1(†27) |
| • 389.0 3 | †4.9×10 ³ | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| 389.1 2 | †8 | ¹³⁹ I(2.29 s) | 527.7(†100), 571.2(†98), 536.6(†67) |
| 389.1 3 | 0.37 4 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| • 389.1 2 | †4.0 9 | ²⁵⁸ Md(51.5 d) | 367.8(†100), 447.9(†37), 276.8(†20.2) |
| 389.11 4 | 1.61 17 | ¹⁴¹ Xe(1.73 s) | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| 389.11 8 | 0.0063 8 | ²⁴⁹ Cm(64.15 m) | 634.31(1.5), 560.45(0.84), 368.76(0.35) |
| • 389.11 8 | 0.0264 3 | ²⁵³ Es(20.47 d) | 41.79(0.050), 387.1(0.00810), 42.98(0.009) |
| 389.12 15 | 0.0106 16 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 389.14 20 | 0.031 6 | ⁸⁷ Br(55.60 s) | 1419.71(22.0), 1476.04(7.9), 1577.60(6.0) |
| 389.20 10 | 0.64 4 | ⁸³ Se(22.3 m) | 356.687(70), 510.17(43), 224.8(32.7) |
| 389.20 30 | 0.102 25 | ¹⁰³ Ag(65.7 m) | 118.72(31.2), 148.193(28.3), 266.86(13.3) |
| 389.2 3 | 0.28 11 | ¹⁰⁸ Tc(5.17 s) | 242.25(82), 465.6(14.3), 707.81(11.4) |
| 389.2 3 | 2.94 4 | ¹³⁷ Pm(2.4 m) | 177.5(40.29), 108.6(35), 233.6(29.57) |
| 389.2 1 | 12.5 18 | ¹⁴¹ Gd(24.5 s) | 351.1(89), 223.9(64), 574.9(51) |
| 389.2 5 | 0.20 12 | ²⁰⁸ Fr(59.1 s) | 635.8(10), 778.5(6.8), 325.3(5.2) |
| 389.25 5 | 0.87 5 | ⁹⁷ Rh(30.7 m) | 421.55(75), 840.13(12.0), 878.80(9.0) |
| 389.26 9 | 0.38 19 | ⁶³ Ga(32.4 s) | 637.04(11), 627.10(10.3), 192.94(5.7) |
| 389.3 3 | 0.21 5 | ⁹⁷ Rb(169.9 ms) | 167.1(26), 585.2(21.0), 600.5(10.6) |
| 389.3 3 | 3.7 | ¹¹¹ Sb(75 s) | 154.48(71), 489.1(42), 1032.6(10.0) |
| 389.3 3 | †3.1 6 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 389.3 3 | 0.47 12 | ²⁰⁸ Fr(59.1 s) | 635.8(10), 778.5(6.8), 325.3(5.2) |
| • 389.37 10 | 1.66 6 | ⁸³ Sr(32.41 h) | 762.65(30), 381.53(14.1), 418.37(4.41) |
| 389.37 9 | 0.212 20 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 389.38 3 | 0.0480 13 | ¹⁶⁶ Tm(7.70 h) | 778.817(18.9), 2052.36(17.2), 184.410(16.1) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 389.40 7 | 0.08 6 | ⁸² Rb(6.472 h) | 776.517(84), 554.348(62.4), 619.106(37.976) |
| • 389.404 14 | 2.82 6 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| • 389.44 5 | 0.070 8 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 389.45 15 | 2.1 4 | ¹²⁵ Cd(0.65 s) | 436.29(37), 1099.48(22.3), 2147.19(19.1) |
| 389.45 15 | 2.18 13 | ¹⁶⁰ Yb(4.8 m) | 173.74(42.0), 215.78(20.2), 140.35(9.3) |
| 389.47 5 | 3.46 25 | ¹⁴³ Gd(112 s) | 271.94(84), 588.00(15.7), 798.89(10.7) |
| 389.5 | | ¹³⁸ Nd(5.04 h) | 325.76(2.84), 199.50(0.53), 341.65(0.40) |
| 389.5 2 | †2.33 21 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 389.5 2 | 0.54 18 | ¹⁹⁸ Pb(2.40 h) | 290.3(36), 365.4(19), 173.4(18) |
| • 389.53 3 | 0.147 7 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| 389.531 16 | 1.52 4 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 389.59 7 | 0.085 5 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| 389.59 13 | 0.307 20 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| • 389.64 2 | 0.0364 17 | ¹⁴³ Ce(33.039 h) | 293.266(42.80), 57.356(11.7), 664.571(5.69) |
| 389.70 | 12.68 22 | ²⁵ Na(59.1 s) | 974.72(14.95), 585.03(13.00), 1611.711(9.48) |
| 389.70 | 0.023 5 | ²⁵ Al(7.183 s) | 1611.711(0.79), 974.72(0.024), 585.03(0.023) |
| 389.7 3 | 0.10 3 | ¹¹⁷ Xe(61 s) | 28.5(7.0), 221.3(10.0), 32.3(7.6) |
| 389.7 2 | 0.38 9 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 389.7 4 | >0.8 | ¹⁷⁶ Tm(1.9 m) | 189.57(44.5), 1069.3(34), 381.8(21.8) |
| 389.7 3 | 1.28 9 | ²⁵¹ Cm(16.8 m) | 542.7(10.9), 530.0(1.62), 438.2(1.24) |
| 389.734 15 | 24.3 25 | ¹⁶³ Tb(19.5 m) | 351.138(26), 494.534(23), 421.860(11.5) |
| 389.8 1 | 5.11 9 | ¹⁴⁸ Ho(9.59 s) | 1687.5(82.47), 660.8(58.94), 504.3(18.62) |
| 389.8 4 | †1.2 | ¹⁷⁹ Os(6.5 m) | 65.39(†100), 218.6(†17), 32.3(†17) |
| 389.8 4 | 2.6 5 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 389.83 5 | 0.193 23 | ¹³² Ce(3.51 h) | 182.11(77), 155.37(10.5), 216.83(4.95) |
| 389.85 15 | 0.56 19 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 389.88 4 | 3.8 3 | ⁷¹ Zn(2.45 m) | 511.56(32), 910.27(7.8), 121.51(3.0) |
| 389.88 4 | 2.6 3 | ⁷¹ Zn(3.96 h) | 386.28(93), 487.38(62), 620.18(57) |
| 389.9 4 | †2.8 14 | ¹⁵⁵ Nd(8.9 s) | 180.574(†100), 418.99(†75), 955.08(†50) |
| 389.9 5 | 0.05 3 | ¹⁶⁵ Yb(9.9 m) | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 389.9 2 | 0.038 6 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 389.9 2 | †3.4 4 | ²⁰³ At(7.4 m) | 639.4(†100), 641.5(†55.8), 738.1(†38.4) |
| • 389.94 15 | 0.019 4 | ¹⁸⁸ Ir(41.5 h) | 155.032(29.7), 2214.62(18.7), 632.99(18) |
| 389.94 7 | 6.2 5 | ²⁰² Pb(3.53 h) | 490.47(9.1), 459.72(8.6), 241.1(0.84) |
| 389.94 8 | 1.10 11 | ²⁰³ Po(36.7 m) | 908.64(55), 1090.95(19.2), 893.49(18.7) |
| 389.97 10 | 1.46 14 | ¹⁴⁰ Xe(13.60 s) | 805.52(20), 1413.66(12.2), 1315.05(8.2) |
| 390.0 5 | 2.4 5 | ¹¹⁹ Cs(43.0 s) | 176.05(29.7), 225.13(26), 257.9(17.4) |
| 390.0 | 1.33 5 | ¹⁴¹ Ba(18.27 m) | 190.328(46.0), 304.194(25.4), 276.948(23.4) |
| 390.0 3 | †2.3 | ¹⁴⁹ Ce(5.3 s) | 57.7(†100), 380.0(†33.7), 86.4(†20.2) |
| • 390.02 6 | 0.0040 5 | ¹⁴⁷ Eu(24.1 d) | 197.299(27), 121.220(22.9), 677.516(9.8) |
| 390.05 5 | 0.0528 13 | ¹²⁷ Cs(6.25 h) | 411.95(62.8), 124.70(11.37), 462.31(5.07) |
| • 390.05 17 | 0.0019 5 | ¹³¹ Ba(11.50 d) | 496.326(47), 123.805(28.97), 216.078(19.66) |
| 390.10 18 | 0.077 19 | ²⁰⁷ Po(5.80 h) | 992.33(59.3), 742.64(28.2), 911.79(16.95) |
| 390.17 6 | 4.8 3 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| 390.2 2 | 4.9 9 | ¹³² La(24.3 m) | 464.55(22), 663.07(11.6), 285.6(7) |
| 390.20 8 | †113 6 | ¹⁵⁹ Yb(1.58 m) | 166.16(†500), 177.12(†159), 330.24(†100) |
| 390.21 4 | 0.300 17 | ²⁰⁰ Pt(12.5 h) | 76.21(13), 135.90(3.24), 243.71(2.49) |
| 390.28 2 | 2.72 19 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 390.30 10 | 1.09 10 | ¹¹⁴ Sb(3.49 m) | 1299.90(99), 887.60(17.4), 327.18(7.0) |
| 390.3 2 | 0.76 13 | ¹³⁶ Nd(50.65 m) | 108.90(32), 40.2(18.9), 574.8(10.4) |
| 390.3 | 0.5 3 | ¹⁴⁸ Ba(0.607 s) | 56.08(29.20), 133.53(3.88), 415.78(3.59) |
| 390.3 | 0.11 3 | ¹⁴⁹ Tb(4.118 h) | 352.24(29.43), 164.98(26.4), 388.57(18.37) |
| 390.3 4 | 0.17 3 | ¹⁹⁹ Pb(90 m) | 366.90(44.2), 353.39(9.5), 1135.04(7.8) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|-----------------------|---|---|
| 390.3 4 | 0.38 5 | ²⁰⁸ At(1.63 h) | 686.527(98), 660.040(89), 177.595(48.6) |
| • 390.3 2 | 0.04 1 | ²³⁵ U(7.038×10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| 390.38 7 | †3.8 3 | ¹⁸⁴ Ir(3.09 h) | 263.97(†100), 119.80(†45), 961.22(†18.3) |
| 390.4 2 | 0.9 8 | ⁷³ Br(3.4 m) | 64.9(37.0), 336.0(10.4), 699.8(9.1) |
| 390.4 2 | †>0.14 | ¹⁶⁰ Ho(5.02 h) | 728.18(†100), 879.383(†65.9), 962.317(†59.1) |
| • 390.40 15 | 0.0560 22 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 390.4 2 | †2.2 7 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 390.4 3 | †5.9 7 | ¹⁹⁸ Tl(1.87 h) | 636.4(†202), 411.8044(†202), 587.2(†185) |
| • 390.4 5 | 0.007 3 | ²²³ Ra(11.435 d) | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| 390.4 6 | 0.07 | ²²⁷ Ra(42.2 m) | 27.36(16), 300.07(4.6), 302.65(4.3) |
| 390.433 4 | 0.07 | ¹⁸² Hf(61.5 m) | 942.80(18.8), 799.64(9.4), 114.3152(6.2) |
| 390.5 4 | 1.28 12 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 390.50 18 | 1.53 10 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 390.543 11 | 0.64 4 | ⁸⁸ Kr(2.84 h) | 2392.11(34.6), 196.301(25.98), 2195.842(13.18) |
| • 390.552 1 | 0.019 4 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 390.57 4 | 1.25 10 | ²⁰⁸ Rn(24.35 m) | 426.78(7.07), 251.05(5.02), 350.026(3.34) |
| 390.59 16 | 0.70 11 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 390.6 2 | 0.00093 20 | ¹⁰⁹ Pd(13.7012 h) | 88.04(1.171), 311.4(0.032), 647.3(0.024) |
| 390.6 3 | 0.072 9 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 390.6 2 | 0.43 10 | ¹⁵⁹ Er(36 m) | 624.5(33), 649.1(23.4), 205.92(9.7) |
| 390.6 2 | 0.31 3 | ¹⁶⁴ Yb(75.8 m) | 40.928(1.147), 675.41(0.38), 446.74(0.28) |
| 390.6 2 | 0.043 | ¹⁶⁴ Yb(75.8 m) | 40.928(1.147), 675.41(0.38), 390.6(0.31) |
| • 390.62 10 | †5.90×10 ⁴ | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| 390.65 20 | 0.087 12 | ¹⁵⁸ Tm(3.98 m) | 192.13(62), 335.10(16.8), 1149.83(7.6) |
| 390.7 2 | | ¹⁰⁶ In(6.2 m) | 632.66(100), 861.16(92), 997.87(48) |
| 390.7 2 | | ¹⁰⁶ In(5.2 m) | 632.66(92), 1714.90(17.1), 861.16(10.6) |
| • 390.7 5 | | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| • 390.70 6 | 0.054 5 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 390.7 1 | 0.55 4 | ²³⁷ Am(73.0 m) | 280.23(47.3), 438.4(8.3), 473.5(4.3) |
| 390.7 5 | 0.00040 8 | ²⁵⁵ Fm(20.07 h) | 81.477(0.81), 58.477(0.67), 80.92(0.27) |
| 390.71 17 | 0.85 15 | ¹⁸⁴ Au(53.0 s) | 162.97(50), 272.98(40), 362.47(17.5) |
| 390.79 16 | 1.32 23 | ¹⁴⁸ Ce(56 s) | 269.519(17.0), 291.724(16.7), 121.169(13.2) |
| 390.8 3 | †6 3 | ¹³¹ Ce(10.3 m) | 169.42(†100), 414.25(†68), 119.18(†44) |
| • 390.8 3 | 0.034 12 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 390.8 | †100 | ¹⁷⁸ Yb(74 m) | 348.4(†64), 42.4(†6.7) |
| • 390.85 5 | 0.0172 20 | ²⁴⁹ Cf(351 y) | 388.16(66), 333.37(14.6), 252.80(2.50) |
| • 390.890 8 | 0.0224 25 | ⁷⁷ Br(57.036 h) | 238.996(23), 520.639(22.4), 297.215(4.16) |
| 390.9 1 | 6.1 3 | ¹³⁸ Pr(2.12 h) | 1037.8(101), 788.742(100), 302.7(80) |
| 390.9 | 0.008 3 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 391.0 11 | 1.1 1 | ⁶¹ Mn(0.71 s) | 628.6(16.7), 206.8(8.2), 422.0(0.68) |
| 391.0 3 | 0.124 16 | ⁷⁸ As(90.7 m) | 613.725(54), 694.916(16.7), 1308.59(13.0) |
| 391 1 | 0.05 3 | ¹⁰⁹ Rh(80 s) | 326.868(54), 426.135(7.7), 178.034(7.6) |
| 391 | †5.9 | ¹⁶³ Lu(238 s) | 163.08(†100), 54.00(†88), 396.34(†63) |
| • 391.0 2 | 35 2 | ¹⁹⁴ Ir(171 d) | 482.833(97), 328.455(93), 600.5(62) |
| 391 | | ²⁰⁶ Fr(0.7 s) | |
| 391.039 30 | 3.5 3 | ¹⁰⁶ Rh(131 m) | 511.842(85), 1045.83(30.4), 717.24(28.9) |
| • 391.039 30 | 3.68 18 | ¹⁰⁶ Ag(8.28 d) | 511.842(88), 1045.83(29.6), 717.24(28.9) |
| 391.10 20 | †20 3 | ¹⁶³ Lu(238 s) | 163.08(†100), 54.00(†88), 396.34(†63) |
| 391.13 2 | 0.052 16 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 391.15 2 | 0.22 6 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 391.15 10 | 0.162 25 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 391.20 10 | 0.08 4 | ⁸⁸ Kr(2.84 h) | 2392.11(34.6), 196.301(25.98), 2195.842(13.18) |
| 391.25 7 | 0.0259 8 | ¹¹¹ Pd(23.4 m) | 580.00(0.8), 70.44(0.78), 1459.0(0.56) |
| 391.25 7 | 5.4 4 | ¹¹¹ Pd(5.5 h) | 70.44(8.3), 632.80(3.6), 575.0(3.2) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 391.3 1 | 0.36 5 | ¹⁰⁸ In(39.6 m) | 632.96(76), 1986.8(12.4), 3452.2(9.2) |
| 391.3 3 | 1.69 18 | ¹¹⁸ Ag(2.0 s) | 487.77(57), 677.13(53), 1058.39(14.8) |
| 391.30 15 | 0.29 6 | ¹²⁵ Cd(0.57 s) | 1027.53(25.8), 1173.16(25.1), 736.65(12.6) |
| 391.3 4 | †2.9 15 | ¹⁵⁵ Nd(8.9 s) | 180.574(†100), 418.99(†75), 955.08(†50) |
| 391.3 7 | 0.79 8 | ¹⁹⁹ Bi(27 m) | 560.1(22.0), 424.85(22), 841.7(11) |
| • 391.32 14 | 0.00125 21 | ¹⁵² Eu(13.542 y) | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| 391.32 9 | 14.2 9 | ¹⁵⁷ Er(18.65 m) | 53.05(24), 121.57(10.1), 150.4(3.0) |
| 391.331 16 | 0.45 11 | ¹⁶³ Tb(19.5 m) | 351.138(26), 389.734(24.3), 494.534(23) |
| 391.34 11 | 2.34 21 | ⁸¹ Ge(7.6 s) | 335.98(58.9), 792.94(34), 1495.53(19.9) |
| • 391.360 2 | 0.0030 13 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| • 391.383 18 | 0.604 5 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 391.39 5 | 11.4 9 | ¹³⁰ In(0.55 s) | 2258.79(88), 96.54(4.2), 2320.72(4.1) |
| 391.40 8 | 0.30 4 | ¹⁶⁵ Yb(9.9 m) | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 391.45 14 | 0.122 16 | ⁸³ Se(70.1 s) | 1030.86(21.2), 356.687(18), 987.96(16.1) |
| 391.5 4 | | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| 391.57 2 | 2.60 17 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| 391.60 20 | 1.45 10 | ⁸³ Y(7.08 m) | 35.50(0.44), 882.1(6.30), 489.90(5.53) |
| 391.6 4 | †96 9 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 216.0(†96) |
| • 391.60 7 | 0.0078 7 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 391.67 8 | 0.173 23 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| • 391.690 8 | 64 | ¹¹³ Sn(115.09 d) | 255.06(1.82), 638.03(0.00095), 382.6(>0.000060) |
| • 391.7 4 | 0.0019 5 | ⁹⁹ Mo(65.94 h) | 739.50(12.1), 181.063(6.08), 140.511(4.52) |
| 391.7 3 | 0.32 7 | ⁹⁹ Ag(124 s) | 264.41(65), 832.29(13.5), 805.07(12.5) |
| 391.7 | 0.015 7 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 391.7 2 | †12 3 | ¹⁵³ Ho(9.3 m) | 108.7(†100), 365.9(†92), 161.5(†83) |
| 391.76 10 | †3.5 5 | ¹⁶⁵ Lu(10.74 m) | 132.49(†100), 120.60(†100), 174.25(†47.0) |
| 391.8 5 | 2.6 13 | ¹¹³ Te(1.7 m) | 814.4(22), 1018.1(13.0), 1181.0(12.3) |
| • 391.8 5 | 0.95 7 | ¹²⁷ Sb(3.85 d) | 685.7(37), 473.0(25.7), 783.7(15.0) |
| 391.8 2 | †2.9 3 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 391.8 6 | | ¹⁹¹ Hg(50.8 m) | 252.5(57), 420.1(18.6), 578.6(17.6) |
| 391.83 8 | | ⁹³ Ru(59.7 s) | 680.68(6), 1434.73(0.73), 1015.90(0.42) |
| 391.83 8 | | ⁹³ Ru(10.8 s) | 1396.2(39), 1111.2(26.2), 2039.1(9.2) |
| 391.9 4 | 7.2 13 | ⁷³ Kr(27.0 s) | 177.8(65.8), 62.5(19.1), 454.8(15) |
| 391.9 4 | 0.13 7 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 392.0 6 | | ¹³⁴ Pr(11 m) | 293.5(†100), 299.0(†100), 1196.8(†100) |
| 392.0 6 | | ¹³⁴ Pr(17 m) | 1964.1(†100), 1904.3(†100), 1579.9(†100) |
| 392.00 20 | 0.063 11 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 392.0 4 | 0.18 9 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 392.08 9 | 0.00018 5 | ¹³⁵ La(19.5 h) | 480.51(1.5), 874.51(0.164), 587.83(0.1108) |
| 392.1 5 | 0.037 16 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| • 392.1 5 | 0.016 9 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 392.1 4 | 0.71 14 | ¹⁷⁶ Tm(1.9 m) | 189.57(44.5), 1069.3(34), 381.8(21.8) |
| • 392.1 5 | 0.00013 10 | ²⁵³ Es(20.47 d) | 41.79(0.050), 389.11(0.0264), 387.1(0.00810) |
| • 392.156 54 | 0.0344 25 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 392.16 8 | 0.318 20 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 392.2 | †20.7 | ¹⁹³ Pb(5.8 m) | 365.2(†100), 716.4(†6.7), 735.8(†5.1) |
| 392.2 | >0.021 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| 392.21 13 | 0.37 3 | ¹⁰⁵ In(5.07 m) | 131.37(41), 260.21(15.7), 604.11(9.2) |
| 392.3 4 | 0.066 8 | ¹¹² Sb(51.4 s) | 1257.05(96), 990.70(14.3), 670.0(3.7) |
| 392.3 2 | 0.020 2 | ¹¹³ Ag(5.37 h) | 298.58(10), 258.8(1.64), 316.3(1.343) |
| 392.3 2 | 11 | ¹¹³ Ag(68.7 s) | 316.3(18), 298.58(10), 583.8(3.6) |
| 392.33 7 | †22.2 6 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 392.4 | 15.7 8 | ³⁵ Si(0.78 s) | 4100.7(36.5), 3859.5(32.7), 2386.3(31.6) |
| 392.4 4 | 0.44 5 | ¹⁶² Ho(15.0 m) | 80.660(8.0), 1319.3(3.8), 1372.8(0.81) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|--|
| • 392.4 5 | †0.65 16 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 392.4 1 | 0.17 3 | ²³⁶ Th(37.5 m) | 110.8(4.2), 646.6(0.72), 196.0(0.69) |
| • 392.4 5 | 0.0016 | ²³⁹ Np(2.3565 d) | 106.125(27.2), 277.599(14.38), 228.183(10.76) |
| • 392.4 5 | | ²⁴³ Cm(29.1 y) | 277.599(14.0), 228.183(10.6), 209.753(3.29) |
| 392.42 16 | 7.1 13 | ¹⁸⁴ Hg(30.6 s) | 236.18(64), 156.24(58), 295.11(10.3) |
| 392.44 3 | 0.250 25 | ¹³³ Te(12.5 m) | 312.072(62), 407.63(27.1), 1333.21(10.67) |
| 392.44 3 | 0.11 6 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 392.47 20 | 8.8 6 | ¹⁰⁷ Rh(21.7 m) | 302.77(66), 312.21(4.8), 348.21(2.27) |
| 392.5 2 | 0.77 16 | ¹²⁶ Ba(100 m) | 233.6(19.6), 257.6(7.6), 241.0(6.0) |
| 392.5 3 | †15 2 | ¹³¹ Ce(10.3 m) | 169.42(†100), 414.25(†68), 119.18(†44) |
| 392.5 1 | 6.18 20 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 392.5 4 | 0.33 13 | ¹⁵³ Ho(2.0 m) | 295.8(67), 637.0(5.36), 688.5(3.7) |
| 392.5 4 | 0.39 20 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| • 392.514 26 | 1.338 9 | ¹⁶⁰ Tb(72.3 d) | 879.383(30.01), 298.580(25.51), 966.171(25.21) |
| 392.514 26 | †1.18 14 | ¹⁶⁰ Ho(5.02 h) | 728.18(†100), 879.383(†65.9), 962.317(†59.1) |
| 392.52 6 | 10.4 16 | ¹⁸³ Ir(58 m) | 228.70(6.9), 87.67(5.6), 282.39(4.9) |
| • 392.560 5 | 0.000205 20 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 392.6 4 | 0.023 12 | ⁹⁰ Kr(32.32 s) | 1118.69(39.0), 121.82(35.5), 539.49(30.8) |
| 392.61 8 | 0.60 4 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| • 392.63 4 | 0.00210 13 | ¹⁶¹ Tb(6.88 d) | 25.65150(23.2), 48.91562(17.0), 74.56711(10.2) |
| 392.63 10 | 0.146 23 | ¹⁹⁴ Pb(12.0 m) | 581.82(18.8), 1519.45(16.4), 203.82(16.2) |
| • 392.64 6 | 1.98 10 | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 280.41(30.2), 644.55(11.1) |
| 392.64 6 | †>31 | ¹⁰⁵ Ag(7.23 m) | 319.14(†63000), 306.25(†12800), 442.37(†5900) |
| 392.7 6 | 0.33 | ²⁰³ Bi(11.76 h) | 820.3(30), 825.2(14.6), 896.9(13) |
| 392.7 4 | 0.07 5 | ²⁴⁵ Pu(10.5 h) | 327.428(25.4), 560.13(5.4), 308.222(4.9) |
| 392.76 14 | 0.082 12 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 392.8 5 | 0.7 4 | ¹⁹⁵ Pb(15.0 m) | 383.64(106.9), 394.21(44), 878.40(24.2) |
| • 392.87 9 | | ⁸⁸ Zr(83.4 d) | |
| 392.9 1 | †0.80 8 | ¹⁷¹ Ta(23.3 m) | 49.6(†100), 506.4(†54), 501.8(†22.6) |
| 392.94 6 | 0.80 6 | ²⁰⁷ At(1.80 h) | 814.41(44.5), 588.33(19.2), 300.654(12.8) |
| 393.0 1 | 0.050 3 | ⁹¹ Sr(9.63 h) | 1024.3(33), 749.8(23.61), 652.9(8.0) |
| 393.0 4 | 0.0175 14 | ²³³ Np(36.2 m) | 312.17(0.7), 298.89(0.44), 546.9(0.280) |
| 393.1 2 | 1.3 2 | ¹⁰⁴ Mo(60 s) | 68.8(55), 69.7(17.8), 36.3(14) |
| 393.1 3 | 0.37 4 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| • 393.136 2 | 0.00035 3 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 393.2 2 | 2.1 | ¹¹⁷ Cs(8.4 s) | 204.8(15.0), 29.7(9.9), 205.6(6.8) |
| 393.2 2 | 0.45 | ¹¹⁷ Cs(8.4 s) | 204.8(15.0), 29.7(9.9), 205.6(6.8) |
| 393.2 2 | 0.85 12 | ¹¹⁹ Ag(2.1 s) | 626.4(13), 366.2(12.1), 399.1(10.9) |
| 393.2 3 | 0.23 10 | ¹²¹ Cs(155 s) | 153.9(15.2), 239.6(7.7), 427.1(3.63) |
| 393.2 1 | 0.16 8 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 393.2 2 | †4.9 12 | ¹⁵² Pr(3.24 s) | 164.2(†100), 284.9(†81.0), 72.40(†38.9) |
| 393.2 | 0.6 3 | ¹⁶⁸ Lu(6.7 m) | 198.82(28), 979.22(20), 896.12(15) |
| 393.2 6 | 2.12 16 | ¹⁷⁵ Ta(10.5 h) | 207.4(14.0), 348.5(12.0), 266.9(10.8) |
| • 393.22 11 | 0.12 3 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 393.261 11 | 1.37 3 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 393.3 2 | 0.10 3 | ¹⁰¹ Tc(14.22 m) | 306.85(88), 545.06(6.0), 127.23(2.86) |
| 393.3 | 6.7 5 | ¹⁷⁹ Pt(21.2 s) | 171.7(16), 193.1(14.2), 99.8(13.2) |
| 393.32 10 | 0.70 18 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 393.346 7 | †105.2 21 | ¹⁹⁶ Ir(1.40 h) | 521.175(†104), 447.1(†102.1), 355.684(†102) |
| • 393.346 7 | 0.0101 5 | ¹⁹⁶ Au(6.183 d) | 355.684(87), 332.983(22.9), 521.175(0.389) |
| 393.35 6 | 0.140 9 | ¹³⁷ Xe(3.818 m) | 455.490(31), 848.95(0.62), 1783.43(0.415) |
| 393.36 10 | 3.77 5 | ¹⁰⁵ Ru(4.44 h) | 724.21(47), 469.37(17.5), 676.36(15.7) |
| 393.37 9 | 9.7 4 | ⁷⁷ Rb(3.75 m) | 66.52(57), 178.99(22.2), 149.93(4.3) |
| 393.4 1 | †2.4 3 | ¹²³ La(17 s) | 92.5(†100), 937.3(†43), 153.6(†43) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|---------------------------|---|---|
| 393.4 3 | $\dagger 100$ 5 | $^{187}\text{Pb}(18.3 \text{ s})$ | 331.4($\dagger 75$), 343.5($\dagger 75$), 331.4($\dagger 60$) |
| 393.4 9 | 0.029 12 | $^{192}\text{Au}(4.94 \text{ h})$ | 316.50791(58.0), 295.95827(22.3), 2236.89(5.6) |
| 393.4 10 | 0.14 3 | $^{201}\text{Bi}(108 \text{ m})$ | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| 393.408 20 | 0.122 12 | $^{157}\text{Eu}(15.18 \text{ h})$ | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| 393.43 7 | 1.626 16 | $^{73}\text{Se}(39.8 \text{ m})$ | 67.03(2.59), 253.70(2.356), 84.0(2.03) |
| 393.46 18 | $\dagger 8.3$ 17 | $^{187}\text{Hg}(1.9 \text{ m})$ | 233.38($\dagger 100$), 376.34($\dagger 38$), 240.26($\dagger 33$) |
| 393.5 1 | 1.25 7 | $^{92}\text{Rb}(4.492 \text{ s})$ | 814.98(33), 2820.6(6.2), 569.8(5.6) |
| 393.5 1 | $\dagger 3.8 \times 10^2$ | $^{93}\text{Rb}(5.84 \text{ s})$ | 814.98($\dagger 27000$), 569.8($\dagger 800$), 963.5($\dagger 460$) |
| 393.5 2 | <0.09 | $^{116}\text{Cs}(3.84 \text{ s})$ | 524.3(76), 615.1(30.4), 622.3(10.4) |
| 393.5 2 | | $^{116}\text{Cs}(0.70 \text{ s})$ | |
| 393.5 2 | 0.10 5 | $^{129}\text{La}(11.6 \text{ m})$ | 278.6(25), 110.5(16.9), 457.0(8.0) |
| 393.50 6 | 6.7 3 | $^{139}\text{Xe}(39.68 \text{ s})$ | 218.59(56), 296.53(21.7), 174.97(11.3) |
| • 393.5 5 | 0.011 4 | $^{223}\text{Ra}(11.435 \text{ d})$ | 269.459(13.7), 154.21(5.62), 323.871(3.93) |
| • 393.529 10 | 0.220 8 | $^{67}\text{Cu}(61.83 \text{ h})$ | 184.577(48.7), 93.311(16.1), 91.266(7.0) |
| • 393.529 10 | 4.68 6 | $^{67}\text{Ga}(3.2612 \text{ d})$ | 93.311(39.2), 184.577(21.2), 300.219(16.80) |
| 393.6 2 | 0.19 | $^{142}\text{La}(91.1 \text{ m})$ | 641.285(47), 2397.8(13.3), 2542.7(10.00) |
| 393.6 3 | 0.37 18 | $^{147}\text{La}(4.015 \text{ s})$ | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 393.65 16 | $\dagger 7.6$ 8 | $^{182}\text{Ir}(15 \text{ m})$ | 273.23($\dagger 100$), 126.79($\dagger 77$), 236.3($\dagger 21.0$) |
| 393.7 2 | $\dagger 100$ | $^{91}\text{Ru}(7.6 \text{ s})$ | 1096.9($\dagger 24$), 892.8($\dagger 15$), 204.0($\dagger 6$) |
| 393.7 3 | $\dagger 42$ 4 | $^{195}\text{Pb}(15 \text{ m})$ | 883.1($\dagger 100$), 871.0($\dagger 36$), 696.0($\dagger 31$) |
| • 393.70 15 | 7.0×10^{-6} 3 | $^{233}\text{U}(1.592 \times 10^5 \text{ y})$ | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| • 393.70 | | $^{233}\text{U}(1.592 \times 10^5 \text{ y})$ | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 393.7 | | $^{235}\text{Pa}(24.5 \text{ m})$ | 652.053, 659.3, 645.896 |
| 393.74 16 | 0.58 10 | $^{197}\text{Pb}(43 \text{ m})$ | 385.85(74), 387.72(25.1), 222.45(24.6) |
| • 393.80 3 | 0.0155 22 | $^{148}\text{Pm}(5.370 \text{ d})$ | 1465.12(22), 550.284(22.00), 914.85(11.46) |
| 393.86 27 | 0.151 20 | $^{99}\text{Nb}(2.6 \text{ m})$ | 97.785(7), 253.50(3.64), 2641.3(3.64) |
| 393.9 | 93 5 | $^{150}\text{Ho}(26 \text{ s})$ | 653.3(100), 803.4(100), 550.9(88) |
| 393.9 1 | $\dagger 100$ | $^{151}\text{Yb}(1.6 \text{ s})$ | 1050.2($\dagger 100$), 1245.6($\dagger 100$), 624.8($\dagger 100$) |
| 394.0 2 | 9 | $^{141}\text{Eu}(40.0 \text{ s})$ | 384.5(5.6), 382.9(2.97), 593.1(2.95) |
| 394.0 2 | 0.60 13 | $^{141}\text{Eu}(2.7 \text{ s})$ | 882.9(0.54), 518.8(0.45), 804.4(0.44) |
| • 394.0 5 | | $^{146}\text{Eu}(4.59 \text{ d})$ | 747.2(98), 633.03(43), 634.07(37) |
| 394.00 20 | 0.040 8 | $^{153}\text{Dy}(6.4 \text{ h})$ | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 394.0 5 | 0.50 10 | $^{181}\text{Os}(105 \text{ m})$ | 238.75(44), 826.77(20), 118.03(12.9) |
| 394.00 4 | 3.12 15 | $^{193}\text{Hg}(11.8 \text{ h})$ | 257.97(61), 407.63(25), 573.25(14.2) |
| 394.0 10 | 0.008 4 | $^{214}\text{Bi}(19.9 \text{ m})$ | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| 394.03 6 | 2.236 10 | $^{62}\text{Zn}(9.186 \text{ h})$ | 596.56(26), 40.84(25.5), 548.35(15.3) |
| 394.04 4 | 0.0043 3 | $^{135}\text{La}(19.5 \text{ h})$ | 480.51(1.5), 874.51(0.164), 587.83(0.1108) |
| 394.1 7 | | $^{84}\text{Br}(31.80 \text{ m})$ | 881.610(42), 1897.761(14.7), 3927.5(6.8) |
| 394.1 3 | 0.39 5 | $^{97}\text{Rb}(169.9 \text{ ms})$ | 167.1(26), 585.2(21.0), 600.5(10.6) |
| 394.1 | | $^{199}\text{Po}(4.13 \text{ m})$ | 1002.19(19), 1034.3(16), 362.01(7) |
| 394.1 1 | 0.093 10 | $^{234}\text{Pa}(6.70 \text{ h})$ | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 394.17 12 | 0.129 18 | $^{183}\text{Au}(42.0 \text{ s})$ | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 394.19 20 | 3.4 10 | $^{175}\text{Tm}(15.2 \text{ m})$ | 514.868(65), 941.23(15), 363.942(12.7) |
| 394.20 10 | $\dagger 17.5$ 12 | $^{142}\text{Xe}(1.22 \text{ s})$ | 571.83($\dagger 100$), 657.05($\dagger 79$), 538.24($\dagger 77$) |
| 394.2 1 | $\dagger 143$ 38 | $^{157}\text{Ho}(12.6 \text{ m})$ | 279.97($\dagger 47600$), 341.16($\dagger 37000$), 193.41($\dagger 15200$) |
| 394.21 12 | 44 | $^{195}\text{Pb}(15.0 \text{ m})$ | 383.64(106.9), 878.40(24.2), 707.67(14.0) |
| • 394.23 9 | 0.00060 9 | $^{151}\text{Gd}(124 \text{ d})$ | 153.56(6.20), 243.28(5.60), 174.70(2.96) |
| 394.34 6 | 0.218 20 | $^{161}\text{Gd}(3.66 \text{ m})$ | 360.94(0.59), 314.92(22.7), 102.315(13.9) |
| 394.351 16 | 11.93 17 | $^{157}\text{Sm}(482 \text{ s})$ | 197.870(56.00), 196.461(16.8), 121.147(4.76) |
| 394.39 10 | 5.1 5 | $^{184}\text{Pt}(17.3 \text{ m})$ | 154.90(31), 191.97(27), 548.36(23.1) |
| 394.4 3 | $\dagger 16$ 3 | $^{147}\text{Ho}(5.8 \text{ s})$ | 189.1($\dagger 100$), 883.9($\dagger 100$), 486.7($\dagger 61$) |
| 394.4 5 | 0.8 3 | $^{185}\text{Ta}(49.4 \text{ m})$ | 177.59(25.7), 173.68(22.6), 65.86(3.9) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|------------------------------|---|
| 394.4 | 0.08 | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 394.41 5 | 0.392 21 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| • 394.474 8 | 0.0020 13 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 394.5 1 | †6.5 7 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 394.5 1 | †2.8 6 | ¹⁶⁹ Ta(4.9 m) | 511.0(†20.6), 28.80(†18.3), 192.4(†8) |
| • 394.5 4 | 0.043 16 | ¹⁹⁰ Ir(11.78 d) | 186.718(52.4), 605.24(39.9), 518.55(34.0) |
| 394.52 7 | 0.46 | ¹³⁷ I(24.5 s) | 1218.00(12.8), 601.05(4.80), 1302.64(4.42) |
| 394.54 8 | 0.028 10 | ¹⁵⁵ Dy(9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| 394.6 5 | 0.38 | ¹⁰¹ Cd(1.2 m) | 98.0(47), 1722.5(11), 1259.3(8) |
| 394.6 2 | 0.44 12 | ¹⁰⁸ Tc(5.17 s) | 242.25(82), 465.6(14.3), 707.81(11.4) |
| 394.6 | 86 5 | ¹⁴⁸ Tb(2.20 m) | 784.430(100), 631.947(95), 882.3(92) |
| 394.6 2 | 0.033 13 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 394.6 4 | 0.46 8 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| 394.66 9 | †0.81 7 | ¹⁸⁴ Ir(3.09 h) | 263.97(†100), 119.80(†45), 390.38(†38) |
| 394.7 3 | 0.12 3 | ⁹² Kr(1.840 s) | 142.307(64), 1218.6(60), 812.6(14.6) |
| 394.7 3 | 0.021 11 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| 394.7 1 | †3.5 9 | ¹⁷¹ Hf(12.1 h) | 122.0(†100), 662.2(†83), 347.18(†47) |
| 394.74 15 | 2.1 5 | ¹⁹⁷ Pb(8 m) | 385.85(50), 761.14(13.3), 375.48(12.8) |
| 394.8 | 37 3 | ³⁹ S(11.5 s) | 1301.7(52), 1696.5(44), 874.6(12.8) |
| 394.9 4 | 0.15 7 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 394.93 9 | 0.165 13 | ²⁰¹ Pb(9.33 h) | 331.19(79), 361.27(9.9), 945.96(7.4) |
| 395 | >0.13 | ⁹⁹ Sr(0.269 s) | 125.118(16.1), 536.12(14.0), 1198.12(9.2) |
| 395.0 3 | †5.4 7 | ¹¹¹ Ru(2.12 s) | 303.8(†100), 211.7(†77.7), 382.0(†41.3) |
| 395 | †7.8 | ¹⁶³ Lu(238 s) | 163.08(†100), 54.00(†88), 396.34(†63) |
| 395.02 41 | 0.10 4 | ¹³⁷ Nd(38.5 m) | 75.5(17.0), 580.6(13), 306.60(10.0) |
| • 395.06 40 | 0.031 19 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 395.1 4 | †21.0 14 | ⁹⁴ Kr(0.20 s) | 629.2(†100), 764.5(†71), 219.466(†67.4) |
| 395.1 3 | 0.220 25 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| 395.1 3 | †23 8 | ²³⁴ Ac(44 s) | 1847(†100), 1912(†91), 688.5(†87) |
| 395.12 20 | 0.068 12 | ¹⁵⁸ Tm(3.98 m) | 192.13(62), 335.10(16.8), 1149.83(7.6) |
| 395.14 2 | 1.11 12 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 395.16 25 | 0.68 10 | ¹⁶⁰ Yb(4.8 m) | 173.74(42.0), 215.78(20.2), 140.35(9.3) |
| • 395.2 1 | 0.0053 5 | ¹⁷⁷ Ta(56.56 h) | 112.9498(7.2), 208.3664(0.94), 1057.8(0.29) |
| 395.2 2 | †4.3 4 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 395.258 14 | 0.351 11 | ¹⁵⁹ Ho(33.05 m) | 121.012(36.2), 131.973(23.6), 309.594(17.2) |
| 395.28 8 | †35 5 | ¹³¹ Ce(10.3 m) | 169.42(†100), 414.25(†68), 119.18(†44) |
| 395.30 7 | 0.0014 | ²³⁹ U(23.45 m) | 74.664(48), 43.533(4.14), 662.24(0.18) |
| 395.4 | 0.19 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 395.4 1 | †21.0 9 | ¹⁶⁰ Lu(36.1 s) | 243.2(†100), 577.2(†10.7), 1115.3(†6.8) |
| 395.4 1 | 0.41 3 | ²⁰⁰ Po(11.5 m) | 671.0(34.0), 617.7(19.7), 434.4(9.3) |
| • 395.41 5 | | ¹⁵⁶ Tb(5.35 d) | 534.318(66.6), 199.2132(40.9), 1222.36(31.00) |
| • 395.42 6 | 0.33 3 | ¹¹⁹ Te(4.70 d) | 153.59(66), 1212.73(66), 270.53(28.0) |
| 395.444 10 | 10.8 3 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 395.48 23 | 0.79 18 | ⁷⁸ Zn(1.47 s) | 224.75(43.9), 181.68(28.1), 860.30(24.5) |
| 395.5 2 | | ¹⁰⁶ In(6.2 m) | 632.66(100), 861.16(92), 997.87(48) |
| 395.5 2 | | ¹⁰⁶ In(5.2 m) | 632.66(92), 1714.90(17.1), 861.16(10.6) |
| 395.5 3 | †2.7 3 | ¹²⁰ Cs(64 s) | 322.4(†100), 473.5(†30), 553.4(†19.1) |
| 395.5 5 | †2.2 4 | ¹⁹⁴ Tl(33.0 m) | 428.0(†100), 636.5(†23), 645.20(†13) |
| 395.50 7 | 0.08 | ²²⁷ Ra(42.2 m) | 27.36(16), 300.07(4.6), 302.65(4.3) |
| • 395.50 7 | 0.00224 25 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 395.54 4 | 48 3 | ²⁰⁶ At(30.0 m) | 700.66(98), 477.10(86), 733.73(10.2) |
| 395.6 3 | 0.00017 7 | ¹⁰⁹ Pd(13.7012 h) | 88.04(1.171), 311.4(0.032), 647.3(0.024) |
| 395.6 2 | 1.64 13 | ¹⁴¹ Eu(40.0 s) | 394.0(9), 384.5(5.6), 382.9(2.97) |
| 395.6 2 | 0.11 3 | ¹⁴¹ Eu(2.7 s) | 394.0(0.60), 882.9(0.54), 518.8(0.45) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| 395.6 3 | †138 33 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| • 395.68 10 | 0.043 5 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 395.7 4 | †0.60 17 | ¹⁵⁵ Tm(21.6 s) | 226.8(†100), 531.7(†20), 88.1(†17) |
| 395.70 10 | 0.28 5 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 395.7 2 | †5.0 15 | ¹⁵⁹ Yb(1.58 m) | 166.16(†500), 177.12(†159), 390.20(†113) |
| 395.7 2 | †7.1 5 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| 395.7 3 | 0.05 5 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 395.70 8 | 0.43 5 | ²⁰⁵ At(26.2 m) | 719.30(31), 669.41(8.6), 628.88(5.6) |
| 395.71 7 | 0.133 3 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| 395.74 5 | 1.23 9 | ²⁰⁸ At(1.63 h) | 686.527(98), 660.040(89), 177.595(48.6) |
| 395.8 8 | 0.08 4 | ⁹⁰ Rb(258 s) | 831.69(94), 1375.36(16.7), 3317.00(14.4) |
| 395.8 4 | †13 2 | ¹³⁵ Pm(49 s) | 198.5(†100), 207.2(†70), 463.5(†62) |
| 395.8 3 | 0.16 4 | ¹⁴¹ Eu(40.0 s) | 394.0(9), 384.5(5.6), 382.9(2.97) |
| 395.87 20 | 0.10 3 | ²⁴⁵ Pu(10.5 h) | 327.428(25.4), 560.13(5.4), 308.222(4.9) |
| 395.90 20 | 0.095 10 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 395.9 3 | †17 4 | ¹⁶⁶ W(18.8 s) | 125.8(†310), 224.6(†24.0), 172.5(†17.8) |
| • 395.95 10 | 0.188 5 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 396.0 3 | 0.81 9 | ⁷⁴ Kr(11.50 m) | 89.65(31), 203.0(18.0), 296.67(9.9) |
| 396.0 2 | 0.43 5 | ¹³⁶ I(83.4 s) | 1313.02(67), 1321.08(24.8), 2289.6(10.4) |
| • 396.00 10 | 34.3 16 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 929.01(20.2), 370.0(17.2) |
| • 396.0 5 | 0.00201 25 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 396.0 | †100 | ¹⁶³ Ta(10.6 s) | 451.1(†70), 448.7(†60), 210.0(†50) |
| 396.01 12 | 0.022 11 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| 396.08 8 | 0.21 3 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 396.1 7 | 0.27 5 | ²⁰¹ Bi(108 m) | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| 396.2 6 | 0.29 4 | ⁹⁵ Y(10.3 m) | 954.00(16), 2175.6(7.00), 3576.0(6.4) |
| 396.2 7 | 0.052 19 | ¹⁰⁷ In(32.4 m) | 204.97(47), 505.51(11.9), 320.92(10.2) |
| 396.2 | 0.15 | ¹¹¹ Sb(75 s) | 154.48(71), 489.1(42), 1032.6(10.0) |
| 396.2 1 | †2.0 10 | ¹⁷² Ir(2.0 s) | 227.8(†100.0), 378.4(†62.0), 448.4(†40.5) |
| 396.3 5 | 5 3 | ⁷³ Kr(27.0 s) | 177.8(65.8), 62.5(19.1), 454.8(15) |
| 396.3 3 | 0.063 18 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| • 396.329 20 | 6.40 10 | ¹⁷⁵ Yb(4.185 d) | 282.522(3.01), 113.805(1.88), 144.863(0.328) |
| 396.34 10 | †63 7 | ¹⁶³ Lu(238 s) | 163.08(†100), 54.00(†88), 371.73(†62) |
| 396.35 10 | 0.76 8 | ¹⁴⁰ Xe(13.60 s) | 805.52(20), 1413.66(12.2), 1315.05(8.2) |
| 396.4 3 | 0.14 3 | ¹⁵² Tb(4.2 m) | 344.281(20.8), 411.115(18.8), 471.9(12.2) |
| 396.4 3 | 3.0 8 | ¹⁶³ Gd(68 s) | 287.79(25), 214.0(11.5), 1562.1(9.0) |
| 396.40 5 | 0.47 9 | ¹⁶³ Tb(19.5 m) | 351.138(26), 389.734(24.3), 494.534(23) |
| 396.4 3 | †18 | ²³⁸ Pa(2.3 m) | 1015.3(†<100), 1014.6(†<100), 635.18(†88) |
| 396.42 | 3.5 11 | ³⁹ S(11.5 s) | 1301.7(52), 1696.5(44), 394.8(37) |
| 396.44 3 | 64.3 6 | ¹⁰⁸ Sn(10.30 m) | 272.75(45.5), 669.08(22.6), 168.62(19.9) |
| 396.453 | 0.0440 16 | ³⁹ Cl(55.6 m) | 1267.185(54), 250.332(46.3), 1517.508(39.2) |
| 396.49 4 | †1.16 7 | ¹⁵³ Pm(5.4 m) | 35.842(†100), 127.298(†75), 28.309(†34.6) |
| 396.5 | 0.22 4 | ¹⁹⁸ Pb(2.40 h) | 290.3(36), 365.4(19), 173.4(18) |
| 396.513 10 | 6.30 13 | ¹³⁸ Xe(14.08 m) | 258.411(31.5), 434.562(20.3), 1768.26(16.7) |
| 396.54 21 | 0.051 12 | ⁹⁰ Kr(32.32 s) | 1118.69(39.0), 121.82(35.5), 539.49(30.8) |
| 396.55 30 | 0.07 4 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| 396.55 7 | 0.0467 24 | ²¹⁰ Rn(2.4 h) | 458.25(1.7), 648.70(0.843), 570.95(0.840) |
| 396.56 10 | 6 | ¹¹⁵ Pd(25 s) | 342.71(8), 303.87(7), 556.3(6) |
| 396.6 4 | 0.174 8 | ¹¹⁷ In(43.2 m) | 553.00(100), 158.562(87), 156.02 |
| 396.6 2 | 0.91 8 | ¹²¹ Xe(40.1 m) | 252.7(13), 132.8(10.9), 445.2(7.7) |
| 396.6 3 | 0.73 10 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 396.65 10 | 0.078 10 | ²²⁴ Fr(3.30 m) | 215.985(33.1), 131.613(16.3), 836.90(9.8) |
| • 396.7 2 | 0.010 3 | ¹⁹¹ Pt(2.9 d) | 538.90(13.7), 409.44(8.0), 359.90(6.0) |
| • 396.7 1 | 8.0×10 ⁻⁶ 1 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 396.76 4 | 0.073 3 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 396.8 4 | †0.44 10 | ¹⁵⁵ Tm(21.6 s) | 226.8(†100), 531.7(†20), 88.1(†17) |
| 396.861 | 11.85 8 | ⁴³ K(22.3 h) | 372.760(87), 617.490(79.2), 593.390(11.26) |
| • 396.90 4 | 0.06 3 | ¹¹⁰ Ag(249.79 d) | 657.7622(94.0), 884.685(72.2), 937.493(34.13) |
| 396.9 4 | 0.35 4 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 396.9 3 | 0.018 5 | ¹³⁹ Cs(9.27 m) | 1283.23(8.3), 627.24(1.78), 1420.66(0.91) |
| 396.9 2 | 0.74 12 | ²³¹ Ac(7.5 m) | 282.471(39.0), 307.063(30.4), 221.399(16.8) |
| 396.94 8 | 0.74 4 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 396.97 4 | 0.72 6 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 397 | | ⁸² Zr(32 s) | 525, 278, 248 |
| 397.0 6 | †33 6 | ⁸⁷ Mo(13.4 s) | 262.5(†100), 585.5 |
| 397.0 3 | 0.86 11 | ¹¹⁸ I(8.5 m) | 605.71(99), 600.71(92), 614.42(65) |
| 397.0 3 | †5.0 11 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 234.0(†40.0) |
| 397.0 7 | †2.4 2 | ¹⁸² Ir(15 m) | 273.23(†100), 126.79(†77), 236.3(†21.0) |
| 397.02 10 | 1.48 4 | ¹⁶⁶ Lu(2.65 m) | 228.12(77.3), 337.50(41), 367.95(31.4) |
| 397.06 12 | †10.4 21 | ¹⁶⁸ Lu(5.5 m) | 1483.65(†100), 228.58(†97), 111.8(†68) |
| • 397.11 4 | 0.103 10 | ¹⁸⁹ Re(24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| • 397.14 2 | 0.0289 11 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 397.14 15 | 0.175 25 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 397.2 1 | 0.20 6 | ¹¹⁷ Cd(2.49 h) | 273.349(28), 1303.27(18.4), 344.459(17.9) |
| 397.2 2 | 23 3 | ¹³² Pm(6.3 s) | 212.5(88), 610.4(12.3), 823.5(11.4) |
| 397.2 | 0.50 25 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 397.2 3 | 63 | ¹⁵⁰ Dy(7.17 m) | |
| 397.2 3 | †1.4 5 | ¹⁷¹ Hf(12.1 h) | 122.0(†100), 662.2(†83), 347.18(†47) |
| 397.2 2 | †3.6 | ²⁵⁶ Es(7.6 h) | 861.8(†100), 231.1(†61), 172.6(†49) |
| 397.27 10 | <0.03 | ¹⁶ C(0.747 s) | 120.42(0.67), 298.22(<0.5), 276.85(<0.07) |
| 397.3 2 | †3.4 2 | ²⁰³ At(7.4 m) | 639.4(†100), 641.5(†55.8), 738.1(†38.4) |
| 397.388 17 | 7.9 4 | ¹⁹⁰ Re(3.1 m) | 186.718(48.4), 557.972(28.2), 223.811(26.0) |
| 397.388 17 | 6.2 6 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| • 397.388 17 | 6.54 21 | ¹⁹⁰ Ir(11.78 d) | 186.718(52.4), 605.24(39.9), 518.55(34.0) |
| 397.440 9 | 94.3 16 | ¹⁴⁴ La(40.8 s) | 541.20(39.2), 844.8(22.3), 585.02(7.97) |
| 397.49 11 | 0.099 12 | ¹⁹⁷ Tl(2.84 h) | 425.84(12.9), 152.22(7.2), 1411.34(4.5) |
| 397.5 2 | 1.52 9 | ¹¹⁸ Cs(14 s) | 337.4(100), 472.8(37.4), 586.6(15.4) |
| 397.50 4 | 0.133 10 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 397.5 3 | †0.92 9 | ¹⁹² Tl(9.6 m) | 422.8(†100), 634.8(†75.9), 786.3(†31.7) |
| • 397.52 5 | 0.073 5 | ¹⁴⁰ La(1.6781 d) | 1596.210(95), 487.021(45.5), 815.772(23.28) |
| • 397.54 10 | 9.3 3 | ⁷⁹ Kr(35.04 h) | 261.29(13), 606.09(8.12), 306.47(2.6) |
| 397.6 1 | 6.05 14 | ⁷⁹ Rb(22.9 m) | 688.1(23), 182.77(19.2), 143.41(13.9) |
| 397.6 | 0.30 | ⁸³ Zr(44 s) | 55.55(8), 104.97(5.70), 475.1(5.1) |
| 397.6 4 | 0.28 14 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 397.6 6 | 0.49 24 | ¹³⁰ La(8.7 m) | 357.4(81.0), 550.7(25.9), 908.0(17.0) |
| 397.67 3 | 2.02 21 | ¹¹⁸ Ag(2.0 s) | 487.77(57), 677.13(53), 1058.39(14.8) |
| 397.676 8 | 1.457 15 | ¹⁴³ Ba(14.33 s) | 211.475(25), 798.79(15.6), 980.45(11.55) |
| 397.69 20 | | ¹⁰² Nb(1.3 s) | 948.85, 847.37, 551.54 |
| 397.69 20 | 3.4 7 | ¹⁰² Nb(4.3 s) | 296.611(79), 1633.10(41), 551.54(30) |
| 397.7 4 | 12 | ¹⁰² In(24 s) | 776.6(100), 861.1(96), 593.1(30) |
| 397.7 3 | 1.19 4 | ¹³⁷ Pm(2.4 m) | 177.5(40.29), 108.6(35), 233.6(29.57) |
| • 397.7 3 | 0.79 3 | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 397.7 1 | 2.9 5 | ¹⁹⁸ Pb(2.40 h) | 290.3(36), 365.4(19), 173.4(18) |
| 397.7 1 | 0.41 4 | ²³⁰ Ac(122 s) | 454.95(8), 508.20(5.15), 1243.9(3.50) |
| • 397.7 1 | 1.87 16 | ²³⁰ Pa(17.4 d) | 951.95(1.65), 918.48(8.2), 454.95(6.27) |
| 397.7 3 | 0.027 6 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 397.75 6 | 0.600 24 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 397.81 7 | 0.026 7 | ²⁹ Al(6.56 m) | 1273.367(90.6), 2425.907(5.7), 2028.12(3.7) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| 397.81 7 | 0.00044 12 | ²⁹ P(4.140 s) | 1273.367(1.549), 2425.907(0.097), 2028.12(0.063) |
| 397.83 13 | 1.57 11 | ⁹¹ Kr(8.57 s) | 108.788(43.5), 506.592(19.1), 612.87(7.7) |
| 397.859 12 | 2.9 3 | ¹⁸³ Hf(1.067 h) | 783.754(66), 73.174(38), 459.069(27) |
| 397.9 4 | †1.7 3 | ¹⁶⁴ Hf(111 s) | 122.1(†100), 153.3(†47), 313.7(†22) |
| 397.94 5 | 0.092 7 | ⁸⁹ Br(4.40 s) | 1097.82(6.00), 997.93(4.26), 953.53(4.26) |
| 397.94 10 | 0.028 3 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 397.95 2 | 1.03 7 | ⁶⁹ As(15.2 m) | 232.69(11), 145.95(4.96), 86.78(3.44) |
| 397.98 21 | 1.75 15 | ¹⁸⁶ Tl(27.5 s) | 405.43(92), 402.72(45.9), 356.84(29.3) |
| 398.0 3 | †1.4 3 | ¹⁰¹ Nb(7.1 s) | 276.10(†100), 157.466(†32), 13.5(†32) |
| • 398 1 | 0.00048 | ¹²⁵ Sn(9.64 d) | 1067.10(10), 1089.15(4.59), 822.48(4.28) |
| 398 | | ¹²⁷ Ce(32 s) | 58.4(7.3), 253.0, 177.0 |
| 398.00 15 | †2.6 5 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| 398.0 3 | 0.09 7 | ¹⁹⁰ Au(42.8 m) | 295.78(71.0), 301.82(23.4), 597.67(9.4) |
| • 398.00 3 | 10.74 10 | ²⁰⁶ Bi(6.243 d) | 803.10(99), 881.01(66.2), 516.18(40.7) |
| • 398 7 | | ²⁴⁷ Cm(1.56×10 ⁷ y) | 402.6(72), 278.0(3.4), 287.4(2.0) |
| 398.05 5 | 0.497 17 | ¹³⁵ Ce(17.7 h) | 265.56(41.8), 300.07(23.5), 606.76(18.8) |
| 398.06 24 | †2.1 4 | ¹⁶⁵ Lu(10.74 m) | 132.49(†100), 120.60(†100), 174.25(†47.0) |
| 398.08 9 | 0.008 1 | ⁵² V(3.75 m) | 1434.068(100), 1333.649(0.588), 1530.67(0.116) |
| • 398.08 9 | †0.089 6 | ⁵² Mn(5.591 d) | 1434.068(†100.0), 935.538(†94.9), 744.233(†90.6) |
| 398.1 3 | 16 5 | ¹¹⁶ Rh(0.68 s) | 340.5(45), 738.1(12) |
| 398.1 3 | 13 3 | ¹¹⁶ Rh(0.9 s) | 340.5(90), 639.4(52), 538.4(40) |
| 398.1 2 | 4.7 4 | ¹⁵² Ho(49.5 s) | 647.2(92), 613.8(88.4), 683.3(88) |
| 398.1 2 | 0.0047 10 | ¹⁶⁷ Yb(17.5 m) | 113.34(55.3), 106.18(22.5), 176.25(21) |
| 398.1 3 | 0.16 4 | ¹⁸⁸ Hg(3.25 m) | 66.7(63), 190.1(4.40), 82.7(2.6) |
| 398.14 12 | 0.0082 12 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| • 398.15 6 | 0.0088 10 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| • 398.155 20 | 0.87 6 | ¹⁴⁷ Nd(10.98 d) | 91.105(28), 531.016(13.1), 319.411(1.95) |
| 398.2 2 | 0.53 5 | ¹⁸⁸ Tl(71 s) | 412.7(88), 592.0(61), 504.2(23.3) |
| 398.24 16 | 0.64 16 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| • 398.242 8 | 0.023 13 | ²⁰⁰ Tl(26.1 h) | 367.943(87), 1205.717(29.9), 579.298(13.8) |
| 398.3 4 | †0.48 9 | ¹²⁰ Cs(64 s) | 322.4(†100), 473.5(†30), 553.4(†19.1) |
| 398.3 7 | | ¹⁷³ Ta(3.14 h) | 172.2(18), 69.70(5.9), 90.3(5.0) |
| • 398.3 2 | 0.00056 9 | ¹⁷⁷ Ta(56.56 h) | 112.9498(7.2), 208.3664(0.94), 1057.8(0.29) |
| • 398.4 4 | 0.031 19 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 398.4 4 | 0.08 | ²²⁷ Ra(42.2 m) | 27.36(16), 300.07(4.6), 302.65(4.3) |
| 398.5 | 0.30 | ⁸³ Zr(44 s) | 55.55(8), 104.97(5.70), 475.1(5.1) |
| 398.5 2 | 0.32 4 | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 398.58 5 | 0.61 6 | ⁷¹ Zn(2.45 m) | 511.56(32), 910.27(7.8), 389.88(3.8) |
| 398.60 10 | 0.84 7 | ⁹⁹ Ag(124 s) | 264.41(65), 832.29(13.5), 805.07(12.5) |
| 398.6 2 | | ¹¹⁵ Pd(25 s) | 342.71(8), 303.87(7), 396.56(6) |
| 398.6 4 | †6.9 10 | ¹⁹³ Tl(21.6 m) | 324.37(†100), 1044.7(†59), 676.10(†48) |
| • 398.613 7 | 0.021 4 | ²⁰⁰ Tl(26.1 h) | 367.943(87), 1205.717(29.9), 579.298(13.8) |
| • 398.62 8 | 1.390 12 | ²³³ Pa(26.967 d) | 312.17(38.6), 300.34(6.62), 340.81(4.47) |
| • 398.64 15 | †2.0×10 ⁴ | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| 398.65 15 | 18.1 11 | ¹¹⁰ Rh(28.5 s) | 373.80(91), 546.90(42.4), 687.70(25.8) |
| 398.66 14 | †16.7 14 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| 398.7 3 | 0.14 4 | ¹⁰⁰ Rh(20.8 h) | 539.59(78.4), 2376.1(35.3), 1553.4(21) |
| 398.7 2 | †14.1 14 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 398.8 3 | 0.47 7 | ¹²¹ Cs(155 s) | 153.9(15.2), 239.6(7.7), 427.1(3.63) |
| 398.8 5 | 0.014 | ²³³ Th(22.3 m) | 86.477(2.7), 29.374(2.5), 459.222(1.4) |
| • 398.816 12 | 0.0446 11 | ¹⁴⁹ Gd(9.28 d) | 149.735(48.2), 298.634(28.6), 346.651(23.9) |
| 398.83 13 | 0.34 3 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 398.87 7 | 0.90 17 | ¹⁶⁷ Ho(3.1 h) | 346.547(56), 321.336(23.5), 237.873(5.0) |
| 398.9 1 | 0.37 3 | ⁹⁶ Rb(0.199 s) | 815.0(78.00), 692.0(8.0), 813.2(7.0) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|--|
| 398.9 2 | 0.336 24 | ¹⁴¹ Xe(1.73 s) | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| • 398.9 1 | 0.032 5 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 398.9 2 | 0.14 4 | ¹⁵⁷ Er(18.65 m) | 53.05(24), 391.32(14.2), 121.57(10.1) |
| 398.9 6 | 88 | ¹⁷³ Tm(8.24 h) | 461.4(6.9), 62.6(0.9) |
| 398.9 4 | 0.077 14 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 398.91 5 | 0.90 5 | ¹⁰¹ Mo(14.61 m) | 191.92(19), 590.91(16.4), 1012.47(12.8) |
| 398.92 5 | 0.35 3 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| 398.953 9 | 1.32 7 | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| 398.99 8 | 0.056 5 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| 399.0 2 | †2.8 6 | ¹⁰¹ Nb(7.1 s) | 276.10(†100), 157.466(†32), 13.5(†32) |
| 399.0 2 | †23 | ¹³⁸ Eu(12.1 s) | 346.6(†100), 544.2(†55), 685.4(†41) |
| 399.0 2 | †30 2 | ¹⁷⁵ Ir(9 s) | 105.7(†100) |
| • 399.0 | | ¹⁸⁸ Ir(41.5 h) | 155.032(29.7), 2214.62(18.7), 632.99(18) |
| • 399.0 4 | †0.16 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 399.01 5 | 0.096 3 | ⁷⁷ Ge(11.30 h) | 264.44(54), 211.03(30.8), 215.50(28.6) |
| 399.01 12 | 0.118 10 | ⁹³ Kr(1.286 s) | 253.42(41.2), 323.89(24.1), 266.83(20.6) |
| 399.05 10 | 0.93 11 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 399.1 2 | 10.9 17 | ¹¹⁹ Ag(2.1 s) | 626.4(13), 366.2(12.1), 213.4(8.8) |
| 399.1 | 0.015 6 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 399.16 5 | 5.1 6 | ⁷⁷ Zn(2.08 s) | 189.49(28.1), 473.94(19.7), 1832.0(12.4) |
| 399.2 4 | 0.09 5 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 399.3 3 | 3.50 20 | ⁶⁹ Se(27.4 s) | 97.98(66), 66.4(24.8), 691.8(16.6) |
| 399.4 | 0.27 | ⁹⁶ Y(9.6 s) | 1750.42(89), 915.0(60), 617.1(56) |
| 399.4 | 0.48 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 399.4 2 | 0.00048 | ²³⁹ U(23.45 m) | 74.664(48), 43.533(4.14), 662.24(0.18) |
| 399.41 3 | 31.8 12 | ⁸⁸ Nb(14.5 m) | 1082.53(103), 1057.01(100), 671.20(64) |
| 399.41 3 | 45.7 16 | ⁸⁸ Nb(7.8 m) | 1057.01(89.3), 1082.53(53.9), 450.52(26.6) |
| 399.43 19 | 0.77 20 | ¹⁴⁸ Ce(56 s) | 269.519(17.0), 291.724(16.7), 121.169(13.2) |
| 399.5 2 | 0.34 4 | ⁷⁶ Br(16.2 h) | 559.101(74), 657.041(15.9), 1853.67(14.7) |
| 399.5 2 | | ⁷⁶ Br(16.2 h) | 559.101(74), 657.041(15.9), 1853.67(14.7) |
| 399.5 5 | 0.39 8 | ⁸⁰ Ga(1.697 s) | 659.14(78.0), 1083.47(48.4), 1109.36(18.6) |
| 399.5 10 | >0.16 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| • 399.535 10 | 5.9×10^{-6} 3 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| • 399.57 5 | †0.181 7 | ⁵² Mn(5.591 d) | 1434.068(†100.0), 935.538(†94.9), 744.233(†90.6) |
| 399.6 5 | | ¹²⁸ Pr(3.1 s) | 550.6, 873, 799 |
| 399.62 10 | 0.030 3 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 399.64 2 | 2.436 12 | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 399.65 10 | 0.299 19 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| 399.7 5 | 0.026 7 | ⁸¹ Rb(4.576 h) | 190.38(64.0), 446.15(23.2), 510.31(5.3) |
| • 399.7 5 | | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 399.7 5 | †3.4 11 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 234.0(†40.0) |
| • 399.7 3 | 0.122 15 | ²⁵² Es(471.7 d) | 52.33(0.55), 64.42(0.274), 418.5(0.220) |
| • 399.750 15 | 0.119 7 | ¹⁷² Tm(63.6 h) | 78.7435(6.5), 1093.657(6.0), 1387.093(5.6) |
| • 399.750 15 | 0.551 14 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 399.8 6 | 0.10 3 | ³⁰ Al(3.60 s) | 2235.24(65), 1263.23(40), 3498.37(32) |
| 399.80 10 | 3.56 22 | ⁹⁹ Pd(21.4 m) | 136.00(73), 263.60(15.2), 673.38(6.9) |
| 399.84 2 | 4.7 3 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 399.86 14 | 0.16 4 | ¹⁶² Yb(18.87 m) | 163.35(40.0), 118.70(33.6), 576.10(3.24) |
| 399.87 8 | 0.51 6 | ²⁰⁸ Rn(24.35 m) | 426.78(7.07), 251.05(5.02), 350.026(3.34) |
| 399.9 2 | 5.6 9 | ¹⁰³ Zr(1.3 s) | 248(100), 164.05(94), 126.30(84) |
| 399.9 3 | 0.090 18 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 399.95 10 | 0.0221 25 | ²³⁰ Ac(122 s) | 454.95(8), 508.20(5.15), 1243.9(3.50) |
| • 399.95 10 | 0.63 3 | ²³⁰ Pa(17.4 d) | 951.95(1.65), 918.48(8.2), 454.95(6.27) |
| 399.98 16 | 0.68 10 | ²⁰⁶ At(30.0 m) | 700.66(98), 477.10(86), 395.54(48) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|--|---|
| 400.0 5 | 0.13 3 | ⁹⁶ Rh(9.90 m) | 832.57(100), 685.49(95.7), 631.71(74.5) |
| 400.0 8 | 0.318 13 | ¹³⁵ Ce(17.7 h) | 265.56(41.8), 300.07(23.5), 606.76(18.8) |
| 400.0 | 0.34 | ¹⁴⁵ Ba(4.31 s) | 96.6(17), 91.9(7), 65.9(5) |
| 400.0 3 | 0.111 17 | ¹⁸¹ Au(11.4 s) | 198.60(4.4), 2022.4(4.2), 79.40(4.2) |
| 400.0 3 | †1.1 4 | ¹⁸² Ir(15 m) | 273.23(†100), 126.79(†77), 236.3(†21.0) |
| 400.0 3 | †0.16 2 | ¹⁸⁴ Ir(3.09 h) | 263.97(†100), 119.80(†45), 390.38(†38) |
| 400.0 3 | 0.038 6 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| 400.20 | | ²⁵⁶ Md(78.1 m) | |
| • 400.010 60 | 0.147 10 | ¹²⁴ Sb(60.20 d) | 602.730(97.8), 1690.980(47.3), 722.786(10.76) |
| 400.1 3 | 0.075 25 | ¹⁰⁵ Mo(35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 400.1 2 | 1.57 24 | ¹¹⁹ Ag(2.1 s) | 626.4(13), 366.2(12.1), 399.1(10.9) |
| 400.1 3 | †12 7 | ²³⁴ Ac(44 s) | 1847(†100), 1912(†91), 688.5(†87) |
| 400.17 9 | 0.16 10 | ¹⁰⁰ Nb(1.5 s) | 535.60(45.7), 528.24(9.1), 159.547(8.8) |
| 400.20 5 | 0.013 4 | ¹²⁷ Cs(6.25 h) | 411.95(62.8), 124.70(11.37), 462.31(5.07) |
| 400.2 2 | †390 38 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| 400.27 25 | 0.26 3 | ¹²² In(1.5 s) | 1140.55(29), 2759.13(3.1), 1013.34(2.7) |
| 400.3 | †100 | ¹⁰⁷ Mo(3.5 s) | 65.7(†>92), 384.4(†57.6), 483.6(†41.6) |
| 400.30 20 | †16.0 20 | ¹⁶³ Lu(238 s) | 163.08(†100), 54.00(†88), 396.34(†63) |
| 400.4 2 | 1.56 10 | ⁹⁷ Rb(169.9 ms) | 167.1(26), 585.2(21.0), 600.5(10.6) |
| 400.4 3 | 4.1 5 | ¹¹² Rh(6.8 s) | 348.70(87), 560.5(49), 1098.6(39) |
| 400.4 | >1.1 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 400.42 16 | 0.245 16 | ⁹⁷ Zr(16.91 h) | 743.36(93), 507.64(5.03), 1147.97(2.61) |
| 400.45 97 | 0.9 6 | ¹⁷⁴ W(31 m) | 35.42(14.1), 428.83(12.7), 328.68(9.5) |
| 400.48 4 | 19.2 8 | ¹⁰⁰ Zr(7.1 s) | 504.25(31), 498.0(0.72), 103.7(0.67) |
| • 400.52 12 | 0.17 3 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| • 400.520 11 | 0.140 3 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 400.54 8 | 1.29 11 | ¹⁹⁹ Pb(90 m) | 366.90(44.2), 353.39(9.5), 1135.04(7.8) |
| 400.55 10 | †20.0 8 | ¹⁶⁵ Lu(10.74 m) | 132.49(†100), 120.60(†100), 174.25(†47.0) |
| 400.56 5 | 36.6 10 | ²⁸ Mg(20.91 h) | 30.6383(95), 1342.27(52.6), 941.72(38.3) |
| 400.6 1 | 6.0 3 | ⁷³ Br(3.4 m) | 64.9(37.0), 336.0(10.4), 699.8(9.1) |
| 400.6 2 | 1.14 16 | ¹²⁶ Ba(100 m) | 233.6(19.6), 257.6(7.6), 241.0(6.0) |
| 400.6600 110.0039 19 | | ⁷⁵ Ge(47.7 s) | 136.0008(0.020), 121.1166(0.0050), 279.5441(0.0043) |
| • 400.6600 1111.37 6 | | ⁷⁵ Se(119.779 d) | 264.6584(58.50), 136.0008(58.3), 279.5441(24.79) |
| 400.67 16 | 0.30 4 | ¹⁵¹ Dy(17.9 m) | 386.10(19.4), 49.46(18.0), 546.31(14.3) |
| 400.68 13 | 0.193 25 | ¹⁹⁷ Pb(43 m) | 385.85(74), 387.72(25.1), 222.45(24.6) |
| 400.7 3 | 0.21 5 | ⁹¹ Kr(8.57 s) | 108.788(43.5), 506.592(19.1), 612.87(7.7) |
| 400.7 5 | 0.39 4 | ¹³⁵ Pr(24 m) | 296.12(24), 82.64(13.7), 213.45(13.0) |
| 400.7 4 | 0.30 12 | ²⁰⁸ At(1.63 h) | 686.527(98), 660.040(89), 177.595(48.6) |
| • 400.74 12 | 0.007 3 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 400.74 17 | 0.065 11 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 400.8 5 | 0.043 21 | ¹⁴⁰ Cs(63.7 s) | 602.345(71.1), 908.25(11.6), 1200.25(6.39) |
| 400.80 5 | 0.173 14 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 400.8 2 | 0.71 8 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 400.8 13 | 0.024 24 | ¹⁷⁵ Ta(10.5 h) | 207.4(14.0), 348.5(12.0), 266.9(10.8) |
| 400.8 1 | 1.6 3 | ¹⁸⁷ Pt(2.35 h) | 106.46(9), 201.52(6.4), 110.04(5.7) |
| 400.80 12 | 0.68 8 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 400.89 7 | 3.94 13 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 610.68(3.93) |
| 400.9 2 | 6.2 3 | ¹⁹⁶ Bi(308 s) | 1049.21(87), 689.00(35.5), 776.6(9.1) |
| 400.9 2 | †0.14 5 | ¹⁹⁶ Bi(240 s) | 1049.21(†21.1), 371.93(†20.8), 689.00(†19.2) |
| 400.97 5 | | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| • 400.98 25 | | ¹⁷¹ Lu(8.24 d) | 739.78(47.8), 19.394(13.7), 667.404(11.04) |
| • 400.99 4 | 0.329 19 | ¹⁷⁶ Lu(3.78×10 ¹⁰ y) | 306.78(94), 201.83(86), 88.34(13.3) |
| 401.0 | 0.008 | ¹³⁵ Ce(17.7 h) | 265.56(41.8), 300.07(23.5), 606.76(18.8) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 401.00 8 | †36 4 | ¹⁶⁸ Lu(5.5 m) | 1483.65(†100), 228.58(†97), 111.8(†68) |
| 401.08 22 | 0.0116 25 | ¹³⁹ Cs(9.27 m) | 1283.23(8.3), 627.24(1.78), 1420.66(0.91) |
| • 401.15 5 | 0.0091 8 | ⁸² Br(35.30 h) | 776.517(83.5), 554.348(70.8), 619.106(43.4) |
| 401.15 5 | 0.51 8 | ⁸² Rb(6.472 h) | 776.517(84), 554.348(62.4), 619.106(37.976) |
| 401.17 10 | 1.2 3 | ¹⁵¹ Pr(18.90 s) | 880.19(13), 189.057(11.8), 484.501(11.3) |
| 401.19 7 | 2.66 11 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 401.2 3 | 0.46 9 | ⁹⁵ Rh(5.02 m) | 941.6(72), 1352.0(20.8), 677.6(5.80) |
| 401.2 2 | 16.2 17 | ¹⁰⁴ Sn(20.8 s) | 132.7(56), 912.6(42), 1407.3(15.1) |
| 401.2 2 | 0.087 16 | ¹²⁴ Cs(30.8 s) | 353.9(40), 914.8(4.0), 492.6(3.6) |
| 401.20 12 | 0.68 5 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 401.2 3 | 0.064 14 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| • 401.258 14 | 0.1911 21 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 401.3 4 | 0.0325 19 | ⁷² Ga(14.10 h) | 834.01(96), 2201.69(25.9), 629.95(24.8) |
| 401.3 5 | 0.036 8 | ¹¹² Sb(51.4 s) | 1257.05(96), 990.70(14.3), 670.0(3.7) |
| • 401.30 20 | 0.009 3 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 401.3 3 | 0.11 3 | ¹⁹³ Au(17.65 h) | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| 401.30 15 | 0.28 9 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 401.3 4 | †1.0 3 | ¹⁹⁵ Bi(183 s) | 807.6(†100), 831.7(†100), 776.2(†95) |
| 401.3 5 | 0.0028 7 | ²³⁰ Ac(122 s) | 454.95(8), 508.20(5.15), 1243.9(3.50) |
| • 401.3 5 | 0.025 6 | ²³⁰ Pa(17.4 d) | 951.95(1.65), 918.48(8.2), 454.95(6.27) |
| • 401.3 30 | †4.9×10 ³ | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| 401.31 5 | 0.42 3 | ¹⁸³ Os(9.9 h) | 1101.94(49.0), 1107.92(22.36), 1034.85(6.02) |
| • 401.323 10 | 3.35 7 | ²⁰³ Pb(51.873 h) | 279.1967(81), 680.516(0.753) |
| 401.36 5 | 2.17 10 | ¹³⁸ Xe(14.08 m) | 258.411(31.5), 434.562(20.3), 1768.26(16.7) |
| 401.4 3 | 0.22 3 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 401.4 6 | 0.054 19 | ¹⁴² Cs(1.70 s) | 359.598(27.2), 1326.46(12.92), 966.89(9.0) |
| 401.4 3 | | ¹⁴⁴ Cs(1.01 s) | 199.326(†100.0), 639.00(†21.2), 758.96(†20.6) |
| 401.44 20 | 0.0194 22 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 401.47 7 | 1.249 12 | ⁷³ Se(39.8 m) | 67.03(2.59), 253.70(2.356), 84.0(2.03) |
| 401.47 20 | 0.68 12 | ¹⁰³ Tc(54.2 s) | 346.380(17.5), 136.079(16.6), 562.90(7.0) |
| 401.5 3 | 0.046 7 | ⁹³ Kr(1.286 s) | 253.42(41.2), 323.89(24.1), 266.83(20.6) |
| 401.50 20 | 0.11 6 | ¹⁰⁶ Tc(35.6 s) | 270.07(56), 2239.30(13.6), 1969.40(8.9) |
| 401.5 | | ¹⁸⁰ Os(21.5 m) | 20.1(†100), 717.4, 667.0 |
| 401.592 13 | | ¹⁰² Nb(1.3 s) | 948.85, 397.69, 847.37 |
| 401.592 13 | 1.9 4 | ¹⁰² Nb(4.3 s) | 296.611(79), 1633.10(41), 551.54(30) |
| 401.6 3 | †95 29 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| 401.61 | | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| • 401.65 7 | 0.174 12 | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 280.41(30.2), 644.55(11.1) |
| 401.68 3 | 0.264 7 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 401.7 3 | 0.20 10 | ¹⁰² Nb(4.3 s) | 296.611(79), 1633.10(41), 551.54(30) |
| 401.74 15 | 0.0048 16 | ¹⁹⁵ Hg(9.9 h) | 779.80(7), 61.46(6.2), 585.13(1.99) |
| 401.75 5 | 4.2 4 | ⁸¹ Ge(7.6 s) | 335.98(58.9), 792.94(34), 1495.53(19.9) |
| 401.75 5 | 4.3 4 | ⁸¹ Ge(7.6 s) | 93.10(26), 335.98(12.8), 197.30(12.3) |
| 401.8 1 | 0.809 23 | ⁷⁹ Rb(22.9 m) | 688.1(23), 182.77(19.2), 143.41(13.9) |
| 401.8 4 | 0.09 3 | ¹⁰⁹ Sn(18.0 m) | 1099.4(30), 649.90(28.0), 1321.3(11.9) |
| 401.8 1 | 12.8 8 | ¹⁴⁵ Ho(2.4 s) | 339.8(15), 312.9(14.3), 334.1(13.5) |
| 401.8 2 | †3.7 4 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 401.8 2 | 0.036 10 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 401.81 1 | †1.0 4 | ²¹⁵ Bi(7.6 m) | 293.54(†100), 271.23(†5.5), 517.63(†1.9) |
| 401.81 1 | 6.37 22 | ²¹⁹ Rn(3.96 s) | 271.23(10.8), 130.59(0.119), 293.54(0.073) |
| 401.821 16 | 7.2 4 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 401.86 17 | 0.24 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 401.9 10 | | ⁷⁷ Ga(13.2 s) | 469.4(†100), 458.6(†48), 2187.3 |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|--|---|
| 401.90 5 | 0.031 4 | ¹²⁷ Cs(6.25 h) | 411.95(62.8), 124.70(11.37), 462.31(5.07) |
| 401.9 | 0.06 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 401.9 5 | 0.020 11 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 401.9 2 | 0.112 18 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| • 401.92 18 | 0.015 4 | ¹⁹⁵ Hg(41.6 h) | 261.75(30.9), 560.27(7), 387.87(2.15) |
| 401.943 17 | 2.50 25 | ¹⁶³ Tb(19.5 m) | 351.138(26), 389.734(24.3), 494.534(23) |
| 401.96 11 | 0.035 4 | ¹⁵⁵ Dy(9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| 402.00 29 | 0.043 9 | ¹¹² Ag(3.130 h) | 617.27(43), 1387.67(5.4), 606.49(3.1) |
| 402 | | ¹¹² In(14.97 m) | 617.27(4.6), 606.49(1.111), 1253.43(0.218) |
| 402.00 29 | | ¹¹² In(14.97 m) | 617.27(4.6), 606.49(1.111), 1253.43(0.218) |
| 402.0 8 | 0.29 4 | ¹⁷² Ta(36.8 m) | 214.02(46), 95.23(17.5), 1109.27(12.4) |
| 402.03 9 | 0.168 19 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| 402.06 27 | 0.093 16 | ¹⁶⁴ Yb(75.8 m) | 40.928(1.147), 675.41(0.38), 390.6(0.31) |
| 402.10 8 | 0.00068 16 | ¹⁴⁵ Pr(5.984 h) | 748.278(0.5250), 675.795(0.514), 72.500(0.261) |
| 402.15 10 | 1.62 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 402.15 10 | †18.5 20 | ¹⁵⁹ Yb(1.58 m) | 166.16(†500), 177.12(†159), 390.20(†113) |
| 402.15 2 | 0.775 20 | ²¹⁰ At(8.1 h) | 1181.39(99.3), 245.31(79), 1483.39(46.5) |
| • 402.152 12 | 0.780 8 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| • 402.173 2 | 0.072 5 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| 402.2 5 | †1.0 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 402.25 20 | 0.32 4 | ⁸⁹ Kr(3.15 m) | 220.948(20.1), 586.03(16.6), 904.27(7.2) |
| 402.3 2 | 0.055 13 | ⁷⁹ As(9.01 m) | 95.73(0.85), 364.9(1.06), 432.1(0.850) |
| 402.3 5 | †1.4 2 | ¹⁰⁴ Nb(0.92 s) | 192.2(†100), 368.4(†20), 620.2(†19.2) |
| 402.33 2 | 0.28 4 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 402.36 14 | 0.007 3 | ¹³¹ Te(25.0 m) | 149.716(69), 452.323(18.18), 1146.96(4.95) |
| 402.4 2 | 0.064 7 | ¹³⁷ Pr(1.28 h) | 836.7(1.8), 433.9(1.28), 514.0(1.08) |
| 402.4 | 5.2 5 | ¹⁷⁹ Pt(21.2 s) | 171.7(16), 193.1(14.2), 99.8(13.2) |
| 402.4 2 | †3.8 16 | ¹⁹² Bi(37 s) | 853.8(†100.0), 501.8(†80), 504.3(†39) |
| 402.4 4 | | ²⁰⁷ Po(5.80 h) | 992.33(59.3), 742.64(28.2), 911.79(16.95) |
| • 402.4 2 | 8.0×10^{-6} 8 | ²³³ U(1.592×10^5 y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 402.5 2 | †11 1 | ¹¹⁷ Pd(4.3 s) | 247.5(†100), 649.9(†41), 323.9(†37) |
| 402.5 4 | 0.09 5 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 402.5 1 | 0.00069 9 | ²²³ Fr(21.8 m) | 50.13(36.0), 79.72(9.1), 234.81(3.0) |
| • 402.5 1 | | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 402.51 10 | 3.61 20 | ¹²¹ Cd(13.5 s) | 324.976(49.5), 1040.26(16.8), 349.937(12.9) |
| • 402.51 6 | 0.007 3 | ¹⁸⁹ Re(24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| • 402.51 6 | 0.0066 6 | ¹⁸⁹ Ir(13.2 d) | 245.09(6), 69.537(3.5), 59.053(1.20) |
| 402.586 10 | 49.6 20 | ⁸⁷ Kr(76.3 m) | 2554.8(9.2), 845.43(7.34), 2558.1(3.92) |
| 402.6 3 | †20.2 15 | ⁹⁴ Kr(0.20 s) | 629.2(†100), 764.5(†71), 219.466(†67.4) |
| 402.6 1 | 0.50 | ¹⁸¹ Au(11.4 s) | 198.60(4.4), 2022.4(4.2), 79.40(4.2) |
| 402.6 | 0.16 | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| • 402.6 3 | 72 6 | ²⁴⁷ Cm(1.56×10^7 y) | 278.0(3.4), 287.4(2.0), 344.5(1.3) |
| 402.68 5 | 11.9 12 | ²⁰⁷ Rn(9.25 m) | 344.53(46), 747.15(14.2), 674.00(8) |
| 402.72 12 | 45.9 8 | ¹⁸⁶ Tl(27.5 s) | 405.43(92), 356.84(29.3), 675.22(14.2) |
| 402.73 2 | 1.4 6 | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| • 402.75 25 | | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 280.41(30.2), 644.55(11.1) |
| 402.80 20 | 0.10 2 | ¹²⁶ In(1.60 s) | 1141.11(55.9), 3344.61(21.6), 969.61(14.9) |
| 402.80 20 | 0.50 10 | ¹²⁶ In(1.64 s) | 1141.11(100), 908.58(99), 111.79(88) |
| 402.8 2 | 15 | ¹³⁹ Pm(4.15 m) | 463.1(4.1), 367.8(3.52), 756.5(1.99) |
| 402.80 13 | †18 | ¹⁸¹ Pt(51 s) | 289.29(†100), 111.97(†100), 230.15(†92) |
| 402.80 5 | | ²²³ Rn(23.2 m) | 591.8(†100), 635.2(†76), 416.0(†55) |
| 402.9 | 0.6 2 | ⁸⁸ Nb(14.5 m) | 1082.53(103), 1057.01(100), 671.20(64) |
| 402.90 4 | 0.88 13 | ¹³¹ La(59 m) | 108.081(25.0), 417.783(18.0), 365.162(16.9) |
| 402.9 1 | 4.7 12 | ¹⁴¹ Tb(3.5 s) | 293.3(16.8), 343.6(16.3), 198.4(14.8) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 402.9 3 | 0.038 6 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| • 402.97 5 | 0.2448 10 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| 403 1 | 0.011 5 | ¹¹¹ Sn(35.3 m) | 1152.98(2.7), 1914.70(1.99), 761.97(1.48) |
| 403.00 8 | 43.3 20 | ¹⁶² Gd(8.4 m) | 442.12(51), 39.0(5.1), 341.42(2.70) |
| 403.01 20 | 1.40 20 | ¹²⁴ In(2.4 s) | 1131.64(100), 969.94(52), 1072.85(47) |
| 403.02 11 | 3.25 17 | ¹⁶⁷ Ho(3.1 h) | 346.547(56), 321.336(23.5), 237.873(5.0) |
| 403.03 4 | 0.234 3 | ¹³⁵ I(6.57 h) | 1260.409(28.90), 1131.511(22.74), 1678.027(9.62) |
| • 403.094 7 | 0.0234 14 | ⁷⁶ As(26.32 h) | 559.101(45), 657.041(6.2), 1216.104(3.42) |
| 403.1 1 | 0.022 3 | ¹⁴⁵ Ce(3.01 m) | 724.33(59), 62.54(13.33), 1148.03(9.15) |
| • 403.1 5 | | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| • 403.1 1 | 0.0014 4 | ²²⁵ Ac(10.0 d) | 99.91(1.01), 150.04(0.80), 99.63(0.62) |
| 403.11 19 | 2.10 12 | ¹⁰³ Tc(54.2 s) | 346.380(17.5), 136.079(16.6), 562.90(7.0) |
| 403.19 15 | 0.30 17 | ¹³³ Sb(2.5 m) | 1096.22(43.0), 817.8(18.5), 2755(12.5) |
| 403.19 10 | 0.332 24 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| 403.2 5 | 0.19 | ¹⁰¹ Cd(1.2 m) | 98.0(47), 1722.5(11), 1259.3(8) |
| 403.2 2 | 0.021 3 | ¹⁴¹ Pm(20.90 m) | 1223.26(4.74), 886.22(2.44), 193.68(1.61) |
| 403.29 16 | 0.19 6 | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 403.3 4 | 0.77 17 | ¹⁰⁴ In(1.8 m) | 658.0(100), 834.1(99), 878.1(29.4) |
| 403.3 4 | 0.014 9 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| 403.3 2 | 0.26 6 | ¹⁰⁸ In(58.0 m) | 875.46(100), 632.96(100), 242.84(41) |
| 403.3 10 | 0.007 3 | ¹³¹ Te(25.0 m) | 149.716(69), 452.323(18.18), 1146.96(4.95) |
| • 403.3 10 | 0.040 15 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 403.4 2 | †3.3 3 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 403.5 3 | 0.19 4 | ¹⁰⁰ Rh(20.8 h) | 539.59(78.4), 2376.1(35.3), 1553.4(21) |
| 403.5 2 | 0.17 3 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| • 403.5 5 | 0.011 6 | ¹⁹¹ Pt(2.9 d) | 538.90(13.7), 409.44(8.0), 359.90(6.0) |
| 403.50 4 | 1.72 9 | ¹⁹⁹ Tl(7.42 h) | 455.46(12.4), 208.20597(12.3), 247.26(9.3) |
| • 403.505 5 | 0.0264 11 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 403.51 15 | 2.9 5 | ⁸⁰ Zn(0.545 s) | 712.53(45.1), 715.40(33.8), 964.93(15.6) |
| 403.51 5 | 0.329 17 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| 403.51 17 | 0.38 10 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| • 403.54 5 | 0.074 7 | ¹⁸⁹ Re(24.3 h) | 216.663(5.50), 219.395(4.54), 245.09(3.5) |
| 403.57 4 | 0.208 10 | ¹⁵⁵ Dy(9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| 403.6 | †8.4 8 | ¹³¹ Ce(10.3 m) | 169.42(†100), 414.25(†68), 119.18(†44) |
| 403.6 2 | 1.0 | ¹⁴⁵ La(24.8 s) | 70.0(11), 355.8(3.8), 118.2(3.6) |
| 403.6 4 | 0.050 | ¹⁸⁶ Ta(10.5 m) | 197.93(50), 214.87(42.3), 510.82(37.5) |
| 403.7 | 0.27 13 | ¹⁵³ Ho(2.0 m) | 295.8(67), 637.0(5.36), 688.5(3.7) |
| 403.74 4 | 1.41 7 | ¹⁸⁹ Pt(10.87 h) | 721.41(9.3), 94.33(7.6), 568.84(7.1) |
| 403.75 8 | 2.40 21 | ¹³⁹ Nd(5.50 h) | 113.94(40), 737.96(35), 982.2(26.4) |
| 403.8 4 | 0.028 7 | ⁹⁵ Ru(1.643 h) | 336.43(70.2), 1096.76(21.0), 626.77(17.8) |
| 403.8 1 | 43 | ¹⁴¹ Sm(10.2 m) | 438.8(37.7), 1292.6(6.8), 1600.7(4.0) |
| • 403.8 2 | 0.109 9 | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 403.86 10 | 0.12 3 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| 403.9 7 | †2.7 6 | ¹⁹⁴ Tl(33.0 m) | 428.0(†100), 636.5(†23), 645.20(†13) |
| 403.94 | 0.064 17 | ⁴⁴ K(22.13 m) | 1157.031(58), 2150.76(22.7), 2518.95(9.69) |
| • 403.957 25 | 0.124 9 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| 403.980 10 | 1.05 3 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 404 1 | †22 8 | ¹⁰³ Mo(67.5 s) | 83.4(†100), 423.91(†69), 45.8(†57) |
| 404.0 3 | 0.135 18 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| • 404.0 10 | 0.03 3 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 396.00(34.3), 929.01(20.2) |
| 404.00 20 | 0.017 4 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 404.0 2 | †1.7 3 | ¹⁶⁹ Ta(4.9 m) | 511.0(†20.6), 28.80(†18.3), 192.4(†8) |
| • 404.00 15 | 0.0143 7 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 404 1 | 0.02 | ¹⁷⁵ Ta(10.5 h) | 207.4(14.0), 348.5(12.0), 266.9(10.8) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-------------------------------------|--|
| 404 | $\dagger 1.2$ | $^{177}\text{Os}(2.8 \text{ m})$ | 84.7($\dagger 100$), 125.4($\dagger 63$), 195.8($\dagger 61$) |
| 404.0 2 | 0.22 6 | $^{190}\text{Tl}(2.6 \text{ m})$ | 416.4(79), 625.4(11.1), 683.5(8.7) |
| 404.0 | $\dagger 11 1$ | $^{191}\text{Pb}(2.18 \text{ m})$ | 387.1($\dagger 100$), 712.2($\dagger 46$), 613.5($\dagger 40$) |
| 404.004 13 | 0.779 19 | $^{166}\text{Tm}(7.70 \text{ h})$ | 778.817(18.9), 2052.36(17.2), 184.410(16.1) |
| 404.03 10 | $\dagger 6$ | $^{197}\text{Ir}(5.8 \text{ m})$ | 469.72($\dagger 100$), 430.56($\dagger 61$), 815.92($\dagger 45$) |
| • 404.046 11 | 1.310 9 | $^{131}\text{Ba}(11.50 \text{ d})$ | 496.326(47), 123.805(28.97), 216.078(19.66) |
| 404.07 9 | 26 3 | $^{108}\text{Rh}(6.0 \text{ m})$ | 433.937(88), 581.1(60), 947.27(49) |
| 404.1 3 | 0.14 5 | $^{76}\text{Rb}(39.1 \text{ s})$ | 2571.3(47), 424.0(43.4), 355.6(8.2) |
| 404.1 3 | 0.27 13 | $^{153}\text{Ho}(2.0 \text{ m})$ | 295.8(67), 637.0(5.36), 688.5(3.7) |
| 404.20 20 | 0.6 3 | $^{102}\text{Sr}(69 \text{ ms})$ | 243.80(53), 150.15(18.0), 93.89(13.4) |
| • 404.2 2 | 0.0021 5 | $^{224}\text{Ra}(3.66 \text{ d})$ | 240.987(3.97), 292.70(0.0060), 645.50(0.0052) |
| 404.2 2 | $\dagger 3 1$ | $^{220}\text{At}(224 \text{ s})$ | 240.987($\dagger 100$), 292.70($\dagger 39$), 422.04($\dagger 23$) |
| 404.213 13 | 0.036 6 | $^{183}\text{Os}(13.0 \text{ h})$ | 381.768(89.6), 114.463(20.63), 167.844(8.81) |
| 404.214 | 0.365 13 | $^{43}\text{K}(22.3 \text{ h})$ | 372.760(87), 617.490(79.2), 396.861(11.85) |
| • 404.296 5 | 0.199 3 | $^{149}\text{Gd}(9.28 \text{ d})$ | 149.735(48.2), 298.634(28.6), 346.651(23.9) |
| 404.3 3 | 1.0 2 | $^{128}\text{Sb}(9.01 \text{ h})$ | 753.82(100), 743.22(100), 314.12(61) |
| 404.36 6 | 2.28 9 | $^{133}\text{Sb}(2.5 \text{ m})$ | 1096.22(43.0), 817.8(18.5), 2755(12.5) |
| 404.36 5 | 0.86 18 | $^{193}\text{Hg}(11.8 \text{ h})$ | 257.97(61), 407.63(25), 573.25(14.2) |
| 404.39 15 | $\dagger 7.8 12$ | $^{155}\text{Nd}(8.9 \text{ s})$ | 180.574($\dagger 100$), 418.99($\dagger 75$), 955.08($\dagger 50$) |
| 404.4 2 | 5.9 6 | $^{128}\text{Sn}(59.07 \text{ m})$ | 482.3(59), 75.1(27.7), 557.3(16.5) |
| 404.4 | 0.68 15 | $^{151}\text{Er}(0.58 \text{ s})$ | 789.4(5.1), 597.4(4.4), 297.2(3.7) |
| 404.46 14 | 0.64 6 | $^{148}\text{Ba}(0.607 \text{ s})$ | 56.08(29.20), 133.53(3.88), 415.78(3.59) |
| 404.47 10 | 0.09 | $^{165}\text{Yb}(9.9 \text{ m})$ | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 404.49 9 | $\dagger 0.56 4$ | $^{184}\text{Ir}(3.09 \text{ h})$ | 263.97($\dagger 100$), 119.80($\dagger 45$), 390.38($\dagger 38$) |
| 404.5 2 | $\dagger 0.6 2$ | $^{136}\text{Pm}(107 \text{ s})$ | 373.8($\dagger 100$), 602.7($\dagger 38.4$), 857.2($\dagger 23.4$) |
| 404.5 2 | 0.82 17 | $^{136}\text{Pm}(107 \text{ s})$ | 373.8(15.0), 602.7(12.3), 857.2(12.72) |
| 404.5 5 | $\dagger 2.0 5$ | $^{142}\text{Xe}(1.22 \text{ s})$ | 571.83($\dagger 100$), 657.05($\dagger 79$), 538.24($\dagger 77$) |
| 404.5 3 | 3.1 4 | $^{192}\text{Pb}(3.5 \text{ m})$ | 1195.4(47), 608.2(17.9), 167.5(13.6) |
| 404.5 | > 0.019 | $^{195}\text{Tl}(1.16 \text{ h})$ | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| • 404.5 5 | $5.6 \times 10^{-6} 6$ | $^{253}\text{Es}(20.47 \text{ d})$ | 41.79(0.050), 389.11(0.0264), 387.1(0.00810) |
| 404.57 | 0.05 | $^{165}\text{Yb}(9.9 \text{ m})$ | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 404.61 25 | 0.0091 25 | $^{139}\text{Cs}(9.27 \text{ m})$ | 1283.23(8.3), 627.24(1.78), 1420.66(0.91) |
| • 404.7 5 | 0.025 9 | $^{153}\text{Tb}(2.34 \text{ d})$ | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 404.7 2 | $\dagger 8.7 17$ | $^{229}\text{Ac}(62.7 \text{ m})$ | 164.522($\dagger 100$), 569.1($\dagger 91$), 261.92($\dagger 39$) |
| • 404.72 6 | 0.065 7 | $^{151}\text{Pm}(28.40 \text{ h})$ | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 404.78 4 | 1.70 4 | $^{133}\text{Ce}(4.9 \text{ h})$ | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 404.8 2 | 0.084 5 | $^{111}\text{Pd}(23.4 \text{ m})$ | 580.00(0.8), 70.44(0.78), 1459.0(0.56) |
| 404.8 3 | 1.14 11 | $^{118}\text{I}(8.5 \text{ m})$ | 605.71(99), 600.71(92), 614.42(65) |
| 404.8 7 | $\dagger 1.8 10$ | $^{155}\text{Er}(5.3 \text{ m})$ | 110.12($\dagger 100$), 241.5($\dagger 65$), 234.0($\dagger 40.0$) |
| • 404.814 4 | 0.0547 16 | $^{131}\text{I}(8.02070 \text{ d})$ | 364.489(81.7), 636.989(7.17), 284.305(6.14) |
| 404.85 7 | 0.26 6 | $^{133}\text{Te}(12.5 \text{ m})$ | 312.072(62), 407.63(27.1), 1333.21(10.67) |
| 404.853 10 | 3.78 5 | $^{211}\text{Pb}(36.1 \text{ m})$ | 832.01(3.52), 427.088(1.76), 766.51(0.617) |
| 404.853 10 | | $^{215}\text{At}(0.10 \text{ ms})$ | |
| 404.99 18 | 0.054 9 | $^{93}\text{Rb}(5.84 \text{ s})$ | 432.61(17.4), 986.05(6.8), 213.429(6.7) |
| 405.0 5 | 0.09 4 | $^{109}\text{Ru}(34.5 \text{ s})$ | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 405.0 2 | 0.36 7 | $^{123}\text{Cs}(5.94 \text{ m})$ | 97.3(23), 596.7(10.1), 83.3(4.1) |
| 405.0 4 | 0.47 8 | $^{127}\text{Sn}(2.10 \text{ h})$ | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 405.0 7 | 1.38 13 | $^{129}\text{Sb}(4.40 \text{ h})$ | 812.8(43), 914.6(20.0), 544.7(17.9) |
| 405.0 5 | | $^{180}\text{Hg}(2.8 \text{ s})$ | 300.5($\dagger 100$), 381.2($\dagger 69$), 479.9($\dagger 23.0$) |
| 405.0 5 | $\dagger 17$ | $^{180}\text{Hg}(2.8 \text{ s})$ | 300.5($\dagger 100$), 381.2($\dagger 69$), 479.9($\dagger 23.0$) |
| 405.0 4 | $\dagger 0.95 10$ | $^{182}\text{Ir}(15 \text{ m})$ | 273.23($\dagger 100$), 126.79($\dagger 77$), 236.3($\dagger 21.0$) |
| 405 | | $^{241}\text{Np}(13.9 \text{ m})$ | 174.94(3.1), 132.99(0.86), 518.8(0.40) |
| • 405 2 | 0.08 | $^{253}\text{Fm}(3.00 \text{ d})$ | 271.8(2.6), 144.99(0.192), 62.47(0.16) |
| 405.01 17 | 0.210 17 | $^{197}\text{Tl}(2.84 \text{ h})$ | 425.84(12.9), 152.22(7.2), 1411.34(4.5) |

• $t_{1/2} > 1 \text{ d}$

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 405.02 13 | 0.0029 6 | ¹²³ I(13.27 h) | 158.97(83), 528.96(1.39), 440.02(0.428) |
| 405.12 8 | 7 | ¹³⁹ Nd(29.7 m) | 1074.2(2.5), 669.0(1.52), 916.9(1.52) |
| 405.121 3 | 3.3 3 | ²³¹ Ac(7.5 m) | 282.471(39.0), 307.063(30.4), 221.399(16.8) |
| 405.159 6 | 0.26 12 | ¹⁷⁵ Tm(15.2 m) | 514.868(65), 941.23(15), 363.942(12.7) |
| 405.18 5 | †11.4 7 | ⁸³ Ge(1.85 s) | 306.51(†100.0), 1193.77(†20.5), 1525.50(†13.6) |
| 405.2 5 | 0.6 | ¹⁰¹ Cd(1.2 m) | 98.0(47), 1722.5(11), 1259.3(8) |
| 405.2 2 | 0.5 2 | ¹³⁰ Sb(6.3 m) | 839.49(100), 793.53(86), 182.36(41) |
| 405.2 15 | 0.018 4 | ¹⁵⁷ Dy(8.14 h) | 326.16(92), 182.20(1.84), 83.01(0.62) |
| 405.2 1 | | ²¹² Bi(25.0 m) | 276.5, 120.9, 223.0 |
| 405.251 30 | 0.0107 5 | ¹⁶⁵ Dy(2.334 h) | 94.700(3.58), 361.68(0.84), 633.415(0.568) |
| 405.3 4 | 0.91 13 | ¹²² In(10.3 s) | 1140.55(98), 1001.58(50.7), 1190.58(20.5) |
| 405.43 15 | 92 | ¹⁸⁶ Tl(27.5 s) | 402.72(45.9), 356.84(29.3), 675.22(14.2) |
| 405.451 20 | 7.3 4 | ¹³⁴ I(52.6 m) | 847.025(95.4), 884.090(64.9), 1072.547(15.0) |
| 405.49 5 | †9.1 3 | ¹⁸⁸ Au(8.84 m) | 265.63(†100), 340.04(†23.9), 605.5(†16.3) |
| 405.5 | 0.8 4 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 405.5 | >0.14 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 405.6 1 | 0.99 5 | ²⁵¹ Fm(5.30 h) | 880.8(2.19), 453.1(1.45), 349.9(0.82) |
| 405.67 9 | 0.031 3 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 405.67 5 | 0.0143 21 | ¹⁶⁷ Yb(17.5 m) | 113.34(55.3), 106.18(22.5), 176.25(21) |
| 405.68 5 | 0.0157 25 | ¹²⁷ Cs(6.25 h) | 411.95(62.8), 124.70(11.37), 462.31(5.07) |
| • 405.701 12 | 0.0074 14 | ⁷⁷ Br(57.036 h) | 238.996(23), 520.639(22.4), 297.215(4.16) |
| 405.73 8 | †1.00 14 | ¹⁶⁰ Ho(5.02 h) | 728.18(†100), 879.383(†65.9), 962.317(†59.1) |
| 405.73 8 | 0.47 6 | ¹⁶⁰ Ho(25.6 m) | 728.18(46.9), 879.383(26.6), 962.317(25.6) |
| 405.74 3 | 0.18 4 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| 405.75 6 | 9.7 5 | ²⁰⁷ Po(5.80 h) | 992.33(59.3), 742.64(28.2), 911.79(16.95) |
| 405.8 2 | 0.23 5 | ⁹⁷ Rb(169.9 ms) | 167.1(26), 585.2(21.0), 600.5(10.6) |
| 405.80 5 | 2.12 16 | ¹⁰⁷ Ru(3.75 m) | 194.05(9.9), 847.93(5.3), 462.61(3.66) |
| 405.8 4 | 2.9 5 | ¹⁵⁴ Ho(3.10 m) | 334.6(94), 412.4(79), 477.1(55) |
| 405.8 3 | 0.031 6 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| 405.8 | >0.013 | ¹⁹⁷ Tl(2.84 h) | 425.84(12.9), 152.22(7.2), 1411.34(4.5) |
| 405.81 8 | 0.24 3 | ²⁰⁴ Bi(11.22 h) | 899.15(98), 374.72(82), 984.02(59) |
| 405.82 13 | †9 | ¹⁹⁷ Ir(5.8 m) | 469.72(†100), 430.56(†61), 815.92(†45) |
| 405.87 3 | 0.49 4 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 405.9 5 | 2.4 9 | ¹¹⁵ Te(6.7 m) | 770.40(34.2), 723.569(18), 1071.70(12.9) |
| 405.9 2 | †162 24 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| 405.91 8 | 0.174 16 | ²²⁸ Fr(39 s) | 473.7(10.2), 474.0(7.6), 410.40(6.3) |
| 406.0 4 | 1.3 7 | ⁹⁹ Y(1.470 s) | 121.761(33), 724.30(14.9), 536.2(6.6) |
| 406 | | ¹²⁹ Sb(17.7 m) | 759.8(†100.0), 657.78(†92), 433.76(†73) |
| 406.0 1 | 0.39 6 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 406.00 20 | 0.043 12 | ¹⁵⁸ Tm(3.98 m) | 192.13(62), 335.10(16.8), 1149.83(7.6) |
| • 406.00 10 | 0.0108 8 | ²⁴⁹ Cf(351 y) | 388.16(66), 333.37(14.6), 252.80(2.50) |
| • 406.03 7 | 0.042 4 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| 406.03 7 | 2.01 11 | ²⁰¹ Pb(9.33 h) | 331.19(79), 361.27(9.9), 945.96(7.4) |
| 406.06 15 | 0.052 11 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 406.08 16 | 0.266 21 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 406.1 2 | †8 2 | ¹¹³ I(6.6 s) | 462.5(†100), 622.4(†74), 351.5(†43) |
| 406.1 4 | 0.276 23 | ¹⁷² Ta(36.8 m) | 214.02(46), 95.23(17.5), 1109.27(12.4) |
| 406.1 3 | 0.22 5 | ¹⁸⁸ Hg(3.25 m) | 66.7(63), 190.1(4.40), 82.7(2.6) |
| • 406.1 1 | 0.0076 22 | ²²⁵ Ac(10.0 d) | 99.91(1.01), 150.04(0.80), 99.63(0.62) |
| 406.1 1 | 0.30 3 | ²³⁵ Th(7.1 m) | 417.0(2), 727.2(0.87), 696.1(0.64) |
| 406.14 8 | †100 | ¹⁵⁸ Ho(21.3 m) | 838.9(†84.3), 1484.1(†66.2), 166.4(†55.4) |
| 406.14 8 | †0.19 4 | ¹⁵⁸ Ho(11.3 m) | 218.21(†100.0), 98.91(†70), 945.7(†37) |
| 406.17 3 | 11.6 7 | ¹⁰⁶ Rh(131 m) | 511.842(85), 1045.83(30.4), 717.24(28.9) |
| • 406.17 3 | 13.4 4 | ¹⁰⁶ Ag(8.28 d) | 511.842(88), 1045.83(29.6), 717.24(28.9) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|----------------------------|--|--|
| 406.2 1 | 0.49 5 | ¹²⁹ La(11.6 m) | 278.6(25), 110.5(16.9), 457.0(8.0) |
| 406.2 6 | 0.37 | ²⁰³ Bi(11.76 h) | 820.3(30), 825.2(14.6), 896.9(13) |
| • 406.25 15 | 0.0233 13 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 406.3 2 | 0.63 11 | ¹⁰¹ Ag(11.1 m) | 261.0(53), 588.0(10.0), 667.3(9.8) |
| 406.34 6 | 2.40 12 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| • 406.35 15 | $\dagger 1.45 \times 10^4$ | ²⁴¹ Am(432.2 y) | 59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$) |
| 406.37 12 | 0.32 4 | ¹⁰¹ Sr(118 ms) | 128.34(18.0), 1124.82(10.9), 510.73(8.5) |
| 406.39 6 | 0.32 4 | ¹⁶² Yb(18.87 m) | 163.35(40.0), 118.70(33.6), 576.10(3.24) |
| 406.40 15 | 0.42 9 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 406.4 | $\dagger 2.4$ | ¹⁹³ Pb(5.8 m) | 365.2($\dagger 100$), 392.2($\dagger 20.7$), 716.4($\dagger 6.7$) |
| 406.47 10 | $\dagger 11.0$ | ¹⁴² Xe(1.22 s) | 571.83($\dagger 100$), 657.05($\dagger 79$), 538.24($\dagger 77$) |
| 406.5 2 | 12.1 12 | ⁷⁶ Kr(14.8 h) | 315.7(39), 270.2(21.1), 45.48(19.5) |
| 406.5 2 | $\dagger 5.9$ | ²²⁹ Ac(62.7 m) | 164.522($\dagger 100$), 569.1($\dagger 91$), 261.92($\dagger 39$) |
| 406.51 8 | $\dagger 1.32$ | ¹⁸⁴ Ir(3.09 h) | 263.97($\dagger 100$), 119.80($\dagger 45$), 390.38($\dagger 38$) |
| 406.52 5 | 5.6 3 | ¹⁵⁰ Pm(2.68 h) | 333.971(68), 1324.51(17.5), 1165.739(15.8) |
| 406.52 5 | 2.81 24 | ¹⁵⁰ Eu(12.8 h) | 333.971(4.0), 1165.739(0.257), 921.17(0.210) |
| • 406.52 5 | 0.140 14 | ¹⁵⁰ Eu(35.8 y) | 333.971(96), 439.401(80.4), 584.274(52.6) |
| 406.54 10 | 0.43 5 | ¹¹⁸ Ag(2.0 s) | 487.77(57), 677.13(53), 1058.39(14.8) |
| 406.54 13 | $\dagger 16$ | ¹⁵⁹ Yb(1.58 m) | 166.16($\dagger 500$), 177.12($\dagger 159$), 390.20($\dagger 113$) |
| 406.54 13 | $\dagger 7.0$ | ¹⁵⁹ Yb(1.58 m) | 166.16($\dagger 500$), 177.12($\dagger 159$), 390.20($\dagger 113$) |
| • 406.5865 5 | 0.512 21 | ¹⁸³ Ta(5.1 d) | 246.0591(27), 353.9912(11.2), 107.9322(11.0) |
| • 406.5865 5 | 0.028 4 | ¹⁸³ Re(70.0 d) | 162.3219(23.3), 46.4839(7.97), 291.7238(3.05) |
| 406.63 15 | 0.63 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 406.660 18 | 0.224 16 | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 406.7 3 | 0.15 5 | ¹²⁷ In(1.09 s) | 1597.7(49), 646.1(6.2), 805.1(5.6) |
| 406.7 1 | $\dagger 4.6$ | ¹⁷¹ Ta(23.3 m) | 49.6($\dagger 100$), 506.4($\dagger 54$), 501.8($\dagger 22.6$) |
| 406.7 4 | 0.34 7 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| • 406.7 3 | 5.0×10^{-6} | ²³³ U(1.592×10^5 y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 406.71 10 | 0.42 4 | ⁹³ Sr(7.423 m) | 590.238(67), 875.73(24.1), 888.13(21.8) |
| • 406.72 17 | 0.078 16 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 406.72 9 | 0.50 5 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| • 406.74 15 | 0.00083 21 | ¹⁵² Eu(13.542 y) | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| 406.8 1 | 1.3 3 | ¹⁴¹ Tb(3.5 s) | 293.3(16.8), 343.6(16.3), 198.4(14.8) |
| 406.8 2 | 0.7 3 | ¹⁵² Ho(49.5 s) | 647.2(92), 613.8(88.4), 683.3(88) |
| • 406.88 17 | 2.5×10^{-6} | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 406.9 | 0.11 | ⁹⁵ Sr(23.90 s) | 685.6(23), 2717.3(4.6), 2933.1(4.1) |
| 406.9 1 | 19.0 13 | ¹⁵⁴ Ho(3.10 m) | 334.6(94), 412.4(79), 477.1(55) |
| 406.9 3 | 0.09 3 | ¹⁵⁶ Tm(83.8 s) | 344.55(86), 452.85(17.2), 585.93(14.6) |
| 406.9 2 | 0.45 5 | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 406.93 6 | 0.112 6 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| 407.0 1 | 0.54 6 | ¹⁴² Gd(70.2 s) | 750.2(11.2), 178.90(11.20), 284.4(6.16) |
| • 407.0 10 | 0.03 3 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 396.00(34.3), 929.01(20.2) |
| 407.0 3 | 1.9 3 | ¹⁴⁷ Tb(1.7 h) | 1152.4(100), 694.4(43), 139.9(27.46) |
| 407.0 6 | 0.44 22 | ¹⁶⁶ Lu(1.41 m) | 228.12(15), 102.38(13), 285.07(11.0) |
| 407.0 1 | 0.190 20 | ²⁴⁷ Cf(3.11 h) | 294.1(0.98), 447.8(0.55), 417.9(0.34) |
| • 407.03 3 | 0.187 14 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 407.1 2 | 5.7 6 | ⁹⁷ Y(1.17 s) | 1103.0(92.6), 161.4(71.8), 1091(56) |
| 407.1 7 | 0.27 9 | ¹⁰⁴ Tc(18.3 m) | 358.0(89), 530.5(15.6), 535.1(14.7) |
| 407.1 1 | 0.82 8 | ¹¹⁷ I(2.22 m) | 325.9(75), 274.4(20.4), 661.5(5.1) |
| 407.1 1 | 2.78 24 | ¹¹⁹ Ag(2.1 s) | 626.4(13), 366.2(12.1), 399.1(10.9) |
| 407.1 4 | 1.55 16 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 407.10 10 | 0.247 20 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| • 407.1 3 | 0.062 9 | ¹⁵⁶ Tb(5.35 d) | 534.318(66.6), 199.2132(40.9), 1222.36(31.00) |
| 407.1 5 | 0.0012 5 | ²⁴³ Pu(4.956 h) | 84.0(23), 41.8(0.76), 381.7(0.56) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 407.17 7 | 9.5 12 | ¹²² In(10.8 s) | 1140.55(100), 1001.58(98.4), 103.74(81) |
| 407.176 25 | 9.7 4 | ¹⁹⁰ Re(3.1 m) | 186.718(48.4), 557.972(28.2), 223.811(26.0) |
| 407.176 25 | 8.3 6 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| • 407.176 25 | 23.9 11 | ¹⁹⁰ Ir(11.78 d) | 186.718(52.4), 605.24(39.9), 518.55(34.0) |
| 407.2 1 | 0.328 25 | ¹⁴³ Cs(1.78 s) | 195.554(13), 232.421(8.32), 306.424(6.80) |
| 407.21 5 | †76 10 | ¹⁹⁸ Ir(8 s) | 507.3(†100) |
| 407.22 41 | 0.071 21 | ¹⁴¹ Xe(1.73 s) | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| • 407.338 3 | 42.1 8 | ¹⁷² Er(49.3 h) | 610.062(44.2), 68.107(3.29), 446.025(2.96) |
| 407.351 20 | 42 3 | ¹¹⁶ Sb(60.3 m) | 1293.54(100), 972.550(72), 542.872(52) |
| 407.4 5 | 0.28 14 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 407.4 5 | 0.052 11 | ¹³⁵ Te(19.0 s) | 603.5(37.0), 266.8(10.36), 870.3(7.73) |
| 407.43 8 | 0.114 13 | ¹⁰⁰ Sr(202 ms) | 963.85(22.0), 898.50(18.9), 65.46(15.2) |
| 407.46 8 | 0.64 8 | ¹²⁵ Cd(0.57 s) | 1027.53(25.8), 1173.16(25.1), 736.65(12.6) |
| 407.5 3 | 0.50 20 | ¹¹⁸ Cs(14 s) | 337.4(100), 472.8(37.4), 586.6(15.4) |
| 407.5 3 | †17.6 19 | ¹⁴³ Tb(12 s) | 45.1(†100), 686.1(†48), 462.8(†45) |
| 407.5 | †9 | ²³⁸ Pa(2.3 m) | 1015.3(†<100), 1014.6(†<100), 635.18(†88) |
| 407.543 25 | 5.5 8 | ¹⁹⁰ Re(3.1 m) | 186.718(48.4), 557.972(28.2), 223.811(26.0) |
| 407.543 25 | 4.4 10 | ¹⁹⁰ Re(3.2 h) | 186.718(27.8), 605.24(14.9), 557.972(14.3) |
| • 407.543 25 | 4.6 7 | ¹⁹⁰ Ir(11.78 d) | 186.718(52.4), 605.24(39.9), 518.55(34.0) |
| 407.55 2 | 0.562 15 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| • 407.55 20 | 0.0090 5 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 407.60 15 | 0.090 10 | ¹⁰⁵ Ru(4.44 h) | 724.21(47), 469.37(17.5), 676.36(15.7) |
| 407.6 1 | †0.70 7 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 407.6 4 | 0.21 7 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 407.63 3 | 27.1 3 | ¹³³ Te(12.5 m) | 312.072(62), 1333.21(10.67), 719.71(8.9) |
| 407.63 4 | 25 | ¹⁹³ Hg(11.8 h) | 257.97(61), 573.25(14.2), 932.37(6.7) |
| 407.7 | 0.7 | ¹⁴⁵ Ba(4.31 s) | 96.6(17), 91.9(7), 65.9(5) |
| 407.7 3 | †2.1 4 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 407.70 5 | 0.0034 | ²³⁹ U(23.45 m) | 74.664(48), 43.533(4.14), 662.24(0.18) |
| 407.72 10 | 0.143 10 | ¹⁶³ Yb(11.05 m) | 860.28(10.1), 63.62(6.5), 123.21(1.98) |
| 407.8 1 | 0.63 5 | ²³⁷ Am(73.0 m) | 280.23(47.3), 438.4(8.3), 473.5(4.3) |
| • 407.8 2 | 0.028 | ²⁴⁵ Bk(4.94 d) | 252.80(29.1), 380.8(2.40), 385.0(0.57) |
| 407.81 2 | 2.2 | ²²⁷ Ra(42.2 m) | 27.36(16), 300.07(4.6), 302.65(4.3) |
| • 407.81 2 | 0.0362 19 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 407.9 2 | †4 1 | ¹¹⁴ Te(15.2 m) | 90.28(†100), 83.8(†67), 1417.6(†32) |
| 407.9 3 | 0.099 9 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 407.9 2 | 5.9 2 | ¹⁹⁶ Os(34.9 m) | 126.2(5.3), 315.4(2.5), 207.1(2.4) |
| 407.91 10 | 4.5 9 | ¹⁶⁶ Hf(6.77 m) | 78.76(41), 341.82(4.7), 483.05(4.1) |
| 407.94 2 | 43.0 9 | ¹⁸⁰ Lu(5.7 m) | 1199.7(24.3), 1106.00(22.7), 215.256(22.1) |
| 407.99 6 | 0.0101 10 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| • 408.00 8 | 0.040 6 | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 280.41(30.2), 644.55(11.1) |
| 408.0 2 | 0.09 5 | ¹¹⁷ Cd(3.36 h) | 1997.33(26), 1065.98(23.1), 564.397(14.7) |
| 408.0 3 | 0.50 20 | ¹¹⁸ Cs(14 s) | 337.4(100), 472.8(37.4), 586.6(15.4) |
| 408.0 | 0.09 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 408.009 8 | 0.359 12 | ¹³⁵ Xe(9.14 h) | 249.770(90), 608.151(2.90), 158.260(0.290) |
| • 408.065 10 | 0.184 3 | ¹²⁵ Sb(2.7582 y) | 427.875(30), 600.600(17.86), 635.954(11.31) |
| 408.11 5 | 0.398 10 | ¹⁴³ Ba(14.33 s) | 211.475(25), 798.79(15.6), 980.45(11.55) |
| 408.16 5 | 7.8 6 | ¹³⁰ In(0.55 s) | 1221.24(89), 774.37(46), 89.23(20.2) |
| 408.16 13 | 0.65 20 | ¹⁸⁴ Au(53.0 s) | 162.97(50), 272.98(40), 362.47(17.5) |
| 408.19 4 | 0.92 12 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 408.2 | 4.1 | ⁴⁴ Ar(11.87 m) | 182.6(66), 1703.4(57), 1886.0(31) |
| 408.2 4 | 100 | ⁸⁴ Se(3.1 m) | 498.5(2.4) |
| • 408.2 3 | 0.08 4 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 408.2 1 | 0.40 7 | ¹⁸¹ Au(11.4 s) | 198.60(4.4), 2022.4(4.2), 79.40(4.2) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 408.3 3 | †40 4 | ¹³⁷ Sm(45 s) | 380.5(†100), 163.7(†85), 531.2(†37) |
| 408.3 3 | 0.37 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 408.31 20 | 0.052 | ¹³⁷ I(24.5 s) | 1218.00(12.8), 601.05(4.80), 1302.64(4.42) |
| 408.32 4 | 50.3 15 | ²⁰⁹ Rn(28.5 m) | 745.78(22.8), 337.45(14.5), 689.26(9.7) |
| 408.36 11 | 15.3 4 | ⁸¹ Y(72.4 s) | 124.16(41.1), 79.23(24.67), 119.76(8.0) |
| 408.37 54 | 0.046 15 | ¹⁷⁴ Ta(1.05 h) | 206.50(58), 91.00(16.0), 1205.92(4.9) |
| 408.4 3 | 0.47 13 | ⁹⁷ Rb(169.9 ms) | 167.1(26), 585.2(21.0), 600.5(10.6) |
| 408.4 2 | | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| 408.4 2 | 0.025 14 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| 408.4 2 | 0.13 3 | ¹⁹³ Au(17.65 h) | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| 408.5 2 | 0.56 6 | ⁷⁷ Zn(2.08 s) | 189.49(28.1), 473.94(19.7), 1832.0(12.4) |
| • 408.5 5 | 0.019 9 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 408.50 10 | 2.07 23 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 408.58 2 | 1.24 6 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 408.68 15 | 0.126 14 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 408.7 5 | †34 3 | ⁸⁸ Se(1.52 s) | 159.2(†100), 259.2(†82), 1903.7(†64) |
| • 408.7 1 | 0.19 3 | ²⁴⁵ Bk(4.94 d) | 252.80(29.1), 380.8(2.40), 385.0(0.57) |
| 408.73 30 | 1.60 8 | ¹⁰¹ Mo(14.61 m) | 191.92(19), 590.91(16.4), 1012.47(12.8) |
| 408.74 7 | 0.023 5 | ²⁰⁰ Pt(12.5 h) | 76.21(13), 135.90(3.24), 243.71(2.49) |
| 408.80 10 | 0.0096 21 | ¹⁵⁵ Dy(9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| 408.8 | 0.16 3 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| 408.8 | 0.06 3 | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| 408.8 5 | 0.0038 | ²³³ Th(22.3 m) | 86.477(2.7), 29.374(2.5), 459.222(1.4) |
| 408.92 15 | 0.6 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 408.92 3 | 0.16 4 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 408.98 6 | 4.66 9 | ¹³⁸ Cs(33.41 m) | 1435.795(76.3), 462.796(30.7), 1009.78(29.8) |
| 408.98 6 | 0.09 | ¹³⁸ Cs(2.91 m) | 1435.795(19), 462.796(18.6), 191.96(15.4) |
| 409 | >0.009 | ⁹⁰ Nb(14.60 h) | 1129.224(92.7), 2318.968(82.03), 141.178(66.8) |
| 409.0 4 | 0.35 10 | ⁹⁷ Sr(426 ms) | 1905.0(25), 953.8(21.4), 652.2(11.4) |
| 409.049 11 | 1.41 9 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 409.1 2 | 2.5 5 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| 409.1 1 | | ¹⁷¹ Ta(23.3 m) | 49.6(†100), 506.4(†54), 501.8(†22.6) |
| 409.1 2 | 0.049 7 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 409.1 1 | 0.0035 12 | ¹⁹⁷ Pt(95.41 m) | 279.01(2.4), 130.2(0.105), 201.6(0.034) |
| 409.1 1 | †3 1 | ¹⁹⁷ Hg(23.8 h) | 279.01(†2000), 130.2(†89), 201.6(†29) |
| 409.135 10 | 2.67 13 | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| 409.2 1 | †100 11 | ¹³⁴ Pr(11 m) | 293.5(†100), 299.0(†100), 1196.8(†100) |
| 409.2 1 | †100 11 | ¹³⁴ Pr(17 m) | 1964.1(†100), 1904.3(†100), 1579.9(†100) |
| 409.23 16 | 0.24 8 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| 409.3 4 | 0.069 13 | ⁸³ Y(7.08 m) | 35.50(0.44), 882.1(6.30), 489.90(5.53) |
| 409.3 3 | 15.9 3 | ¹¹³ Rh(2.72 s) | 189.7(17.0), 219.6(3.88), 116.8(3.66) |
| 409.3 5 | 0.09 | ¹²⁵ Cd(0.57 s) | 1027.53(25.8), 1173.16(25.1), 736.65(12.6) |
| 409.3 2 | †3.3 1 | ²⁰⁰ At(43 s) | 665.9(†100), 611.1(†85.0), 484.5(†49.8) |
| • 409.33 5 | 0.0064 7 | ¹¹⁰ Ag(249.79 d) | 657.7622(94.0), 884.685(72.2), 937.493(34.13) |
| • 409.34 5 | 0.0064 7 | ¹¹⁰ Ag(249.79 d) | 657.7622(94.0), 884.685(72.2), 937.493(34.13) |
| 409.34 5 | 0.46 7 | ¹¹⁰ In(4.9 h) | 657.7622(98.3), 884.685(92.9), 937.493(68.4) |
| 409.4 2 | †17 2 | ¹³⁵ Pm(49 s) | 198.5(†100), 207.2(†70), 463.5(†62) |
| • 409.44 2 | 8.0 4 | ¹⁹¹ Pt(2.9 d) | 538.90(13.7), 359.90(6.0), 82.407(4.9) |
| • 409.44 2 | 0.096 16 | ¹⁹¹ Pt(2.9 d) | 538.90(13.7), 409.44(8.0), 359.90(6.0) |
| 409.456 5 | 1.94 5 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 409.456 5 | 6 | ²²⁸ Pa(22 h) | 911.205(4.19), 463.005(1.250), 964.770(4.25) |
| 409.5 3 | 0.84 6 | ⁸⁵ Y(2.68 h) | 231.67(84), 504.45(60), 913.93(9.0) |
| 409.5 2 | 0.16 | ¹⁴⁰ Sm(14.82 m) | 225.5(>10), 225.4(10), 140.0(5.0) |
| 409.5 | 0.25 13 | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| 409.5 7 | 2.2 3 | ¹⁶⁴ Ta(14.2 s) | 211.05(74), 376.8(22), 605.0(14) |
| 409.60 20 | 0.31 4 | ¹²⁴ In(3.17 s) | 1131.64(68), 3214.15(21.5), 997.79(21.1) |
| 409.60 20 | 1.80 20 | ¹²⁴ In(2.4 s) | 1131.64(100), 969.94(52), 1072.85(47) |
| 409.69 6 | 0.72 7 | ¹⁸⁶ Ir(2.0 h) | 137.155(27), 767.508(21.2), 630.354(18.0) |
| 409.7 1 | 0.242 22 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 409.7 2 | †2.6 3 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| 409.77 5 | 0.153 11 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 409.78 5 | 7.2 6 | ⁷⁵ Zn(10.2 s) | 228.67(28.9), 432.29(20.2), 155.94(17.2) |
| 409.79 3 | 13.2 5 | ¹²³ Ag(0.309 s) | 263.87(35.9), 591.30(8.2), 116.41(7.58) |
| 409.8 1 | 0.34 3 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 409.86 5 | 4.33 19 | ¹⁴⁶ La(6.27 s) | 258.47(64), 924.58(7.45), 702.28(6.43) |
| 409.86 5 | 81 | ¹⁴⁶ La(10.0 s) | 258.47(93), 514.75(31), 502.95(26) |
| 409.873 2 | 2.18 16 | ¹⁵⁵ Pm(41.5 s) | 778.156(8), 725.123(5.30), 761.631(1.5) |
| 409.9 2 | 0.128 16 | ¹¹³ Sb(6.67 m) | 497.96(80), 332.41(14.8), 88.25(2.7) |
| 409.92 9 | †100 11 | ²³¹ Ra(103 s) | 204.98(†93), 469.3(†75), 456.2(†59) |
| 409.97 9 | 0.7 | ¹¹³ Ag(68.7 s) | 316.3(18), 392.3(11), 298.58(10) |
| 410 1 | 0.07 5 | ⁹⁷ Zr(16.91 h) | 743.36(93), 507.64(5.03), 1147.97(2.61) |
| 410 | †5 | ¹⁷⁵ Os(1.4 m) | 125.0(†100), 181(†10.8), 248(†8.6) |
| 410.0 5 | 2.8 6 | ¹⁹¹ Hg(50.8 m) | 252.5(57), 420.1(18.6), 578.6(17.6) |
| 410 3 | 0.8 3 | ²²⁴ Th(1.05 s) | 178.1(9), 234.4(0.4), 295.7(0.3) |
| 410.0 3 | 0.0090 13 | ²⁵¹ Fm(5.30 h) | 425.4(0.95), 480.4(0.392), 358.3(0.315) |
| 410.0 5 | 0.00012 4 | ²⁵⁵ Fm(20.07 h) | 81.477(0.81), 58.477(0.67), 80.92(0.27) |
| 410.0 2 | †2 | ²⁵⁶ Es(7.6 h) | 861.8(†100), 231.1(†61), 172.6(†49) |
| • 410.02 7 | 0.034 4 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 410.10 4 | 0.44 9 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 410.12 10 | †16.8 10 | ¹⁶² Hf(37.6 s) | 173.90(†100), 196.34(†25), 22.48 |
| 410.14 18 | †4.6 9 | ¹⁸⁷ Hg(1.9 m) | 233.38(†100), 376.34(†38), 240.26(†33) |
| 410.2 2 | 0.194 20 | ¹⁴⁰ Xe(13.60 s) | 805.52(20), 1413.66(12.2), 1315.05(8.2) |
| 410.2 2 | †5.9 2 | ²⁰³ At(7.4 m) | 639.4(†100), 641.5(†55.8), 738.1(†38.4) |
| 410.21 25 | †0.31 3 | ¹⁸⁴ Ir(3.09 h) | 263.97(†100), 119.80(†45), 390.38(†38) |
| 410.22 7 | 1.41 11 | ¹⁶⁴ Tm(5.1 m) | 208.08(14.6), 314.97(10), 240.49(7.5) |
| 410.25 20 | | ¹³¹ Sn(56.0 s) | 3267.5, 2470.5, 2039.25 |
| 410.25 20 | †5.1 10 | ¹³¹ Sn(56.0 s) | 1226.03(†100), 450.03(†90), 798.50(†86) |
| • 410.274 95 | 0.0019 4 | ⁹⁹ Mo(65.94 h) | 739.50(12.1), 181.063(6.08), 140.511(4.52) |
| 410.29 3 | 0.50 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| • 410.29 4 | 0.003 | ²³⁵ U(7.038×10 ⁸ y) | 185.712(57.2), 143.764(10.96), 163.358(5.08) |
| 410.3 1 | 0.089 22 | ⁶⁶ Ga(9.49 h) | 1039.30(37), 2752.01(23.38), 833.50(5.89) |
| 410.3 3 | 1.07 11 | ⁹⁵ Rh(5.02 m) | 941.6(72), 1352.0(20.8), 677.6(5.80) |
| 410.30 20 | 1.31 7 | ⁹⁹ Pd(21.4 m) | 136.00(73), 263.60(15.2), 673.38(6.9) |
| 410.3 4 | †92 16 | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| • 410.3 1 | 0.0032 5 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| • 410.308 12 | 1.97 3 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 410.34 20 | 6.1 4 | ¹⁶⁴ Tb(3.0 m) | 168.838(25.4), 754.80(23.3), 215.07(21) |
| • 410.36 14 | 0.034 6 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 410.39 10 | 0.721 24 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 410.4 1 | 1.80 4 | ⁹² Ru(3.65 m) | 213.81(96), 259.32(92), 134.57(65.5) |
| 410.40 6 | 0.94 6 | ¹³³ Te(12.5 m) | 312.072(62), 407.63(27.1), 1333.21(10.67) |
| • 410.4 5 | | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 410.40 6 | 6.3 3 | ²²⁸ Fr(39 s) | 473.7(10.2), 474.0(7.6), 140.86(5.4) |
| • 410.42 8 | 0.008 4 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 410.44 17 | 1.23 9 | ¹⁶¹ Yb(4.2 m) | 78.20(34), 599.88(25.9), 631.45(13.9) |
| • 410.48 3 | 0.139 8 | ¹⁴⁷ Nd(10.98 d) | 91.105(28), 531.016(13.1), 319.411(1.95) |
| 410.5 3 | | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| • 410.55 15 | 0.0099 22 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| 410.6 5 | 7.00 11 | ¹³⁷ Pm(2.4 m) | 177.5(40.29), 108.6(35), 233.6(29.57) |
| 410.6 2 | >0.10 | ¹⁷⁶ Tm(1.9 m) | 189.57(44.5), 1069.3(34), 381.8(21.8) |
| 410.6 2 | 4.2 3 | ¹⁷⁶ Tm(1.9 m) | 189.57(44.5), 1069.3(34), 381.8(21.8) |
| 410.65 7 | 1.52 6 | ¹⁴⁸ Ba(0.607 s) | 56.08(29.20), 133.53(3.88), 415.78(3.59) |
| 410.66 10 | 0.115 13 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 410.666 | 0.0959 21 | ³⁹ Cl(55.6 m) | 1267.185(54), 250.332(46.3), 1517.508(39.2) |
| 410.70 20 | 0.116 13 | ¹¹² Ag(3.130 h) | 617.27(43), 1387.67(5.4), 606.49(3.1) |
| 410.7 5 | †0.83 21 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 410.7 2 | 0.14 4 | ²²¹ Fr(4.9 m) | 218.19(11.6), 99.5(0.11), 150.0(0.07) |
| 410.723 9 | 17.5 9 | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 370.509(11.0), 54.548(3.7) |
| 410.78 7 | 0.60 9 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| • 410.79 7 | 0.063 7 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| • 410.797 16 | 0.0168 5 | ¹⁶⁶ Ho(1.20×10 ³ y) | 184.410(72.6), 810.276(58.08), 711.683(55.32) |
| 410.797 16 | 0.0926 19 | ¹⁶⁶ Tm(7.70 h) | 778.817(18.9), 2052.36(17.2), 184.410(16.1) |
| 410.8 1 | 0.012 2 | ¹¹³ Ag(5.37 h) | 298.58(10), 258.8(1.64), 316.3(1.343) |
| 410.8 1 | †8.5 20 | ¹²⁹ Sb(17.7 m) | 759.8(†100.0), 657.78(†92), 433.76(†73) |
| 410.8 3 | 6.0 7 | ¹⁷⁹ Yb(8.0 m) | 592.1(75), 612.3(35.4), 381.4(9.6) |
| • 410.8 1 | 0.086 9 | ²⁴¹ Cm(32.8 d) | 471.805(71), 430.634(4.06), 132.413(3.86) |
| • 410.8 1 | | ²⁴⁵ Bk(4.94 d) | 205.879(0.040), 471.805(0.026), 164.8(0.0084) |
| 410.83 11 | 0.44 7 | ⁸¹ Sr(22.3 m) | 153.54(33.8), 147.76(30.1), 443.34(17.5) |
| 410.9 3 | 1.40 14 | ¹¹⁸ Ag(2.0 s) | 487.77(57), 677.13(53), 1058.39(14.8) |
| 410.9 2 | †2.7 9 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| • 410.9 3 | 0.639 23 | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| • 410.9 2 | | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| • 410.944 8 | 11.41 8 | ¹⁶⁶ Ho(1.20×10 ³ y) | 184.410(72.6), 810.276(58.08), 711.683(55.32) |
| 410.96 7 | 0.61 4 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 411.00 8 | 0.56 6 | ¹³⁴ I(52.6 m) | 847.025(95.4), 884.090(64.9), 1072.547(15.0) |
| 411.0 2 | †17 | ¹⁷⁷ Os(2.8 m) | 84.7(†100), 125.4(†63), 195.8(†61) |
| • 411.02 4 | 7.0×10 ⁻⁶ 3 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 411.1 2 | 0.60 17 | ¹⁰⁵ Mo(35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 411.10 4 | 0.59 4 | ²⁰⁷ At(1.80 h) | 814.41(44.5), 588.33(19.2), 300.654(12.8) |
| • 411.1 2 | †1.8×10 ⁵ 5 | ²³⁷ Pu(45.2 d) | 280.40(†870000), 298.89(†7.85×10 ⁶), 320.75(†6.48×10 ⁶) |
| • 411.115 | 2.231 21 | ¹⁵² Eu(13.542 y) | 344.281(26.58), 778.91(12.96), 1089.700(1.710) |
| 411.115 | †97 6 | ¹⁵² Tb(17.5 h) | 344.281(†1500), 586.294(†223), 271.135(†203) |
| 411.115 | 18.8 9 | ¹⁵² Tb(4.2 m) | 344.281(20.8), 471.9(12.2), 519.4(4.9) |
| 411.14 10 | 3.7 3 | ¹³⁰ In(0.55 s) | 2258.79(88), 391.39(11.4), 96.54(4.2) |
| 411.14 10 | 2.23 18 | ¹³⁰ In(0.55 s) | 1221.24(89), 774.37(46), 89.23(20.2) |
| 411.140 80 | 0.12 3 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| 411.15 2 | 0.68 6 | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 411.2 | 7 2 | ¹⁵⁰ Ho(26 s) | 653.3(100), 803.4(100), 393.9(93) |
| • 411.38 8 | 0.025 5 | ⁵⁶ Co(77.27 d) | 846.771(100), 1238.282(67.6), 2598.459(17.28) |
| 411.4 5 | 97 7 | ⁵⁴ Co(1.48 m) | 1408.1(100), 1129.9(98) |
| 411.42 10 | 2.57 14 | ⁸⁹ Kr(3.15 m) | 220.948(20.1), 586.03(16.6), 904.27(7.2) |
| 411.44 18 | 0.036 7 | ¹¹⁸ In(4.45 m) | 1229.68(96), 1050.69(81.0), 683.08(54.3) |
| • 411.48 26 | 0.0096 24 | ¹⁹¹ Pt(2.9 d) | 538.90(13.7), 409.44(8.0), 359.90(6.0) |
| 411.49 4 | 1.98 12 | ⁸⁹ Br(4.40 s) | 1097.82(6.00), 997.93(4.26), 953.53(4.26) |
| 411.49 4 | 3.88 19 | ⁹⁰ Br(1.92 s) | 962.71(1.25), 1097.82(0.91), 997.93(0.33) |
| • 411.490 2 | 22.31 9 | ¹²⁹ Cs(32.06 h) | 371.918(30.60), 548.945(3.40), 39.578(2.97) |
| • 411.491 15 | 0.0146 6 | ⁹⁹ Mo(65.94 h) | 739.50(12.1), 181.063(6.08), 140.511(4.52) |
| 411.5 1 | 0.74 5 | ¹¹⁹ Cd(2.20 m) | 1025.0(24.8), 2021.3(22.6), 720.7(17.9) |
| 411.5 1 | 1.14 17 | ¹¹⁹ Cd(2.20 m) | 1025.0(24.8), 2021.3(22.6), 720.7(17.9) |
| 411.5 2 | 0.15 4 | ¹³⁹ Nd(29.7 m) | 405.12(7), 1074.2(2.5), 669.0(1.52) |
| 411.507 22 | 1.12 8 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 411.52 7 | 1.14 18 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|------------------------------|--|
| 411.53 8 | 0.043 4 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| 411.6 7 | 0.53 10 | ²⁰¹ Bi(108 m) | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| 411.66 7 | 0.058 6 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 411.67 20 | 0.018 3 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 411.7 10 | 0.042 9 | ⁹⁹ Rh(4.7 h) | 340.71(70), 617.8(12.0), 1261.2(11) |
| 411.7 8 | 0.11 4 | ¹⁴⁰ Cs(63.7 s) | 602.345(71.1), 908.25(11.6), 1200.25(6.39) |
| 411.7 4 | 0.83 7 | ¹⁵⁰ Tb(3.48 h) | 638.05(72), 496.3(14.8), 792.5(4.39) |
| 411.7 2 | 0.044 16 | ¹⁵⁷ Er(18.65 m) | 53.05(24), 391.32(14.2), 121.57(10.1) |
| • 411.77 20 | 0.012 4 | ¹⁸⁸ Ir(41.5 h) | 155.032(29.7), 2214.62(18.7), 632.99(18) |
| 411.8 3 | †9.42 18 | ¹¹¹ Rh(11 s) | 275.4(†100.0), 230.0(†8.9), 789.0(†3.8) |
| 411.8 2 | | ¹⁹¹ Tl(5.22 m) | 452.6(†100), 470.1(†98), 391.6(†96) |
| • 411.8044 1196 | | ¹⁹⁸ Au(2.69517 d) | 675.8874(0.804), 1087.6904(0.159) |
| 411.8044 1182 7 | | ¹⁹⁸ Tl(5.3 h) | 675.8874(11), 636.4(10.1), 1200.6(9.7) |
| 411.8044 1†202 19 | | ¹⁹⁸ Tl(1.87 h) | 636.4(†202), 587.2(†185), 226.2(†19) |
| 411.82 5 | 0.061 4 | ¹²⁶ Cs(1.64 m) | 388.633(41), 491.243(5.0), 925.24(4.56) |
| 411.9 3 | 1.07 7 | ⁵⁵ Co(17.53 h) | 931.3(75), 477.2(20.2), 1408.4(16.88) |
| 411.9 | †8.0 | ¹⁰⁷ Mo(3.5 s) | 400.3(†100), 65.7(†>92), 384.4(†57.6) |
| 411.9 1 | 0.25 5 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 411.9 2 | †33.0 11 | ²⁰¹ Po(8.9 m) | 967.4(†100.0), 964.3(†85), 537.5(†24.8) |
| 411.93 5 | 0.49 5 | ²⁴⁵ Pu(10.5 h) | 327.428(25.4), 560.13(5.4), 308.222(4.9) |
| 411.95 5 | 62.8 13 | ¹²⁷ Cs(6.25 h) | 124.70(11.37), 462.31(5.07), 587.01(4.21) |
| 412.0 1 | 0.051 8 | ¹²¹ I(2.12 h) | 212.189(84), 532.08(6.07), 598.74(1.47) |
| 412 1 | 5 | ¹²⁵ Cs(45 m) | 526(24), 111.8(9), 712(3.5) |
| 412.0 5 | 0.5 3 | ¹²⁸ La(5.0 m) | 284.00(87), 479.24(54), 643.65(14.7) |
| 412.0 3 | 0.0007 4 | ¹⁵² Eu(9.274 h) | 344.281(2.44), 1314.67(0.956), 970.38(0.604) |
| 412.04 8 | 2.35 13 | ⁹¹ Kr(8.57 s) | 108.788(43.5), 506.592(19.1), 612.87(7.7) |
| • 412.05 20 | 0.00242 21 | ¹⁵³ Sm(46.27 h) | 103.1807(31.4), 69.67340(4.85), 97.4316(0.847) |
| 412.05 10 | 0.11 3 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 412.06 16 | 0.50 25 | ¹⁸⁶ Ta(10.5 m) | 197.93(50), 214.87(42.3), 510.82(37.5) |
| 412.08 8 | †1.17 8 | ¹⁸⁴ Ir(3.09 h) | 263.97(†100), 119.80(†45), 390.38(†38) |
| • 412.1 5 | 3.8 4 | ¹²⁷ Sb(3.85 d) | 685.7(37), 473.0(25.7), 783.7(15.0) |
| 412.1 3 | †4.8 9 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 234.0(†40.0) |
| 412.10 6 | 0.58 7 | ¹⁶⁴ Lu(3.14 m) | 123.3(34.0), 740.52(12.2), 262.22(10.8) |
| 412.15 16 | 1.0 3 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| 412.2 1 | 11.6 18 | ¹⁴¹ Gd(24.5 s) | 351.1(89), 223.9(64), 574.9(51) |
| 412.2 2 | 1.21 11 | ¹⁶⁶ Lu(1.41 m) | 228.12(15), 102.38(13), 285.07(11.0) |
| 412.20 10 | 0.146 19 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| • 412.27 10 | 0.030 18 | ¹⁹⁴ Au(38.02 h) | 328.455(60), 293.545(10.2), 1468.91(6.3) |
| 412.27 18 | 0.29 5 | ²⁰² Bi(1.72 h) | 960.67(99), 422.18(83.7), 657.49(60.6) |
| 412.3 3 | 2.38 25 | ⁹⁷ Sr(426 ms) | 1905.0(25), 953.8(21.4), 652.2(11.4) |
| 412.3 3 | 0.44 10 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 412.3 9 | 0.0094 18 | ¹⁵⁹ Ho(33.05 m) | 121.012(36.2), 131.973(23.6), 309.594(17.2) |
| • 412.3 3 | | ¹⁷¹ Lu(8.24 d) | 739.78(47.8), 19.394(13.7), 667.404(11.04) |
| 412.3 4 | 1.4 3 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 412.4 3 | 0.045 9 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 412.4 2 | 9.8 6 | ¹⁵⁰ Tb(5.8 m) | 638.05(100), 650.4(70), 438.37(42) |
| 412.4 2 | 0.07 | ¹⁵⁰ Tb(3.48 h) | 638.05(72), 496.3(14.8), 792.5(4.39) |
| 412.4 1 | 79 5 | ¹⁵⁴ Ho(3.10 m) | 334.6(94), 477.1(55), 406.9(19.0) |
| 412.4 1 | 15.0 8 | ¹⁵⁴ Ho(11.76 m) | 334.6(84), 873.4(12.5), 569(11.1) |
| 412.4 3 | 0.044 6 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| • 412.436 8 | 1.8×10^{-8} | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 412.5 10 | 0.15 7 | ¹³⁹ Pm(4.15 m) | 402.8(15), 463.1(4.1), 367.8(3.52) |
| 412.5 7 | 0.048 24 | ¹⁴¹ Xe(1.73 s) | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| 412.5 3 | 1.48 18 | ¹⁸⁶ Tl(27.5 s) | 405.43(92), 402.72(45.9), 356.84(29.3) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|------------------------------|---|
| 412.5 5 | 0.013 | ²³³ Th(22.3 m) | 86.477(2.7), 29.374(2.5), 459.222(1.4) |
| 412.52 5 | 0.35 5 | ²⁰⁴ Bi(11.22 h) | 899.15(98), 374.72(82), 984.02(59) |
| 412.56 10 | †56 8 | ¹⁶⁰ Eu(38 s) | 173.19(†100), 513.6(†60), 822.04(†49) |
| 412.6 5 | 0.017 6 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 412.6 2 | †1.80 21 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 412.7 6 | 0.28 17 | ⁹⁷ Rh(46.2 m) | 189.21(49), 2245.6(14), 421.55(12.7) |
| 412.7 2 | †36 6 | ¹¹⁶ Xe(56 s) | 104.5(†100), 310.7(†42), 247.7(†40) |
| 412.7 5 | 0.06 3 | ¹⁴² Ba(10.6 m) | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| 412.70 21 | †1.7 3 | ¹⁶⁵ Lu(10.74 m) | 132.49(†100), 120.60(†100), 174.25(†47.0) |
| 412.7 1 | 88 4 | ¹⁸⁸ Tl(71 s) | 592.0(61), 504.2(23.3), 772.3(11.9) |
| 412.7 2 | †10.4 16 | ¹⁹⁵ Bi(183 s) | 807.6(†100), 831.7(†100), 776.2(†95) |
| • 412.8 5 | 0.016 9 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 412.9 1 | 1.21 14 | ¹¹⁹ Ag(2.1 s) | 626.4(13), 366.2(12.1), 399.1(10.9) |
| 412.9 4 | 2.95 24 | ¹⁷⁰ Ho(2.76 m) | 258.2(37.0), 931.3(36.1), 181.6(23.8) |
| • 412.9 | >0.00017 | ¹⁷³ Lu(1.37 y) | 272.105(21.2), 78.63(11.87), 100.724(5.24) |
| 412.9 1 | †0.80 18 | ²³⁰ Ra(93 m) | 72.0(†100), 63.0(†35.4), 202.8(†27.3) |
| 412.93 13 | 0.39 9 | ¹³³ Sb(2.5 m) | 1096.22(43.0), 817.8(18.5), 2755(12.5) |
| 412.97 15 | 0.098 | ¹³⁷ I(24.5 s) | 1218.00(12.8), 601.05(4.80), 1302.64(4.42) |
| 413.0 4 | 0.0066 10 | ¹⁰⁹ Pd(13.7012 h) | 88.04(1.171), 311.4(0.032), 647.3(0.024) |
| 413.0 10 | 0.19 9 | ¹⁴⁹ Er(8.9 s) | 1171.0(9.4), 171.5(6.5), 343.9(6.3) |
| 413 | †22 | ¹⁷⁸ Os(5.0 m) | 968.7(†100), 1331.1(†94), 594.6(†72) |
| 413.029 11 | 0.308 24 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| 413.1 3 | 0.83 18 | ⁷⁸ Zn(1.47 s) | 224.75(43.9), 181.68(28.1), 860.30(24.5) |
| 413.2 1 | 0.29 17 | ⁶³ Ga(32.4 s) | 637.04(11), 627.10(10.3), 192.94(5.7) |
| 413.2 2 | 0.12 5 | ¹⁰⁴ Tc(18.3 m) | 358.0(89), 530.5(15.6), 535.1(14.7) |
| 413.2 2 | 0.66 6 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 413.2 4 | 0.62 25 | ¹⁶⁴ Tm(5.1 m) | 208.08(14.6), 314.97(10), 240.49(7.5) |
| 413.2 2 | 3.15 20 | ¹⁷⁰ Ho(2.76 m) | 258.2(37.0), 931.3(36.1), 181.6(23.8) |
| 413.2 3 | 51 4 | ¹⁷⁰ Re(8.0 s) | 305.8(86), 156.7(57) |
| • 413.2 3 | 0.038 14 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 413.27 13 | 0.40 4 | ¹⁵¹ Dy(17.9 m) | 386.10(19.4), 49.46(18.0), 546.31(14.3) |
| • 413.294 23 | 0.082 6 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 413.30 23 | 0.24 5 | ¹³¹ La(59 m) | 108.081(25.0), 417.783(18.0), 365.162(16.9) |
| 413.3 1 | 0.124 9 | ¹⁴⁹ Tb(4.118 h) | 352.24(29.43), 164.98(26.4), 388.57(18.37) |
| 413.3 1 | 0.087 23 | ¹⁷³ Ta(3.14 h) | 172.2(18), 69.70(5.9), 90.3(5.0) |
| 413.3 4 | 0.09 5 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 413.4 10 | >2.9 | ¹³² In(0.201 s) | 374.3(62), 4040.8(61), 299.2(49) |
| 413.4 3 | 0.25 4 | ¹⁴⁰ Cs(63.7 s) | 602.345(71.1), 908.25(11.6), 1200.25(6.39) |
| 413.4 1 | †5.4 12 | ¹⁷² Ir(2.0 s) | 227.8(†100.0), 378.4(†62.0), 448.4(†40.5) |
| 413.4 5 | †0.51 3 | ¹⁸⁸ Au(8.84 m) | 265.63(†100), 340.04(†23.9), 605.5(†16.3) |
| 413.40 5 | 0.65 3 | ²²⁴ Fr(3.30 m) | 215.985(33.1), 131.613(16.3), 836.90(9.8) |
| 413.430 18 | 0.0605 19 | ¹⁶⁶ Tm(7.70 h) | 778.817(18.9), 2052.36(17.2), 184.410(16.1) |
| 413.50 30 | 1.8 4 | ¹¹¹ Pd(5.5 h) | 70.44(8.3), 391.25(5.4), 632.80(3.6) |
| 413.5 3 | 0.044 15 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 413.5 | †53 11 | ¹⁸² Hg(10.83 s) | 129.3(†100), 217.7(†75), 542.9 |
| 413.53 10 | 2.27 24 | ¹⁰⁵ Ru(4.44 h) | 724.21(47), 469.37(17.5), 676.36(15.7) |
| 413.6 1 | 2.27 9 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 413.6 4 | 0.18 9 | ¹⁴⁹ Pr(2.26 m) | 138.447(11.0), 165.087(9.9), 108.520(9.5) |
| 413.6 | †20 | ¹⁸² Tl(3.1 s) | 351.8(†100), 261.8(†60), 333.2(†30) |
| 413.6 2 | 0.25 7 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 413.680 15 | 0.66 4 | ¹⁴⁷ Pr(13.4 m) | 77.9921(15), 314.675(13.2), 641.380(10.0) |
| 413.7 4 | 0.80 9 | ¹⁰⁷ In(32.4 m) | 204.97(47), 505.51(11.9), 320.92(10.2) |
| 413.70 18 | 0.43 4 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 413.7 3 | 0.29 8 | ¹⁹⁷ Pb(43 m) | 385.85(74), 387.72(25.1), 222.45(24.6) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|--|
| 413.707 6 | | ²³⁵ Pa(24.5 m) | 652.053, 659.3, 645.896 |
| • 413.707 6 | 0.001466 11 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| • 413.78 8 | 0.035 6 | ¹⁸⁸ Ir(41.5 h) | 155.032(29.7), 2214.62(18.7), 632.99(18) |
| 413.8 | 1.5 | ⁴³ Ar(5.37 m) | 975.0(34), 738.1(15), 1439.5(13) |
| 413.8 2 | 7.6 6 | ⁷⁹ Sr(2.25 m) | 39.41(28), 105.00(21.8), 218.98(5.9) |
| 413.8 3 | 2.7 5 | ¹¹⁷ Ag(5.34 s) | 135.4(48), 386.8(39.9), 298.1(21.1) |
| 413.81 3 | 3.69 24 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| • 413.81 9 | 0.0047 16 | ¹⁹³ Os(30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| 413.85 8 | 0.198 25 | ¹⁹⁹ Tl(7.42 h) | 455.46(12.4), 208.20597(12.3), 247.26(9.3) |
| 413.91 8 | 2.10 6 | ⁷⁰ Se(41.1 m) | 49.51(35.8), 426.15(29), 376.65(9.43) |
| 413.96 6 | 0.93 7 | ²⁰⁸ Rn(24.35 m) | 426.78(7.07), 251.05(5.02), 350.026(3.34) |
| 414 1 | 0.025 8 | ¹¹¹ Pd(23.4 m) | 580.00(0.8), 70.44(0.78), 1459.0(0.56) |
| 414.0 1 | | ¹²⁵ La(76 s) | 67.6(34), 43.6(3.5), 985.2 |
| 414.0 1 | †2.75 14 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 414.0 1 | 0.12 5 | ¹²⁹ La(11.6 m) | 278.6(25), 110.5(16.9), 457.0(8.0) |
| 414.0 5 | 2.17 7 | ¹³⁷ Pm(2.4 m) | 177.5(40.29), 108.6(35), 233.6(29.57) |
| 414.0 4 | †1.9 | ¹⁵⁴ Nd(25.9 s) | 151.703(†800), 799.55(†600), 180.693(†510) |
| 414.0 10 | †1.0 | ¹⁷⁹ Os(6.5 m) | 65.39(†100), 218.6(†17), 32.3(†17) |
| • 414.028 12 | 18.59 15 | ¹⁴⁸ Pm(41.29 d) | 550.284(94.5), 629.987(89), 725.673(32.7) |
| • 414.028 12 | 10.3 3 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| 414.03 4 | 72 | ¹⁸⁴ Ta(8.7 h) | 252.848(43), 920.932(32.0), 111.208(23.7) |
| • 414.057 16 | 10.1 5 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| 414.1 5 | 3.2 3 | ⁸⁰ Sr(106.3 m) | 589.0(39), 175.4(10.1), 553.4(6.9) |
| 414.1 2 | 0.29 6 | ¹⁰⁸ In(58.0 m) | 875.46(100), 632.96(100), 242.84(41) |
| 414.1 1 | 2.7 3 | ¹⁵¹ Er(0.58 s) | 789.4(5.1), 597.4(4.4), 297.2(3.7) |
| 414.1 3 | 6.1 9 | ¹⁹² Pb(3.5 m) | 1195.4(47), 608.2(17.9), 167.5(13.6) |
| 414.16 6 | 0.0104 12 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 414.2 2 | 1.60 22 | ¹⁰⁵ Mo(35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 414.2 2 | 2.6 5 | ¹¹⁹ Cs(43.0 s) | 176.05(29.7), 225.13(26), 257.9(17.4) |
| 414.24 3 | 0.153 22 | ⁶⁹ As(15.2 m) | 232.69(11), 145.95(4.96), 86.78(3.44) |
| 414.25 8 | †68 6 | ¹³¹ Ce(10.3 m) | 169.42(†100), 119.18(†44), 26.2(†43) |
| 414.26 13 | †0.299 22 | ¹⁵³ Pm(5.4 m) | 35.842(†100), 127.298(†75), 28.309(†34.6) |
| 414.3 1 | 2.81 23 | ⁹⁶ Rb(0.199 s) | 815.0(78.00), 692.0(8.0), 813.2(7.0) |
| 414.3 1 | 15.0 | ⁹⁷ Rb(169.9 ms) | 815.0(100), 692.0(16.5), 813.2(11.2) |
| • 414.30 | 0.00500 25 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 414.34 15 | 0.08 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| • 414.39 10 | 0.0033 8 | ⁷¹ As(65.28 h) | 174.954(82.00), 1095.490(4.08), 499.876(3.624) |
| 414.4 3 | | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 414.52 7 | †46.8 25 | ¹⁴² Xe(1.22 s) | 571.83(†100), 657.05(†79), 538.24(†77) |
| 414.6 1 | 0.016 4 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| 414.6 3 | 2.4 5 | ¹²⁰ In(46.2 s) | 1171.3(96), 1023.1(55), 863.7(32.5) |
| 414.6 2 | 2.16 13 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 414.6 2 | †0.90 10 | ¹⁸⁸ Au(8.84 m) | 265.63(†100), 340.04(†23.9), 605.5(†16.3) |
| 414.6 7 | 1.32 17 | ²⁰¹ Bi(108 m) | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| • 414.60 5 | 0.00030 | ²²⁶ Ra(1600 y) | 186.10(3.50), 262.27(0.0049), 600.66(0.00049) |
| 414.63 8 | 0.192 15 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 414.65 20 | 0.29 3 | ²⁰⁵ At(26.2 m) | 719.30(31), 669.41(8.6), 628.88(5.6) |
| • 414.66 19 | 0.286 25 | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 280.41(30.2), 644.55(11.1) |
| 414.78 2 | 0.95 9 | ²⁰⁴ At(9.2 m) | 684.341(95), 516.318(90), 426.253(67.5) |
| 414.8 2 | 7.6 6 | ¹⁰² Cd(5.5 m) | 481.0(63), 1036.6(12.8), 505.1(9.6) |
| • 414.8 2 | 1.0 3 | ¹²⁶ Sb(12.46 d) | 695.03(100), 666.331(100), 414.81(83.3) |
| 414.8 | 0.79 16 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 414.8 2 | †1.80 21 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 414.8 2 | †8 1 | ¹⁹¹ Pb(2.18 m) | 387.1(†100), 712.2(†46), 613.5(†40) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|------------------------------|--|
| 414.8 3 | 0.13 3 | ²³⁶ Th(37.5 m) | 110.8(4.2), 646.6(0.72), 196.0(0.69) |
| • 414.81 2 | 83.3 21 | ¹²⁶ Sb(12.46 d) | 695.03(100), 666.331(100), 720.64(53.8) |
| 414.81 2 | 86 4 | ¹²⁶ Sb(19.15 m) | 666.331(86), 695.03(82), 1035.07(1.80) |
| 414.83 3 | 0.303 14 | ¹³⁵ I(6.57 h) | 1260.409(28.90), 1131.511(22.74), 1678.027(9.62) |
| 414.9 3 | 0.07 | ¹¹³ Pd(93 s) | 95.74(3.3), 643.7(3.0), 739.63(2.4) |
| 414.92 10 | 0.34 3 | ⁸⁰ Ge(29.5 s) | 265.36(27.0), 110.4(6.5), 1564.3(4.9) |
| 415 1 | 0.16 8 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 415.00 20 | 0.64 6 | ¹²¹ Ag(0.78 s) | 314.55(32.1), 353.43(19.9), 500.61(9.3) |
| 415 | 0.11 6 | ¹³³ Te(55.4 m) | 912.671(55.28), 647.51(19.4), 863.955(15.6) |
| 415.0 1 | 1.14 16 | ¹³⁵ Nd(12.4 m) | 204.02(52), 41.43(23), 441.2(14.9) |
| 415.0 3 | 0.056 12 | ¹⁵⁸ Tm(3.98 m) | 192.13(62), 335.10(16.8), 1149.83(7.6) |
| 415.0 3 | 0.048 7 | ¹⁶³ Yb(11.05 m) | 860.28(10.1), 63.62(6.5), 123.21(1.98) |
| 415.0 5 | 0.21 11 | ¹⁶⁴ Tb(3.0 m) | 168.838(25.4), 754.80(23.3), 215.07(21) |
| 415 10 | 0.5 | ²²¹ Ra(28 s) | 149.0(9.0), 93.1(2.1), 174.1(1.6) |
| 415.068 24 | 5.4 5 | ¹⁶³ Tb(19.5 m) | 351.138(26), 389.734(24.3), 494.534(23) |
| 415.090 10 | 4.8 4 | ⁹⁹ Zr(2.1 s) | 469.140(55), 546.13(48.6), 593.990(27.4) |
| 415.1 3 | 34.7 7 | ⁷² Kr(17.2 s) | 310.0(28.5), 162.2(16.3), 576.5(12.1) |
| • 415.12 3 | 0.061 3 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| • 415.13 17 | †0.106 24 | ²²⁷ Th(18.72 d) | 235.971(†813), 50.13(†528), 256.25(†463) |
| 415.15 6 | 0.087 7 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 415.2 4 | 0.102 12 | ⁷³ Zn(23.5 s) | 218.1(6.00), 910.5(1.91), 495.6(1.48) |
| 415.2 5 | 1.62 11 | ⁸³ Se(22.3 m) | 356.687(70), 510.17(43), 224.8(32.7) |
| 415.2 5 | 0.62 7 | ⁹⁶ Rh(9.90 m) | 832.57(100), 685.49(95.7), 631.71(74.5) |
| 415.2 3 | 0.50 17 | ⁹⁹ Y(1.470 s) | 121.761(33), 724.30(14.9), 536.2(6.6) |
| 415.2 3 | 0.0107 10 | ¹⁰⁹ Pd(13.7012 h) | 88.04(1.171), 311.4(0.032), 647.3(0.024) |
| 415.2 3 | 0.030 15 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 415.2 | 0.143 22 | ²¹² Pb(10.64 h) | 238.632(43.3), 300.087(3.28), 115.183(0.592) |
| 415.23 15 | 1.24 | ¹⁵⁴ Pm(2.68 m) | 184.810(32), 81.99(15.4), 546.66(14.5) |
| 415.28 13 | 0.42 6 | ⁶⁶ Ge(2.26 h) | 43.89(28.7), 381.85(28), 272.97(10.4) |
| 415.3 2 | 0.15 | ¹⁴⁰ Sm(14.82 m) | 225.5(>10), 225.4(10), 140.0(5.0) |
| 415.3 2 | 4.0 5 | ¹⁵⁰ Tb(5.8 m) | 638.05(100), 650.4(70), 438.37(42) |
| 415.3 4 | †1.30 15 | ¹⁸² Ir(15 m) | 273.23(†100), 126.79(†77), 236.3(†21.0) |
| 415.32 18 | †1.09 11 | ¹⁰² Tc(4.35 m) | 475.070(†115), 628.05(†35.3), 631.28(†21.3) |
| • 415.32 18 | 2.1 3 | ¹⁰² Rh(2.9 y) | 475.070(95), 631.28(55.9), 697.49(43.9) |
| • 415.32 18 | †0.031 21 | ¹⁰² Rh(207 d) | 475.070(†47), 628.05(†4.6), 1103.16(†2.99) |
| 415.34 5 | 0.26 11 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 415.4 3 | 0.43 13 | ¹¹⁰ Ru(14.6 s) | 112.2(25.00), 166.1(0.65), 116.1(0.45) |
| 415.4 | 0.098 24 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 415.4 3 | 0.119 25 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| • 415.4 5 | >0.009 | ¹⁹² Ir(73.831 d) | 205.79549(3.300), 484.5780(3.184), 374.4852(0.721) |
| • 415.4 5 | >0.009 | ¹⁹² Ir(73.831 d) | 316.50791(82.81), 468.07152(47.83), 308.45692(30.00) |
| 415.411 15 | 10.6 6 | ¹⁷⁹ Re(19.5 m) | 430.221(28), 289.968(26.9), 1680.244(13.0) |
| 415.5 4 | 0.019 9 | ⁹⁸ Nb(51.3 m) | 787.374(93), 722.645(73.8), 1168.830(17.8) |
| 415.50 21 | 0.08 | ¹¹¹ Pd(23.4 m) | 580.00(0.8), 70.44(0.78), 1459.0(0.56) |
| 415.50 21 | 1.6 4 | ¹¹¹ Pd(5.5 h) | 70.44(8.3), 391.25(5.4), 632.80(3.6) |
| 415.5 3 | 0.61 12 | ¹²⁶ Ba(100 m) | 233.6(19.6), 257.6(7.6), 241.0(6.0) |
| 415.5 3 | 0.36 5 | ¹⁴⁹ Dy(4.20 m) | 100.8(15.2), 789.4(11.8), 1776.3(11.1) |
| 415.5 2 | 0.0041 10 | ¹⁶⁷ Yb(17.5 m) | 113.34(55.3), 106.18(22.5), 176.25(21) |
| 415.54 18 | 1.09 11 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 415.580 17 | 1.12 3 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 415.6 5 | †1.7 4 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 415.61 15 | 8.5 4 | ¹⁸⁶ Au(10.7 m) | 191.56(62), 298.67(25.4), 764.89(10.5) |
| 415.7 3 | †2.1 5 | ⁸² Ga(0.602 s) | 1348.07(†100), 2215.0(†22.0), 867.46(†13.4) |
| • 415.7 4 | 0.050 25 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|---|---|
| 415.70 4 | 0.0130 18 | ²⁰⁵ Hg(5.2 m) | 203.750(2.2), 1218.96(0.0062), 1136.56(0.0046) |
| 415.71 6 | 1.29 6 | ¹⁴⁶ Ce(13.52 m) | 316.74(56), 218.23(20.8), 264.56(9.0) |
| • 415.72 12 | 0.022 5 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| • 415.76 4 | 1.745 16 | ²³³ Pa(26.967 d) | 312.17(38.6), 300.34(6.62), 340.81(4.47) |
| 415.78 6 | 3.59 9 | ¹⁴⁸ Ba(0.607 s) | 56.08(29.20), 133.53(3.88), 98.5(2.89) |
| 415.79 25 | 0.110 16 | ¹⁶⁴ Yb(75.8 m) | 40.928(1.147), 675.41(0.38), 390.6(0.31) |
| 415.8 1 | †100 | ¹⁵¹ Yb(1.6 s) | 1050.2(†100), 1245.6(†100), 624.8(†100) |
| 415.8 4 | 0.40 9 | ¹⁵⁴ Ho(11.76 m) | 334.6(84), 412.4(15.0), 873.4(12.5) |
| 415.80 15 | 0.46 9 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 415.80 17 | †1.7 4 | ¹⁶⁵ Lu(10.74 m) | 132.49(†100), 120.60(†100), 174.25(†47.0) |
| 415.8 6 | 0.055 18 | ²⁰⁹ At(5.41 h) | 545.0(91), 781.9(83.5), 790.2(63.5) |
| • 415.84 10 | 0.00043 9 | ¹⁵¹ Gd(124 d) | 153.56(6.20), 243.28(5.60), 174.70(2.96) |
| 415.85 6 | 2.11 14 | ¹⁵⁴ Tb(9.4 h) | 123.071(30), 247.925(22.1), 540.18(20) |
| 415.88 14 | 0.00062 23 | ¹²⁹ Te(69.6 m) | 27.81(16.3), 459.60(7.70), 487.39(1.42) |
| • 415.88 10 | †3.1×10 ⁴ | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| 415.9 2 | †7.0 12 | ¹⁰⁵ Nb(2.95 s) | 94.8(†100), 246.9(†79), 309.9(†41.9) |
| 415.9 3 | 0.16 7 | ²⁵¹ Cm(16.8 m) | 542.7(10.9), 530.0(1.62), 389.7(1.28) |
| 416.00 | †6.7 6 | ³³ Si(6.18 s) | 1847.54(†100), 1431.6(†13.1), 2538.5(†9.3) |
| 416.0 5 | †0.21 6 | ¹²⁰ Cs(64 s) | 322.4(†100), 473.5(†30), 553.4(†19.1) |
| • 416.0 10 | 0.03 3 | ¹⁴⁷ Gd(38.06 h) | 229.32(63), 396.00(34.3), 929.01(20.2) |
| 416.0 3 | †55 | ²²³ Rn(23.2 m) | 591.8(†100), 635.2(†76), 654.0(†44) |
| 416.01 11 | 0.25 3 | ¹⁰⁰ Y(735 ms) | 212.531(73), 118.59(15.4), 665.98(7.7) |
| 416.03 13 | 0.164 13 | ¹⁶⁵ Yb(9.9 m) | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 416.052 6 | 0.025 17 | ¹⁵² Pm(4.1 m) | 121.7824(15.7), 841.586(2.17), 961.06(1.92) |
| • 416.052 6 | 0.1106 21 | ¹⁵² Eu(13.542 y) | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| • 416.08 3 | 0.0235 7 | ¹⁴⁹ Gd(9.28 d) | 149.735(48.2), 298.634(28.6), 346.651(23.9) |
| 416.1 1 | †2.75 14 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 416.1 3 | | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 416.1 7 | 0.209 22 | ¹⁹⁹ Bi(27 m) | 560.1(22.0), 424.85(22), 841.7(11) |
| 416.1 1 | †13 2 | ²²⁷ Rn(22.5 s) | 162.14(†100), 739.2(†65), 686.2(†62) |
| 416.1 1 | 0.036 10 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 416.13 | 0.09 | ²⁰³ Bi(11.76 h) | 820.3(30), 825.2(14.6), 896.9(13) |
| 416.2 3 | 0.0036 13 | ⁸⁸ Rb(17.78 m) | 1836.063(21.40), 898.042(14.04), 2677.892(1.96) |
| 416.20 30 | 0.23 3 | ¹¹⁵ Ag(20.0 m) | 229.08(18), 212.80(4.4), 472.70(4.0) |
| 416.2 2 | †11.1 11 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 416.21 21 | 0.55 17 | ¹³¹ La(59 m) | 108.081(25.0), 417.783(18.0), 365.162(16.9) |
| 416.21 11 | 2.29 20 | ¹⁹⁷ Pb(43 m) | 385.85(74), 387.72(25.1), 222.45(24.6) |
| 416.28 7 | 1.70 14 | ¹⁰⁷ In(32.4 m) | 204.97(47), 505.51(11.9), 320.92(10.2) |
| 416.3 2 | 27.0 18 | ⁸⁵ Zr(7.86 m) | 454.20(45), 1198.4(4.8), 266.3(2.57) |
| 416.3 4 | 0.081 9 | ¹³⁷ Pr(1.28 h) | 836.7(1.8), 433.9(1.28), 514.0(1.08) |
| 416.30 20 | 0.0136 21 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 416.3 3 | 0.28 6 | ²³¹ Np(48.8 m) | 370.9(10), 348.4(3.63), 263.8(2.84) |
| 416.33 3 | 21.8 5 | ⁷⁷ Ge(11.30 h) | 264.44(54), 211.03(30.8), 215.50(28.6) |
| 416.36 17 | | ⁸⁵ Zr(10.9 s) | |
| 416.36 17 | 0.27 5 | ⁸⁵ Zr(7.86 m) | 454.20(45), 416.3(27.0), 1198.4(4.8) |
| 416.390 10 | 1.95 6 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 416.4 2 | 91 | ¹⁹⁰ Tl(3.7 m) | 625.4(82), 731.1(37), 839.7(24) |
| 416.4 2 | 79 | ¹⁹⁰ Tl(2.6 m) | 625.4(11.1), 683.5(8.7), 1099.9(7.1) |
| 416.4 1 | 3.47 18 | ²¹¹ Rn(14.6 h) | 674.1(45), 1362.9(32.5), 678.4(28.9) |
| • 416.4 2 | 9.0×10 ⁻⁶ 3 | ²³³ U(1.592×10 ⁵ y) | 42.44(0.0862), 97.134(0.020), 54.699(0.0182) |
| 416.41 12 | 1.27 10 | ²⁰⁶ At(30.0 m) | 700.66(98), 477.10(86), 395.54(48) |
| 416.44 25 | 0.24 3 | ¹⁰⁵ In(5.07 m) | 131.37(41), 260.21(15.7), 604.11(9.2) |
| • 416.4714 8 | 0.664 7 | ¹⁹² Ir(73.831 d) | 316.50791(82.81), 468.07152(47.83), 308.45692(30.00) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 416.4714 8 | 0.052 6 | ¹⁹² Au(4.94 h) | 316.50791(58.0), 295.95827(22.3), 2236.89(5.6) |
| 416.49 22 | 0.014 3 | ¹³⁹ Cs(9.27 m) | 1283.23(8.3), 627.24(1.78), 1420.66(0.91) |
| 416.5 3 | 20 6 | ¹⁴⁶ Ho(3.6 s) | 682.9(100), 925.3(69), 673.7(55) |
| 416.5 2 | †105 33 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| • 416.50 20 | 0.0060 7 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 416.5 4 | | ¹⁹⁹ Pb(12.2 m) | 366.90(7), 382.8, 2751.9 |
| 416.52 2 | 1.01 16 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| • 416.57 10 | 0.0068 13 | ¹⁴³ Ce(33.039 h) | 293.266(42.80), 57.356(11.7), 664.571(5.69) |
| 416.6 5 | 0.26 7 | ⁹⁹ Ag(124 s) | 264.41(65), 832.29(13.5), 805.07(12.5) |
| 416.6 3 | 0.37 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 416.633 25 | 1.87 4 | ¹²² Xe(20.1 h) | 350.065(7.80), 148.612(2.62), 90.596(0.563) |
| • 416.65 8 | 0.086 10 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 416.7 3 | 11 4 | ¹⁴⁹ Tm(0.9 s) | 796.2(18), 158.8(12.3), 907.3(8) |
| 416.7 3 | †10 | ¹⁵⁴ Nd(25.9 s) | 151.703(†800), 799.55(†600), 180.693(†510) |
| 416.79 2 | 0.072 12 | ¹⁴⁷ La(4.015 s) | 117.718(12), 186.320(6.48), 438.30(5.04) |
| 416.80 5 | 0.201 13 | ⁷⁸ Rb(17.66 m) | 454.97(63), 692.86(12.56), 562.15(11.41) |
| 416.80 5 | 2.28 10 | ⁷⁸ Rb(5.74 m) | 454.97(81), 664.44(38.3), 1109.72(13.12) |
| 416.8 3 | 0.47 5 | ¹³² I(2.295 h) | 667.718(99), 772.60(75.6), 954.55(17.6) |
| • 416.8 4 | 0.016 5 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 416.8 3 | 0.061 8 | ¹⁶³ Yb(11.05 m) | 860.28(10.1), 63.62(6.5), 123.21(1.98) |
| • 416.8 5 | 0.009 3 | ¹⁷² Er(49.3 h) | 610.062(44.2), 407.338(42.1), 68.107(3.29) |
| 416.84 3 | 0.338 25 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 416.848 | >0.08 | ²⁶ Si(2.234 s) | 829.420(21.90), 1622.26(2.73), 1843.26(0.258) |
| 416.86 3 | 28.9 8 | ¹¹⁶ In(54.41 m) | 1293.54(84.4), 1097.3(56.2), 2112.1(15.5) |
| 416.86 3 | 0.07 | ¹¹⁶ Sb(15.8 m) | 1293.54(85), 931.800(24.7), 2225.33(14.2) |
| 416.88 20 | 0.074 12 | ¹⁵⁸ Tm(3.98 m) | 192.13(62), 335.10(16.8), 1149.83(7.6) |
| • 416.88 10 | 0.0199 25 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 416.9 2 | 0.017 17 | ¹¹⁷ Cd(2.49 h) | 273.349(28), 1303.27(18.4), 344.459(17.9) |
| 416.9 2 | 1.0 3 | ¹²⁹ Sn(2.23 m) | 645.13(100), 80.5(6.6), 913.2(5.0) |
| 417.0 4 | 0.31 4 | ¹⁶¹ Gd(3.66 m) | 360.94(0.59), 314.92(22.7), 102.315(13.9) |
| 417 4 | †96 | ¹⁸⁹ W(11.5 m) | 258(†100), 550(†28), 855(†20) |
| 417.0 2 | †13.3 4 | ²⁰³ At(7.4 m) | 639.4(†100), 641.5(†55.8), 738.1(†38.4) |
| 417.0 1 | 2 | ²³⁵ Th(7.1 m) | 727.2(0.87), 696.1(0.64), 644.9(0.56) |
| 417.07 11 | 0.140 14 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 417.1 3 | 0.23 7 | ⁷⁹ Rb(22.9 m) | 688.1(23), 182.77(19.2), 143.41(13.9) |
| 417.10 20 | 0.014 9 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| 417.1 1 | 0.52 7 | ¹¹⁹ Cd(2.69 m) | 292.9(36.8), 343.0(16.9), 1609.7(10.9) |
| 417.1 3 | 0.09 5 | ¹²⁹ In(0.61 s) | 2118.0(45), 1865.0(32), 769.3(9.1) |
| 417.1 2 | 0.00087 8 | ¹⁶³ Er(75.0 m) | 1113.5(0.0490), 436.1(0.0285), 439.94(0.0276) |
| 417.1 2 | 0.088 14 | ¹⁸³ Ir(58 m) | 392.52(10.4), 228.70(6.9), 87.67(5.6) |
| 417.16 5 | 6.2 3 | ¹⁷⁷ W(135 m) | 115.65(50), 426.98(13.2), 1036.4(10.3) |
| 417.2 1 | 0.027 4 | ¹¹⁹ I(19.1 m) | 257.52(87), 635.86(2.69), 320.53(2.17) |
| 417.2 5 | †21 4 | ¹³⁴ Pr(11 m) | 293.5(†100), 299.0(†100), 1196.8(†100) |
| 417.2 5 | †21 4 | ¹³⁴ Pr(17 m) | 1964.1(†100), 1904.3(†100), 1579.9(†100) |
| 417.2 3 | 0.038 6 | ¹⁸⁶ Hg(1.38 m) | 112.1(63), 251.5(55), 191.6(3.7) |
| • 417.24 4 | 0.65 4 | ²⁴¹ Cm(32.8 d) | 471.805(71), 430.634(4.06), 132.413(3.86) |
| • 417.27 20 | 0.034 22 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 417.27 4 | 0.42 6 | ²⁰² Bi(1.72 h) | 960.67(99), 422.18(83.7), 657.49(60.6) |
| 417.3 5 | †6.7 10 | ¹⁰³ Mo(67.5 s) | 83.4(†100), 423.91(†69), 45.8(†57) |
| 417.3 2 | 0.35 10 | ¹⁰⁵ Mo(35.6 s) | 85.4(25.0), 76.50(19.3), 147.8(14.8) |
| 417.3 3 | †1.8 | ¹⁴⁹ Ce(5.3 s) | 57.7(†100), 380.0(†33.7), 86.4(†20.2) |
| 417.31 18 | 0.33 4 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 417.4 3 | 0.374 11 | ⁴⁵ K(17.3 m) | 174.276(74.4), 1705.6(53), 2353.6(14.12) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_\gamma(\Delta E)$ | $I_\gamma(\Delta I)$ | Decay Parent | Associated γ -rays: $E_\gamma(I_\gamma)$ |
|----------------------|----------------------|----------------------------|--|
| 417.4 3 | 0.164 23 | ⁶⁹ Cu(2.85 m) | 1007.5(23.4), 834.4(13.1), 531.2(6.0) |
| • 417.4 2 | 0.364 25 | ¹³¹ Te(30 h) | 773.67(49.9), 852.21(27.0), 793.75(18.10) |
| 417.44 5 | 0.139 13 | ¹⁴³ Cs(1.78 s) | 195.554(13), 232.421(8.32), 306.424(6.80) |
| 417.45 16 | 0.0116 22 | ¹⁵⁹ Ho(33.05 m) | 121.012(36.2), 131.973(23.6), 309.594(17.2) |
| 417.5 2 | 0.12 6 | ¹⁰¹ Zr(2.1 s) | 119.3(10.8), 205.6(6.0), 912.2(3.48) |
| • 417.5 5 | †0.025 11 | ¹⁰¹ Rh(4.34 d) | 306.85(†115), 545.06(†6.1), 127.23(†0.85) |
| 417.5 1 | 1.35 9 | ¹⁴⁶ Ba(2.22 s) | 140.7(20.2), 251.2(19.6), 121.2(14.2) |
| 417.56 | 0.154 10 | ¹³³ I(20.8 h) | 529.872(87.0), 875.329(4.51), 1298.223(2.35) |
| 417.6 5 | 0.070 14 | ⁶³ Fe(6.1 s) | 994.8(14.0), 1427.2(4.6), 1299.0(1.23) |
| 417.6 3 | 0.26 5 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 417.6 2 | †8 | ²⁵⁶ Es(7.6 h) | 861.8(†100), 231.1(†61), 172.6(†49) |
| 417.633 22 | 3.55 3 | ¹³⁵ I(6.57 h) | 1260.409(28.90), 1131.511(22.74), 1678.027(9.62) |
| 417.657 3 | 0.376 16 | ¹⁹⁹ Pt(30.80 m) | 542.993(15), 493.772(5.59), 317.056(4.95) |
| 417.69 7 | 3.12 7 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 417.7 1 | 27 3 | ¹⁴⁰ Gd(15.8 s) | 174.8(76), 749.9(70), 379.0(38) |
| 417.7 2 | 0.46 9 | ²⁰⁷ Rn(9.25 m) | 344.53(46), 747.15(14.2), 402.68(11.9) |
| 417.783 15 | 18.0 4 | ¹³¹ La(59 m) | 108.081(25.0), 365.162(16.9), 285.246(12.4) |
| 417.8 2 | 0.37 4 | ¹⁴² Ba(10.6 m) | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| 417.8 2 | 4.3 | ¹⁴⁵ Ba(4.31 s) | 96.6(17), 91.9(7), 65.9(5) |
| 417.8 3 | 0.051 10 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 417.8 4 | 0.45 3 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 417.89 9 | 0.058 9 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| 417.9 2 | 5.9 4 | ⁹⁷ Rb(169.9 ms) | 167.1(26), 585.2(21.0), 600.5(10.6) |
| 417.9 3 | 0.035 17 | ¹⁰³ Tc(54.2 s) | 346.380(17.5), 136.079(16.6), 562.90(7.0) |
| 417.9 2 | 1.03 13 | ¹¹⁸ Cs(14 s) | 337.4(100), 472.8(37.4), 586.6(15.4) |
| 417.90 10 | 0.14 2 | ¹²⁶ In(1.60 s) | 1141.11(55.9), 3344.61(21.6), 969.61(14.9) |
| 417.90 10 | 0.66 10 | ¹²⁶ In(1.64 s) | 1141.11(100), 908.58(99), 111.79(88) |
| 417.9 4 | 2.8 5 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 417.9 2 | †3.2 3 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 417.9 1 | 0.97 9 | ¹⁸⁸ Tl(71 s) | 412.7(88), 592.0(61), 504.2(23.3) |
| 417.9 3 | | ²⁰¹ At(89 s) | 571.0, 6.5 |
| 417.9 1 | 0.34 3 | ²⁴⁷ Cf(3.11 h) | 294.1(0.98), 447.8(0.55), 407.0(0.190) |
| 417.9 | | ²⁴⁷ Cf(3.11 h) | 294.1(0.98), 447.8(0.55), 417.9(0.34) |
| 417.92 6 | 2.27 3 | ¹⁹⁴ Pb(12.0 m) | 581.82(18.8), 1519.45(16.4), 203.82(16.2) |
| 417.95 10 | 1.0 | ¹²⁷ Te(9.35 h) | 360.32(0.1346), 202.860(0.0580), 215.17(0.0387) |
| • 417.98 10 | 0.042 6 | ¹⁹⁴ Au(38.02 h) | 328.455(60), 293.545(10.2), 1468.91(6.3) |
| 418.0 7 | 0.0042 25 | ¹¹¹ Pd(23.4 m) | 580.00(0.8), 70.44(0.78), 1459.0(0.56) |
| 418 1 | 0.05 3 | ¹¹¹ Pd(5.5 h) | 70.44(8.3), 391.25(5.4), 632.80(3.6) |
| 418.0 1 | †0.81 1 | ¹⁵⁸ Ho(11.3 m) | 218.21(†100.0), 98.91(†70), 945.7(†37) |
| 418.0 4 | †1.62 24 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| • 418 | 0.0071 16 | ¹⁹³ Os(30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| 418.01 3 | 34.2 10 | ¹³⁰ I(12.36 h) | 536.09(99), 668.54(96), 739.48(82) |
| • 418.06 20 | 0.042 6 | ¹⁹⁴ Au(38.02 h) | 328.455(60), 293.545(10.2), 1468.91(6.3) |
| • 418.1 1 | 0.0054 11 | ²²⁵ Ac(10.0 d) | 99.91(1.01), 150.04(0.80), 99.63(0.62) |
| 418.2 8 | 0.21 6 | ¹²¹ Cd(8.3 s) | 2059.41(21.0), 1020.89(18.9), 987.81(13.6) |
| 418.2 4 | 0.31 | ¹⁴⁸ Pr(2.27 m) | 301.702(61), 1357.78(5.5), 1023.18(4.8) |
| 418.2 3 | 0.18 5 | ¹⁵⁹ Er(36 m) | 624.5(33), 649.1(23.4), 205.92(9.7) |
| 418.22 18 | 12.5 10 | ¹⁸⁶ Ta(10.5 m) | 197.93(50), 214.87(42.3), 510.82(37.5) |
| • 418.27 7 | 0.055 6 | ¹⁹³ Os(30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| 418.3 2 | †100 | ¹⁵³ Nd(28.9 s) | 105.4(†36), 475.2(†33), 83.0(†27) |
| 418.35 10 | 0.88 16 | ¹⁷⁷ W(135 m) | 115.65(50), 426.98(13.2), 1036.4(10.3) |
| • 418.37 3 | 4.41 15 | ⁸³ Sr(32.41 h) | 762.65(30), 381.53(14.1), 381.17(2.49) |
| 418.4 2 | 0.025 6 | ¹³³ Te(12.5 m) | 312.072(62), 407.63(27.1), 1333.21(10.67) |
| 418.4 2 | 0.059 10 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|-----------------------------|---|
| 418.4 5 | 0.012 | ²³³ Th(22.3 m) | 86.477(2.7), 29.374(2.5), 459.222(1.4) |
| • 418.44 4 | 0.00366 24 | ¹⁴⁰ Ba(12.752 d) | 537.261(24.39), 29.9640(14.1), 162.660(6.21) |
| • 418.494 3 | 0.0081 4 | ¹⁶¹ Tb(6.88 d) | 25.65150(23.2), 48.91562(17.0), 74.56711(10.2) |
| 418.50 12 | †6.2 5 | ¹⁰² Tc(4.35 m) | 475.070(†115), 628.05(†35.3), 631.28(†21.3) |
| • 418.50 12 | 9.4 10 | ¹⁰² Rh(2.9 y) | 475.070(95), 631.28(55.9), 697.49(43.9) |
| • 418.50 12 | †0.124 21 | ¹⁰² Rh(207 d) | 475.070(†47), 628.05(†4.6), 1103.16(†2.99) |
| 418.5 3 | †3.6 6 | ¹⁴² Xe(1.22 s) | 571.83(†100), 657.05(†79), 538.24(†77) |
| • 418.5 3 | 0.220 23 | ²⁵² Es(471.7 d) | 52.33(0.55), 64.42(0.274), 377.4(0.122) |
| • 418.51 6 | 0.072 7 | ⁶⁹ Ge(39.05 h) | 1107.01(36), 574.17(13.3), 872.14(11.9) |
| • 418.5391 7 | 21.3 8 | ¹⁷⁷ Lu(160.4 d) | 208.3664(57.7), 228.4838(37.0), 378.5029(29.7) |
| 418.6 2 | 2.2 8 | ¹⁰³ Zr(1.3 s) | 248(100), 164.05(94), 126.30(84) |
| 418.6 4 | 0.028 11 | ¹⁶² Tm(21.70 m) | 102.00(17.5), 798.68(8.4), 227.52(7) |
| 418.61 19 | 0.44 16 | ¹⁰⁵ Tc(7.6 m) | 143.26(16), 107.945(14.1), 321.50(11.1) |
| 418.7 | 0.16 | ⁸³ Zr(44 s) | 55.55(8), 104.97(5.70), 475.1(5.1) |
| 418.7 5 | †0.8 | ¹⁸³ Hg(9.4 s) | 60.5(†100), 159.91(†21), 172.70(†17) |
| 418.7 3 | †9 1 | ¹⁸⁴ Tl(11 s) | 366.51(†100), 286.80(†39), 340.0(†25) |
| 418.71 28 | 0.60 17 | ¹⁰⁶ Rh(131 m) | 511.842(85), 1045.83(30.4), 717.24(28.9) |
| • 418.71 28 | 0.33 6 | ¹⁰⁶ Ag(8.28 d) | 511.842(88), 1045.83(29.6), 717.24(28.9) |
| • 418.77 13 | 0.0052 6 | ¹⁴⁹ Gd(9.28 d) | 149.735(48.2), 298.634(28.6), 346.651(23.9) |
| 418.8 | 0.064 14 | ¹⁴¹ Ba(18.27 m) | 190.328(46.0), 304.194(25.4), 276.948(23.4) |
| 418.8 2 | 0.27 3 | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 418.8 2 | †6 2 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| 418.9 2 | †57 5 | ¹¹² Te(2.0 m) | 372.70(†100), 296.20(†86), 350.9(†36) |
| • 418.9 6 | >0.012 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 418.99 4 | †75 8 | ¹⁵⁵ Nd(8.9 s) | 180.574(†100), 955.08(†50), 67.432(†38) |
| 418.99 12 | 0.168 23 | ¹⁷⁴ Ta(1.05 h) | 206.50(58), 91.00(16.0), 1205.92(4.9) |
| • 419.0 | 0.019 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| • 419.00 5 | 0.061 5 | ¹⁹⁵ Hg(41.6 h) | 261.75(30.9), 560.27(7), 387.87(2.15) |
| • 419.082 7 | 0.0164 21 | ⁷⁷ Br(57.036 h) | 238.996(23), 520.639(22.4), 297.215(4.16) |
| 419.1 2 | 0.185 7 | ⁷⁵ Ge(82.78 m) | 264.6584(11), 198.6031(1.19), 468.8(0.223) |
| • 419.1 2 | 0.0135 12 | ⁷⁵ Se(119.779 d) | 264.6584(58.50), 136.0008(58.3), 279.5441(24.79) |
| 419.1 2 | 0.23 6 | ¹⁰⁸ In(58.0 m) | 875.46(100), 632.96(100), 242.84(41) |
| 419.1 5 | >0.35 | ¹³⁷ Pm(2.4 m) | 177.5(40.29), 108.6(35), 233.6(29.57) |
| 419.12 5 | 0.320 12 | ⁹⁰ Kr(32.32 s) | 1118.69(39.0), 121.82(35.5), 539.49(30.8) |
| 419.13 11 | 0.52 5 | ²⁰⁴ Po(3.53 h) | 883.984(29.9), 270.068(27.8), 1016.31(24.1) |
| 419.16 5 | 0.470 24 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 419.2 3 | 0.038 10 | ⁸⁹ Kr(3.15 m) | 220.948(20.1), 586.03(16.6), 904.27(7.2) |
| 419.2 1 | 0.44 11 | ¹⁰⁷ Tc(21.2 s) | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| 419.2 7 | | ¹⁷³ Ta(3.14 h) | 172.2(18), 69.70(5.9), 90.3(5.0) |
| 419.2 1 | 0.79 6 | ²⁴⁰ Np(61.9 m) | 566.34(25.3), 973.9(23.8), 600.57(18.4) |
| 419.21 8 | †44 10 | ²¹⁶ Bi(3.6 s) | 549.73(†100) |
| 419.3 3 | 0.011 3 | ¹³⁹ Cs(9.27 m) | 1283.23(8.3), 627.24(1.78), 1420.66(0.91) |
| 419.3 2 | | ¹⁴⁶ Dy(29 s) | 2156.8, 1915.7, 1876.7 |
| 419.3 1 | †10 | ¹⁷² Re(15 s) | 253.9(†100), 350.5(†55), 123.2(†45) |
| • 419.33 4 | †2.87×10 ⁵ 6 | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| • 419.39 8 | 0.036 3 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| 419.4 2 | †5.4 12 | ¹⁰⁵ Nb(2.95 s) | 94.8(†100), 246.9(†79), 309.9(†41.9) |
| 419.42 10 | 0.021 3 | ²²⁸ Ac(6.15 h) | 911.205(26.6), 968.971(16.2), 338.322(11.3) |
| 419.43 7 | 2.42 22 | ²⁰³ Po(36.7 m) | 908.64(55), 1090.95(19.2), 893.49(18.7) |
| 419.5 | 0.09 | ⁹⁵ Sr(23.90 s) | 685.6(23), 2717.3(4.6), 2933.1(4.1) |
| 419.5 5 | 3.0 15 | ¹³⁹ Eu(17.9 s) | 267.3(31), 155.3(31), 190.1(25) |
| 419.54 35 | 0.040 9 | ¹⁶⁴ Yb(75.8 m) | 40.928(1.147), 675.41(0.38), 390.6(0.31) |
| • 419.55 5 | 0.0035 11 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 419.57 5 | 92 2 | ¹⁴⁰ Pm(5.95 m) | 1028.19(100), 773.74(100), 1197.5(3.8) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|-----------------------------|---|
| 419.6 5 | 0.042 9 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 419.6 5 | 0.26 7 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 419.61 12 | †0.10 3 | ¹⁸⁴ Ir(3.09 h) | 263.97(†100), 119.80(†45), 390.38(†38) |
| • 419.65 5 | 0.502 13 | ¹⁷⁰ Lu(2.00 d) | 84.2551(4.256), 1280.25(3.450), 2041.88(1.434) |
| 419.69 15 | 0.38 9 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 419.7 3 | 0.40 11 | ¹³⁹ Sm(2.57 m) | 273.7(37), 306.7(28.5), 596.3(8.0) |
| 419.7 9 | >0.11 | ¹⁷² Ta(36.8 m) | 214.02(46), 95.23(17.5), 1109.27(12.4) |
| 419.7 3 | †5.2 10 | ¹⁸⁹ Hg(7.6 m) | 320.99(†100), 78.21(†63), 565.42(†48) |
| 419.70 13 | 91 3 | ²⁰⁰ Bi(36.4 m) | 1026.5(100), 462.34(98), 245.154(46) |
| 419.70 13 | †26.0 13 | ²⁰⁰ Bi(31 m) | 1026.5(†110), 462.34(†45.7), 245.154(†5.6) |
| 419.74 2 | 0.20 4 | ¹⁴⁵ Cs(0.594 s) | 175.36(20), 198.93(10.9), 112.46(10.71) |
| 419.75 3 | 1.23 3 | ⁷⁷ Ge(11.30 h) | 264.44(54), 211.03(30.8), 215.50(28.6) |
| 419.75 3 | 0.094 10 | ⁷⁷ Ge(52.9 s) | 215.50(21), 194.76(0.408), 614.39(0.044) |
| 419.79 4 | 0.18 4 | ¹¹⁷ Cd(2.49 h) | 273.349(28), 1303.27(18.4), 344.459(17.9) |
| 419.8 10 | 0.40 20 | ¹⁰⁴ In(1.8 m) | 658.0(100), 834.1(99), 878.1(29.4) |
| 419.8 2 | †1.43 19 | ¹⁶⁸ Re(4.4 s) | 199.3(†100), 363.2(†95), 479.8(†62.8) |
| 419.8 3 | †56 7 | ¹⁸⁰ Yb(2.4 m) | 172.9(†100), 375.0(†87), 339.2(†44) |
| 419.81 3 | 0.616 22 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 419.81 16 | 0.63 8 | ¹⁹⁵ Pb(15.0 m) | 383.64(106.9), 394.21(44), 878.40(24.2) |
| 419.83 7 | †26.7 8 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 419.9 3 | 0.083 4 | ¹⁷¹ Er(7.516 h) | 308.31(64.4), 295.901(28.9), 111.621(20.5) |
| 420.0 1 | †581 57 | ¹⁵⁷ Ho(12.6 m) | 279.97(†47600), 341.16(†37000), 193.41(†15200) |
| 420.0 2 | 0.169 25 | ¹⁶⁷ Lu(51.5 m) | 29.66(14.4), 239.22(8.6), 213.19(3.6) |
| 420.0 3 | 0.10 4 | ¹⁸¹ Re(19.9 h) | 365.57(56), 360.70(20), 639.30(6.4) |
| 420.090 9 | 0.92 7 | ¹⁵⁷ Eu(15.18 h) | 63.929(23.0), 410.723(17.5), 370.509(11.0) |
| 420.1 4 | 0.08 4 | ¹⁰¹ Ag(11.1 m) | 261.0(53), 588.0(10.0), 667.3(9.8) |
| 420.10 10 | 4.41 21 | ¹²¹ Cd(8.3 s) | 2059.41(21.0), 1020.89(18.9), 987.81(13.6) |
| 420.1 1 | | ¹⁵³ Ho(9.3 m) | 108.7(†100), 365.9(†92), 161.5(†83) |
| 420.1 4 | 18.6 19 | ¹⁹¹ Hg(50.8 m) | 252.5(57), 578.6(17.6), 274.2(13) |
| 420.12 10 | 0.00026 8 | ¹³⁵ La(19.5 h) | 480.51(1.5), 874.51(0.164), 587.83(0.1108) |
| 420.20 30 | 0.128 23 | ¹¹⁵ Ag(20.0 m) | 229.08(18), 212.80(4.4), 472.70(4.0) |
| 420.2 3 | 0.0093 25 | ¹²¹ I(2.12 h) | 212.189(84), 532.08(6.07), 598.74(1.47) |
| 420.2 2 | †2.4 3 | ¹³⁶ Pm(107 s) | 373.8(†100), 602.7(†38.4), 857.2(†23.4) |
| 420.2 2 | 0.24 | ¹⁴² La(91.1 m) | 641.285(47), 2397.8(13.3), 2542.7(10.00) |
| 420.2 7 | 0.50 6 | ¹⁹⁹ Bi(27 m) | 560.1(22.0), 424.85(22), 841.7(11) |
| 420.28 5 | 0.0271 25 | ⁹⁰ Nb(14.60 h) | 1129.224(92.7), 2318.968(82.03), 141.178(66.8) |
| 420.3 3 | 1.84 13 | ⁸³ Y(7.08 m) | 35.50(0.44), 882.1(6.30), 489.90(5.53) |
| 420.3 3 | 1.00 25 | ⁹⁷ Sr(426 ms) | 1905.0(25), 953.8(21.4), 652.2(11.4) |
| 420.32 13 | 0.23 4 | ¹⁵¹ Dy(17.9 m) | 386.10(19.4), 49.46(18.0), 546.31(14.3) |
| • 420.34 5 | 0.166 12 | ¹⁹³ Os(30.5 h) | 139.03(4.27), 460.50(3.95), 73.039(3.2) |
| • 420.4 2 | 3.2 3 | ¹⁰² Rh(2.9 y) | 475.070(95), 631.28(55.9), 697.49(43.9) |
| 420.4 5 | 0.22 | ¹²⁵ Cd(0.57 s) | 1027.53(25.8), 1173.16(25.1), 736.65(12.6) |
| 420.4 2 | 0.47 13 | ¹⁵³ Ho(2.0 m) | 295.8(67), 637.0(5.36), 688.5(3.7) |
| 420.4 3 | †<1.3 | ¹⁸² Au(21 s) | 154.76(†100), 264.33(†40.0), 855.41(†14.5) |
| 420.45 15 | †8.9 13 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| 420.48 9 | 0.109 20 | ¹⁵⁰ Pm(2.68 h) | 333.971(68), 1324.51(17.5), 1165.739(15.8) |
| 420.5 | <0.03 | ⁴⁸ Cr(21.56 h) | 308.25(100), 112.36(96.0) |
| 420.53 25 | †0.31 3 | ¹⁸⁴ Ir(3.09 h) | 263.97(†100), 119.80(†45), 390.38(†38) |
| • 420.532 10 | 0.0737 25 | ¹⁹² Ir(73.831 d) | 205.79549(3.300), 484.5780(3.184), 374.4852(0.721) |
| 420.6 3 | 0.88 7 | ¹⁰⁹ In(4.2 h) | 203.5(74), 623.7(5.5), 1148.9(4.3) |
| • 420.63 15 | 0.053 19 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| • 420.63 12 | 1.64 7 | ¹⁹⁰ Ir(11.78 d) | 186.718(52.4), 605.24(39.9), 518.55(34.0) |
| • 420.65 6 | 0.056 7 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 420.7 2 | †54 | ¹⁰¹ In(16 s) | 252(†100), 750.3(†61), 891.4(†48) |
| 420.7 2 | 0.24 16 | ¹¹³ Sb(6.67 m) | 497.96(80), 332.41(14.8), 88.25(2.7) |
| 420.7 4 | 0.16 4 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 420.7 4 | 1.05 11 | ²³¹ Np(48.8 m) | 370.9(10), 348.4(3.63), 263.8(2.84) |
| 420.78 9 | 1.5 3 | ¹⁵⁶ Tm(83.8 s) | 344.55(86), 452.85(17.2), 585.93(14.6) |
| • 420.8 1 | 0.031 3 | ¹⁷⁷ Ta(56.56 h) | 112.9498(7.2), 208.3664(0.94), 1057.8(0.29) |
| 420.801 17 | 2.87 13 | ¹⁸⁶ Ir(16.64 h) | 296.911(64.0), 137.155(42), 434.849(34.4) |
| 420.9 10 | | ⁷⁷ Ga(13.2 s) | 469.4(†100), 458.6(†48), 2187.3 |
| • 420.90 2 | 0.0337 13 | ¹⁴⁷ Eu(24.1 d) | 197.299(27), 121.220(22.9), 677.516(9.8) |
| 420.9 3 | †2.71 10 | ¹⁹⁶ Ir(1.40 h) | 393.346(†105.2), 521.175(†104), 447.1(†102.1) |
| • 420.94 9 | 0.105 10 | ¹⁰⁵ Ag(41.29 d) | 344.520(41), 280.41(30.2), 644.55(11.1) |
| 420.97 3 | 0.70 4 | ¹⁵⁵ Ho(48 m) | 240.19(12.5), 136.30(5.00), 45.38(5) |
| 420.98 25 | 0.66 8 | ¹⁸⁶ Tl(27.5 s) | 405.43(92), 402.72(45.9), 356.84(29.3) |
| 421.0 3 | 0.25 8 | ⁹⁰ Mo(5.67 h) | 257.34(78), 122.370(64.2), 203.13(6.4) |
| 421.0 2 | 2.6 3 | ¹⁰⁴ Mo(60 s) | 68.8(55), 69.7(17.8), 36.3(14) |
| 421.00 5 | 0.0132 19 | ¹²⁷ Cs(6.25 h) | 411.95(62.8), 124.70(11.37), 462.31(5.07) |
| 421.0 2 | †28 | ¹⁷⁷ Os(2.8 m) | 84.7(†100), 125.4(†63), 195.8(†61) |
| 421.08 30 | 0.018 4 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 421.08 5 | 0.0220 17 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |
| 421.1 3 | †12.9 9 | ¹¹¹ Ru(2.12 s) | 303.8(†100), 211.7(†77.7), 382.0(†41.3) |
| 421.1 | | ¹⁴⁷ Cs(0.225 s) | 85.2(7.3), 245.8(4.5), 109.7(4.5) |
| 421.1 2 | †59.9 8 | ¹⁹⁴ Bi(92 s) | 965.4(†100.0), 575.1(†98.0), 280.1(†73.7) |
| • 421.14 11 | 0.023 1 | ²³⁸ Np(2.117 d) | 984.45(27.8), 1028.54(20.3), 1025.87(9.6) |
| 421.17 7 | 0.331 19 | ¹⁴⁶ La(6.27 s) | 258.47(64), 924.58(7.45), 702.28(6.43) |
| • 421.179 10 | 0.327 7 | ¹⁶⁵ Tm(30.06 h) | 242.917(35.5), 47.155(16.9), 297.369(12.71) |
| 421.2 4 | 2.2 5 | ¹¹⁷ Ag(5.34 s) | 135.4(48), 386.8(39.9), 298.1(21.1) |
| 421.2 5 | 0.22 | ¹²⁵ Cd(0.57 s) | 1027.53(25.8), 1173.16(25.1), 736.65(12.6) |
| 421.2 | 0.09 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 421.21 10 | 0.35 5 | ²⁰⁸ Rn(24.35 m) | 426.78(7.07), 251.05(5.02), 350.026(3.34) |
| 421.26 9 | 2.09 11 | ¹⁶⁶ Lu(1.41 m) | 228.12(15), 102.38(13), 285.07(11.0) |
| 421.27 5 | 1.84 10 | ⁷⁹ Ga(2.847 s) | 464.79(24.2), 516.41(21.5), 1187.28(12.8) |
| 421.29 6 | 0.95 7 | ⁸¹ Sr(22.3 m) | 153.54(33.8), 147.76(30.1), 443.34(17.5) |
| 421.3 2 | 0.069 10 | ⁹⁵ Ru(1.643 h) | 336.43(70.2), 1096.76(21.0), 626.77(17.8) |
| 421.30 20 | | ¹⁰⁶ In(6.2 m) | 632.66(100), 861.16(92), 997.87(48) |
| 421.3 10 | 0.012 6 | ¹⁹² Au(4.94 h) | 316.50791(58.0), 295.95827(22.3), 2236.89(5.6) |
| 421.3 4 | 0.05 3 | ¹⁹³ Au(17.65 h) | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| 421.30 13 | 0.0092 10 | ²⁴⁹ Cm(64.15 m) | 634.31(1.5), 560.45(0.84), 368.76(0.35) |
| • 421.30 13 | 0.00011 | ²⁵³ Es(20.47 d) | 41.79(0.050), 389.11(0.0264), 387.1(0.00810) |
| 421.32 7 | 0.042 8 | ¹³¹ Te(25.0 m) | 149.716(69), 452.323(18.18), 1146.96(4.95) |
| 421.4 6 | 0.39 17 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| 421.4 1 | 0.045 20 | ¹⁴³ Ba(14.33 s) | 211.475(25), 798.79(15.6), 980.45(11.55) |
| 421.4 2 | 0.0041 10 | ¹⁶⁷ Yb(17.5 m) | 113.34(55.3), 106.18(22.5), 176.25(21) |
| 421.44 3 | 3.45 24 | ¹⁹¹ Au(3.18 h) | 586.45(17), 277.88(7.2), 674.19(6.8) |
| 421.49 15 | †13.1 14 | ¹³¹ Ce(10.3 m) | 169.42(†100), 414.25(†68), 119.18(†44) |
| 421.5 1 | †3.56 19 | ¹⁹⁶ Bi(240 s) | 1049.21(†21.1), 371.93(†20.8), 689.00(†19.2) |
| 421.55 5 | 75 | ⁹⁷ Rh(30.7 m) | 840.13(12.0), 878.80(9.0), 1053.70(1.47) |
| 421.55 5 | 12.7 17 | ⁹⁷ Rh(46.2 m) | 189.21(49), 2245.6(14), 1586.66(8.9) |
| 421.59 7 | 0.427 23 | ¹³⁸ Cs(33.41 m) | 1435.795(76.3), 462.796(30.7), 1009.78(29.8) |
| 421.6 2 | | ¹⁴⁰ Sm(14.82 m) | 225.5(>10), 225.4(10), 140.0(5.0) |
| • 421.6 | 0.065 9 | ¹⁴⁶ Gd(48.27 d) | 154.57(47), 115.51(44.0), 114.71(44.0) |
| 421.6 3 | 0.35 5 | ¹⁶¹ Er(3.21 h) | 826.6(3.0), 211.15(12.2), 592.6(3.7) |
| • 421.63 18 | 0.0034 5 | ¹⁴⁹ Gd(9.28 d) | 149.735(48.2), 298.634(28.6), 346.651(23.9) |
| 421.66 13 | 0.450 21 | ¹⁴⁴ Ba(11.5 s) | 103.855(23.30), 430.48(18.3), 172.828(15.4) |
| 421.66 15 | 3.8 5 | ¹⁸⁴ Hg(30.6 s) | 236.18(64), 156.24(58), 295.11(10.3) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 421.7 3 | 0.091 7 | ⁸⁵ Br(2.90 m) | 802.41(2.56), 924.63(1.63), 919.06(0.65) |
| 421.70 18 | 0.010 4 | ⁸⁸ Kr(2.84 h) | 2392.11(34.6), 196.301(25.98), 2195.842(13.18) |
| 421.72 4 | 1.13 8 | ²⁰⁴ Bi(11.22 h) | 899.15(98), 374.72(82), 984.02(59) |
| 421.74 10 | 3.2 3 | ⁸⁷ Br(55.60 s) | 1419.71(22.0), 1476.04(7.9), 1577.60(6.0) |
| 421.74 8 | 0.56 6 | ¹⁰¹ Mo(14.61 m) | 191.92(19), 590.91(16.4), 1012.47(12.8) |
| 421.778 62 | 3.64 18 | ¹⁴⁸ Ce(56 s) | 269.519(17.0), 291.724(16.7), 121.169(13.2) |
| 421.8 2 | >0.09 | ⁶¹ Zn(89.1 s) | 475.0(16.85), 1660.5(7.80), 970.0(2.57) |
| 421.8 3 | 0.140 23 | ⁶⁹ Cu(2.85 m) | 1007.5(23.4), 834.4(13.1), 531.2(6.0) |
| 421.8 3 | 0.08 | ⁸³ Y(7.08 m) | 35.50(0.44), 882.1(6.30), 489.90(5.53) |
| 421.8 3 | 19.5 16 | ⁸³ Y(2.85 m) | 259.10(54), 494.50(8.1) |
| 421.8 2 | 0.5 1 | ⁹⁶ Rh(9.90 m) | 832.57(100), 685.49(95.7), 631.71(74.5) |
| 421.8 8 | 0.27 9 | ¹⁰⁴ Tc(18.3 m) | 358.0(89), 530.5(15.6), 535.1(14.7) |
| 421.8 11 | †1.2 6 | ¹⁴² Xe(1.22 s) | 571.83(†100), 657.05(†79), 538.24(†77) |
| 421.8 2 | 0.15 6 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 421.8 3 | 0.07 3 | ¹⁵⁷ Tm(3.63 m) | 455.00(9.3), 385.5(8.8), 348.40(8.4) |
| 421.8 2 | †1.91 21 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| 421.85 5 | 0.043 3 | ¹⁵⁵ Dy(9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| 421.860 23 | 11.5 11 | ¹⁶³ Tb(19.5 m) | 351.138(26), 389.734(24.3), 494.534(23) |
| 421.9 2 | 1.36 20 | ²⁰⁰ Po(11.5 m) | 671.0(34.0), 617.7(19.7), 434.4(9.3) |
| 421.92 3 | 0.167 11 | ¹⁶³ Tm(1.810 h) | 104.320(18.6), 69.229(11.6), 241.305(10.9) |
| • 421.932 7 | 2.52 19 | ²³² Pa(1.31 d) | 969.315(41.6), 894.351(19.8), 150.059(10.8) |
| 422.0 3 | 0.68 8 | ⁶¹ Mn(0.71 s) | 628.6(16.7), 206.8(8.2), 391.0(1.1) |
| 422 1 | 0.10 5 | ¹²⁷ In(1.09 s) | 1597.7(49), 646.1(6.2), 805.1(5.6) |
| 422.0 4 | 1.34 18 | ¹⁴⁸ Pr(2.27 m) | 301.702(61), 1357.78(5.5), 1023.18(4.8) |
| • 422.0 | 0.0022 8 | ¹⁵⁴ Eu(8.593 y) | 123.071(40.79), 1274.436(35.19), 723.304(20.22) |
| 422.0 5 | 0.81 9 | ²¹² Fr(20.0 m) | 1273.8(46), 227.72(43), 1185.6(14.1) |
| 422.0 2 | 0.071 16 | ²²⁷ Fr(2.47 m) | 90.035(39), 585.804(29.5), 64.267(14.5) |
| • 422.04 10 | 0.0029 5 | ²²⁴ Ra(3.66 d) | 240.987(3.97), 292.70(0.0060), 645.50(0.0052) |
| 422.04 10 | †23 2 | ²²⁰ At(224 s) | 240.987(†100), 292.70(†39), 645.50(†6) |
| 422.1 3 | †4.9 | ¹⁰⁷ Sn(2.90 m) | 1129.2(†100), 678.5(†100), 1540.6(†30) |
| 422.17 11 | 0.86 13 | ¹³³ Sb(2.5 m) | 1096.22(43.0), 817.8(18.5), 2755(12.5) |
| 422.18 4 | 83.7 25 | ²⁰² Bi(1.72 h) | 960.67(99), 657.49(60.6), 954.45(7.8) |
| 422.2 3 | 0.056 14 | ⁶⁵ Ga(15.2 m) | 115.09(54), 61.20(11.4), 153.0(8.9) |
| 422.2 3 | 0.88 15 | ⁹⁸ Sr(0.653 s) | 119.353(73), 444.628(39), 428.4(31) |
| 422.2 3 | 0.37 6 | ¹²⁴ Cs(30.8 s) | 353.9(40), 914.8(4.0), 492.6(3.6) |
| 422.2 | | ¹²⁴ Cs(30.8 s) | 353.9(40), 914.8(4.0), 492.6(3.6) |
| 422.2 4 | †3.1 6 | ¹⁹⁸ Tl(1.87 h) | 636.4(†202), 411.8044(†202), 587.2(†185) |
| 422.2 | †6 | ²³⁸ Pa(2.3 m) | 1015.3(†<100), 1014.6(†<100), 635.18(†88) |
| 422.26 25 | 0.038 4 | ¹⁶⁵ Yb(9.9 m) | 80.11(49), 68.86(9.1), 1090.28(4.4) |
| 422.27 6 | 0.089 5 | ¹⁰⁵ Cd(55.5 m) | 961.84(4.69), 346.870(4.20), 1302.459(3.98) |
| • 422.3 3 | 0.013 4 | ¹⁴⁶ Eu(4.59 d) | 747.2(98), 633.03(43), 634.07(37) |
| 422.3 3 | †13 4 | ¹⁵⁷ Yb(38.6 s) | 230.92(†100), 340.7(†90), 241.7(†74) |
| 422.30 15 | 0.047 4 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| 422.3 6 | 0.38 | ²⁰³ Bi(11.76 h) | 820.3(30), 825.2(14.6), 896.9(13) |
| 422.3 2 | 0.082 11 | ²²⁸ Fr(39 s) | 473.7(10.2), 474.0(7.6), 410.40(6.3) |
| 422.3 3 | 0.72 9 | ²⁵¹ Cm(16.8 m) | 542.7(10.9), 530.0(1.62), 389.7(1.28) |
| 422.318 4 | 0.214 17 | ¹⁶⁸ Ho(2.99 m) | 741.356(36.6), 821.164(34.5), 815.990(18.6) |
| • 422.318 4 | 0.293 4 | ¹⁶⁸ Tm(93.1 d) | 198.241(52.39), 815.990(48.99), 447.515(23.05) |
| • 422.380 12 | 7.95 4 | ¹⁵⁶ Tb(5.35 d) | 534.318(66.6), 199.2132(40.9), 1222.36(31.00) |
| 422.4 5 | 0.26 7 | ⁹⁹ Ag(124 s) | 264.41(65), 832.29(13.5), 805.07(12.5) |
| 422.4 5 | 0.09 3 | ¹⁰¹ Mo(14.61 m) | 191.92(19), 590.91(16.4), 1012.47(12.8) |
| 422.4 4 | 0.035 9 | ¹⁰¹ Tc(14.22 m) | 306.85(88), 545.06(6.0), 127.23(2.86) |
| • 422.4 4 | 0.38 6 | ¹⁰¹ Rh(3.3 y) | 127.23(73), 197.6(70.8), 324.8(13.4) |
| 422.4 6 | 0.46 | ¹¹⁶ Ag(2.68 m) | 513.39(76), 2478.5(12), 699.58(11) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|--|
| 422.4 1 | 9.5 6 | ¹¹⁹ Cd(2.20 m) | 1025.0(24.8), 2021.3(22.6), 720.7(17.9) |
| 422.4 2 | 0.41 12 | ¹⁴¹ Xe(1.73 s) | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| 422.4 | 66 15 | ¹⁵² Tm(5.2 s) | 807.9(100), 672.5(76), 279.9(46) |
| 422.40 15 | 0.46 9 | ¹⁵⁹ Tm(9.13 m) | 38.35(5.8), 84.8(5.8), 271.30(5.1) |
| 422.4 3 | 0.132 19 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| 422.47 15 | 0.37 5 | ⁸¹ Sr(22.3 m) | 153.54(33.8), 147.76(30.1), 443.34(17.5) |
| • 422.598 4 | 0.000122 2 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 422.6 2 | <0.2 | ⁵⁹ Zn(182.0 ms) | 491.13(4.8), 913.85(1.1) |
| 422.6 2 | †4.2 4 | ¹¹⁰ Tc(0.92 s) | 240.67(†100), 372.1(†17.0), 613.0(†16.0) |
| 422.6 3 | 0.86 11 | ¹³⁶ Sm(47 s) | 114.4(36), 747.7(5.4), 485.3(5.0) |
| 422.6 2 | 0.41 6 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 422.6 4 | 0.10 5 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| • 422.61 3 | 0.137 6 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 422.7 1 | †20.2 13 | ¹⁵⁵ Er(5.3 m) | 110.12(†100), 241.5(†65), 234.0(†40.0) |
| 422.8 5 | †20 | ⁹⁹ Rb(59 ms) | 90.8(†100), 125.2(†40), 1071.6(†26) |
| 422.8 2 | 0.30 6 | ¹⁵⁷ Er(18.65 m) | 53.05(24), 391.32(14.2), 121.57(10.1) |
| 422.80 20 | 0.03 1 | ¹⁶³ Yb(11.05 m) | 860.28(10.1), 63.62(6.5), 123.21(1.98) |
| 422.8 4 | 0.17 9 | ¹⁸⁵ Au(4.25 m) | 310.6(13), 243.1(6.6), 77.7(6) |
| 422.8 1 | †100 | ¹⁹² Tl(9.6 m) | 634.8(†75.9), 786.3(†31.7), 745.5(†26.8) |
| 422.84 9 | 0.57 4 | ¹⁰¹ Sr(118 ms) | 128.34(18.0), 1124.82(10.9), 510.73(8.5) |
| 422.9 1 | 3.3 8 | ¹⁰⁸ Tc(5.17 s) | 242.25(82), 465.6(14.3), 707.81(11.4) |
| 422.9 2 | †6.8 12 | ²²⁹ Ac(62.7 m) | 164.522(†100), 569.1(†91), 261.92(†39) |
| 422.91 10 | 2.8 4 | ¹²⁵ Cd(0.65 s) | 436.29(37), 1099.48(22.3), 2147.19(19.1) |
| 422.910 16 | 0.311 9 | ¹³³ I(20.8 h) | 529.872(87.0), 875.329(4.51), 1298.223(2.35) |
| 422.92 5 | 0.710 24 | ¹³³ Ce(4.9 h) | 477.22(39), 510.36(20.7), 58.39(19.2) |
| 422.94 20 | 0.37 7 | ¹⁷⁵ Tm(15.2 m) | 514.868(65), 941.23(15), 363.942(12.7) |
| 423.0 1 | 1.96 17 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| • 423.04 6 | 0.0156 12 | ¹⁷² Tm(63.6 h) | 78.7435(6.5), 1093.657(6.0), 1387.093(5.6) |
| 423.057 15 | 0.0631 25 | ¹⁷³ Hf(23.6 h) | 123.672(83), 296.974(33.9), 139.634(12.7) |
| 423.1 1 | 0.3 1 | ¹⁰⁷ Tc(21.2 s) | 102.70(21.0), 177.00(9.2), 106.31(7.6) |
| 423.1 1 | 0.95 5 | ²³⁶ Pa(9.1 m) | 642.35(37.0), 687.59(9.9), 1762.7(6.0) |
| 423.150 25 | 0.0301 15 | ¹⁰⁷ Cd(6.50 h) | 93.124(1.45), 828.93(0.17), 796.462(0.0665) |
| 423.15 30 | 0.017 4 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 423.17 17 | 0.224 21 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 423.2 3 | 0.038 3 | ⁷¹ Zn(2.45 m) | 511.56(32), 910.27(7.8), 389.88(3.8) |
| 423.2 3 | 1.7 9 | ¹⁵² Ho(161.8 s) | 613.8(73), 613.8(14), 1098.0(12) |
| 423.2 1 | 0.35 5 | ¹⁸¹ Au(11.4 s) | 198.60(4.4), 2022.4(4.2), 79.40(4.2) |
| 423.2 1 | 0.090 16 | ²³⁰ Ac(122 s) | 454.95(8), 508.20(5.15), 1243.9(3.50) |
| 423.2 | | ²⁴³ Pu(4.956 h) | 84.0(23), 41.8(0.76), 381.7(0.56) |
| 423.2 3 | 0.0131 14 | ²⁴³ Pu(4.956 h) | 84.0(23), 41.8(0.76), 381.7(0.56) |
| 423.2 3 | >0.034 | ²⁴⁵ Pu(10.5 h) | 327.428(25.4), 560.13(5.4), 308.222(4.9) |
| 423.3 4 | †0.5 3 | ¹⁰¹ Nb(7.1 s) | 276.10(†100), 157.466(†32), 13.5(†32) |
| 423.3 1 | >0.18 | ¹¹³ Ag(68.7 s) | 316.3(18), 392.3(11), 298.58(10) |
| 423.3 4 | †44 3 | ¹⁷² W(6.6 m) | 38.9(†100), 89.8(†33.0), 221.3(†29) |
| 423.3 3 | 0.35 3 | ¹⁸⁴ Pt(17.3 m) | 154.90(31), 191.97(27), 548.36(23.1) |
| 423.3 3 | 0.18 3 | ¹⁹⁷ Tl(2.84 h) | 425.84(12.9), 152.22(7.2), 1411.34(4.5) |
| 423.3 4 | †3.8 6 | ¹⁹⁸ Tl(1.87 h) | 636.4(†202), 411.8044(†202), 587.2(†185) |
| • 423.34 10 | 4.36 23 | ¹⁸⁸ Pt(10.2 d) | 187.59(19.4), 195.05(18.6), 381.43(7.5) |
| • 423.376 17 | 0.028 3 | ¹⁶⁹ Lu(34.06 h) | 960.622(23.4), 191.2137(20.6), 1449.74(9.92) |
| 423.40 3 | 3.53 17 | ¹³³ Sb(2.5 m) | 1096.22(43.0), 817.8(18.5), 2755(12.5) |
| • 423.4 3 | 0.012 6 | ¹⁵³ Tb(2.34 d) | 212.038(31.0), 170.504(6.8), 109.758(6.4) |
| 423.40 17 | 0.44 7 | ¹⁵⁶ Tm(83.8 s) | 344.55(86), 452.85(17.2), 585.93(14.6) |
| 423.4 1 | †3.5 4 | ¹⁷¹ Ta(23.3 m) | 49.6(†100), 506.4(†54), 501.8(†22.6) |
| 423.4 5 | 0.0040 17 | ²⁴⁶ Am(25.0 m) | 1078.86(27.7), 798.80(25), 1062.04(17.1) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|------------------------------|---|
| • 423.45 9 | 0.0027 6 | ¹⁵² Eu(13.542 y) | 121.7824(28.4), 1408.011(20.87), 964.131(14.34) |
| 423.462 18 | 2.66 12 | ⁵⁹ Cu(81.5 s) | 1301.46(14.78), 877.97(11.40), 339.411(7.97) |
| 423.5 1 | | ¹¹⁵ Pd(25 s) | 342.71(8), 303.87(7), 396.56(6) |
| 423.5 2 | 0.23 5 | ¹¹⁸ Cs(14 s) | 337.4(100), 472.8(37.4), 586.6(15.4) |
| 423.5 2 | 0.18 8 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| • 423.5 4 | 0.038 9 | ¹⁴⁸ Eu(54.5 d) | 550.284(98.5), 629.987(71.9), 611.293(20.5) |
| 423.5 1 | 0.155 5 | ²¹⁰ Rn(2.4 h) | 458.25(1.7), 648.70(0.843), 570.95(0.840) |
| 423.553 10 | 7.4 4 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 423.56 2 | 6.59 13 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 423.56 2 | 0.118 6 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| 423.60 3 | 3.83 6 | ¹⁴⁵ Ce(3.01 m) | 724.33(59), 62.54(13.33), 1148.03(9.15) |
| 423.6 3 | 0.85 17 | ¹⁷⁶ Tm(1.9 m) | 189.57(44.5), 1069.3(34), 381.8(21.8) |
| • 423.63 3 | 1.59 6 | ⁸³ Sr(32.41 h) | 762.65(30), 381.53(14.1), 418.37(4.41) |
| • 423.722 1 | 3.098 24 | ¹⁴⁰ Ba(12.752 d) | 537.261(24.39), 29.9640(14.1), 162.660(6.21) |
| 423.8 1 | 0.025 3 | ¹²¹ I(2.12 h) | 212.189(84), 532.08(6.07), 598.74(1.47) |
| 423.8 2 | 0.00060 6 | ²⁵⁵ Fm(20.07 h) | 81.477(0.81), 58.477(0.67), 80.92(0.27) |
| 423.86 7 | 0.18 3 | ¹⁶¹ Gd(3.66 m) | 360.94(0.59), 314.92(22.7), 102.315(13.9) |
| 423.89 5 | 2.06 17 | ¹⁴¹ Xe(1.73 s) | 909.23(24.0), 118.705(16.1), 105.937(9.8) |
| 423.9 2 | 0.00095 20 | ¹⁰⁹ Pd(13.7012 h) | 88.04(1.171), 311.4(0.032), 647.3(0.024) |
| 423.910 17 | †2.6 6 | ¹⁰³ Nb(1.5 s) | 102.64(†100), 641.1(†55), 538.5(†34.0) |
| 423.91 2 | †69 | ¹⁰³ Mo(67.5 s) | 83.4(†100), 45.8(†57), 687.6(†31) |
| 424.0 10 | 4.1 16 | ⁷³ Kr(27.0 s) | 177.8(65.8), 62.5(19.1), 454.8(15) |
| 424.0 1 | 43.4 24 | ⁷⁶ Rb(39.1 s) | 2571.3(47), 355.6(8.2), 1803.3(7.6) |
| 424.0 1 | 0.91 20 | ¹⁷⁷ W(135 m) | 115.65(50), 426.98(13.2), 1036.4(10.3) |
| 424.0 1 | 3.4 3 | ¹⁸⁸ Tl(71 s) | 412.7(88), 592.0(61), 504.2(23.3) |
| 424.0 | >0.013 | ¹⁹⁷ Tl(2.84 h) | 425.84(12.9), 152.22(7.2), 1411.34(4.5) |
| 424.09 18 | 0.62 6 | ¹⁸⁶ Au(10.7 m) | 191.56(62), 298.67(25.4), 764.89(10.5) |
| 424.1 2 | †3.7 4 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| • 424.178 13 | 0.0219 23 | ⁷⁷ Br(57.036 h) | 238.996(23), 520.639(22.4), 297.215(4.16) |
| 424.2 2 | †3.7 4 | ¹¹⁰ Tc(0.92 s) | 240.67(†100), 372.1(†17.0), 613.0(†16.0) |
| 424.2 3 | 1.21 13 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 424.2 3 | 0.25 5 | ¹²⁷ In(1.09 s) | 1597.7(49), 646.1(6.2), 805.1(5.6) |
| 424.2 2 | 0.094 12 | ¹⁸³ Au(42.0 s) | 161.18(9.4), 214.13(5.9), 313.08(5.0) |
| 424.2 2 | 0.50 10 | ¹⁸⁴ Au(53.0 s) | 162.97(50), 272.98(40), 362.47(17.5) |
| 424.27 18 | 12.2 4 | ¹⁸⁶ Tl(27.5 s) | 405.43(92), 402.72(45.9), 356.84(29.3) |
| 424.3 1 | 0.76 9 | ¹³⁹ Nd(5.50 h) | 113.94(40), 737.96(35), 982.2(26.4) |
| • 424.38 20 | 0.00242 24 | ¹⁵³ Sm(46.27 h) | 103.1807(31.4), 69.67340(4.85), 97.4316(0.847) |
| 424.39 14 | 0.39 7 | ¹⁵⁶ Ho(56 m) | 266.35(54.7), 137.83(51), 366.25(10.73) |
| 424.4 6 | 0.64 20 | ¹⁰⁴ In(1.8 m) | 658.0(100), 834.1(99), 878.1(29.4) |
| 424.4 2 | 1.20 17 | ¹⁸⁰ Lu(5.7 m) | 407.94(43.0), 1199.7(24.3), 1106.00(22.7) |
| 424.46 15 | 0.044 4 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 424.48 15 | 0.050 5 | ¹⁷⁶ Ta(8.09 h) | 1159.28(25), 88.34(12), 1224.93(6) |
| 424.5 | 0.23 | ¹⁴⁷ Ba(0.893 s) | 167.4(11), 105.2(4.8), 196.1(4.8) |
| 424.5 7 | 0.89 14 | ²⁰¹ Bi(108 m) | 629.1(24.0), 936.2(11.3), 1014.1(10.7) |
| • 424.55 6 | 0.050 7 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 424.6 5 | 0.021 14 | ¹⁶² Tm(21.70 m) | 102.00(17.5), 798.68(8.4), 227.52(7) |
| • 424.6 1 | 0.103 9 | ¹⁷⁷ Ta(56.56 h) | 112.9498(7.2), 208.3664(0.94), 1057.8(0.29) |
| 424.67 3 | 1.16 8 | ¹³² Ce(3.51 h) | 182.11(77), 155.37(10.5), 216.83(4.95) |
| 424.70 13 | 0.25 3 | ⁹³ Sr(7.423 m) | 590.238(67), 875.73(24.1), 888.13(21.8) |
| 424.7 2 | 0.468 20 | ¹⁶² Ho(67.0 m) | 185.005(28.6), 1220.0(22.5), 282.864(11.3) |
| • 424.71 15 | 0.034 6 | ¹⁸⁸ Ir(41.5 h) | 155.032(29.7), 2214.62(18.7), 632.99(18) |
| 424.76 12 | 0.15 3 | ¹⁹³ Au(17.65 h) | 186.17(10.1), 255.57(6.7), 268.22(3.9) |
| 424.85 5 | 0.473 25 | ¹⁴³ Ba(14.33 s) | 211.475(25), 798.79(15.6), 980.45(11.55) |
| 424.85 15 | 22 | ¹⁹⁹ Bi(27 m) | 560.1(22.0), 841.7(11), 946.0(10.8) |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|------------------------|----------------------------|---|
| 424.9 | 32 4 | ³⁶ Si(0.45 s) | 175.0(68), 249.9(68), 878.2(44) |
| 424.9 5 | 0.0224 23 | ¹⁷¹ Er(7.516 h) | 308.31(64.4), 295.901(28.9), 111.621(20.5) |
| 424.92 15 | 0.00068 21 | ¹⁴⁵ Pr(5.984 h) | 748.278(0.5250), 675.795(0.514), 72.500(0.261) |
| 425 1 | 0.93 21 | ¹⁶⁴ Tb(3.0 m) | 168.838(25.4), 754.80(23.3), 215.07(21) |
| 425.03 3 | 0.061 3 | ¹⁵⁵ Dy(9.9 h) | 226.918(68.4), 184.564(3.37), 1089.8(>2.8) |
| 425.036 31 | 5.72 10 | ¹⁴² Ba(10.6 m) | 255.300(20.5), 1204.3(14.23), 895.2(13.9) |
| 425.1 3 | 0.0137 20 | ⁴⁵ Ti(184.8 m) | 720.22(0.154), 1408.6(0.085), 1662.4(0.041) |
| 425.1 3 | 0.36 8 | ⁹⁰ Mo(5.67 h) | 257.34(78), 122.370(64.2), 203.13(6.4) |
| 425.10 7 | 0.48 5 | ¹⁵⁰ Pm(2.68 h) | 333.971(68), 1324.51(17.5), 1165.739(15.8) |
| 425.10 7 | 0.0079 16 | ¹⁵⁰ Eu(12.8 h) | 333.971(4.0), 406.52(2.81), 1165.739(0.257) |
| 425.1 1 | 0.060 11 | ²²⁸ Fr(39 s) | 473.7(10.2), 474.0(7.6), 410.40(6.3) |
| • 425.1 | 0.00024 | ²⁵³ Es(20.47 d) | 41.79(0.050), 389.11(0.0264), 387.1(0.00810) |
| 425.19 25 | 0.19 4 | ²⁰⁷ At(1.80 h) | 814.41(44.5), 588.33(19.2), 300.654(12.8) |
| 425.2 5 | †8 | ¹⁵⁴ Nd(25.9 s) | 151.703(†800), 799.55(†600), 180.693(†510) |
| 425.2 | †10 3 | ²¹⁰ Fr(3.18 m) | 643.8(†100), 817.6(†60), 203.1(†35) |
| 425.22 3 | 0.272 10 | ¹⁴⁹ Nd(1.728 h) | 211.309(25.9), 114.314(19.2), 270.166(10.7) |
| 425.23 3 | 2.8 5 | ¹²⁰ I(53 m) | 560.44(100), 601.11(87), 614.62(67) |
| 425.30 11 | 100 10 | ⁸⁴ Br(6.0 m) | 881.610(98), 1463.84(97), 446.9(3) |
| 425.3 2 | †1.8 3 | ¹⁵⁸ Ho(11.3 m) | 218.21(†100.0), 98.91(†70), 945.7(†37) |
| 425.3 2 | 0.036 10 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 425.340 3 | 0.143 12 | ¹⁹⁹ Pt(30.80 m) | 542.993(15), 493.772(5.59), 317.056(4.95) |
| 425.4 7 | 0.17 8 | ¹²³ In(5.98 s) | 1130.5(63), 1019.7(32), 618.8(2.6) |
| 425.40 10 | 0.22 4 | ¹⁶² Yb(18.87 m) | 163.35(40.0), 118.70(33.6), 576.10(3.24) |
| 425.4 1 | 0.95 5 | ²⁵¹ Fm(5.30 h) | 480.4(0.392), 358.3(0.315), 383.2(0.0196) |
| 425.41 20 | 0.66 19 | ¹⁹⁵ Ir(3.8 h) | 98.85(10), 684.88(9.4), 432.86(9) |
| • 425.48 7 | 0.0184 13 | ¹⁴⁵ Eu(5.93 d) | 893.73(66), 653.512(15.0), 1658.53(14.9) |
| 425.5 | >0.08 | ⁸³ Zr(44 s) | 55.55(8), 104.97(5.70), 475.1(5.1) |
| 425.5 2 | 0.0049 8 | ⁹⁰ Nb(14.60 h) | 1129.224(92.7), 2318.968(82.03), 141.178(66.8) |
| 425.6 2 | 0.11 | ¹⁴⁰ Sm(14.82 m) | 225.5(>10), 225.4(10), 140.0(5.0) |
| • 425.6 4 | 0.010 3 | ¹⁵¹ Pm(28.40 h) | 340.08(23), 167.75(8.3), 275.21(6.8) |
| 425.6 5 | 0.23 5 | ¹⁶¹ Tm(33 m) | 45.54(5.00), 1648.1(9.50), 84.40(9.4) |
| 425.6 4 | 0.058 4 | ²³³ Np(36.2 m) | 312.17(0.7), 298.89(0.44), 546.9(0.280) |
| 425.68 8 | 1.00 6 | ¹⁴⁸ La(1.05 s) | 158.468(55.6), 989.85(9.3), 760.30(8.6) |
| 425.7 4 | 0.23 4 | ¹²⁷ Sn(2.10 h) | 1114.3(39), 1095.6(20), 823.1(10.9) |
| 425.7 1 | †1.55 11 | ¹²⁹ Ba(2.17 h) | 182.30(†100), 1459.1(†50.0), 202.38(†33.7) |
| 425.7 4 | 0.42 8 | ¹⁴⁸ Ho(9.59 s) | 1687.5(82.47), 660.8(58.94), 504.3(18.62) |
| 425.7 3 | 1.1 | ¹⁷⁰ Hf(16.01 h) | 164.78(33), 620.7(23), 120.17(19) |
| 425.7 2 | >0.017 | ¹⁷³ Ta(3.14 h) | 172.2(18), 69.70(5.9), 90.3(5.0) |
| • 425.784 4 | 0.00030 5 | ¹⁶¹ Tb(6.88 d) | 25.65150(23.2), 48.91562(17.0), 74.56711(10.2) |
| 425.784 4 | | ¹⁶¹ Ho(2.48 h) | 25.65150(27), 103.062(3.9), 77.414(1.91) |
| 425.8 3 | †100 | ¹⁵¹ Yb(1.6 s) | 1050.2(†100), 1245.6(†100), 624.8(†100) |
| 425.8 1 | 1.94 12 | ²³⁷ Am(73.0 m) | 280.23(47.3), 438.4(8.3), 473.5(4.3) |
| 425.84 10 | 12.9 9 | ¹⁹⁷ Tl(2.84 h) | 152.22(7.2), 1411.34(4.5), 577.97(4.4) |
| 425.89 20 | 0.169 24 | ⁹¹ Mo(65.0 s) | 1507.93(24.3), 1208.09(18.7), 2240.87(0.73) |
| 425.9 2 | 1.1 3 | ¹²⁹ Sn(6.9 m) | 1161.31(56.0), 1128.44(50), 760.8(16.8) |
| 425.9 3 | 0.19 3 | ¹³⁶ Nd(50.65 m) | 108.90(32), 40.2(18.9), 574.8(10.4) |
| 425.9 5 | 0.36 18 | ¹⁵⁰ Tb(3.48 h) | 638.05(72), 496.3(14.8), 792.5(4.39) |
| 425.97 23 | 0.305 16 | ⁸⁶ Y(14.74 h) | 1076.64(83), 627.72(32.6), 1153.01(30.5) |
| 425.98 5 | 0.111 11 | ¹⁵³ Dy(6.4 h) | 80.723(11.10), 213.754(10.90), 99.659(10.51) |
| 426.0 4 | 0.148 8 | ⁶¹ Zn(89.1 s) | 475.0(16.85), 1660.5(7.80), 970.0(2.57) |
| 426.0 1 | 1.2 3 | ¹⁴¹ Tb(3.5 s) | 293.3(16.8), 343.6(16.3), 198.4(14.8) |
| • 426.00 3 | 0.58 12 | ¹⁶⁶ Dy(81.6 h) | 82.471(14), 28.242(1.13), 54.2400(0.81) |
| 426 | | ¹⁹⁵ Tl(1.16 h) | 563.52(10.5), 884.47(10.0), 1363.88(8.4) |
| • 426.0 1 | †1.4×10 ³ | ¹⁹⁶ Au(6.183 d) | |

• $t_{1/2} > 1$ d

Energy-ordered Decay γ -ray Tables from the *Table of Isotopes*

| $E_{\gamma}(\Delta E)$ | $I_{\gamma}(\Delta I)$ | Decay Parent | Associated γ -rays: $E_{\gamma}(I_{\gamma})$ |
|------------------------|-------------------------|-----------------------------|---|
| 426.0 1 | 84 4 | ¹⁹⁶ Tl(1.84 h) | 610.5(11.9), 635.5(9.8), 1495.8(8.2) |
| 426.0 1 | †540 80 | ¹⁹⁶ Tl(1.41 h) | 635.5(†304), 695.6(†243), 610.5(†30) |
| 426.03 10 | 2.32 19 | ¹²⁵ In(2.36 s) | 1335.04(71), 1031.75(9.6), 617.88(7.4) |
| 426.06 11 | 0.71 7 | ¹⁵⁷ Pm(10.56 s) | 160.61(35), 188.052(13.5), 571.27(5.39) |
| 426.135 4 | 7.7 7 | ¹⁰⁹ Rh(80 s) | 326.868(54), 178.034(7.6), 291.430(7.5) |
| 426.15 8 | 29 | ⁷⁰ Se(41.1 m) | 49.51(35.8), 376.65(9.43), 202.73(4.89) |
| 426.177 3 | 0.0127 22 | ¹⁵⁵ Sm(22.3 m) | 104.3346(74.6), 245.771(3.7), 141.4428(1.98) |
| 426.19 7 | 1.6 2 | ¹²⁸ In(0.72 s) | 831.54(100), 1168.80(100), 120.54(11.1) |
| 426.2 1 | 6.9 4 | ¹¹⁷ Ag(72.8 s) | 135.4(23), 337.7(10.3), 157.1(7.9) |
| • 426.2 4 | 0.025 9 | ¹⁹⁰ Ir(11.78 d) | 186.718(52.4), 605.24(39.9), 518.55(34.0) |
| 426.23 18 | †1.6 3 | ¹⁶⁵ Lu(10.74 m) | 132.49(†100), 120.60(†100), 174.25(†47.0) |
| 426.25 21 | 4.12 15 | ¹⁰⁹ In(4.2 h) | 203.5(74), 623.7(5.5), 1148.9(4.3) |
| 426.253 10 | 67.5 20 | ²⁰⁴ At(9.2 m) | 684.341(95), 516.318(90), 609.13(24.6) |
| 426.34 11 | 1.89 10 | ¹⁸⁷ Au(8.4 m) | 1331.81(7.0), 1408.23(3.06), 914.73(3.02) |
| 426.383 6 | 97.0 13 | ¹⁷⁸ Lu(23.1 m) | 325.562(94.1), 213.440(81.4), 88.867(64.4) |
| 426.383 6 | 97.0 13 | ¹⁷⁸ Ta(2.36 h) | 325.562(94.1), 213.440(81.4), 88.867(64.4) |
| 426.41 4 | 0.25 4 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 427.12(4.12), 400.89(3.94) |
| 426.47 3 | 0.43 4 | ¹⁵¹ Nd(12.44 m) | 116.80(43.4), 255.68(16.4), 1180.89(14.8) |
| • 426.47 4 | †2.46×10 ⁵ 5 | ²⁴¹ Am(432.2 y) | 59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸) |
| • 426.4726 24 | 0.428 24 | ¹⁷⁷ Lu(160.4 d) | 208.3664(57.7), 228.4838(37.0), 378.5029(29.7) |
| 426.5 | 2.6 | ⁴⁴ Ar(11.87 m) | 182.6(66), 1703.4(57), 1886.0(31) |
| 426.5 3 | †0.33 9 | ¹⁸⁸ Au(8.84 m) | 265.63(†100), 340.04(†23.9), 605.5(†16.3) |
| 426.5 5 | >0.010 | ²¹⁴ Bi(19.9 m) | 609.312(44.8), 1764.494(15.36), 1120.287(14.80) |
| 426.6 5 | 0.7 4 | ¹⁷⁹ Yb(8.0 m) | 592.1(75), 612.3(35.4), 381.4(9.6) |
| 426.6 | †1.91 21 | ¹⁸⁵ Hg(21.6 s) | 222.8(†100.0), 258.7(†98), 212.5(†58) |
| • 426.670 6 | 2.33×10 ⁻⁵ 6 | ²³⁹ Pu(24110 y) | 51.624(0.007100), 38.661(0.000500), 129.297(0.00631) |
| 426.692 10 | 4.33 14 | ¹⁵¹ Tb(17.609 h) | 287.357(28.3), 251.863(26.3), 108.088(24.3) |
| 426.71 25 | 0.87 18 | ¹⁷² Ta(36.8 m) | 214.02(46), 95.23(17.5), 1109.27(12.4) |
| 426.78 7 | 17 | ¹⁵⁴ Tb(22.7 h) | 247.925(79), 346.643(69), 1419.81(46) |
| 426.78 2 | 7.07 20 | ²⁰⁸ Rn(24.35 m) | 251.05(5.02), 350.026(3.34), 287.160(2.85) |
| 426.8 | 0.14 | ¹⁸⁵ Ir(14.4 h) | 254.4(13.3), 1828.8(10), 60.0(5.7) |
| 426.84 5 | 10.5 5 | ¹⁰⁹ Ru(34.5 s) | 206.29(22.0), 225.98(19.6), 1929.05(13.7) |
| 426.84 2 | 1.88 12 | ²⁰⁴ Po(3.53 h) | 883.984(29.9), 270.068(27.8), 1016.31(24.1) |
| 426.9 3 | 0.35 5 | ¹²⁰ Xe(40 m) | 25.1(30), 72.6(9), 178.1(6.8) |
| 426.9 | 0.70 23 | ¹⁴⁸ Ba(0.607 s) | 56.08(29.20), 133.53(3.88), 415.78(3.59) |
| 426.94 12 | †6.2 15 | ¹³¹ Pr(1.53 m) | 266.13(†100), 72.82(†64), 387.56(†38) |
| 426.94 8 | 0.0099 17 | ¹⁷³ Hf(23.6 h) | 123.672(83), 296.974(33.9), 139.634(12.7) |
| 426.95 5 | 0.45 3 | ²³⁴ Pa(6.70 h) | 131.30(18), 946.00(13.4), 883.24(9.6) |
| 426.98 5 | 13.2 6 | ¹⁷⁷ W(135 m) | 115.65(50), 1036.4(10.3), 115.05(8.6) |
| 427.00 5 | 0.0082 19 | ¹²⁷ Cs(6.25 h) | 411.95(62.8), 124.70(11.37), 462.31(5.07) |
| 427.0 2 | 0.10 | ¹⁴⁰ Sm(14.82 m) | 225.5(>10), 225.4(10), 140.0(5.0) |
| 427.0 3 | †0.15 2 | ¹⁸⁴ Ir(3.09 h) | 263.97(†100), 119.80(†45), 390.38(†38) |
| 427.0 2 | †3.3 4 | ¹⁸⁵ Pt(33.0 m) | 229.60(†100), 135.3(†80), 197.4(†74) |
| • 427 1 | 0.0007 3 | ²³¹ Pa(32760 y) | 27.36(10.3), 300.07(2.46), 302.65(2.2) |
| 427.03 6 | 37.4 10 | ⁶⁴ Ge(63.7 s) | 666.94(16.9), 128.2(10.7), 774.5(7.0) |
| 427.088 10 | 1.76 4 | ²¹¹ Pb(36.1 m) | 404.853(3.78), 832.01(3.52), 766.51(0.617) |
| 427.1 5 | >0.007 | ⁶⁴ Ga(2.630 m) | 991.52(43), 807.86(13.65), 3365.86(13.1) |
| 427.1 2 | 3.63 23 | ¹²¹ Cs(155 s) | 153.9(15.2), 239.6(7.7), 179.4(2.7) |
| 427.1 2 | 2.11 16 | ¹²¹ Cs(122 s) | 179.4(30.2), 196.0(24.1), 459.7(12.0) |
| 427.12 4 | 4.12 13 | ¹⁸⁷ Ir(10.5 h) | 912.95(4.79), 400.89(3.94), 610.68(3.93) |
| • 427.18 1 | 0.0274 8 | ¹⁵⁵ Tb(5.32 d) | 86.545(32.0), 105.305(25), 180.103(7.45) |
| • 427.19 5 | 0.123 7 | ¹⁷² Lu(6.70 d) | 1093.657(62.5), 900.724(29.8), 181.528(20.6) |
| 427.2 2 | 0.25 4 | ⁹⁵ Rb(377.5 ms) | 352.02(49), 204.02(15.1), 680.7(14.8) |
| 427.2 2 | †1.4 | ⁹⁶ Rb(0.199 s) | 352.02(†700), 204.02(†200), 680.7(†121) |

• $t_{1/2} > 1$ d