

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

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$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	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	²⁰⁶ 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	¹⁸⁶ 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(1.592×10 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	¹⁸⁶ 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)

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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 Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
228.22 10	0.77 10	¹¹⁵ Te(5.8 m)	723.569(30), 1380.58(23.0), 1326.83(22.7)
228.3 3	0.00042 25	¹⁶⁵ Dy(2.334 h)	94.700(3.58), 361.68(0.84), 633.415(0.568)
228.34 20	0.029 4	¹⁶⁵ Yb(9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
228.4 1	40	⁵³ Ti(32.7 s)	127.6(46), 1675.5(25), 100.8(20.3)
228.4 4	1.68 9	⁸⁶ Se(15.3 s)	2441.1(43.0), 2660.0(21.6), 48.3(15.4)
228.4 4	0.19 4	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
228.4	†50 5	¹⁸⁹ Tl(1.4 m)	317.5(†100), 215.6(†90), 335(†63)
228.48 6	1.326 14	¹⁴⁴ Ba(11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
• 228.4838 6	37.0 7	¹⁷⁷ Lu(160.4 d)	208.3664(57.7), 378.5029(29.7), 418.5391(21.3)
228.5 1	†1.83 17	¹²³ La(17 s)	92.5(†100), 937.3(†43), 153.6(†43)
• 228.5 2	1.9×10^{-5} 4	²²⁸ Th(1.9131 y)	84.373(1.266), 215.985(0.263), 131.613(0.1355)
228.56 20	0.048 4	²³³ Np(36.2 m)	312.17(0.7), 298.89(0.44), 546.9(0.280)
• 228.56 20	$\dagger 3.93 \times 10^6$ 16	²³⁷ Pu(45.2 d)	280.40(†870000), 298.89(†7.85×10 ⁶), 320.75(†6.48×10 ⁶)
228.58 8	†97 10	¹⁶⁸ Lu(5.5 m)	1483.65(†100), 111.8(†68), 111.79(†68)
228.59 6	0.38 2	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
228.6 1	†3.3 4	²²⁵ Fr(4.0 m)	182.3(†100), 31.50(†91), 225.1(†55)
228.630 20	2.1 14	¹⁰⁶ Rh(131 m)	511.842(85), 1045.83(30.4), 717.24(28.9)
• 228.630 20	2.10 10	¹⁰⁶ Ag(8.28 d)	511.842(88), 1045.83(29.6), 717.24(28.9)
228.67 5	28.9 12	⁷⁵ Zn(10.2 s)	432.29(20.2), 155.94(17.2), 606.43(9.0)
228.7 1	0.074 20	⁷⁹ Kr(4.3 m)	132.43(67), 154.66(20.8), 153.15(8.0)
228.70 7	6.9 10	¹⁸³ Ir(58 m)	392.52(10.4), 87.67(5.6), 282.39(4.9)
• 228.71 5	>0.00039	¹⁶⁹ Yb(32.026 d)	63.12077(44.2), 197.95788(35.8), 177.21402(22.16)
228.71 7	0.037 7	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
228.7346 18	0.052 8	¹⁵⁵ Sm(22.3 m)	104.3346(74.6), 245.771(3.7), 141.4428(1.98)
228.76 11	1.6 4	¹⁸¹ Os(105 m)	238.75(44), 826.77(20), 118.03(12.9)
228.78 20	†2.3	¹⁹⁷ Ir(5.8 m)	469.72(†100), 430.56(†61), 815.92(†45)
• 228.785 6	0.008 3	²³⁵ U(7.038×10 ⁸ y)	185.712(57.2), 143.764(10.96), 163.358(5.08)
228.80 6	2.52 13	¹⁴³ Cs(1.78 s)	195.554(13), 232.421(8.32), 306.424(6.80)
228.8		²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
228.9 1	0.11 1	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
228.9 3	0.14 5	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
228.9	0.08	¹⁸⁵ Ir(14.4 h)	254.4(13.3), 1828.8(10), 60.0(5.7)
228.951 15	0.012 3	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
• 229.00 7	0.023 5	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
• 229.0 5	0.0024 6	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
229	0.07	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
229.0 2	†3.0	²⁵⁶ Es(7.6 h)	861.8(†100), 231.1(†61), 172.6(†49)
229.08 9	18	¹¹⁵ Ag(20.0 m)	212.80(4.4), 472.70(4.0), 649.10(3.0)
229.08 9	†100	¹¹⁵ Ag(18.0 s)	131.52(†77), 388.9(†52), 360.52(†16.3)
• 229.080 10	0.356 9	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
229.1 3	0.102 24	¹⁰⁰ Rh(20.8 h)	539.59(78.4), 2376.1(35.3), 1553.4(21)
• 229.1		¹⁸⁵ Os(93.6 d)	646.116(78.0), 874.813(6.29), 880.523(5.17)
229.1 3	0.15 5	²³⁷ Am(73.0 m)	280.23(47.3), 438.4(8.3), 473.5(4.3)
229.17 13	†5.2 10	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
229.2 5	0.14 5	⁸⁹ Nb(1.9 h)	1627.20(3.4), 1833.46(3.16), 3092.7(3.0)
229.2 2	0.12 6	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
229.2 1	23.4 14	¹³⁰ Sn(3.72 m)	192.5(70), 779.8(59), 70.0(35.5)
229.2 3	†15 4	¹⁵⁵ Er(5.3 m)	110.12(†100), 241.5(†65), 234.0(†40.0)
229.3 3	2.29 14	⁹⁵ Rh(5.02 m)	941.6(72), 1352.0(20.8), 677.6(5.80)
• 229.3 2	0.036 10	²⁴⁷ Cm(1.56×10 ⁷ y)	402.6(72), 278.0(3.4), 287.4(2.0)
• 229.32 2	63 3	¹⁴⁷ Gd(38.06 h)	396.00(34.3), 929.01(20.2), 370.0(17.2)
• 229.3220 6	3.630 21	¹⁸² Ta(114.43 d)	67.75001(41.2), 1121.3007(34.9), 1221.4066(26.98)
229.3220 6	2.5 3	¹⁸² Re(12.7 h)	67.75001(38.2), 1121.3007(32), 1221.4066(24.8)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
• 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	¹²⁶ 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	¹⁸⁶ 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	¹⁴⁶ 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)

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	$\dagger 4.6 \times 10^4$ 3	²⁴¹ Am(432.2 y)	59.537(†60), 26.345(†1000 $\times 10^9$), 33.195(†6000 $\times 10^6$)
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	²⁰⁶ 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 $\times 10^8$ 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 ⁶)
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	$\dagger 2.14 \times 10^3$	²⁴⁵⁷ 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} 18	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	$\dagger 19.2$ 18	¹⁵⁵ Er(5.3 m)	110.12($\dagger 100$), 241.5($\dagger 65$), 234.0($\dagger 40.0$)
234.8 2	$\dagger 0.14$ 5	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	$\dagger 0.24$ 7	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	$\dagger 14.3$ 1	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	$\dagger 27$ 10	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	$\dagger 10$ 2	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 18	0.07	$^{182}\text{Hf}(61.5 \text{ m})$	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	¹⁸⁶ 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)

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)

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	⁷⁹ 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	¹⁴⁶ 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}Pd (16.991 d)	39.757(0.07), 357.47(0.0221), 497.080(0.00396)
241.9 2	1.6	^{104}Zr (1.2 s)	100.9(6), 504.7(5), 445.0(5)
241.9	6	^{133}Pr (6.5 m)	134.3(14), 74.0(10), 315.6(10)
241.90 30	0.10 3	^{161}Tm (33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
241.9 3	1.02 14	^{176}Tm (1.9 m)	189.57(44.5), 1069.3(34), 381.8(21.8)
241.91 5	\dagger 22.4 24	^{229}U (58 m)	122.51(\dagger 100), 88.43(\dagger 88), 198.83(\dagger 88)
• 241.933 30	0.414 8	^{140}La (1.6781 d)	1596.210(95), 487.021(45.5), 815.772(23.28)
241.94 5	0.80 15	^{55}V (6.54 s)	517.71(73), 880.70(18.1), 921.10(4.6)
241.981 8	7.50 10	^{214}Pb (26.8 m)	351.921(35.8), 295.213(18.5), 53.226(1.11)
242.0 7	0.070 23	^{103}Cd (7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
242.0 1	0.031 12	^{133}Te (12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
242.0 2	0.144 20	^{140}Xe (13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
242.00 4	0.21 3	^{153}Dy (6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
242.0 2	\dagger 4.1	^{256}Es (7.6 h)	861.8(\dagger 100), 231.1(\dagger 61), 172.6(\dagger 49)
• 242.085 20	7.3×10^{-6} 5	^{239}Pu (24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
• 242.10 14	0.00019 3	^{149}Pm (53.08 h)	285.95(3.1), 859.46(0.109), 590.88(0.069)
242.1 1	\dagger 1.6 2	^{225}Fr (4.0 m)	182.3(\dagger 100), 31.50(\dagger 91), 225.1(\dagger 55)
242.1 2	0.027	^{227}Ra (42.2 m)	27.36(16), 300.07(4.6), 302.65(4.3)
242.12 11	6.0×10^{-5} 3	^{135}La (19.5 h)	480.51(1.5), 874.51(0.164), 587.83(0.1108)
242.12 5	1.89 20	^{222}Fr (14.2 m)	206.15(51), 111.12(12.5), 317.8(0.8)
242.12 5	0.866 40	^{226}Th (30.9 m)	111.12(3.29), 131.02(0.278), 206.15(0.189)
242.15 5	4.3 3	^{195}Tl (1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
242.19 3	9.9 3	^{90}Kr (32.32 s)	1118.69(39.0), 121.82(35.5), 539.49(30.8)
242.2 11	0.012 8	^{89}Kr (3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
242.2 1	1.5×10^{-6} 8	^{129}Te (69.6 m)	27.81(16.3), 459.60(7.70), 487.39(1.42)
• 242.2 1	0.00066 9	^{129}Te (33.6 d)	695.88(2.988), 729.57(0.70), 556.65(0.118)
• 242.2 1	0.0090 14	^{231}Pa (32760 y)	27.36(10.3), 300.07(2.46), 302.65(2.2)
242.25 5	82	^{108}Tc (5.17 s)	465.6(14.3), 707.81(11.4), 1583.5(9.8)
242.281 25	1.7 3	^{179}Re (19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
• 242.29 8	0.00146 24	^{99}Mo (65.94 h)	739.50(12.1), 181.063(6.08), 140.511(4.52)
242.3 3	0.143 14	^{190}Re (3.2 h)	186.718(27.8), 605.24(14.9), 557.972(14.3)
242.35 20	\dagger 0.21 2	^{184}Ir (3.09 h)	263.97(\dagger 100), 119.80(\dagger 45), 390.38(\dagger 38)
242.4 2	\dagger 2	^{87}Nb (2.6 m)	200.95(\dagger 100), 470.63(\dagger 73), 1066.8(\dagger 37)
242.4 3	0.036 9	^{120}Xe (40 m)	25.1(30), 72.6(9), 178.1(6.8)
242.4	\dagger 0.8 2	^{178}Ir (12 s)	266.1(\dagger 100.0), 131.6(\dagger 79), 363.1(\dagger 39.9)
242.4 5	76 33	^{184}Lu (20 s)	367.6(109), 481.9(65), 107.4(27)
• 242.4 2	0.094 14	^{229}Th (7340 y)	193.509(4.4), 210.853(2.8), 86.40(2.57)
242.45 10	0.093 20	^{105}Tc (7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
242.5 3	37	^{87}Se (5.85 s)	334.0(35), 573.2(19), 468.0(18)
• 242.5 8	0.0072 9	^{160}Tb (72.3 d)	879.383(30.01), 298.580(25.51), 966.171(25.21)
• 242.5	0.037 12	^{177}Lu (160.4 d)	208.3664(57.7), 228.4838(37.0), 378.5029(29.7)
242.5 4	0.084 7	^{233}Np (36.2 m)	312.17(0.7), 298.89(0.44), 546.9(0.280)
• 242.524 22	0.00084 8	^{231}Th (25.52 h)	25.646(14.5), 84.216(6.6), 89.944(0.94)
242.56 5	3.50 6	^{138}Xe (14.08 m)	258.411(31.5), 434.562(20.3), 1768.26(16.7)
242.6 10		^{77}Ga (13.2 s)	469.4(\dagger 100), 458.6(\dagger 48), 2187.3
242.6 3	0.023 5	^{113}Sb (6.67 m)	497.96(80), 332.41(14.8), 88.25(2.7)
242.6 12	0.35 14	^{186}Pt (2.0 h)	276.7(0), 611.5(6.0), 635.6(>3.8)
242.6		^{190}Hg (20.0 m)	142.6(68), 171.5(4.8), 154.7(2.5)
• 242.69 4	0.0210 8	^{134}Cs (2.062 y)	604.699(97.56), 795.845(85.44), 569.315(15.43)
242.7 1	2.9 3	^{117}Cs (8.4 s)	204.8(15.0), 29.7(9.9), 205.6(6.8)
242.7	0.092 14	^{141}Ba (18.27 m)	190.328(46.0), 304.194(25.4), 276.948(23.4)
242.80 10	96	^{86}Zr (16.5 h)	29.10(21.6), 612.00(5.7), 135.6(0.47)
242.8 6	\dagger 2.7 13	^{142}Xe (1.22 s)	571.83(\dagger 100), 657.05(\dagger 79), 538.24(\dagger 77)
242.8 2	0.47 7	^{167}Lu (51.5 m)	29.66(14.4), 239.22(8.6), 213.19(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: $E_{\gamma}(I_{\gamma})$
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 10	0.51 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		¹⁸⁶ 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)

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 Tc(18.3 m)	358.0(89), 530.5(15.6), 535.1(14.7)
245.50 10	0.270 17	¹⁴⁶ Ce(13.52 m)	316.74(56), 218.23(20.8), 264.56(9.0)
245.5	0.21 10	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
245.5 4	†7	¹⁷⁷ Os(2.8 m)	84.7(†100), 125.4(†63), 195.8(†61)
245.5 3	0.11 4	¹⁸¹ Re(19.9 h)	365.57(56), 360.70(20), 639.30(6.4)
245.588 25	0.60 18	¹⁴⁹ Pr(2.26 m)	138.447(11.0), 165.087(9.9), 108.520(9.5)
245.60 5	0.0210 15	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
• 245.6 1	0.0078 9	²³¹ Pa(32760 y)	27.36(10.3), 300.07(2.46), 302.65(2.2)
245.7 3	0.044 11	¹⁰³ Tc(54.2 s)	346.380(17.5), 136.079(16.6), 562.90(7.0)
245.7	>0.028	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
245.7 4	0.16 4	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
245.71 3	5.36 20	⁶⁶ Ge(2.26 h)	43.89(28.7), 381.85(28), 272.97(10.4)
245.72 5	0.80 21	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
245.771 4	3.7	¹⁵⁵ Sm(22.3 m)	104.3346(74.6), 141.4428(1.98), 30.5(0.56)
245.80 8	3.1 14	⁷⁹ Sr(2.25 m)	39.41(28), 105.00(21.8), 413.8(7.6)
245.8	4.5 5	¹⁴⁷ Cs(0.225 s)	85.2(7.3), 109.7(4.5), 596.0(4.3)
245.8 10	0.32 5	²⁰⁸ Rn(24.35 m)	426.78(7.07), 251.05(5.02), 350.026(3.34)
• 245.83 9	0.0018 4	⁹⁵ Tc(61 d)	204.117(63.25), 582.082(29.96), 835.149(26.63)
245.88 4	0.31 12	¹⁸³ Os(9.9 h)	1101.94(49.0), 1107.92(22.36), 1034.85(6.02)
245.9 4	0.18 4	¹¹⁹ Cd(2.69 m)	292.9(36.8), 343.0(16.9), 1609.7(10.9)
245.9 5	†40 4	¹¹⁹ Cs(30.4 s)	169.3(†>100), 314.0(†47)
245.95 8	0.035 9	¹³³ I(20.8 h)	529.872(87.0), 875.329(4.51), 1298.223(2.35)
245.99 6	0.027	²²⁷ Ra(42.2 m)	27.36(16), 300.07(4.6), 302.65(4.3)
• 245.99 6	0.0110 15	²³¹ Pa(32760 y)	27.36(10.3), 300.07(2.46), 302.65(2.2)
246.0 2	28	¹⁹⁹ Po(5.48 m)	845.7(23), 206.7(5.1), 545.8(4.6)
246.0 1	5.06 11	²²⁵ Th(8.72 m)	321.4(23), 359.0(4.1), 305.9(4.1)
246 3	†0.42 11	²²⁸ U(9.1 m)	98.0(†1.8), 185.7(†0.32), 152(†0.21)
246.0 3		²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
• 246.05 9	0.0013 5	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
• 246.0591 5 27 4		¹⁸³ Ta(5.1 d)	353.9912(11.2), 107.9322(11.0), 161.3467(8.9)
• 246.0591 5 1.31 4		¹⁸³ Re(70.0 d)	162.3219(23.3), 46.4839(7.97), 291.7238(3.05)
246.15 15	†8	¹⁹⁷ Ir(5.8 m)	469.72(†100), 430.56(†61), 815.92(†45)
246.19 11	0.076 12	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
• 246.19 20	†0.65 24	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
246.2 3	2.12 22	¹¹⁸ Ag(2.0 s)	487.77(57), 677.13(53), 1058.39(14.8)
246.2 2	0.183 18	¹⁴⁸ Pr(2.27 m)	301.702(61), 1357.78(5.5), 1023.18(4.8)
246.2 2	1.80 25	¹⁴⁸ Pr(2.0 m)	301.702(95), 450.58(50), 697.61(40)
246.2 3	>0.10	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
246.278 19	0.119 4	¹⁸⁷ W(23.72 h)	685.774(27.3), 479.531(21.8), 72.001(11.14)
246.29 5	0.60 14	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
246.3 2	0.23 3	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
• 246.3 5		¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
246.4 8	0.49 20	¹²² In(10.3 s)	1140.55(98), 1001.58(50.7), 1190.58(20.5)
246.44 5	0.047 5	¹³⁰ I(12.36 h)	536.09(99), 668.54(96), 739.48(82)
246.45 2	0.37 6	¹⁴⁷ La(4.015 s)	117.718(12), 186.320(6.48), 438.30(5.04)
246.456 1	2.23 10	¹⁹⁹ Pt(30.80 m)	542.993(15), 493.772(5.59), 317.056(4.95)
• 246.489 16	0.0225 9	¹⁶⁰ Tb(72.3 d)	879.383(30.01), 298.580(25.51), 966.171(25.21)
246.5 2	0.008 4	¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
246.5 5	0.42 11	¹⁶⁴ Tb(3.0 m)	168.838(25.4), 754.80(23.3), 215.07(21)
246.53 17	0.9 3	¹⁶⁶ Lu(6.7 m)	198.82(28), 979.22(20), 896.12(15)
246.6 3	0.68 4	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
246.66 6	1.20 12	¹⁴⁸ Ba(0.607 s)	56.08(29.20), 133.53(3.88), 415.78(3.59)
246.7 3	0.61 6	¹⁰⁹ Sb(17.0 s)	925.4(32), 1062.8(23.9), 664.5(20.1)
246.7 1	†1.04 9	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: $E_\gamma(I_\gamma)$
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(7.038×10^8 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($\dagger 22.6$)

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	¹⁸⁶ 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	¹²⁶ 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	1.7 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	¹⁵⁶ 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	¹⁵⁶ 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	†28.7 29	⁸⁸ Se(1.52 s)	159.2(†100), 259.2(†82), 1903.7(†64)
249.5 2	1.01 24	¹¹⁷ Ag(5.34 s)	135.4(48), 386.8(39.9), 298.1(21.1)
249.5 2	†1	¹³⁹ I(2.29 s)	527.7(†100), 571.2(†98), 536.6(†67)
• 249.5 2	0.012 5	²²⁵ Ac(10.0 d)	99.91(1.01), 150.04(0.80), 99.63(0.62)
• 249.508 25	1.95 12	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
249.52 11	0.291 12	¹⁴⁴ Ba(11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
249.52 15	1.01	¹⁵⁴ Pm(2.68 m)	184.810(32), 81.99(15.4), 546.66(14.5)
249.563 2	1.4 3	¹⁵¹ Pr(18.90 s)	880.19(13), 189.057(11.8), 484.501(11.3)
• 249.57 4	0.00078 8	²³¹ Th(25.52 h)	25.646(14.5), 84.216(6.6), 89.944(0.94)
249.6 1	1.60 9	²⁰⁷ Po(5.80 h)	992.33(59.3), 742.64(28.2), 911.79(16.95)
• 249.6 5	†0.49	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
• 249.6741 100.212 11		¹⁷⁷ Lu(6.734 d)	208.3664(11.0), 112.9498(6.4), 321.3162(0.219)
• 249.6741 106.14 18		¹⁷⁷ Lu(160.4 d)	208.3664(57.7), 228.4838(37.0), 378.5029(29.7)
• 249.6741 100.031 3		¹⁷⁷ Ta(56.56 h)	112.9498(7.2), 208.3664(0.94), 1057.8(0.29)
249.7 2	0.6 1	¹²⁸ Sb(9.01 h)	753.82(100), 743.22(100), 314.12(61)
• 249.7 10	0.020 3	²⁴⁰ Am(50.8 h)	987.76(73.2), 888.80(25.1), 98.860(1.5)
249.770 4	90	¹³⁵ Xe(9.14 h)	608.151(2.90), 408.009(0.359), 158.260(0.290)
• 249.786 3	0.394 16	⁷⁷ As(38.83 h)	238.996(1.6), 520.639(0.558), 87.8671(0.202)
• 249.786 3	2.98 7	⁷⁷ Br(57.036 h)	238.996(23), 520.639(22.4), 297.215(4.16)
249.8 2	9.3 8	¹⁰⁵ Mo(35.6 s)	85.4(25.0), 76.50(19.3), 147.8(14.8)
249.8 1	0.053 6	¹⁴⁵ Ce(3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)
249.8 4	†1.1 5	¹⁹⁶ Tl(1.87 h)	636.4(†202), 411.8044(†202), 587.2(†185)
249.81 12	0.278 17	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
• 249.83 4	0.142 14	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
249.83 10	0.21 3	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
249.89 18	0.0116 25	¹³⁹ Cs(9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
249.9	68 3	³⁶ Si(0.45 s)	175.0(68), 878.2(44), 424.9(32)
249.9 4	1.1	¹¹³ Ag(68.7 s)	316.3(18), 392.3(11), 298.58(10)
249.94 10	0.0205 11	⁸⁵ Br(2.90 m)	802.41(2.56), 924.63(1.63), 919.06(0.65)
• 249.95 20	0.0038 11	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
250.00 5	0.178 22	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
250.0		¹⁸⁰ Os(21.5 m)	20.1(†100), 717.4, 667.0
250.03 13	9.6 5	¹⁶⁷ Dy(6.20 m)	569.7(48), 259.33(27.9), 310.26(25.0)
250.1 4	0.12 6	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
250.1	0.5	¹⁴⁷ Ce(56.4 s)	268.80(7), 92.9(4.7), 374.23(3.5)
250.1 2	21.8 10	¹⁵² Nd(11.4 m)	278.5(32), 16.0(8.0), 294.6(3.8)
• 250.17 10	0.030 4	¹⁹⁴ Au(38.02 h)	328.455(60), 293.545(10.2), 1468.91(6.3)
250.20 5	1.16 19	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
250.2 1	0.74 8	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
250.2 5		¹⁶⁷ Ho(3.1 h)	346.547(56), 321.336(23.5), 237.873(5.0)
• 250.2 5	0.0022 5	¹⁶⁷ Tm(9.25 d)	207.801(41), 57.0723(4.6), 531.54(1.6)
250.2	>0.013	¹⁹⁷ Tl(2.84 h)	425.84(12.9), 152.22(7.2), 1411.34(4.5)
250.2 1	6.0 3	²¹¹ Rn(14.6 h)	674.1(45), 1362.9(32.5), 678.4(28.9)
250.3 3		¹²² Ba(1.95 m)	550.7, 388.7, 231.0
250.3 2	†39 4	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
250.31 21	0.084 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
250.332	46.3 16	³⁹ Cl(55.6 m)	1267.185(54), 1517.508(39.2), 1091.058(2.42)
250.35 3	0.21 4	²¹⁰ At(8.1 h)	1181.39(99.3), 245.31(79), 1483.39(46.5)
250.35 5	0.0204 9	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
250.35 5	0.0204 12	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
• 250.35 5	†5.7 16	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
• 250.35 5	†23 3	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
250.4 1	0.067 5	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
• 250.43 4	0.00065 7	²³¹ Th(25.52 h)	25.646(14.5), 84.216(6.6), 89.944(0.94)

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

• $t_{1/2} > 1$ 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: $E_\gamma(I_\gamma)$
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)

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	¹⁴⁶ 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	¹³⁶ 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	²⁰⁶ 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	$9.8 \times 10^{-5} 15$	$^{233}\text{U}(1.592 \times 10^5 \text{ y})$	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	$\dagger 1.21 \times 10^4 19$	$^{241}\text{Am}(432.2 \text{ y})$	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	$\dagger 2715 11$	$^{169}\text{Yb}(32.026 \text{ d})$	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	²³⁷ 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		¹⁸⁶ 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 605 24		¹⁸² Ta(114.43 d)	67.75001(41.2), 1121.3007(34.9), 1221.4066(26.98)
264.07519 629 4		¹⁸² Re(12.7 h)	67.75001(38.2), 1121.3007(32), 1221.4066(24.8)
• 264.07519 657 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)

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	†9.7 13	¹⁸¹ Hg(3.6 s)	147.8(†100), 42.5(†25), 1986.7(†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	†3.9×10 ³ 5	¹³⁴ Ce(75.9 h)	162.306(†230000), 130.414(†209000), 39.08(†>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	†100 3	¹⁸⁶ Au(8.84 m)	340.04(†23.9), 605.5(†16.3), 405.49(†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	†2.5 10	¹⁸⁹ Au(28.7 m)	713.17(†100), 812.68(†63), 447.65(†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	1.6×10 ⁻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	†93 5	²²⁴ Rn(107 m)	260.581(†100), 202.21(†21.9), 328.331(†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(3.04×10 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	†24 5	¹⁸⁰ Yb(2.4 m)	172.9(†100), 375.0(†87), 419.8(†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	†100.0 22	¹⁷⁸ Ir(12 s)	131.6(†79), 363.1(†39.9), 899.7(†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	†100	¹³¹ Pr(1.53 m)	72.82(†64), 387.56(†38), 324.35(†34)
266.2 4	2.17 23	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
266.2	†15.6	¹⁵⁶ Ho(21.3 m)	406.14(†100), 838.9(†84.3), 1484.1(†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	¹⁰⁶ 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(7.038×10 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	†9 1	²²⁷ Rn(22.5 s)	162.14(†100), 739.2(†65), 686.2(†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	$\dagger 2.63 \times 10^5$	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		¹⁰⁶ 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		¹⁸⁶ 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	¹⁵⁶ 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}Tb (17.5 h)	344.281($\dagger 1500$), 586.294($\dagger 223$), 271.135($\dagger 203$)
• 270.56 4	0.0095 10	^{189}Re (24.3 h)	216.663(5.50), 219.395(4.54), 245.09(3.5)
• 270.60 5	0.107 4	^{125}Sn (9.64 d)	1067.10(10), 1089.15(4.59), 822.48(4.28)
270.6 2	$\dagger 72$ 4	^{153}Ho (9.3 m)	108.7($\dagger 100$), 365.9($\dagger 92$), 161.5($\dagger 83$)
270.6 2	0.7	^{153}Ho (2.0 m)	295.8(67), 637.0(5.36), 688.5(3.7)
270.60 5	0.70 14	^{157}Tm (3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
270.6 1	0.047 8	^{227}Fr (2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)
• 270.63 15	$\dagger 6.4 \times 10^3$ 20	^{241}Am (432.2 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}La (11.6 m)	278.6(25), 110.5(16.9), 457.0(8.0)
270.7 3	0.038 9	^{195}Ir (3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
• 270.7 5	$\dagger 2.4$ 8	^{227}Th (18.72 d)	235.971($\dagger 813$), 50.13($\dagger 528$), 256.25($\dagger 463$)
• 270.72 3	0.068 7	^{151}Pm (28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
• 270.758 3	0.0020 13	^{155}Tb (5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
270.81 20	0.6	^{113}Pd (93 s)	95.74(3.3), 643.7(3.0), 739.63(2.4)
• 270.844 4	0.0083 5	^{77}As (38.83 h)	238.996(1.6), 520.639(0.558), 249.786(0.394)
• 270.844 4	0.321 12	^{77}Br (57.036 h)	238.996(23), 520.639(22.4), 297.215(4.16)
270.86 19	0.063 14	^{187}Au (8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
270.87 5	0.87 4	^{161}Gd (3.66 m)	360.94(0.59), 314.92(22.7), 102.315(13.9)
270.89 3	0.36 3	^{151}Nd (12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
270.9 3	0.10 5	^{127}In (1.09 s)	1597.7(49), 646.1(6.2), 805.1(5.6)
270.9 3	1.33 7	^{146}Ba (2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
271.0 10	0.018 6	^{99}Rh (4.7 h)	340.71(70), 617.8(12.0), 1261.2(11)
271.0 3	6.3 11	^{118}Pd (1.9 s)	125.4(34), 125.4(34), 224.2(20.1)
271.0 3	2.3 5	^{118}Pd (1.9 s)	125.4(34), 125.4(34), 224.2(20.1)
271.00 20	0.19 3	^{153}Dy (6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
271.0 3	0.00032 4	^{255}Fm (20.07 h)	81.477(0.81), 58.477(0.67), 80.92(0.27)
271.02 9	3.98 13	^{177}W (135 m)	115.65(50), 426.98(13.2), 1036.4(10.3)
271.056 9	1.21 7	^{155}Dy (9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
271.1 1	4.3 3	^{117}Cs (8.4 s)	204.8(15.0), 29.7(9.9), 205.6(6.8)
271.1 2	0.41 12	^{119}Ag (2.1 s)	626.4(13), 366.2(12.1), 399.1(10.9)
271.1	$\dagger 2.7$	^{144}Gd (4.5 m)	333.3($\dagger 100$), 2432.6($\dagger 94.8$), 629.5($\dagger 32.4$)
271.1 2	0.0049 25	^{246}Am (25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
271.135 8	0.076 3	^{152}Eu (9.274 h)	344.281(2.44), 1314.67(0.956), 970.38(0.604)
• 271.135 8	0.0730 21	^{152}Eu (13.542 y)	344.281(26.58), 778.91(12.96), 411.115(2.231)
271.135 8	$\dagger 203$ 14	^{152}Tb (17.5 h)	344.281($\dagger 1500$), 586.294($\dagger 223$), 778.91($\dagger 137$)
271.135 8	0.08 5	^{152}Tb (4.2 m)	344.281(20.8), 411.115(18.8), 471.9(12.2)
271.15 10	$\dagger 19.8$ 10	^{165}Lu (10.74 m)	132.49($\dagger 100$), 120.60($\dagger 100$), 174.25($\dagger 47.0$)
271.2	$\dagger 100$ 5	^{101}Rb (32 ms)	251.6($\dagger 31$), 1091.8($\dagger 25$), 1362.9($\dagger 14$)
271.2 1	0.23 7	^{107}Tc (21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
271.2 1	0.012 4	^{161}Er (3.21 h)	826.6(3.0), 211.15(12.2), 592.6(3.7)
271.23 1	$\dagger 5.5$ 5	^{215}Bi (7.6 m)	293.54($\dagger 100$), 517.63($\dagger 1.9$), 833($\dagger 1.4$)
271.23 1	10.8 3	^{219}Rn (3.96 s)	401.81(6.37), 130.59(0.119), 293.54(0.073)
271.30 10	5.1 7	^{159}Tm (9.13 m)	38.35(5.8), 84.8(5.8), 220.18(4.60)
271.3 1	5.7 3	^{240}Np (61.9 m)	566.34(25.3), 973.9(23.8), 600.57(18.4)
271.31 7	1.56 24	^{183}Ir (58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
271.4 3	6.4 26	^{49}Mn (384 ms)	
271.4 1	0.031 6	^{186}Hg (1.38 m)	112.1(63), 251.5(55), 191.6(3.7)
271.45 17	$\dagger 31$ 6	^{187}Hg (1.9 m)	233.38($\dagger 100$), 376.34($\dagger 38$), 240.26($\dagger 33$)
• 271.48 8	0.328 12	^{233}Pa (26.967 d)	312.17(38.6), 300.34(6.62), 340.81(4.47)
271.48 8	0.0059 3	^{233}Np (36.2 m)	312.17(0.7), 298.89(0.44), 546.9(0.280)
271.5 4	0.12 4	^{127}Sn (2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
271.5 2	0.67 10	^{148}Ce (56 s)	269.519(17.0), 291.724(16.7), 121.169(13.2)
271.5 2	$\dagger 2.9 \times 10^3$ 4	^{156}Er (2.29 h)	71.91($\dagger 23300$), 386.84($\dagger 111000$), 248.58($\dagger 42000$)
271.5 6	0.14	^{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: $E_\gamma(I_\gamma)$
• 271.56 5	0.026 4	¹⁸⁶ 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	¹⁶⁶ 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	¹⁹⁶ 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)

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)

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	¹⁶⁶ 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	¹⁸⁶ 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)

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	¹⁸⁶ 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	¹⁴⁶ Ho(9.59 s)	1687.5(82.47), 660.8(58.94), 504.3(18.62)

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	¹⁸⁶ 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	\dagger 1.1 5	¹⁷¹ Hf(12.1 h)	122.0(\dagger 100), 662.2(\dagger 83), 347.18(\dagger 47)
283.36 6		²²³ Rn(23.2 m)	591.8(\dagger 100), 635.2(\dagger 76), 416.0(\dagger 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	\dagger 8.7 9	¹⁸⁵ Hg(21.6 s)	222.8(\dagger 100.0), 258.7(\dagger 98), 212.5(\dagger 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	\dagger 3.3 4	¹⁰¹ Nb(7.1 s)	276.10(\dagger 100), 157.466(\dagger 32), 13.5(\dagger 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	\dagger 1.9 7	¹⁵⁵ Er(5.3 m)	110.12(\dagger 100), 241.5(\dagger 65), 234.0(\dagger 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	\dagger 0.24 3	¹²⁹ Ba(2.17 h)	182.30(\dagger 100), 1459.1(\dagger 50.0), 202.38(\dagger 33.7)
284.0 5	\dagger 0.3 1	¹³⁶ Eu(3.3 s)	254.9(\dagger 100), 431.4(\dagger 34), 458.0(\dagger 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	\dagger 0.9 4	¹⁹⁴ Bi(92 s)	965.4(\dagger 100.0), 575.1(\dagger 98.0), 280.1(\dagger 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	\dagger 2.0 8	¹³¹ Pr(1.53 m)	266.13(\dagger 100), 72.82(\dagger 64), 387.56(\dagger 38)
284.2 2	\dagger 7 2	¹⁸⁷ Hg(1.9 m)	233.38(\dagger 100), 376.34(\dagger 38), 240.26(\dagger 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	¹³⁶ Nd(5.04 h)	325.76(2.84), 199.50(0.53), 341.65(0.40)
284.3 4	\dagger 4.2 8	¹⁸³ Hg(9.4 s)	60.5(\dagger 100), 159.91(\dagger 21), 172.70(\dagger 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	\dagger 1.6 8	²²⁷ Th(18.72 d)	235.971(\dagger 813), 50.13(\dagger 528), 256.25(\dagger 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	$\dagger 2.11 \times 10^3$	²²⁴ 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	$\dagger 3.5 4$	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	$\dagger 1.9 4$	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	$\dagger 2.32 8$	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		¹⁶⁶ 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	$\dagger 39 4$	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	$\dagger 17.1 9$	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	¹⁴⁶ Er(4.6 s)	1311.8(8.9), 244.0(7.1), 315.3(6.9)

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	¹⁴⁶ 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)

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	¹⁴⁶ 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 $\times 10^6$)
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 $\times 10^6$), 861.9(†2.8 $\times 10^6$)
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	¹⁴⁶ 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	$\dagger 2$ 1	^{101}Nb (7.1 s)	276.10($\dagger 100$), 157.466($\dagger 32$), 13.5($\dagger 32$)
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 $\times 10^5$ y)	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
294.0 3	$\dagger 6.3$	^{149}Ce (5.3 s)	57.7($\dagger 100$), 380.0($\dagger 33.7$), 86.4($\dagger 20.2$)
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	$\dagger 4.3$ 5	^{193}Tl (21.6 m)	324.37($\dagger 100$), 1044.7($\dagger 59$), 676.10($\dagger 48$)
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	$\dagger 100$	^{134}Pm (24 s)	494.7($\dagger 60$), 459.3($\dagger 15$), 631.3($\dagger 10$)
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	$\dagger 5.4 \times 10^4$ 4	^{134}Ce (75.9 h)	162.306($\dagger 230000$), 130.414($\dagger 209000$), 39.08($\dagger >150000$)
294.3 4	$\dagger 2.0$ 10	^{155}Nd (8.9 s)	180.574($\dagger 100$), 418.99($\dagger 75$), 955.08($\dagger 50$)
294.3 1	$\dagger 6.7$ 10	^{185}Pt (33.0 m)	229.60($\dagger 100$), 135.3($\dagger 80$), 197.4($\dagger 74$)
• 294.3 1	0.033	^{235}U (7.038 $\times 10^8$ 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	$\dagger 89$ 3	^{171}W (2.38 m)	184.2($\dagger 100$), 478.7($\dagger 83$), 52.1($\dagger 51$)
• 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	$\dagger 5$ 2	^{101}Nb (7.1 s)	276.10($\dagger 100$), 157.466($\dagger 32$), 13.5($\dagger 32$)
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	$\dagger 4.9$	^{177}Os (2.8 m)	84.7($\dagger 100$), 125.4($\dagger 63$), 195.8($\dagger 61$)
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	†8 1	¹¹⁹ Xe(5.8 m)	231.8(†100), 98.5(†95), 461.5(†91)
294.8 4	0.048 20	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
294.8 3	†11.4 14	¹⁴³ Tb(12 s)	45.1(†100), 686.1(†48), 462.8(†45)
294.8 3	0.39 8	¹⁶⁶ Lu(2.65 m)	228.12(77.3), 337.50(41), 367.95(31.4)
294.8 3	0.0019 4	²⁴⁰ U(14.1 h)	44.10(1.05), 189.7(0.24), 66.5(0.154)
294.802 10	0.570 16	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
294.82 13	0.22 6	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
• 294.84 9	0.014 5	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
294.89 5	0.048 3	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
294.9 5	0.6 4	¹⁰⁴ Tc(18.3 m)	358.0(89), 530.5(15.6), 535.1(14.7)
294.9 3	5.45 18	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
294.93 6	0.092 6	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)
294.94 10	0.052 5	¹⁹⁹ Tl(7.42 h)	455.46(12.4), 208.20597(12.3), 247.26(9.3)
294.959 14	0.48 7	¹⁸⁴ Ta(8.7 h)	414.03(72), 252.848(43), 920.932(32.0)
• 294.959 14	0.022 4	¹⁸⁴ Re(38.0 d)	903.279(37.9), 792.071(37.5), 111.208(17.1)
• 294.978 20	0.303 5	¹⁰³ Ru(39.26 d)	497.080(90.9), 610.33(5.75), 443.799(3.27)
• 294.978 20	0.00280 7	¹⁰³ Pd(16.991 d)	39.757(0.07), 357.47(0.0221), 497.080(0.00396)
295.0 3	0.19 4	⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
295.0 3	0.044 18	¹⁰¹ Tc(14.22 m)	306.85(88), 545.06(6.0), 127.23(2.86)
• 295.0 3	0.73 22	¹⁰¹ Rh(3.3 y)	127.23(73), 197.6(70.8), 324.8(13.4)
• 295.00 30	0.016 9	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
295.07 9	6.67 11	¹⁴⁶ La(1.05 s)	158.468(55.6), 989.85(9.3), 760.30(8.6)
295.1 2	0.315 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
295.1 2	0.024 6	²¹² Bi(60.55 m)	39.858(1.091), 452.83(0.31), 288.07(0.31)
295.11 10	10.3 13	¹⁸⁴ Hg(30.6 s)	236.18(64), 156.24(58), 392.42(7.1)
295.14 20	0.50 12	¹⁴⁹ Pr(2.26 m)	138.447(11.0), 165.087(9.9), 108.520(9.5)
295.14 20	0.14 4	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
• 295.15 20	0.0045 5	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
295.17	0.0016	¹²³ I(13.27 h)	158.97(83), 528.96(1.39), 440.02(0.428)
295.2 4	†2.60 26	¹⁸² Ir(15 m)	273.23(†100), 126.79(†77), 236.3(†21.0)
• 295.2 5	2.1×10^{-5} 5	²³³ U(1.592×10^5 y)	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
295.2 1	0.44 6	²⁴⁰ Np(61.9 m)	566.34(25.3), 973.9(23.8), 600.57(18.4)
295.213 8	18.5 3	²¹⁴ Pb(26.8 m)	351.921(35.8), 241.981(7.50), 53.226(1.11)
295.22 8	0.172 20	¹⁸³ Hf(1.067 h)	783.754(66), 73.174(38), 459.069(27)
295.3 1	0.0076 13	¹¹⁰ Ag(24.6 s)	657.7622(4.5), 815.35(0.0382), 1125.700(0.0153)
295.3 1	0.039 6	¹¹⁰ In(69.1 m)	657.7622(98), 2129.53(2.13), 2211.49(1.76)
• 295.3 3	0.0025 17	¹⁷² Er(49.3 h)	610.062(44.2), 407.338(42.1), 68.107(3.29)
• 295.40 6	0.0032 5	¹⁴⁷ Eu(24.1 d)	197.299(27), 121.220(22.9), 677.516(9.8)
• 295.4 1	0.016 5	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
295.4 3	0.539 22	¹⁵⁹ Ho(33.05 m)	121.012(36.2), 131.973(23.6), 309.594(17.2)
295.5 7	0.016 12	⁸⁹ Kr(3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
295.5 6	1.03 9	¹²⁹ Sb(4.40 h)	812.8(43), 914.6(20.0), 544.7(17.9)
295.5	1.7	¹³⁴ Nd(8.5 m)	163.2(58), 288.9(13), 216.8(12)
295.5 3	0.40 7	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
295.5 1	†7 1	²²⁷ Rn(22.5 s)	162.14(†100), 739.2(†65), 686.2(†62)
295.53 7	†1.00 8	¹⁸⁶ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
295.59 6	†43 9	¹⁷¹ Hf(12.1 h)	122.0(†100), 662.2(†83), 347.18(†47)
295.597 3	0.32 5	¹⁰⁹ Rh(80 s)	326.868(54), 426.135(7.7), 178.034(7.6)
295.6 2	1.13 13	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
295.6 5		¹⁵³ Ho(9.3 m)	108.7(†100), 365.9(†92), 161.5(†83)
295.6 5	†1.9 7	¹⁵⁵ Er(5.3 m)	110.12(†100), 241.5(†65), 234.0(†40.0)
295.68 16	0.24 5	⁷⁵ Kr(4.3 m)	132.43(67), 154.66(20.8), 153.15(8.0)
• 295.70 10	1.15 10	⁹⁹ Rh(16.1 d)	528.24(33), 353.05(30.0), 89.65(29.0)
295.70 30	0.014 9	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)

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 128.67 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	$\dagger 1.67 \times 10^3$ 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	†14.5 25	¹⁸⁹ Au(28.7 m)	713.17(†100), 812.68(†63), 447.65(†55)
297.5 2	†2.5	²⁵⁶ Es(7.6 h)	861.8(†100), 231.1(†61), 172.6(†49)
297.6 5		¹³² La(24.3 m)	464.55(22), 663.07(11.6), 285.6(7)
297.6 1	†13.2 6	¹⁵² Pr(3.24 s)	164.2(†100), 284.9(†81.0), 72.40(†38.9)
297.6 2	†0.44 18	²³⁰ Ra(93 m)	72.0(†100), 63.0(†35.4), 202.8(†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	†34 3	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†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	†1.81 19	¹⁶⁸ Re(4.4 s)	199.3(†100), 363.2(†95), 479.8(†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	¹⁶⁶ Ho(2.99 m)	741.356(36.6), 821.164(34.5), 815.990(18.6)
297.8 1	†1.04 9	¹²³ La(17 s)	92.5(†100), 937.3(†43), 153.6(†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	†0.29 3	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†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	†1.00 23	¹⁶⁰ Ho(5.02 h)	728.18(†100), 879.383(†65.9), 962.317(†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	†12 3	¹⁶⁴ Tm(2.0 m)	91.40(†1500), 1154.66(†366), 768.91(†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	†2.0 4	¹⁸⁵ Pt(33.0 m)	229.60(†100), 135.3(†80), 197.4(†74)
298.1 2	2.05 23	¹⁹⁴ Tl(32.8 m)	636.5(99), 428.0(99), 748.9(76)
• 298.1 3	†1.9 6	²⁵⁸ Md(51.5 d)	367.8(†100), 447.9(†37), 276.8(†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	$\dagger 10.6$ 21	¹⁸⁷ Hg(1.9 m)	233.38($\dagger 100$), 376.34($\dagger 38$), 240.26($\dagger 33$)
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	$\dagger 3.36$ 23	¹⁶⁰ Ho(5.02 h)	728.18($\dagger 100$), 879.383($\dagger 65.9$), 962.317($\dagger 59.1$)
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		¹⁶⁶ Lu(5.5 m)	1483.65($\dagger 100$), 228.58($\dagger 97$), 111.8($\dagger 68$)
298.70 4	2.6 3	¹⁶⁶ 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	$\dagger 7.6$ 9	¹⁵⁵ Er(5.3 m)	110.12($\dagger 100$), 241.5($\dagger 65$), 234.0($\dagger 40.0$)
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	$\dagger 7.85 \times 10^6$ 20	²³⁷ Pu(45.2 d)	280.40($\dagger 870000$), 320.75($\dagger 6.48 \times 10^6$), 228.56($\dagger 3.93 \times 10^6$)
298.91 14	$\dagger 12$ 2	¹⁸¹ Pt(51 s)	289.29($\dagger 100$), 111.97($\dagger 100$), 230.15($\dagger 92$)
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	$\dagger 100$ 40	¹³⁴ Pr(11 m)	293.5($\dagger 100$), 1196.8($\dagger 100$), 1125.4($\dagger 100$)
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	¹⁴⁶ 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	$\dagger 6.4 \times 10^2$ 13	²³⁴ Pa(1.17 m)	1001.03($\dagger 837000$), 766.38($\dagger 294000$), 742.81($\dagger 80000$)
• 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	$\dagger 0.77$ 8	¹⁸² Ir(15 m)	273.23($\dagger 100$), 126.79($\dagger 77$), 236.3($\dagger 21.0$)
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	¹⁵⁶ 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(0.0044100), 98.860(0.001470), 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	¹⁸⁶ 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	²⁰⁶ 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	¹⁴⁶ 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 30.45 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)

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	\dagger 8.5 13	^{181}Pt (51 s)	289.29(\dagger 100), 111.97(\dagger 100), 230.15(\dagger 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	^{166}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	\dagger 87 10	^{234}Pa (1.17 m)	1001.03(\dagger 837000), 766.38(\dagger 294000), 742.81(\dagger 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 \times 10 ⁸ y)	185.712(57.2), 143.764(10.96), 163.358(5.08)
310.7 1	\dagger 6.6 10	^{75}Ga (126 s)	253.0(\dagger 100), 574.8(\dagger 31.6), 885.6(\dagger 11.1)
310.7 4	\dagger 42 5	^{116}Xe (56 s)	104.5(\dagger 100), 247.7(\dagger 40), 191.6(\dagger 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	\dagger 2.46 \times 10 ⁴ 8	^{158}Er (2.29 h)	71.91(\dagger 23300), 386.84(\dagger 111000), 248.58(\dagger 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	\dagger 13.5 19	^{191}Tl (5.22 m)	452.6(\dagger 100), 470.1(\dagger 98), 391.6(\dagger 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	\dagger 1.3	^{149}Ce (5.3 s)	57.7(\dagger 100), 380.0(\dagger 33.7), 86.4(\dagger 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	¹⁴⁶ 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 Au(53.0 s)	162.97(50), 272.98(40), 362.47(17.5)
• 312.0 5	2.5×10 ⁻⁵ 10	²³³ U(1.592×10 ⁵ y)	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
312.02 4	0.0046 10	¹⁸⁶ Re(16.98 h)	155.032(14.9), 632.99(1.25), 477.99(1.0)
• 312.02 4	0.197 19	¹⁸⁶ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
312.05 3	0.005	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
312.06 15	6.9 6	⁸⁰ Zn(0.545 s)	712.53(45.1), 715.40(33.8), 964.93(15.6)
312.072 3	62	¹³³ Te(12.5 m)	407.63(27.1), 1333.21(10.67), 719.71(8.9)
312.072 3	2.21 17	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
• 312.17 2	38.6 4	²³³ Pa(26.967 d)	300.34(6.62), 340.81(4.47), 86.814(1.97)
312.17 2	0.7	²³³ Np(36.2 m)	298.89(0.44), 546.9(0.280), 506.5(0.154)
312.2	2.3 13	¹⁴⁷ Cs(0.225 s)	85.2(7.3), 245.8(4.5), 109.7(4.5)
312.21 20	4.8 4	¹⁰⁷ Rh(21.7 m)	302.77(66), 392.47(8.8), 348.21(2.27)
312.25 30	0.040 7	¹⁶⁵ Yb(9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
• 312.26	0.0187 14	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
312.3 1	5.9 6	¹¹⁷ Ag(72.8 s)	135.4(23), 337.7(10.3), 157.1(7.9)
312.3	†87 21	¹⁵² Lu(0.7 s)	1531.2(†100), 358.7(†89)
312.30 17	0.266 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
312.3 7	0.028 11	¹⁹⁹ Pb(90 m)	366.90(44.2), 353.39(9.5), 1135.04(7.8)
312.31 21	0.0091 17	¹³⁹ Cs(9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
• 312.327 12	0.465 25	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
312.4 2	0.17	¹⁴⁰ Sm(14.82 m)	225.5(>10), 225.4(10), 140.0(5.0)
312.4 4	0.26 9	¹⁵⁶ Tm(83.8 s)	344.55(86), 452.85(17.2), 585.93(14.6)
312.5 2	0.64 4	²⁰⁵ At(26.2 m)	719.30(31), 669.41(8.6), 628.88(5.6)
312.52 6	0.32 5	¹⁶³ Yb(11.05 m)	860.28(10.1), 63.62(6.5), 123.21(1.98)
312.56 15	0.31 5	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
312.58 20	0.0011 6	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
312.6	0.336 20	⁴² K(12.360 h)	1524.70(18), 899.43(0.0515), 1922.18(0.041)
312.6	0.0074 11	⁴² Sc(681.3 ms)	1524.70(0.0074)
312.6 8	0.22 15	⁹⁵ Ru(1.643 h)	336.43(70.2), 1096.76(21.0), 626.77(17.8)
312.6 4	0.148 18	¹³⁵ Te(19.0 s)	603.5(37.0), 266.8(10.36), 870.3(7.73)
• 312.6 4	0.012 6	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
312.6 4	†28 2	¹⁸³ Pt(43 s)	629.3(†100), 316.7(†53), 328.8(†36)
312.63 3	0.27 3	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
312.64 26	0.23 6	⁷⁰ Se(41.1 m)	49.51(35.8), 426.15(29), 376.65(9.43)
312.69 9	0.0177 12	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
• 312.69 9	†32 5	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
312.7 3	0.065 14	⁷⁹ Rb(22.9 m)	688.1(23), 182.77(19.2), 143.41(13.9)
312.7 1	†0.3 1	¹⁷² Ir(2.0 s)	227.8(†100.0), 378.4(†62.0), 448.4(†40.5)
312.71 4	0.19 5	¹⁶³ Yb(11.05 m)	860.28(10.1), 63.62(6.5), 123.21(1.98)
312.76 6	0.93 15	¹⁴⁶ Ba(0.607 s)	56.08(29.20), 133.53(3.88), 415.78(3.59)
• 312.8	4.0×10 ⁻⁶ 2	²⁵³ Es(20.47 d)	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
• 312.83 4	0.025 9	²⁰⁵ Bi(15.31 d)	1764.36(1.368), 703.44(31), 987.62(0.585)
312.87 10	0.28 3	¹⁰¹ Sr(118 ms)	128.34(18.0), 1124.82(10.9), 510.73(8.5)
312.9 4	0.038 21	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
312.9 1	14.3 8	¹⁴⁵ Ho(2.4 s)	339.8(15), 334.1(13.5), 401.8(12.8)
• 312.92 4	0.102 3	²³¹ Pa(32760 y)	27.36(10.3), 300.07(2.46), 302.65(2.2)
312.99 23	†3.1 5	¹⁴² Xe(1.22 s)	571.83(†100), 657.05(†79), 538.24(†77)
313.0 5	†0.16 2	¹⁸⁶ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
313.0 2	†8 1	¹⁹¹ Pb(2.18 m)	387.1(†100), 712.2(†46), 613.5(†40)
• 313.0158 5	3.32 16	¹⁸³ Ta(5.1 d)	246.0591(27), 353.9912(11.2), 107.9322(11.0)
• 313.0158 5	0.415 9	¹⁸³ Re(70.0 d)	162.3219(23.3), 46.4839(7.97), 291.7238(3.05)
313.08 6	5.0 8	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 179.54(4.6)
313.088 14	0.85 10	¹⁴⁹ Pr(2.26 m)	138.447(11.0), 165.087(9.9), 108.520(9.5)
313.1 2		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: $E_{\gamma}(I_{\gamma})$
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	\dagger 10.6 11	¹⁸⁵ Hg(21.6 s)	222.8(\dagger 100.0), 258.7(\dagger 98), 212.5(\dagger 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	\dagger 0.96 9	¹²³ La(17 s)	92.5(\dagger 100), 937.3(\dagger 43), 153.6(\dagger 43)
• 313.34 20	\dagger 3.02 \times 10 ⁶ 15	²³⁷ Pu(45.2 d)	280.40(\dagger 870000), 298.89(\dagger 7.85 \times 10 ⁶), 320.75(\dagger 6.48 \times 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	\dagger 2.0 4	¹⁸⁵ Pt(33.0 m)	229.60(\dagger 100), 135.3(\dagger 80), 197.4(\dagger 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	\dagger 22 4	¹⁶⁴ Hf(111 s)	122.1(\dagger 100), 153.3(\dagger 47), 31.4(\dagger 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	\dagger 3.0 5	¹⁶⁵ Lu(10.74 m)	132.49(\dagger 100), 120.60(\dagger 100), 174.25(\dagger 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	\dagger 24 3	¹⁶³ Lu(238 s)	163.08(\dagger 100), 54.00(\dagger 88), 396.34(\dagger 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	\dagger 47 4	¹¹⁹ Cs(30.4 s)	169.3(\dagger >100), 245.9(\dagger 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	\dagger 2.5 15	¹⁵⁹ Yb(1.58 m)	166.16(\dagger 500), 177.12(\dagger 159), 390.20(\dagger 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	¹⁵⁶ 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)

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}Po (44.7 m)	688.6($\dagger 1000$), 165.7($\dagger 174$), 790.5($\dagger 145$)
• 316.2	0.15 2	^{254}Es (275.7 d)	63.0(2.0), 304(0.07), 385(0.05)
• 316.08 9	0.41 4	^{153}Tb (2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
• 316.200 20	0.00248 10	^{115}Cd (44.6 d)	933.8(2.000), 1290.580(0.890), 484.470(0.290)
• 316.2 2	0.0021 13	^{152}Eu (13.542 y)	121.7824(28.4), 1408.011(20.87), 964.131(14.34)
316.2 7	0.165 22	^{199}Bi (27 m)	560.1(22.0), 424.85(22), 841.7(11)
316.2 4	0.10 3	^{202}Bi (1.72 h)	960.67(99), 422.18(83.7), 657.49(60.6)
316.236 10	2.70 10	^{149}Pr (2.26 m)	138.447(11.0), 165.087(9.9), 108.520(9.5)
316.27 10	0.09 4	^{195}Tl (1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
316.271 87	0.061 9	^{96}Nb (23.35 h)	778.224(96.45), 568.80(58.0), 459.88(26.62)
• 316.271 87	1.40 20	^{96}Tc (4.28 d)	778.224(100), 849.929(98), 812.581(82)
316.28 20	0.087	^{137}I (24.5 s)	1218.00(12.8), 601.05(4.80), 1302.64(4.42)
316.30 20	0.98 4	^{88}Nb (7.8 m)	1057.01(89.3), 1082.53(53.9), 399.41(45.7)
316.3 1	1.343 20	^{113}Ag (5.37 h)	298.58(10), 258.8(1.64), 672.3(0.87)
316.3 1	18	^{113}Ag (68.7 s)	392.3(11), 298.58(10), 583.8(3.6)
316.3 3	0.35 10	^{118}Cs (14 s)	337.4(100), 472.8(37.4), 586.6(15.4)
316.3	0.6	^{145}Ba (4.31 s)	96.6(17), 91.9(7), 65.9(5)
316.3 1	2.67 16	^{146}Ba (2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
316.3 2	0.10 3	^{177}W (135 m)	115.65(50), 426.98(13.2), 1036.4(10.3)
316.305 13	8.3 8	^{163}Tb (19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
316.4 2	1.42 14	^{130}Sn (3.72 m)	192.5(70), 779.8(59), 70.0(35.5)
316.4 1	$\dagger 0.88$ 18	^{230}Ra (93 m)	72.0($\dagger 100$), 63.0($\dagger 35.4$), 202.8($\dagger 27.3$)
316.4 2	$\dagger 5.1$	^{256}Es (7.6 h)	861.8($\dagger 100$), 231.1($\dagger 61$), 172.6($\dagger 49$)
316.44 15	11.1 4	^{105}Ru (4.44 h)	724.21(47), 469.37(17.5), 676.36(15.7)
• 316.440 6	1.32×10^{-5} 4	^{239}Pu (24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
316.46 8	1.11 11	^{206}Rn (24.35 m)	426.78(7.07), 251.05(5.02), 350.026(3.34)
• 316.50791 13	2.81 21	^{192}Ir (73.831 d)	468.07152(47.83), 308.45692(30.00), 295.95827(28.67)
316.50791 13	13	^{192}Ir (1.45 m)	612.46564, 295.95827
316.50791 13	38.0 8	^{192}Au (4.94 h)	295.95827(22.3), 2236.89(5.6), 612.46564(4.34)
316.53 9	$\dagger 0.95$ 9	^{188}Au (8.84 m)	265.63($\dagger 100$), 340.04($\dagger 23.9$), 605.5($\dagger 16.3$)
316.56 7	0.052 10	^{151}Nd (12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
316.575 14	0.87 4	^{131}La (59 m)	108.081(25.0), 417.783(18.0), 365.162(16.9)
316.6 1	1.14 21	^{135}Nd (12.4 m)	204.02(52), 41.43(23), 441.2(14.9)
316.6 2	1.2 3	^{145}Ho (2.4 s)	339.8(15), 312.9(14.3), 334.1(13.5)
316.61 6	12.9 4	^{180}Lu (5.7 m)	407.94(43.0), 1199.7(24.3), 1106.00(22.7)
316.7 4	0.128 20	^{132}I (2.295 h)	667.718(99), 772.60(75.6), 954.55(17.6)
316.7 3	> 0.06	^{146}La (6.27 s)	258.47(64), 924.58(7.45), 702.28(6.43)
316.7 4	$\dagger 53$ 4	^{183}Pt (43 s)	629.3($\dagger 100$), 328.8($\dagger 36$), 312.6($\dagger 28$)
316.7 1	0.103 10	^{234}Pa (6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
316.7 1	$\dagger 180$ 50	^{234}Pa (1.17 m)	1001.03($\dagger 837000$), 766.38($\dagger 294000$), 742.81($\dagger 80000$)
316.72 9	0.241 19	^{93}Kr (1.286 s)	253.42(41.2), 323.89(24.1), 266.83(20.6)
316.74 3	56 3	^{146}Ce (13.52 m)	218.23(20.8), 264.56(9.0), 133.52(8.1)
316.8 1	5.8 3	^{92}Kr (1.840 s)	142.307(64), 1218.6(60), 812.6(14.6)
316.8 12	0.42	^{186}Pt (2.0 h)	276.7(0), 611.5(6.0), 635.6(> 3.8)
316.8 2	0.0054 14	^{230}Ac (122 s)	454.95(8), 508.20(5.15), 1243.9(3.50)
• 316.8 2	0.16 3	^{230}Pa (17.4 d)	951.95(1.65), 918.48(8.2), 454.95(6.27)
• 316.8 2	$\dagger > 5.0 \times 10^2$	^{241}Am (432.2 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}Pd (23.4 m)	580.00(0.8), 70.44(0.78), 1459.0(0.56)
316.81 19	0.037	^{111}Pd (5.5 h)	70.44(8.3), 391.25(5.4), 632.80(3.6)
316.82 5	0.249 9	^{105}Cd (55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
316.9 1	$\dagger 3.3$ 7	^{75}Ga (126 s)	253.0($\dagger 100$), 574.8($\dagger 31.6$), 885.6($\dagger 11.1$)
316.9 2	$\dagger 7$ 1	^{152}Yb (3.1 s)	482.4($\dagger 100$), 141.7($\dagger 13$), 949.2($\dagger 0.7$)
316.9 4	1.5 5	^{183}Lu (58 s)	1125.3(25.0), 1056.8(16.5), 168.1(7.5)
316.99 9	0.169 10	^{210}At (8.1 h)	1181.39(99.3), 245.31(79), 1483.39(46.5)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
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 Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
320	0.7	²²¹ Ra(28 s)	149.0(9.0), 93.1(2.1), 174.1(1.6)
• 320.03 15	0.0017 6	¹⁵² Eu(13.542 y)	121.7824(28.4), 1408.011(20.87), 964.131(14.34)
320.04		¹¹ Li(8.5 ms)	
320.057 18	0.309 13	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
320.0842 9 93		⁵¹ Ti(5.76 m)	928.6(6.9), 608.6(1.18)
• 320.0842 9 10		⁵¹ Cr(27.702 d)	
320.09 3	0.68 4	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
320.1 3	†2.0 5	¹³⁶ Eu(3.3 s)	254.9(†100), 431.4(†34), 458.0(†20)
320.1 4	0.074 20	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
320.13 5	3.12 18	²⁰² Bi(1.72 h)	960.67(99), 422.18(83.7), 657.49(60.6)
320.2 3	0.076 23	⁷⁹ Rb(22.9 m)	688.1(23), 182.77(19.2), 143.41(13.9)
320.2 5	0.36 5	⁹⁷ Rh(30.7 m)	421.55(75), 840.13(12.0), 878.80(9.0)
320.2 5	>0.06	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
320.2 1	†3.81×10 ³	¹⁵⁷ Ho(12.6 m)	279.97(†47600), 341.16(†37000), 193.41(†15200)
320.2 4	0.13 7	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
320.2 5	†0.13 2	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
320.2 4	11.8 24	¹⁸⁹ Au(4.59 m)	166.40(59), 19.0, 6.22
• 320.209 18	0.00011 1	²³¹ Th(25.52 h)	25.646(14.5), 84.216(6.6), 89.944(0.94)
320.3 10	0.055 11	¹⁹⁹ Bi(27 m)	560.1(22.0), 424.85(22), 841.7(11)
320.37 20	0.30 3	¹²¹ Ag(0.78 s)	314.55(32.1), 353.43(19.9), 500.61(9.3)
320.4 2	†33 2	¹¹³ I(6.6 s)	462.5(†100), 622.4(†74), 351.5(†43)
320.4 4	0.207 20	¹¹⁴ Sb(3.49 m)	1299.90(99), 887.60(17.4), 327.18(7.0)
320.4 3	0.7 3	¹²¹ Cs(122 s)	179.4(30.2), 196.0(24.1), 459.7(12.0)
320.4 1	0.052 6	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
320.49 12	0.51 5	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
320.5 6	†12 2	¹¹⁹ Xe(5.8 m)	231.8(†100), 98.5(†95), 461.5(†91)
320.5 5	0.08 4	¹²⁶ Ba(100 m)	233.6(19.6), 257.6(7.6), 241.0(6.0)
320.5	1.0	¹³⁴ Nd(8.5 m)	163.2(58), 288.9(13), 216.8(12)
320.5 2	3.5 5	¹⁵² Ho(49.5 s)	647.2(92), 613.8(88.4), 683.3(88)
320.53 8	0.815 9	⁷³ Se(39.8 m)	67.03(2.59), 253.70(2.356), 84.0(2.03)
320.53 4	2.17 9	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 557.24(1.77)
320.54 10		¹⁵⁶ Ho(21.3 m)	406.14(†100), 838.9(†84.3), 1484.1(†66.2)
320.54 10	†11.1 19	¹⁵⁶ Ho(11.3 m)	218.21(†100.0), 98.91(†70), 945.7(†37)
320.541 5	†6.5 12	²²⁹ Ac(62.7 m)	164.522(†100), 569.1(†91), 261.92(†39)
• 320.541 5	0.00290 3	²³³ U(1.592×10 ⁵ y)	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
320.57 2	0.55 11	¹⁴⁷ La(4.015 s)	117.718(12), 186.320(6.48), 438.30(5.04)
320.6 2	0.195 23	⁹⁶ Rb(0.199 s)	815.0(78.00), 692.0(8.0), 813.2(7.0)
320.6 1	0.21 5	²⁴² U(16.8 m)	67.60(9.6), 55.58(3.90), 585.0(1.92)
• 320.64 11	0.00061 9	¹²⁹ Te(33.6 d)	695.88(2.988), 729.57(0.70), 556.65(0.118)
320.68 8	0.221 13	¹⁶⁵ Yb(9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
320.7 2	1.7 6	¹²⁹ Sn(6.9 m)	1161.31(56.0), 1128.44(50), 760.8(16.8)
320.72 10	0.13 3	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
320.72 3	†15.19 18	¹⁶² Lu(1.37 m)	166.82(†100), 631.87(†26.6), 798.76(†16.9)
320.74 4	0.56 3	¹⁰¹ Pd(8.47 h)	296.29(19), 590.44(12.06), 269.67(6.43)
320.75 12	†3.4 6	¹³¹ Sn(56.0 s)	1226.03(†100), 450.03(†90), 798.50(†86)
320.75 20	0.069 5	²³³ Np(36.2 m)	312.17(0.7), 298.89(0.44), 546.9(0.280)
• 320.75 20	†6.48×10 ⁶	²³⁷ Pu(45.2 d)	280.40(†870000), 298.89(†7.85×10 ⁶), 228.56(†3.93×10 ⁶)
320.772 15	0.058 9	¹⁸³ Os(13.0 h)	381.768(89.6), 114.463(20.63), 167.844(8.81)
320.8 3	0.69 4	¹⁷⁰ Ta(6.76 m)	100.8(21.0), 221.2(15.7), 860.4(7.39)
320.839 43	†25.7 16	⁹⁴ Kr(0.20 s)	629.2(†100), 764.5(†71), 219.466(†67.4)
320.84 11	0.508 14	¹⁴⁴ Ba(11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
• 320.865 10	5.42×10 ⁻⁵	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
320.89 11	0.135 24	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)

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	\dagger 100 12	¹⁸⁹ Hg(7.6 m)	78.21(\dagger 63), 565.42(\dagger 48), 434.52(\dagger 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	\dagger 0.47 3	¹⁵³ Pm(5.4 m)	35.842(\dagger 100), 127.298(\dagger 75), 28.309(\dagger 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	\dagger 4.0 6	¹⁷² W(6.6 m)	38.9(\dagger 100), 423.3(\dagger 44), 89.8(\dagger 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	\dagger 2.0 4	⁷⁵ Ga(126 s)	253.0(\dagger 100), 574.8(\dagger 31.6), 885.6(\dagger 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	\dagger 7.4 7	¹⁸⁵ Hg(21.6 s)	222.8(\dagger 100.0), 258.7(\dagger 98), 212.5(\dagger 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	²³⁶ 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)

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	†0.9 3	¹⁷² Ir(2.0 s)	227.8(†100.0), 378.4(†62.0), 448.4(†40.5)
322.0		²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†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	†12 1	¹⁵⁹ Yb(1.58 m)	166.16(†500), 177.12(†159), 390.20(†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	†4.2 16	¹³¹ Pr(1.53 m)	266.13(†100), 72.82(†64), 387.56(†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	†100	¹²⁰ Cs(64 s)	473.5(†30), 553.4(†19.1), 601.2(†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	†7.2	¹⁴⁹ Ce(5.3 s)	57.7(†100), 380.0(†33.7), 86.4(†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	†0.518×10 ⁶	²⁴¹ Am(432.2 y)	59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸)
• 322.52		²⁴¹ Am(432.2 y)	59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 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	†10.8 11	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
322.7 4	†1.9	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
322.8 2	†2	⁸⁷ Nb(2.6 m)	200.95(†100), 470.63(†73), 1066.8(†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	†3.9 9	¹⁵⁵ Er(5.3 m)	110.12(†100), 241.5(†65), 234.0(†40.0)
322.9 2	†11.8 24	¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†33)
322.9 2	†3.5 8	²²⁹ Ac(62.7 m)	164.522(†100), 569.1(†91), 261.92(†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	¹⁸⁶ Re(16.98 h)	155.032(14.9), 632.99(1.25), 477.99(1.0)
• 322.92 2	1.62 13	¹⁸⁶ 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 16	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	¹⁴⁶ 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	²³⁶ 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	¹⁵⁶ 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)

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	²⁰⁶ 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	¹³⁶ 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	† $>7 \times 10^{02}$	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 \times 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 \times 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 Gd(70.2 s)	750.2(11.2), 178.90(11.20), 284.4(6.16)
330.40 5	0.31	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
330.40 4	0.46	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
330.43 19	0.143 15	⁹⁷ Zr(16.91 h)	743.36(93), 507.64(5.03), 1147.97(2.61)
330.5 5	0.46 18	¹⁰⁴ In(1.8 m)	658.0(100), 834.1(99), 878.1(29.4)
330.5 7	12 5	¹³⁹ Eu(17.9 s)	267.3(31), 155.3(31), 190.1(25)
330.50 10	†11 4	¹⁵⁹ Yb(1.58 m)	166.16(†500), 177.12(†159), 390.20(†113)
330.5 2	8.3 6	¹⁷⁶ Tm(1.9 m)	189.57(44.5), 1069.3(34), 381.8(21.8)
330.5 3	0.013 3	¹⁹⁵ Hg(9.9 h)	779.80(7), 61.46(6.2), 585.13(1.99)
• 330.54 10	0.0075 10	¹⁵² Eu(13.542 y)	121.7824(28.4), 1408.011(20.87), 964.131(14.34)
330.6 1	0.64 7	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
• 330.619 21	0.52 4	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
330.7 2	†0.8 3	¹⁰³ Nb(1.5 s)	102.64(†100), 641.1(†55), 538.5(†34.0)
330.70 8	0.0116 6	¹²³ I(13.27 h)	158.97(83), 528.96(1.39), 440.02(0.428)
330.7 2	0.114 21	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
330.76 5	†4.98 19	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
• 330.777 10	0.088 5	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
330.78 10	0.37 8	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
330.8	6	¹³³ Pr(6.5 m)	134.3(14), 74.0(10), 315.6(10)
330.85 10	0.67 8	¹⁰⁵ Ru(4.44 h)	724.21(47), 469.37(17.5), 676.36(15.7)
• 330.885 10	0.114 5	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
330.9 5	†2.6 3	¹⁰³ Mo(67.5 s)	83.4(†100), 423.91(†69), 45.8(†57)
330.90 23	0.46 10	¹⁰⁵ In(5.07 m)	131.37(41), 260.21(15.7), 604.11(9.2)
330.9 5	0.45 8	¹⁶⁶ Lu(2.65 m)	228.12(77.3), 337.50(41), 367.95(31.4)
330.9 2	†7 1	¹⁸¹ Hg(3.6 s)	147.8(†100), 42.5(†25), 1986.7(†17)
330.93 5	†8.9 2	¹⁴⁴ Cs(1.01 s)	199.326(†100.0), 639.00(†21.2), 758.96(†20.6)
331.0 5	†13	⁹⁹ Rb(59 ms)	90.8(†100), 125.2(†40), 1071.6(†26)
331.0 3	0.31 3	¹¹⁸ I(13.7 m)	605.71(86.0), 545.12(10.9), 600.71(10.2)
331.0 2	0.34 4	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
331.00 10	0.150 24	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
331.0 3	0.0063 13	²⁵¹ Fm(5.30 h)	425.4(0.95), 480.4(0.392), 358.3(0.315)
331.05 2	78 4	¹³⁰ Sb(39.5 m)	793.53(100), 839.49(100), 182.36(65)
331.06 11	0.12 3	¹⁸⁴ Ta(8.7 h)	414.03(72), 252.848(43), 920.932(32.0)
331.08 23	0.833 25	⁸⁶ Y(14.74 h)	1076.64(83), 627.72(32.6), 1153.01(30.5)
331.1 2	9.7 4	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
331.1 2	48	¹²² Cs(21.0 s)	512.0(3.8), 817.9(3.09), 843.0(1.90)
331.1 2	94	¹²² Cs(4.5 m)	497.1(79), 638.5(63), 560.3(14.0)
331.1 6	0.056 24	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
331.1 2	†6 1	²²⁷ Rn(22.5 s)	162.14(†100), 739.2(†65), 686.2(†62)
331.12 10	0.00021 6	¹⁶³ Er(75.0 m)	1113.5(0.0490), 436.1(0.0285), 439.94(0.0276)
331.19 3	79 5	²⁰¹ Pb(9.33 h)	361.27(9.9), 945.96(7.4), 907.56(5.7)
331.2 4	2.86 16	⁵¹ Sc(12.4 s)	1437.3(52), 2144.1(31.8), 1567.5(14.9)
• 331.2 6	0.040 15	¹³¹ Te(30 h)	773.67(49.9), 852.21(27.0), 793.75(18.10)
• 331.220 4	0.067 7	⁷⁷ Br(57.036 h)	238.996(23), 520.639(22.4), 297.215(4.16)
331.3 3	0.10 3	⁹⁷ Rb(169.9 ms)	167.1(26), 585.2(21.0), 600.5(10.6)
331.355 19	0.232 7	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
331.39 9	0.0025 8	⁹⁵ Ru(1.643 h)	336.43(70.2), 1096.76(21.0), 626.77(17.8)
• 331.4 2	0.0016 8	⁷¹ As(65.28 h)	174.954(82.00), 1095.490(4.08), 499.876(3.624)
331.4 2	0.32 5	¹¹⁷ Cs(8.4 s)	204.8(15.0), 29.7(9.9), 205.6(6.8)
331.4 4	0.162 18	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
331.4 4	†0.40 12	¹⁵⁵ Tm(21.6 s)	226.8(†100), 531.7(†20), 88.1(†17)
331.4 3	†75 4	¹⁸⁷ Pb(18.3 s)	393.4(†100), 343.5(†75), 331.4(†60)
331.4 3	†60 3	¹⁸⁷ Pb(18.3 s)	393.4(†100), 331.4(†75), 343.5(†75)
331.4 5	†38 6	¹⁹¹ Hg(49 m)	252.5(†100), 196.3(†65), 224.7(†60)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
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 ⁶)
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	$4.9 \times 10^{-5} 3$	^{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	^{186}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	^{186}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	^{146}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	$\dagger 8.8$ 13	²⁴⁴ Bk(4.35 h)	891.5($\dagger 100$), 217.6($\dagger 88$), 921.5($\dagger 19$)
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	$\dagger 100$ 13	¹⁸⁹ Tl(2.3 m)	942.2($\dagger 69$), 451.0($\dagger 49$), 522.3($\dagger 27$)
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	$\dagger 6.8$ 13	¹⁵⁵ Er(5.3 m)	110.12($\dagger 100$), 241.5($\dagger 65$), 234.0($\dagger 40.0$)
333.8 1	$\dagger 1.0$ 5	¹⁷² Ir(2.0 s)	227.8($\dagger 100.0$), 378.4($\dagger 62.0$), 448.4($\dagger 40.5$)
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	$\dagger 1.06$ 8	¹²⁹ Ba(2.17 h)	182.30($\dagger 100$), 1459.1($\dagger 50.0$), 202.38($\dagger 33.7$)
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	$\dagger 73$ 10	¹³⁴ Pr(11 m)	293.5($\dagger 100$), 299.0($\dagger 100$), 1196.8($\dagger 100$)
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	$\dagger 69$ 7	²²⁷ Th(18.72 d)	235.971($\dagger 813$), 50.13($\dagger 528$), 256.25($\dagger 463$)
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)

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	¹³⁶ 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 ⁶)
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	$\dagger 1.56 \times 10^3$ 22	¹⁵⁶ 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	²³⁶ 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	$\dagger 1.12 \times 10^3$	$^{234}\text{Pa}(1.17 \text{ m})$	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(1.78 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}Tm (2.0 m)	91.40($\dagger 1500$), 1154.66($\dagger 366$), 768.91($\dagger 279$)
339.411 16	7.97 9	^{59}Cu (81.5 s)	1301.46(14.78), 877.97(11.40), 465.02(5.87)
339.42 4	0.19 4	^{184}Ta (8.7 h)	414.03(72), 252.848(43), 920.932(32.0)
• 339.45 20	0.0031 5	^{170}Lu (2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
339.5 4	0.09 5	^{142}La (91.1 m)	641.285(47), 2397.8(13.3), 2542.7(10.00)
339.50 6	0.070 5	^{223}Fr (21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
339.54 18	0.171 17	^{57}Mn (87.2 s)	122.0614(13.9), 14.41300(10.56), 692.03(5.50)
• 339.54 18	0.0139 3	^{57}Co (271.79 d)	122.0614(85.60), 136.4743(10.68), 14.41300(9.16)
339.54 5	$\dagger 213$ 44	^{105}Ag (7.23 m)	319.14($\dagger 63000$), 306.25($\dagger 12800$), 442.37($\dagger 5900$)
339.6	0.039	^{148}Dy (3.1 m)	620.24(96), 1247.2(1.4), 178.3(0.5)
339.6 3	$\dagger 5.3$ 14	^{155}Er (5.3 m)	110.12($\dagger 100$), 241.5($\dagger 65$), 234.0($\dagger 40.0$)
339.61 15	$\dagger 0.95$ 19	^{189}Hg (7.6 m)	320.99($\dagger 100$), 78.21($\dagger 63$), 565.42($\dagger 48$)
339.65 6	5.6 5	^{182}Hf (61.5 m)	942.80(18.8), 799.64(9.4), 114.3152(6.2)
339.67 20	0.070 23	^{165}Yb (9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
339.68 20	0.70	^{154}Pm (2.68 m)	184.810(32), 81.99(15.4), 546.66(14.5)
339.7 2	0.9 2	^{129}Sn (2.23 m)	645.13(100), 80.5(6.6), 913.2(5.0)
339.7 6	$\dagger 3.7$	^{177}Os (2.8 m)	84.7($\dagger 100$), 125.4($\dagger 63$), 195.8($\dagger 61$)
339.7 10	0.14 3	^{201}Bi (108 m)	629.1(24.0), 936.2(11.3), 1014.1(10.7)
• 339.74 3	0.161 6	^{166}Ho (1.20×10^3 y)	184.410(72.6), 810.276(58.08), 711.683(55.32)
339.76 9	3.4 4	^{174}W (31 m)	35.42(14.1), 428.83(12.7), 328.68(9.5)
339.8 4	0.071 17	^{84}Br (31.80 m)	881.610(42), 1897.761(14.7), 3927.5(6.8)
339.8 1	1.8	^{140}Sm (14.82 m)	225.5(>10), 225.4(10), 140.0(5.0)
339.8 1	0.10	^{140}Sm (14.82 m)	225.5(>10), 225.4(10), 140.0(5.0)
339.8 1	15	^{145}Ho (2.4 s)	312.9(14.3), 334.1(13.5), 401.8(12.8)
• 339.8 10		^{227}Th (18.72 d)	235.971($\dagger 813$), 50.13($\dagger 528$), 256.25($\dagger 463$)
• 339.85 6		^{206}Bi (6.243 d)	803.10(99), 881.01(66.2), 516.18(40.7)
339.92 15	0.058 7	^{81}Rb (4.576 h)	190.38(64.0), 446.15(23.2), 510.31(5.3)
339.94 30	0.110 20	^{124}In (3.17 s)	1131.64(68), 3214.15(21.5), 997.79(21.1)
339.94 30	0.70 10	^{124}In (2.4 s)	1131.64(100), 969.94(52), 1072.85(47)
339.95 10	0.00333 12	^{163}Er (75.0 m)	1113.5(0.0490), 436.1(0.0285), 439.94(0.0276)
340.0 3	0.58 6	^{65}Co (1.20 s)	1141.7(4.0), 310.6(2.90), 963.7(2.6)
340		^{126}La (54 s)	625, 460, 256.10
340.0 3	$\dagger 25$ 3	^{184}Tl (11 s)	366.51($\dagger 100$), 286.80($\dagger 39$), 534.40($\dagger 16.8$)
340.04 5	$\dagger 23.9$ 8	^{186}Au (8.84 m)	265.63($\dagger 100$), 605.5($\dagger 16.3$), 405.49($\dagger 9.1$)
• 340.08 1	23	^{151}Pm (28.40 h)	167.75(8.3), 275.21(6.8), 717.72(4.05)
340.1 2	0.32 5	^{123}Cs (5.94 m)	97.3(23), 596.7(10.1), 83.3(4.1)
340.10 25	$\dagger 1.8$ 4	^{165}Lu (10.74 m)	132.49($\dagger 100$), 120.60($\dagger 100$), 174.25($\dagger 47.0$)
340.1 1	0.67 9	^{236}Th (37.5 m)	110.8(4.2), 646.6(0.72), 196.0(0.69)
340.16 18	0.45 5	^{83}Se (22.3 m)	356.687(70), 510.17(43), 224.8(32.7)
340.16 25	$\dagger 4.7$	^{197}Ir (5.8 m)	469.72($\dagger 100$), 430.56($\dagger 61$), 815.92($\dagger 45$)
340.2 4	0.24 6	^{109}Sn (18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
340.2 3	0.47 8	^{144}La (40.8 s)	397.440(94.3), 541.20(39.2), 844.8(22.3)
340.2 7	$\dagger 3.0$ 15	^{159}Yb (1.58 m)	166.16($\dagger 500$), 177.12($\dagger 159$), 390.20($\dagger 113$)
340.2 2	$\dagger 1.3$ 5	^{171}Hf (12.1 h)	122.0($\dagger 100$), 662.2($\dagger 83$), 347.18($\dagger 47$)
340.2 2	$\dagger 2.7$ 3	^{185}Hg (21.6 s)	222.8($\dagger 100.0$), 258.7($\dagger 98$), 212.5($\dagger 58$)
340.2 1	0.040 8	^{234}Pa (6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
340.2 1	$\dagger 70$ 30	^{234}Pa (1.17 m)	1001.03($\dagger 837000$), 766.38($\dagger 294000$), 742.81($\dagger 80000$)
340.22 10	0.0200 22	^{125}Xe (16.9 h)	188.418(54), 243.378(30.1), 54.968(6.81)
340.3 4	0.45 4	^{137}Pm (2.4 m)	177.5(40.29), 108.6(35), 233.6(29.57)
340.30 10	0.043 8	^{153}Dy (6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
340.3 4	0.79 16	^{185}Au (4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
340.34 5	0.153 17	^{191}Au (3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
• 340.38 4	0.156 14	^{150}Eu (35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
340.4 4	0.42 10	^{121}Cd (8.3 s)	2059.41(21.0), 1020.89(18.9), 987.81(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: $E_\gamma(I_\gamma)$
• 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	$\dagger < 0.5$	¹³² Pr(1.6 m)	325.5($\dagger 100$), 496.9($\dagger 25$), 822.4($\dagger 17.3$)
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	$\dagger 39 4$	¹⁴³ Tb(12 s)	45.1($\dagger 100$), 686.1($\dagger 48$), 462.8($\dagger 45$)
340.5 5	$\dagger 7.1 \times 10^2 24$	¹⁵⁷ Ho(12.6 m)	279.97($\dagger 47600$), 341.16($\dagger 37000$), 193.41($\dagger 15200$)
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	$\dagger 42.3 13$	¹³⁶ Cs(13.16 d)	818.514($\dagger 100$), 1048.073($\dagger 80$), 1235.362($\dagger 20.1$)
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	$\dagger 4.3 \times 10^4$	²⁴¹ Am(432.2 y)	59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$)
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	$\dagger 90 10$	¹⁵⁷ Yb(38.6 s)	230.92($\dagger 100$), 241.7($\dagger 74$), 353.94($\dagger 57$)
340.7 4	$\dagger 1.67 21$	¹⁹⁶ Ir(1.40 h)	393.346($\dagger 105.2$), 521.175($\dagger 104$), 447.1($\dagger 102.1$)
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	$1.7 \times 10^{-6} 7$	²⁴⁴ Cm(18.10 y)	42.824(.0044100), 98.860(.0001470), 152.63($< 4.9 \times 10^{-7}$)
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	$\dagger 12.5 14$	¹³⁷ Te(2.49 s)	243.3($\dagger 100$), 554.0($\dagger 34$), 469.1($\dagger 21$)
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($\dagger 47600$), 193.41($\dagger 15200$), 86.55($\dagger 12200$)
• 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	$\dagger 20 1$	¹⁹¹ Pb(2.18 m)	387.1($\dagger 100$), 712.2($\dagger 46$), 613.5($\dagger 40$)
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	¹⁵⁶ 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	²²⁶ 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)

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)

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(\dagger 63000), 306.25(\dagger 12800), 442.37(\dagger 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	$\dagger > 50$	¹⁰⁵ Ag(7.23 m)	319.14(\dagger 63000), 306.25(\dagger 12800), 442.37(\dagger 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	$\dagger 6.0$ 10	¹⁸² Au(21 s)	154.76(\dagger 100), 264.33(\dagger 40.0), 855.41(\dagger 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	$\dagger 4.6$ 16	¹⁵⁵ Er(5.3 m)	110.12(\dagger 100), 241.5(\dagger 65), 234.0(\dagger 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(\dagger 100), 1689.0(\dagger 85), 240.5(\dagger 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	$\dagger 9$	²²⁸ Pa(22 h)	95(\dagger 100), 310(\dagger 42), 240(\dagger 23)
• 345.000 4	$> 5.0 \times 10^{-5}$	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	$\dagger 18$ 4	¹⁵³ Nd(28.9 s)	418.3(\dagger 100), 105.4(\dagger 36), 475.2(\dagger 33)
345.2 2	$\dagger 0.53$ 5	¹⁸⁵ Hg(21.6 s)	222.8(\dagger 100.0), 258.7(\dagger 98), 212.5(\dagger 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	$\dagger 0.22$ 5	¹²⁹ Ba(2.17 h)	182.30(\dagger 100), 1459.1(\dagger 50.0), 202.38(\dagger 33.7)
345.37 18	$\dagger 1.7$ 4	¹⁶⁵ Lu(10.74 m)	132.49(\dagger 100), 120.60(\dagger 100), 174.25(\dagger 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 Tm(24.3 s)	811.52(6.5), 798.68(5.2), 227.52(5)
• 345.4 1	<0.07	²³⁵ U(7.038×10 ⁸ y)	185.712(57.2), 143.764(10.96), 163.358(5.08)
345.43 5	0.104 17	¹³³ I(20.8 h)	529.872(87.0), 875.329(4.51), 1298.223(2.35)
345.46 4	0.78 8	¹⁹³ Hg(11.8 h)	257.97(61), 407.63(25), 573.25(14.2)
• 345.47 4	0.49 5	¹⁸² Re(64.0 h)	229.3220(26), 67.75001(22.2), 1121.3007(22.0)
345.51 10	>0.07	¹¹⁸ Ag(3.76 s)	487.77(60), 677.13(11.9), 2788.7(11.8)
345.52 3	8.3 4	⁹¹ Rb(58.4 s)	93.628(33.7), 2564.19(12.5), 3599.67(10.4)
345.53 10	0.084 19	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
345.569 15	0.459 11	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
345.6 1	0.014 4	¹³¹ Te(25.0 m)	149.716(69), 452.323(18.18), 1146.96(4.95)
345.6 4	0.22 17	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
345.6 1	0.39 16	²⁰⁶ Fr(15.9 s)	575.3(12), 559.0(8.19), 628.6(3.6)
345.608 9	1.096 24	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
345.62 12		¹⁸⁷ W(23.72 h)	685.774(27.3), 479.531(21.8), 72.001(11.14)
345.64 10	0.51 6	¹²¹ Ag(0.78 s)	314.55(32.1), 353.43(19.9), 500.61(9.3)
345.70 19	0.287 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
345.76 26	5.2 8	⁷⁸ Ga(5.09 s)	619.40(77), 1186.42(20.1), 567.06(18.2)
345.86 8	0.55 7	¹²⁵ Cd(0.57 s)	1027.53(25.8), 1173.16(25.1), 736.65(12.6)
• 345.89 12	0.87 10	¹⁰² Rh(2.9 y)	475.070(95), 631.28(55.9), 697.49(43.9)
345.9 5	0.25 10	¹⁰⁵ Mo(35.6 s)	85.4(25.0), 76.50(19.3), 147.8(14.8)
345.9 4	1.2 3	¹¹⁶ Cs(3.84 s)	393.5(<0.09), 524.3(76), 615.1(30.4)
• 345.9 3	0.13 4	¹³¹ Te(30 h)	773.67(49.9), 852.21(27.0), 793.75(18.10)
345.9 4	0.30 15	¹⁴⁹ Pr(2.26 m)	138.447(11.0), 165.087(9.9), 108.520(9.5)
345.9 3	0.10 3	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
• 345.90 3	0.038 5	²³⁵ U(7.038×10 ⁸ y)	185.712(57.2), 143.764(10.96), 163.358(5.08)
• 345.916 25	15.12 10	¹⁸¹ Hf(42.39 d)	482.182(80.50), 133.024(43.3), 136.266(5.85)
345.955 19	0.44 5	¹⁵⁰ Pm(2.68 h)	333.971(68), 1324.51(17.5), 1165.739(15.8)
• 345.955 19	0.398 14	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
346.0 1	6.0 6	⁷⁶ Rb(39.1 s)	2571.3(47), 424.0(43.4), 355.6(8.2)
• 346.0 1	0.038 9	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
346.0 5	†2.8 19	¹⁹⁵ Pb(15 m)	883.1(†100), 393.7(†42), 871.0(†36)
• 346.02 4	†0.987 17	⁵² Mn(5.591 d)	1434.068(†100.0), 935.538(†94.9), 744.233(†90.6)
• 346.059 2	0.0065 10	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
346.06 7	0.080 6	⁸⁷ Br(55.60 s)	1419.71(22.0), 1476.04(7.9), 1577.60(6.0)
346.1 2	0.5 1	¹⁵⁰ Er(18.5 s)	475.8(100), 130.0(2.6), 1014.0(0.9)
346.1 2	0.47 19	²³¹ Ac(7.5 m)	282.471(39.0), 307.063(30.4), 221.399(16.8)
346.2 2	0.24 6	¹⁰¹ Zr(2.1 s)	119.3(10.8), 205.6(6.0), 912.2(3.48)
346.29 7	0.280 19	¹⁴⁶ La(6.27 s)	258.47(64), 924.58(7.45), 702.28(6.43)
346.29 3	0.08 3	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
346.3 3	0.094 23	⁶⁹ Cu(2.85 m)	1007.5(23.4), 834.4(13.1), 531.2(6.0)
346.3 5	†2.2 5	¹⁰⁶ Mo(8.4 s)	465.70(†100), 54.00(†54), 618.60(†25)
346.3 1		¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
• 346.3 3	2.13 8	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
346.3 2	0.58 7	¹⁴⁸ Ce(56 s)	269.519(17.0), 291.724(16.7), 121.169(13.2)
• 346.3 5	0.000172 17	²⁵³ Es(20.47 d)	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
• 346.31 15	0.059 9	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
346.35 5	0.126 4	¹²³ I(13.27 h)	158.97(83), 528.96(1.39), 440.02(0.428)
346.380 10	17.5 9	¹⁰³ Tc(54.2 s)	136.079(16.6), 562.90(7.0), 210.21(6.8)
346.39 5	4.16 8	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
346.4 2	>0.07	¹²⁹ La(11.6 m)	278.6(25), 110.5(16.9), 457.0(8.0)
346.44 13	0.022 3	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
• 346.45 10	†0.65 24	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
346.47 6	4.6 3	²⁰² Bi(1.72 h)	960.67(99), 422.18(83.7), 657.49(60.6)
346.49 5	3.23 17	⁹³ Sr(7.423 m)	590.238(67), 875.73(24.1), 888.13(21.8)

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	†5.9 7	¹⁰³ Nb(1.5 s)	102.64(†100), 641.1(†55), 538.5(†34.0)
346.5 1	5.11 25	¹²⁹ La(11.6 m)	278.6(25), 110.5(16.9), 457.0(8.0)
346.5 3	1.28 18	¹⁹⁰ Tl(3.7 m)	416.4(91), 625.4(82), 731.1(37)
346.5 2		¹⁹⁷ Ir(5.8 m)	469.72(†100), 430.56(†61), 815.92(†45)
• 346.5 4	>0.027	²³⁰ Pa(17.4 d)	951.95(1.65), 918.48(8.2), 454.95(6.27)
346.547 15 56		¹⁶⁷ Ho(3.1 h)	321.336(23.5), 237.873(5.0), 207.801(4.9)
• 346.547 15 0.025 3		¹⁶⁷ Tm(9.25 d)	207.801(41), 57.0723(4.6), 531.54(1.6)
346.6 2	†100	¹³⁸ Eu(12.1 s)	544.2(†55), 685.4(†41), 399.0(†23)
346.6 3	9.9 7	¹⁵⁴ Ho(3.10 m)	334.6(94), 412.4(79), 477.1(55)
346.6 3	1.0 1	¹⁵⁴ Ho(11.76 m)	334.6(84), 412.4(15.0), 873.4(12.5)
• 346.643 5 0.0292 11		¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
346.643 5 1.56 20		¹⁵⁴ Tb(9.4 h)	123.071(30), 247.925(22.1), 540.18(20)
346.643 5 69 5		¹⁵⁴ Tb(22.7 h)	247.925(79), 1419.81(46), 123.071(43)
• 346.651 3 23.9 3		¹⁴⁹ Gd(9.28 d)	149.735(48.2), 298.634(28.6), 748.601(8.22)
346.7 3	4.2 4	⁷⁴ Zn(96 s)	56.7(70), 49.4(33.4), 143.5(21.7)
346.7 2	0.07	¹⁶¹ Er(3.21 h)	826.6(3.0), 211.15(12.2), 592.6(3.7)
346.7 1	0.49 5	¹⁸⁶ Hg(1.38 m)	112.1(63), 251.5(55), 191.6(3.7)
• 346.7		¹⁸⁸ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
346.8 2	0.133 12	¹⁴² Ba(10.6 m)	255.300(20.5), 1204.3(14.23), 895.2(13.9)
346.8	0.06	¹⁸⁵ Ir(14.4 h)	254.4(13.3), 1828.8(10), 60.0(5.7)
346.8 4	0.11 5	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
• 346.8 3 0.18		²²³ Ra(11.435 d)	269.459(13.7), 154.21(5.62), 323.871(3.93)
346.81 10 3.01 18		¹³⁶ I(46.9 s)	1313.02(100), 381.359(100), 197.316(78)
• 346.825 11 0.220 7		¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
346.870 20 4.20 4		¹⁰⁵ Cd(55.5 m)	961.84(4.69), 1302.459(3.98), 607.220(3.74)
346.89 8 0.133 14		¹⁹⁹ Tl(7.42 h)	455.46(12.4), 208.20597(12.3), 247.26(9.3)
346.9 2	†18 2	¹¹⁴ Te(15.2 m)	90.28(†100), 83.8(†67), 1417.6(†32)
346.9 3	0.54 9	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
346.9 3	†2.0 5	¹²⁹ Sb(17.7 m)	759.8(†100.0), 657.78(†92), 433.76(†73)
346.9 2	0.11	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
• 346.93 7 0.0076 5		⁶⁰ Co(5.2714 y)	1332.501(99.9820), 1173.237(99.90), 826.06(0.0076)
• 346.933 11 2.88 11		¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
347.1 3 0.0033 15		¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
347.1 2	†27.9	¹⁴⁴ Gd(4.5 m)	333.3(†100), 2432.6(†94.8), 629.5(†32.4)
347.1 2	†190 95	¹⁵⁷ Ho(12.6 m)	279.97(†47600), 341.16(†37000), 193.41(†15200)
347.13 2 0.44 3		¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
347.17 1 0.773 12		¹⁴⁵ Ce(3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)
347.18 10 78		⁹⁸ Cd(9.2 s)	1176.1(66.3), 107.28(43.7), 60.55(35.1)
347.18 10	†47 6	¹⁷¹ Hf(12.1 h)	122.0(†100), 662.2(†83), 1071.8(†46)
347.2 10 2.4 3		¹⁴⁷ Tb(1.7 h)	1152.4(100), 694.4(43), 139.9(27.46)
• 347.2 5 0.00018 2		²⁵³ Es(20.47 d)	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
347.210 14 0.34 11		¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
347.23 15 2.11 20		¹⁰⁰ Cd(49.1 s)	936.55(66), 139.71(6.7), 582.5(6.3)
347.25 10 0.029 9		¹⁶² Ho(67.0 m)	185.005(28.6), 1220.0(22.5), 282.864(11.3)
347.251 18 0.205 16		²²⁷ Fr(2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)
347.26 4 0.0240 12		²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
347.28 9	†0.40 3	¹⁸⁴ Ir(3.09 h)	263.97(†100), 119.80(†45), 390.38(†38)
347.3 2 0.29 4		⁹⁶ Rb(0.199 s)	815.0(78.00), 692.0(8.0), 813.2(7.0)
347.3 3 0.012		²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
347.3		²³⁶ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
347.31 4 0.66 6		¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
347.38 6 3.9 4		¹²³ Ag(0.309 s)	263.87(35.9), 409.79(13.2), 591.30(8.2)
347.48 8 3.0 5		¹²³ Cd(2.10 s)	371.32(51), 1052.28(24.8), 1438.13(8.3)
347.5 10 0.044 24		⁸⁹ Nb(1.9 h)	1627.20(3.4), 1833.46(3.16), 3092.7(3.0)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
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	†12.9 13	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†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	†1.16 4	⁹⁵ Pd(13.3 s)	1350.9(†105), 716.6(†70.63), 381.8(†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	†4.0 3	¹⁴⁴ Cs(1.01 s)	199.326(†100.0), 639.00(†21.2), 758.96(†20.6)
348.06 12	†24 4	¹⁸¹ Pt(51 s)	289.29(†100), 111.97(†100), 230.15(†92)
348.14 11	†43 3	¹⁸⁹ Au(28.7 m)	713.17(†100), 812.68(†63), 447.65(†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	†22	¹⁶⁶ Lu(5.5 m)	1483.65(†100), 228.58(†97), 111.8(†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	†20 10	¹⁵⁷ Yb(38.6 s)	230.92(†100), 340.7(†90), 241.7(†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	†64	¹⁶⁶ Lu(5.5 m)	1483.65(†100), 228.58(†97), 111.8(†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	†64	¹⁷⁸ Yb(74 m)	390.8(†100), 42.4(†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	¹⁶⁶ Lu(6.7 m)	198.82(28), 979.22(20), 896.12(15)
348.5 1	†17.4 16	¹⁰⁵ Nb(2.95 s)	94.8(†100), 246.9(†79), 309.9(†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	†0.41 16	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
• 348.523 2	0.340 4	¹⁶⁶ Tm(93.1 d)	198.241(52.39), 815.990(48.99), 447.515(23.05)

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)

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	$\dagger > 3.7$	$^{172}\text{Re}(55 \text{ s})$	123.2($\dagger 100$), 253.9($\dagger 74$), 743.0($\dagger 19$)
350.5 2	$\dagger 7 1$	$^{181}\text{Ir}(4.90 \text{ m})$	107.64($\dagger 100$), 1639.6($\dagger 52$), 318.9($\dagger 46$)
350.5 1	0.40 3	$^{211}\text{Rn}(14.6 \text{ h})$	674.1(45), 1362.9(32.5), 678.4(28.9)
• 350.5 1	0.076 7	$^{245}\text{Bk}(4.94 \text{ d})$	252.80(29.1), 380.8(2.40), 385.0(0.57)
350.52 5	0.40 8	$^{108}\text{In}(58.0 \text{ m})$	875.46(100), 632.96(100), 242.84(41)
350.6 1	7.23 14	$^{79}\text{Rb}(22.9 \text{ m})$	688.1(23), 182.77(19.2), 143.41(13.9)
350.6 4	0.08 3	$^{196}\text{Tl}(5.3 \text{ h})$	411.8044(82), 675.8874(11), 636.4(10.1)
• 350.619 3	3.23 3	$^{143}\text{Ce}(33.039 \text{ h})$	293.266(42.80), 57.356(11.7), 664.571(5.69)
350.70 20	$\dagger 39 2$	$^{106}\text{Nb}(1.02 \text{ s})$	171.548($\dagger 100$), 714.00($\dagger 30$), 725.10($\dagger 17$)
350.7 4	0.07 3	$^{185}\text{Au}(4.25 \text{ m})$	310.6(13), 243.1(6.6), 77.7(6)
350.7 3	$\dagger 12.2 19$	$^{206}\text{Rn}(5.67 \text{ m})$	497.7($\dagger 100$), 324.5($\dagger 96$), 386.6($\dagger 61$)
• 350.71 7	0.00149 9	$^{149}\text{Pm}(53.08 \text{ h})$	285.95(3.1), 859.46(0.109), 590.88(0.069)
350.72 6	99	$^{21}\text{F}(4.158 \text{ s})$	1396(17.0), 1745.5(0.855), 4334(0.0526)
350.72 6	5.0 1	$^{21}\text{Na}(22.49 \text{ s})$	
• 350.774 18	0.301 11	$^{173}\text{Lu}(1.37 \text{ y})$	272.105(21.2), 78.63(11.87), 100.724(5.24)
350.78 12	0.047 19	$^{98}\text{Nb}(51.3 \text{ m})$	787.374(93), 722.645(73.8), 1168.830(17.8)
350.8 8	0.44 25	$^{151}\text{Ho}(35.2 \text{ s})$	527.4(63), 775.53(9.2), 209.5(5.69)
350.8 10	$\dagger 22$	$^{178}\text{Os}(5.0 \text{ m})$	968.7($\dagger 100$), 1331.1($\dagger 94$), 594.6($\dagger 72$)
• 350.8 3	$1.8 \times 10^{-6} 4$	$^{239}\text{Pu}(24110 \text{ y})$	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
350.85 5	0.197 16	$^{227}\text{Fr}(2.47 \text{ m})$	90.035(39), 585.804(29.5), 64.267(14.5)
350.9 2	$\dagger 36 3$	$^{112}\text{Te}(2.0 \text{ m})$	372.70($\dagger 100$), 296.20($\dagger 86$), 418.9($\dagger 57$)
350.9	2.54 3	$^{145}\text{Ce}(3.01 \text{ m})$	724.33(59), 62.54(13.33), 1148.03(9.15)
350.9	0.909 12	$^{145}\text{Ce}(3.01 \text{ m})$	724.33(59), 62.54(13.33), 1148.03(9.15)
350.90 10	1.00 14	$^{195}\text{Ir}(3.8 \text{ h})$	98.85(10), 684.88(9.4), 432.86(9)
350.9 7	0.198 22	$^{199}\text{Bi}(27 \text{ m})$	560.1(22.0), 424.85(22), 841.7(11)
350.92 10	0.383 19	$^{98}\text{Nb}(51.3 \text{ m})$	787.374(93), 722.645(73.8), 1168.830(17.8)
350.94	0.897 12	$^{145}\text{Ce}(3.01 \text{ m})$	724.33(59), 62.54(13.33), 1148.03(9.15)
• 350.95 5	0.264 10	$^{125}\text{Sn}(9.64 \text{ d})$	1067.10(10), 1089.15(4.59), 822.48(4.28)
351.0 4	0.21 3	$^{73}\text{Ga}(4.86 \text{ h})$	297.32(79.8), 325.70(11.17), 739.42(4.23)
351.0 4	0.37 5	$^{97}\text{Rh}(30.7 \text{ m})$	421.55(75), 840.13(12.0), 878.80(9.0)
351	> 0.09	$^{133}\text{Ce}(4.9 \text{ h})$	477.22(39), 510.36(20.7), 58.39(19.2)
351.0 10	0.105 21	$^{138}\text{Pr}(2.12 \text{ h})$	1037.8(101), 788.742(100), 302.7(80)
351.0	1.5 8	$^{147}\text{Cs}(0.225 \text{ s})$	85.2(7.3), 245.8(4.5), 109.7(4.5)
351.0 3	2.0 5	$^{152}\text{Ho}(49.5 \text{ s})$	647.2(92), 613.8(88.4), 683.3(88)
351.001 20	0.80 12	$^{149}\text{Pr}(2.26 \text{ m})$	138.447(11.0), 165.087(9.9), 108.520(9.5)
351.059 20	77	$^{207}\text{Hg}(2.9 \text{ m})$	997.1(69), 1637.1(30), 1756.3(16)
351.059 20	12.91 11	$^{211}\text{Bi}(2.14 \text{ m})$	
• 351.06 5	0.033 17	$^{189}\text{Re}(24.3 \text{ h})$	216.663(5.50), 219.395(4.54), 245.09(3.5)
• 351.07 5	0.0091 10	$^{182}\text{Ta}(114.43 \text{ d})$	67.75001(41.2), 1121.3007(34.9), 1221.4066(26.98)
• 351.07 5	10.3 8	$^{182}\text{Re}(64.0 \text{ h})$	229.3220(26), 67.75001(22.2), 1121.3007(22.0)
351.08 10	0.50 6	$^{134}\text{I}(52.6 \text{ m})$	847.025(95.4), 884.090(64.9), 1072.547(15.0)
351.1 8	0.051 25	$^{103}\text{Ag}(65.7 \text{ m})$	118.72(31.2), 148.193(28.3), 266.86(13.3)
351.1 1	89 9	$^{141}\text{Gd}(24.5 \text{ s})$	223.9(64), 574.9(51), 361.2(37)
351.11 8	0.13 3	$^{189}\text{Pt}(10.87 \text{ h})$	721.41(9.3), 94.33(7.6), 568.84(7.1)
351.138 13	26 3	$^{163}\text{Tb}(19.5 \text{ m})$	389.734(24.3), 494.534(23), 421.860(11.5)
• 351.196 24	0.091 3	$^{131}\text{Ba}(11.50 \text{ d})$	496.326(47), 123.805(28.97), 216.078(19.66)
351.20 7	2.73 15	$^{99}\text{Nb}(2.6 \text{ m})$	97.785(7), 253.50(3.64), 2641.3(3.64)
351.2 4	$\dagger 13 3$	$^{113}\text{Ru}(0.80 \text{ s})$	263.2($\dagger 100$), 211.7($\dagger 31.0$), 337.5($\dagger 27.9$)
351.21 9	> 1.8	$^{176}\text{Re}(5.3 \text{ m})$	240.17(48), 109.08(25.0), 848.7(4.0)
• 351.21 8	3.36 16	$^{191}\text{Pt}(2.9 \text{ d})$	538.90(13.7), 409.44(8.0), 359.90(6.0)
• 351.3 1	0.273 25	$^{131}\text{Te}(30 \text{ h})$	773.67(49.9), 852.21(27.0), 793.75(18.10)
351.31 25	0.7 4	$^{167}\text{Ho}(3.1 \text{ h})$	346.547(56), 321.336(23.5), 237.873(5.0)
351.4 2		$^{102}\text{Ag}(7.7 \text{ m})$	556.52(48), 1834.7(9.8), 2054.4(6.6)
351.47 16	$\dagger 4.8 14$	$^{189}\text{Hg}(7.6 \text{ m})$	320.99($\dagger 100$), 78.21($\dagger 63$), 565.42($\dagger 48$)

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)

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		¹⁸⁶ 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)

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

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	¹⁵⁶ 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)

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	²³⁶ 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)

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	¹⁸⁶ 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	¹³⁶ 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	¹⁴⁶ Pm(41.29 d)	550.284(94.5), 629.987(89), 725.673(32.7)
• 362.5 3	0.026 4	¹⁴⁶ 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	¹⁹⁶ 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	²⁵⁶ 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	²⁴¹ Am(432.2 y)	59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁶)
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)

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	¹⁹⁶ 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 ⁶)
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)

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	¹⁴⁶ 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	²³⁶ 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		¹⁸⁶ 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		¹⁶⁶ 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	²³⁶ 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	⁹⁶ 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)

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 Ag(2.37 m)	433.937(0.50), 618.84(0.261), 1007.22(0.0139)
383.2 3	†1.3 3	¹³¹ Sn(56.0 s)	1226.03(†100), 450.03(†90), 798.50(†86)
383.2 3	0.027 12	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
383.2	>0.21	¹⁹⁰ Au(42.8 m)	295.78(71.0), 301.82(23.4), 597.67(9.4)
383.2 3	0.0196 20	²⁵¹ Fm(5.30 h)	425.4(0.95), 480.4(0.392), 358.3(0.315)
383.28 11	0.43 6	¹³² La(4.8 h)	464.55(76), 567.14(15.7), 1909.91(9.0)
383.3 3	>0.24	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
383.4 4	0.023 12	¹⁹³ Au(17.65 h)	186.17(10.1), 255.57(6.7), 268.22(3.9)
• 383.414 7	0.026 4	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
• 383.428 9	0.052 17	²⁰⁰ Tl(26.1 h)	367.943(87), 1205.717(29.9), 579.298(13.8)
• 383.46 8	0.035 6	¹⁸⁶ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
• 383.47 8	8.7×10^{-5} 13	²³³ U(1.592×10^5 y)	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
• 383.5 1	0.047 19	¹⁴⁶ Gd(48.27 d)	154.57(47), 115.51(44.0), 114.71(44.0)
383.5 5	†2.3	¹⁵⁴ Nd(25.9 s)	151.703(†800), 799.55(†600), 180.693(†510)
• 383.501 4	2.35 5	¹⁷² Er(49.3 h)	610.062(44.2), 407.338(42.1), 68.107(3.29)
• 383.52 9	†3.1 7	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
383.566 21	0.27 4	¹⁴⁹ Pr(2.26 m)	138.447(11.0), 165.087(9.9), 108.520(9.5)
• 383.595 15	0.075 12	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
383.6 2	0.040 11	¹⁰¹ Tc(14.22 m)	306.85(88), 545.06(6.0), 127.23(2.86)
383.6 2	0.052 5	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
383.60 3	0.27 3	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
• 383.6 5	0.036 3	²³⁰ Pa(17.4 d)	314.8(0.094), 366.56(0.076), 51.72(0.026)
383.62 8	0.051 4	¹⁶⁶ Ho(2.99 m)	741.356(36.6), 821.164(34.5), 815.990(18.6)
383.64 12		¹⁹⁵ Pb(15 m)	883.1(†100), 393.7(†42), 871.0(†36)
383.64 12	106.9 18	¹⁹⁵ Pb(15.0 m)	394.21(44), 878.40(24.2), 707.67(14.0)
383.7 1	13.6 7	²⁵⁰ Es(8.6 h)	828.82(72), 303.41(21.6), 349.4(19.8)
383.73 6	0.0185 20	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
383.74 5	0.27 3	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
• 383.75 10	0.042 5	²³⁴ Np(4.4 d)	1558.31(18.72), 1527.21(11.2), 1601.80(9.1)
383.8 3	0.23 9	⁶⁵ Co(1.20 s)	1141.7(4.0), 310.6(2.90), 963.7(2.6)
383.8 1	0.168 16	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
383.80 20	0.084 17	¹⁸⁹ Pt(10.87 h)	721.41(9.3), 94.33(7.6), 568.84(7.1)
• 383.81 3	$\dagger 2.82 \times 10^5$ 5	²⁴¹ Am(432.2 y)	59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸)
383.85 10	0.23 11	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
• 383.851 3	0.0024 2	¹³³ Xe(5.243 d)	80.997(38.0), 79.623(0.27), 160.613(0.066)
• 383.851 3	8.94 3	¹³³ Ba(10.52 y)	356.017(62.05), 80.997(34.06), 302.853(18.33)
• 383.90 7	0.26 4	¹³¹ Te(30 h)	773.67(49.9), 852.21(27.0), 793.75(18.10)
383.9 4	†1.8 6	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
383.9 2	†2.52 14	¹⁹² Tl(9.6 m)	422.8(†100), 634.8(†75.9), 786.3(†31.7)
383.9 4	†<1.0	¹⁹² Bi(37 s)	853.8(†100.0), 501.8(†80), 504.3(†39)
383.95 14	0.99 10	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
384.0 5	0.15 7	⁹⁸ Sr(0.653 s)	119.353(73), 444.628(39), 428.4(31)
384.0 7	0.17 11	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
384.0 5	†0.4 2	¹³⁶ Eu(3.3 s)	254.9(†100), 431.4(†34), 458.0(†20)
384.0 2	†1	¹³⁹ La(2.29 s)	527.7(†100), 571.2(†98), 536.6(†67)
• 384	0.006	²¹⁰ Bi(3.04×10^6 y)	265.832(50), 304.896(28), 649.42(3.8)
• 384.0 5	1.4×10^{-5} 2	²³³ U(1.592×10^5 y)	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
384.03 25	0.12 3	¹²⁸ In(0.84 s)	1168.80(40), 935.20(6.5), 1089.53(6.0)
384.03 25	0.36 10	¹²⁸ In(0.72 s)	831.54(100), 1168.80(100), 120.54(11.1)
384.059 3	0.894 7	¹³¹ Te(25.0 m)	149.716(69), 452.323(18.18), 1146.96(4.95)
384.08 5	0.27 3	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
384.1 3	4.7 5	⁶⁴ Ge(63.7 s)	427.03(37.4), 666.94(16.9), 128.2(10.7)
384.1 1	1.18 7	⁷⁹ Rb(22.9 m)	688.1(23), 182.77(19.2), 143.41(13.9)
384.17 7	0.266 25	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: $E_{\gamma}(I_{\gamma})$
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)

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	¹⁸⁶ 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)

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)

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	†36 3	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
387.56 8	†38 3	¹³¹ Pr(1.53 m)	266.13(†100), 72.82(†64), 324.35(†34)
387.6 4	†1.3 4	¹³¹ Sn(56.0 s)	1226.03(†100), 450.03(†90), 798.50(†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	†9.5×10 ² 16	²³⁴ Pa(1.17 m)	1001.03(†837000), 766.38(†294000), 742.81(†80000)
387.7 1	†88 3	¹⁴⁸ Er(4.6 s)	1653.4(†100), 197.1(†71), 256.9(†65)
387.70 16	†0.68 12	¹⁶² Lu(1.37 m)	166.82(†100), 631.87(†26.6), 798.76(†16.9)
387.7	†>1.5	¹⁶⁴ Tm(2.0 m)	91.40(†1500), 1154.66(†366), 768.91(†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	†9.8 9	¹⁵² Tb(17.5 h)	344.281(†1500), 586.294(†223), 271.135(†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(7.038×10 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	†465 20	²³⁴ Pa(1.17 m)	1001.03(†837000), 766.38(†294000), 742.81(†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	†0.5 3	¹⁸⁰ Au(8.1 s)	153.3(†100), 524.3(†29), 257.6(†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	†2.5 5	¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†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	†3.0 3	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†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	†952 95	¹⁵⁷ Ho(12.6 m)	279.97(†47600), 341.16(†37000), 193.41(†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	†1.3	¹¹¹ Rh(11 s)	275.4(†100.0), 411.8(†9.42), 230.0(†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)

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 ⁶)
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	²⁵⁶ 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)

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	†38 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 ⁶)
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	¹³⁶ 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	⁸⁹ 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}Pb (18.3 s)	331.4($\dagger 75$), 343.5($\dagger 75$), 331.4($\dagger 60$)
393.4 9	0.029 12	^{192}Au (4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
393.4 10	0.14 3	^{201}Bi (108 m)	629.1(24.0), 936.2(11.3), 1014.1(10.7)
393.408 20	0.122 12	^{157}Eu (15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
393.43 7	1.626 16	^{73}Se (39.8 m)	67.03(2.59), 253.70(2.356), 84.0(2.03)
393.46 18	$\dagger 8.3$ 17	^{187}Hg (1.9 m)	233.38($\dagger 100$), 376.34($\dagger 38$), 240.26($\dagger 33$)
393.5 1	1.25 7	^{92}Rb (4.492 s)	814.98(33), 2820.6(6.2), 569.8(5.6)
393.5 1	$\dagger 3.8 \times 10^2$	^{93}Rb (5.84 s)	814.98($\dagger 27000$), 569.8($\dagger 800$), 963.5($\dagger 460$)
393.5 2	<0.09	^{116}Cs (3.84 s)	524.3(76), 615.1(30.4), 622.3(10.4)
393.5 2		^{116}Cs (0.70 s)	
393.5 2	0.10 5	^{129}La (11.6 m)	278.6(25), 110.5(16.9), 457.0(8.0)
393.50 6	6.7 3	^{139}Xe (39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
• 393.5 5	0.011 4	^{223}Ra (11.435 d)	269.459(13.7), 154.21(5.62), 323.871(3.93)
• 393.529 10	0.220 8	^{67}Cu (61.83 h)	184.577(48.7), 93.311(16.1), 91.266(7.0)
• 393.529 10	4.68 6	^{67}Ga (3.2612 d)	93.311(39.2), 184.577(21.2), 300.219(16.80)
393.6 2	0.19	^{142}La (91.1 m)	641.285(47), 2397.8(13.3), 2542.7(10.00)
393.6 3	0.37 18	^{147}La (4.015 s)	117.718(12), 186.320(6.48), 438.30(5.04)
393.65 16	$\dagger 7.6$ 8	^{182}Ir (15 m)	273.23($\dagger 100$), 126.79($\dagger 77$), 236.3($\dagger 21.0$)
393.7 2	$\dagger 100$	^{91}Ru (7.6 s)	1096.9($\dagger 24$), 892.8($\dagger 15$), 204.0($\dagger 6$)
393.7 3	$\dagger 42$ 4	^{195}Pb (15 m)	883.1($\dagger 100$), 871.0($\dagger 36$), 696.0($\dagger 31$)
• 393.70 15	7.0×10^{-6} 3	^{233}U (1.592×10^5 y)	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
• 393.70		^{233}U (1.592×10^5 y)	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
393.7		^{235}Pa (24.5 m)	652.053, 659.3, 645.896
393.74 16	0.58 10	^{197}Pb (43 m)	385.85(74), 387.72(25.1), 222.45(24.6)
• 393.80 3	0.0155 22	^{146}Pm (5.370 d)	1465.12(22), 550.284(22.00), 914.85(11.46)
393.86 27	0.151 20	^{99}Nb (2.6 m)	97.785(7), 253.50(3.64), 2641.3(3.64)
393.9	93 5	^{150}Ho (26 s)	653.3(100), 803.4(100), 550.9(88)
393.9 1	$\dagger 100$	^{151}Yb (1.6 s)	1050.2($\dagger 100$), 1245.6($\dagger 100$), 624.8($\dagger 100$)
394.0 2	9	^{141}Eu (40.0 s)	384.5(5.6), 382.9(2.97), 593.1(2.95)
394.0 2	0.60 13	^{141}Eu (2.7 s)	882.9(0.54), 518.8(0.45), 804.4(0.44)
• 394.0 5		^{146}Eu (4.59 d)	747.2(98), 633.03(43), 634.07(37)
394.00 20	0.040 8	^{153}Dy (6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
394.0 5	0.50 10	^{181}Os (105 m)	238.75(44), 826.77(20), 118.03(12.9)
394.00 4	3.12 15	^{193}Hg (11.8 h)	257.97(61), 407.63(25), 573.25(14.2)
394.0 10	0.008 4	^{214}Bi (19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
394.03 6	2.236 10	^{62}Zn (9.186 h)	596.56(26), 40.84(25.5), 548.35(15.3)
394.04 4	0.0043 3	^{135}La (19.5 h)	480.51(1.5), 874.51(0.164), 587.83(0.1108)
394.1 7		^{84}Br (31.80 m)	881.610(42), 1897.761(14.7), 3927.5(6.8)
394.1 3	0.39 5	^{97}Rb (169.9 ms)	167.1(26), 585.2(21.0), 600.5(10.6)
394.1		^{199}Po (4.13 m)	1002.19(19), 1034.3(16), 362.01(7)
394.1 1	0.093 10	^{234}Pa (6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
394.17 12	0.129 18	^{183}Au (42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
394.19 20	3.4 10	^{175}Tm (15.2 m)	514.868(65), 941.23(15), 363.942(12.7)
394.20 10	$\dagger 17.5$ 12	^{142}Xe (1.22 s)	571.83($\dagger 100$), 657.05($\dagger 79$), 538.24($\dagger 77$)
394.2 1	$\dagger 143$ 38	^{157}Ho (12.6 m)	279.97($\dagger 47600$), 341.16($\dagger 37000$), 193.41($\dagger 15200$)
394.21 12	44	^{195}Pb (15.0 m)	383.64(106.9), 878.40(24.2), 707.67(14.0)
• 394.23 9	0.00060 9	^{151}Gd (124 d)	153.56(6.20), 243.28(5.60), 174.70(2.96)
394.34 6	0.218 20	^{161}Gd (3.66 m)	360.94(0.59), 314.92(22.7), 102.315(13.9)
394.351 16	11.93 17	^{157}Sm (482 s)	197.870(56.00), 196.461(16.8), 121.147(4.76)
394.39 10	5.1 5	^{184}Pt (17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
394.4 3	$\dagger 16$ 3	^{147}Ho (5.8 s)	189.1($\dagger 100$), 883.9($\dagger 100$), 486.7($\dagger 61$)
394.4 5	0.8 3	^{185}Ta (49.4 m)	177.59(25.7), 173.68(22.6), 65.86(3.9)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
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)

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	¹⁶⁶ 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)

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	¹³⁶ 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		¹⁸⁶ 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		¹²⁶ 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)

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 111.37 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)

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	¹⁶⁶ 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

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)
• 404.0 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 Os(2.8 m)	84.7($\dagger 100$), 125.4($\dagger 63$), 195.8($\dagger 61$)
404.0 2	0.22 6	¹⁹⁰ Tl(2.6 m)	416.4(79), 625.4(11.1), 683.5(8.7)
404.0	$\dagger 11 1$	¹⁹¹ Pb(2.18 m)	387.1($\dagger 100$), 712.2($\dagger 46$), 613.5($\dagger 40$)
404.004 13	0.779 19	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
404.03 10	$\dagger 6$	¹⁹⁷ Ir(5.8 m)	469.72($\dagger 100$), 430.56($\dagger 61$), 815.92($\dagger 45$)
• 404.046 11	1.310 9	¹³¹ Ba(11.50 d)	496.326(47), 123.805(28.97), 216.078(19.66)
404.07 9	26 3	¹⁰⁶ Rh(6.0 m)	433.937(88), 581.1(60), 947.27(49)
404.1 3	0.14 5	⁷⁶ Rb(39.1 s)	2571.3(47), 424.0(43.4), 355.6(8.2)
404.1 3	0.27 13	¹⁵³ Ho(2.0 m)	295.8(67), 637.0(5.36), 688.5(3.7)
404.20 20	0.6 3	¹⁰² Sr(69 ms)	243.80(53), 150.15(18.0), 93.89(13.4)
• 404.2 2	0.0021 5	²²⁴ Ra(3.66 d)	240.987(3.97), 292.70(0.0060), 645.50(0.0052)
404.2 2	$\dagger 3 1$	²²⁰ At(224 s)	240.987($\dagger 100$), 292.70($\dagger 39$), 422.04($\dagger 23$)
404.213 13	0.036 6	¹⁸³ Os(13.0 h)	381.768(89.6), 114.463(20.63), 167.844(8.81)
404.214	0.365 13	⁴³ K(22.3 h)	372.760(87), 617.490(79.2), 396.861(11.85)
• 404.296 5	0.199 3	¹⁴⁹ Gd(9.28 d)	149.735(48.2), 298.634(28.6), 346.651(23.9)
404.3 3	1.0 2	¹²⁸ Sb(9.01 h)	753.82(100), 743.22(100), 314.12(61)
404.36 6	2.28 9	¹³³ Sb(2.5 m)	1096.22(43.0), 817.8(18.5), 2755(12.5)
404.36 5	0.86 18	¹⁹³ Hg(11.8 h)	257.97(61), 407.63(25), 573.25(14.2)
404.39 15	$\dagger 7.8 12$	¹⁵⁵ Nd(8.9 s)	180.574($\dagger 100$), 418.99($\dagger 75$), 955.08($\dagger 50$)
404.4 2	5.9 6	¹²⁸ Sn(59.07 m)	482.3(59), 75.1(27.7), 557.3(16.5)
404.4	0.68 15	¹⁵¹ Er(0.58 s)	789.4(5.1), 597.4(4.4), 297.2(3.7)
404.46 14	0.64 6	¹⁴⁶ Ba(0.607 s)	56.08(29.20), 133.53(3.88), 415.78(3.59)
404.47 10	0.09	¹⁶⁵ Yb(9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
404.49 9	$\dagger 0.56 4$	¹⁸⁴ Ir(3.09 h)	263.97($\dagger 100$), 119.80($\dagger 45$), 390.38($\dagger 38$)
404.5 2	$\dagger 0.6 2$	¹³⁶ Pm(107 s)	373.8($\dagger 100$), 602.7($\dagger 38.4$), 857.2($\dagger 23.4$)
404.5 2	0.82 17	¹³⁶ Pm(107 s)	373.8(15.0), 602.7(12.3), 857.2(12.72)
404.5 5	$\dagger 2.0 5$	¹⁴² Xe(1.22 s)	571.83($\dagger 100$), 657.05($\dagger 79$), 538.24($\dagger 77$)
404.5 3	3.1 4	¹⁹² Pb(3.5 m)	1195.4(47), 608.2(17.9), 167.5(13.6)
404.5	> 0.019	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
• 404.5 5	$5.6 \times 10^{-6} 6$	²⁵³ Es(20.47 d)	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
404.57	0.05	¹⁶⁵ Yb(9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
404.61 25	0.0091 25	¹³⁹ Cs(9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
• 404.7 5	0.025 9	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
404.7 2	$\dagger 8.7 17$	²²⁹ Ac(62.7 m)	164.522($\dagger 100$), 569.1($\dagger 91$), 261.92($\dagger 39$)
• 404.72 6	0.065 7	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
404.78 4	1.70 4	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
404.8 2	0.084 5	¹¹¹ Pd(23.4 m)	580.00(0.8), 70.44(0.78), 1459.0(0.56)
404.8 3	1.14 11	¹¹⁸ I(8.5 m)	605.71(99), 600.71(92), 614.42(65)
404.8 7	$\dagger 1.8 10$	¹⁵⁵ Er(5.3 m)	110.12($\dagger 100$), 241.5($\dagger 65$), 234.0($\dagger 40.0$)
• 404.814 4	0.0547 16	¹³¹ I(8.02070 d)	364.489(81.7), 636.989(7.17), 284.305(6.14)
404.85 7	0.26 6	¹³³ Te(12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
404.853 10	3.78 5	²¹¹ Pb(36.1 m)	832.01(3.52), 427.088(1.76), 766.51(0.617)
404.853 10		²¹⁵ At(0.10 ms)	
404.99 18	0.054 9	⁹³ Rb(5.84 s)	432.61(17.4), 986.05(6.8), 213.429(6.7)
405.0 5	0.09 4	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
405.0 2	0.36 7	¹²³ Cs(5.94 m)	97.3(23), 596.7(10.1), 83.3(4.1)
405.0 4	0.47 8	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
405.0 7	1.38 13	¹²⁹ Sb(4.40 h)	812.8(43), 914.6(20.0), 544.7(17.9)
405.0 5		¹⁸⁰ Hg(2.8 s)	300.5($\dagger 100$), 381.2($\dagger 69$), 479.9($\dagger 23.0$)
405.0 5	$\dagger 17$	¹⁸⁰ Hg(2.8 s)	300.5($\dagger 100$), 381.2($\dagger 69$), 479.9($\dagger 23.0$)
405.0 4	$\dagger 0.95 10$	¹⁸² Ir(15 m)	273.23($\dagger 100$), 126.79($\dagger 77$), 236.3($\dagger 21.0$)
405		²⁴¹ Np(13.9 m)	174.94(3.1), 132.99(0.86), 518.8(0.40)
• 405 2	0.08	²⁵³ Fm(3.00 d)	271.8(2.6), 144.99(0.192), 62.47(0.16)
405.01 17	0.210 17	¹⁹⁷ Tl(2.84 h)	425.84(12.9), 152.22(7.2), 1411.34(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: $E_\gamma(I_\gamma)$
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	$\dagger 1.45 \times 10^4$	²²⁴¹ 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)

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	¹³⁶ Cs(33.41 m)	1435.795(76.3), 462.796(30.7), 1009.78(29.8)
408.98 6	0.09	¹³⁶ 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)

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)

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	¹⁸⁶ 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	²⁰⁶ 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	¹⁴⁶ Pm(41.29 d)	550.284(94.5), 629.987(89), 725.673(32.7)
• 414.028 12	10.3 3	¹⁴⁶ 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	¹⁴⁶ 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	¹⁵⁶ 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	0.209 22	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	¹⁵⁶ 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	¹⁴⁶ 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 ⁶)
• 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	¹⁶⁶ 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)

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	¹⁶⁶ Ho(2.99 m)	741.356(36.6), 821.164(34.5), 815.990(18.6)
• 422.318 4	0.293 4	¹⁶⁶ 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	¹⁸⁶ 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	¹⁸⁶ 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)

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

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
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- $t_{1/2} > 1$ d