

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
427.2	0.6	¹⁴⁵ Ba(4.31 s)	96.6(17), 91.9(7), 65.9(5)
427.2 2	0.12 4	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
• 427.20 20	0.0085 13	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
427.2 4	0.05 3	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
• 427.25 4	0.063 7	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
427.27 9	2.2 4	¹⁸⁷ Pt(2.35 h)	106.46(9), 201.52(6.4), 110.04(5.7)
427.30 10	1.96 11	⁹⁹ Pd(21.4 m)	136.00(73), 263.60(15.2), 673.38(6.9)
427.3	>0.27	¹⁰⁹ Rh(80 s)	326.868(54), 426.135(7.7), 178.034(7.6)
427.33 6	0.221 17	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
427.35 9	0.129 18	¹⁰⁶ In(5.2 m)	632.66(92), 1714.90(17.1), 861.16(10.6)
427.355 15	0.160 15	¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
427.4 4	0.93 19	⁹⁷ Y(1.17 s)	1103.0(92.6), 161.4(71.8), 1091(56)
427.4 3	0.78 13	¹²⁸ La(5.0 m)	284.00(87), 479.24(54), 643.65(14.7)
427.4 5	†8.5 19	¹⁹⁵ Pb(15 m)	883.1(†100), 393.7(†42), 871.0(†36)
427.4 4	3.1×10 ⁻⁵ 8	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
427.4 4	†20 5	²³⁴ Pa(1.17 m)	1001.03(†837000), 766.38(†294000), 742.81(†80000)
• 427.4 4	0.009 2	²³⁴ Np(4.4 d)	1558.31(18.72), 1527.21(11.2), 1601.80(9.1)
427.401 15	0.62 5	⁹⁹ Nb(2.6 m)	97.785(7), 253.50(3.64), 2641.3(3.64)
427.41 13	0.162 18	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
427.5 4	0.18 7	¹³⁹ Sm(2.57 m)	273.7(37), 306.7(28.5), 596.3(8.0)
• 427.56 12	0.0355 21	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
• 427.570 17	0.0955 9	¹³¹ Ba(11.50 d)	496.326(47), 123.805(28.97), 216.078(19.66)
427.6 2	0.96 6	¹⁵² Tb(4.2 m)	344.281(20.8), 411.115(18.8), 471.9(12.2)
427.6 2	†2.1 4	¹⁵³ Yb(4.2 s)	547.4(†100), 674.1(†61), 369.6(†32)
427.6 2	>0.035	¹⁷³ Ta(3.14 h)	172.2(18), 69.70(5.9), 90.3(5.0)
427.65 8	0.098 6	¹⁰¹ Pd(8.47 h)	296.29(19), 590.44(12.06), 269.67(6.43)
427.65 5	0.21 4	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
427.672 24	3.5 4	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
427.7 4	0.073 6	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
427.7 2	†32.7 20	²⁰² Po(44.7 m)	688.6(†1000), 316.0(†286), 165.7(†174)
427.8 2	0.66 9	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
• 427.81 3	0.059 4	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
427.83 6	0.53 11	⁶⁶ Ge(2.26 h)	43.89(28.7), 381.85(28), 272.97(10.4)
• 427.875 6	30	¹²⁵ Sb(2.7582 y)	600.600(17.86), 635.954(11.31), 463.365(10.493)
427.883 4	4.4 4	⁷⁵ Br(96.7 m)	286.572(88), 141.3147(6.6), 377.385(3.93)
427.9 2	8.0 9	¹⁴⁰ Gd(15.8 s)	174.8(76), 749.9(70), 379.0(38)
• 427.92 4	0.047 10	¹⁸⁹ Re(24.3 h)	216.663(5.50), 219.395(4.54), 245.09(3.5)
427.94 4	0.083 11	¹³⁰ I(12.36 h)	536.09(99), 668.54(96), 739.48(82)
427.94 4	0.00034 9	¹³⁰ I(9.0 m)	536.09(16), 586.05(1.07), 1614.10(0.447)
428 1	1.6	¹²⁵ Cs(45 m)	526(24), 111.8(9), 412(5)
428.0 2	†100 29	¹⁹⁴ Tl(33.0 m)	636.5(†23), 645.20(†13), 1040.3(†5.6)
428.0 2	99 5	¹⁹⁴ Tl(32.8 m)	636.5(99), 748.9(76), 734.9(22)
428.0 7	0.70 12	²⁰¹ Bi(108 m)	629.1(24.0), 936.2(11.3), 1014.1(10.7)
428.0 5	0.011 3	²¹⁴ Bi(19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
428.03 21	0.15 3	⁹³ Sr(7.423 m)	590.238(67), 875.73(24.1), 888.13(21.8)
• 428.098 9	1.0×10 ⁻⁶ 1	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
428.1 2	0.25 8	¹⁴³ Gd(112 s)	271.94(84), 588.00(15.7), 798.89(10.7)
428.1 4	0.07 3	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
428.11 6	†83.7 28	¹²⁶ Cd(0.506 s)	260.09(†100), 688.23(†5.9), 555.40(†4.8)
428.12 9	1.09 13	¹¹⁵ Te(5.8 m)	723.569(30), 1380.58(23.0), 1326.83(22.7)
428.15 8	†11.9 16	¹³¹ Pr(1.53 m)	266.13(†100), 72.82(†64), 387.56(†38)
428.20 15	4.6 3	¹⁰⁰ Cd(49.1 s)	936.55(66), 139.71(6.7), 582.5(6.3)
428.20 4	†5.5 7	¹⁴² Xe(1.22 s)	571.83(†100), 657.05(†79), 538.24(†77)

• $t_{1/2} > 1$ d

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$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
428.2 2	†362 71	¹⁵⁷ Ho(12.6 m)	279.97(†47600), 341.16(†37000), 193.41(†15200)
428.2 3	†13.8 5	²⁰¹ Po(15.3 m)	890.1(†100), 240.1(†71.0), 904.2(†54.8)
• 428.24 7	0.0034	¹⁴⁷ Eu(24.1 d)	197.299(27), 121.220(22.9), 677.516(9.8)
428.3 3	0.087 16	⁷³ Se(7.15 h)	360.80(108), 67.03(78), 865.09(0.584)
428.3 2	†1.1 3	⁷⁵ Ga(126 s)	253.0(†100), 574.8(†31.6), 885.6(†11.1)
428.3 1	0.11 4	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
• 428.3 5	0.009	²⁵² Es(471.7 d)	52.33(0.55), 64.42(0.274), 418.5(0.220)
428.35 15	0.19 4	¹⁰³ Tc(54.2 s)	346.380(17.5), 136.079(16.6), 562.90(7.0)
428.4 1	1.4 3	⁷⁵ Zn(10.2 s)	228.67(28.9), 432.29(20.2), 155.94(17.2)
428.4 1	31 3	⁹⁸ Sr(0.653 s)	119.353(73), 444.628(39), 36.5(20.4)
428.4 2	0.08	²²⁷ Ra(42.2 m)	27.36(16), 300.07(4.6), 302.65(4.3)
428.41 3	7.4 4	¹²³ Cd(1.82 s)	1165.86(25.7), 1027.45(22.6), 2102.81(12.5)
428.420 13	0.0121 16	¹⁷³ Hf(23.6 h)	123.672(83), 296.974(33.9), 139.634(12.7)
428.438 22	0.52 5	²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
428.438		²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
428.44 11	0.198 18	⁷² Ga(14.10 h)	834.01(96), 2201.69(25.9), 629.95(24.8)
• 428.44 11	0.069 5	⁷² As(26.0 h)	834.01(80), 629.95(7.92), 1463.95(1.107)
428.44 13	4.5 3	¹⁹⁵ Pb(15.0 m)	383.64(106.9), 394.21(44), 878.40(24.2)
428.5 5	0.17 4	⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
428.5 4	0.11 3	⁸⁹ Kr(3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
428.5 3		¹⁰⁷ Sn(2.90 m)	1129.2(†100), 678.5(†100), 1540.6(†30)
428.53 9	0.0053 8	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
428.53 10	0.37 4	¹⁵⁸ Tm(3.98 m)	192.13(62), 335.10(16.8), 1149.83(7.6)
428.56 9	0.0706 22	¹⁰⁶ Rh(29.80 s)	511.842(20), 621.94(9.93), 1050.39(1.56)
428.56 9	0.0077 8	¹⁰⁶ Ag(23.96 m)	511.842(17.0), 621.94(0.316), 873.48(0.199)
428.6 5	0.045 9	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
428.615 8	>0.15	¹⁷⁵ Tm(15.2 m)	514.868(65), 941.23(15), 363.942(12.7)
428.7 2	0.139 23	⁷⁹ Rb(22.9 m)	688.1(23), 182.77(19.2), 143.41(13.9)
• 428.7 1	0.0010 5	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
428.7 4	0.14 7	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
428.71 12	0.22 4	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
428.83 7	12.7 10	¹⁷⁴ W(31 m)	35.42(14.1), 328.68(9.5), 378.54(8.3)
428.85 20	0.0146 22	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
428.9 2	>0.017	¹⁷³ Ta(3.14 h)	172.2(18), 69.70(5.9), 90.3(5.0)
• 428.94 10	0.0060 6	²⁵³ Es(20.47 d)	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
429	>0.0049	⁹⁰ Nb(14.60 h)	1129.224(92.7), 2318.968(82.03), 141.178(66.8)
429 1	†0.34 14	¹⁰³ Mo(67.5 s)	83.4(†100), 423.91(†69), 45.8(†57)
429.0 4	0.50 13	¹⁶⁰ Yb(4.8 m)	173.74(42.0), 215.78(20.2), 140.35(9.3)
429.0 3	†2.4 5	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
429.03 5	2.21 11	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
429.04	0.024	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
429.07	†94 3	³⁴ Si(2.77 s)	1178.5(†100), 1607.6(†56)
429.07 2	0.26 8	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
• 429.1 3	0.016 7	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
429.1 4	0.45 11	¹⁵⁴ Ho(11.76 m)	334.6(84), 412.4(15.0), 873.4(12.5)
429.10 20	0.060 14	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
429.12	0.034 11	¹³⁰ I(12.36 h)	536.09(99), 668.54(96), 739.48(82)
• 429.25 15	0.0066 13	¹⁴⁵ Eu(5.93 d)	893.73(66), 653.512(15.0), 1658.53(14.9)
• 429.26 5	0.061 10	¹⁸⁹ Re(24.3 h)	216.663(5.50), 219.395(4.54), 245.09(3.5)
429.3 3	3.6 4	⁹⁸ Sr(0.653 s)	119.353(73), 444.628(39), 428.4(31)
429.3 6	0.27 5	¹²⁷ Ba(12.7 m)	180.8(12), 114.8(9.3), 66.06(2.12)
429.3 2	6.06 16	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
429.4 3	0.22 3	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
429.4 4	†24 3	¹³⁴ Pr(11 m)	293.5(†100), 299.0(†100), 1196.8(†100)

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429.4 4	$\dagger 24$ 3	^{134}Pr (17 m)	1964.1($\dagger 100$), 1904.3($\dagger 100$), 1579.9($\dagger 100$)
429.4 6	0.3 3	^{172}Ta (36.8 m)	214.02(46), 95.23(17.5), 1109.27(12.4)
429.40 16	0.63 5	^{187}Au (8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
429.44 10	0.66 6	^{140}Xe (13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
429.5 4	0.7	^{118}Pd (1.9 s)	125.4(34), 125.4(34), 224.2(20.1)
429.50 10	0.084 25	^{119}Te (16.03 h)	644.01(84), 699.85(10.1), 1749.65(3.95)
429.5 2	0.159 24	^{183}Au (42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
429.51 5		^{193}Hg (3.80 h)	861.11($\dagger 100$), 1118.84($\dagger 64$), 789.21($\dagger 36$)
429.51 5	0.6 1	^{193}Hg (11.8 h)	257.97(61), 407.63(25), 573.25(14.2)
429.6 2	0.114 15	^{143}Eu (2.63 m)	1107.3(8), 1536.8(3.29), 1912.7(2.13)
429.61 9	0.329 18	^{153}Dy (6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
429.64 5	13.3 21	^{106}Rh (131 m)	511.842(85), 1045.83(30.4), 717.24(28.9)
• 429.64 5	13.2 4	^{106}Ag (8.28 d)	511.842(88), 1045.83(29.6), 717.24(28.9)
429.7 1		^{191}Tl (5.22 m)	452.6($\dagger 100$), 470.1($\dagger 98$), 391.6($\dagger 96$)
429.7 1	0.082 7	^{251}Fm (5.30 h)	880.8(2.19), 453.1(1.45), 405.6(0.99)
429.7 1	8	^{255}Md (27 m)	
429.714 15	0.0089 18	^{173}Hf (23.6 h)	123.672(83), 296.974(33.9), 139.634(12.7)
429.79 4	0.133 6	^{168}Ho (2.99 m)	741.356(36.6), 821.164(34.5), 815.990(18.6)
429.80 20	$\dagger 13.5$ 16	^{106}Mo (8.4 s)	465.70($\dagger 100$), 54.00($\dagger 54$), 618.60($\dagger 25$)
429.8 2	$\dagger 10.6$ 11	^{185}Hg (21.6 s)	222.8($\dagger 100.0$), 258.7($\dagger 98$), 212.5($\dagger 58$)
• 429.8 2	0.0039	^{239}Np (2.3565 d)	106.125(27.2), 277.599(14.38), 228.183(10.76)
429.8 2	0.0017 3	^{239}Am (11.9 h)	277.599(15.0), 228.183(11.3), 209.753(3.50)
• 429.8 2		^{243}Cm (29.1 y)	277.599(14.0), 228.183(10.6), 209.753(3.29)
429.82 24	0.53 18	^{154}Tb (21.5 h)	123.071(26), 1274.436(10.5), 2187.10(9.9)
429.885 20	0.0775 19	^{166}Tm (7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
429.90 15	0.13 3	^{156}Tm (83.8 s)	344.55(86), 452.85(17.2), 585.93(14.6)
429.93 14	0.15 3	^{90}Kr (32.32 s)	1118.69(39.0), 121.82(35.5), 539.49(30.8)
429.93 3	0.306 20	^{135}I (6.57 h)	1260.409(28.90), 1131.511(22.74), 1678.027(9.62)
• 429.94 10	$\dagger 1.15 \times 10^4$ 23	^{241}Am (432.2 y)	59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$)
430.0 4	$\dagger 2.7$ 3	^{182}Ir (15 m)	273.23($\dagger 100$), 126.79($\dagger 77$), 236.3($\dagger 21.0$)
430.0 2	$\dagger 7.1$ 14	^{187}Hg (1.9 m)	233.38($\dagger 100$), 376.34($\dagger 38$), 240.26($\dagger 33$)
430 1	0.006 3	^{211}Pb (36.1 m)	404.853(3.78), 832.01(3.52), 427.088(1.76)
• 430 1	0.040	^{241}Cm (32.8 d)	471.805(71), 430.634(4.06), 132.413(3.86)
430.1	$\dagger 13$	^{107}Mo (3.5 s)	400.3($\dagger 100$), 65.7($\dagger > 92$), 384.4($\dagger 57.6$)
• 430.187 15	4.30×10^{-6} 13	^{239}Pu (24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
430.2 1	2.07 5	^{96}Rh (9.90 m)	832.57(100), 685.49(95.7), 631.71(74.5)
430.20 16	0.042 3	^{139}Cs (9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
430.2 2	1.6	^{145}La (24.8 s)	70.0(11), 355.8(3.8), 118.2(3.6)
430.2 3	0.030 9	^{151}Nd (12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
430.221 17	28	^{179}Re (19.5 m)	289.968(26.9), 1680.244(13.0), 415.411(10.6)
430.27 2	1.15 4	^{145}Cs (0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
430.28 21	0.00033	^{115}Sb (32.1 m)	497.358(98), 489.27(1.3), 1236.52(0.58)
430.28 3	5.0 3	^{166}Lu (2.65 m)	228.12(77.3), 337.50(41), 367.95(31.4)
430.3 2	$\dagger 305$ 86	^{157}Ho (12.6 m)	279.97($\dagger 47600$), 341.16($\dagger 37000$), 193.41($\dagger 15200$)
430.30 19	1.80 12	^{186}Au (10.7 m)	191.56(62), 298.67(25.4), 764.89(10.5)
430.3 1	4.76 24	^{200}Po (11.5 m)	671.0(34.0), 617.7(19.7), 434.4(9.3)
430.32 10	4.08 16	^{121}Ag (0.78 s)	314.55(32.1), 353.43(19.9), 500.61(9.3)
430.4 5	0.11 3	^{117}Cs (8.4 s)	204.8(15.0), 29.7(9.9), 205.6(6.8)
430.4 3	$\dagger 5.6$ 8	^{191}Tl (5.22 m)	452.6($\dagger 100$), 470.1($\dagger 98$), 391.6($\dagger 96$)
430.48 12	18.3 4	^{144}Ba (11.5 s)	103.855(23.30), 172.828(15.4), 156.600(15.1)
430.48 12	0.30 9	^{144}Ba (11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
430.49 3	3.28 15	^{92}Sr (2.71 h)	1383.93(90), 953.31(3.52), 241.56(2.92)
430.5 4	0.99 4	^{86}Se (15.3 s)	2441.1(43.0), 2660.0(21.6), 48.3(15.4)
430.5 3	0.029 6	^{145}Ce (3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)

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430.5 3	0.12 3	¹⁶⁷ Ho(3.1 h)	346.547(56), 321.336(23.5), 237.873(5.0)
• 430.5 5	0.019 6	²²³ Ra(11.435 d)	269.459(13.7), 154.21(5.62), 323.871(3.93)
• 430.53 14	4.74 11	¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
430.56 7	†61	¹⁹⁷ Ir(5.8 m)	469.72(†100), 815.92(†45), 378.32(†38)
• 430.594 21	0.280 14	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
430.60 21	0.0102 5	⁷⁷ Ge(11.30 h)	264.44(54), 211.03(30.8), 215.50(28.6)
430.6 1	0.058 5	¹⁰⁷ Ru(3.75 m)	194.05(9.9), 847.93(5.3), 462.61(3.66)
430.6 2	0.25 5	¹²³ Cs(5.94 m)	97.3(23), 596.7(10.1), 83.3(4.1)
430.6 6		¹³¹ Sn(56.0 s)	3267.5, 2470.5, 2039.25
430.6 6		¹³¹ Sn(58.4 s)	367.40, 285.0, 62.9
430.6 6	†1.0 5	¹³¹ Sn(56.0 s)	1226.03(†100), 450.03(†90), 798.50(†86)
430.6 3	0.050 19	¹⁵⁸ Tm(3.98 m)	192.13(62), 335.10(16.8), 1149.83(7.6)
• 430.634 20	4.06 20	²⁴¹ Cm(32.8 d)	471.805(71), 132.413(3.86), 165.049(2.97)
• 430.634 20	0.0015 3	²⁴⁵ Bk(4.94 d)	205.879(0.040), 471.805(0.026), 164.8(0.0084)
430.70 14	0.131 13	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
430.74 10	1.3 3	¹⁶⁶ Hf(6.77 m)	78.76(41), 341.82(4.7), 407.91(4.5)
430.8	1.22 6	¹⁵⁰ Pr(6.19 s)	130.2(32), 722.5(7.0), 852.7(6.1)
430.8 5	0.017 4	¹⁶⁵ Yb(9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
430.9 2	0.6	¹¹⁵ Pd(25 s)	342.71(8), 303.87(7), 396.56(6)
430.9 10	0.25 5	¹⁹³ Hg(11.8 h)	257.97(61), 407.63(25), 573.25(14.2)
430.9 3	0.20 5	¹⁹⁹ Pb(90 m)	366.90(44.2), 353.39(9.5), 1135.04(7.8)
430.9 4	0.023	²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
431.0 5	9.2 7	⁷⁶ Ga(32.6 s)	562.93(66), 545.51(26.0), 1108.41(15.8)
431	0.28 11	¹³⁸ I(6.49 s)	588.825(56), 875.23(9.2), 2262.19(3.86)
431.0 5	0.07	¹⁵³ Ho(2.0 m)	295.8(67), 637.0(5.36), 688.5(3.7)
431.0 1	0.74 14	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
431.0 1	1.68 25	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
431.02 6	0.0200 22	¹²⁵ Xe(16.9 h)	188.418(54), 243.378(30.1), 54.968(6.81)
431.02 6	0.16 3	¹⁸⁹ Pt(10.87 h)	721.41(9.3), 94.33(7.6), 568.84(7.1)
431.16 10	0.00144 10	¹⁶³ Er(75.0 m)	1113.5(0.0490), 436.1(0.0285), 439.94(0.0276)
431.19 20	†0.48 3	¹⁸⁴ Ir(3.09 h)	263.97(†100), 119.80(†45), 390.38(†38)
431.20 4	2.76 10	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
431.2 3	2.5 4	¹⁷⁹ Yb(8.0 m)	592.1(75), 612.3(35.4), 381.4(9.6)
• 431.281 23	0.0205 8	⁷¹ As(65.28 h)	174.954(82.00), 1095.490(4.08), 499.876(3.624)
• 431.29 8	0.0060 6	¹⁷² Tm(63.6 h)	78.7435(6.5), 1093.657(6.0), 1387.093(5.6)
• 431.297 12	0.0713 14	¹⁴⁹ Gd(9.28 d)	149.735(48.2), 298.634(28.6), 346.651(23.9)
431.3 2	0.28 9	⁷⁶ Rb(39.1 s)	2571.3(47), 424.0(43.4), 355.6(8.2)
431.3 2	0.44 8	¹²¹ Cs(122 s)	179.4(30.2), 196.0(24.1), 459.7(12.0)
431.3		¹³¹ La(59 m)	108.081(25.0), 417.783(18.0), 365.162(16.9)
431.3 1	†94 4	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
431.3	†0.8	¹⁹³ Pb(5.8 m)	365.2(†100), 392.2(†20.7), 716.4(†6.7)
431.3	>0.013	¹⁹⁷ Tl(2.84 h)	425.84(12.9), 152.22(7.2), 1411.34(4.5)
431.38 12	0.20 7	¹³⁶ I(83.4 s)	1313.02(67), 1321.08(24.8), 2289.6(10.4)
431.38 12	0.63 19	¹³⁶ I(46.9 s)	1313.02(100), 381.359(100), 197.316(78)
431.4 2	†34 5	¹³⁶ Eu(3.3 s)	254.9(†100), 458.0(†20), 778.0(†17)
431.4 3	3.63 15	¹⁴⁴ La(40.8 s)	397.440(94.3), 541.20(39.2), 844.8(22.3)
• 431.4 5	0.000052 4	¹⁴⁵ Sm(340 d)	61.25(12), 492.31(0.00328)
431.4 3	0.31 3	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
431.4 7	0.38	¹⁸⁵ Ir(14.4 h)	254.4(13.3), 1828.8(10), 60.0(5.7)
431.4 3	0.029 9	¹⁹³ Au(17.65 h)	186.17(10.1), 255.57(6.7), 268.22(3.9)
431.45 10	0.77 8	¹⁷⁷ W(135 m)	115.65(50), 426.98(13.2), 1036.4(10.3)
431.49 4	0.97 7	¹³² Ce(3.51 h)	182.11(77), 155.37(10.5), 216.83(4.95)
431.5	37 7	⁴⁰ S(8.8 s)	211.55(72), 888.4(36), 676.8(27)
• 431.5 5	0.16 7	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
431.6 4	0.078 16	⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
431.6 1	40.4 20	¹⁴¹ Sm(22.6 m)	196.88(74), 777.6(20.3), 1786.4(10.9)
431.6 3	†8.8 21	¹⁴⁷ Ho(5.8 s)	189.1(†100), 883.9(†100), 486.7(†61)
431.61 13	0.12 3	¹³³ Te(12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
431.61 6	16.7 13	¹⁹⁰ Re(3.1 m)	186.718(48.4), 557.972(28.2), 223.811(26.0)
431.61 6	0.40 4	¹⁹⁰ Re(3.2 h)	186.718(27.8), 605.24(14.9), 557.972(14.3)
• 431.61 6	2.74 16	¹⁹⁰ Ir(11.78 d)	186.718(52.4), 605.24(39.9), 518.55(34.0)
431.652 4	3.9 4	⁷⁵ Br(96.7 m)	286.572(88), 141.3147(6.6), 427.883(4.4)
431.7 5	0.026 6	¹⁰⁷ Rh(21.7 m)	302.77(66), 392.47(8.8), 312.21(4.8)
431.77 11	0.0014 8	⁴⁵ Ti(184.8 m)	720.22(0.154), 1408.6(0.085), 1662.4(0.041)
431.8 3	0.47 8	¹¹⁷ Cs(8.4 s)	204.8(15.0), 29.7(9.9), 205.6(6.8)
431.8 2	0.40 5	¹²⁹ La(11.6 m)	278.6(25), 110.5(16.9), 457.0(8.0)
431.8 3	0.47 5	¹³² I(2.295 h)	667.718(99), 772.60(75.6), 954.55(17.6)
431.82 15	0.052	¹³⁷ I(24.5 s)	1218.00(12.8), 601.05(4.80), 1302.64(4.42)
431.9 6	0.032 5	¹¹² Sb(51.4 s)	1257.05(96), 990.70(14.3), 670.0(3.7)
431.9 2	0.35 5	¹¹⁹ Ag(2.1 s)	626.4(13), 366.2(12.1), 399.1(10.9)
431.9 2	0.06	¹⁴⁰ Sm(14.82 m)	225.5(>10), 225.4(10), 140.0(5.0)
431.93 25	†1.0 2	¹⁶⁵ Lu(10.74 m)	132.49(†100), 120.60(†100), 174.25(†47.0)
• 431.982 24	0.0067 6	¹⁹⁶ Au(6.183 d)	355.684(87), 332.983(22.9), 521.175(0.389)
432.0 4	1.64 10	⁹⁵ Y(10.3 m)	954.00(16), 2175.6(7.00), 3576.0(6.4)
432.00 14	0.170 17	¹⁰³ Ag(65.7 m)	118.72(31.2), 148.193(28.3), 266.86(13.3)
• 432.0 8	0.010 7	¹⁸⁹ Re(24.3 h)	216.663(5.50), 219.395(4.54), 245.09(3.5)
432.08 9	0.054 12	¹⁰³ Tc(54.2 s)	346.380(17.5), 136.079(16.6), 562.90(7.0)
432.1 2	0.62 3	⁶³ Fe(6.1 s)	994.8(14.0), 1427.2(4.6), 1299.0(1.23)
432.1 2	0.850 17	⁷⁹ As(9.01 m)	95.73(0.85), 364.9(1.06), 879.2(0.80)
432.1 1	†1.20 12	¹⁷¹ Ta(23.3 m)	49.6(†100), 506.4(†54), 501.8(†22.6)
• 432.1 1	0.034 3	²²³ Ra(11.435 d)	269.459(13.7), 154.21(5.62), 323.871(3.93)
432.15 5	0.309 17	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
432.16 10	4.03 10	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)
432.2 2	0.015 3	¹⁴¹ Pm(20.90 m)	1223.26(4.74), 886.22(2.44), 193.68(1.61)
432.24 8	1.37 23	⁷⁵ Rb(19.0 s)	178.98(<63), 178.97(>51), 187.21(8.7)
• 432.27 7	0.028 3	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
432.29 5	20.2 12	⁷⁵ Zn(10.2 s)	228.67(28.9), 155.94(17.2), 606.43(9.0)
432.3 5	†0.26 4	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
432.3 3	0.0022 12	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
432.3 1	1.02 8	¹⁴² Ba(10.6 m)	255.300(20.5), 1204.3(14.23), 895.2(13.9)
• 432.33 9	†0.31 7	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
432.36 16	†11.6 12	¹⁴² Xe(1.22 s)	571.83(†100), 657.05(†79), 538.24(†77)
• 432.40 7	0.86 4	¹³¹ Te(30 h)	773.67(49.9), 852.21(27.0), 793.75(18.10)
432.4 3	1.90 25	¹⁸⁴ Au(53.0 s)	162.97(50), 272.98(40), 362.47(17.5)
432.42 10	0.153 17	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
• 432.493 12	2.90 3	¹⁴⁰ La(1.6781 d)	1596.210(95), 487.021(45.5), 815.772(23.28)
432.5 5	2.3 5	⁸⁵ Se(31.7 s)	345.2(<0.23), 3396.6(7.4), 1427.2(7.0)
432.5 2	0.071 18	¹⁴⁹ Tb(4.118 h)	352.24(29.43), 164.98(26.4), 388.57(18.37)
432.5 2	1.64 11	¹⁵² Pm(7.52 m)	244.6989(78), 121.7824(45), 340.48(31.3)
432.5 4	0.050 21	¹⁶² Tm(21.70 m)	102.00(17.5), 798.68(8.4), 227.52(7)
432.52 8	0.048 16	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
• 432.549 13	1.64 4	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
432.55 4	3.53 8	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
432.6 3	0.08	¹⁵⁴ Pm(1.73 m)	2057.76(17.1), 1393.9(14.4), 81.99(12.6)
432.6 3	0.038 6	¹⁸⁶ Hg(1.38 m)	112.1(63), 251.5(55), 191.6(3.7)
432.6 2	†100 3	²³¹ Fr(17.5 s)	454.1(†80), 95.6(†17)
432.61 3	17.4 9	⁹³ Rb(5.84 s)	986.05(6.8), 213.429(6.7), 1385.21(5.7)
432.61 3	9000	⁹⁴ Rb(2.702 s)	213.429(†6000), 986.05(†4100), 709.95(†2500)

• $t_{1/2} > 1$ d

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
432.61 15	0.117 23	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
432.65 30	1.10 20	¹²⁴ In(2.4 s)	1131.64(100), 969.94(52), 1072.85(47)
432.66	0.013 5	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
• 432.66 12	0.0237 12	¹⁶⁰ Tb(72.3 d)	879.383(30.01), 298.580(25.51), 966.171(25.21)
432.67 6	1.46 9	⁹³ Sr(7.423 m)	590.238(67), 875.73(24.1), 888.13(21.8)
432.7 2	†10 2	¹⁵⁵ Tm(45 s)	88.1(†100), 323.2(†65), 507.0(†40)
• 432.745 8	5.33 6	¹⁴⁸ Pm(41.29 d)	550.284(94.5), 629.987(89), 725.673(32.7)
• 432.745 8	2.83 9	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
• 432.745 8	0.12 6	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
432.8	0.052 20	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
432.8 4	†2.20 25	¹⁸² Ir(15 m)	273.23(†100), 126.79(†77), 236.3(†21.0)
432.86 7	9	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 319.90(9.4)
432.9 10	†6.0 3	¹⁷⁸ Ir(12 s)	266.1(†100.0), 131.6(†79), 363.1(†39.9)
432.95 3	2.40 12	¹⁴⁹ Pr(2.26 m)	138.447(11.0), 165.087(9.9), 108.520(9.5)
432.96 10	0.42 3	²⁰⁷ At(1.80 h)	814.41(44.5), 588.33(19.2), 300.654(12.8)
• 432.999 6	0.159 3	¹⁴³ Ce(33.039 h)	293.266(42.80), 57.356(11.7), 664.571(5.69)
433.0 10	0.16 4	⁸³ Se(22.3 m)	356.687(70), 510.17(43), 224.8(32.7)
433.0 5	†0.68 14	¹²⁰ I(81.0 m)	560.44(†137), 1523.0(†21.1), 640.85(†17.1)
433.0 5	2.1 4	¹²⁰ I(53 m)	560.44(100), 601.11(87), 614.62(67)
433.0 1	0.151 12	¹⁴³ La(14.2 m)	620.3(2.34), 643.75(1.55), 621.4(1.52)
• 433.0 5	0.08 6	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
433.0 2	0.22 4	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
• 433.0 5	1.436 25	¹⁷⁵ Hf(70 d)	343.40(84), 89.36(2.40), 229.6(0.683)
433.0 4	0.16 8	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
• 433.0 5	0.004	²³⁵ U(7.038×10 ⁸ y)	85.712(57.2), 143.764(10.96), 163.358(5.08)
433.0		²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
433.1 1	0.093 10	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
• 433.1 5	0.0029 3	²⁵³ Es(20.47 d)	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
433.14 7	2.3 3	¹⁰⁶ In(6.2 m)	632.66(100), 861.16(92), 997.87(48)
433.14 10	2.50 18	¹⁹⁷ Tl(2.84 h)	425.84(12.9), 152.22(7.2), 1411.34(4.5)
433.150 13	0.711 21	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
433.18 18	0.058 6	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
433.2 4	0.36 6	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
433.2 3	0.089 19	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
433.2 2	†3.9 4	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
433.2 3	0.17 5	¹⁹⁹ Pb(90 m)	366.90(44.2), 353.39(9.5), 1135.04(7.8)
433.2 6	0.13	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
433.2 4	0.015	²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
433.22 9	0.0518 9	¹³⁷ Ce(9.0 h)	447.15(1.8), 10.6(0.8), 436.59(0.265)
433.240 30	2.814 23	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
433.24 2	0.14 4	¹⁴⁷ La(4.015 s)	117.718(12), 186.320(6.48), 438.30(5.04)
433.3 1	0.84 6	⁷⁷ Rb(3.75 m)	66.52(57), 178.99(22.2), 393.37(9.7)
433.3 2	0.25 5	¹²⁹ La(11.6 m)	278.6(25), 110.5(16.9), 457.0(8.0)
433.3 2	0.38	¹⁴² La(91.1 m)	641.285(47), 2397.8(13.3), 2542.7(10.00)
433.3 2	†6.3 10	¹⁹⁵ Bi(183 s)	807.6(†100), 831.7(†100), 776.2(†95)
433.31 20	0.11 2	¹²⁶ In(1.60 s)	1141.11(55.9), 3344.61(21.6), 969.61(14.9)
433.31 20	0.51 10	¹²⁶ In(1.64 s)	1141.11(100), 908.58(99), 111.79(88)
433.32 8	1.11 6	¹⁴⁸ La(1.05 s)	158.468(55.6), 989.85(9.3), 760.30(8.6)
433.345 30	4.20 19	¹³⁴ I(52.6 m)	847.025(95.4), 884.090(64.9), 1072.547(15.0)
433.35 10	0.187 13	¹⁶⁵ Yb(9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
433.35 13	0.18 3	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
433.4 2	2.55 16	⁹⁷ Rb(169.9 ms)	167.1(26), 585.2(21.0), 600.5(10.6)
433.4 2	0.06	¹¹³ Pd(93 s)	95.74(3.3), 643.7(3.0), 739.63(2.4)
433.4 2	1.06 9	¹²¹ Xe(40.1 m)	252.7(13), 132.8(10.9), 445.2(7.7)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
433.47 5	1.31 4	⁹⁰ Kr(32.32 s)	1118.69(39.0), 121.82(35.5), 539.49(30.8)
• 433.5 4	0.009 6	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
433.51 9	0.043 5	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
433.6 1	7.5 8	⁹⁸ Rb(96 ms)	144.224(73), 289.4(68), 3010.5(23.4)
433.6 3	0.73 8	¹¹⁸ Ag(2.0 s)	487.77(57), 677.13(53), 1058.39(14.8)
433.6 4	0.18 10	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
433.6 2	†83 2	¹⁵⁴ Lu(1.12 s)	821.3(†100), 694.7(†97), 96.6(†12)
433.6 4	0.012 6	²¹² Bi(60.55 m)	39.858(1.091), 452.83(0.31), 288.07(0.31)
433.7	0.16	⁸³ Zr(44 s)	55.55(8), 104.97(5.70), 475.1(5.1)
433.7 5	1.8 5	⁹⁸ Y(2.0 s)	1223.0(80), 620.505(63), 647.58(53)
433.7 4	0.6	¹⁰⁸ In(58.0 m)	875.46(100), 632.96(100), 242.84(41)
433.70 12	†11.6 12	¹³¹ Ce(10.3 m)	169.42(†100), 414.25(†68), 119.18(†44)
433.7 3	†41 4	¹⁴³ Tb(12 s)	45.1(†100), 686.1(†48), 462.8(†45)
433.7 3	0.062 10	²⁴⁹ Es(102.2 m)	379.5(40.4), 813.2(9.2), 375.1(3.3)
433.73 16	0.0147 18	⁸⁵ Br(2.90 m)	802.41(2.56), 924.63(1.63), 919.06(0.65)
433.741 19	0.558 14	¹³⁵ I(6.57 h)	1260.409(28.90), 1131.511(22.74), 1678.027(9.62)
433.76 8	†73 8	¹²⁹ Sb(17.7 m)	759.8(†100.0), 657.78(†92), 63.6(†10)
433.8 2	>3.9	¹³¹ Sb(23.03 m)	943.4(47), 933.1(26.1), 642.30(23)
433.824 9	5.1 3	²²⁷ Fr(2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)
433.9 3	0.10 3	⁹⁰ Kr(32.32 s)	1118.69(39.0), 121.82(35.5), 539.49(30.8)
433.9 4	0.17	¹⁰⁶ Rh(131 m)	511.842(85), 1045.83(30.4), 717.24(28.9)
• 433.9 4	0.09 4	¹⁰⁶ Ag(8.28 d)	511.842(88), 1045.83(29.6), 717.24(28.9)
433.9 2	1.28 11	¹³⁷ Pr(1.28 h)	836.7(1.8), 514.0(1.08), 160.32(0.97)
433.9 2	0.57 5	¹⁴¹ Eu(40.0 s)	394.0(9), 384.5(5.6), 382.9(2.97)
433.9 2	0.43 15	¹⁴¹ Eu(2.7 s)	394.0(0.60), 882.9(0.54), 518.8(0.45)
433.937 5	43	¹⁰⁸ Rh(16.8 s)	618.84(15.0), 497.22(5.2), 931.15(1.46)
433.937 5	88	¹⁰⁸ Rh(6.0 m)	581.1(60), 947.27(49), 901.31(28)
433.937 5	0.50	¹⁰⁸ Ag(2.37 m)	618.84(0.261), 1007.22(0.0139), 510.1(>0.0035)
• 433.937 5	90	¹⁰⁸ Ag(418 y)	722.938(90.8), 614.281(89.8)
434.0 3	0.094 23	⁶⁹ Cu(2.85 m)	1007.5(23.4), 834.4(13.1), 531.2(6.0)
434.0	0.008	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
434.0 3	0.66 4	¹³⁷ Pm(2.4 m)	177.5(40.29), 108.6(35), 233.6(29.57)
434.01 5	1.087 20	¹²⁶ Cs(1.64 m)	388.633(41), 491.243(5.0), 925.24(4.56)
434.1 2	†1.0 2	¹⁶⁰ Lu(36.1 s)	243.2(†100), 395.4(†21.0), 577.2(†10.7)
434.1 2	0.038 6	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
434.101 21	1.22 3	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
• 434.13 10	0.0242 19	¹²⁵ Sn(9.64 d)	1067.10(10), 1089.15(4.59), 822.48(4.28)
434.18 11	0.79 6	¹³⁶ I(83.4 s)	1313.02(67), 1321.08(24.8), 2289.6(10.4)
434.190 17	9.8 4	¹¹⁷ Cd(2.49 h)	273.349(28), 1303.27(18.4), 344.459(17.9)
434.190 17		¹¹⁷ Cd(3.36 h)	1997.33(26), 1065.98(23.1), 564.397(14.7)
434.2 1	0.52 5	²²³ Ac(2.10 m)	98.58(0.891), 191.3(0.58), 83.55(0.57)
434.23 20	0.016 3	¹³⁹ Cs(9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
434.25 21	0.0202 20	¹⁰⁶ Rh(29.80 s)	511.842(20), 621.94(9.93), 1050.39(1.56)
434.25 21	0.00224 22	¹⁰⁶ Ag(23.96 m)	511.842(17.0), 621.94(0.316), 873.48(0.199)
434.25 15	0.46 9	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
434.27 6	1.13 3	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
434.3 1	1.07 14	¹²³ Cs(5.94 m)	97.3(23), 596.7(10.1), 83.3(4.1)
• 434.3 5	0.13 5	¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
434.3 1	0.053 14	¹⁷³ Ta(3.14 h)	172.2(18), 69.70(5.9), 90.3(5.0)
434.3	†7.3	¹⁹⁸ Bi(693 s)	1063.5(†100), 197.6(†80), 562.4(†79)
434.3 1	0.67 9	²³⁶ Th(37.5 m)	110.8(4.2), 646.6(0.72), 196.0(0.69)
434.33 10	0.652 25	¹³¹ La(59 m)	108.081(25.0), 417.783(18.0), 365.162(16.9)
434.388 13	0.35 3	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: $E_{\gamma}(I_{\gamma})$
434.4 1	0.45 6	¹⁴² Ba(10.6 m)	255.300(20.5), 1204.3(14.23), 895.2(13.9)
434.4 1	9.3 5	²⁰⁰ Po(11.5 m)	671.0(34.0), 617.7(19.7), 796.7(7.9)
434.4 1	0.0024 5	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
• 434.43 4	0.170 9	¹⁴⁵ Eu(5.93 d)	893.73(66), 653.512(15.0), 1658.53(14.9)
• 434.465 13	0.209 4	¹⁵⁶ Eu(15.19 d)	811.79(9.70), 88.9667(8.4), 1230.68(7.98)
• 434.50 10	0.039 5	⁷⁹ Kr(35.04 h)	261.29(13), 397.54(9.3), 606.09(8.12)
434.5 2	†0.74 7	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
434.5 2	†1.6 1	²⁰³ At(7.4 m)	639.4(†100), 641.5(†55.8), 738.1(†38.4)
434.52 12	†47 4	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
434.562 41	20.3 4	¹³⁸ Xe(14.08 m)	258.411(31.5), 1768.26(16.7), 2015.82(12.25)
434.6 5	0.076 19	⁸³ Y(7.08 m)	35.50(0.44), 882.1(6.30), 489.90(5.53)
434.6 3	†1.4 2	¹⁸⁵ Pt(33.0 m)	229.60(†100), 135.3(†80), 197.4(†74)
434.7 2	14.2 7	¹³⁰ Sn(3.72 m)	192.5(70), 779.8(59), 70.0(35.5)
434.7 2	2.5 3	¹⁵⁴ Ho(3.10 m)	334.6(94), 412.4(79), 477.1(55)
434.70 3	0.0043	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
434.71 5	0.38 3	⁹⁶ Nb(23.35 h)	778.224(96.45), 568.80(58.0), 459.88(26.62)
• 434.71 5	0.75 5	⁹⁶ Tc(4.28 d)	778.224(100), 849.929(98), 812.581(82)
434.71 2	1.13 8	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
434.72 3	0.525 17	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
434.73 12	1.9 4	¹⁸¹ Os(105 m)	238.75(44), 826.77(20), 118.03(12.9)
434.75 7	0.254 15	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
434.8	1.0 3	¹⁴⁷ Tb(1.7 h)	1152.4(100), 694.4(43), 139.9(27.46)
434.8 3	0.20 7	¹⁵⁹ Er(36 m)	624.5(33), 649.1(23.4), 205.92(9.7)
434.81 5	1.42 23	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
434.849 17	34.4 8	¹⁸⁶ Ir(16.64 h)	296.911(64.0), 137.155(42), 773.276(9.1)
434.85 10	0.048 5	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
• 434.89 10	0.0227 20	²⁰⁶ Bi(6.243 d)	803.10(99), 881.01(66.2), 516.18(40.7)
434.9 7	0.036 14	¹¹⁶ In(54.41 m)	1293.54(84.4), 1097.3(56.2), 416.86(28.9)
434.9 10	0.09 4	¹²⁹ Sb(4.40 h)	812.8(43), 914.6(20.0), 544.7(17.9)
434.9 10	0.47 11	¹⁶⁴ Tb(3.0 m)	168.838(25.4), 754.80(23.3), 215.07(21)
434.9 3	7.6 3	¹⁷¹ Re(15.2 s)	568.4(16.1), 102.0(9.7), 1066.0(8.1)
• 434.9 3	0.013	²³⁹ Np(2.3565 d)	106.125(27.2), 277.599(14.38), 228.183(10.76)
• 434.9 3		²⁴³ Cm(29.1 y)	277.599(14.0), 228.183(10.6), 209.753(3.29)
434.92 13	0.071 24	²²⁷ Fr(2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)
434.92 13	0.009 3	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
435.0 3	0.15 3	⁸⁸ Br(16.5 s)	775.28(63), 802.14(13.13), 1440.69(4.72)
435.0 8	0.0007 5	¹⁴¹ La(3.92 h)	1354.52(1.64), 1693.3(0.074), 2267.0(0.0413)
435.0 5		²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
435.06 4	18.6 12	¹³⁴ Te(41.8 m)	767.20(29.0), 210.465(22.3), 277.951(20.9)
435.08 8	0.063 8	¹⁰¹ Pd(8.47 h)	296.29(19), 590.44(12.06), 269.67(6.43)
435.1 1	0.23	²²⁷ Ra(42.2 m)	27.36(16), 300.07(4.6), 302.65(4.3)
• 435.1 1	0.00311 15	²³¹ Pa(32760 y)	27.36(10.3), 300.07(2.46), 302.65(2.2)
435.16 19	1.8 8	¹⁸⁴ Au(53.0 s)	162.97(50), 272.98(40), 362.47(17.5)
435.2 3	0.25 4	²³⁷ Am(73.0 m)	280.23(47.3), 438.4(8.3), 473.5(4.3)
435.28 5	1.22 17	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
435.28 7	0.34	¹³⁷ I(24.5 s)	1218.00(12.8), 601.05(4.80), 1302.64(4.42)
435.3 4	0.072 18	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
435.4 2	1.2 3	¹²⁹ Sn(6.9 m)	1161.31(56.0), 1128.44(50), 760.8(16.8)
435.4 6	0.6 1	¹⁴⁸ Ho(9.59 s)	1687.5(82.47), 660.8(58.94), 504.3(18.62)
435.5 4	0.77 4	⁸⁶ Se(15.3 s)	2441.1(43.0), 2660.0(21.6), 48.3(15.4)
435.5 2	0.39 6	⁹⁵ Rb(377.5 ms)	352.02(49), 204.02(15.1), 680.7(14.8)
435.5 2	†3.6	⁹⁶ Rb(0.199 s)	352.02(†700), 204.02(†200), 680.7(†121)
435.5 3	0.21 4	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
435.5 2	1.7	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: $E_\gamma(I_\gamma)$
435.55 6	0.33 6	²⁰⁸ Rn(24.35 m)	426.78(7.07), 251.05(5.02), 350.026(3.34)
435.6 3	0.48 5	¹¹⁸ Ag(3.76 s)	487.77(60), 677.13(11.9), 2788.7(11.8)
435.6 3	†1.8 5	¹²⁹ Sb(17.7 m)	759.8(†100.0), 657.78(†92), 433.76(†73)
435.6 3	0.168 24	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
435.6 1	†4.7 5	²²⁵ Fr(4.0 m)	182.3(†100), 31.50(†91), 225.1(†55)
435.62 7	0.61 4	¹⁶³ Yb(11.05 m)	860.28(10.1), 63.62(6.5), 123.21(1.98)
435.63 2	5.74 8	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
435.7 3	0.075 23	¹³¹ La(59 m)	108.081(25.0), 417.783(18.0), 365.162(16.9)
435.72 5	0.462 22	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
435.72 2	2.02 18	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
435.8 6	0.096 24	⁸⁹ Kr(3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
435.8 3	0.15 5	²⁵¹ Cm(16.8 m)	542.7(10.9), 530.0(1.62), 389.7(1.28)
435.82 3	0.0255 12	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
435.85 10	1.96 13	¹²¹ Ag(0.78 s)	314.55(32.1), 353.43(19.9), 500.61(9.3)
435.85 18	0.070 14	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
435.9	0.015 7	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
• 435.9	0.0039 11	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
435.9 2	†6.3 12	²²⁹ Ac(62.7 m)	164.522(†100), 569.1(†91), 261.92(†39)
435.99 3	1.79 8	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
435.99 4	1.209 24	¹⁴⁵ Ce(3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)
436 1	†>0.7	¹⁰³ Mo(67.5 s)	83.4(†100), 423.91(†69), 45.8(†57)
436.0 10		¹⁹⁰ Au(42.8 m)	295.78(71.0), 301.82(23.4), 597.67(9.4)
436.1 3	0.081 9	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
436.1	0.31	¹³³ Pr(6.5 m)	134.3(14), 74.0(10), 315.6(10)
436.1 11	0.018	¹⁶¹ Er(3.21 h)	826.6(3.0), 211.15(12.2), 592.6(3.7)
436.1 1	0.0285 6	¹⁶³ Er(75.0 m)	1113.5(0.0490), 439.94(0.0276), 297.88(0.012)
• 436.102 16	0.247 9	¹⁷² Tm(63.6 h)	78.7435(6.5), 1093.657(6.0), 1387.093(5.6)
436.136 14	0.0080 10	²³⁹ Am(11.9 h)	277.599(15.0), 228.183(11.3), 209.753(3.50)
436.176 5	2.5 3	¹⁷⁵ Tm(15.2 m)	514.868(65), 941.23(15), 363.942(12.7)
436.2 3	0.21 4	⁹² Kr(1.840 s)	142.307(64), 1218.6(60), 812.6(14.6)
436.24 6	0.158 9	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
436.29 3	37 3	¹²⁵ Cd(0.65 s)	1099.48(22.3), 2147.19(19.1), 1700.96(10.8)
436.3 2	0.06	¹⁴⁰ Sm(14.82 m)	225.5(>10), 225.4(10), 140.0(5.0)
436.3 4	†5.3 15	²⁰⁶ Rn(5.67 m)	497.7(†100), 324.5(†96), 386.6(†61)
436.3 3	0.30 8	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
• 436.330 25	0.384 19	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
436.33 14	†2.1 3	¹⁸² Au(21 s)	154.76(†100), 264.33(†40.0), 855.41(†14.5)
• 436.369 10	0.0159 14	¹⁴⁹ Gd(9.28 d)	149.735(48.2), 298.634(28.6), 346.651(23.9)
• 436.369 10	0.047 4	¹⁴⁹ Gd(9.28 d)	149.735(48.2), 298.634(28.6), 346.651(23.9)
436.4 2	4.9 9	¹⁴⁰ Gd(15.8 s)	174.8(76), 749.9(70), 379.0(38)
436.4 2	0.33 9	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
436.4	0.25 7	¹⁵⁹ Er(36 m)	624.5(33), 649.1(23.4), 205.92(9.7)
436.4 7	3.8 2	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
436.5 2	0.44 5	⁹² Ru(3.65 m)	213.81(96), 259.32(92), 134.57(65.5)
436.5 4	0.19 5	¹³⁶ Nd(50.65 m)	108.90(32), 40.2(18.9), 574.8(10.4)
436.551 8	91 4	²⁰⁴ Au(39.8 s)	1511.10(25.2), 691.80(24.0), 723.00(22.2)
436.59 9	0.265 9	¹³⁷ Ce(9.0 h)	447.15(1.8), 10.6(0.8), 433.22(0.0518)
436.6 4	0.00027 3	¹⁰⁷ Cd(6.50 h)	93.124(1.45), 828.93(0.17), 796.462(0.0665)
436.6 3	>0.5	¹⁷⁶ Tm(1.9 m)	189.57(44.5), 1069.3(34), 381.8(21.8)
436.6 1	0.54 5	¹⁷⁷ W(135 m)	115.65(50), 426.98(13.2), 1036.4(10.3)
• 436.6 4	4.6×10 ⁻⁶ 7	²³³ U(1.592×10 ⁵ y)	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
436.68 6	4.1 3	¹¹⁶ Sb(60.3 m)	1293.54(100), 972.550(72), 542.872(52)
436.7 2	4.1 6	¹²⁸ Sn(59.07 m)	482.3(59), 75.1(27.7), 557.3(16.5)
436.7 1	3.9 7	¹⁴⁹ Er(8.9 s)	1171.0(9.4), 171.5(6.5), 343.9(6.3)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
436.7 1		¹⁵⁰ Tm(2.2 s)	343.9, 171.5
436.7 2	0.10 3	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
436.7 3	0.66 10	¹⁹² Hg(4.85 h)	274.8(50.4), 157.2(7), 306.5(5.4)
436.80 8	3.26 25	⁷⁷ Zn(2.08 s)	189.49(28.1), 473.94(19.7), 1832.0(12.4)
436.8 2	3.0 3	¹³² Sb(2.79 m)	973.9(99), 696.8(86), 989.6(14.9)
436.8 6	0.15 5	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
436.8 10	†0.8	¹⁷⁹ Os(6.5 m)	65.39(†100), 218.6(†17), 32.3(†17)
436.8 3	0.031 6	¹⁸⁶ Hg(1.38 m)	112.1(63), 251.5(55), 191.6(3.7)
• 436.83 20	0.00190 19	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
436.85 12	†7.3 6	¹³¹ Ce(5.0 m)	230.43(†100), 462.9(†6.9), 568.95(†4.7)
436.86 10	0.76 4	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)
436.9 2	0.079 11	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
436.9 4	0.28 6	²³¹ Np(48.8 m)	370.9(10), 348.4(3.63), 263.8(2.84)
436.92	100	⁴² Sc(61.7 s)	1524.70(99.70), 1227.66(99.0), 328.24(1.0)
436.98 15	0.58 4	¹⁰¹ Sr(118 ms)	128.34(18.0), 1124.82(10.9), 510.73(8.5)
437.0 1	0.0194 17	¹²¹ I(2.12 h)	212.189(84), 532.08(6.07), 598.74(1.47)
437.0 1	†0.55 7	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
437.0 7	8.5 11	¹⁶⁸ Dy(8.7 m)	192.5(32.8), 487.0(22.5), 443.3(15.5)
437.0	†16	²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
437.02 8	0.45 7	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
437.071 28	0.103 16	²²⁷ Fr(2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)
437.1 1	0.94 4	¹⁵⁰ Tb(3.48 h)	638.05(72), 496.3(14.8), 792.5(4.39)
• 437.12 19	0.25 3	¹⁰⁵ Ag(41.29 d)	344.520(41), 280.41(30.2), 644.55(11.1)
• 437.18 4	0.191 6	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
437.2 5	0.07 3	⁹⁸ Rb(114 ms)	144.224(24.5), 1693.3(5.9), 2171.7(5.7)
437.2 5	0.8 3	⁹⁸ Rb(96 ms)	144.224(73), 289.4(68), 3010.5(23.4)
437.2 3	1.0 4	¹⁰² Sr(69 ms)	243.80(53), 150.15(18.0), 93.89(13.4)
437.2 3	2.6 4	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
437.2 5	†13 3	¹¹⁹ Xe(5.8 m)	231.8(†100), 98.5(†95), 461.5(†91)
437.2 2	0.39 7	¹²³ Cs(5.94 m)	97.3(23), 596.7(10.1), 83.3(4.1)
437.2 3	0.19 4	¹⁹⁸ Tl(5.3 h)	411.8044(82), 675.8874(11), 636.4(10.1)
437.3 3	†0.76 8	¹²⁰ Cs(64 s)	322.4(†100), 473.5(†30), 553.4(†19.1)
437.3 3	0.25 7	¹⁵⁹ Er(36 m)	624.5(33), 649.1(23.4), 205.92(9.7)
437.4 4	2.6 4	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
437.4 2	†10.4 6	¹³⁸ Pm(3.24 m)	520.9(†100), 729.0(†37.8), 493.1(†21.6)
437.4 2	7	¹⁴⁹ Tm(0.9 s)	796.2(18), 158.8(12.3), 416.7(11)
437.41 8	0.49 9	¹⁹³ Au(17.65 h)	186.17(10.1), 255.57(6.7), 268.22(3.9)
437.42 4	0.165 11	⁸¹ Ga(1.221 s)	216.47(37.4), 828.26(22.1), 711.18(17.6)
437.43 8	0.34 11	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
437.48 2	0.32 16	¹⁴⁷ La(4.015 s)	117.718(12), 186.320(6.48), 438.30(5.04)
437.5 3	0.0007 8	¹²³ I(13.27 h)	158.97(83), 528.96(1.39), 440.02(0.428)
437.54 20	2.0 3	¹²³ Ag(0.309 s)	263.87(35.9), 409.79(13.2), 591.30(8.2)
437.56 13	0.35 3	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
• 437.575 2	1.929 10	¹⁴⁰ Ba(12.752 d)	537.261(24.39), 29.9640(14.1), 162.660(6.21)
437.6 3	5.3 9	¹⁰⁸ Rh(6.0 m)	433.937(88), 581.1(60), 947.27(49)
• 437.60 2	0.234 8	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
437.6	†0.8 2	¹⁷⁸ Ir(12 s)	266.1(†100.0), 131.6(†79), 363.1(†39.9)
437.6 3	0.91 9	¹⁹⁰ Tl(3.7 m)	416.4(91), 625.4(82), 731.1(37)
437.6 1	0.75 5	²⁴⁹ Es(102.2 m)	379.5(40.4), 813.2(9.2), 375.1(3.3)
437.631 8	6.0 14	¹⁵¹ Pr(18.90 s)	880.19(13), 189.057(11.8), 484.501(11.3)
437.69 7	0.165 20	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
437.7 4	0.24 13	¹¹³ Te(1.7 m)	814.4(22), 1018.1(13.0), 1181.0(12.3)
437.7 6	0.30 15	¹¹⁹ Cd(2.20 m)	1025.0(24.8), 2021.3(22.6), 720.7(17.9)
437.7 4	9 4	¹³⁹ Eu(17.9 s)	267.3(31), 155.3(31), 190.1(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: $E_{\gamma}(I_{\gamma})$
437.7 4	0.096 24	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
437.7 3	†0.27 9	²³⁰ Ra(93 m)	72.0(†100), 63.0(†35.4), 202.8(†27.3)
437.77 19	0.079 18	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
437.8 2	0.00135 14	²⁵⁵ Fm(20.07 h)	81.477(0.81), 58.477(0.67), 80.92(0.27)
437.85 5	0.122 4	¹²⁶ Cs(1.64 m)	388.633(41), 491.243(5.0), 925.24(4.56)
437.85 7	0.036 3	²¹⁰ Rn(2.4 h)	458.25(1.7), 648.70(0.843), 570.95(0.840)
437.98 5	1.38 7	⁷⁹ Ga(2.847 s)	464.79(24.2), 516.41(21.5), 1187.28(12.8)
438.2		⁷² Kr(17.2 s)	415.1(34.7), 310.0(28.5), 162.2(16.3)
438.0 2	†1.8 5	¹²⁹ Sb(17.7 m)	759.8(†100.0), 657.78(†92), 433.76(†73)
438.0 5	†2	¹³¹ Pr(1.53 m)	266.13(†100), 72.82(†64), 387.56(†38)
438.0 4	0.11 6	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
438.0 3	†2.44 21	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
• 438.01 7	0.0046 4	²³¹ Pa(32760 y)	27.36(10.3), 300.07(2.46), 302.65(2.2)
438.02 16	2.75 30	⁹⁴ Rh(25.8 s)	756.23(100), 1430.50(100), 311.70(97.3)
438.02 16	7.1 3	⁹⁴ Rh(70.6 s)	1430.50(100), 756.23(51), 1072.50(30.7)
438.08 10	0.96 6	⁸⁹ Kr(3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
438.1 3	1.57 8	¹¹⁸ Cs(14 s)	337.4(100), 472.8(37.4), 586.6(15.4)
438.1 1	0.088 13	¹⁴³ Cs(1.78 s)	195.554(13), 232.421(8.32), 306.424(6.80)
438.1 3	0.32 3	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
438.13 4	0.20 5	²⁰¹ Au(26 m)	542.6(1.2), 517.0(0.83), 613.2(0.77)
• 438.16 10	0.85 3	⁸³ Sr(32.41 h)	762.65(30), 381.53(14.1), 418.37(4.41)
438.19 17	†6.3 7	¹⁴² Xe(1.22 s)	571.83(†100), 657.05(†79), 538.24(†77)
438.2 4	6.2 6	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
438.2	0.09	¹⁴⁷ Ba(0.893 s)	167.4(11), 105.2(4.8), 196.1(4.8)
438.2 6	>0.030	²¹⁹ Rn(3.96 s)	271.23(10.8), 401.81(6.37), 130.59(0.119)
438.2 3	1.24 8	²⁵¹ Cm(16.8 m)	542.7(10.9), 530.0(1.62), 389.7(1.28)
438.22 5	1.55 24	²⁰² Bi(1.72 h)	960.67(99), 422.18(83.7), 657.49(60.6)
438.25 7	0.27 4	⁶⁹ As(15.2 m)	232.69(11), 145.95(4.96), 86.78(3.44)
• 438.252 5	0.0014 5	⁷⁶ As(26.32 h)	559.101(45), 657.041(6.2), 1216.104(3.42)
438.252 5	0.27	⁷⁶ Br(16.2 h)	559.101(74), 657.041(15.9), 1853.67(14.7)
438.274 18	0.068 16	¹⁸² Os(22.10 h)	510.056(52), 180.230(33.5), 263.285(6.71)
438.30 20	0.32 7	⁹⁹ Ag(124 s)	264.41(65), 832.29(13.5), 805.07(12.5)
438.3 2	0.007 3	¹³¹ Te(25.0 m)	149.716(69), 452.323(18.18), 1146.96(4.95)
438.30 2	5.04 24	¹⁴⁷ La(4.015 s)	117.718(12), 186.320(6.48), 215.52(3.48)
438.3 1	0.30 9	¹⁷³ Ta(3.14 h)	172.2(18), 69.70(5.9), 90.3(5.0)
438.3 3	0.126 13	¹⁸⁶ Hg(1.38 m)	112.1(63), 251.5(55), 191.6(3.7)
438.37 10	42 3	¹⁵⁰ Tb(5.8 m)	638.05(100), 650.4(70), 827.48(41)
438.4 5	0.167 11	⁸⁵ Y(4.86 h)	231.67(22.8), 2123.8(5.0), 767.40(3.6)
438.4 1	8.3 4	²³⁷ Am(73.0 m)	280.23(47.3), 473.5(4.3), 908.8(2.60)
• 438.43 8	0.0043 9	¹⁴³ Ce(33.039 h)	293.266(42.80), 57.356(11.7), 664.571(5.69)
438.49 10	0.79 16	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
438.5 1	0.049 5	¹¹¹ Pd(23.4 m)	580.00(0.8), 70.44(0.78), 1459.0(0.56)
• 438.5 5	0.039 10	¹⁴⁰ La(1.6781 d)	1596.210(95), 487.021(45.5), 815.772(23.28)
438.5 5	0.09	²⁰⁷ At(1.80 h)	814.41(44.5), 588.33(19.2), 300.654(12.8)
• 438.51 10	0.021 7	¹⁸⁹ Re(24.3 h)	216.663(5.50), 219.395(4.54), 245.09(3.5)
438.6 4	0.14 4	⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
438.6 2		¹⁰⁶ In(6.2 m)	632.66(100), 861.16(92), 997.87(48)
438.6 2		¹⁰⁶ In(5.2 m)	632.66(92), 1714.90(17.1), 861.16(10.6)
438.6 3		¹¹⁸ Ag(3.76 s)	487.77(60), 677.13(11.9), 2788.7(11.8)
438.68 5	2.30 25	¹²³ Cd(2.10 s)	371.32(51), 1052.28(24.8), 1438.13(8.3)
438.68 5	0.1 1	¹²³ Cd(1.82 s)	1165.86(25.7), 1027.45(22.6), 2102.81(12.5)
438.69 10	2.6 3	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
438.7 2	†11.3 23	¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†33)
• 438.7 1	0.0015 5	²³¹ Pa(32760 y)	27.36(10.3), 300.07(2.46), 302.65(2.2)

• $t_{1/2} > 1$ 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: $E_\gamma(I_\gamma)$
• 438.71 6	0.0030 11	¹⁸⁹ Re(24.3 h)	216.663(5.50), 219.395(4.54), 245.09(3.5)
• 438.71 6	0.0036 12	¹⁸⁹ Ir(13.2 d)	245.09(6), 69.537(3.5), 59.053(1.20)
438.76 20	2.18	¹⁵⁴ Pm(2.68 m)	184.810(32), 81.99(15.4), 546.66(14.5)
438.768 18	0.150 24	²²⁷ Fr(2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)
438.8 2	2.9 3	¹¹⁷ Cs(8.4 s)	204.8(15.0), 29.7(9.9), 205.6(6.8)
438.8 1	37.7 13	¹⁴¹ Sm(10.2 m)	403.8(43), 1292.6(6.8), 1600.7(4.0)
438.8 3	0.04	²¹⁵ Po(1.781 ms)	
438.83 10	0.215 10	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
438.87 9	0.040 4	¹³³ I(20.8 h)	529.872(87.0), 875.329(4.51), 1298.223(2.35)
438.9 4	0.028 19	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
438.95 10	0.49 9	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
439.00 15	0.25 14	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
439.0 5		¹¹⁰ Ru(14.6 s)	112.2(25.00), 166.1(0.65), 116.1(0.45)
439. 3	0.6 6	¹¹⁴ Rh(1.85 s)	332.9(87), 519.8(48.4), 618.7(31)
439.0 5	0.05 5	¹⁴² La(91.1 m)	641.285(47), 2397.8(13.3), 2542.7(10.00)
439.0 1	1.36 6	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
• 439.0 5	0.008 6	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
439.0 4	0.08 4	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
439.0 10	0.034 17	²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
439.04 8	1.91 15	¹⁹³ Au(17.65 h)	186.17(10.1), 255.57(6.7), 268.22(3.9)
439.08 15	0.74 10	¹²¹ Ag(0.78 s)	314.55(32.1), 353.43(19.9), 500.61(9.3)
439.15 3	2.09 10	⁹¹ Rb(58.4 s)	93.628(33.7), 2564.19(12.5), 3599.67(10.4)
439.19 26	0.0126 20	¹⁰⁶ Rh(29.80 s)	511.842(20), 621.94(9.93), 1050.39(1.56)
439.19 26	0.0057 8	¹⁰⁶ Ag(23.96 m)	511.842(17.0), 621.94(0.316), 873.48(0.199)
439.2 3	0.014 3	⁸⁸ Rb(17.78 m)	1836.063(21.40), 898.042(14.04), 2677.892(1.96)
439.2 2	2.85 10	¹⁰¹ Ag(11.1 m)	261.0(53), 588.0(10.0), 667.3(9.8)
439.2 2	2.3 2	¹¹⁷ Xe(61 s)	28.5(7.0), 221.3(10.0), 32.3(7.6)
439.2 1	1.06 10	¹¹⁹ Ag(2.1 s)	626.4(13), 366.2(12.1), 399.1(10.9)
439.22 3	0.355 15	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
439.3	0.10	⁴³ Ar(5.37 m)	975.0(34), 738.1(15), 1439.5(13)
439.3 2	0.24 4	¹¹¹ Pd(5.5 h)	70.44(8.3), 391.25(5.4), 632.80(3.6)
439.3 4	0.07 3	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
• 439.3	0.081 14	²²³ Ra(11.435 d)	269.459(13.7), 154.21(5.62), 323.871(3.93)
439.39 7	0.11 6	¹¹⁷ Cd(2.49 h)	273.349(28), 1303.27(18.4), 344.459(17.9)
439.39 7	0.18 8	¹¹⁷ Cd(3.36 h)	1997.33(26), 1065.98(23.1), 564.397(14.7)
439.401 15	0.77 5	¹⁵⁰ Pm(2.68 h)	333.971(68), 1324.51(17.5), 1165.739(15.8)
• 439.401 15	80.4 16	¹⁵⁰ Eu(35.8 y)	333.971(96), 584.274(52.6), 737.455(9.60)
439.43 4	1.9 6	⁵⁹ Mn(4.6 s)	726.7(42), 472.71(29.0), 570.81(24.8)
439.44 5	0.202 4	⁷⁷ Ge(11.30 h)	264.44(54), 211.03(30.8), 215.50(28.6)
• 439.453 6	0.00102 11	⁷⁷ As(38.83 h)	238.996(1.6), 520.639(0.558), 249.786(0.394)
• 439.453 6	1.56 4	⁷⁷ Br(57.036 h)	238.996(23), 520.639(22.4), 297.215(4.16)
439.5 3	0.20 7	⁸⁶ Y(14.74 h)	1076.64(83), 627.72(32.6), 1153.01(30.5)
439.50 15	0.124 11	¹⁹⁵ Hg(9.9 h)	779.80(7), 61.46(6.2), 585.13(1.99)
439.53 5	0.0100 6	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
439.56 6	0.046 3	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
439.575 17	0.37 3	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
439.59 2	10.0 5	²⁰² Au(28.8 s)	1125.20(2.30), 1306.38(2.25), 1203.7(2.01)
• 439.59 2	91	²⁰² Tl(12.23 d)	520.11(0.58), 959.70(0.069)
439.6 1	0.89 22	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
439.6	0.036 16	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
439.60 8	0.037 3	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
439.6 3	0.00033 15	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
439.7 3	0.189 18	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
439.7 3	†0.8 3	¹⁷¹ Hf(12.1 h)	122.0(†100), 662.2(†83), 347.18(†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: $E_{\gamma}(I_{\gamma})$
439.7 3	0.17	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
439.71 4	6.73 12	¹⁴⁵ Ce(3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)
439.71 3	0.525 25	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
439.79 7	20.7 22	¹¹⁰ Rh(28.5 s)	373.80(91), 546.90(42.4), 687.70(25.8)
439.79 7	6.5 5	¹¹⁰ Rh(3.2 s)	373.80(54), 796.83(5.3), 813.56(2.3)
• 439.895 22	1.20 8	¹⁴⁷ Nd(10.98 d)	91.105(28), 531.016(13.1), 319.411(1.95)
439.9 3		¹²² Ba(1.95 m)	550.7, 388.7, 231.0
439.9 3	2.08 17	¹²⁸ La(5.0 m)	284.00(87), 479.24(54), 643.65(14.7)
439.9 5	0.065 25	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
• 439.9 2	0.00035 8	¹⁷⁷ Ta(56.56 h)	112.9498(7.2), 208.3664(0.94), 1057.8(0.29)
439.94 10	0.0276 6	¹⁶³ Er(75.0 m)	1113.5(0.0490), 436.1(0.0285), 297.88(0.012)
439.986	33	²³ Ne(37.24 s)	1635.96(0.99), 2075.91(0.102), 2981.85(0.0378)
439.986	8.2 3	²³ Mg(11.317 s)	2390.598(0.0044), 1950.652(0.0025)
440.0 1	0.60 5	⁹² Kr(1.840 s)	142.307(64), 1218.6(60), 812.6(14.6)
440.0 2	†1	¹³⁹ I(2.29 s)	527.7(†100), 571.2(†98), 536.6(†67)
440 1	0.23 11	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
440	4.0 6	²¹¹ Fr(3.10 m)	539.9(20), 918.3(11), 281(6.8)
440.0 3	†0.27 9	²³⁰ Ra(93 m)	72.0(†100), 63.0(†35.4), 202.8(†27.3)
440.01 8	0.022 3	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
440.02 5	0.428 14	¹²³ I(13.27 h)	158.97(83), 528.96(1.39), 538.54(0.382)
440.15 12	0.343 14	¹⁴⁴ Ba(11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
440.2 3	0.17 6	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
440.2 4	0.80 15	¹⁸⁶ Ta(10.5 m)	197.93(50), 214.87(42.3), 510.82(37.5)
440.3 3	1.18 25	⁹⁵ Rb(377.5 ms)	352.02(49), 204.02(15.1), 680.7(14.8)
440.3 2	0.41 15	¹⁵² Tb(4.2 m)	344.281(20.8), 411.115(18.8), 471.9(12.2)
440.3 2	0.36 18	¹⁵² Tb(4.2 m)	344.281(20.8), 411.115(18.8), 471.9(12.2)
440.3 3	1.24 6	¹⁸⁶ Au(10.7 m)	191.56(62), 298.67(25.4), 764.89(10.5)
440.37 8	0.058 7	¹⁸⁷ Ir(10.5 h)	912.95(4.79), 427.12(4.12), 400.89(3.94)
440.40 10	0.21 5	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
440.4 6	>0.010	²¹⁴ Bi(19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
440.449 14	0.125 8	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
440.46 1	26.1 3	²¹³ Bi(45.59 m)	292.80(0.429), 807.36(0.292), 1100.16(0.29)
440.5 4	0.22 4	⁶¹ Fe(5.98 m)	1205.07(44), 1027.42(42.7), 297.90(22.2)
440.5 7	1.0 5	⁷⁸ Zn(1.47 s)	224.75(43.9), 181.68(28.1), 860.30(24.5)
440.5 6	0.93 23	⁹⁰ Mo(5.67 h)	257.34(78), 122.370(64.2), 203.13(6.4)
440.5	0.36	⁹⁶ Y(9.6 s)	1750.42(89), 915.0(60), 617.1(56)
440.50 20	0.65 10	¹²² In(10.8 s)	1140.55(100), 1001.58(98.4), 103.74(81)
440.5 7	1.1 3	¹⁹¹ Hg(50.8 m)	252.5(57), 420.1(18.6), 578.6(17.6)
440.59 3	2.5 4	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
440.60 12	†15.2 15	¹³¹ Pr(1.53 m)	266.13(†100), 72.82(†64), 387.56(†38)
440.61 19	†7 1	¹⁸¹ Pt(51 s)	289.29(†100), 111.97(†100), 230.15(†92)
440.80 18	0.19 4	⁹³ Sr(7.423 m)	590.238(67), 875.73(24.1), 888.13(21.8)
440.8 1	†3.0 6	¹⁶⁹ Ta(4.9 m)	511.0(†20.6), 28.80(†18.3), 192.4(†8)
440.8 10	0.048 20	²³⁰ Ac(122 s)	454.95(8), 508.20(5.15), 1243.9(3.50)
• 440.8 10	0.11 3	²³⁰ Pa(17.4 d)	951.95(1.65), 918.48(8.2), 454.95(6.27)
440.84 5	1.07 5	¹⁰⁰ Nb(1.5 s)	535.60(45.7), 528.24(9.1), 159.547(8.8)
440.85 15	0.87 10	¹²¹ Ag(0.78 s)	314.55(32.1), 353.43(19.9), 500.61(9.3)
• 440.85 2	1.51 9	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
• 440.856 95	0.0109 19	¹⁵² Eu(13.542 y)	121.7824(28.4), 1408.011(20.87), 964.131(14.34)
440.88 12	0.203 23	¹⁷⁴ Ta(1.05 h)	206.50(58), 91.00(16.0), 1205.92(4.9)
440.9 2	†1.6 3	¹⁰³ Nb(1.5 s)	102.64(†100), 641.1(†55), 538.5(†34.0)
440.9 1	13.1 9	¹⁴⁶ Tb(23 s)	1579.4(100), 1078.6(51.6), 1417.2(17.2)
440.9 5	0.31 7	¹⁷⁶ Tm(1.9 m)	189.57(44.5), 1069.3(34), 381.8(21.8)
440.94 4	0.23	²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
440.96 8	0.65 13	¹³³ Sb(2.5 m)	1096.22(43.0), 817.8(18.5), 2755(12.5)
• 440.96 5	0.007 3	¹⁸⁹ Re(24.3 h)	216.663(5.50), 219.395(4.54), 245.09(3.5)
• 440.97 4	0.092 6	¹⁹³ Os(30.5 h)	139.03(4.27), 460.50(3.95), 73.039(3.2)
441.0 5	0.41 8	¹²⁶ Ba(100 m)	233.6(19.6), 257.6(7.6), 241.0(6.0)
• 441.0 9	0.7 3	¹²⁷ Sb(3.85 d)	685.7(37), 473.0(25.7), 783.7(15.0)
441.0 10	0.050 25	¹²⁷ Ba(12.7 m)	180.8(12), 114.8(9.3), 66.06(2.12)
441.01 5	†22 1	¹⁰¹ Nb(7.1 s)	276.10(†100), 157.466(†32), 13.5(†32)
441.05 10	3.5 3	¹²³ Ag(0.309 s)	263.87(35.9), 409.79(13.2), 591.30(8.2)
441.10 7	0.76 8	⁷⁷ Zn(2.08 s)	189.49(28.1), 473.94(19.7), 1832.0(12.4)
441.10 15	0.76 7	¹⁰⁰ Cd(49.1 s)	936.55(66), 139.71(6.7), 582.5(6.3)
441.1 7	0.40 7	¹¹⁹ Cd(2.69 m)	292.9(36.8), 343.0(16.9), 1609.7(10.9)
441.1 2	1.73 20	¹²¹ Cd(13.5 s)	324.976(49.5), 1040.26(16.8), 349.937(12.9)
441.1 4	0.032 9	¹⁴¹ Ba(18.27 m)	190.328(46.0), 304.194(25.4), 276.948(23.4)
441.1 2		¹⁴⁶ Dy(29 s)	2156.8, 1915.7, 1876.7
441.12 3	0.68 14	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
441.2 2	14.9 10	¹³⁵ Nd(12.4 m)	204.02(52), 41.43(23), 501.7(10.0)
441.2 3	0.52 14	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
441.2 1	1.96 9	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
441.2	†0.8 3	¹⁵² Tb(17.5 h)	344.281(†1500), 586.294(†223), 271.135(†203)
441.2	0.19 12	¹⁵² Tb(4.2 m)	344.281(20.8), 411.115(18.8), 471.9(12.2)
441.2 5	0.80 15	¹⁸⁶ Ta(10.5 m)	197.93(50), 214.87(42.3), 510.82(37.5)
441.2 2		²²³ Rn(23.2 m)	591.8(†100), 635.2(†76), 416.0(†55)
441.21 5	3.73 7	¹⁹⁰ Au(42.8 m)	295.78(71.0), 301.82(23.4), 597.67(9.4)
441.22 3	0.0113 23	¹⁶⁷ Yb(17.5 m)	113.34(55.3), 106.18(22.5), 176.25(21)
• 441.23 14	0.0115 22	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
441.28 14	0.0316 24	¹⁴¹ Cs(24.94 s)	48.53(7.90), 561.63(4.7), 1194.02(3.95)
441.3 7	0.095 6	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
441.3 3	0.13 3	¹⁵⁹ Er(36 m)	624.5(33), 649.1(23.4), 205.92(9.7)
441.3 2	0.32 5	¹⁸⁴ Au(53.0 s)	162.97(50), 272.98(40), 362.47(17.5)
441.38 19	0.44 22	¹⁸¹ Re(19.9 h)	365.57(56), 360.70(20), 639.30(6.4)
• 441.43 12	0.027 3	¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
441.43 12	†38 4	¹⁸⁹ Au(28.7 m)	713.17(†100), 812.68(†63), 447.65(†55)
441.44 7	0.040 3	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
441.45 25	0.190 13	⁹⁹ Nb(2.6 m)	97.785(7), 253.50(3.64), 2641.3(3.64)
441.49 5	0.343 18	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
441.5 10	0.032 11	¹¹¹ Sn(35.3 m)	1152.98(2.7), 1914.70(1.99), 761.97(1.48)
441.5	†9	¹³⁸ Eu(12.1 s)	346.6(†100), 544.2(†55), 685.4(†41)
441.5 4	0.05 3	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
• 441.50 20	0.036 6	¹⁹⁵ Hg(41.6 h)	261.75(30.9), 560.27(7), 387.87(2.15)
441.51 4	1.66 19	¹⁸⁶ Ir(16.64 h)	296.911(64.0), 137.155(42), 434.849(34.4)
441.51 4	0.4 3	¹⁸⁶ Ir(2.0 h)	137.155(27), 767.508(21.2), 630.354(18.0)
441.70 20	0.049 10	¹¹⁴ Sb(3.49 m)	1299.90(99), 887.60(17.4), 327.18(7.0)
• 441.7 5	8.5×10^{-5} 8	²⁵³ Es(20.47 d)	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
441.8 3	†7.8 11	¹⁹⁸ Tl(1.87 h)	636.4(†202), 411.8044(†202), 587.2(†185)
441.9 4	0.0017 8	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
441.90 13	1.0 5	¹⁸¹ Re(19.9 h)	365.57(56), 360.70(20), 639.30(6.4)
441.93 8	1.8 3	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
442.0 4	0.051 9	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
442	0.08	¹⁴⁷ Tb(1.83 m)	1397.0(79), 1797.1(14), 1643.0(1.2)
442.0	0.13	¹⁴⁸ Dy(3.1 m)	620.24(96), 1247.2(1.4), 178.3(0.5)
442.0 2	†0.19 6	¹⁵⁸ Ho(11.3 m)	218.21(†100.0), 98.91(†70), 945.7(†37)
442 1	0.18 8	¹⁹³ Hg(11.8 h)	257.97(61), 407.63(25), 573.25(14.2)
• 442.08	>0.00042	¹⁷³ Lu(1.37 y)	272.105(21.2), 78.63(11.87), 100.724(5.24)
442.1 2	0.054 8	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: $E_\gamma(I_\gamma)$
442.12 8	51	¹⁶² Gd(8.4 m)	403.00(43.3), 39.0(5.1), 341.42(2.70)
• 442.14 10	0.038 4	²⁰⁶ Bi(6.243 d)	803.10(99), 881.01(66.2), 516.18(40.7)
• 442.17 7	0.161 16	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
442.2 8	0.16 8	¹⁰³ Cd(7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
442.2 5	3.9 11	¹¹⁹ Cs(43.0 s)	176.05(29.7), 225.13(26), 257.9(17.4)
442.2 3	†1.5 3	¹⁸⁵ Pt(33.0 m)	229.60(†100), 135.3(†80), 197.4(†74)
442.2 9	0.023 12	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
442.2 1	23.0 14	²¹¹ Rn(14.6 h)	674.1(45), 1362.9(32.5), 678.4(28.9)
442.28 3	0.59 5	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
442.3 4	0.11 3	⁹⁰ Rb(258 s)	831.69(94), 1375.36(16.7), 3317.00(14.4)
• 442.37 5	0.042 6	¹⁰⁵ Rh(35.36 h)	319.14(19), 306.25(5.1), 280.41(0.167)
• 442.37 5		¹⁰⁵ Ag(41.29 d)	344.520(41), 280.41(30.2), 644.55(11.1)
442.37 5	5900 8	¹⁰⁵ Ag(7.23 m)	319.14(†63000), 306.25(†12800), 929.12(†4000)
442.40 30	0.027	¹³⁷ I(24.5 s)	1218.00(12.8), 601.05(4.80), 1302.64(4.42)
442.4	>0.016	²⁰¹ Pb(9.33 h)	331.19(79), 361.27(9.9), 945.96(7.4)
442.42 7	>0.6	⁸³ Se(22.3 m)	356.687(70), 510.17(43), 224.8(32.7)
442.42 7	0.065 12	⁸³ Se(70.1 s)	1030.86(21.2), 356.687(18), 987.96(16.1)
442.5 6	0.8	⁸³ Se(22.3 m)	356.687(70), 510.17(43), 224.8(32.7)
442.51 6	†1.87 10	¹⁵³ Pm(5.4 m)	35.842(†100), 127.298(†75), 28.309(†34.6)
442.6 2	1.3 3	¹¹⁷ Ag(5.34 s)	135.4(48), 386.8(39.9), 298.1(21.1)
442.6 2	0.92 9	¹¹⁷ Ag(72.8 s)	135.4(23), 337.7(10.3), 157.1(7.9)
442.6 2	0.66 9	¹²³ Cs(5.94 m)	97.3(23), 596.7(10.1), 83.3(4.1)
442.6		¹⁸² Hg(10.83 s)	129.3(†100), 217.7(†75), 413.5(†53)
442.7 3	0.39	⁵³ V(1.61 m)	1006.14(90), 1289.59(10), 283.14(0.8)
442.7 2	1.0 5	¹³⁵ Nd(12.4 m)	204.02(52), 41.43(23), 441.2(14.9)
442.7 4	0.179 6	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
442.7 3	0.27 9	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
442.74 10	†16 2	¹³¹ Ce(10.3 m)	169.42(†100), 414.25(†68), 119.18(†44)
442.74 14	0.82 8	¹⁹⁵ Pb(15.0 m)	383.64(106.9), 394.21(44), 878.40(24.2)
442.78 8	0.24 3	²²⁴ Fr(3.30 m)	215.985(33.1), 131.613(16.3), 836.90(9.8)
442.8 2	†0.9 1	⁷⁵ Ga(126 s)	253.0(†100), 574.8(†31.6), 885.6(†11.1)
• 442.80 20	1.9 3	⁹⁹ Rh(16.1 d)	528.24(33), 353.05(30.0), 89.65(29.0)
• 442.81 7	†3.5×10 ⁴ 3	²⁴¹ Am(432.2 y)	59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸)
442.87 20	0.53 12	¹⁶⁶ Lu(2.65 m)	228.12(77.3), 337.50(41), 367.95(31.4)
442.90 10	0.056 3	⁷³ Se(7.15 h)	360.80(108), 67.03(78), 865.09(0.584)
442.90 10	0.0262 16	⁷³ Se(39.8 m)	67.03(2.59), 253.70(2.356), 84.0(2.03)
442.9 3	0.026	¹¹⁷ Cd(3.36 h)	1997.33(26), 1065.98(23.1), 564.397(14.7)
442.9 5	†109 35	²⁰² At(181 s)	677.4(†230), 571.6(†216)
442.9		²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
442.901 10 17		¹²⁸ I(24.99 m)	526.557(1.58), 969.458(0.404), 1140.079(0.0103)
442.901 10 26.8 3		¹²⁸ Cs(3.66 m)	526.557(2.41), 1140.079(1.168), 969.458(0.630)
• 442.980 16 0.73 3		¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
443.0 5	0.0160 9	⁸¹ Rb(4.576 h)	190.38(64.0), 446.15(23.2), 510.31(5.3)
443.00 20	0.56 14	¹⁰² Zr(2.9 s)	599.60(13.9), 535.30(10.6), 64.50(8.9)
443.0 4	†1.4 5	¹²⁹ Sb(17.7 m)	759.8(†100.0), 657.78(†92), 433.76(†73)
443.0 9	0.14 6	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
443.02 24	0.41 7	¹⁶¹ Yb(4.2 m)	78.20(34), 599.88(25.9), 631.45(13.9)
443.1 3	0.26 7	⁹⁹ Ag(124 s)	264.41(65), 832.29(13.5), 805.07(12.5)
443.1 1	1.67 18	¹⁸⁸ Tl(71 s)	412.7(88), 592.0(61), 504.2(23.3)
443.1 3	0.031 9	²⁴⁹ Es(102.2 m)	379.5(40.4), 813.2(9.2), 375.1(3.3)
443.13 20	0.016 4	⁶³ Zn(38.47 m)	669.62(8), 962.06(6.5), 1412.08(0.75)
443.13 3	0.37 4	¹⁵⁸ Tm(3.98 m)	192.13(62), 335.10(16.8), 1149.83(7.6)
443.14 9	16.9 5	⁸⁶ Y(14.74 h)	1076.64(83), 627.72(32.6), 1153.01(30.5)
• 443.20 7		²⁰⁶ Bi(6.243 d)	803.10(99), 881.01(66.2), 516.18(40.7)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
• 443.24 45	0.00038 5	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
443.25 18	0.0035 10	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
• 443.29 4	0.139 8	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
443.3 4	0.66 20	¹¹³ Te(1.7 m)	814.4(22), 1018.1(13.0), 1181.0(12.3)
443.3 1	0.0270 25	¹²¹ I(2.12 h)	212.189(84), 532.08(6.07), 598.74(1.47)
443.3 2	5.2 4	¹⁵⁴ Ho(3.10 m)	334.6(94), 412.4(79), 477.1(55)
443.3 2	15.5 11	¹⁶⁸ Dy(8.7 m)	192.5(32.8), 487.0(22.5), 630.4(13.6)
443.3 7	0.14 4	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
443.34 4	17.5 5	⁸¹ Sr(22.3 m)	153.54(33.8), 147.76(30.1), 188.27(15.4)
• 443.37 7	10.5 5	¹⁰⁵ Ag(41.29 d)	344.520(41), 280.41(30.2), 644.55(11.1)
• 443.40 15	0.0408 13	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
443.4 3	0.27 11	²⁰³ Po(36.7 m)	908.64(55), 1090.95(19.2), 893.49(18.7)
443.5 1	†1.26 13	¹²³ La(17 s)	92.5(†100), 937.3(†43), 153.6(†43)
443.5 2	0.226 20	¹³² Sn(39.7 s)	340.53(49), 85.58(48.2), 899.04(44.8)
443.5 2	0.31 6	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
443.5 4	0.19 6	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
443.551 11	1.15 5	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
• 443.554 9	0.302 3	¹²⁵ Sb(2.7582 y)	427.875(30), 600.600(17.86), 635.954(11.31)
443.6 3	0.047 19	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
443.6 3	0.21 7	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
443.60 4	1.09 10	¹⁷⁴ Tm(5.4 m)	366.526(92), 992.128(87), 272.918(86)
443.62 15	71	³⁰ Mg(335 ms)	243.89(<71), 2168.9(2.1), 687.52(2.0)
443.7 3	†5.4 12	¹¹³ Ru(0.80 s)	263.2(†100), 211.7(†31.0), 337.5(†27.9)
443.7	0.010	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
443.7 3	0.33 9	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
443.7		¹⁵⁷ Lu(5.0 s)	967.5, 949.8, 880.5
443.75 5	0.18 3	²³⁰ Ac(122 s)	454.95(8), 508.20(5.15), 1243.9(3.50)
• 443.75 5	5.5 3	²³⁰ Pa(17.4 d)	951.95(1.65), 918.48(8.2), 454.95(6.27)
• 443.799 19	3.27 9	¹⁰³ Ru(39.26 d)	497.080(90.9), 610.33(5.75), 557.039(0.8672)
• 443.799 19	1.50×10 ⁻⁵ 7	¹⁰³ Pd(16.991 d)	39.757(0.07), 357.47(0.0221), 497.080(0.00396)
• 443.8 1	0.023 9	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
443.8 2	0.050 7	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
443.879 10	10.8 3	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
443.9 2	>0.019	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
443.9 1	0.63 14	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
443.9 4	0.20 5	¹²¹ Ag(0.78 s)	314.55(32.1), 353.43(19.9), 500.61(9.3)
443.94 5	2.0 2	¹²⁶ In(1.64 s)	1141.11(100), 908.58(99), 111.79(88)
• 443.961 50	0.196 10	¹²⁴ Sb(60.20 d)	602.730(97.8), 1690.980(47.3), 722.786(10.76)
• 443.961 50	0.033 9	¹²⁴ I(4.18 d)	602.730(60), 1690.980(10.41), 722.786(9.98)
443.976 5	0.025 8	¹⁵² Pm(4.1 m)	121.7824(15.7), 841.586(2.17), 961.06(1.92)
443.976 5	0.033 17	¹⁵² Pm(4.1 m)	121.7824(15.7), 841.586(2.17), 961.06(1.92)
443.976 5	0.89 9	¹⁵² Pm(7.52 m)	244.6989(78), 121.7824(45), 340.48(31.3)
• 443.976 5	0.313 21	¹⁵² Eu(13.542 y)	121.7824(28.4), 1408.011(20.87), 964.131(14.34)
• 443.976 5	2.78 6	¹⁵² Eu(13.542 y)	121.7824(28.4), 1408.011(20.87), 964.131(14.34)
443.976 5	0.0254 12	¹⁵² Eu(9.274 h)	841.586(14.6), 963.37(12.01), 121.7824(7.21)
444.0 5	†4	⁹⁹ Rb(59 ms)	90.8(†100), 125.2(†40), 1071.6(†26)
444.0 4	†0.85 14	¹⁶⁴ Hf(111 s)	122.1(†100), 153.3(†47), 313.7(†22)
444.04 7		¹⁴⁵ Ce(3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)
444.08 10	0.57 4	¹⁹⁷ Tl(2.84 h)	425.84(12.9), 152.22(7.2), 1411.34(4.5)
444.18 23	0.64 17	⁸⁶ Y(14.74 h)	1076.64(83), 627.72(32.6), 1153.01(30.5)
444.18 8	†1.08 9	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
444.2 5	0.05 3	⁷⁴ Ga(8.12 m)	595.847(91), 2353.46(44.5), 608.353(14.3)
444.2 2	0.126 14	¹¹¹ Pd(5.5 h)	70.44(8.3), 391.25(5.4), 632.80(3.6)
444.2 1	0.018 3	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
444.2 1	1.37 16	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
444.2 1	0.94 12	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
444.2 3	†27 3	²⁰⁶ Rn(5.67 m)	497.7(†100), 324.5(†96), 386.6(†61)
444.22 2	0.119 12	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
444.28 5	2.54 9	¹⁴⁸ Ba(0.607 s)	56.08(29.20), 133.53(3.88), 415.78(3.59)
444.3 1	0.050 13	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
444.40 46	0.06 3	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
444.4 1	†15.6 16	¹⁷¹ Ta(23.3 m)	49.6(†100), 506.4(†54), 501.8(†22.6)
444.4 7	0.33 3	¹⁹⁹ Bi(27 m)	560.1(22.0), 424.85(22), 841.7(11)
444.42 17	0.0172 5	⁷⁷ Ge(11.30 h)	264.44(54), 211.03(30.8), 215.50(28.6)
• 444.484 6	0.565 5	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
444.484 6	1.06 6	¹⁵⁴ Tb(9.4 h)	123.071(30), 247.925(22.1), 540.18(20)
444.484 6	0.95 18	¹⁵⁴ Tb(21.5 h)	123.071(26), 1274.436(10.5), 2187.10(9.9)
444.484 6		¹⁵⁴ Tb(22.7 h)	247.925(79), 346.643(69), 1419.81(46)
444.5 2	9.0×10 ⁻⁵ 4	¹⁰⁴ Rh(4.34 m)	555.796(0.13), 767.72(0.0065), 1237.2(0.0042)
444.5 2	1.7 3	¹⁰⁴ Ag(69.2 m)	555.796(92.6), 767.72(65.7), 941.7(25.0)
444.5 2	0.32 5	¹⁰⁵ Mo(35.6 s)	85.4(25.0), 76.50(19.3), 147.8(14.8)
444.5	†40	¹⁶² Ta(3.52 s)	285.0(†100)
444.5 4	0.18 9	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
444.5 3	0.00054 15	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
444.50 5	0.129 7	²²⁶ Fr(48 s)	253.73(22.3), 186.05(16.3), 253.9(2.5)
444.59 14	0.063 14	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
444.6 2	>0.019	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
444.60 20	0.67 17	¹⁰⁶ Tc(35.6 s)	270.07(56), 2239.30(13.6), 1969.40(8.9)
444.6 3	0.192 25	¹⁶⁴ Yb(75.8 m)	40.928(1.147), 675.41(0.38), 390.6(0.31)
444.628 20	39 4	⁹⁸ Sr(0.653 s)	119.353(73), 428.4(31), 36.5(20.4)
444.7 4	0.47 8	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
444.7	0.015 15	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
444.73 12	0.347 16	¹⁴⁴ Ba(11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
444.73 23	1.27 10	²⁰⁶ At(30.0 m)	700.66(98), 477.10(86), 395.54(48)
444.731 25	0.74 3	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
444.79 16	†1.3 2	¹⁶⁵ Lu(10.74 m)	132.49(†100), 120.60(†100), 174.25(†47.0)
444.8 10	0.50 9	⁷⁴ Kr(11.50 m)	89.65(31), 203.0(18.0), 296.67(9.9)
444.8 1	†1.6 2	⁷⁵ Ga(126 s)	253.0(†100), 574.8(†31.6), 885.6(†11.1)
444.8 2	0.28 6	¹⁰⁴ Mo(60 s)	68.8(55), 69.7(17.8), 36.3(14)
444.8 2	0.00091 10	¹⁶³ Er(75.0 m)	1113.5(0.0490), 436.1(0.0285), 439.94(0.0276)
444.821 16	0.0043 12	¹⁷³ Hf(23.6 h)	123.672(83), 296.974(33.9), 139.634(12.7)
444.9 3	†0.16 2	¹⁸⁴ Ir(3.09 h)	263.97(†100), 119.80(†45), 390.38(†38)
444.94 2	2.05 11	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
445.0 1	5	¹⁰⁴ Zr(1.2 s)	100.9(6), 504.7(5), 263.7(4.1)
445.0 6	>0.10	¹³² I(2.295 h)	667.718(99), 772.60(75.6), 954.55(17.6)
445.0 4	0.49 7	¹⁷² Ta(36.8 m)	214.02(46), 95.23(17.5), 1109.27(12.4)
445 1	0.012 12	¹⁹³ Au(17.65 h)	186.17(10.1), 255.57(6.7), 268.22(3.9)
• 445.03 1	1.27 4	²²³ Ra(11.435 d)	269.459(13.7), 154.21(5.62), 323.871(3.93)
• 445.07 17	0.0016 8	⁷¹ As(65.28 h)	174.954(82.00), 1095.490(4.08), 499.876(3.624)
445.1	0.30	⁸³ As(13.4 s)	734.60(43), 1113.10(14.7), 2076.70(11.9)
• 445.1 5	4.32 11	¹²⁷ Sb(3.85 d)	685.7(37), 473.0(25.7), 783.7(15.0)
445.1 3	†16.4 24	¹⁴⁷ Ho(5.8 s)	189.1(†100), 883.9(†100), 486.7(†61)
445.1 2	†10.5 20	¹⁵⁹ Yb(1.58 m)	166.16(†500), 177.12(†159), 390.20(†113)
445.1 3	1.00 9	¹⁹⁰ Tl(3.7 m)	416.4(91), 625.4(82), 731.1(37)
445.12 15	0.70 8	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
445.2 2	7.7 7	¹²¹ Xe(40.1 m)	252.7(13), 132.8(10.9), 310.5(5.4)
445.2 2	0.14	¹⁴⁰ Sm(14.82 m)	225.5(>10), 225.4(10), 140.0(5.0)
445.2	†14 3	¹⁸⁹ Tl(1.4 m)	317.5(†100), 215.6(†90), 335(†63)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
• 445.2 1	0.054 6	¹⁹¹ Pt(2.9 d)	538.90(13.7), 409.44(8.0), 359.90(6.0)
445.2 3	†1.34 16	¹⁹² Tl(9.6 m)	422.8(†100), 634.8(†75.9), 786.3(†31.7)
• 445.24 6	0.014 6	²⁰⁵ Bi(15.31 d)	1764.36(1.368), 703.44(31), 987.62(0.585)
445.28 5	0.063 13	⁷⁸ Rb(17.66 m)	454.97(63), 692.86(12.56), 562.15(11.41)
445.28 5	0.69 4	⁷⁸ Rb(5.74 m)	454.97(81), 664.44(38.3), 1109.72(13.12)
445.3 8	0.33	¹⁰¹ Cd(1.2 m)	98.0(47), 1722.5(11), 1259.3(8)
445.32 20	1.2 4	¹²⁵ Cd(0.65 s)	436.29(37), 1099.48(22.3), 2147.19(19.1)
445.32 20	0.35 9	¹²⁵ Cd(0.57 s)	1027.53(25.8), 1173.16(25.1), 736.65(12.6)
445.34 20	0.30 5	²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
445.37 21	6.0 6	⁹⁰ Mo(5.67 h)	257.34(78), 122.370(64.2), 203.13(6.4)
445.4 1		¹¹⁵ Pd(25 s)	342.71(8), 303.87(7), 396.56(6)
445.4 3	0.13 3	¹²¹ Cs(155 s)	153.9(15.2), 239.6(7.7), 427.1(3.63)
445.4 3	0.10 3	¹²¹ Cs(122 s)	179.4(30.2), 196.0(24.1), 459.7(12.0)
• 445.494 9	0.050 9	¹⁵⁶ Tb(5.35 d)	534.318(66.6), 199.2132(40.9), 1222.36(31.00)
445.5 2	1.0 2	¹²⁹ Sn(2.23 m)	645.13(100), 80.5(6.6), 913.2(5.0)
445.5 3	0.0042 25	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
• 445.5 5	0.0029 10	¹⁴⁰ La(1.6781 d)	1596.210(95), 487.021(45.5), 815.772(23.28)
445.50 15	0.41 5	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
445.5 5	0.039 14	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
445.52 8	0.05	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
445.53 11	0.117 15	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
445.55 15	0.46 6	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
445.59 8	1.03 5	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
445.59 12	†6.2 5	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
• 445.68 2	4.01 23	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
445.7 3	1.5 3	¹²⁸ Sb(9.01 h)	753.82(100), 743.22(100), 314.12(61)
445.7 5	0.13 7	¹⁵³ Ho(2.0 m)	295.8(67), 637.0(5.36), 688.5(3.7)
• 445.740 6	8.8×10^{-6} 6	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
445.76 10	0.103 24	²²⁷ Fr(2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)
445.8 3	†28 3	¹⁰⁹ Tc(0.87 s)	194.6(†100), 128.7(†51), 96.2(†48)
445.8 4	0.22 9	¹⁶⁶ Lu(2.65 m)	228.12(77.3), 337.50(41), 367.95(31.4)
445.81 14	1.6 3	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
445.84 8	0.022 3	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
445.90 20	0.143 12	¹⁵⁸ Tm(3.98 m)	192.13(62), 335.10(16.8), 1149.83(7.6)
445.9 4	0.08 4	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
445.9 1	0.88 9	¹⁸⁸ Tl(71 s)	412.7(88), 592.0(61), 504.2(23.3)
445.91 10	†30 7	²³⁴ Pa(1.17 m)	1001.03(†837000), 766.38(†294000), 742.81(†80000)
• 445.91 10	0.020 4	²³⁴ Np(4.4 d)	1558.31(18.72), 1527.21(11.2), 1601.80(9.1)
445.99 2	5.53 16	¹¹⁸ In(4.45 m)	1229.68(96), 1050.69(81.0), 683.08(54.3)
• 445.995 4	0.073 21	¹⁶⁸ Tm(93.1 d)	198.241(52.39), 815.990(48.99), 447.515(23.05)
446.0 5	7	¹⁴⁶ La(10.0 s)	258.47(93), 409.86(81), 514.75(31)
• 446.02 9	0.015 3	¹⁴³ Ce(33.039 h)	293.266(42.80), 57.356(11.7), 664.571(5.69)
• 446.025 9	2.96 7	¹⁷² Er(49.3 h)	610.062(44.2), 407.338(42.1), 68.107(3.29)
• 446.081 4	0.0098 23	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
446.10 30	0.034 4	¹⁶⁵ Yb(9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
446.1	0.06	¹⁸⁵ Ir(14.4 h)	254.4(13.3), 1828.8(10), 60.0(5.7)
446.1 1	0.5 1	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
446.15 2	23.2 7	⁸¹ Rb(4.576 h)	190.38(64.0), 510.31(5.3), 456.76(3.02)
446.15 2	0.0212 24	⁸¹ Rb(30.5 m)	49.56(0.78), 643.6(0.115), 1194.9(0.112)
446.2 3	>0.39	⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
446.20 6	2.32 13	⁹³ Sr(7.423 m)	590.238(67), 875.73(24.1), 888.13(21.8)
446.2 1	11.2 4	¹⁰⁰ Rh(20.8 h)	539.59(78.4), 2376.1(35.3), 1553.4(21)
446.2 2	†0.81 14	¹⁰³ Nb(1.5 s)	102.64(†100), 641.1(†55), 538.5(†34.0)
446.2 7	0.041 7	¹¹² Sb(51.4 s)	1257.05(96), 990.70(14.3), 670.0(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: $E_\gamma(I_\gamma)$
446.2 4	1.84 15	¹¹⁹ Cd(2.69 m)	292.9(36.8), 343.0(16.9), 1609.7(10.9)
446.2 3	0.60 5	¹³² I(2.295 h)	667.718(99), 772.60(75.6), 954.55(17.6)
446.26 13	0.57 6	¹⁹⁷ Pb(43 m)	385.85(74), 387.72(25.1), 222.45(24.6)
446.3 3	1.0 3	⁷⁸ Zn(1.47 s)	224.75(43.9), 181.68(28.1), 860.30(24.5)
446.3 4	0.23 8	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
446.3 2	0.7 3	¹⁵² Ho(49.5 s)	647.2(92), 613.8(88.4), 683.3(88)
446.3 3	1.3	²⁰⁷ Hg(2.9 m)	351.059(77), 997.1(69), 1637.1(30)
446.4 3	0.08 4	⁹⁵ Ru(1.643 h)	336.43(70.2), 1096.76(21.0), 626.77(17.8)
446.4 4	0.108 18	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
446.4 10	0.077 10	¹⁴⁶ Pr(24.15 m)	453.88(48.0), 1523.7(15.6), 735.72(7.5)
• 446.43 15	$\dagger 4.9 \times 10^3$	²⁴¹ Am(432.2 y)	59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$)
446.5 1	$\dagger 3.4 3$	¹⁷¹ Ta(23.3 m)	49.6($\dagger 100$), 506.4($\dagger 54$), 501.8($\dagger 22.6$)
446.5 5	$\dagger 5.6 17$	¹⁹³ Hg(3.80 h)	861.11($\dagger 100$), 1118.84($\dagger 64$), 789.21($\dagger 36$)
446.5 7	2.8 5	¹⁹⁴ Tl(32.8 m)	636.5(99), 428.0(99), 748.9(76)
• 446.52 6	0.040 3	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
446.53	0.014 3	³⁹ Cl(55.6 m)	1267.185(54), 250.332(46.3), 1517.508(39.2)
446.6 1	0.113 10	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
446.6 1		²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
446.613 3	4.5 4	¹⁹⁶ Ir(52 s)	355.684(19), 779.630(10.4), 332.983(4.35)
446.69 5	0.36 3	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
446.7 6		¹³⁴ Pr(11 m)	293.5($\dagger 100$), 299.0($\dagger 100$), 1196.8($\dagger 100$)
446.7 6		¹³⁴ Pr(17 m)	1964.1($\dagger 100$), 1904.3($\dagger 100$), 1579.9($\dagger 100$)
446.7 6	0.026 18	¹⁴⁹ Tb(4.118 h)	352.24(29.43), 164.98(26.4), 388.57(18.37)
446.7 1	$\dagger 0.45 9$	¹⁶⁰ Ho(5.02 h)	728.18($\dagger 100$), 879.383($\dagger 65.9$), 962.317($\dagger 59.1$)
446.7 7	0.32 16	¹⁸⁶ Ir(16.64 h)	296.911(64.0), 137.155(42), 434.849(34.4)
• 446.74 19	0.12 6	¹⁰⁵ Ag(41.29 d)	344.520(41), 280.41(30.2), 644.55(11.1)
446.74 26	0.28 3	¹⁶⁴ Yb(75.8 m)	40.928(1.147), 675.41(0.38), 390.6(0.31)
446.78 6	1.65 9	⁹¹ Kr(8.57 s)	108.788(43.5), 506.592(19.1), 612.87(7.7)
446.8 2	0.149 17	⁷⁹ As(9.01 m)	95.73(0.85), 364.9(1.06), 432.1(0.850)
446.8 3	0.101 6	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
446.8 3	0.0025 8	¹⁶⁷ Yb(17.5 m)	113.34(55.3), 106.18(22.5), 176.25(21)
446.8 5	0.0012 10	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
446.81 6	0.089 5	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)
• 446.811 3	3.72 3	¹¹⁰ Ag(249.79 d)	657.7622(94.0), 884.685(72.2), 937.493(34.13)
• 446.82 20	$8.4 \times 10^{-7} 20$	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
446.88 7	0.207 15	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
446.90 6	5.6 3	⁷⁹ Ge(39.0 s)	230.62(61), 542.27(32.6), 755(18)
446.9 3	0.042 12	⁸⁴ Br(31.80 m)	881.610(42), 1897.761(14.7), 3927.5(6.8)
446.9 3	3	⁸⁴ Br(6.0 m)	425.30(100), 881.610(98), 1463.84(97)
446.9 3	4.4 13	¹⁴⁰ Gd(15.8 s)	174.8(76), 749.9(70), 379.0(38)
446.9 1	0.40 4	¹⁶¹ Er(3.21 h)	826.6(3.0), 211.15(12.2), 592.6(3.7)
446.9 5	$\dagger 3.7$	¹⁷⁷ Os(2.8 m)	84.7($\dagger 100$), 125.4($\dagger 63$), 195.8($\dagger 61$)
446.96 8	0.38 3	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
447.048 16	$\dagger 7.0 7$	¹⁴² Xe(1.22 s)	571.83($\dagger 100$), 657.05($\dagger 79$), 538.24($\dagger 77$)
447.08 10	3.53 21	¹²¹ Cd(8.3 s)	2059.41(21.0), 1020.89(18.9), 987.81(13.6)
447.1 1	3.0 5	¹⁰⁵ Mo(35.6 s)	85.4(25.0), 76.50(19.3), 147.8(14.8)
447.1 3	0.114 23	¹²³ Cs(5.94 m)	97.3(23), 596.7(10.1), 83.3(4.1)
447.1 4	0.15	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
447.1 2	$\dagger 102.1 21$	¹⁹⁶ Ir(1.40 h)	393.346($\dagger 105.2$), 521.175($\dagger 104$), 355.684($\dagger 102$)
447.13 6	19.6 20	¹⁰² Nb(4.3 s)	296.611(79), 1633.10(41), 551.54(30)
447.15 8	1.8	¹³⁷ Ce(9.0 h)	10.6(0.8), 436.59(0.265), 433.22(0.0518)
447.18 7	0.077 6	¹⁴⁵ Ce(3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)
447.2 2	$\dagger 0.14 3$	¹⁵⁸ Ho(11.3 m)	218.21($\dagger 100.0$), 98.91($\dagger 70$), 945.7($\dagger 37$)
447.2 2	$\dagger 5.8 12$	¹⁸⁷ Hg(1.9 m)	233.38($\dagger 100$), 376.34($\dagger 38$), 240.26($\dagger 33$)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
447.26 9	0.48 6	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
447.30 20	0.28 14	¹⁰² Zr(2.9 s)	599.60(13.9), 535.30(10.6), 64.50(8.9)
447.3 5	0.22 7	¹¹⁹ Cd(2.69 m)	292.9(36.8), 343.0(16.9), 1609.7(10.9)
447.3 3	2.0 4	¹³² Sb(2.79 m)	973.9(99), 696.8(86), 989.6(14.9)
447.3 5	†190 95	¹⁵⁷ Ho(12.6 m)	279.97(†47600), 341.16(†37000), 193.41(†15200)
• 447.35 4	0.119 15	²⁴¹ Cm(32.8 d)	471.805(71), 430.634(4.06), 132.413(3.86)
447.36 20	0.071 4	¹⁶³ Yb(11.05 m)	860.28(10.1), 63.62(6.5), 123.21(1.98)
447.40 5	3.3 3	¹¹⁸ I(8.5 m)	605.71(99), 600.71(92), 614.42(65)
447.4		¹³¹ Sn(56.0 s)	3267.5, 2470.5, 2039.25
447.4		¹³¹ Sn(58.4 s)	367.40, 285.0, 62.9
447.4	†2.9	¹³¹ Sn(56.0 s)	1226.03(†100), 450.03(†90), 798.50(†86)
447.4 2	3.2	¹⁴⁵ La(24.8 s)	70.0(11), 355.8(3.8), 118.2(3.6)
• 447.45 2	0.060 3	¹⁴³ Ce(33.039 h)	293.266(42.80), 57.356(11.7), 664.571(5.69)
447.5 5	>0.13	¹³⁷ Nd(38.5 m)	75.5(17.0), 580.6(13), 306.60(10.0)
447.5 2	3.21 18	¹³⁹ Sm(2.57 m)	273.7(37), 306.7(28.5), 596.3(8.0)
447.5 3	0.44	¹⁵⁴ Pm(2.68 m)	184.810(32), 81.99(15.4), 546.66(14.5)
447.5 3	†22 5	¹⁵⁷ Yb(38.6 s)	230.92(†100), 340.7(†90), 241.7(†74)
447.515 3	1.30 6	¹⁶⁸ Ho(2.99 m)	741.356(36.6), 821.164(34.5), 815.990(18.6)
• 447.515 3	23.05 10	¹⁶⁸ Tm(93.1 d)	198.241(52.39), 815.990(48.99), 184.285(17.45)
447.56 12	†13 2	¹⁸¹ Pt(51 s)	289.29(†100), 111.97(†100), 230.15(†92)
447.6 2	0.00083 20	¹⁰⁹ Pd(13.7012 h)	88.04(1.171), 311.4(0.032), 647.3(0.024)
447.6 1	0.264 18	²⁰⁹ At(5.41 h)	545.0(91), 781.9(83.5), 790.2(63.5)
447.61 15	0.10 2	⁸⁷ Br(55.60 s)	1419.71(22.0), 1476.04(7.9), 1577.60(6.0)
• 447.65 10	0.0703 22	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
447.65 12	†55 7	¹⁸⁹ Au(28.7 m)	713.17(†100), 812.68(†63), 348.14(†43)
447.7 4	0.099 25	¹⁵² Tb(4.2 m)	344.281(20.8), 411.115(18.8), 471.9(12.2)
447.70 10	0.37 9	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
447.762 20	0.15	²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
447.8 5	0.057 11	¹¹⁶ Te(2.49 h)	93.70(31.4), 628.63(3.22), 102.97(1.95)
447.8 1	0.55 4	²⁴⁷ Cf(3.11 h)	294.1(0.98), 417.9(0.34), 407.0(0.190)
447.81 8	2.88 16	¹⁹⁰ Re(3.2 h)	186.718(27.8), 605.24(14.9), 557.972(14.3)
• 447.81 8	2.55 14	¹⁹⁰ Ir(11.78 d)	186.718(52.4), 605.24(39.9), 518.55(34.0)
447.90 16	0.076 19	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
447.9 5	†0.11 2	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
• 447.9 1	†37 4	²⁵⁸ Md(51.5 d)	367.8(†100), 276.8(†20.2), 71.1(†8.0)
448 1	0.17 3	⁷⁰ As(52.6 m)	1039.20(81), 1114.1(21.8), 668.3(21.8)
448.0	0.7	⁸³ Zr(44 s)	55.55(8), 104.97(5.70), 475.1(5.1)
• 448.0 8	0.005 5	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
• 448	>0.006	¹⁹¹ Pt(2.9 d)	538.90(13.7), 409.44(8.0), 359.90(6.0)
• 448.0 6	†0.010 5	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
448.01 9	0.124 6	¹⁸⁷ Ir(10.5 h)	912.95(4.79), 427.12(4.12), 400.89(3.94)
448.01 6	12.3 6	²⁴⁰ Np(61.9 m)	566.34(25.3), 973.9(23.8), 600.57(18.4)
• 448.01 6	0.013 4	²⁴⁰ Am(50.8 h)	987.76(73.2), 888.80(25.1), 98.860(1.5)
448.10 10	0.074 25	⁸⁶ Y(14.74 h)	1076.64(83), 627.72(32.6), 1153.01(30.5)
• 448.10 8	0.075 15	¹⁸⁸ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
448.15 3	0.008	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
448.2 2	0.047 19	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
448.2 1	0.20 5	¹⁴² Gd(70.2 s)	750.2(11.2), 178.90(11.20), 284.4(6.16)
• 448.2 2	0.00026	²³⁹ Np(2.3565 d)	106.125(27.2), 277.599(14.38), 228.183(10.76)
448.2 2	0.00012	²³⁹ Am(11.9 h)	277.599(15.0), 228.183(11.3), 209.753(3.50)
• 448.2 2		²⁴³ Cm(29.1 y)	277.599(14.0), 228.183(10.6), 209.753(3.29)
• 448.2 5	0.00069 7	²⁵³ Es(20.47 d)	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
448.3 5	0.022 9	¹¹³ Sb(6.67 m)	497.96(80), 332.41(14.8), 88.25(2.7)
448.3 1	0.248 14	¹⁴² Ba(10.6 m)	255.300(20.5), 1204.3(14.23), 895.2(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: $E_{\gamma}(I_{\gamma})$
448.3 4	†76	²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
448.3		²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
448.34 9	2.34 14	⁹² Y(3.54 h)	934.46(13.9), 1405.28(4.8), 561.03(2.40)
• 448.34 9	>0.0033	⁹² Nb(10.15 d)	934.46(99), 912.73(1.78), 1847.27(0.85)
448.4 1	†40.5 11	¹⁷² Ir(2.0 s)	227.8(†100.0), 378.4(†62.0), 582.3(†20.2)
448.4	0.016 12	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
• 448.40 6	0.001	²³⁵ U(7.038×10 ⁸ y)	85.712(57.2), 143.764(10.96), 163.358(5.08)
448.42 12	0.088 6	¹⁴¹ Cs(24.94 s)	48.53(7.90), 561.63(4.7), 1194.02(3.95)
448.46 4	0.0112 14	¹⁵⁹ Ho(33.05 m)	121.012(36.2), 131.973(23.6), 309.594(17.2)
448.5 5	>0.00021	¹⁴⁵ Pr(5.984 h)	748.278(0.5250), 675.795(0.514), 72.500(0.261)
448.5	0.044 9	¹⁴⁹ Tb(4.118 h)	352.24(29.43), 164.98(26.4), 388.57(18.37)
• 448.52 10	0.0033 16	⁷¹ As(65.28 h)	174.954(82.00), 1095.490(4.08), 499.876(3.624)
• 448.580 14	1.63 5	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
448.6 1	5.2 3	¹²⁹ La(11.6 m)	278.6(25), 110.5(16.9), 457.0(8.0)
• 448.6 1	0.020 9	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
448.6 5	†3.1	¹⁷⁷ Os(2.8 m)	84.7(†100), 125.4(†63), 195.8(†61)
448.61 7	1.68 9	²⁰⁵ At(26.2 m)	719.30(31), 669.41(8.6), 628.88(5.6)
448.65 11	0.51 5	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
448.66	1.05 3	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
448.67 5	0.69 4	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
• 448.67 27	0.09 5	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
448.67 20	0.50 25	¹⁸⁶ Ta(10.5 m)	197.93(50), 214.87(42.3), 510.82(37.5)
448.7 2	0.45 8	¹⁰⁸ In(58.0 m)	875.46(100), 632.96(100), 242.84(41)
448.7 3	0.97 11	¹³⁶ Sm(47 s)	114.4(36), 747.7(5.4), 485.3(5.0)
448.7	†60	¹⁶³ Ta(10.6 s)	396.0(†100), 451.1(†70), 210.0(†50)
448.7 3	†1.33 7	¹⁸⁷ Pb(15.2 s)	299.5(†100), 617.2(†2.67), 493.6(†2.67)
448.7 5	0.00023	²⁴³ Pu(4.956 h)	84.0(23), 41.8(0.76), 381.7(0.56)
448.76 12	0.035 4	¹³⁹ Cs(9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
• 448.789 12	0.259 10	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
448.80 20	0.008 4	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
448.8 3	1.4 3	¹⁵¹ Pr(18.90 s)	880.19(13), 189.057(11.8), 484.501(11.3)
448.80 20	†30 5	¹⁶³ Lu(238 s)	163.08(†100), 54.00(†88), 396.34(†63)
448.88 17	0.301 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
448.9 1	0.107 4	⁶⁶ Ga(9.49 h)	1039.30(37), 2752.01(23.38), 833.50(5.89)
448.9 2	†1	¹³⁹ I(2.29 s)	527.7(†100), 571.2(†98), 536.6(†67)
448.9 1	†13.3 4	²³⁰ Ra(93 m)	72.0(†100), 63.0(†35.4), 202.8(†27.3)
448.9 1	0.123 25	²³⁰ Ac(122 s)	454.95(8), 508.20(5.15), 1243.9(3.50)
448.92 29	0.106 4	¹³¹ La(59 m)	108.081(25.0), 417.783(18.0), 365.162(16.9)
448.98 3	0.74 4	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
• 449 1	0.050 22	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
449.0 3	†0.9 3	¹⁷¹ Hf(12.1 h)	122.0(†100), 662.2(†83), 347.18(†47)
449.0 5	0.71 14	¹⁷⁶ Tm(1.9 m)	189.57(44.5), 1069.3(34), 381.8(21.8)
449.0 2	†2.23 21	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
449.0 3	0.12 4	¹⁹⁸ Tl(5.3 h)	411.8044(82), 675.8874(11), 636.4(10.1)
449.05 20	1.3 3	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
449.1		¹⁶¹ Er(3.21 h)	826.6(3.0), 211.15(12.2), 592.6(3.7)
449.12 13	0.214 18	²⁰⁷ At(1.80 h)	814.41(44.5), 588.33(19.2), 300.654(12.8)
449.15 6	0.049 5	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
449.15 6	0.15 5	²²⁸ Pa(22 h)	911.205(4.19), 463.005(1.250), 964.770(4.25)
449.2 3	3.3 3	⁹⁴ Tc(293 m)	871.082(100), 702.626(99.6), 849.74(95.7)
449.2 2	1.66 18	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
449.2 2	0.036 13	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
• 449.25 20	0.0072 7	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
449.263 29	0.36 3	²²⁷ Fr(2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
449.3 6	2.0 5	¹⁸³ Lu(58 s)	1125.3(25.0), 1056.8(16.5), 168.1(7.5)
449.30 15	†0.24 3	¹⁸⁴ Ir(3.09 h)	263.97(†100), 119.80(†45), 390.38(†38)
449.3 5	0.038	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
449.3 2	†15.9 24	²²⁹ Ac(62.7 m)	164.522(†100), 569.1(†91), 261.92(†39)
449.33 20	0.32 4	¹²⁴ In(3.17 s)	1131.64(68), 3214.15(21.5), 997.79(21.1)
449.33 20	1.90 20	¹²⁴ In(2.4 s)	1131.64(100), 969.94(52), 1072.85(47)
• 449.36 7	0.168 12	¹⁹⁴ Au(38.02 h)	328.455(60), 293.545(10.2), 1468.91(6.3)
• 449.37 10	0.00019	²²⁶ Ra(1600 y)	186.10(3.50), 262.27(0.0049), 600.66(0.00049)
449.4 5	†3.6 6	¹⁰⁶ Mo(8.4 s)	465.70(†100), 54.00(†54), 618.60(†25)
449.4		¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
449.5 4	0.75 10	¹⁴⁴ La(40.8 s)	397.440(94.3), 541.20(39.2), 844.8(22.3)
449.50 16	†29 6	¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†33)
• 449.5 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)
449.54 5	2.51 12	⁷⁵ Zn(10.2 s)	228.67(28.9), 432.29(20.2), 155.94(17.2)
449.55 21	0.094 18	⁷² Ga(14.10 h)	834.01(96), 2201.69(25.9), 629.95(24.8)
449.6	0.062 18	¹⁴⁹ Tb(4.118 h)	352.24(29.43), 164.98(26.4), 388.57(18.37)
449.6 2	†467 62	¹⁵⁷ Ho(12.6 m)	279.97(†47600), 341.16(†37000), 193.41(†15200)
449.7 3	†100 5	⁷³ Cu(3.9 s)	199.2(†17), 502.0(†12), 306.8(†10)
449.7 2	†100 2	¹¹⁴ Cs(0.57 s)	698.2(†11.8), 618.3(†5.0), 758.2(†3.0)
449.7 4	0.20 7	¹⁵³ Ho(2.0 m)	295.8(67), 637.0(5.36), 688.5(3.7)
449.8	0.10	¹⁸⁵ Ir(14.4 h)	254.4(13.3), 1828.8(10), 60.0(5.7)
449.8 4	0.26 13	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
449.9 3	0.050 6	¹⁸⁶ Hg(1.38 m)	112.1(63), 251.5(55), 191.6(3.7)
449.93 5	0.236 16	⁶³ Zn(38.47 m)	669.62(8), 962.06(6.5), 1412.08(0.75)
449.94 6	0.08 3	⁷⁸ As(90.7 m)	613.725(54), 694.916(16.7), 1308.59(13.0)
450.0 3	0.33 5	¹¹⁷ Cs(8.4 s)	204.8(15.0), 29.7(9.9), 205.6(6.8)
450.0 1	0.99 6	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
• 450 1	0.011	²³⁰ Pa(17.4 d)	951.95(1.65), 918.48(8.2), 454.95(6.27)
450.0 10	0.034 17	²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
450.03 5		¹³¹ Sn(56.0 s)	3267.5, 2470.5, 2039.25
450.03 5		¹³¹ Sn(58.4 s)	367.40, 285.0, 62.9
450.03 5	†90 10	¹³¹ Sn(56.0 s)	1226.03(†100), 798.50(†86), 304.33(†32.0)
450.1 2	0.33 10	¹²¹ Cs(155 s)	153.9(15.2), 239.6(7.7), 427.1(3.63)
450.1 2	0.10 5	¹²¹ Cs(122 s)	179.4(30.2), 196.0(24.1), 459.7(12.0)
450.1 2	1.3 1	¹²¹ Cs(122 s)	179.4(30.2), 196.0(24.1), 459.7(12.0)
450.1 3	†0.37 4	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
450.1 4	†6.1 18	¹⁵⁵ Er(5.3 m)	110.12(†100), 241.5(†65), 234.0(†40.0)
450.2 1	6.3 13	⁷⁵ Rb(19.0 s)	178.98(<63), 178.97(>51), 187.21(8.7)
450.2 1	17.4 10	¹⁰⁰ Ag(2.01 m)	665.54(99), 750.67(78), 773.20(24.2)
450.3 3	†0.78 16	¹¹¹ Rh(11 s)	275.4(†100.0), 411.8(†9.42), 230.0(†8.9)
450.30 10	0.92 9	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
450.3 1	0.44 4	¹⁸⁸ Tl(71 s)	412.7(88), 592.0(61), 504.2(23.3)
450.3 1		¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
450.3 10	0.14 3	²⁰¹ Bi(108 m)	629.1(24.0), 936.2(11.3), 1014.1(10.7)
450.4		¹⁸⁰ Os(21.5 m)	20.1(†100), 717.4, 667.0
450.4 2	0.30 8	²³⁵ Th(7.1 m)	417.0(2), 727.2(0.87), 696.1(0.64)
450.48 16	0.154 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
450.5	0.06 4	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
450.5 5		¹⁸⁰ Hg(2.8 s)	300.5(†100), 381.2(†69), 479.9(†23.0)
450.5 5	†16	¹⁸⁰ Hg(2.8 s)	300.5(†100), 381.2(†69), 479.9(†23.0)
450.52 16	26.6 8	⁸⁸ Nb(7.8 m)	1057.01(89.3), 1082.53(53.9), 399.41(45.7)
450.52 3	3.3	²⁰⁰ Pb(21.5 h)	147.63(37.7), 257.17(4.46), 235.63(4.30)
• 450.559 3	0.0281 23	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
450.58 7	3.3	¹⁴⁸ Pr(2.27 m)	301.702(61), 1357.78(5.5), 1023.18(4.8)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
450.58 7	50 4	¹⁴⁸ Pr(2.0 m)	301.702(95), 697.61(40), 1556.7(4.9)
450.6 2	1.30 3	¹⁷⁷ W(135 m)	115.65(50), 426.98(13.2), 1036.4(10.3)
450.6 2	0.18 3	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
450.69 18	0.22 4	¹⁶² Yb(18.87 m)	163.35(40.0), 118.70(33.6), 576.10(3.24)
450.69 11	0.15 3	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
450.7 1	6.82 19	⁹² Ru(3.65 m)	213.81(96), 259.32(92), 134.57(65.5)
450.7 2	0.7 1	¹¹⁷ Xe(61 s)	28.5(7.0), 221.3(10.0), 32.3(7.6)
450.7	†3.1	¹⁴⁴ Gd(4.5 m)	333.3(†100), 2432.6(†94.8), 629.5(†32.4)
450.7 1	†3.6 8	¹⁸⁰ Au(8.1 s)	153.3(†100), 524.3(†29), 257.6(†26)
450.72 5	0.56 9	¹⁴⁹ Pr(2.26 m)	138.447(11.0), 165.087(9.9), 108.520(9.5)
450.761 10	1.22 9	¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
450.8 4	0.052 17	⁹¹ Kr(8.57 s)	108.788(43.5), 506.592(19.1), 612.87(7.7)
450.80 10	0.240 18	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
450.8 15	†0.8	²⁵⁶ Es(7.6 h)	861.8(†100), 231.1(†61), 172.6(†49)
450.81 15	0.070 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
450.85 2	0.011 4	⁸⁵ Kr(4.480 h)	151.159(75.0), 129.820(0.300), 731.812(0.007)
450.85 2	†1.06 5	⁸⁵ Sr(67.63 m)	151.159(†1272), 129.820(†15), 731.812(†1.45)
450.87 8	1.69 9	⁹⁹ Nb(2.6 m)	97.785(7), 253.50(3.64), 2641.3(3.64)
450.9 10	0.109 25	⁷⁰ As(52.6 m)	1039.20(81), 1114.1(21.8), 668.3(21.8)
450.9 3	0.034 9	¹¹² Ag(3.130 h)	617.27(43), 1387.67(5.4), 606.49(3.1)
450.93 4	0.0039 19	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
450.93 4	†3.00×10 ³ 16	²³⁴ Pa(1.17 m)	1001.03(†837000), 766.38(†294000), 742.81(†80000)
• 450.93 4	1.15 5	²³⁴ Np(4.4 d)	1558.31(18.72), 1527.21(11.2), 1601.80(9.1)
450.94 13	0.017 3	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
450.97 3	24.2 13	¹⁰⁶ Rh(131 m)	511.842(85), 1045.83(30.4), 717.24(28.9)
• 450.97 3	28.2 7	¹⁰⁶ Ag(8.28 d)	511.842(88), 1045.83(29.6), 717.24(28.9)
451.0 3	†1.39 15	¹²⁰ Cs(64 s)	322.4(†100), 473.5(†30), 553.4(†19.1)
• 451.0 7	0.18 7	¹²⁷ Sb(3.85 d)	685.7(37), 473.0(25.7), 783.7(15.0)
451.0 10	0.087 25	¹²⁷ Ba(12.7 m)	180.8(12), 114.8(9.3), 66.06(2.12)
451.0	†49 9	¹⁸⁹ Tl(2.3 m)	333.7(†100), 942.2(†69), 522.3(†27)
451.0 7	4.9 11	¹⁹⁴ Tl(32.8 m)	636.5(99), 428.0(99), 748.9(76)
451.06 7	0.024	¹⁰³ Ag(65.7 m)	118.72(31.2), 148.193(28.3), 266.86(13.3)
451.1 3	0.27 5	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
451.1	†70	¹⁶³ Ta(10.6 s)	396.0(†100), 448.7(†60), 210.0(†50)
451.15 22	0.0062 6	¹⁰⁴ Rh(42.3 s)	555.796(2.0), 1237.2(0.066), 767.72(0.011)
451.15 22		¹⁰⁴ Ag(33.5 m)	555.796(91), 1238.0(3.87), 2276.7(2.46)
451.2 2	0.110 22	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
451.20 6	1.01 5	²²⁸ Fr(39 s)	473.7(10.2), 474.0(7.6), 410.40(6.3)
451.2 2	0.0025 10	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
451.3 3	†0.94 14	¹⁰³ Nb(1.5 s)	102.64(†100), 641.1(†55), 538.5(†34.0)
451.3 5	0.010 10	¹¹⁴ Sb(3.49 m)	1299.90(99), 887.60(17.4), 327.18(7.0)
451.3 4	0.67 22	¹²⁹ Sn(6.9 m)	1161.31(56.0), 1128.44(50), 760.8(16.8)
451.3	†>1.5	¹⁶⁴ Tm(2.0 m)	91.40(†1500), 1154.66(†366), 768.91(†279)
451.3	>0.026	¹⁹⁷ Tl(2.84 h)	425.84(12.9), 152.22(7.2), 1411.34(4.5)
451.305 14	0.0089 12	¹⁷³ Hf(23.6 h)	123.672(83), 296.974(33.9), 139.634(12.7)
• 451.370 3	0.0098 23	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
• 451.40 2	0.288 23	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
451.4 2	1.34 10	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
451.40 20	0.60 6	²⁰⁸ At(1.63 h)	686.527(98), 660.040(89), 177.595(48.6)
• 451.418 15	0.0407 9	¹³¹ Ba(11.50 d)	496.326(47), 123.805(28.97), 216.078(19.66)
451.42 10	1.06 8	¹⁹⁷ Tl(2.84 h)	425.84(12.9), 152.22(7.2), 1411.34(4.5)
451.44 3	2.24 15	¹³² Ce(3.51 h)	182.11(77), 155.37(10.5), 216.83(4.95)
• 451.483 9	0.0001894 16	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
451.50 20	0.32 6	¹²¹ Ag(0.78 s)	314.55(32.1), 353.43(19.9), 500.61(9.3)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
451.5 4	0.29 7	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
451.5 4	>0.13	¹⁵⁶ Tm(83.8 s)	344.55(86), 452.85(17.2), 585.93(14.6)
451.5 3	1.26 24	¹⁷⁶ Tm(1.9 m)	189.57(44.5), 1069.3(34), 381.8(21.8)
451.5	\dagger 0.58 16	¹⁷⁸ Ir(12 s)	266.1(\dagger 100.0), 131.6(\dagger 79), 363.1(\dagger 39.9)
• 451.521 14	2.984 22	¹⁶⁶ Ho(1.20×10^3 y)	184.410(72.6), 810.276(58.08), 711.683(55.32)
451.58 7	0.19 3	¹⁰¹ Sr(118 ms)	128.34(18.0), 1124.82(10.9), 510.73(8.5)
451.6 1	>0.19	⁴⁸ K(6.8 s)	3832.2(78), 780.25(31.0), 675.05(16.8)
451.6 1	\dagger 9.3 12	⁴⁹ K(1.26 s)	3832.2(\dagger 116)
451.6 7	0.55 12	¹²⁸ La(5.0 m)	284.00(87), 479.24(54), 643.65(14.7)
451.63 19	0.91 8	⁸³ Se(22.3 m)	356.687(70), 510.17(43), 224.8(32.7)
451.63 3	0.318 14	¹³⁵ I(6.57 h)	1260.409(28.90), 1131.511(22.74), 1678.027(9.62)
451.64 8	0.95 4	¹⁸⁰ Lu(5.7 m)	407.94(43.0), 1199.7(24.3), 1106.00(22.7)
451.7 4	0.09 3	¹⁰⁵ In(5.07 m)	131.37(41), 260.21(15.7), 604.11(9.2)
451.7 3	\dagger 2.14 21	¹⁹² Tl(9.6 m)	422.8(\dagger 100), 634.8(\dagger 75.9), 786.3(\dagger 31.7)
451.73 9	0.023 3	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
451.8 3	0.53 4	¹⁸⁸ Hg(3.25 m)	66.7(63), 190.1(4.40), 82.7(2.6)
451.8 7	0.31 3	¹⁹⁹ Bi(27 m)	560.1(22.0), 424.85(22), 841.7(11)
451.84 3	1.34 10	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
451.846 22	1.91 7	²⁰⁴ Po(3.53 h)	883.984(29.9), 270.068(27.8), 1016.31(24.1)
451.88 20	0.51 4	¹⁰⁷ Rh(21.7 m)	302.77(66), 392.47(8.8), 312.21(4.8)
451.9 2	9.8 12	⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
451.9 3	\dagger 0.76 9	¹²⁰ Cs(64 s)	322.4(\dagger 100), 473.5(\dagger 30), 553.4(\dagger 19.1)
451.90 10	0.240 18	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
451.9 4	0.07 4	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
451.9 2	\dagger 5.9 6	¹⁸⁵ Hg(21.6 s)	222.8(\dagger 100.0), 258.7(\dagger 98), 212.5(\dagger 58)
451.9 2	\dagger 4.3 5	¹⁸⁹ Hg(7.6 m)	320.99(\dagger 100), 78.21(\dagger 63), 565.42(\dagger 48)
452		⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
452.0 4	11.0 6	⁹⁸ Ag(46.7 s)	863.1(100), 678.5(85), 570.93(53)
452.0 2	0.5	¹⁴⁵ La(24.8 s)	70.0(11), 355.8(3.8), 118.2(3.6)
452		¹⁶² Tm(21.70 m)	102.00(17.5), 798.68(8.4), 227.52(7)
452.0	0.029 12	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
452.0 1	0.13	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
452.03 2	1.74 10	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
• 452.04 5	0.204 13	¹⁹⁵ Hg(41.6 h)	261.75(30.9), 560.27(7), 387.87(2.15)
452.1 4	0.39 4	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
452.1 1	4.4 3	¹³⁵ Nd(12.4 m)	204.02(52), 41.43(23), 441.2(14.9)
452.1	3.3	¹⁴⁷ Ce(56.4 s)	268.80(7), 92.9(4.7), 374.23(3.5)
452.1 3	0.089 13	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
• 452.16 13	0.014 5	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
452.18 10	0.024	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
452.2 2	0.059 10	¹⁶¹ Gd(3.66 m)	360.94(0.59), 314.92(22.7), 102.315(13.9)
452.2 2	0.30 7	¹⁷⁴ Tm(5.4 m)	366.526(92), 992.128(87), 272.918(86)
452.248 24	0.160 6	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
452.3 2	0.00069 7	¹⁶³ Er(75.0 m)	1113.5(0.0490), 436.1(0.0285), 439.94(0.0276)
452.323 2	18.18 5	¹³¹ Te(25.0 m)	149.716(69), 1146.96(4.95), 492.66(4.826)
• 452.323 2	2.0 5	¹³¹ Te(30 h)	773.67(49.9), 852.21(27.0), 793.75(18.10)
452.39 8	0.052 9	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)
452.4 3	0.073 9	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
452.4	0.18	¹⁴⁷ Ba(0.893 s)	167.4(11), 105.2(4.8), 196.1(4.8)
• 452.4 1	0.118 10	²²⁵ Ac(10.0 d)	99.91(1.01), 150.04(0.80), 99.63(0.62)
452.4 3	0.027 8	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
• 452.4 5	0.030 8	²⁵² Es(471.7 d)	52.33(0.55), 64.42(0.274), 418.5(0.220)
• 452.42 8	0.068 9	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: $E_{\gamma}(I_{\gamma})$
• 452.47 5	0.322 14	²⁰⁶ Po(8.8 d)	1032.26(32.9), 511.36(24.1), 286.410(23.8)
452.47 10	0.016 5	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
452.5 2	4	¹⁹⁹ Po(5.48 m)	246.0(28), 845.7(23), 206.7(5.1)
452.6 2	†24.1 20	¹⁵⁵ Er(5.3 m)	110.12(†100), 241.5(†65), 234.0(†40.0)
452.6 3	†100 14	¹⁹¹ Tl(5.22 m)	470.1(†98), 391.6(†96), 216.0(†96)
• 452.6 2	†2.40×10 ⁴ 24	²⁴¹ Am(432.2 y)	59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸)
• 452.62 8	1.6×10 ⁻⁵ 4	¹⁶⁹ Yb(32.026 d)	63.12077(44.2), 197.95788(35.8), 177.21402(22.16)
452.7 1	2.46 18	¹⁸⁸ Tl(71 s)	412.7(88), 592.0(61), 504.2(23.3)
452.7 6	0.00198 18	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
• 452.7 6	†0.007	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
452.8 3	0.15 6	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
452.8 3	0.18 8	¹²⁶ Ba(100 m)	233.6(19.6), 257.6(7.6), 241.0(6.0)
452.8 5	†0.06 2	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
452.80	0.10	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
452.83 10	0.31 6	²¹² Bi(60.55 m)	39.858(1.091), 288.07(0.31), 327.96(0.139)
• 452.84 8	0.156 8	²⁰⁶ Bi(6.243 d)	803.10(99), 881.01(66.2), 516.18(40.7)
452.85 7	17.2 9	¹⁵⁶ Tm(83.8 s)	344.55(86), 585.93(14.6), 585.9(>15)
452.9 1	0.12 6	¹³³ Te(12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
453.0 6	0.6 3	¹⁶² Tm(24.3 s)	811.52(6.5), 798.68(5.2), 227.52(5)
453.0	0.049	¹⁸⁵ Ir(14.4 h)	254.4(13.3), 1828.8(10), 60.0(5.7)
453.0 1	†3.3 4	²²⁵ Fr(4.0 m)	182.3(†100), 31.50(†91), 225.1(†55)
453.02 8	0.37 4	¹⁶² Tm(21.70 m)	102.00(17.5), 798.68(8.4), 227.52(7)
453.1 2	2.3 10	¹⁰³ Zr(1.3 s)	248(100), 164.05(94), 126.30(84)
453.1 4	0.30 8	¹⁵⁷ Sm(482 s)	197.870(56.00), 196.461(16.8), 394.351(11.93)
453.1 1	1.45 8	²⁵¹ Fm(5.30 h)	880.8(2.19), 405.6(0.99), 349.9(0.82)
453.11 4	0.176 19	⁷¹ Zn(2.45 m)	511.56(32), 910.27(7.8), 389.88(3.8)
453.11 4	1.12 9	⁷¹ Zn(3.96 h)	386.28(93), 487.38(62), 620.18(57)
453.15 7	†19.9 12	¹⁴² Xe(1.22 s)	571.83(†100), 657.05(†79), 538.24(†77)
453.2 1	3.81 16	¹³⁰ La(8.7 m)	357.4(81.0), 550.7(25.9), 908.0(17.0)
453.2 2	0.55 10	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
• 453.2 1	0.0023 3	¹⁷⁷ Ta(56.56 h)	112.9498(7.2), 208.3664(0.94), 1057.8(0.29)
453.2 3	0.100 20	²³⁷ Am(73.0 m)	280.23(47.3), 438.4(8.3), 473.5(4.3)
453.21 9	0.016 3	¹⁵⁹ Ho(33.05 m)	121.012(36.2), 131.973(23.6), 309.594(17.2)
453.27 5	1.00 4	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
453.31 19	0.133 14	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
453.34 2	0.073 5	¹⁸⁸ Re(16.98 h)	155.032(14.9), 632.99(1.25), 477.99(1.0)
• 453.34 2	0.031 12	¹⁸⁸ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
453.4 2	15	¹³⁹ Eu(17.9 s)	267.3(31), 155.3(31), 190.1(25)
453.4 2	13 4	¹⁴⁰ Gd(15.8 s)	174.8(76), 749.9(70), 379.0(38)
453.4 4	1.89 21	¹⁴⁴ La(40.8 s)	397.440(94.3), 541.20(39.2), 844.8(22.3)
453.40 6	0.14 3	¹⁵⁰ Pm(2.68 h)	333.971(68), 1324.51(17.5), 1165.739(15.8)
• 453.40 6	0.026 5	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
453.4 3	†5	¹⁵⁴ Nd(25.9 s)	151.703(†800), 799.55(†600), 180.693(†510)
453.4 5	<0.5	²³⁶ Pa(9.1 m)	642.35(37.0), 687.59(9.9), 1762.7(6.0)
• 453.42 6	0.035 3	¹⁴⁵ Eu(5.93 d)	893.73(66), 653.512(15.0), 1658.53(14.9)
453.47 6	0.40 11	¹⁵⁷ Sm(482 s)	197.870(56.00), 196.461(16.8), 394.351(11.93)
453.5 10	0.77 21	¹²⁹ Sb(4.40 h)	812.8(43), 914.6(20.0), 544.7(17.9)
453.5 2	†4.0 12	¹²⁹ Sb(17.7 m)	759.8(†100.0), 657.78(†92), 433.76(†73)
453.5 3	†17 3	¹⁶³ Lu(238 s)	163.08(†100), 54.00(†88), 396.34(†63)
453.5 1	†4.4 7	¹⁷² Ir(2.0 s)	227.8(†100.0), 378.4(†62.0), 448.4(†40.5)
453.5 2	0.222 8	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
453.58 10	†1.90×10 ³ 16	²³⁴ Pa(1.17 m)	1001.03(†837000), 766.38(†294000), 742.81(†80000)
453.6 2	2.6 3	⁷⁶ Rb(39.1 s)	2571.3(47), 424.0(43.4), 355.6(8.2)
453.6 1	0.105 17	⁹⁴ Rb(2.702 s)	1309.1(87), 836.9(87.10), 1577.5(31.8)

• $t_{1/2} > 1$ 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: $E_\gamma(I_\gamma)$
• 453.655 5	8.61 19	²³² Pa(1.31 d)	969.315(41.6), 894.351(19.8), 150.059(10.8)
453.659 15	5.88 13	¹³¹ La(59 m)	108.081(25.0), 417.783(18.0), 365.162(16.9)
453.7 2	0.605 23	¹⁰¹ Pd(8.47 h)	296.29(19), 590.44(12.06), 269.67(6.43)
453.7 3	†0.88 9	¹²⁰ Cs(64 s)	322.4(†100), 473.5(†30), 553.4(†19.1)
453.70 15	0.32 6	¹²⁵ Cd(0.57 s)	1027.53(25.8), 1173.16(25.1), 736.65(12.6)
453.7 5	0.09	¹⁴² La(91.1 m)	641.285(47), 2397.8(13.3), 2542.7(10.00)
453.7	0.08	¹⁴⁷ Ce(56.4 s)	268.80(7), 92.9(4.7), 374.23(3.5)
453.796 11	4.69 10	¹²⁵ Xe(16.9 h)	188.418(54), 243.378(30.1), 54.968(6.81)
453.8 3	2.21 20	⁹⁹ Y(1.470 s)	121.761(33), 724.30(14.9), 536.2(6.6)
453.8 3	0.036 20	¹¹⁷ Cd(2.49 h)	273.349(28), 1303.27(18.4), 344.459(17.9)
453.80 10	0.51 7	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
453.8 3	†13 4	¹⁷¹ Ho(53 s)	903.3(†100), 198.6(†88), 279.2(†60)
453.86 8	1.58 10	¹⁶⁶ Lu(2.65 m)	228.12(77.3), 337.50(41), 367.95(31.4)
453.88 6	48.0 24	¹⁴⁶ Pr(24.15 m)	1523.7(15.6), 735.72(7.5), 788.6(6.3)
• 453.88 6	65 2	¹⁴⁶ Pm(5.53 y)	735.72(22.5), 589.3(0.42), 146.4(0.21)
453.9 3	0.042 5	⁴⁵ K(17.3 m)	174.276(74.4), 1705.6(53), 2353.6(14.12)
453.93 15	19.7 9	⁷⁸ Zn(1.47 s)	224.75(43.9), 181.68(28.1), 860.30(24.5)
454.0 3	†1.7 5	¹⁰¹ Nb(7.1 s)	276.10(†100), 157.466(†32), 13.5(†32)
454.0 10	0.26 10	¹¹¹ Pd(5.5 h)	70.44(8.3), 391.25(5.4), 632.80(3.6)
454.03 6	0.61 4	¹⁴³ La(14.2 m)	620.3(2.34), 643.75(1.55), 621.4(1.52)
454.05 1	0.023 10	¹⁷⁸ Lu(23.1 m)	426.383(97.0), 325.562(94.1), 213.440(81.4)
454.07 9	0.238 23	¹⁷⁴ Ta(1.05 h)	206.50(58), 91.00(16.0), 1205.92(4.9)
454.08 9	0.18 4	²⁰⁵ Po(1.66 h)	872.39(37), 1001.21(28.8), 849.83(25.5)
454.1 2	†80 4	²³¹ Fr(17.5 s)	432.6(†100), 95.6(†17)
454.20 9	45	⁸⁵ Zr(7.86 m)	416.3(27.0), 1198.4(4.8), 266.3(2.57)
454.2 2	0.0036 7	¹³⁵ Xe(9.14 h)	249.770(90), 608.151(2.90), 408.009(0.359)
454.20 3	0.033 4	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
454.2 5	0.040	²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
454.25 5	0.25 3	¹²³ Cd(2.10 s)	371.32(51), 1052.28(24.8), 1438.13(8.3)
454.25 5	0.45 5	¹²³ Cd(1.82 s)	1165.86(25.7), 1027.45(22.6), 2102.81(12.5)
454.28 2	1.58 10	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
454.3 3	0.00054 22	¹⁰⁹ Pd(13.7012 h)	88.04(1.171), 311.4(0.032), 647.3(0.024)
454.3		¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
454.3 4	0.044 12	¹⁶¹ Er(3.21 h)	826.6(3.0), 211.15(12.2), 592.6(3.7)
454.3 4	0.42 8	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
454.38 7	0.108 9	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
454.40 20	2.39 6	⁸³ Y(7.08 m)	35.50(0.44), 882.1(6.30), 489.90(5.53)
454.4 5	0.031 10	⁸⁷ Br(55.60 s)	1419.71(22.0), 1476.04(7.9), 1577.60(6.0)
454.4 5	0.18 6	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
• 454.4 4	0.014 5	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
454.46 13	0.258 6	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
• 454.472 3	0.0198 20	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
454.5 2	1.12 18	¹¹¹ Pd(5.5 h)	70.44(8.3), 391.25(5.4), 632.80(3.6)
454.5 3	1.5 3	¹²⁸ Sb(9.01 h)	753.82(100), 743.22(100), 314.12(61)
454.551 11	0.288 21	¹⁸² Os(22.10 h)	510.056(52), 180.230(33.5), 263.285(6.71)
• 454.565 12	0.00082	²³⁹ Np(2.3565 d)	106.125(27.2), 277.599(14.38), 228.183(10.76)
454.565 12	0.0120 12	²³⁹ Am(11.9 h)	277.599(15.0), 228.183(11.3), 209.753(3.50)
454.6 3	0.044 22	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
454.6 2	0.046 9	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
454.6 1	†3.0 15	¹⁶⁴ Tm(2.0 m)	91.40(†1500), 1154.66(†366), 768.91(†279)
454.6 5		¹⁹¹ Hg(50.8 m)	252.5(57), 420.1(18.6), 578.6(17.6)
454.63 9	0.017 3	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
454.66 6	0.151 9	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: $E_{\gamma}(I_{\gamma})$
• 454.66 8	$\dagger 9.7 \times 10^4$ 3	^{241}Am (432.2 y)	59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$)
• 454.66		^{241}Am (432.2 y)	59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$)
• 454.67 5	0.15 3	^{189}Re (24.3 h)	216.663(5.50), 219.395(4.54), 245.09(3.5)
454.70 10	13.1 8	^{72}Br (78.6 s)	862.03(70), 1316.70(17.3), 2371.9(7.5)
454.7 4	1.06 15	^{113}Rh (2.72 s)	189.7(17.0), 409.3(15.9), 219.6(3.88)
454.7 1	$\dagger 4.5$ 5	^{171}Ta (23.3 m)	49.6($\dagger 100$), 506.4($\dagger 54$), 501.8($\dagger 22.6$)
454.76 15	0.0039 5	^{123}I (13.27 h)	158.97(83), 528.96(1.39), 440.02(0.428)
454.77 2	2.10 12	^{145}Cs (0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
454.77 12	0.282 9	^{214}Bi (19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
454.8 5	15 4	^{73}Kr (27.0 s)	177.8(65.8), 62.5(19.1), 151.1(12.5)
454.8 1	0.080 17	^{143}Ba (14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
454.8 5	$\dagger 9$	^{154}Nd (25.9 s)	151.703($\dagger 800$), 799.55($\dagger 600$), 180.693($\dagger 510$)
454.893 23	0.0295 19	^{187}W (23.72 h)	685.774(27.3), 479.531(21.8), 72.001(11.14)
454.95 5	8	^{230}Ac (122 s)	508.20(5.15), 1243.9(3.50), 1347.7(1.57)
• 454.95 5	6.27 16	^{230}Pa (17.4 d)	951.95(1.65), 918.48(8.2), 898.68(5.8)
• 454.95 5	0.000025 7	^{234}U (2.455×10^5 y)	53.20(0.123), 120.90(0.0342), 508.20(0.000015)
454.954 17	0.318 11	^{163}Tm (1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
454.97 5	0.007 3	^{78}Br (6.46 m)	
454.97 5	63	^{78}Rb (17.66 m)	692.86(12.56), 562.15(11.41), 3438.16(10.8)
454.97 5	81	^{78}Rb (5.74 m)	664.44(38.3), 1109.72(13.12), 692.86(12.26)
454.97 15	$\dagger 2.2$ 10	^{165}Lu (10.74 m)	132.49($\dagger 100$), 120.60($\dagger 100$), 174.25($\dagger 47.0$)
455.0	0.36	^{96}Y (9.6 s)	1750.42(89), 915.0(60), 617.1(56)
455.00 15	9.3 3	^{157}Tm (3.63 m)	385.5(8.8), 348.40(8.4), 110.35(8.2)
455.0 5	$\dagger 94$ 15	^{190}Bi (6.3 s)	773.8($\dagger 100$), 506.2($\dagger 92$), 846.4($\dagger 70$)
455		^{217}At (32.3 ms)	258.5(0.056), 593.1(0.0120), 334
455.04 10	0.82 3	^{98}Nb (51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
455.1		^{135}Ce (17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
455.1 5	0.06 4	^{140}Xe (13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
• 455.1 1	0.008	^{235}U (7.038×10^8 y)	85.712(57.2), 143.764(10.96), 163.358(5.08)
455.14 18	0.483 24	^{205}At (26.2 m)	719.30(31), 669.41(8.6), 628.88(5.6)
455.18 19	1.27 8	^{82}Rb (6.472 h)	776.517(84), 554.348(62.4), 619.106(37.976)
455.2 3	2.1 5	^{114}Rh (1.85 s)	332.9(87), 519.8(48.4), 618.7(31)
455.2 5	0.4 2	^{129}Sn (2.23 m)	645.13(100), 80.5(6.6), 913.2(5.0)
455.23 2	0.28 8	^{145}Cs (0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
455.28 10	0.11 4	^{133}Ce (4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
• 455.30 15	0.027 3	^{148}Eu (54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
455.3 2	1.8 4	^{151}Er (23.5 s)	638.3(36), 667.2(17), 256.4(15.9)
455.3 4	0.18 9	^{185}Au (4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
455.333 18	1.48 8	^{179}Re (19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
• 455.376 30	0.016 16	^{153}Tb (2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
455.4 6	0.07	^{103}Ag (65.7 m)	118.72(31.2), 148.193(28.3), 266.86(13.3)
455.4 2	4.8 5	^{130}Sb (39.5 m)	793.53(100), 839.49(100), 331.05(78)
455.46 3	12.4 6	^{199}Tl (7.42 h)	208.20597(12.3), 247.26(9.3), 158.37947(4.96)
455.490 3	31	^{137}Xe (3.818 m)	848.95(0.62), 1783.43(0.415), 1273.23(0.228)
455.5 1	0.44 4	^{96}Rb (0.199 s)	815.0(78.00), 692.0(8.0), 813.2(7.0)
455.5 1	0.2	^{97}Rb (169.9 ms)	815.0(100), 692.0(16.5), 414.3(15.0)
455.5	0.10	^{147}Ba (0.893 s)	167.4(11), 105.2(4.8), 196.1(4.8)
• 455.50 10	0.130 5	^{170}Lu (2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
455.5 2	$\dagger 1.70$ 21	^{185}Hg (21.6 s)	222.8($\dagger 100.0$), 258.7($\dagger 98$), 212.5($\dagger 58$)
455.6 3	0.152 15	^{135}Te (19.0 s)	603.5(37.0), 266.8(10.36), 870.3(7.73)
455.6 2	0.006 2	^{171}Er (7.516 h)	308.31(64.4), 295.901(28.9), 111.621(20.5)
455.6 3	0.047 7	^{181}Au (11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
455.60 6	0.0031	^{239}U (23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
455.62 15	0.021 3	^{85}Br (2.90 m)	802.41(2.56), 924.63(1.63), 919.06(0.65)

• $t_{1/2} > 1$ d

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
455.64 12	1.46 3	¹⁴⁴ Ba(11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
455.7 2	12 3	¹⁵⁰ Tb(5.8 m)	638.05(100), 650.4(70), 438.37(42)
455.7	0.029 12	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
455.8 5	†0.16 2	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
455.8 3	0.090 20	²³⁷ Am(73.0 m)	280.23(47.3), 438.4(8.3), 473.5(4.3)
• 455.84 13	0.0013 6	⁹⁹ Mo(65.94 h)	739.50(12.1), 181.063(6.08), 140.511(4.52)
455.89 5	0.42 8	¹⁰⁸ In(58.0 m)	875.46(100), 632.96(100), 242.84(41)
455.9 2	0.163 22	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
455.9 3	†7.4 13	¹⁵⁵ Er(5.3 m)	110.12(†100), 241.5(†65), 234.0(†40.0)
455.92 15	0.127 24	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
455.94 10	0.76 5	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
456.0 8	0.042	¹⁰³ Ag(65.7 m)	118.72(31.2), 148.193(28.3), 266.86(13.3)
• 456 1	0.11 7	¹²⁷ Sb(3.85 d)	685.7(37), 473.0(25.7), 783.7(15.0)
• 456.05 13	0.038 7	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
456.08 9	0.10 3	¹⁰³ Tc(54.2 s)	346.380(17.5), 136.079(16.6), 562.90(7.0)
456.093 25	0.0425 21	¹⁶⁵ Dy(2.334 h)	94.700(3.58), 361.68(0.84), 633.415(0.568)
456.1 2	0.54 5	¹⁰⁷ In(32.4 m)	204.97(47), 505.51(11.9), 320.92(10.2)
456.11 6	0.0138 17	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
456.2 1	†8.8 10	¹⁰³ Nb(1.5 s)	102.64(†100), 641.1(†55), 538.5(†34.0)
456.2 1	0.14 4	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
456.2 2	†59 7	²³¹ Ra(103 s)	409.92(†100), 204.98(†93), 469.3(†75)
456.2		²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
456.23 4	0.70 4	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
456.3 2	1.8 3	⁸¹ Ge(7.6 s)	93.10(26), 335.98(12.8), 197.30(12.3)
456.3 2	0.060 18	⁸⁹ Br(4.40 s)	1097.82(6.00), 997.93(4.26), 953.53(4.26)
456.3 4	0.07 4	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
456.31 16	†2.5 3	¹⁶⁵ Lu(10.74 m)	132.49(†100), 120.60(†100), 174.25(†47.0)
456.34 7	2.92 9	¹⁰³ Cd(7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
456.34 10	0.041 9	¹⁸⁷ Ir(10.5 h)	912.95(4.79), 427.12(4.12), 400.89(3.94)
456.35 10	0.10 3	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
456.4 2		¹³⁰ Pr(40.0 s)	951.9, 499.0, 1405
• 456.42 15	†0.082 21	¹⁰² Rh(207 d)	475.070(†47), 628.05(†4.6), 1103.16(†2.99)
• 456.459 15	1.25 6	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
456.5 5	0.46 23	⁹⁸ Y(2.0 s)	1223.0(80), 620.505(63), 647.58(53)
456.5 4	†3.0 8	¹³² Pr(1.6 m)	325.5(†100), 496.9(†25), 822.4(†17.3)
• 456.5 1	3.36 16	¹⁹¹ Pt(2.9 d)	538.90(13.7), 409.44(8.0), 359.90(6.0)
456.5 3	†1.23 41	¹⁹² Tl(9.6 m)	422.8(†100), 634.8(†75.9), 786.3(†31.7)
456.6 3	0.70 10	¹²¹ Cs(155 s)	153.9(15.2), 239.6(7.7), 427.1(3.63)
456.6 5	0.33 13	¹²¹ Cs(155 s)	153.9(15.2), 239.6(7.7), 427.1(3.63)
456.600 26	0.233 10	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
456.6 4	†11 3	¹⁶³ Lu(238 s)	163.08(†100), 54.00(†88), 396.34(†63)
456.63 23	0.23 3	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
• 456.638 9	0.71 3	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
456.68 11	0.080 9	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
456.68 13	0.28 4	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
456.7 3	1.8 3	⁹⁷ Y(1.17 s)	1103.0(92.6), 161.4(71.8), 1091(56)
456.7 5	>1.4	¹³¹ Sb(23.03 m)	943.4(47), 933.1(26.1), 642.30(23)
456.7 12		¹⁹⁷ Pb(43 m)	385.85(74), 387.72(25.1), 222.45(24.6)
456.7 10	†7.1×10 ² 15	²³⁴ Pa(1.17 m)	1001.03(†837000), 766.38(†294000), 742.81(†80000)
456.74 14	0.023 3	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
456.75 2	1.78 13	²⁰⁷ At(1.80 h)	814.41(44.5), 588.33(19.2), 300.654(12.8)
456.76 5	3.02 9	⁸¹ Rb(4.576 h)	190.38(64.0), 446.15(23.2), 510.31(5.3)
456.76 5	0.0087 16	⁸¹ Rb(30.5 m)	49.56(0.78), 643.6(0.115), 1194.9(0.112)
• 456.78 3	0.0239 12	¹⁴⁹ Gd(9.28 d)	149.735(48.2), 298.634(28.6), 346.651(23.9)

• $t_{1/2} > 1$ 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: $E_\gamma(I_\gamma)$
• 456.79 5	0.0356 22	⁷⁶ As(26.32 h)	559.101(45), 657.041(6.2), 1216.104(3.42)
456.79 5	0.067 15	⁷⁶ Br(16.2 h)	559.101(74), 657.041(15.9), 1853.67(14.7)
• 456.79 3	0.141 5	¹⁷³ Lu(1.37 y)	272.105(21.2), 78.63(11.87), 100.724(5.24)
456.8 3	0.48 5	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
456.8 2	†34	¹⁵³ Ho(9.3 m)	108.7(†100), 365.9(†92), 161.5(†83)
456.8 2	0.7	¹⁵³ Ho(2.0 m)	295.8(67), 637.0(5.36), 688.5(3.7)
456.81 6	†37	¹⁹⁷ Ir(5.8 m)	469.72(†100), 430.56(†61), 815.92(†45)
456.89 19	2.15 25	¹⁸⁶ Ta(10.5 m)	197.93(50), 214.87(42.3), 510.82(37.5)
456.9 5	†0.8 3	¹⁵² Tb(17.5 h)	344.281(†1500), 586.294(†223), 271.135(†203)
457.0 1	†4.5 4	⁷⁵ Ga(126 s)	253.0(†100), 574.8(†31.6), 885.6(†11.1)
457.0 1	8.0 6	¹²⁹ La(11.6 m)	278.6(25), 110.5(16.9), 253.8(8.0)
457	†6.4	¹⁶³ Lu(238 s)	163.08(†100), 54.00(†88), 396.34(†63)
457.0 1	0.0068 14	¹⁶⁷ Yb(17.5 m)	113.34(55.3), 106.18(22.5), 176.25(21)
457.0 2	†21	¹⁷⁷ Os(2.8 m)	84.7(†100), 125.4(†63), 195.8(†61)
457.07 5	0.138 13	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
457.1 1	0.373 14	¹⁴² Ba(10.6 m)	255.300(20.5), 1204.3(14.23), 895.2(13.9)
457.1 2	2.6 3	¹⁷⁶ Tm(1.9 m)	189.57(44.5), 1069.3(34), 381.8(21.8)
457.1 3	0.16 3	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
457.17 15	0.0154 24	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
457.19 6	0.60 16	⁶³ Ga(32.4 s)	637.04(11), 627.10(10.3), 192.94(5.7)
457.2 5	0.106 11	¹¹⁶ Te(2.49 h)	93.70(31.4), 628.63(3.22), 102.97(1.95)
457.2 2	0.69 12	¹²⁶ Ba(100 m)	233.6(19.6), 257.6(7.6), 241.0(6.0)
457.2 4	0.273 20	¹⁷⁷ W(135 m)	115.65(50), 426.98(13.2), 1036.4(10.3)
457.24 13	0.15	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
457.26 15	0.109 11	¹⁴² Cs(1.70 s)	359.598(27.2), 1326.46(12.92), 966.89(9.0)
457.30 10	0.91 6	⁹⁷ Rh(30.7 m)	421.55(75), 840.13(12.0), 878.80(9.0)
457.3 5	4.23 11	¹³⁷ Pm(2.4 m)	177.5(40.29), 108.6(35), 233.6(29.57)
457.34 6	0.75 5	¹⁴⁶ La(6.27 s)	258.47(64), 924.58(7.45), 702.28(6.43)
457.38 19	0.29 4	¹⁶² Yb(18.87 m)	163.35(40.0), 118.70(33.6), 576.10(3.24)
457.4 5	0.03 1	¹⁶³ Yb(11.05 m)	860.28(10.1), 63.62(6.5), 123.21(1.98)
457.4 3	†10.2 21	²³³ Pu(20.9 m)	235.4(†100), 534.8(†90.2), 500.3(†38.6)
457.41 10	3.46 15	⁸³ Se(22.3 m)	356.687(70), 510.17(43), 224.8(32.7)
• 457.5 10	0.0045 22	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
457.5 1	†1.90 19	¹⁷¹ Ta(23.3 m)	49.6(†100), 506.4(†54), 501.8(†22.6)
457.5 2	0.26 7	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
• 457.5 10	†0.0041	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
457.56 9	0.382 21	¹¹¹ Sn(35.3 m)	1152.98(2.7), 1914.70(1.99), 761.97(1.48)
457.59 3	0.304 10	¹⁶⁸ Ho(2.99 m)	741.356(36.6), 821.164(34.5), 815.990(18.6)
457.6 3	0.108 9	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
457.6 1	8.0 18	¹⁴¹ Gd(24.5 s)	351.1(89), 223.9(64), 574.9(51)
• 457.603 29	0.0068 5	⁹⁹ Mo(65.94 h)	739.50(12.1), 181.063(6.08), 140.511(4.52)
457.630 19	59	¹⁴⁰ I(0.86 s)	376.657(91), 936.7(16), 564.4(11)
• 457.65 4	1.49×10 ⁻⁶ 2	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
457.68 5	†100	¹⁷³ W(7.5 m)	130.19(†31.5), 174.8(†29.1), 623.48(†24.2)
457.7 5	2	¹¹⁶ Ag(10.4 s)	513.39(92), 705.82(61), 1028.90(30.4)
• 457.72 12	0.0033 8	⁷¹ As(65.28 h)	174.954(82.00), 1095.490(4.08), 499.876(3.624)
457.72 3	0.237 15	¹³⁰ I(12.36 h)	536.09(99), 668.54(96), 739.48(82)
• 457.76 5	0.154 9	²⁰⁶ Po(8.8 d)	1032.26(32.9), 511.36(24.1), 286.410(23.8)
457.77 5	0.117 20	²⁰⁰ Pb(21.5 h)	147.63(37.7), 257.17(4.46), 235.63(4.30)
457.8	5.01 14	¹⁴¹ Ba(18.27 m)	190.328(46.0), 304.194(25.4), 276.948(23.4)
457.80 13	0.40	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
457.8 10	0.57 17	¹⁹¹ Hg(50.8 m)	252.5(57), 420.1(18.6), 578.6(17.6)
457.81 19	0.36 10	¹²² In(10.3 s)	1140.55(98), 1001.58(50.7), 1190.58(20.5)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
457.9 4	0.5 4	¹³⁸ Pr(2.12 h)	1037.8(101), 788.742(100), 302.7(80)
• 457.90 15	0.0215 18	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
457.90 4	0.039 6	¹⁷⁷ Yb(1.911 h)	150.392(20.3), 1080.21(5.6), 1241.2(3.47)
457.9		¹⁹⁷ Pb(43 m)	385.85(74), 387.72(25.1), 222.45(24.6)
457.9 1	†16.4 5	²³⁰ Ra(93 m)	72.0(†100), 63.0(†35.4), 202.8(†27.3)
458.00 15	5.9 3	⁷⁸ Ga(5.09 s)	619.40(77), 1186.42(20.1), 567.06(18.2)
458.0 1	0.56 4	⁹⁴ Rb(2.702 s)	1309.1(87), 836.9(87.10), 1577.5(31.8)
458.0 1	0.0029	⁹⁵ Rb(377.5 ms)	836.9(2.9), 1089.4(0.14), 1309.1(0.12)
458.0 2	0.055 8	⁹⁵ Ru(1.643 h)	336.43(70.2), 1096.76(21.0), 626.77(17.8)
458.0 7	0.11 6	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
458.0 2	†20 5	¹³⁶ Eu(3.3 s)	254.9(†100), 431.4(†34), 778.0(†17)
• 458.0 5	0.05 5	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
458.1	0.22	¹⁴⁷ Ba(0.893 s)	167.4(11), 105.2(4.8), 196.1(4.8)
458.1 5	†6	²²³ Rn(23.2 m)	591.8(†100), 635.2(†76), 416.0(†55)
458.11 5	0.076 8	¹⁴³ Sm(8.83 m)	1056.58(4), 1514.98(1.39), 1173.18(0.88)
458.2 1	2.10 15	¹²⁹ La(11.6 m)	278.6(25), 110.5(16.9), 457.0(8.0)
458.2 2	†3 1	¹³⁶ Eu(3.3 s)	254.9(†100), 431.4(†34), 458.0(†20)
458.22 16	2.86 10	¹⁶¹ Yb(4.2 m)	78.20(34), 599.88(25.9), 631.45(13.9)
458.221 20	0.21	¹⁸² Os(22.10 h)	510.056(52), 180.230(33.5), 263.285(6.71)
458.23 8	0.0033 17	¹⁷³ Hf(23.6 h)	123.672(83), 296.974(33.9), 139.634(12.7)
458.25 7	1.7	²¹⁰ Rn(2.4 h)	648.70(0.843), 570.95(0.840), 72.70(0.59)
458.3 11	0.052 9	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
458.3 2	0.066 22	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
458.3 3	2.8 4	¹¹⁶ Cs(3.84 s)	393.5(<0.09), 524.3(76), 615.1(30.4)
458.3 6	0.18 7	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
458.3 4	0.28 14	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
458.36 6	0.034 7	¹⁵⁰ Pm(2.68 h)	333.971(68), 1324.51(17.5), 1165.739(15.8)
• 458.36 6	0.044 5	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
458.4	0.18	⁹⁵ Sr(23.90 s)	685.6(23), 2717.3(4.6), 2933.1(4.1)
458.4 3	0.043 15	¹⁴³ Eu(2.63 m)	1107.3(8), 1536.8(3.29), 1912.7(2.13)
458.400 15	0.56 9	¹⁷⁴ Tm(5.4 m)	366.526(92), 992.128(87), 272.918(86)
458.4 2	†76 5	²⁰² Po(44.7 m)	688.6(†1000), 316.0(†286), 165.7(†174)
458.42 25	0.26 6	⁷⁰ Se(41.1 m)	49.51(35.8), 426.15(29), 376.65(9.43)
458.5 3		⁵⁸ Mn(65.3 s)	810.764(<0.026), 1323.09(6.44), 459.160(21.4)
458.5 5	0.07 2	¹¹⁶ In(54.41 m)	1293.54(84.4), 1097.3(56.2), 416.86(28.9)
458.5 1	0.0038 6	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
458.5 5	†4.8 10	²⁰⁶ Rn(5.67 m)	497.7(†100), 324.5(†96), 386.6(†61)
458.6 10	†48	⁷⁷ Ga(13.2 s)	469.4(†100), 2187.3, 1242.3
458.68 5	1.13 6	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
458.70 20	1.7 3	¹⁰² Zr(2.9 s)	599.60(13.9), 535.30(10.6), 64.50(8.9)
458.7 1	5.6 6	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
458.7 3	0.47 4	¹⁷² Ta(36.8 m)	214.02(46), 95.23(17.5), 1109.27(12.4)
458.7 3	0.91 9	¹⁹⁰ Tl(3.7 m)	416.4(91), 625.4(82), 731.1(37)
458.7 3	0.79 8	¹⁹⁰ Tl(2.6 m)	416.4(79), 625.4(11.1), 683.5(8.7)
• 458.7 1	0.043 8	¹⁹¹ Pt(2.9 d)	538.90(13.7), 409.44(8.0), 359.90(6.0)
458.77 12	†12.4 6	¹⁶⁵ Lu(10.74 m)	132.49(†100), 120.60(†100), 174.25(†47.0)
458.77 12	†<12.4	¹⁶⁵ Lu(10.74 m)	132.49(†100), 120.60(†100), 174.25(†47.0)
• 458.8 2	0.0054 22	²²⁵ Ac(10.0 d)	99.91(1.01), 150.04(0.80), 99.63(0.62)
458.92 6	1.34 10	¹³⁴ I(52.6 m)	847.025(95.4), 884.090(64.9), 1072.547(15.0)
458.97 14	†10.0 10	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
459.0 10	6 3	⁷³ Kr(27.0 s)	177.8(65.8), 62.5(19.1), 454.8(15)
459.0 3	†1.9 4	¹⁰¹ Nb(7.1 s)	276.10(†100), 157.466(†32), 13.5(†32)
459.0 4	0.7 3	¹²² Cs(4.5 m)	331.1(94), 497.1(79), 638.5(63)
459.0	0.6	¹³⁴ Nd(8.5 m)	163.2(58), 288.9(13), 216.8(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: $E_\gamma(I_\gamma)$
459.05 8	0.296 17	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
459.05 3	0.109 10	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
459.069 11	27 3	¹⁸³ Hf(1.067 h)	783.754(66), 73.174(38), 397.859(2.9)
459.08 4	0.117 13	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
459.1 5	2.0 3	⁶⁵ Ge(30.9 s)	649.7(33), 62.0(27), 809.1(21.5)
459.1	0.013	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
459.1 2	2.13 25	¹⁵¹ Ho(35.2 s)	527.4(63), 775.53(9.2), 209.5(5.69)
459.10 9	0.032 4	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
459.160 25	21.4 6	⁵⁸ Mn(65.3 s)	810.764(<0.026), 1323.09(6.44), 863.935(14.8)
459.2 5	1.89 11	¹³⁷ Pm(2.4 m)	177.5(40.29), 108.6(35), 233.6(29.57)
459.2 4	†14.2 20	¹⁷² W(6.6 m)	38.9(†100), 423.3(†44), 89.8(†33.0)
459.2 2	0.015 9	¹⁹³ Au(17.65 h)	186.17(10.1), 255.57(6.7), 268.22(3.9)
459.222 7	1.4	²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 94.66(0.8)
459.3 4	0.179 19	¹⁰⁷ In(32.4 m)	204.97(47), 505.51(11.9), 320.92(10.2)
459.3 2	†15	¹³⁴ Pm(24 s)	294.2(†100), 494.7(†60), 631.3(†10)
459.30 4	5.5 5	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
459.4 5	0.043 12	⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
459.4 4	0.73 16	¹³⁰ La(8.7 m)	357.4(81.0), 550.7(25.9), 908.0(17.0)
459.4 4	0.15 8	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
459.43 7	†15.7 5	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
459.48	0.06	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
459.5 2	4.2 5	¹¹⁹ Cs(43.0 s)	176.05(29.7), 225.13(26), 257.9(17.4)
459.5 3	1.5 3	¹²⁸ Sb(9.01 h)	753.82(100), 743.22(100), 314.12(61)
• 459.5 5		¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
459.5 2	†1.70 21	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
459.5 3	0.0110 16	²⁴⁷ Cf(3.11 h)	294.1(0.98), 447.8(0.55), 417.9(0.34)
459.52 11	0.95 20	¹⁴⁹ Pr(2.26 m)	138.447(11.0), 165.087(9.9), 108.520(9.5)
459.52 15	2.3 3	¹⁸⁶ Tl(27.5 s)	405.43(92), 402.72(45.9), 356.84(29.3)
459.55 6	0.48 6	¹²³ Cd(1.82 s)	1165.86(25.7), 1027.45(22.6), 2102.81(12.5)
459.6 2	0.11 3	¹⁰⁴ Tc(18.3 m)	358.0(89), 530.5(15.6), 535.1(14.7)
459.60 5	7.70 23	¹²⁹ Te(69.6 m)	27.81(16.3), 487.39(1.42), 278.43(0.567)
• 459.60 5	0.00122 23	¹²⁹ Te(33.6 d)	695.88(2.988), 729.57(0.70), 556.65(0.118)
459.600 15	2.51 5	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
459.60 20	0.084 17	¹⁸⁹ Pt(10.87 h)	721.41(9.3), 94.33(7.6), 568.84(7.1)
459.6		²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
459.62 19	†4.2 8	¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†33)
• 459.68	†3.6×10 ⁴ 3	²⁴¹ Am(432.2 y)	59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸)
459.69 3	1.69 11	²⁰⁷ At(1.80 h)	814.41(44.5), 588.33(19.2), 300.654(12.8)
459.7 2	12.0 5	¹²¹ Cs(122 s)	179.4(30.2), 196.0(24.1), 234.5(4.7)
459.7 3	0.21 5	¹⁸⁸ Hg(3.25 m)	66.7(63), 190.1(4.40), 82.7(2.6)
459.72 7	8.6 5	²⁰² Pb(3.53 h)	490.47(9.1), 389.94(6.2), 241.1(0.84)
459.8 1	0.089 4	⁶⁶ Ga(9.49 h)	1039.30(37), 2752.01(23.38), 833.50(5.89)
459.8 4	0.21 9	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
459.8 3	0.21 9	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
459.8 3	†3.0 12	¹³¹ Ce(10.3 m)	169.42(†100), 414.25(†68), 119.18(†44)
459.8	0.006 3	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
459.80 10	1.15 18	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
459.8 2	†7 1	¹⁸⁵ Pt(33.0 m)	229.60(†100), 135.3(†80), 197.4(†74)
• 459.8 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)
• 459.80 22	0.003	²³⁸ Np(2.117 d)	984.45(27.8), 1028.54(20.3), 1025.87(9.6)
• 459.80 22	6×10 ⁻⁸ 4	²⁴² Cm(162.8 d)	44.08(0.0325), 101.90(0.0025), 157.42(0.0014)
• 459.814 5	0.579 6	¹⁴⁹ Gd(9.28 d)	149.735(48.2), 298.634(28.6), 346.651(23.9)
459.88 12	26.62 19	⁹⁶ Nb(23.35 h)	778.224(96.45), 568.80(58.0), 849.929(20.45)
• 459.88 12	0.43 4	⁹⁶ Tc(4.28 d)	778.224(100), 849.929(98), 812.581(82)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
459.88 12	0.0028 8	⁹⁶ Tc(51.5 m)	778.224(1.9), 1200.231(1.08), 480.705(0.311)
459.9 3	0.37 5	¹⁰¹ Ag(11.1 m)	261.0(53), 588.0(10.0), 667.3(9.8)
459.9	3.19 23	¹⁴⁰ Eu(1.51 s)	530.7(29), 1068.0(3.2), 2064.9(0.93)
459.92 5	0.96 5	²⁰⁴ Po(3.53 h)	883.984(29.9), 270.068(27.8), 1016.31(24.1)
460		¹¹⁵ I(1.3 m)	709, 284, 275
460.0 3	0.15 5	¹¹⁷ Xe(61 s)	28.5(7.0), 221.3(10.0), 32.3(7.6)
460		¹²⁶ La(54 s)	625, 340, 256.10
460.0 3	†2.0	¹⁴⁹ Ce(5.3 s)	57.7(†100), 380.0(†33.7), 86.4(†20.2)
460.0 2	2.07 22	¹⁶⁷ Ho(3.1 h)	346.547(56), 321.336(23.5), 237.873(5.0)
460.0 3	0.076 12	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
460.02 5	0.523 25	⁸⁸ Br(16.5 s)	775.28(63), 802.14(13.13), 1440.69(4.72)
460.05 10	3.03 5	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
460.1 4	0.0008 3	⁵⁷ Mn(87.2 s)	122.0614(13.9), 14.41300(10.56), 692.03(5.50)
460.1 1	0.032 3	¹²⁸ Cs(3.66 m)	442.901(26.8), 526.557(2.41), 1140.079(1.168)
460.1 7	0.38 7	²⁰¹ Bi(108 m)	629.1(24.0), 936.2(11.3), 1014.1(10.7)
460.16 18	0.25	¹⁸⁶ Ta(10.5 m)	197.93(50), 214.87(42.3), 510.82(37.5)
460.2 2	0.9 3	¹⁵² Ho(49.5 s)	647.2(92), 613.8(88.4), 683.3(88)
• 460.263 16	4.12 14	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
460.3 3	0.24 3	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
460.40 5	0.062 3	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
460.5 4	0.00010	¹⁰⁴ Rh(4.34 m)	555.796(0.13), 767.72(0.0065), 1237.2(0.0042)
460.5 3	†16 5	¹³¹ Nd(27 s)	87.8(†100), 174.42(†34), 164.09(†25)
460.5	0.07	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
460.5	0.125 24	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
460.5	2.4	¹³³ Pr(6.5 m)	134.3(14), 74.0(10), 315.6(10)
460.5 2	0.41 9	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
460.5 8	0.3 2	¹⁸¹ Os(105 m)	238.75(44), 826.77(20), 118.03(12.9)
• 460.50 3	3.95 20	¹⁹³ Os(30.5 h)	139.03(4.27), 73.039(3.2), 557.36(1.30)
• 460.57 3	0.121 3	⁹⁷ Ru(2.9 d)	215.718(86), 324.48(10.79), 569.31(0.873)
• 460.57 3	0.417 18	¹⁴⁸ Pm(41.29 d)	550.284(94.5), 629.987(89), 725.673(32.7)
• 460.57 3	0.0187 22	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
460.59 2	1.07 3	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
• 460.6 5	0.14 7	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
460.6 1	7.2 4	¹⁸⁸ Tl(71 s)	412.7(88), 592.0(61), 504.2(23.3)
460.7 2	0.40 8	¹⁰⁵ Mo(35.6 s)	85.4(25.0), 76.50(19.3), 147.8(14.8)
460.7 2	0.39 13	¹²¹ Cs(122 s)	179.4(30.2), 196.0(24.1), 459.7(12.0)
460.7 3	†1.5	¹³¹ Pr(1.53 m)	266.13(†100), 72.82(†64), 387.56(†38)
460.7 4	†16 3	¹⁶³ Lu(238 s)	163.08(†100), 54.00(†88), 396.34(†63)
460.7 3	0.128 14	¹⁹⁰ Au(42.8 m)	295.78(71.0), 301.82(23.4), 597.67(9.4)
460.73 5	0.60 4	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
460.73 13	0.027 4	¹⁶⁷ Yb(17.5 m)	113.34(55.3), 106.18(22.5), 176.25(21)
• 460.80 20	0.0187 22	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
460.84 5	0.24 3	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
460.9 1	0.54 7	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
460.9 3	0.92 8	¹⁵⁴ Ho(11.76 m)	334.6(84), 412.4(15.0), 873.4(12.5)
460.9 5	†1.9	¹⁷¹ Hf(12.1 h)	122.0(†100), 662.2(†83), 347.18(†47)
460.9 5	0.040 10	²¹⁴ Bi(19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
460.923 9	0.97 7	¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
460.94 4	1.62 13	¹¹⁷ Cd(3.36 h)	1997.33(26), 1065.98(23.1), 564.397(14.7)
460.94 6		¹³² Ce(3.51 h)	182.11(77), 155.37(10.5), 216.83(4.95)
460.997 22	9.9 6	¹³⁴ Te(41.8 m)	767.20(29.0), 210.465(22.3), 277.951(20.9)
461.00	0.9 1	³⁴ Ar(844.5 ms)	665.54(2.5), 3128.9(1.30), 2580.2(0.863)
461.0 2	7.7 4	¹³⁶ Pr(13.1 m)	552.16(76), 539.75(52), 1092.3(18.5)
461	†7.2	¹⁶³ Lu(238 s)	163.08(†100), 54.00(†88), 396.34(†63)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
461.0 2	$\dagger 18.1$ 18	$^{185}\text{Hg}(21.6 \text{ s})$	222.8($\dagger 100.0$), 258.7($\dagger 98$), 212.5($\dagger 58$)
461	$\dagger 11$ 3	$^{210}\text{Fr}(3.18 \text{ m})$	643.8($\dagger 100$), 817.6($\dagger 60$), 203.1($\dagger 35$)
461 1	0.9	$^{228}\text{Pa}(22 \text{ h})$	911.205(4.19), 463.005(1.250), 964.770(4.25)
461.0 1	0.090 6	$^{251}\text{Fm}(5.30 \text{ h})$	880.8(2.19), 453.1(1.45), 405.6(0.99)
461.04 3	10.7 3	$^{184}\text{Ta}(8.7 \text{ h})$	414.03(72), 252.848(43), 920.932(32.0)
461.046 11	0.065 9	$^{155}\text{Sm}(22.3 \text{ m})$	104.3346(74.6), 245.771(3.7), 141.4428(1.98)
461.081 5	0.11 3	$^{75}\text{Br}(96.7 \text{ m})$	286.572(88), 141.3147(6.6), 427.883(4.4)
461.09 11	$\dagger 12.1$ 6	$^{32}\text{Ar}(98 \text{ ms})$	1168.4($\dagger 32.8$), 707.4($\dagger 12.1$), 1078.5($\dagger 12.0$)
461.1	2.3	$^{110}\text{In}(4.9 \text{ h})$	657.7622(98.3), 884.685(92.9), 937.493(68.4)
461.1 5	$\dagger 8$	$^{223}\text{Rn}(23.2 \text{ m})$	591.8($\dagger 100$), 635.2($\dagger 76$), 416.0($\dagger 55$)
461.2 2	6.4 8	$^{100}\text{Nb}(2.99 \text{ s})$	535.60(97.0), 600.5(65.0), 1280.6(23.8)
• 461.20 15	0.0121 18	$^{170}\text{Lu}(2.00 \text{ d})$	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
461.2 2	0.0032 12	$^{246}\text{Am}(25.0 \text{ m})$	1078.86(27.7), 798.80(25), 1062.04(17.1)
• 461.258 24	0.056 9	$^{131}\text{Ba}(11.50 \text{ d})$	496.326(47), 123.805(28.97), 216.078(19.66)
• 461.260 4	2.27×10^{-6} 2	$^{239}\text{Pu}(24110 \text{ y})$	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
461.3 5	0.10 3	$^{63}\text{Fe}(6.1 \text{ s})$	994.8(14.0), 1427.2(4.6), 1299.0(1.23)
461.30 4	0.62 12	$^{133}\text{Te}(12.5 \text{ m})$	312.072(62), 407.63(27.1), 1333.21(10.67)
461.38 3	1.27 3	$^{77}\text{Ge}(11.30 \text{ h})$	264.44(54), 211.03(30.8), 215.50(28.6)
461.4 4	0.103 15	$^{109}\text{In}(4.2 \text{ h})$	203.5(74), 623.7(5.5), 1148.9(4.3)
461.4 8	6.9 3	$^{173}\text{Tm}(8.24 \text{ h})$	398.9(88), 62.6(0.9)
461.4	>0.017	$^{251}\text{Fm}(5.30 \text{ h})$	880.8(2.19), 453.1(1.45), 405.6(0.99)
461.41 8	0.059 11	$^{176}\text{Ta}(8.09 \text{ h})$	1159.28(25), 88.34(12), 1224.93(6)
461.41 7	1.44 8	$^{209}\text{Rn}(28.5 \text{ m})$	408.32(50.3), 745.78(22.8), 337.45(14.5)
461.5 1	1.224 23	$^{79}\text{Rb}(22.9 \text{ m})$	688.1(23), 182.77(19.2), 143.41(13.9)
461.5 3	$\dagger 20$ 4	$^{85}\text{As}(2.028 \text{ s})$	1111.5($\dagger 100$), 3749.4($\dagger 23$), 3345.0($\dagger 14.2$)
461.5 6	$\dagger 91$ 7	$^{119}\text{Xe}(5.8 \text{ m})$	231.8($\dagger 100$), 98.5($\dagger 95$), 207.8($\dagger 60$)
461.5 2	0.54 4	$^{162}\text{Tm}(24.3 \text{ s})$	811.52(6.5), 798.68(5.2), 227.52(5)
461.5 5	0.42 11	$^{164}\text{Tb}(3.0 \text{ m})$	168.838(25.4), 754.80(23.3), 215.07(21)
461.5 1	0.034 10	$^{234}\text{Pa}(6.70 \text{ h})$	131.30(18), 946.00(13.4), 883.24(9.6)
461.5 1		$^{234}\text{Pa}(6.70 \text{ h})$	131.30(18), 946.00(13.4), 883.24(9.6)
461.52 7	0.43 3	$^{87}\text{Br}(55.60 \text{ s})$	1419.71(22.0), 1476.04(7.9), 1577.60(6.0)
461.6 3	$\dagger 3.4$ 1	$^{114}\text{Te}(15.2 \text{ m})$	90.28($\dagger 100$), 83.8($\dagger 67$), 1417.6($\dagger 32$)
461.6 3	0.046 9	$^{146}\text{Pr}(24.15 \text{ m})$	453.88(48.0), 1523.7(15.6), 735.72(7.5)
461.6 1	$\dagger 2.0$ 2	$^{171}\text{Ta}(23.3 \text{ m})$	49.6($\dagger 100$), 506.4($\dagger 54$), 501.8($\dagger 22.6$)
461.61 5	0.81 3	$^{153}\text{Dy}(6.4 \text{ h})$	80.723(11.10), 213.754(10.90), 99.659(10.51)
461.61 15	0.254 20	$^{154}\text{Tb}(9.4 \text{ h})$	123.071(30), 247.925(22.1), 540.18(20)
461.7 23	$\dagger 2$	$^{87}\text{Nb}(2.6 \text{ m})$	200.95($\dagger 100$), 470.63($\dagger 73$), 1066.8($\dagger 37$)
461.70 20	11.0 5	$^{99}\text{Zr}(2.1 \text{ s})$	469.140(55), 546.13(48.6), 593.990(27.4)
461.70 10	1.01 14	$^{159}\text{Tm}(9.13 \text{ m})$	38.35(5.8), 84.8(5.8), 271.30(5.1)
461.70 15	0.119 24	$^{204}\text{Bi}(11.22 \text{ h})$	899.15(98), 374.72(82), 984.02(59)
• 461.761 15	0.826 19	$^{150}\text{Eu}(35.8 \text{ y})$	333.971(96), 439.401(80.4), 584.274(52.6)
461.80 13	4.7	$^{110}\text{In}(4.9 \text{ h})$	657.7622(98.3), 884.685(92.9), 937.493(68.4)
461.8 2	0.8 2	$^{151}\text{Er}(23.5 \text{ s})$	638.3(36), 667.2(17), 256.4(15.9)
461.83 6	1.11 15	$^{193}\text{Hg}(11.8 \text{ h})$	257.97(61), 407.63(25), 573.25(14.2)
461.845 12	0.62 3	$^{163}\text{Tm}(1.810 \text{ h})$	104.320(18.6), 69.229(11.6), 241.305(10.9)
461.85 10	1.48 12	$^{140}\text{Xe}(13.60 \text{ s})$	805.52(20), 1413.66(12.2), 1315.05(8.2)
461.87 17	$\dagger 5$ 1	$^{183}\text{Hg}(9.4 \text{ s})$	60.5($\dagger 100$), 159.91($\dagger 21$), 172.70($\dagger 17$)
461.9 8	0.00067 10	$^{107}\text{Cd}(6.50 \text{ h})$	93.124(1.45), 828.93(0.17), 796.462(0.0665)
461.9	2.3 13	$^{147}\text{Cs}(0.225 \text{ s})$	85.2(7.3), 245.8(4.5), 109.7(4.5)
461.9 3	0.20 7	$^{159}\text{Er}(36 \text{ m})$	624.5(33), 649.1(23.4), 205.92(9.7)
461.9 2	$\dagger 18.5$ 25	$^{159}\text{Yb}(1.58 \text{ m})$	166.16($\dagger 500$), 177.12($\dagger 159$), 390.20($\dagger 113$)
461.9 7	0.23 4	$^{175}\text{Ta}(10.5 \text{ h})$	207.4(14.0), 348.5(12.0), 266.9(10.8)
461.90 10	0.42 6	$^{183}\text{Ir}(58 \text{ m})$	392.52(10.4), 228.70(6.9), 87.67(5.6)
461.9 2	1.0 4	$^{220}\text{Ra}(25 \text{ ms})$	

• $t_{1/2} > 1 \text{ d}$

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
• 461.9 4	0.0016	²³⁹ Np(2.3565 d)	106.125(27.2), 277.599(14.38), 228.183(10.76)
• 461.9 4		²⁴³ Cm(29.1 y)	277.599(14.0), 228.183(10.6), 209.753(3.29)
461.93 7	0.85 8	¹⁵⁸ Tm(3.98 m)	192.13(62), 335.10(16.8), 1149.83(7.6)
461.96 11	0.047 9	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
461.98 8	0.303 16	²²⁴ Fr(3.30 m)	215.985(33.1), 131.613(16.3), 836.90(9.8)
• 462.0 3	0.0015 3	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
462.04 20	>0.00023	¹²⁹ Te(69.6 m)	27.81(16.3), 459.60(7.70), 487.39(1.42)
462.06 8	0.036 5	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
462.1 3	0.081 9	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
462.10 4	0.38 5	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
462.1	0.11	¹⁴⁸ Dy(3.1 m)	620.24(96), 1247.2(1.4), 178.3(0.5)
462.1	0.22	¹⁴⁹ Ho(21.1 s)	1090.7(74.8), 1073.2(6.37), 1583.6(4.48)
462.1 1	†0.77 8	¹⁵⁸ Ho(11.3 m)	218.21(†100.0), 98.91(†70), 945.7(†37)
462.1 3	0.06	¹⁷⁰ Hf(16.01 h)	164.78(33), 620.7(23), 120.17(19)
462.1 2	0.23 3	²¹⁴ Pb(26.8 m)	351.921(35.8), 295.213(18.5), 241.981(7.50)
462.11 11	†10.3 21	¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†33)
• 462.13 38	0.0042 14	¹⁹⁵ Hg(41.6 h)	261.75(30.9), 560.27(7), 387.87(2.15)
462.14 8	2.61 14	¹⁰¹ Sr(118 ms)	128.34(18.0), 1124.82(10.9), 510.73(8.5)
462.15	0.17	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
462.2 2	0.59 5	⁷⁸ As(90.7 m)	613.725(54), 694.916(16.7), 1308.59(13.0)
462.2 1	0.095 5	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
462.2 5	†3.1	¹⁷¹ Hf(12.1 h)	122.0(†100), 662.2(†83), 347.18(†47)
462.2 2	†9.2 10	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
462.2 5	0.040 20	²²³ Ac(2.10 m)	98.58(0.891), 191.3(0.58), 83.55(0.57)
462.23 3	1.55 22	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
• 462.24 13	0.036 5	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
462.3	4.88 14	¹⁴¹ Ba(18.27 m)	190.328(46.0), 304.194(25.4), 276.948(23.4)
462.3 1	0.127 11	¹⁴³ La(14.2 m)	620.3(2.34), 643.75(1.55), 621.4(1.52)
462.31 5	5.07 5	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 587.01(4.21)
462.34 10	0.041 21	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
462.34 13	98 3	²⁰⁰ Bi(36.4 m)	1026.5(100), 419.70(91), 245.154(46)
462.34 13	†45.7 24	²⁰⁰ Bi(31 m)	1026.5(†110), 419.70(†26.0), 245.154(†5.6)
462.4 2	2.2 3	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
462.4 3	0.7 3	¹⁸⁰ Ir(1.5 m)	276.4(56), 132.2(38.1), 699.0(13.4)
• 462.4 4	0.0017 9	²²⁵ Ac(10.0 d)	99.91(1.01), 150.04(0.80), 99.63(0.62)
462.4 2	†43 6	²³¹ Ra(103 s)	409.92(†100), 204.98(†93), 469.3(†75)
462.5 2	†100	¹¹³ I(6.6 s)	622.4(†74), 351.5(†43), 567.4(†36)
462.5 4	0.8 2	¹³⁰ Sb(39.5 m)	793.53(100), 839.49(100), 331.05(78)
• 462.50 21	0.019 9	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
462.5 7	4.6 15	¹⁹⁴ Tl(32.8 m)	636.5(99), 428.0(99), 748.9(76)
• 462.59 5	0.142 3	¹⁸⁹ Re(24.3 h)	216.663(5.50), 219.395(4.54), 245.09(3.5)
462.6	0.44	⁹⁶ Y(9.6 s)	1750.42(89), 915.0(60), 617.1(56)
462.6 2	0.23 4	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
462.6 7	0.59 6	¹⁹⁹ Bi(27 m)	560.1(22.0), 424.85(22), 841.7(11)
462.61 5	3.66 21	¹⁰⁷ Ru(3.75 m)	194.05(9.9), 847.93(5.3), 374.28(3.0)
462.63 5	0.65 17	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
462.63 15	0.108 12	¹⁶⁵ Yb(9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
• 462.68 5	0.047 9	¹³¹ Ba(11.50 d)	496.326(47), 123.805(28.97), 216.078(19.66)
462.7 2	9.8 10	⁸⁴ Y(40 m)	793.3(99), 974.6(75), 1040.2(56)
462.70 6	1.01 10	⁹⁹ Sr(0.269 s)	125.118(16.1), 536.12(14.0), 1198.12(9.2)
462.7 3	4.0	¹²⁸ Cd(0.34 s)	247.92(75), 857.05(71), 68.02(29)
462.7 3	2.5	¹²⁸ Cd(0.34 s)	247.92(75), 857.05(71), 68.02(29)
462.7 2	0.034 6	¹⁴⁶ Ce(13.52 m)	316.74(56), 218.23(20.8), 264.56(9.0)
462.796 5	30.7 6	¹³⁸ Cs(33.41 m)	1435.795(76.3), 1009.78(29.8), 2218.00(15.2)

• $t_{1/2} > 1$ 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: $E_\gamma(I_\gamma)$
462.796 5	18.6 10	¹³⁸ Cs(2.91 m)	1435.795(19), 191.96(15.4), 112.60(1.52)
462.8 3	†45 4	¹⁴³ Tb(12 s)	45.1(†100), 686.1(†48), 380.3(†43)
462.84 8	4.4 5	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
462.9 2	†6.9 9	¹³¹ Ce(5.0 m)	230.43(†100), 436.85(†7.3), 568.95(†4.7)
462.9	0.06 3	¹⁴¹ Ba(18.27 m)	190.328(46.0), 304.194(25.4), 276.948(23.4)
• 462.92 5	2.38 5	¹³¹ Te(30 h)	773.67(49.9), 852.21(27.0), 793.75(18.10)
• 462.92 10	0.053 5	²⁰⁶ Bi(6.243 d)	803.10(99), 881.01(66.2), 516.18(40.7)
462.99 7	5.4 5	⁸⁰ Zn(0.545 s)	712.53(45.1), 715.40(33.8), 964.93(15.6)
463.0		¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
463.005 4	4.44 11	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
463.005 4	1.250 6	²²⁸ Pa(22 h)	911.205(4.19), 964.770(4.25), 968.971(3.88)
463.04 3	0.75 6	¹¹⁷ Cd(2.49 h)	273.349(28), 1303.27(18.4), 344.459(17.9)
463.04 3		¹¹⁷ Cd(3.36 h)	1997.33(26), 1065.98(23.1), 564.397(14.7)
463.08 17	0.30 5	⁸¹ Sr(22.3 m)	153.54(33.8), 147.76(30.1), 443.34(17.5)
463.1 3	1.3 3	⁸¹ Ge(7.6 s)	335.98(58.9), 792.94(34), 1495.53(19.9)
463.1 3	1.4 3	⁸¹ Ge(7.6 s)	93.10(26), 335.98(12.8), 197.30(12.3)
463.1 2	4.1 3	¹³⁹ Pm(4.15 m)	402.8(15), 367.8(3.52), 756.5(1.99)
463.1 3	0.58 15	¹³⁹ Sm(2.57 m)	273.7(37), 306.7(28.5), 596.3(8.0)
463.1 2	0.285 15	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
• 463.1 2	†3.7×10 ⁵ 11	²³⁷ Pu(45.2 d)	280.40(†870000), 298.89(†7.85×10 ⁶), 320.75(†6.48×10 ⁶)
463.16 8	0.25	¹¹⁶ In(14.10 s)	1293.54(1.3), 1252.5(0.031), 2112.1(0.021)
463.16 8	0.83 5	¹¹⁶ In(54.41 m)	1293.54(84.4), 1097.3(56.2), 416.86(28.9)
463.16 8	0.31	¹¹⁶ Sb(15.8 m)	1293.54(85), 931.800(24.7), 2225.33(14.2)
463.20 10	2.40 5	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)
• 463.22 20	†1.0×10 ⁴	²⁴¹ Am(432.2 y)	59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸)
• 463.273 20	1.23 8	²⁴¹ Cm(32.8 d)	471.805(71), 430.634(4.06), 132.413(3.86)
• 463.273 20		²⁴⁵ Bk(4.94 d)	205.879(0.040), 471.805(0.026), 164.8(0.0084)
463.28 10	0.25 4	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
463.3 4	0.017 17	⁴⁴ K(22.13 m)	1157.031(58), 2150.76(22.7), 2518.95(9.69)
463.3 1	†681 67	¹⁵⁷ Ho(12.6 m)	279.97(†47600), 341.16(†37000), 193.41(†15200)
• 463.365 4	10.493 15	¹²⁵ Sb(2.7582 y)	427.875(30), 600.600(17.86), 635.954(11.31)
• 463.38 5	1.79 7	²⁰⁶ Po(8.8 d)	1032.26(32.9), 511.36(24.1), 286.410(23.8)
463.40 7	0.0212 24	⁸¹ Rb(30.5 m)	49.56(0.78), 643.6(0.115), 1194.9(0.112)
463.4 1	0.22 9	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
463.4 5	2.3 11	¹³⁹ Eu(17.9 s)	267.3(31), 155.3(31), 190.1(25)
463.4 1	3.7 5	¹⁴¹ Tb(3.5 s)	293.3(16.8), 343.6(16.3), 198.4(14.8)
463.4 1	0.026 7	¹⁷³ Ta(3.14 h)	172.2(18), 69.70(5.9), 90.3(5.0)
463.4 2	†30 3	¹⁹² Bi(37 s)	853.8(†100.0), 501.8(†80), 504.3(†39)
463.46 18	0.45 17	¹⁶⁷ Ho(3.1 h)	346.547(56), 321.336(23.5), 237.873(5.0)
463.5 1	†62 3	¹³⁵ Pm(49 s)	198.5(†100), 207.2(†70), 128.7(†60)
• 463.6 7	0.0009 5	⁷⁶ As(26.32 h)	559.101(45), 657.041(6.2), 1216.104(3.42)
• 463.6 5		¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
463.6 4	0.41 5	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
463.6	>0.28	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
463.6 3	0.056 19	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
463.60 10	0.029 4	²³⁰ Ac(122 s)	454.95(8), 508.20(5.15), 1243.9(3.50)
• 463.60 10	0.82 6	²³⁰ Pa(17.4 d)	951.95(1.65), 918.48(8.2), 454.95(6.27)
• 463.67 15	0.0163 17	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
463.7 6	0.15 5	¹⁰³ Cd(7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
463.7 5	>0.35	¹³⁷ Pm(2.4 m)	177.5(40.29), 108.6(35), 233.6(29.57)
463.7 1	9.9 8	¹⁴³ Gd(39 s)	258.81(75), 204.77(19.4), 812.9(5.4)
• 463.7	>0.0021	¹⁷² Er(49.3 h)	610.062(44.2), 407.338(42.1), 68.107(3.29)
463.7 3	0.16 3	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
463.7 4	0.07 3	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: $E_\gamma(I_\gamma)$
• 463.71 17	2.8×10^{-7} 3	$^{239}\text{Pu}(24110 \text{ y})$	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
463.73 7	1.11 13	$^{99}\text{Ag}(124 \text{ s})$	264.41(65), 832.29(13.5), 805.07(12.5)
• 463.8 4	0.009 5	$^{151}\text{Pm}(28.40 \text{ h})$	340.08(23), 167.75(8.3), 275.21(6.8)
463.8 1		$^{171}\text{Ta}(23.3 \text{ m})$	49.6(\dagger 100), 506.4(\dagger 54), 501.8(\dagger 22.6)
463.8 5	4.6 13	$^{181}\text{Lu}(3.5 \text{ m})$	652.5(22.0), 205.94(16.1), 574.9(15.4)
• 463.9	0.00429 25	$^{154}\text{Eu}(8.593 \text{ y})$	123.071(40.79), 1274.436(35.19), 723.304(20.22)
463.91 30	0.25	$^{137}\text{I}(24.5 \text{ s})$	1218.00(12.8), 601.05(4.80), 1302.64(4.42)
464.0 5	0.28 17	$^{133}\text{Te}(55.4 \text{ m})$	912.671(55.28), 647.51(19.4), 863.955(15.6)
464.0 5		$^{172}\text{W}(6.6 \text{ m})$	38.9(\dagger 100), 423.3(\dagger 44), 89.8(\dagger 33.0)
464.01 10	0.12 3	$^{195}\text{Tl}(1.16 \text{ h})$	563.52(10.5), 884.47(10.0), 1363.88(8.4)
464.1 4	0.135 18	$^{120}\text{Xe}(40 \text{ m})$	25.1(30), 72.6(9), 178.1(6.8)
464.1	0.31	$^{145}\text{La}(24.8 \text{ s})$	70.0(11), 355.8(3.8), 118.2(3.6)
464.1 5	0.029 15	$^{193}\text{Au}(17.65 \text{ h})$	186.17(10.1), 255.57(6.7), 268.22(3.9)
464.1 1	\dagger 1.6 3	$^{225}\text{Fr}(4.0 \text{ m})$	182.3(\dagger 100), 31.50(\dagger 91), 225.1(\dagger 55)
• 464.11 7	0.38 8	$^{150}\text{Eu}(35.8 \text{ y})$	333.971(96), 439.401(80.4), 584.274(52.6)
• 464.11 7	0.08 8	$^{150}\text{Eu}(35.8 \text{ y})$	333.971(96), 439.401(80.4), 584.274(52.6)
• 464.11 7	0.462 8	$^{150}\text{Eu}(35.8 \text{ y})$	333.971(96), 439.401(80.4), 584.274(52.6)
464.2 2	0.81 24	$^{130}\text{La}(8.7 \text{ m})$	357.4(81.0), 550.7(25.9), 908.0(17.0)
464.2 1	0.031 10	$^{234}\text{Pa}(6.70 \text{ h})$	131.30(18), 946.00(13.4), 883.24(9.6)
464.205 5	0.009 4	$^{200}\text{Au}(48.4 \text{ m})$	367.943(19), 1225.479(10.7), 1262.950(3.12)
• 464.205 5	0.026 17	$^{200}\text{Tl}(26.1 \text{ h})$	367.943(87), 1205.717(29.9), 579.298(13.8)
464.29 7	0.77 22	$^{166}\text{Lu}(1.41 \text{ m})$	228.12(15), 102.38(13), 285.07(11.0)
464.3 4	0.53 13	$^{185}\text{Au}(4.25 \text{ m})$	310.6(13), 243.1(6.6), 77.7(6)
464.3 2	\dagger 3.3 3	$^{185}\text{Hg}(21.6 \text{ s})$	222.8(\dagger 100.0), 258.7(\dagger 98), 212.5(\dagger 58)
464.31 14	0.169 18	$^{167}\text{Lu}(51.5 \text{ m})$	29.66(14.4), 239.22(8.6), 213.19(3.6)
• 464.36 8	0.085 14	$^{241}\text{Cm}(32.8 \text{ d})$	471.805(71), 430.634(4.06), 132.413(3.86)
464.41 4	0.065 18	$^{201}\text{Au}(26 \text{ m})$	542.6(1.2), 517.0(0.83), 613.2(0.77)
464.42 20	\dagger 0.48 4	$^{184}\text{Ir}(3.09 \text{ h})$	263.97(\dagger 100), 119.80(\dagger 45), 390.38(\dagger 38)
464.5 4	0.8 3	$^{105}\text{Tc}(7.6 \text{ m})$	143.26(16), 107.945(14.1), 321.50(11.1)
464.5 3	0.0057 15	$^{166}\text{Tm}(7.70 \text{ h})$	778.817(18.9), 2052.36(17.2), 184.410(16.1)
464.5 7	2.3 8	$^{194}\text{Tl}(32.8 \text{ m})$	636.5(99), 428.0(99), 748.9(76)
464.5	\dagger 25	$^{205}\text{Rn}(2.8 \text{ m})$	264.9(\dagger 100), 620.2(\dagger 25), 675.0(\dagger 20)
• 464.55 4	1.73 8	$^{132}\text{Cs}(6.479 \text{ d})$	567.14(0.234), 1031.70(0.125)
464.55 4	76 5	$^{132}\text{La}(4.8 \text{ h})$	567.14(15.7), 1909.91(9.0), 663.07(9.0)
464.55 4	22	$^{132}\text{La}(24.3 \text{ m})$	663.07(11.6), 285.6(7), 515.78(7)
464.64 5	4.6 3	$^{134}\text{Te}(41.8 \text{ m})$	767.20(29.0), 210.465(22.3), 277.951(20.9)
464.7 4	\dagger 0.6 1	$^{182}\text{Ir}(15 \text{ m})$	273.23(\dagger 100), 126.79(\dagger 77), 236.3(\dagger 21.0)
• 464.72 9	3.6×10^{-6} 21	$^{169}\text{Yb}(32.026 \text{ d})$	63.12077(44.2), 197.95788(35.8), 177.21402(22.16)
464.734 16	3.75 20	$^{179}\text{Re}(19.5 \text{ m})$	430.221(28), 289.968(26.9), 1680.244(13.0)
464.77 10	0.70 5	$^{101}\text{Sr}(118 \text{ ms})$	128.34(18.0), 1124.82(10.9), 510.73(8.5)
464.79 5	24.2 10	$^{79}\text{Ga}(2.847 \text{ s})$	516.41(21.5), 1187.28(12.8), 2140.20(7.0)
• 464.797 17	1.212 22	$^{166}\text{Ho}(1.20 \times 10^3 \text{ y})$	184.410(72.6), 810.276(58.08), 711.683(55.32)
464.82 2	0.20 4	$^{145}\text{Cs}(0.594 \text{ s})$	175.36(20), 198.93(10.9), 112.46(10.71)
464.85 2	5.65 8	$^{149}\text{Tb}(4.118 \text{ h})$	352.24(29.43), 164.98(26.4), 388.57(18.37)
464.9 2	0.074 11	$^{183}\text{Ir}(58 \text{ m})$	392.52(10.4), 228.70(6.9), 87.67(5.6)
464.9	0.10	$^{185}\text{Ir}(14.4 \text{ h})$	254.4(13.3), 1828.8(10), 60.0(5.7)
464.95 8	0.356 16	$^{201}\text{Pb}(9.33 \text{ h})$	331.19(79), 361.27(9.9), 945.96(7.4)
465.0 3	0.31 8	$^{121}\text{Cs}(122 \text{ s})$	179.4(30.2), 196.0(24.1), 459.7(12.0)
465.0 3	\dagger 1.9 5	$^{131}\text{Pr}(1.53 \text{ m})$	266.13(\dagger 100), 72.82(\dagger 64), 387.56(\dagger 38)
465.0	7	$^{133}\text{Pr}(6.5 \text{ m})$	134.3(14), 74.0(10), 315.6(10)
465.0 1	2.7 5	$^{142}\text{Tb}(597 \text{ ms})$	515.0(25), 853.1(2.42), 1399.2(2.39)
465.0 1	0.50 25	$^{142}\text{Tb}(597 \text{ ms})$	515.0(25), 465.0(2.7), 853.1(2.42)
465 1	\dagger 3.1	$^{177}\text{Os}(2.8 \text{ m})$	84.7(\dagger 100), 125.4(\dagger 63), 195.8(\dagger 61)
465.0 2	\dagger 25 5	$^{185}\text{Pt}(33.0 \text{ m})$	229.60(\dagger 100), 135.3(\dagger 80), 197.4(\dagger 74)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
465.02 5	5.87 9	⁵⁹ Cu(81.5 s)	1301.46(14.78), 877.97(11.40), 339.411(7.97)
465.05 20	0.93 17	¹⁶⁴ Tb(3.0 m)	168.838(25.4), 754.80(23.3), 215.07(21)
465.1 3	0.17 3	¹¹⁷ Cs(8.4 s)	204.8(15.0), 29.7(9.9), 205.6(6.8)
465.1 6	0.048 7	¹⁵⁰ Pm(2.68 h)	333.971(68), 1324.51(17.5), 1165.739(15.8)
465.11 10	0.249 21	¹⁶² Tm(21.70 m)	102.00(17.5), 798.68(8.4), 227.52(7)
465.13 24	0.095 3	⁴⁵ K(17.3 m)	174.276(74.4), 1705.6(53), 2353.6(14.12)
465.130 18	96.9 19	²⁰⁹ Tl(2.20 m)	1567.09(99.8), 117.211(84.3), 920.13(0.61)
465.15 16	0.070 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
465.2 2	0.092 21	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
465.2 4	0.59 13	¹⁶⁰ Yb(4.8 m)	173.74(42.0), 215.78(20.2), 140.35(9.3)
• 465.2 1	0.0040 10	²²³ Ra(11.435 d)	269.459(13.7), 154.21(5.62), 323.871(3.93)
• 465.228 1	0.0935 16	⁷¹ As(65.28 h)	174.954(82.00), 1095.490(4.08), 499.876(3.624)
465.28 19	0.070 12	⁹⁰ Kr(32.32 s)	1118.69(39.0), 121.82(35.5), 539.49(30.8)
465.34 5	3.1 10	¹⁶⁵ Tb(2.11 m)	1178.53(13.2), 538.51(7.2), 1292.05(7.0)
465.4 5	0.24 4	⁸⁹ Kr(3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
465.4 3	1.1 3	¹¹⁶ Cs(3.84 s)	393.5(<0.09), 524.3(76), 615.1(30.4)
465.4 2	5.8 3	¹²⁰ In(47.3 s)	1171.3(100), 1023.1(97.4), 197.3(80.6)
465.4	†0.39 12	¹⁷⁸ Ir(12 s)	266.1(†100.0), 131.6(†79), 363.1(†39.9)
465.5 2	3.7 3	⁷⁷ Zn(2.08 s)	189.49(28.1), 473.94(19.7), 1832.0(12.4)
465.5 2	0.056 19	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
465.50 10	0.36 4	¹³⁴ I(52.6 m)	847.025(95.4), 884.090(64.9), 1072.547(15.0)
• 465.50 15	0.0108 9	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
465.53 11	0.0105 15	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
465.53 8	1.10 25	¹⁸⁶ Ta(10.5 m)	197.93(50), 214.87(42.3), 510.82(37.5)
465.6 1	14.3 12	¹⁰⁸ Tc(5.17 s)	242.25(82), 707.81(11.4), 1583.5(9.8)
465.6 5	0.025 12	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
465.6 5	†0.17 1	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
465.6	†2	²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
465.61 5	0.0254 20	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
465.63 10	0.122 14	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
465.65 3	2.50 13	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
465.65 25	0.36 13	¹⁴⁹ Pr(2.26 m)	138.447(11.0), 165.087(9.9), 108.520(9.5)
• 465.657 6	0.0001897 21	¹⁶⁹ Yb(32.026 d)	63.12077(44.2), 197.95788(35.8), 177.21402(22.16)
465.70 20	†100	¹⁰⁶ Mo(8.4 s)	54.00(†54), 618.60(†25), 595.40(†17.9)
465.7 1	0.25 6	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
465.7 4	0.31 4	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
465.7 5	>0.00023	²⁴³ Pu(4.956 h)	84.0(23), 41.8(0.76), 381.7(0.56)
465.80 5	1.21 7	⁸¹ Sr(22.3 m)	153.54(33.8), 147.76(30.1), 443.34(17.5)
465.8 3	0.10 4	¹⁰⁰ Rh(20.8 h)	539.59(78.4), 2376.1(35.3), 1553.4(21)
465.8	†3	¹⁰⁷ Mo(3.5 s)	400.3(†100), 65.7(†>92), 384.4(†57.6)
465.8 3	0.15 6	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
465.8 5	†0.8 3	¹⁵² Tb(17.5 h)	344.281(†1500), 586.294(†223), 271.135(†203)
465.8 3	0.18	¹⁵⁴ Pm(1.73 m)	2057.76(17.1), 1393.9(14.4), 81.99(12.6)
465.8 2	0.128 13	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
465.8 5	†3.6 6	²⁰⁶ Rn(5.67 m)	497.7(†100), 324.5(†96), 386.6(†61)
465.806 3	0.91 4	¹⁹⁹ Pt(30.80 m)	542.993(15), 493.772(5.59), 317.056(4.95)
465.81	0.08	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
• 465.8416 102.35 12		¹⁷⁷ Lu(160.4 d)	208.3664(57.7), 228.4838(37.0), 378.5029(29.7)
465.86 12	0.0212 24	⁸¹ Rb(30.5 m)	49.56(0.78), 643.6(0.115), 1194.9(0.112)
465.87 3	1.394 25	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
465.88 18	†1.3 3	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
466.0 3	0.24 9	⁷⁶ Rb(39.1 s)	2571.3(47), 424.0(43.4), 355.6(8.2)
466.0 10	1.65 5	⁸⁸ Nb(7.8 m)	1057.01(89.3), 1082.53(53.9), 399.41(45.7)
466.0 3	0.40 10	¹²¹ Cs(155 s)	153.9(15.2), 239.6(7.7), 427.1(3.63)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
466 1		¹⁴² Gd(70.2 s)	750.2(11.2), 178.90(11.20), 284.4(6.16)
466.0 1	†352 48	¹⁵⁷ Ho(12.6 m)	279.97(†47600), 341.16(†37000), 193.41(†15200)
466.0 3	0.48 3	¹⁹⁰ Au(42.8 m)	295.78(71.0), 301.82(23.4), 597.67(9.4)
466.1 3	†>0.32	¹⁶⁰ Ho(5.02 h)	728.18(†100), 879.383(†65.9), 962.317(†59.1)
466.1 11	1.8 9	¹⁹⁰ Tl(3.7 m)	416.4(91), 625.4(82), 731.1(37)
466.13 10	0.80 6	⁸⁹ Kr(3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
466.15 26	0.006	¹¹⁶ Te(2.49 h)	93.70(31.4), 628.63(3.22), 102.97(1.95)
466.15 10	1.39 8	¹²¹ Cd(8.3 s)	2059.41(21.0), 1020.89(18.9), 987.81(13.6)
466.16 7	1.1	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
466.22 15	1.30 6	¹⁸⁶ Au(10.7 m)	191.56(62), 298.67(25.4), 764.89(10.5)
466.23 26	1.49 16	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
466.26 8		¹³² Ce(3.51 h)	182.11(77), 155.37(10.5), 216.83(4.95)
466.3	3.3	¹⁴⁷ Ce(56.4 s)	268.80(7), 92.9(4.7), 374.23(3.5)
466.35 4	†18 1	¹⁰¹ Nb(7.1 s)	276.10(†100), 157.466(†32), 13.5(†32)
466.4 3	5.0 5	¹⁷¹ Re(15.2 s)	568.4(16.1), 102.0(9.7), 1066.0(8.1)
466.4 5	0.40 18	¹⁹⁵ Pb(15.0 m)	383.64(106.9), 394.21(44), 878.40(24.2)
466.40 10	0.030 3	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
466.44 13	0.098 7	²⁰⁷ Po(5.80 h)	992.33(59.3), 742.64(28.2), 911.79(16.95)
466.46 6	0.57 4	¹⁰⁰ Sr(202 ms)	963.85(22.0), 898.50(18.9), 65.46(15.2)
466.48 3	1.27 4	⁵⁸ Mn(65.3 s)	810.764(<0.026), 1323.09(6.44), 459.160(21.4)
• 466.5 10	0.004 4	⁷⁶ As(26.32 h)	559.101(45), 657.041(6.2), 1216.104(3.42)
466.5 23	†2	⁸⁷ Nb(2.6 m)	200.95(†100), 470.63(†73), 1066.8(†37)
466.5 5	†0.42 21	¹⁸³ Hg(9.4 s)	60.5(†100), 159.91(†21), 172.70(†17)
• 466.5 10	†0.0031 15	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
• 466.562 8	1.93×10^{-5} 21	¹⁶⁹ Yb(32.026 d)	63.12077(44.2), 197.95788(35.8), 177.21402(22.16)
466.6 3	27 5	¹¹⁶ Rh(0.9 s)	340.5(90), 639.4(52), 538.4(40)
466.62 15	0.070 17	⁸⁹ Rb(15.15 m)	1031.94(58), 1248.19(42.6), 2196.02(13.3)
466.69 5	3.02 13	¹⁴³ Cs(1.78 s)	195.554(13), 232.421(8.32), 306.424(6.80)
466.70 12	0.0232 25	¹³⁹ Cs(9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
466.7 2	0.09 4	¹⁸³ Hf(1.067 h)	783.754(66), 73.174(38), 459.069(27)
466.7 1	1.07 6	²⁴⁰ Np(61.9 m)	566.34(25.3), 973.9(23.8), 600.57(18.4)
466.73 7	0.052 9	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
466.74 5	1.63 10	¹⁴³ Cs(1.78 s)	195.554(13), 232.421(8.32), 306.424(6.80)
466.750 12	1.00 5	¹⁴⁷ Pr(13.4 m)	77.9921(15), 314.675(13.2), 641.380(10.0)
466.76 4	1.06 4	⁸⁰ Ga(1.697 s)	659.14(78.0), 1083.47(48.4), 1109.36(18.6)
466.8 2	0.018 4	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)
466.8 3	0.073 6	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
466.8 1	0.9 3	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
466.8 1	0.44 7	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
466.8 2	>0.06	¹⁴⁶ La(6.27 s)	258.47(64), 924.58(7.45), 702.28(6.43)
466.8 4	†0.33 10	¹⁵⁵ Tm(21.6 s)	226.8(†100), 531.7(†20), 88.1(†17)
466.8	†<1.2	¹⁹³ Pb(5.8 m)	365.2(†100), 392.2(†20.7), 716.4(†6.7)
466.88 18	0.076 12	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
466.9 4	0.013 8	⁸² Rb(1.273 m)	776.517(13), 1395.139(0.471), 698.374(0.133)
466.9		¹³⁰ Pr(40.0 s)	951.9, 499.0, 1405
• 466.93 21	0.047 12	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
466.95 6	0.019 6	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
467.0 9	0.007 7	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
467.0 4	0.7 3	¹²² Cs(4.5 m)	331.1(94), 497.1(79), 638.5(63)
467.0 3	0.55 15	¹³⁹ Sm(2.57 m)	273.7(37), 306.7(28.5), 596.3(8.0)
• 467.0 3	0.011 5	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
467.0 5	0.093 20	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
467.02 7	0.39 6	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
• 467.03 4	0.024 5	¹¹⁰ Ag(249.79 d)	657.7622(94.0), 884.685(72.2), 937.493(34.13)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
467.03 4	0.14	$^{110}\text{In}(4.9 \text{ h})$	657.7622(98.3), 884.685(92.9), 937.493(68.4)
467.03 3	0.0026 3	$^{145}\text{Pr}(5.984 \text{ h})$	748.278(0.5250), 675.795(0.514), 72.500(0.261)
467.04 8	0.75 10	$^{191}\text{Au}(3.18 \text{ h})$	586.45(17), 277.88(7.2), 674.19(6.8)
467.1 2	†1	$^{139}\text{I}(2.29 \text{ s})$	527.7(†100), 571.2(†98), 536.6(†67)
467.1 11	0.079 18	$^{167}\text{Lu}(51.5 \text{ m})$	29.66(14.4), 239.22(8.6), 213.19(3.6)
467.1 2		$^{191}\text{Tl}(5.22 \text{ m})$	452.6(†100), 470.1(†98), 391.6(†96)
467.12 1	7.1 5	$^{207}\text{At}(1.80 \text{ h})$	814.41(44.5), 588.33(19.2), 300.654(12.8)
467.2 2	0.7 2	$^{104}\text{Mo}(60 \text{ s})$	68.8(55), 69.7(17.8), 36.3(14)
467.2 3	0.124 12	$^{112}\text{Sb}(51.4 \text{ s})$	1257.05(96), 990.70(14.3), 670.0(3.7)
467.2 4	0.53 5	$^{120}\text{Xe}(40 \text{ m})$	25.1(30), 72.6(9), 178.1(6.8)
• 467.246 30	0.310 19	$^{153}\text{Tb}(2.34 \text{ d})$	212.038(31.0), 170.504(6.8), 109.758(6.4)
467.3 2	3.52 18	$^{60}\text{Cu}(23.7 \text{ m})$	1332.501(88), 1791.6(45.4), 826.06(21.7)
467.3 3	$>9.0 \times 10^{-5}$	$^{95}\text{Tc}(20.0 \text{ h})$	765.794(93.82), 1073.71(3.74), 947.67(1.951)
467.30 10	0.58 13	$^{99}\text{Ag}(124 \text{ s})$	264.41(65), 832.29(13.5), 805.07(12.5)
467.3 3	0.70 21	$^{104}\text{In}(1.8 \text{ m})$	658.0(100), 834.1(99), 878.1(29.4)
• 467.35 15	0.0220 13	$^{170}\text{Lu}(2.00 \text{ d})$	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
• 467.36 5	0.282 16	$^{195}\text{Hg}(41.6 \text{ h})$	261.75(30.9), 560.27(7), 387.87(2.15)
467.389 6	0.12 3	$^{75}\text{Br}(96.7 \text{ m})$	286.572(88), 141.3147(6.6), 427.883(4.4)
467.4 1		$^{171}\text{Ta}(23.3 \text{ m})$	49.6(†100), 506.4(†54), 501.8(†22.6)
467.4 7	0.048 20	$^{175}\text{Ta}(10.5 \text{ h})$	207.4(14.0), 348.5(12.0), 266.9(10.8)
467.47 3	†100	$^{192}\text{Re}(16 \text{ s})$	750.96(†25), 489.039, 283.2668
467.5 3	2.3 6	$^{114}\text{Rh}(1.85 \text{ s})$	332.9(87), 519.8(48.4), 618.7(31)
• 467.5	>0.0020	$^{140}\text{Ba}(12.752 \text{ d})$	537.261(24.39), 29.9640(14.1), 162.660(6.21)
467.5	5.70 18	$^{141}\text{Ba}(18.27 \text{ m})$	190.328(46.0), 304.194(25.4), 276.948(23.4)
467.5 3		$^{177}\text{W}(135 \text{ m})$	115.65(50), 426.98(13.2), 1036.4(10.3)
467.5 3	0.72 3	$^{177}\text{W}(135 \text{ m})$	115.65(50), 426.98(13.2), 1036.4(10.3)
467.5 3	0.018	$^{233}\text{Th}(22.3 \text{ m})$	86.477(2.7), 29.374(2.5), 459.222(1.4)
467.506 10	0.88 3	$^{151}\text{Tb}(17.609 \text{ h})$	287.357(28.3), 251.863(26.3), 108.088(24.3)
467.57 12	0.65 4	$^{144}\text{Ba}(11.5 \text{ s})$	103.855(23.30), 430.48(18.3), 172.828(15.4)
467.6	0.24	$^{147}\text{Ba}(0.893 \text{ s})$	167.4(11), 105.2(4.8), 196.1(4.8)
467.6 3	†3.8 9	$^{159}\text{Yb}(1.58 \text{ m})$	166.16(†500), 177.12(†159), 390.20(†113)
467.6 4	†1.8 4	$^{189}\text{Hg}(7.6 \text{ m})$	320.99(†100), 78.21(†63), 565.42(†48)
467.7 2	2.46 21	$^{117}\text{Ag}(72.8 \text{ s})$	135.4(23), 337.7(10.3), 157.1(7.9)
467.7 4	0.52 9	$^{144}\text{La}(40.8 \text{ s})$	397.440(94.3), 541.20(39.2), 844.8(22.3)
• 467.7 5	0.064 9	$^{146}\text{Eu}(4.59 \text{ d})$	747.2(98), 633.03(43), 634.07(37)
467.70 20	0.138 12	$^{153}\text{Dy}(6.4 \text{ h})$	80.723(11.10), 213.754(10.90), 99.659(10.51)
467.7 5	0.38 11	$^{166}\text{Lu}(2.65 \text{ m})$	228.12(77.3), 337.50(41), 367.95(31.4)
467.7 4	0.05 3	$^{185}\text{Au}(4.25 \text{ m})$	310.6(13), 243.1(6.6), 77.7(6)
467.72 10	20	$^{81}\text{As}(33.3 \text{ s})$	491.20(8.5), 521.10(1.40), 1406.14(0.998)
467.76 8	†4.92 20	$^{129}\text{Ba}(2.17 \text{ h})$	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
467.8 1	0.40 5	$^{184}\text{Pt}(17.3 \text{ m})$	154.90(31), 191.97(27), 548.36(23.1)
467.8 2	0.72 18	$^{198}\text{Pb}(2.40 \text{ h})$	290.3(36), 365.4(19), 173.4(18)
467.81 4	2.88 24	$^{141}\text{Xe}(1.73 \text{ s})$	909.23(24.0), 118.705(16.1), 105.937(9.8)
467.81 6		$^{168}\text{Lu}(5.5 \text{ m})$	1483.65(†100), 228.58(†97), 111.8(†68)
467.81 6	1.1 3	$^{168}\text{Lu}(6.7 \text{ m})$	198.82(28), 979.22(20), 896.12(15)
• 467.84 5	0.0609 18	$^{154}\text{Eu}(8.593 \text{ y})$	123.071(40.79), 1274.436(35.19), 723.304(20.22)
467.9	2.8	$^{134}\text{Nd}(8.5 \text{ m})$	163.2(58), 288.9(13), 216.8(12)
467.9 3	0.24 4	$^{161}\text{Er}(3.21 \text{ h})$	826.6(3.0), 211.15(12.2), 592.6(3.7)
467.9 2	0.240 20	$^{162}\text{Ho}(67.0 \text{ m})$	185.005(28.6), 1220.0(22.5), 282.864(11.3)
467.94 18	0.24 3	$^{187}\text{Au}(8.4 \text{ m})$	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
467.98 6	2.6 7	$^{81}\text{Ge}(7.6 \text{ s})$	335.98(58.9), 792.94(34), 1495.53(19.9)
467.98 6	2.5 8	$^{81}\text{Ge}(7.6 \text{ s})$	93.10(26), 335.98(12.8), 197.30(12.3)
468.0 3	18	$^{87}\text{Se}(5.85 \text{ s})$	242.5(37), 334.0(35), 573.2(19)
468.0 3	0.98 10	$^{127}\text{In}(1.09 \text{ s})$	1597.7(49), 646.1(6.2), 805.1(5.6)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
468.0 1	$\dagger 319$ 48	$^{157}\text{Ho}(12.6 \text{ m})$	279.97($\dagger 47600$), 341.16($\dagger 37000$), 193.41($\dagger 15200$)
468.0 1		$^{234}\text{Pa}(6.70 \text{ h})$	131.30(18), 946.00(13.4), 883.24(9.6)
468.0 1	0.216 21	$^{234}\text{Pa}(6.70 \text{ h})$	131.30(18), 946.00(13.4), 883.24(9.6)
468.02 15	0.84 6	$^{146}\text{Ce}(13.52 \text{ m})$	316.74(56), 218.23(20.8), 264.56(9.0)
• 468.07152 247.83 17		$^{192}\text{Ir}(73.831 \text{ d})$	316.50791(82.81), 308.45692(30.00), 295.95827(28.67)
468.07152 247.75 3		$^{192}\text{Au}(4.94 \text{ h})$	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
468.10 15	0.28 5	$^{159}\text{Tm}(9.13 \text{ m})$	38.35(5.8), 84.8(5.8), 271.30(5.1)
468.1 5	$\dagger 2.30 \times 10^3$ 16	$^{234}\text{Pa}(1.17 \text{ m})$	1001.03($\dagger 837000$), 766.38($\dagger 294000$), 742.81($\dagger 80000$)
• 468.12 15	$\dagger 2.88 \times 10^4$ 21	$^{241}\text{Am}(432.2 \text{ y})$	59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$)
468.130 4	1.00 4	$^{199}\text{Pt}(30.80 \text{ m})$	542.993(15), 493.772(5.59), 317.056(4.95)
• 468.16 9	0.41 4	$^{131}\text{Te}(30 \text{ h})$	773.67(49.9), 852.21(27.0), 793.75(18.10)
468.17 7	$\dagger 20.3$ 12	$^{142}\text{Xe}(1.22 \text{ s})$	571.83($\dagger 100$), 657.05($\dagger 79$), 538.24($\dagger 77$)
468.17 7	$\dagger 3.4$ 2	$^{142}\text{Xe}(1.22 \text{ s})$	571.83($\dagger 100$), 657.05($\dagger 79$), 538.24($\dagger 77$)
468.2 2	0.94 13	$^{153}\text{Ho}(2.0 \text{ m})$	295.8(67), 637.0(5.36), 688.5(3.7)
468.2 1	5.0 3	$^{188}\text{Tl}(71 \text{ s})$	412.7(88), 592.0(61), 504.2(23.3)
468.27 2	3.1 3	$^{130}\text{Sb}(6.3 \text{ m})$	839.49(100), 793.53(86), 182.36(41)
468.27 2	18 1	$^{130}\text{Sb}(39.5 \text{ m})$	793.53(100), 839.49(100), 331.05(78)
468.3 3	$\dagger 2.1$ 4	$^{183}\text{Hg}(9.4 \text{ s})$	60.5($\dagger 100$), 159.91($\dagger 21$), 172.70($\dagger 17$)
468.33 6	0.208 16	$^{153}\text{Dy}(6.4 \text{ h})$	80.723(11.10), 213.754(10.90), 99.659(10.51)
468.4 4	0.119 11	$^{85}\text{Y}(4.86 \text{ h})$	231.67(22.8), 2123.8(5.0), 767.40(3.6)
468.4 5	0.020 6	$^{151}\text{Tb}(17.609 \text{ h})$	287.357(28.3), 251.863(26.3), 108.088(24.3)
468.4 3	$\dagger > 0.32$	$^{160}\text{Ho}(5.02 \text{ h})$	728.18($\dagger 100$), 879.383($\dagger 65.9$), 962.317($\dagger 59.1$)
468.4 1	0.054 16	$^{228}\text{Fr}(39 \text{ s})$	473.7(10.2), 474.0(7.6), 410.40(6.3)
468.4 2	$\dagger 4.6$	$^{256}\text{Es}(7.6 \text{ h})$	861.8($\dagger 100$), 231.1($\dagger 61$), 172.6($\dagger 49$)
468.5 5	0.17	$^{116}\text{Sb}(15.8 \text{ m})$	1293.54(85), 931.800(24.7), 2225.33(14.2)
468.5		$^{140}\text{Sm}(14.82 \text{ m})$	225.5(> 10), 225.4(10), 140.0(5.0)
• 468.500 12	0.421 9	$^{148}\text{Eu}(54.5 \text{ d})$	550.284(98.5), 629.987(71.9), 611.293(20.5)
468.5 3	0.8 3	$^{152}\text{Ho}(49.5 \text{ s})$	647.2(92), 613.8(88.4), 683.3(88)
468.5		$^{207}\text{Po}(5.80 \text{ h})$	992.33(59.3), 742.64(28.2), 911.79(16.95)
468.5 5	0.24	$^{227}\text{Ra}(42.2 \text{ m})$	27.36(16), 300.07(4.6), 302.65(4.3)
468.59 6	0.88 7	$^{102}\text{Tc}(5.28 \text{ s})$	475.070(7), 865.5(0.87), 628.05(0.78)
• 468.59 6	$\dagger 2.99$ 21	$^{102}\text{Rh}(207 \text{ d})$	475.070($\dagger 47$), 628.05($\dagger 4.6$), 1103.16($\dagger 2.99$)
468.6 10	0.127 15	$^{67}\text{Ge}(18.9 \text{ m})$	167.01(84), 1472.48(4.9), 910.92(3.1)
• 468.6 1	0.029 5	$^{124}\text{Sb}(60.20 \text{ d})$	602.730(97.8), 1690.980(47.3), 722.786(10.76)
468.6 5	0.22	$^{203}\text{Bi}(11.76 \text{ h})$	820.3(30), 825.2(14.6), 896.9(13)
468.7 4	0.7 4	$^{29}\text{S}(187 \text{ ms})$	1383.51(19), 1953.83(17.02), 2422.5(15.5)
468.7 4	0.47 4	$^{127}\text{Sn}(2.10 \text{ h})$	1114.3(39), 1095.6(20), 823.1(10.9)
468.7 2	0.50 3	$^{235}\text{Th}(7.1 \text{ m})$	417.0(2), 727.2(0.87), 696.1(0.64)
468.71 6	0.260 15	$^{200}\text{Pt}(12.5 \text{ h})$	76.21(13), 135.90(3.24), 243.71(2.49)
468.73 5	0.52 4	$^{204}\text{Bi}(11.22 \text{ h})$	899.15(98), 374.72(82), 984.02(59)
468.77 24	0.31 4	$^{187}\text{Au}(8.4 \text{ m})$	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
468.8 2	0.223 9	$^{75}\text{Ge}(82.78 \text{ m})$	264.6584(11), 198.6031(1.19), 419.1(0.185)
• 468.8 2	0.00036 6	$^{75}\text{Se}(119.779 \text{ d})$	264.6584(58.50), 136.0008(58.3), 279.5441(24.79)
468.8 3	0.097 16	$^{78}\text{As}(90.7 \text{ m})$	613.725(54), 694.916(16.7), 1308.59(13.0)
468.8 2		$^{115}\text{Pd}(25 \text{ s})$	342.71(8), 303.87(7), 396.56(6)
• 468.8	9.0×10^{-5}	$^{253}\text{Es}(20.47 \text{ d})$	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
468.9 4	5.0 7	$^{35}\text{Si}(0.78 \text{ s})$	4100.7(36.5), 3859.5(32.7), 2386.3(31.6)
468.9 4	0.10 5	$^{185}\text{Au}(4.25 \text{ m})$	310.6(13), 243.1(6.6), 77.7(6)
468.923 18	0.53 6	$^{179}\text{Re}(19.5 \text{ m})$	430.221(28), 289.968(26.9), 1680.244(13.0)
• 468.925 11	0.061 17	$^{200}\text{Tl}(26.1 \text{ h})$	367.943(87), 1205.717(29.9), 579.298(13.8)
• 468.98 5	0.259 11	$^{206}\text{Po}(8.8 \text{ d})$	1032.26(32.9), 511.36(24.1), 286.410(23.8)
468.99 19	1.19 7	$^{77}\text{Rb}(3.75 \text{ m})$	66.52(57), 178.99(22.2), 393.37(9.7)
468.99 15	0.117 11	$^{101}\text{Mo}(14.61 \text{ m})$	191.92(19), 590.91(16.4), 1012.47(12.8)
469.0 1	1.22 12	$^{96}\text{Rb}(0.199 \text{ s})$	815.0(78.00), 692.0(8.0), 813.2(7.0)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
469.0 1		⁹⁷ Rb(169.9 ms)	815.0(100), 692.0(16.5), 414.3(15.0)
469.0 3	1.06 4	¹⁵⁰ Pr(6.19 s)	130.2(32), 722.5(7.0), 852.7(6.1)
469.1 3	†21 4	¹³⁷ Te(2.49 s)	243.3(†100), 554.0(†34), 358.6(†18.8)
469.140 10	55	⁹⁹ Zr(2.1 s)	546.13(48.6), 593.990(27.4), 461.70(11.0)
469.18 7	0.060 3	¹²¹ I(2.12 h)	212.189(84), 532.08(6.07), 598.74(1.47)
469.24 25	0.297 25	⁸⁶ Y(14.74 h)	1076.64(83), 627.72(32.6), 1153.01(30.5)
469.3 1	†31 3	¹⁷¹ Hf(12.1 h)	122.0(†100), 662.2(†83), 347.18(†47)
469.3 2	†75 6	²³¹ Ra(103 s)	409.92(†100), 204.98(†93), 456.2(†59)
469.33 3	0.172 5	⁹⁶ Y(5.34 s)	1750.42(2.350), 2225.93(0.322), 475.33(0.188)
469.33 8	0.0022 5	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
469.37 10	17.5 5	¹⁰⁵ Ru(4.44 h)	724.21(47), 676.36(15.7), 316.44(11.1)
469.4 10	†100	⁷⁷ Ga(13.2 s)	458.6(†48), 2187.3, 1242.3
469.40 2	>0.12	¹⁴⁷ La(4.015 s)	117.718(12), 186.320(6.48), 438.30(5.04)
469.4 3	†0.4 3	¹⁹² Bi(37 s)	853.8(†100.0), 501.8(†80), 504.3(†39)
469.4 2	†2.3 2	²⁰³ At(7.4 m)	639.4(†100), 641.5(†55.8), 738.1(†38.4)
469.41 5	0.0213 15	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
• 469.5 3	0.0044 11	²²⁵ Ac(10.0 d)	99.91(1.01), 150.04(0.80), 99.63(0.62)
469.6 4	6.7 7	¹¹⁸ Pd(1.9 s)	125.4(34), 125.4(34), 224.2(20.1)
• 469.63 7	0.0027 5	⁹⁹ Mo(65.94 h)	739.50(12.1), 181.063(6.08), 140.511(4.52)
• 469.66 10	0.026 9	¹⁴⁵ Eu(5.93 d)	893.73(66), 653.512(15.0), 1658.53(14.9)
469.69 12	0.139 23	²¹⁴ Bi(19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
469.7 1	0.015 6	¹³¹ Te(25.0 m)	149.716(69), 452.323(18.18), 1146.96(4.95)
469.7 1	0.56 4	²⁰⁸ Fr(59.1 s)	635.8(10), 778.5(6.8), 325.3(5.2)
469.7 1	†25.9 9	²³⁰ Ra(93 m)	72.0(†100), 63.0(†35.4), 202.8(†27.3)
469.71 8	0.0101 12	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
469.72 4	†100	¹⁹⁷ Ir(5.8 m)	430.56(†61), 815.92(†45), 378.32(†38)
469.8 2	†15.2 11	¹⁰³ Mo(67.5 s)	83.4(†100), 423.91(†69), 45.8(†57)
469.8 3	0.103 24	²²⁷ Fr(2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)
• 469.8 4	0.0011	²³⁹ Np(2.3565 d)	106.125(27.2), 277.599(14.38), 228.183(10.76)
• 469.8 4		²⁴³ Cm(29.1 y)	277.599(14.0), 228.183(10.6), 209.753(3.29)
• 469.85 5	1.48 6	¹²⁵ Sn(9.64 d)	1067.10(10), 1089.15(4.59), 822.48(4.28)
469.85 4	0.445 19	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
469.90 14	0.084 19	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
469.9	0.009 5	¹⁴⁹ Tb(4.118 h)	352.24(29.43), 164.98(26.4), 388.57(18.37)
469.9 3	†0.45 18	¹⁶⁰ Ho(5.02 h)	728.18(†100), 879.383(†65.9), 962.317(†59.1)
470 1	0.0081 5	⁷⁷ Ge(11.30 h)	264.44(54), 211.03(30.8), 215.50(28.6)
470.0 23	†5	⁸⁷ Nb(2.6 m)	200.95(†100), 470.63(†73), 1066.8(†37)
470.0 5	0.065 22	⁹¹ Kr(8.57 s)	108.788(43.5), 506.592(19.1), 612.87(7.7)
470.1 4	0.184 24	¹⁰⁵ Ru(4.44 h)	724.21(47), 469.37(17.5), 676.36(15.7)
470.1 1	†98 4	¹⁹¹ Tl(5.22 m)	452.6(†100), 391.6(†96), 216.0(†96)
470.19 10	1.3 5	¹²³ Ag(0.309 s)	263.87(35.9), 409.79(13.2), 591.30(8.2)
470.2	0.34	¹⁴⁴ Tb(4.25 s)	743.0(12), 1001.6(7), 959.36(4.7)
470.2 3	0.7	¹⁷⁰ Hf(16.01 h)	164.78(33), 620.7(23), 120.17(19)
470.24 19	0.44 14	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
470.25 17	†29 6	¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†33)
470.25 20	0.013 3	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
470.32 3	2.00 10	¹⁸² Re(12.7 h)	67.75001(38.2), 1121.3007(32), 1221.4066(24.8)
470.34 8	0.238 16	⁹⁰ Kr(32.32 s)	1118.69(39.0), 121.82(35.5), 539.49(30.8)
470.389 26	0.198 20	¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
470.4 5	0.55 22	¹⁶⁶ Lu(1.41 m)	228.12(15), 102.38(13), 285.07(11.0)
470.4 5	†0.06 1	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
• 470.472 13	1.41 3	¹²¹ Te(16.78 d)	573.139(80.3), 507.591(17.7), 65.548(0.259)
470.5 3	12.7 4	⁶⁹ Ni(11.4 s)	1871.1(40.9), 679.7(39.7), 1213.0(39.3)
470.5	0.010 5	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
• 470.5 2	0.018 7	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
470.5 1	†17.7 9	¹⁷² Ir(2.0 s)	227.8(†100.0), 378.4(†62.0), 448.4(†40.5)
470.5 2	0.062 9	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
• 470.557 17	0.108 12	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
• 470.557 17	0.44 6	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
• 470.60 16	0.0016 8	⁷¹ As(65.28 h)	174.954(82.00), 1095.490(4.08), 499.876(3.624)
470.6 3	0.32 5	¹⁰¹ Ag(11.1 m)	261.0(53), 588.0(10.0), 667.3(9.8)
470.6 2	†4.1 15	¹³¹ Ce(10.3 m)	169.42(†100), 414.25(†68), 119.18(†44)
470.6 2	†12.8 14	¹⁵⁵ Er(5.3 m)	110.12(†100), 241.5(†65), 234.0(†40.0)
470.6 5	0.168 20	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
470.6 8	0.010 5	²¹⁴ Pb(26.8 m)	351.921(35.8), 295.213(18.5), 241.981(7.50)
470.62 6	7.4 4	⁶⁶ Ge(2.26 h)	43.89(28.7), 381.85(28), 272.97(10.4)
470.62 9	0.023 3	¹⁶⁷ Yb(17.5 m)	113.34(55.3), 106.18(22.5), 176.25(21)
470.63 12	†73 3	⁸⁷ Nb(2.6 m)	200.95(†100), 1066.8(†37), 1884.5(†35)
470.7 3	3.64 4	¹³⁷ Pm(2.4 m)	177.5(40.29), 108.6(35), 233.6(29.57)
470.7 5	0.48 19	¹⁵² Tb(4.2 m)	344.281(20.8), 411.115(18.8), 471.9(12.2)
470.70 16	0.34 3	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
470.77 13	0.038 7	¹⁹⁹ Tl(7.42 h)	455.46(12.4), 208.20597(12.3), 247.26(9.3)
470.793 7	0.40 4	¹⁵⁴ Tb(21.5 h)	123.071(26), 1274.436(10.5), 2187.10(9.9)
470.8 1	0.33 8	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
470.8 2	†8.6 9	¹³⁰ Cs(3.46 m)	536.09(†100), 206.6(†1.7), 510.35
470.8 4	0.13 5	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
470.83 4	0.61 3	¹²¹ I(2.12 h)	212.189(84), 532.08(6.07), 598.74(1.47)
470.9 4	†100 34	²³² Ra(250 s)	97.7(†80), 478.5(†69), 105.2(†66)
471.0 3	0.43 10	⁹⁷ Sr(426 ms)	1905.0(25), 953.8(21.4), 652.2(11.4)
471.0 3	†3.8 8	¹³¹ Pr(1.53 m)	266.13(†100), 72.82(†64), 387.56(†38)
471.00 10	1.65 9	¹⁶¹ Yb(4.2 m)	78.20(34), 599.88(25.9), 631.45(13.9)
471.1 5	0.38 5	⁷⁴ Ga(8.12 m)	595.847(91), 2353.46(44.5), 608.353(14.3)
471.10 37	0.037 9	¹⁷⁴ Ta(1.05 h)	206.50(58), 91.00(16.0), 1205.92(4.9)
471.1 5	†0.22 12	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
• 471.1 2	1.4×10^{-5} 2	²³³ U(1.592×10^5 y)	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
• 471.2 4	0.019 9	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
471.21 30	0.12 1	¹⁰⁷ Rh(21.7 m)	302.77(66), 392.47(8.8), 312.21(4.8)
471.3 6	23 4	⁶⁶ Co(0.23 s)	1424.8(100), 1246.0(98), 1020
• 471.3 2	0.014 5	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
• 471.3 2	0.018 7	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
471.3 1	†9.0 9	¹⁷¹ Ta(23.3 m)	49.6(†100), 506.4(†54), 501.8(†22.6)
471.3 3	2.5 7	¹⁷⁹ Yb(8.0 m)	592.1(75), 612.3(35.4), 381.4(9.6)
471.3 2	†2 1	¹⁹¹ Pb(2.18 m)	387.1(†100), 712.2(†46), 613.5(†40)
471.3 5	0.24	²²⁷ Ra(42.2 m)	27.36(16), 300.07(4.6), 302.65(4.3)
471.330 17	4.05 9	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
471.352 16	1.34 4	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
471.36 20	1.02	¹⁵⁴ Pm(2.68 m)	184.810(32), 81.99(15.4), 546.66(14.5)
471.36 9	1.60 16	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
471.38 15	0.69 5	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
471.39 9	0.10 6	¹⁰⁰ Nb(1.5 s)	535.60(45.7), 528.24(9.1), 159.547(8.8)
471.4 5	0.39 12	⁹⁶ Rh(1.51 m)	832.57(39), 1098.51(8.9), 1692.2(7.0)
471.4 5	0.045 4	¹¹⁶ Te(2.49 h)	93.70(31.4), 628.63(3.22), 102.97(1.95)
471.4 2	†1.7 9	¹⁹² Bi(37 s)	853.8(†100.0), 501.8(†80), 504.3(†39)
471.4 7	0.20 6	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
471.5 2	2.9 3	¹⁹⁶ Bi(308 s)	1049.21(87), 689.00(35.5), 776.6(9.1)
471.5 2	†0.83 9	¹⁹⁶ Bi(240 s)	1049.21(†21.1), 371.93(†20.8), 689.00(†19.2)
• 471.59	0.049	¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
471.6 8	†11.2 8	⁹⁴ Kr(0.20 s)	629.2(†100), 764.5(†71), 219.466(†67.4)

• $t_{1/2} > 1$ 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: $E_\gamma(I_\gamma)$
• 471.600 ¹²	0.0562 ¹⁹	¹⁴⁷ Eu(24.1 d)	197.299(27), 121.220(22.9), 677.516(9.8)
471.63 ¹⁹	0.31 ¹⁶	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
471.7 ⁵	0.16 ⁴	⁹⁶ Rh(9.90 m)	832.57(100), 685.49(95.7), 631.71(74.5)
471.7 ²	0.31 ⁵	¹²¹ Cs(122 s)	179.4(30.2), 196.0(24.1), 459.7(12.0)
471.7 ³	†4.6	¹⁵⁴ Nd(25.9 s)	151.703(†800), 799.55(†600), 180.693(†510)
471.7 ⁴	0.13 ⁵	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
471.76 ¹⁵	0.034 ³	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
471.80 ³	0.727 ¹⁴	⁸⁶ Kr(2.84 h)	2392.11(34.6), 196.301(25.98), 2195.842(13.18)
471.8 ¹	†7.0 ⁹	¹²³ La(17 s)	92.5(†100), 937.3(†43), 153.6(†43)
471.8 ¹		¹⁷⁷ W(135 m)	115.65(50), 426.98(13.2), 1036.4(10.3)
• 471.805 ²⁰	71 ³	²⁴¹ Cm(32.8 d)	430.634(4.06), 132.413(3.86), 165.049(2.97)
• 471.805 ²⁰	0.026 ⁵	²⁴⁵ Bk(4.94 d)	205.879(0.040), 164.8(0.0084), 430.634(0.0015)
471.87 ⁴	0.83 ¹¹	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
471.871 ²³	0.1055 ²⁵	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
471.9 ¹	12.2 ⁶	¹⁵² Tb(4.2 m)	344.281(20.8), 411.115(18.8), 519.4(4.9)
471.9 ³	†2.7 ¹¹	¹⁵⁵ Nd(8.9 s)	180.574(†100), 418.99(†75), 955.08(†50)
471.9 ³	†0.8 ⁶	¹⁷¹ Hf(12.1 h)	122.0(†100), 662.2(†83), 347.18(†47)
471.9 ³	†1.3 ⁶	¹⁷¹ Hf(12.1 h)	122.0(†100), 662.2(†83), 347.18(†47)
471.9 ³	†2.7	¹⁷⁹ Os(6.5 m)	65.39(†100), 218.6(†17), 32.3(†17)
471.90 ¹³	0.39 ⁶	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
471.956 ²⁵	1.98 ¹⁰	²⁰⁸ Rn(24.35 m)	426.78(7.07), 251.05(5.02), 350.026(3.34)
• 471.979 ¹⁰	0.353 ⁸	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
472.0	0.21 ⁴	⁴³ Ti(509 ms)	2288.2(4.40), 845.2(2.77), 2458.5(0.91)
472.00 ¹¹	3.24 ²²	⁶⁶ Ge(2.26 h)	43.89(28.7), 381.85(28), 272.97(10.4)
472.0 ²	0.71 ⁷	¹³⁰ Sn(3.72 m)	192.5(70), 779.8(59), 70.0(35.5)
472 ¹	0.11	¹⁴² Gd(70.2 s)	750.2(11.2), 178.90(11.20), 284.4(6.16)
472.0 ⁷	†0.31 ¹⁵	¹⁵² Tb(17.5 h)	344.281(†1500), 586.294(†223), 271.135(†203)
472.04 ¹⁷	†2.5 ⁴	¹⁶⁵ Lu(10.74 m)	132.49(†100), 120.60(†100), 174.25(†47.0)
472.05 ⁶	0.36 ³	¹³² La(4.8 h)	464.55(76), 567.14(15.7), 1909.91(9.0)
• 472.075 ⁶	0.0079 ²¹	⁷⁷ Br(57.036 h)	238.996(23), 520.639(22.4), 297.215(4.16)
472.1 ³	0.06	¹¹³ Pd(93 s)	95.74(3.3), 643.7(3.0), 739.63(2.4)
472.11 ¹⁵	0.00143 ²⁵	¹⁶⁵ Dy(2.334 h)	94.700(3.58), 361.68(0.84), 633.415(0.568)
472.2 ³	0.16 ³	¹⁸³ Hf(1.067 h)	783.754(66), 73.174(38), 459.069(27)
472.2 ³	†0.48 ⁶	¹⁹² Tl(9.6 m)	422.8(†100), 634.8(†75.9), 786.3(†31.7)
472.202		²⁴ Ne(3.38 m)	874.41
472.21 ¹²	0.199 ²²	¹¹⁸ In(4.45 m)	1229.68(96), 1050.69(81.0), 683.08(54.3)
472.24 ²⁸	1.42 ¹⁵	⁹⁰ Mo(5.67 h)	257.34(78), 122.370(64.2), 203.13(6.4)
472.24 ⁸⁸	0.41 ⁸	¹⁷⁴ W(31 m)	35.42(14.1), 428.83(12.7), 328.68(9.5)
472.3 ³	0.7 ³	⁹⁹ Y(1.470 s)	121.761(33), 724.30(14.9), 536.2(6.6)
472.3 ¹	0.025 ⁸	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
472.3 ¹	0.361 ²¹	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
472.33 ⁵	0.0363 ¹⁷	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
• 472.390 ⁶	4.16 ¹⁹	²³² Pa(1.31 d)	969.315(41.6), 894.351(19.8), 150.059(10.8)
472.4 ³	0.045 ⁹	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
472.4 ¹	0.23 ⁴	¹⁴⁹ Tb(4.118 h)	352.24(29.43), 164.98(26.4), 388.57(18.37)
• 472.50 ¹⁵	0.0112 ⁵	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
472.5 ¹	0.0040 ³	²²² Ra(38.0 s)	324.22(2.77), 328.9(0.0043), 840.2(0.0025)
472.53 ¹⁵	0.0391 ¹⁸	¹⁵⁹ Ho(33.05 m)	121.012(36.2), 131.973(23.6), 309.594(17.2)
472.58 ¹⁸	†10.6 ²¹	¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†33)
472.6 ²	†1.06×10 ⁴ ⁴	¹⁵⁸ Er(2.29 h)	71.91(†23300), 386.84(†111000), 248.58(†42000)
472.6 ⁴	0.004 ³	¹⁸³ Os(13.0 h)	381.768(89.6), 114.463(20.63), 167.844(8.81)
472.65 ⁶	0.77 ⁵	¹⁵⁷ Sm(482 s)	197.870(56.00), 196.461(16.8), 394.351(11.93)
472.70 ²⁰	0.15 ⁴	⁸³ Se(22.3 m)	356.687(70), 510.17(43), 224.8(32.7)
472.70 ¹⁰	4.0 ⁵	¹¹⁵ Ag(20.0 m)	229.08(18), 212.80(4.4), 649.10(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: $E_{\gamma}(I_{\gamma})$
• 472.700 9	0.145 4	¹⁵⁶ Eu(15.19 d)	811.79(9.70), 88.9667(8.4), 1230.68(7.98)
472.71 9	29.0 21	⁵⁹ Mn(4.6 s)	726.7(42), 570.81(24.8), 591.20(9.4)
• 472.71 4	0.0312 17	¹⁷² Er(49.3 h)	610.062(44.2), 407.338(42.1), 68.107(3.29)
472.8 2	37.4 20	¹¹⁸ Cs(14 s)	337.4(100), 586.6(15.4), 590.6(11.0)
472.8 1	0.024 6	¹⁴⁵ Ce(3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)
472.80 7	0.127 5	²¹⁰ Rn(2.4 h)	458.25(1.7), 648.70(0.843), 570.95(0.840)
• 472.812 5	0.050 5	⁷⁶ As(26.32 h)	559.101(45), 657.041(6.2), 1216.104(3.42)
472.812 5	1.86 8	⁷⁶ Br(16.2 h)	559.101(74), 657.041(15.9), 1853.67(14.7)
472.9 1	0.63 8	¹¹⁹ Ag(2.1 s)	626.4(13), 366.2(12.1), 399.1(10.9)
472.9 2	0.5 3	¹³⁰ La(8.7 m)	357.4(81.0), 550.7(25.9), 908.0(17.0)
472.90 15	0.32 5	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
473		¹¹⁵ Ag(18.0 s)	229.08(†100), 131.52(†77), 388.9(†52)
• 473.0 4	25.7 7	¹²⁷ Sb(3.85 d)	685.7(37), 783.7(15.0), 252.4(8.5)
473.0 2	†5.4 9	¹³¹ Pr(1.53 m)	266.13(†100), 72.82(†64), 387.56(†38)
473.0 2	†3	¹³⁹ I(2.29 s)	527.7(†100), 571.2(†98), 536.6(†67)
473.0 7	0.121 22	¹⁹⁹ Bi(27 m)	560.1(22.0), 424.85(22), 841.7(11)
473.04 13	0.81 7	¹⁰⁵ In(5.07 m)	131.37(41), 260.21(15.7), 604.11(9.2)
473.04 25	0.156 22	²⁰⁷ At(1.80 h)	814.41(44.5), 588.33(19.2), 300.654(12.8)
473.09 8	0.89 7	²⁰⁵ Po(1.66 h)	872.39(37), 1001.21(28.8), 849.83(25.5)
473.1 3	0.34 5	⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
473.1 8	0.55 13	¹¹³ Te(1.7 m)	814.4(22), 1018.1(13.0), 1181.0(12.3)
473.1 4	0.17 5	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
473.2 4	0.9 4	¹⁰⁶ Rh(131 m)	511.842(85), 1045.83(30.4), 717.24(28.9)
473.2 5	0.18 6	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
473.2 4	†7.2 15	²³³ Pu(20.9 m)	235.4(†100), 534.8(†90.2), 500.3(†38.6)
473.21 7	0.28	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
473.33 15	0.18 3	¹⁰⁰ Sr(202 ms)	963.85(22.0), 898.50(18.9), 65.46(15.2)
473.330 64	0.13 3	²²⁷ Fr(2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)
473.35 12	0.706 21	¹⁴⁴ Ba(11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
473.39 11	0.119 24	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
473.4 1	0.416 14	¹⁴² Ba(10.6 m)	255.300(20.5), 1204.3(14.23), 895.2(13.9)
473.4 4	0.08 4	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
473.440 22	2.42 12	²⁰⁸ Rn(24.35 m)	426.78(7.07), 251.05(5.02), 350.026(3.34)
473.5 6	0.07 4	⁹⁷ Zr(16.91 h)	743.36(93), 507.64(5.03), 1147.97(2.61)
473.5 1	†30 3	¹²⁰ Cs(64 s)	322.4(†100), 553.4(†19.1), 601.2(†10.9)
• 473.5 6	0.009 6	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
473.5 3	0.054 11	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
473.5 2	1.30 3	¹⁷⁷ W(135 m)	115.65(50), 426.98(13.2), 1036.4(10.3)
473.5 3	†>0.27	²³⁰ Ra(93 m)	72.0(†100), 63.0(†35.4), 202.8(†27.3)
473.5 1	4.3 3	²³⁷ Am(73.0 m)	280.23(47.3), 438.4(8.3), 908.8(2.60)
473.6 4	10.5 13	⁷³ Kr(27.0 s)	177.8(65.8), 62.5(19.1), 454.8(15)
473.6 4	0.17 4	¹³² I(2.295 h)	667.718(99), 772.60(75.6), 954.55(17.6)
473.6 2	†8.9 9	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
473.6 2	0.046 11	²¹² Bi(60.55 m)	39.858(1.091), 452.83(0.31), 288.07(0.31)
473.7 2	5.2 3	¹⁰⁴ In(1.8 m)	658.0(100), 834.1(99), 878.1(29.4)
473.7 4	0.40 7	¹¹⁹ Cd(2.69 m)	292.9(36.8), 343.0(16.9), 1609.7(10.9)
473.7	1.3	¹⁴⁷ Ba(0.893 s)	167.4(11), 105.2(4.8), 196.1(4.8)
473.7 2	3.7 3	¹⁹⁶ Bi(308 s)	1049.21(87), 689.00(35.5), 776.6(9.1)
473.7 2	†1.06 9	¹⁹⁶ Bi(240 s)	1049.21(†21.1), 371.93(†20.8), 689.00(†19.2)
473.7 1	10.2 11	²²⁸ Fr(39 s)	474.0(7.6), 410.40(6.3), 140.86(5.4)
473.76 2	0.20 4	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
473.76 5	0.201 19	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
473.8 6	0.028 12	⁹³ Rb(5.84 s)	432.61(17.4), 986.05(6.8), 213.429(6.7)
473.8 2	0.60 9	¹¹⁷ Cs(8.4 s)	204.8(15.0), 29.7(9.9), 205.6(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: $E_\gamma(I_\gamma)$
• 473.8 8	0.007 3	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
473.80 17	0.161 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
473.9 2	0.66 6	¹⁰¹ Zr(2.1 s)	119.3(10.8), 205.6(6.0), 912.2(3.48)
473.9 3	0.27 5	¹²⁹ In(0.61 s)	2118.0(45), 1865.0(32), 769.3(9.1)
473.9 1	†0.49 7	¹⁵⁸ Ho(11.3 m)	218.21(†100.0), 98.91(†70), 945.7(†37)
473.9 5	0.0035	²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
473.93 9	0.042 17	¹⁰³ Ag(65.7 m)	118.72(31.2), 148.193(28.3), 266.86(13.3)
473.94 5	19.7 20	⁷⁷ Zn(2.08 s)	189.49(28.1), 1832.0(12.4), 160.93(8.4)
474.0 1	7.6 14	²²⁸ Fr(39 s)	473.7(10.2), 410.40(6.3), 140.86(5.4)
474.01 7	1.0 2	¹⁴⁰ Pm(5.95 m)	1028.19(100), 773.74(100), 419.57(92)
• 474.060 30	0.93 5	¹⁰⁶ Ag(8.28 d)	511.842(88), 1045.83(29.6), 717.24(28.9)
474.07 7	3.76 20	¹⁰¹ Sr(118 ms)	128.34(18.0), 1124.82(10.9), 510.73(8.5)
474.1 5	2.6 3	⁹⁷ Sr(426 ms)	1905.0(25), 953.8(21.4), 652.2(11.4)
474.1 8	0.112 18	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
• 474.11 15	>0.00038	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
474.2 2	0.103 15	¹²³ Xe(2.08 h)	148.9(49), 178.1(14.9), 330.2(8.6)
• 474.2 3	0.0023 6	¹³¹ Ba(11.50 d)	496.326(47), 123.805(28.97), 216.078(19.66)
• 474.2 4	0.005 3	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
474.2 2	†100 9	¹⁵¹ Yb(1.6 s)	520.1(†85), 108.4(†52)
474.2 2	†4.5 15	¹⁶⁴ Tm(2.0 m)	91.40(†1500), 1154.66(†366), 768.91(†279)
474.2 2	0.036 10	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
474.3 2	†24 3	¹⁵⁷ Yb(38.6 s)	230.92(†100), 340.7(†90), 241.7(†74)
• 474.300 4	5.0×10^{-8} 3	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
474.35 20	1.3 3	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
474.38 10	0.10 4	²¹⁴ Bi(19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
474.4 5	0.75 10	¹⁴² Eu(1.22 m)	768.1(100), 1023.3(92.0), 556.6(86.6)
474.4 2	0.18 6	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
474.4 1	†1.1 1	¹⁶⁰ Lu(36.1 s)	243.2(†100), 395.4(†21.0), 577.2(†10.7)
474.42 16	0.22 3	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
474.43 15	2.38 24	⁴⁵ Ar(21.48 s)	1020.04(34.0), 3703.2(33.3), 61.35(25.0)
474.49 8	0.0034	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
• 474.498 25	0.145 7	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
474.50 15	0.21 5	¹²⁸ In(0.84 s)	1168.80(40), 935.20(6.5), 1089.53(6.0)
474.5 3		¹⁴⁷ La(4.015 s)	117.718(12), 186.320(6.48), 438.30(5.04)
474.5 2	86 7	¹⁵⁰ Tm(2.2 s)	1578.9(91), 207.6(82), 594.1(13.6)
474.57 2	2.88 10	¹¹⁸ In(4.45 m)	1229.68(96), 1050.69(81.0), 683.08(54.3)
474.57 6	2.80 17	¹⁴⁹ Pr(2.26 m)	138.447(11.0), 165.087(9.9), 108.520(9.5)
474.6 2	2.1 3	⁷¹ Br(21.4 s)	260.5(8.0), 233.7(6.5), 171.6(6.2)
474.6 4	†1.24 24	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
474.625 11	2.52 12	¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
474.63 10	0.91 6	⁹¹ Kr(8.57 s)	108.788(43.5), 506.592(19.1), 612.87(7.7)
474.64 8	0.09	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
474.68 35		¹⁹⁹ Pt(30.80 m)	542.993(15), 493.772(5.59), 317.056(4.95)
474.7 4	0.11 6	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
474.719 3	1.15 4	¹⁹⁹ Pt(30.80 m)	542.993(15), 493.772(5.59), 317.056(4.95)
474.74 6	2.75 16	¹⁶⁶ Lu(2.65 m)	228.12(77.3), 337.50(41), 367.95(31.4)
474.75 10	0.023 4	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
474.8 4	†12 4	¹⁶³ Lu(238 s)	163.08(†100), 54.00(†88), 396.34(†63)
474.8 4	0.13 7	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
474.85 1	0.88 3	¹³³ Te(12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
• 474.89 10	0.025 3	¹⁴⁵ Eu(5.93 d)	893.73(66), 653.512(15.0), 1658.53(14.9)
474.90 15	1.15 19	¹³⁷ Nd(38.5 m)	75.5(17.0), 580.6(13), 306.60(10.0)
474.9 4	†1.3 7	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
• 474.9 5	0.00035 4	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: $E_{\gamma}(I_{\gamma})$
• 474.973 9	0.000193 4	¹⁶⁹ Yb(32.026 d)	63.12077(44.2), 197.95788(35.8), 177.21402(22.16)
475.0 1	16.85 23	⁶¹ Zn(89.1 s)	1660.5(7.80), 970.0(2.57), 690.2(1.87)
475.0 2	0.25 7	¹⁰⁴ Tc(18.3 m)	358.0(89), 530.5(15.6), 535.1(14.7)
475.0 4		¹⁰⁵ Ag(7.23 m)	319.14(†63000), 306.25(†12800), 442.37(†5900)
475.0 4	0.090 19	¹⁰⁷ In(32.4 m)	204.97(47), 505.51(11.9), 320.92(10.2)
475 2	0.017 8	¹¹⁶ In(54.41 m)	1293.54(84.4), 1097.3(56.2), 416.86(28.9)
475.0 2	0.0007 5	¹⁴¹ La(3.92 h)	1354.52(1.64), 1693.3(0.074), 2267.0(0.0413)
475.0 2		¹⁷² Ir(4.4 s)	378.4, 227.8
475.0 7	2.04 20	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
475.0 3	0.011 3	²⁴⁰ Np(7.22 m)	554.60(20.9), 597.40(11.7), 1496.9(1.33)
475.016 23	0.49 5	²²⁷ Fr(2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)
475.070 27	†115	¹⁰² Tc(4.35 m)	628.05(†35.3), 631.28(†21.3), 1615.3(†20.8)
475.070 27 7		¹⁰² Tc(5.28 s)	468.59(0.88), 865.5(0.87), 628.05(0.78)
• 475.070 27 95 4		¹⁰² Rh(2.9 y)	631.28(55.9), 697.49(43.9), 766.84(33.9)
• 475.070 27 †47 3		¹⁰² Rh(207 d)	628.05(†4.6), 1103.16(†2.99), 468.59(†2.99)
475.1 1	5.1 4	⁸³ Zr(44 s)	55.55(8), 104.97(5.70), 254.76(4.72)
475.1 6	0.059 25	²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
475.17 9	0.299 11	¹⁴² Cs(1.70 s)	359.598(27.2), 1326.46(12.92), 966.89(9.0)
475.2 1	1.14 23	⁷⁵ Rb(19.0 s)	178.98(<63), 178.97(>51), 187.21(8.7)
475.2 1	26.7 14	⁹⁷ Pd(3.10 m)	265.26(56), 792.70(13.8), 1759.60(6.8)
475.2 2	†33 5	¹⁵³ Nd(28.9 s)	418.3(†100), 105.4(†36), 83.0(†27)
475.2 1	0.27 4	²²³ Ac(2.10 m)	98.58(0.891), 191.3(0.58), 83.55(0.57)
475.28 4	1.02 4	¹²¹ I(2.12 h)	212.189(84), 532.08(6.07), 598.74(1.47)
475.3 2	2.5 3	¹³⁹ Sm(2.57 m)	273.7(37), 306.7(28.5), 596.3(8.0)
475.33 1	0.188 7	⁹⁶ Y(5.34 s)	1750.42(2.350), 2225.93(0.322), 469.33(0.172)
475.33 1	3.1	⁹⁶ Y(9.6 s)	1750.42(89), 915.0(60), 617.1(56)
• 475.35 5	1.465 40	¹³⁴ Cs(2.062 y)	604.699(97.56), 795.845(85.44), 569.315(15.43)
475.35 5	0.0053 16	¹³⁴ La(6.45 m)	604.699(5.05), 1554.934(0.414), 563.227(0.359)
475.36 25	0.0104 19	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
475.38 15	0.15 3	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
475.4	0.8	⁸³ Zr(44 s)	55.55(8), 104.97(5.70), 475.1(5.1)
475.4 2	0.51 12	¹⁰⁸ Tc(5.17 s)	242.25(82), 465.6(14.3), 707.81(11.4)
475.4 5	2.0 4	¹²⁸ La(5.0 m)	284.00(87), 479.24(54), 643.65(14.7)
475.4 1	11.6 18	¹⁴¹ Gd(24.5 s)	351.1(89), 223.9(64), 574.9(51)
475.4 1	8.6 8	¹⁴¹ Tb(3.5 s)	293.3(16.8), 343.6(16.3), 198.4(14.8)
475.40 7	0.0063 3	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
475.412 27	2.9 3	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
475.43 3	0.992 22	⁷⁷ Ge(11.30 h)	264.44(54), 211.03(30.8), 215.50(28.6)
475.44 19	0.0072 12	²⁴⁹ Cm(64.15 m)	634.31(1.5), 560.45(0.84), 368.76(0.35)
• 475.445 2	1.040 21	¹⁷² Er(49.3 h)	610.062(44.2), 407.338(42.1), 68.107(3.29)
475.49 6	3.18 8	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
475.5 3	0.33 8	¹²⁶ Ba(100 m)	233.6(19.6), 257.6(7.6), 241.0(6.0)
475.5 2	†0.46 5	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
475.5 1	1.31 11	¹³⁹ Nd(29.7 m)	405.12(7), 1074.2(2.5), 669.0(1.52)
475.5 4	0.62 9	¹³⁹ Nd(5.50 h)	113.94(40), 737.96(35), 982.2(26.4)
475.5	5.0	¹⁴⁴ Dy(9.1 s)	196.5(11), 298.6(10), 321.5(2.2)
475.5 3	†5.6 13	¹⁵⁵ Er(5.3 m)	110.12(†100), 241.5(†65), 234.0(†40.0)
475.5 4	†4.2	¹⁷⁹ Os(6.5 m)	65.39(†100), 218.6(†17), 32.3(†17)
475.54 14	1.0 3	¹⁸¹ Re(19.9 h)	365.57(56), 360.70(20), 639.30(6.4)
475.59 5	1.37 10	⁹⁹ Sr(0.269 s)	125.118(16.1), 536.12(14.0), 1198.12(9.2)
475.6 3	†1.4 3	¹²⁰ Cs(64 s)	322.4(†100), 473.5(†30), 553.4(†19.1)
475.6 4		¹⁷² W(6.6 m)	38.9(†100), 423.3(†44), 89.8(†33.0)
475.60 10	0.98 11	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
475.6 2	0.69 18	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
475.606 ²⁴	0.0043 ³	¹⁴⁵ Pr(5.984 h)	748.278(0.5250), 675.795(0.514), 72.500(0.261)
475.63 ¹¹	0.91 ⁸	¹⁵⁶ Tm(83.8 s)	344.55(86), 452.85(17.2), 585.93(14.6)
• 475.687 ²	0.0182 ¹²	¹⁶¹ Tb(6.88 d)	25.65150(23.2), 48.91562(17.0), 74.56711(10.2)
475.7 ³	†14 ⁴	¹⁷ C(193 ms)	1373.8(†100), 1849.5(†92), 1906.7(†29)
475.7 ²	0.103 ¹⁹	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
475.75 ¹⁰	†2.29×10 ³ ¹⁵	²³⁴ Pa(1.17 m)	1001.03(†837000), 766.38(†294000), 742.81(†80000)
475.8 ⁹	0.006 ³	⁶³ Zn(38.47 m)	669.62(8), 962.06(6.5), 1412.08(0.75)
475.8	100	¹⁵⁰ Er(18.5 s)	130.0(2.6), 1014.0(0.9), 1022.1(0.9)
475.8 ³	0.6 ³	¹⁵² Ho(49.5 s)	647.2(92), 613.8(88.4), 683.3(88)
475.83 ⁷	1.03 ¹¹	¹¹⁸ I(8.5 m)	605.71(99), 600.71(92), 614.42(65)
475.9 ⁵	0.45 ⁸	¹¹⁷ I(2.22 m)	325.9(75), 274.4(20.4), 661.5(5.1)
475.9 ⁴	>0.023	¹⁶⁴ Yb(75.8 m)	40.928(1.147), 675.41(0.38), 390.6(0.31)
475.92 ¹⁵	†22 ⁵	¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†33)
• 475.94 ³	0.703 ⁶	¹⁸¹ Hf(42.39 d)	482.182(80.50), 133.024(43.3), 345.916(15.12)
476.0 ³	0.29 ⁴	⁸⁸ Nb(7.8 m)	1057.01(89.3), 1082.53(53.9), 399.41(45.7)
476.0 ³	0.58 ⁶	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
476.0 ¹	8.5 ⁵	¹³⁵ Nd(12.4 m)	204.02(52), 41.43(23), 441.2(14.9)
476.0 ⁴		¹⁵⁸ Ho(21.3 m)	406.14(†100), 838.9(†84.3), 1484.1(†66.2)
476.0 ⁵	0.08 ⁴	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
476.1 ²	0.055 ¹⁴	⁷⁹ Rb(22.9 m)	688.1(23), 182.77(19.2), 143.41(13.9)
476.10 ¹¹	0.133 ¹²	⁹⁰ Kr(32.32 s)	1118.69(39.0), 121.82(35.5), 539.49(30.8)
476.1 ¹	†18 ²	¹³¹ Ce(10.3 m)	169.42(†100), 414.25(†68), 119.18(†44)
476.2 ²	0.204 ²¹	⁷⁹ As(9.01 m)	95.73(0.85), 364.9(1.06), 432.1(0.850)
476.2 ³	0.057 ⁶	¹⁸⁶ Hg(1.38 m)	112.1(63), 251.5(55), 191.6(3.7)
476.2	†19	²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
476.26 ²	0.34 ⁴	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
476.3 ³	0.187 ²³	⁶⁹ Cu(2.85 m)	1007.5(23.4), 834.4(13.1), 531.2(6.0)
• 476.367 ¹⁴	2.1×10 ⁻⁶ ⁷	¹⁸⁶ Re(90.64 h)	137.155(8.22), 767.508(0.0255), 630.354(0.0230)
476.367 ¹⁴	0.64 ⁴	¹⁸⁶ Ir(16.64 h)	296.911(64.0), 137.155(42), 434.849(34.4)
476.367 ¹⁴	0.80 ¹³	¹⁸⁶ Ir(2.0 h)	137.155(27), 767.508(21.2), 630.354(18.0)
• 476.37 ⁴	0.0363 ²²	¹⁶⁶ Ho(1.20×10 ³ y)	184.410(72.6), 810.276(58.08), 711.683(55.32)
• 476.38 ¹⁵	0.030 ⁷	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
476.4 ³	1.31 ¹⁵	⁹⁸ Sr(0.653 s)	119.353(73), 444.628(39), 428.4(31)
476.42 ⁹	0.400 ²⁵	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
• 476.49 ⁵	0.023 ³	²⁰⁵ Bi(15.31 d)	1764.36(1.368), 703.44(31), 987.62(0.585)
476.5 ⁵	1.8	¹⁰¹ Cd(1.2 m)	98.0(47), 1722.5(11), 1259.3(8)
• 476.5 ¹	0.034 ⁵	¹²⁴ Sb(60.20 d)	602.730(97.8), 1690.980(47.3), 722.786(10.76)
476.5 ³	0.018 ⁷	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
476.5	>0.8	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
476.54 ¹⁸	†11.1 ²²	¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†33)
476.55 ³	1.36 ⁶	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
476.56 ¹⁰	8.00 ¹⁴	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)
476.6 ⁵	0.12 ⁵	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
476.6 ²	0.100 ⁷	¹⁴³ La(14.2 m)	620.3(2.34), 643.75(1.55), 621.4(1.52)
476.6	0.61 ²³	¹⁴⁸ Ba(0.607 s)	56.08(29.20), 133.53(3.88), 415.78(3.59)
476.6 ⁶	0.09	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
476.6 ²	0.10 ¹	²⁴¹ Np(13.9 m)	174.94(3.1), 132.99(0.86), 518.8(0.40)
• 476.67 ²⁰	0.00010 ²	¹¹⁵ Cd(44.6 d)	933.8(2.000), 1290.580(0.890), 484.470(0.290)
476.70 ⁴	0.522 ¹⁴	⁸¹ Rb(4.576 h)	190.38(64.0), 446.15(23.2), 510.31(5.3)
476.7 ¹	0.058 ⁵	¹¹¹ Pd(23.4 m)	580.00(0.8), 70.44(0.78), 1459.0(0.56)
476.7 ³	0.85 ¹¹	¹¹⁹ Cd(2.69 m)	292.9(36.8), 343.0(16.9), 1609.7(10.9)
476.7 ²	1.26 ¹³	¹³⁶ Nd(50.65 m)	108.90(32), 40.2(18.9), 574.8(10.4)
476.7 ¹	†1.16×10 ³ ¹¹	¹⁵⁷ Ho(12.6 m)	279.97(†47600), 341.16(†37000), 193.41(†15200)
476.8 ¹	0.095 ¹¹	¹⁰⁷ Ru(3.75 m)	194.05(9.9), 847.93(5.3), 462.61(3.66)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
• 476.8 1	42.0 8	¹⁴⁴ Pm(363 d)	696.510(99), 618.01(98.6), 778.5(1.51)
• 476.827 6	0.32 4	²⁰⁰ Tl(26.1 h)	367.943(87), 1205.717(29.9), 579.298(13.8)
• 476.89 13	0.018 5	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
• 476.89 13	>0.018	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
476.89 5	0.0212 15	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
476.9 2	†14 3	¹¹² Te(2.0 m)	372.70(†100), 296.20(†86), 418.9(†57)
476.90 18	0.73 7	¹⁸³ Hf(1.067 h)	783.754(66), 73.174(38), 459.069(27)
476.9 3	0.18 5	¹⁹⁹ Pb(90 m)	366.90(44.2), 353.39(9.5), 1135.04(7.8)
476.98 9	0.46 9	¹⁹³ Au(17.65 h)	186.17(10.1), 255.57(6.7), 268.22(3.9)
477.0 1	>0.040	¹¹¹ Pd(5.5 h)	70.44(8.3), 391.25(5.4), 632.80(3.6)
477.0 10	0.07 5	¹¹⁷ Ag(72.8 s)	135.4(23), 337.7(10.3), 157.1(7.9)
477.0	0.44	¹⁴⁷ Ba(0.893 s)	167.4(11), 105.2(4.8), 196.1(4.8)
• 477.0 6	0.009 6	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
477.0 3	†21 5	¹⁵⁸ Lu(10.4 s)	358.2(†100)
477.0 3	0.0097 14	²⁵¹ Fm(5.30 h)	425.4(0.95), 480.4(0.392), 358.3(0.315)
477.06 15	1.08 11	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
477.1 5	0.88 25	⁹⁷ Sr(426 ms)	1905.0(25), 953.8(21.4), 652.2(11.4)
477.1 3	2.6 5	¹⁴⁰ Pm(9.2 s)	773.74(5.0), 1204.8(1.9), 1138.7(1.5)
477.1 1	55 3	¹⁵⁴ Ho(3.10 m)	334.6(94), 412.4(79), 406.9(19.0)
477.10 3	86 4	²⁰⁶ At(30.0 m)	700.66(98), 395.54(48), 733.73(10.2)
477.12 20	0.23 4	¹⁰³ Cd(7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
477.15 16	0.65 7	⁸¹ Sr(22.3 m)	153.54(33.8), 147.76(30.1), 443.34(17.5)
477.19 15	0.135 18	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
477.2 2	20.2 14	⁵⁵ Co(17.53 h)	931.3(75), 1408.4(16.88), 1316.4(7.09)
477.2 1	0.053 6	¹⁴⁵ Ce(3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)
• 477.2	0.00012	²⁵³ Es(20.47 d)	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
477.21 11	†1.10 13	¹⁴⁴ Cs(1.01 s)	199.326(†100.0), 639.00(†21.2), 758.96(†20.6)
477.22 4	39	¹³³ Ce(4.9 h)	510.36(20.7), 58.39(19.2), 130.803(17.9)
477.23 4	0.301 7	¹⁸³ Os(13.0 h)	381.768(89.6), 114.463(20.63), 167.844(8.81)
477.24 20	0.0053 13	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
477.3 2	0.050 10	⁹⁵ Ru(1.643 h)	336.43(70.2), 1096.76(21.0), 626.77(17.8)
477.3 4	0.068 18	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
477.3 3	3.41 20	¹⁷⁰ Ho(2.76 m)	258.2(37.0), 931.3(36.1), 181.6(23.8)
477.337 14	9.2 5	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
477.393 5	2.96 25	¹⁷⁵ Tm(15.2 m)	514.868(65), 941.23(15), 363.942(12.7)
477.4 2	1.2 5	¹⁰³ Zr(1.3 s)	248(100), 164.05(94), 126.30(84)
477.4 2	3.39 22	¹⁷⁰ Ho(2.76 m)	258.2(37.0), 931.3(36.1), 181.6(23.8)
477.5 2	0.94 13	⁹⁷ Rb(169.9 ms)	167.1(26), 585.2(21.0), 600.5(10.6)
477.5 1	†17.0 18	¹⁰⁴ Nb(0.92 s)	192.2(†100), 368.4(†20), 620.2(†19.2)
477.5 3	†62 7	¹⁰⁶ Sn(115 s)	386.8(†100), 253.30(†57), 1190.0(†33)
• 477.595	10.52 6	⁷ Be(53.29 d)	
477.6 3	†11.0 12	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
477.6 3	†0.60 7	¹⁹² Tl(9.6 m)	422.8(†100), 634.8(†75.9), 786.3(†31.7)
477.69 6	0.144 11	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
477.7 4	0.013 5	⁹⁵ Tc(20.0 h)	765.794(93.82), 1073.71(3.74), 947.67(1.951)
• 477.75 4	0.095 9	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
477.76 7	0.049 4	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)
477.77 6	0.38 3	¹³³ Te(12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
• 477.791 23	0.401 14	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
477.8 6	5.5 11	¹¹⁰ Rh(28.5 s)	373.80(91), 546.90(42.4), 687.70(25.8)
477.8 2	1.4	¹⁴⁵ Ba(4.31 s)	96.6(17), 91.9(7), 65.9(5)
477.8 3	0.23 4	¹⁴⁹ Dy(4.20 m)	100.8(15.2), 789.4(11.8), 1776.3(11.1)
477.8 3	1.65 18	¹⁸⁶ Tl(27.5 s)	405.43(92), 402.72(45.9), 356.84(29.3)
477.8 3	0.42 18	¹⁹⁰ Re(3.2 h)	186.718(27.8), 605.24(14.9), 557.972(14.3)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
• 477.8 3	1.82 21	¹⁹⁰ Ir(11.78 d)	186.718(52.4), 605.24(39.9), 518.55(34.0)
477.8 5	0.36 8	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
477.9 5	†0.38 7	¹²⁰ I(81.0 m)	560.44(†137), 1523.0(†21.1), 640.85(†17.1)
477.9 5	1.2 3	¹²⁰ I(53 m)	560.44(100), 601.11(87), 614.62(67)
477.9 6	0.6 3	¹⁶² Tm(24.3 s)	811.52(6.5), 798.68(5.2), 227.52(5)
477.93 6	0.175 24	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
477.98 25	0.076 20	¹²⁶ In(1.60 s)	1141.11(55.9), 3344.61(21.6), 969.61(14.9)
477.98 25	0.37 10	¹²⁶ In(1.64 s)	1141.11(100), 908.58(99), 111.79(88)
477.98 7	0.39	¹³⁷ I(24.5 s)	1218.00(12.8), 601.05(4.80), 1302.64(4.42)
477.99 2	1.0	¹⁸⁸ Re(16.98 h)	155.032(14.9), 632.99(1.25), 931.34(0.545)
• 477.99 2	15	¹⁸⁸ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
478.0	0.7	¹²⁵ Cd(0.65 s)	436.29(37), 1099.48(22.3), 2147.19(19.1)
478.0 3	>1.1	¹⁷⁶ Tm(1.9 m)	189.57(44.5), 1069.3(34), 381.8(21.8)
478.0 4	0.013 3	²¹¹ Pb(36.1 m)	404.853(3.78), 832.01(3.52), 427.088(1.76)
478.03 5	3.00 18	¹⁴⁷ Pr(13.4 m)	77.9921(15), 314.675(13.2), 641.380(10.0)
478.03 2	3.9 3	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
478.17 12	1.34 20	¹⁴⁸ Ce(56 s)	269.519(17.0), 291.724(16.7), 121.169(13.2)
478.2 4	0.17 4	¹³² I(2.295 h)	667.718(99), 772.60(75.6), 954.55(17.6)
478.2 2	>0.6	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
478.2 4	0.6	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
478.2 2	0.32 11	¹⁹⁰ Au(42.8 m)	295.78(71.0), 301.82(23.4), 597.67(9.4)
• 478.27 4	0.2263 18	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
• 478.29 6		¹⁴⁹ Gd(9.28 d)	149.735(48.2), 298.634(28.6), 346.651(23.9)
478.3 2	0.40 8	¹⁰⁵ Mo(35.6 s)	85.4(25.0), 76.50(19.3), 147.8(14.8)
478.3 3	0.044 6	¹⁸⁶ Hg(1.38 m)	112.1(63), 251.5(55), 191.6(3.7)
• 478.3 5	1.8 3	¹⁸⁸ Pt(10.2 d)	187.59(19.4), 195.05(18.6), 381.43(7.5)
478.3 3	1.19 9	¹⁹⁰ Tl(3.7 m)	416.4(91), 625.4(82), 731.1(37)
478.30 10	0.078 11	²²⁴ Fr(3.30 m)	215.985(33.1), 131.613(16.3), 836.90(9.8)
478.3 1	†6.6 6	²²⁵ Fr(4.0 m)	182.3(†100), 31.50(†91), 225.1(†55)
478.300 6	0.215 16	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
478.300 6	0.038 19	²²⁸ Pa(22 h)	911.205(4.19), 463.005(1.250), 964.770(4.25)
• 478.300 6	1.4×10 ⁻⁶ 5	²³² U(68.9 y)	57.762(0.200), 129.065(0.0686), 270.243(0.00316)
478.3 3	†13.8 17	²³³ Pu(20.9 m)	235.4(†100), 534.8(†90.2), 500.3(†38.6)
478.38 13	†12.5 25	¹⁵⁹ Yb(1.58 m)	166.16(†500), 177.12(†159), 390.20(†113)
478.38 13	†5 2	¹⁵⁹ Yb(1.58 m)	166.16(†500), 177.12(†159), 390.20(†113)
478.4 1	0.161 18	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
478.4 3	0.33 5	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
• 478.4 4	0.022 3	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
478.40 15	0.12 3	¹⁹³ Au(17.65 h)	186.17(10.1), 255.57(6.7), 268.22(3.9)
478.4 4	0.08	²²⁷ Ra(42.2 m)	27.36(16), 300.07(4.6), 302.65(4.3)
478.49 14	0.048 15	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
478.5 4	0.12 6	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
478.5 2	†1.51 21	¹²⁰ Cs(64 s)	322.4(†100), 473.5(†30), 553.4(†19.1)
478.5 2	†17 3	²²⁹ Ac(62.7 m)	164.522(†100), 569.1(†91), 261.92(†39)
478.5 4	†69 32	²³² Ra(250 s)	470.9(†100), 97.7(†80), 105.2(†66)
• 478.6 2	1.4×10 ⁻⁵ 2	²³³ U(1.592×10 ⁵ y)	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
478.6 1		²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
478.6 1	0.124 10	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
478.62 6	0.94 17	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
478.7 9	0.8 3	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
• 478.7 5	0.0260 24	¹²⁴ I(4.18 d)	602.730(60), 1690.980(10.41), 722.786(9.98)
478.7 4	†83 3	¹⁷¹ W(2.38 m)	184.2(†100), 294.5(†89), 52.1(†51)
478.7 2	†0.8 4	¹⁹⁴ Bi(92 s)	965.4(†100.0), 575.1(†98.0), 280.1(†73.7)
478.7 1	†21.4 9	²³⁰ Ra(93 m)	72.0(†100), 63.0(†35.4), 202.8(†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: $E_{\gamma}(I_{\gamma})$
• 478.710 8	0.228 4	¹⁴⁹ Gd(9.28 d)	149.735(48.2), 298.634(28.6), 346.651(23.9)
478.8	3.9	⁴³ Ar(5.37 m)	975.0(34), 738.1(15), 1439.5(13)
478.8 2	0.26 4	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
• 478.80 10	0.056 6	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
478.9 6	0.019 11	¹¹¹ Pd(23.4 m)	580.00(0.8), 70.44(0.78), 1459.0(0.56)
478.9 4	0.70 9	¹⁸⁸ Tl(71 s)	412.7(88), 592.0(61), 504.2(23.3)
479.00 16	†3.4 4	¹³¹ Ce(5.0 m)	230.43(†100), 436.85(†7.3), 462.9(†6.9)
479.1 5	0.19 7	⁵⁷ Cr(21.1 s)	83.16(8.3), 850.2(8.2), 1752.1(5)
479.1 1	0.0030	¹⁰⁴ Rh(42.3 s)	555.796(2.0), 1237.2(0.066), 767.72(0.011)
479.1 1	6.0×10^{-5} 4	¹⁰⁴ Rh(4.34 m)	555.796(0.13), 767.72(0.0065), 1237.2(0.0042)
479.1 1	1.02 19	¹⁰⁴ Ag(69.2 m)	555.796(92.6), 767.72(65.7), 941.7(25.0)
479.1 1	0.11 3	¹⁰⁴ Ag(33.5 m)	555.796(91), 1238.0(3.87), 2276.7(2.46)
479.1 7	29 6	¹³² In(0.201 s)	374.3(62), 4040.8(61), 299.2(49)
479.1 4	0.26	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
479.1 3	0.20 5	¹⁸⁸ Hg(3.25 m)	66.7(63), 190.1(4.40), 82.7(2.6)
479.12 10	0.0119 5	¹³⁷ Ce(9.0 h)	447.15(1.8), 10.6(0.8), 436.59(0.265)
479.13 4	>0.6	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
479.14 10	0.030 4	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
479.18 11	3.8 4	¹⁵⁴ Tb(22.7 h)	247.925(79), 346.643(69), 1419.81(46)
479.2		¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
479.20 16	†1.6 4	¹⁶⁵ Lu(10.74 m)	132.49(†100), 120.60(†100), 174.25(†47.0)
479.20 11	†26 4	¹⁸¹ Pt(51 s)	289.29(†100), 111.97(†100), 230.15(†92)
479.24 5	54 3	¹²⁸ La(5.0 m)	284.00(87), 643.65(14.7), 600.5(10.5)
479.27 11	0.091 9	⁷² Ga(14.10 h)	834.01(96), 2201.69(25.9), 629.95(24.8)
• 479.27 11	0.0223 16	⁷² As(26.0 h)	834.01(80), 629.95(7.92), 1463.95(1.107)
479.3 3	0.012 7	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
479.357 10	15.4 5	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
479.4 4		¹⁶⁸ Lu(6.7 m)	198.82(28), 979.22(20), 896.12(15)
479.40 9	†1.28 13	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
479.47 3	2.20 17	¹³² La(4.8 h)	464.55(76), 567.14(15.7), 1909.91(9.0)
479.47 3	3.1 9	¹³² La(24.3 m)	464.55(22), 663.07(11.6), 285.6(7)
479.5 6	0.022 16	⁶⁵ Ga(15.2 m)	115.09(54), 61.20(11.4), 153.0(8.9)
479.50 6	0.34 9	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
• 479.50 15	0.0300 13	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
479.5 3	†0.85 8	¹⁹² Tl(9.6 m)	422.8(†100), 634.8(†75.9), 786.3(†31.7)
479.531 17	21.8 4	¹⁸⁷ W(23.72 h)	685.774(27.3), 72.001(11.14), 134.243(8.85)
479.6 10	0.00045	⁶² Cu(9.74 m)	1172.9(0.34), 875.68(0.150), 2301.8(0.0414)
479.6 2	0.0279 10	¹⁰⁵ Ru(4.44 h)	724.21(47), 469.37(17.5), 676.36(15.7)
479.6 2	0.31 5	¹⁸⁴ Au(53.0 s)	162.97(50), 272.98(40), 362.47(17.5)
479.6 2	0.0052 13	²¹¹ Pb(36.1 m)	404.853(3.78), 832.01(3.52), 427.088(1.76)
479.622 25	0.0440 22	¹⁶⁵ Dy(2.334 h)	94.700(3.58), 361.68(0.84), 633.415(0.568)
479.65 2	2.32 7	²⁰⁸ Rn(24.35 m)	426.78(7.07), 251.05(5.02), 350.026(3.34)
479.7 3	2.3 3	¹¹² Rh(6.8 s)	348.70(87), 560.5(49), 1098.6(39)
479.70 35	0.19 5	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
• 479.71 23	0.017 6	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
479.72 7	0.35 3	¹⁶⁵ Yb(9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
• 479.76 10	0.0114 13	¹⁷² Er(49.3 h)	610.062(44.2), 407.338(42.1), 68.107(3.29)
479.78 15	0.65 12	²⁰⁴ At(9.2 m)	684.341(95), 516.318(90), 426.253(67.5)
479.8	0.79 8	⁴⁰ Cl(1.35 m)	1460.830(79), 2839.8(30.4), 2621.5(15.4)
479.8 1	0.07 2	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
479.8 2	†62.8 10	¹⁶⁸ Re(4.4 s)	199.3(†100), 363.2(†95), 558.2(†10.6)
479.8 10	0.02 1	²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
479.84 6		¹⁵⁹ Gd(18.479 h)	363.55(11.4), 58.00(2.15), 348.16(0.234)
479.9 2	0.80 14	⁷⁶ Rb(39.1 s)	2571.3(47), 424.0(43.4), 355.6(8.2)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
479.9 3	0.079 18	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
479.9 4		¹⁸⁰ Hg(2.8 s)	300.5(†100), 381.2(†69), 479.9(†23.0)
479.9 4	†23.0 45	¹⁸⁰ Hg(2.8 s)	300.5(†100), 381.2(†69), 405.0(†17)
• 479.95 7	0.057 6	¹⁹¹ Pt(2.9 d)	538.90(13.7), 409.44(8.0), 359.90(6.0)
480.0 3	3.6 4	⁹⁷ Sr(426 ms)	1905.0(25), 953.8(21.4), 652.2(11.4)
480.0 3	0.31 5	¹²⁹ In(0.61 s)	2118.0(45), 1865.0(32), 769.3(9.1)
480 1	0.12 10	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
480.0 4	0.22 8	¹⁵⁴ Ho(11.76 m)	334.6(84), 412.4(15.0), 873.4(12.5)
480.0 5	0.15 3	¹⁶⁷ Ho(3.1 h)	346.547(56), 321.336(23.5), 237.873(5.0)
480.0 2	†14.0 14	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
480 20	2.0 10	²¹⁰ Tl(1.30 m)	799.7(99), 298(79), 1316(21)
480 1	0.00135 18	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
• 480 1	†0.019 7	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
• 480.08 4	0.159 19	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
480.1 4	†19 1	¹⁰¹ Nb(7.1 s)	276.10(†100), 157.466(†32), 13.5(†32)
480.1 3	1.49 16	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
480.1 2	0.165 18	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
480.1	0.5	¹⁹⁹ Po(4.13 m)	1002.19(19), 1034.3(16), 362.01(7)
480.12 2	2.68 15	¹⁶¹ Gd(3.66 m)	360.94(0.59), 314.92(22.7), 102.315(13.9)
480.2		¹⁸² Hg(10.83 s)	129.3(†100), 217.7(†75), 413.5(†53)
• 480.23 8	0.048 4	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
• 480.244 7	0.08 4	²⁰⁰ Tl(26.1 h)	367.943(87), 1205.717(29.9), 579.298(13.8)
480.28 3	1.37 10	¹²³ Cd(1.82 s)	1165.86(25.7), 1027.45(22.6), 2102.81(12.5)
480.3 1	0.0038 6	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
480.3 1	5.4 5	¹⁴¹ Tb(3.5 s)	293.3(16.8), 343.6(16.3), 198.4(14.8)
480.3 2	2.3 2	²⁰⁰ Bi(36.4 m)	1026.5(100), 462.34(98), 419.70(91)
480.32 5	0.041 3	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
• 480.38 10	0.089 9	²⁰⁶ Bi(6.243 d)	803.10(99), 881.01(66.2), 516.18(40.7)
• 480.39 5	0.030 10	¹⁸⁹ Re(24.3 h)	216.663(5.50), 219.395(4.54), 245.09(3.5)
480.4 4	0.23 9	⁸⁵ Zr(7.86 m)	454.20(45), 416.3(27.0), 1198.4(4.8)
480.4 6	†54 13	¹³⁴ Pr(11 m)	293.5(†100), 299.0(†100), 1196.8(†100)
480.4 1	0.126 25	¹⁴³ Cs(1.78 s)	195.554(13), 232.421(8.32), 306.424(6.80)
480.4 7	0.41 4	¹⁹⁹ Bi(27 m)	560.1(22.0), 424.85(22), 841.7(11)
480.4 1	0.392 20	²⁵¹ Fm(5.30 h)	425.4(0.95), 358.3(0.315), 383.2(0.0196)
• 480.407 13	0.328 3	¹³¹ Ba(11.50 d)	496.326(47), 123.805(28.97), 216.078(19.66)
480.42 8	0.33 3	²¹⁴ Pb(26.8 m)	351.921(35.8), 295.213(18.5), 241.981(7.50)
• 480.44 2	†36.5 8	⁵⁶ Ni(5.9 d)	158.38(†98.8), 811.85(†86.0), 749.95(†49.5)
480.44 20	0.087 12	⁹³ Kr(1.286 s)	253.42(41.2), 323.89(24.1), 266.83(20.6)
• 480.5 6	8.0×10^{-6}	¹¹⁵ Cd(44.6 d)	933.8(2.000), 1290.580(0.890), 484.470(0.290)
• 480.50 15	0.0197 9	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
480.5 4	†8.0 20	¹⁷² W(6.6 m)	38.9(†100), 423.3(†44), 89.8(†33.0)
480.5 4	0.05 3	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
480.51 2	1.5	¹³⁵ La(19.5 h)	874.51(0.164), 587.83(0.1108), 220.94(0.0541)
480.6 5	0.394 11	¹¹⁶ Te(2.49 h)	93.70(31.4), 628.63(3.22), 102.97(1.95)
480.60 17	1.14 9	¹⁸⁷ Pt(2.35 h)	106.46(9), 201.52(6.4), 110.04(5.7)
• 480.61	0.0049 3	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
480.65 15	0.077 14	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
480.705 17	5.84 5	⁹⁶ Nb(23.35 h)	778.224(96.45), 568.80(58.0), 459.88(26.62)
• 480.705 17	0.08 3	⁹⁶ Tc(4.28 d)	778.224(100), 849.929(98), 812.581(82)
480.705 17	0.311 15	⁹⁶ Tc(51.5 m)	778.224(1.9), 1200.231(1.08), 719.562(0.296)
480.8 7	0.14 3	⁸⁹ Nb(1.9 h)	1627.20(3.4), 1833.46(3.16), 3092.7(3.0)
480.8 3	†13 3	¹⁵⁷ Yb(38.6 s)	230.92(†100), 340.7(†90), 241.7(†74)
480.8 5	0.32 11	¹⁶⁴ Tb(3.0 m)	168.838(25.4), 754.80(23.3), 215.07(21)
480.8 4	†2.5 10	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: $E_{\gamma}(I_{\gamma})$
480.8 2	0.41 4	¹⁹⁸ Tl(5.3 h)	411.8044(82), 675.8874(11), 636.4(10.1)
480.83 9	0.029 4	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
• 480.84 10	0.122 13	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
• 480.89 8	0.094 4	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
480.9 2	0.18 3	⁹² Kr(1.840 s)	142.307(64), 1218.6(60), 812.6(14.6)
480.9 1	9.5 10	⁹⁸ Sr(0.653 s)	119.353(73), 444.628(39), 428.4(31)
480.9 3	†<10	¹⁸¹ Pt(51 s)	289.29(†100), 111.97(†100), 230.15(†92)
480.9 1	2	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
480.9 3	0.35 3	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
480.94 20	0.024 5	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
480.94 20	0.13	²²⁸ Pa(22 h)	911.205(4.19), 463.005(1.250), 964.770(4.25)
481.00 12	0.103 19	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
481.0 2	63	¹⁰² Cd(5.5 m)	1036.6(12.8), 505.1(9.6), 414.8(7.6)
• 481 1	0.064 10	¹²⁴ Sb(60.20 d)	602.730(97.8), 1690.980(47.3), 722.786(10.76)
481.0 4	0.07	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
481.0 1	0.309 21	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
• 481.05 5	0.033 3	²²⁵ Ac(10.0 d)	99.91(1.01), 150.04(0.80), 99.63(0.62)
481.1 2	0.10	¹⁴⁰ Sm(14.82 m)	225.5(>10), 225.4(10), 140.0(5.0)
481.1 4	0.026 5	²¹¹ Pb(36.1 m)	404.853(3.78), 832.01(3.52), 427.088(1.76)
481.11 5	0.386 23	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
481.17 10	2.63 19	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
481.3 1	†9.52 8	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
481.3	4.7	¹⁷⁰ Hf(16.01 h)	164.78(33), 620.7(23), 120.17(19)
481.3 3	4.7	¹⁷⁰ Hf(16.01 h)	164.78(33), 620.7(23), 120.17(19)
481.31 5	0.71 15	¹⁸³ Hf(1.067 h)	783.754(66), 73.174(38), 459.069(27)
481.33 10	0.0168 13	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
481.34 2	0.218 20	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
481.39 9	1.24 8	⁹¹ Kr(8.57 s)	108.788(43.5), 506.592(19.1), 612.87(7.7)
481.4 3	0.153 18	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
481.4 6	†4.9	¹⁷⁷ Os(2.8 m)	84.7(†100), 125.4(†63), 195.8(†61)
481.5	0.12	¹⁴⁵ Ba(4.31 s)	96.6(17), 91.9(7), 65.9(5)
481.5 5	0.038 24	¹⁴⁶ Pr(24.15 m)	453.88(48.0), 1523.7(15.6), 735.72(7.5)
• 481.520 10	4.6×10 ⁻⁶ 2	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
481.6		¹¹⁷ Rh(0.44 s)	131.8(†100), 97.1(†33), 34.6(†32.7)
481.6 3	0.67 13	¹²¹ Cs(155 s)	153.9(15.2), 239.6(7.7), 427.1(3.63)
481.6 2	1.9 4	¹³⁰ Sb(6.3 m)	839.49(100), 793.53(86), 182.36(41)
• 481.6 5	0.021 6	²²³ Ra(11.435 d)	269.459(13.7), 154.21(5.62), 323.871(3.93)
481.6 5	0.61 12	²³¹ Np(48.8 m)	370.9(10), 348.4(3.63), 263.8(2.84)
481.65 10	3.0 4	¹⁴⁸ Tb(2.20 m)	784.430(100), 631.947(95), 882.3(92)
481.7 3	13.6 9	⁹⁰ Tc(49.2 s)	1054.3(100), 948.1(100), 944.7(36.6)
481.73 3	0.0348 17	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
481.8 7	0.06 2	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
481.9 6	0.50 21	¹⁰⁴ In(1.8 m)	658.0(100), 834.1(99), 878.1(29.4)
481.9 2	†2.95 19	¹⁶⁸ Re(4.4 s)	199.3(†100), 363.2(†95), 479.8(†62.8)
481.9 5	65 33	¹⁸⁴ Lu(20 s)	367.6(109), 242.4(76), 107.4(27)
481.9 10	0.014 7	²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
481.92 13	0.061 10	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
481.92 12	0.0103 13	²¹¹ Pb(36.1 m)	404.853(3.78), 832.01(3.52), 427.088(1.76)
481.96 10	1.12 10	⁹³ Sr(7.423 m)	590.238(67), 875.73(24.1), 888.13(21.8)
481.97 20	0.087 10	¹⁶³ Yb(11.05 m)	860.28(10.1), 63.62(6.5), 123.21(1.98)
482.0 1	0.11 11	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
482.0 1	0.29 5	¹⁴² Gd(70.2 s)	750.2(11.2), 178.90(11.20), 284.4(6.16)
482.0 3	†12.1 5	¹⁷⁰ Ho(43 s)	812.3(†100.0), 1894.5(†45.2), 78.6(†40)
• 482 1	†0.0089 24	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
• 482.06 11	0.059 6	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
482.07 9	0.067 11	²⁰¹ Pb(9.33 h)	331.19(79), 361.27(9.9), 945.96(7.4)
482.1 4		¹¹⁷ Pd(4.3 s)	247.5(†100), 649.9(†41), 323.9(†37)
482.1 1	0.024 3	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)
482.1 3	†3.8	¹⁵⁴ Nd(25.9 s)	151.703(†800), 799.55(†600), 180.693(†510)
482.1 3	0.14 3	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
482.14 12	0.015 3	¹³⁷ Xe(3.818 m)	455.490(31), 848.95(0.62), 1783.43(0.415)
• 482.182 23	80.50 11	¹⁸¹ Hf(42.39 d)	133.024(43.3), 345.916(15.12), 136.266(5.85)
482.19 7	0.95 6	¹⁴⁸ La(1.05 s)	158.468(55.6), 989.85(9.3), 760.30(8.6)
482.2 3	1.8 4	¹³⁵ Nd(12.4 m)	204.02(52), 41.43(23), 441.2(14.9)
482.2 2	0.22 5	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
482.2 3	2.11 20	¹⁷⁶ Tm(1.9 m)	189.57(44.5), 1069.3(34), 381.8(21.8)
• 482.23 4	0.58 4	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
482.3 3	0.103 22	¹⁰⁹ In(4.2 h)	203.5(74), 623.7(5.5), 1148.9(4.3)
482.3 1	†5.2 4	¹²³ La(17 s)	92.5(†100), 937.3(†43), 153.6(†43)
482.3 2	59 3	¹²⁸ Sn(59.07 m)	75.1(27.7), 557.3(16.5), 680.5(15.9)
• 482.3	0.033	¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
• 482.30 3	0.0271 21	¹⁵² Eu(13.542 y)	121.7824(28.4), 1408.011(20.87), 964.131(14.34)
482.3 4	†1.1 5	¹⁵² Tb(17.5 h)	344.281(†1500), 586.294(†223), 271.135(†203)
482.385 17	0.14 5	¹⁷⁴ Tm(5.4 m)	366.526(92), 992.128(87), 272.918(86)
482.39 13	0.24 4	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
482.4 1	7.8 7	⁸¹ Ge(7.6 s)	335.98(58.9), 792.94(34), 1495.53(19.9)
482.4 3	0.9	¹¹³ Pd(93 s)	95.74(3.3), 643.7(3.0), 739.63(2.4)
482.4 2	2.0 3	¹¹⁷ Ag(5.34 s)	135.4(48), 386.8(39.9), 298.1(21.1)
482.4 2	†100	¹⁵² Yb(3.1 s)	141.7(†13), 316.9(†7), 949.2(†0.7)
482.4 3	0.14	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
482.40 20	0.37 9	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
482.44 12	0.475 14	¹⁴⁴ Ba(11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
482.44 10	†0.36 3	¹⁵³ Pm(5.4 m)	35.842(†100), 127.298(†75), 28.309(†34.6)
482.47 10	0.0457 16	¹³⁷ Ce(9.0 h)	447.15(1.8), 10.6(0.8), 436.59(0.265)
482.5 3	1.31 15	⁹⁸ Sr(0.653 s)	119.353(73), 444.628(39), 428.4(31)
482.5 1	0.059 6	¹⁴⁵ Ce(3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)
482.51 3	3.33 19	⁸¹ Ga(1.221 s)	216.47(37.4), 828.26(22.1), 711.18(17.6)
482.52 12	0.081 17	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
482.53 11	†0.15 5	¹⁸⁴ Ir(3.09 h)	263.97(†100), 119.80(†45), 390.38(†38)
482.57 20	0.38	¹⁵⁴ Pm(1.73 m)	2057.76(17.1), 1393.9(14.4), 81.99(12.6)
482.57 20	1.44	¹⁵⁴ Pm(2.68 m)	184.810(32), 81.99(15.4), 546.66(14.5)
482.57 4	0.36 3	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
482.59 9	0.201 18	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
482.6 1	0.022 6	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
• 482.635 12	0.074 3	¹⁴⁹ Gd(9.28 d)	149.735(48.2), 298.634(28.6), 346.651(23.9)
482.7 5	0.12 6	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
482.7 1	2.32 17	¹¹⁹ Ag(2.1 s)	626.4(13), 366.2(12.1), 399.1(10.9)
482.7 3	0.086 13	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
482.8 3	†15 3	¹¹³ Ru(0.80 s)	263.2(†100), 211.7(†31.0), 337.5(†27.9)
482.80 8	0.71 8	¹²⁵ Cd(0.57 s)	1027.53(25.8), 1173.16(25.1), 736.65(12.6)
482.80 10	1.75 9	¹³⁶ I(46.9 s)	1313.02(100), 381.359(100), 197.316(78)
482.8	0.35 4	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
482.8	0.18 5	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
482.8 3	†57 7	²⁰⁶ Rn(5.67 m)	497.7(†100), 324.5(†96), 386.6(†61)
482.833 22	0.0456 18	¹⁹⁴ Ir(19.15 h)	328.455(13.1), 293.545(2.55), 645.157(1.17)
• 482.833 22	97 5	¹⁹⁴ Ir(171 d)	328.455(93), 600.5(62), 687.7(59)
• 482.833 22	1.11 6	¹⁹⁴ Au(38.02 h)	328.455(60), 293.545(10.2), 1468.91(6.3)
482.85 25	0.087 12	¹⁵⁸ Tm(3.98 m)	192.13(62), 335.10(16.8), 1149.83(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: $E_{\gamma}(I_{\gamma})$
482.86 4	0.754 15	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
• 482.894 12	0.147 7	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
483.0 5	†1.20 15	¹⁸² Ir(15 m)	273.23(†100), 126.79(†77), 236.3(†21.0)
483 1	0.015 9	¹⁹³ Au(17.65 h)	186.17(10.1), 255.57(6.7), 268.22(3.9)
• 483.025 18	0.018 3	¹⁸⁴ Re(38.0 d)	903.279(37.9), 792.071(37.5), 111.208(17.1)
483.05 10	4.1 7	¹⁶⁶ Hf(6.77 m)	78.76(41), 341.82(4.7), 407.91(4.5)
483.1 4	0.89 13	¹²⁸ La(5.0 m)	284.00(87), 479.24(54), 643.65(14.7)
483.2 6	1.07 8	⁹¹ Tc(3.14 m)	2450.90(13.5), 1639.90(9.2), 1605.20(7.77)
483.28 9	0.027 3	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
483.3 2	0.17 3	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
483.3 3	0.15 5	¹⁵⁹ Er(36 m)	624.5(33), 649.1(23.4), 205.92(9.7)
483.3 4	0.43 5	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
483.3 7	0.55 6	¹⁹⁹ Bi(27 m)	560.1(22.0), 424.85(22), 841.7(11)
• 483.32 5	0.037 10	¹⁸⁹ Re(24.3 h)	216.663(5.50), 219.395(4.54), 245.09(3.5)
483.4 1	0.07 2	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
483.45 3	2	¹⁸² Hf(61.5 m)	942.80(18.8), 799.64(9.4), 114.3152(6.2)
483.5	2.3	¹³⁴ Nd(8.5 m)	163.2(58), 288.9(13), 216.8(12)
483.50 20	†24 5	¹⁶³ Lu(238 s)	163.08(†100), 54.00(†88), 396.34(†63)
483.50 20	†8 2	¹⁶³ Lu(238 s)	163.08(†100), 54.00(†88), 396.34(†63)
483.58 3	1.86 5	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
483.59 5	0.067 3	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
483.6	†41.6	¹⁰⁷ Mo(3.5 s)	400.3(†100), 65.7(†>92), 384.4(†57.6)
483.6 3	2.2 3	¹³⁰ Sb(39.5 m)	793.53(100), 839.49(100), 331.05(78)
• 483.62 2	0.0020 3	⁹⁷ Ru(2.9 d)	215.718(86), 324.48(10.79), 569.31(0.873)
• 483.68 2	0.0050 3	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
483.70 20	†2.6 5	¹⁰⁶ Mo(8.4 s)	465.70(†100), 54.00(†54), 618.60(†25)
483.7 3	0.81 16	¹³⁰ La(8.7 m)	357.4(81.0), 550.7(25.9), 908.0(17.0)
483.700 24	3.53 17	¹³⁸ I(6.49 s)	588.825(56), 875.23(9.2), 2262.19(3.86)
483.700 24	†2.6×10 ²	¹³⁹ I(2.29 s)	588.825(†900), 875.23(†70), 1464.0(†4.9)
483.7 4	0.217 22	¹⁴³ Gd(39 s)	258.81(75), 204.77(19.4), 463.7(9.9)
483.73 8	1.64 12	⁹³ Sr(7.423 m)	590.238(67), 875.73(24.1), 888.13(21.8)
483.87 18	0.065 8	¹³¹ La(59 m)	108.081(25.0), 417.783(18.0), 365.162(16.9)
483.87 16	†11.0 19	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
483.9 3	0.00039 4	²⁵⁵ Fm(20.07 h)	81.477(0.81), 58.477(0.67), 80.92(0.27)
483.92 11	†4.3 13	¹⁸⁹ Au(28.7 m)	713.17(†100), 812.68(†63), 447.65(†55)
483.98 10	0.245 18	¹⁹⁷ Tl(2.84 h)	425.84(12.9), 152.22(7.2), 1411.34(4.5)
484.0 5	0.44 8	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
484.0 3	0.00028 6	¹⁶³ Er(75.0 m)	1113.5(0.0490), 436.1(0.0285), 439.94(0.0276)
484.0 5	†0.6	¹⁸³ Hg(9.4 s)	60.5(†100), 159.91(†21), 172.70(†17)
484.0 2	†4.5 2	²⁰³ At(7.4 m)	639.4(†100), 641.5(†55.8), 738.1(†38.4)
484.0 3	0.20 3	²⁰⁵ At(26.2 m)	719.30(31), 669.41(8.6), 628.88(5.6)
484.03 4	0.26 3	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
484.04 9	0.88 14	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
• 484.06 11	0.047 5	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
484.10 20	0.195 25	¹⁰³ Ag(65.7 m)	118.72(31.2), 148.193(28.3), 266.86(13.3)
484.1 5	0.27	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
• 484.1 2	4.0×10 ⁻⁶ 1	²³³ U(1.592×10 ⁵ y)	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
484.11 20	0.08 3	⁶⁶ Ge(2.26 h)	43.89(28.7), 381.85(28), 272.97(10.4)
484.119 20	0.0172 8	¹⁸⁷ W(23.72 h)	685.774(27.3), 479.531(21.8), 72.001(11.14)
484.14 17	0.093 14	¹⁴⁴ Ba(11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
484.158 13	1.07 3	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
484.2	10.6 13	³⁹ S(11.5 s)	1301.7(52), 1696.5(44), 394.8(37)
484.2 3	†2.5 4	⁷¹ Se(4.74 m)	147.50(†211), 1095.26(†43.6), 830.33(†43.2)
484.2 1	0.117 11	¹⁰⁷ Ru(3.75 m)	194.05(9.9), 847.93(5.3), 462.61(3.66)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
484.2 1	0.026 3	$^{119}\text{I}(19.1 \text{ m})$	257.52(87), 635.86(2.69), 320.53(2.17)
484.2 2	$\dagger 1.7 4$	$^{230}\text{Ra}(93 \text{ m})$	72.0($\dagger 100$), 63.0($\dagger 35.4$), 202.8($\dagger 27.3$)
484.2 2	0.38 8	$^{235}\text{Th}(7.1 \text{ m})$	417.0(2), 727.2(0.87), 696.1(0.64)
484.212 5	0.28 4	$^{75}\text{Br}(96.7 \text{ m})$	286.572(88), 141.3147(6.6), 427.883(4.4)
484.25 18	$\dagger 0.24 7$	$^{184}\text{Ir}(3.09 \text{ h})$	263.97($\dagger 100$), 119.80($\dagger 45$), 390.38($\dagger 38$)
• 484.25 5	0.170 12	$^{193}\text{Os}(30.5 \text{ h})$	139.03(4.27), 460.50(3.95), 73.039(3.2)
484.26 6		$^{168}\text{Lu}(5.5 \text{ m})$	1483.65($\dagger 100$), 228.58($\dagger 97$), 111.8($\dagger 68$)
484.26 6	0.31 15	$^{168}\text{Lu}(6.7 \text{ m})$	198.82(28), 979.22(20), 896.12(15)
484.3 3	0.5	$^{135}\text{Pr}(24 \text{ m})$	296.12(24), 82.64(13.7), 213.45(13.0)
484.3	>0.026	$^{197}\text{Tl}(2.84 \text{ h})$	425.84(12.9), 152.22(7.2), 1411.34(4.5)
• 484.3 3	0.0010	$^{239}\text{Np}(2.3565 \text{ d})$	106.125(27.2), 277.599(14.38), 228.183(10.76)
• 484.3 3		$^{243}\text{Cm}(29.1 \text{ y})$	277.599(14.0), 228.183(10.6), 209.753(3.29)
484.4 2	0.7	$^{145}\text{La}(24.8 \text{ s})$	70.0(11), 355.8(3.8), 118.2(3.6)
484.4 4	$\dagger 3.5 15$	$^{159}\text{Yb}(1.58 \text{ m})$	166.16($\dagger 500$), 177.12($\dagger 159$), 390.20($\dagger 113$)
484.40 4	<0.08	$^{183}\text{Os}(13.0 \text{ h})$	381.768(89.6), 114.463(20.63), 167.844(8.81)
484.40 4	2.21 11	$^{183}\text{Os}(9.9 \text{ h})$	1101.94(49.0), 1107.92(22.36), 1034.85(6.02)
• 484.470 20	0.290 2	$^{115}\text{Cd}(44.6 \text{ d})$	933.8(2.000), 1290.580(0.890), 1132.570(0.0856)
484.5 4	0.066 16	$^{76}\text{Kr}(14.8 \text{ h})$	315.7(39), 270.2(21.1), 45.48(19.5)
484.5	0.056 25	$^{133}\text{Te}(12.5 \text{ m})$	312.072(62), 407.63(27.1), 1333.21(10.67)
484.5 1	$\dagger 49.8 4$	$^{200}\text{At}(43 \text{ s})$	665.9($\dagger 100$), 611.1($\dagger 85.0$), 565.0($\dagger 17.0$)
484.5	0.008	$^{210}\text{Rn}(2.4 \text{ h})$	458.25(1.7), 648.70(0.843), 570.95(0.840)
484.501 5	11.3 23	$^{151}\text{Pr}(18.90 \text{ s})$	880.19(13), 189.057(11.8), 495.309(11.2)
484.53 16	0.028 6	$^{88}\text{Rb}(17.78 \text{ m})$	1836.063(21.40), 898.042(14.04), 2677.892(1.96)
• 484.545 10	1.000 23	$^{77}\text{Br}(57.036 \text{ h})$	238.996(23), 520.639(22.4), 297.215(4.16)
• 484.5780 4	3.184 11	$^{192}\text{Ir}(73.831 \text{ d})$	205.79549(3.300), 374.4852(0.721), 201.3112(0.472)
484.6 1	3.21 17	$^{92}\text{Kr}(1.840 \text{ s})$	142.307(64), 1218.6(60), 812.6(14.6)
484.6 2	$\dagger 3 1$	$^{136}\text{Eu}(3.3 \text{ s})$	254.9($\dagger 100$), 431.4($\dagger 34$), 458.0($\dagger 20$)
484.6 3	0.091 20	$^{163}\text{Yb}(11.05 \text{ m})$	860.28(10.1), 63.62(6.5), 123.21(1.98)
484.6 3	0.027 7	$^{189}\text{Pt}(10.87 \text{ h})$	721.41(9.3), 94.33(7.6), 568.84(7.1)
• 484.64	0.00398 21	$^{154}\text{Eu}(8.593 \text{ y})$	123.071(40.79), 1274.436(35.19), 723.304(20.22)
484.65 20	2.5 4	$^{157}\text{Tm}(3.63 \text{ m})$	455.00(9.3), 385.5(8.8), 348.40(8.4)
• 484.65 4	0.164 7	$^{169}\text{Lu}(34.06 \text{ h})$	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
484.7 2	0.66 9	$^{123}\text{Cs}(5.94 \text{ m})$	97.3(23), 596.7(10.1), 83.3(4.1)
484.7 5	0.42 11	$^{164}\text{Tb}(3.0 \text{ m})$	168.838(25.4), 754.80(23.3), 215.07(21)
484.7 5	1.6 3	$^{231}\text{Np}(48.8 \text{ m})$	370.9(10), 348.4(3.63), 263.8(2.84)
• 484.73 3	0.107 6	$^{165}\text{Tm}(30.06 \text{ h})$	242.917(35.5), 47.155(16.9), 297.369(12.71)
484.74 21	0.156 20	$^{154}\text{Tb}(9.4 \text{ h})$	123.071(30), 247.925(22.1), 540.18(20)
484.77 8	0.31 3	$^{100}\text{Sr}(202 \text{ ms})$	963.85(22.0), 898.50(18.9), 65.46(15.2)
484.79 3	1.02 13	$^{117}\text{Cd}(3.36 \text{ h})$	1997.33(26), 1065.98(23.1), 564.397(14.7)
• 484.8 3	0.0059 14	$^{76}\text{As}(26.32 \text{ h})$	559.101(45), 657.041(6.2), 1216.104(3.42)
• 484.8 1	0.00030 15	$^{155}\text{Tb}(5.32 \text{ d})$	86.545(32.0), 105.305(25), 180.103(7.45)
• 484.805 5	89.7 3	$^{87}\text{Y}(79.8 \text{ h})$	388.531(82)
484.85 15	0.45 6	$^{156}\text{Tm}(83.8 \text{ s})$	344.55(86), 452.85(17.2), 585.93(14.6)
484.85 25	0.074 12	$^{158}\text{Tm}(3.98 \text{ m})$	192.13(62), 335.10(16.8), 1149.83(7.6)
484.86 6	6.3 4	$^{79}\text{Ge}(39.0 \text{ s})$	230.62(61), 542.27(32.6), 755(18)
484.87 25	$\dagger 2.6 5$	$^{187}\text{Hg}(1.9 \text{ m})$	233.38($\dagger 100$), 376.34($\dagger 38$), 240.26($\dagger 33$)
484.89 17	0.42 3	$^{187}\text{Au}(8.4 \text{ m})$	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
484.9 10	2.2 18	$^{33}\text{Na}(8.2 \text{ ms})$	546.5(6.4), 1242.6(4.2), 704.3(3.7)
484.9 3	1.06 6	$^{74}\text{Ga}(8.12 \text{ m})$	595.847(91), 2353.46(44.5), 608.353(14.3)
• 484.9 1	3.02 15	$^{147}\text{Gd}(38.06 \text{ h})$	229.32(63), 396.00(34.3), 929.01(20.2)
484.90 20	0.32 9	$^{159}\text{Tm}(9.13 \text{ m})$	38.35(5.8), 84.8(5.8), 271.30(5.1)
485.0 2	0.562 25	$^{133}\text{Te}(12.5 \text{ m})$	312.072(62), 407.63(27.1), 1333.21(10.67)
485.0 4	0.46 8	$^{139}\text{Nd}(29.7 \text{ m})$	405.12(7), 1074.2(2.5), 669.0(1.52)
485 1	1.7 5	$^{164}\text{Ta}(14.2 \text{ s})$	211.05(74), 376.8(22), 605.0(14)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
485.0 6	0.24 7	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
485.02 6	0.209 21	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
• 485.03 20	0.00042 4	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
485.04 5	0.240 22	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
485.1 5	†0.38 7	¹²⁰ I(81.0 m)	560.44(†137), 1523.0(†21.1), 640.85(†17.1)
485.1 5	1.2 3	¹²⁰ I(53 m)	560.44(100), 601.11(87), 614.62(67)
485.10 27	†0.9 3	¹⁶⁵ Lu(10.74 m)	132.49(†100), 120.60(†100), 174.25(†47.0)
485.10 25	0.51 3	²⁰⁸ At(1.63 h)	686.527(98), 660.040(89), 177.595(48.6)
485.16 20	0.14 3	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
485.2 2	0.70 8	⁹⁶ Rb(0.199 s)	815.0(78.00), 692.0(8.0), 813.2(7.0)
485.23 20	0.137 14	¹⁹⁰ Re(3.2 h)	186.718(27.8), 605.24(14.9), 557.972(14.3)
• 485.23 20	0.73 16	¹⁹⁰ Ir(11.78 d)	186.718(52.4), 605.24(39.9), 518.55(34.0)
485.3 3	0.26 4	¹²¹ Xe(40.1 m)	252.7(13), 132.8(10.9), 445.2(7.7)
485.3 2	5.0 11	¹³⁶ Sm(47 s)	114.4(36), 747.7(5.4), 313.6(4.7)
485.3	0.8	¹⁴⁴ Tb(4.25 s)	743.0(12), 1001.6(7), 959.36(4.7)
485.3 3	0.56 8	¹⁵⁴ Ho(11.76 m)	334.6(84), 412.4(15.0), 873.4(12.5)
• 485.30 11	0.0022 5	¹⁹² Ir(73.831 d)	316.50791(82.81), 468.07152(47.83), 308.45692(30.00)
485.30 11	0.070 6	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
485.38 10	0.43 4	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
485.4 2	0.068 23	²²⁵ Th(8.72 m)	321.4(23), 246.0(5.06), 359.0(4.1)
485.43 11	0.103 10	¹⁹⁷ Pb(43 m)	385.85(74), 387.72(25.1), 222.45(24.6)
485.44 7	†19.0 19	²³⁴ Pa(1.17 m)	1001.03(†837000), 766.38(†294000), 742.81(†80000)
• 485.44 7	0.089 7	²³⁴ Np(4.4 d)	1558.31(18.72), 1527.21(11.2), 1601.80(9.1)
485.5 10	3.4 3	¹¹⁹ Cs(43.0 s)	176.05(29.7), 225.13(26), 257.9(17.4)
485.50 25	0.48 10	²⁰⁴ At(9.2 m)	684.341(95), 516.318(90), 426.253(67.5)
485.6 6	0.14 4	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
485.6 3	†30 4	²⁰⁶ Rn(5.67 m)	497.7(†100), 324.5(†96), 386.6(†61)
• 485.648 9	0.015	²⁰⁰ Tl(26.1 h)	367.943(87), 1205.717(29.9), 579.298(13.8)
485.7 1	>2.3	⁸³ Se(22.3 m)	356.687(70), 510.17(43), 224.8(32.7)
485.7 3	1.5 3	¹¹² Rh(6.8 s)	348.70(87), 560.5(49), 1098.6(39)
485.7		¹⁸⁰ Os(21.5 m)	20.1(†100), 717.4, 667.0
485.72 10	2.36 12	⁸³ Se(22.3 m)	356.687(70), 510.17(43), 224.8(32.7)
485.76 7	0.71 3	¹⁸⁷ Ir(10.5 h)	912.95(4.79), 427.12(4.12), 400.89(3.94)
485.8 3	0.52 4	¹⁰¹ Sr(118 ms)	128.34(18.0), 1124.82(10.9), 510.73(8.5)
485.80 11	5.9 8	¹⁸⁴ Au(53.0 s)	162.97(50), 272.98(40), 362.47(17.5)
485.88 9	0.026 5	¹¹¹ Pd(23.4 m)	580.00(0.8), 70.44(0.78), 1459.0(0.56)
485.88 9	0.52 8	¹¹¹ Pd(5.5 h)	70.44(8.3), 391.25(5.4), 632.80(3.6)
485.9 5	0.50 7	⁹⁶ Rh(9.90 m)	832.57(100), 685.49(95.7), 631.71(74.5)
• 485.90 14	0.016 3	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
• 485.91 20	†1.0×10 ⁴ 3	²⁴¹ Am(432.2 y)	59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸)
• 485.931 20	0.165 7	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
485.95 5	0.292 16	¹⁰⁷ Ru(3.75 m)	194.05(9.9), 847.93(5.3), 462.61(3.66)
485.95 15	0.050 5	²⁰⁸ Tl(3.053 m)	2614.533(99), 583.191(84.5), 510.77(22.6)
486.0 2	0.100 18	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
• 486.06 5	0.0858 9	¹⁶⁰ Tb(72.3 d)	879.383(30.01), 298.580(25.51), 966.171(25.21)
486.086 17	0.0768 20	¹⁸⁸ Re(16.98 h)	155.032(14.9), 632.99(1.25), 477.99(1.0)
486.1 3	0.50 20	¹²¹ Cs(155 s)	153.9(15.2), 239.6(7.7), 427.1(3.63)
486.1 3	0.16 8	¹²¹ Cs(122 s)	179.4(30.2), 196.0(24.1), 459.7(12.0)
486.1 2	†3.0 18	¹⁹² Bi(37 s)	853.8(†100.0), 501.8(†80), 504.3(†39)
486.1 1	2.09 16	²⁰³ Po(36.7 m)	908.64(55), 1090.95(19.2), 893.49(18.7)
486.11 3	0.335 17	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
• 486.11 15	0.011 6	¹⁹³ Os(30.5 h)	139.03(4.27), 460.50(3.95), 73.039(3.2)
• 486.160 18	0.66 3	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: $E_{\gamma}(I_{\gamma})$
• 486.19 13	0.33 3	⁹⁹ Rh(16.1 d)	528.24(33), 353.05(30.0), 89.65(29.0)
486.19 13	0.64 7	⁹⁹ Rh(4.7 h)	340.71(70), 617.8(12.0), 1261.2(11)
486.2 4	0.16 6	¹⁵⁶ Ho(56 m)	266.35(54.7), 137.83(51), 366.25(10.73)
486.3 5	0.030 10	²¹⁴ Bi(19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
486.3 6	0.034 17	²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
486.35 7	1.23 9	¹⁸⁷ Pt(2.35 h)	106.46(9), 201.52(6.4), 110.04(5.7)
486.4	0.08	¹⁸⁵ Ir(14.4 h)	254.4(13.3), 1828.8(10), 60.0(5.7)
486.5 3	0.16 4	⁸⁶ Br(16.5 s)	775.28(63), 802.14(13.13), 1440.69(4.72)
486.5 2	0.080 3	⁹¹ Sr(9.63 h)	1024.3(33), 749.8(23.61), 652.9(8.0)
486.5 4		¹³⁹ Eu(17.9 s)	267.3(31), 155.3(31), 190.1(25)
• 486.5	0.016 3	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
486.5 5	0.12	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
486.5 3	†8 3	²⁰³ At(7.4 m)	639.4(†100), 641.5(†55.8), 738.1(†38.4)
• 486.522 12	2.087 14	¹³¹ Ba(11.50 d)	496.326(47), 123.805(28.97), 216.078(19.66)
• 486.54 11	0.055 5	⁵⁶ Co(77.27 d)	846.771(100), 1238.282(67.6), 2598.459(17.28)
486.6 2	0.0068 16	¹⁶⁷ Yb(17.5 m)	113.34(55.3), 106.18(22.5), 176.25(21)
486.69 6	1.19 19	⁸¹ Sr(22.3 m)	153.54(33.8), 147.76(30.1), 443.34(17.5)
486.69 6	>0.35	⁸¹ Sr(22.3 m)	153.54(33.8), 147.76(30.1), 443.34(17.5)
486.7 4	0.12 5	⁹³ Sr(7.423 m)	590.238(67), 875.73(24.1), 888.13(21.8)
486.7	0.060 14	¹⁴¹ Ba(18.27 m)	190.328(46.0), 304.194(25.4), 276.948(23.4)
486.7 3	†61 6	¹⁴⁷ Ho(5.8 s)	189.1(†100), 883.9(†100), 1263.7(†36)
486.71 6	1.10 18	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
486.73 10	0.066 9	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
486.79 3	1.56 7	²⁰⁸ Rn(24.35 m)	426.78(7.07), 251.05(5.02), 350.026(3.34)
486.8 2	0.224 18	⁷⁹ Rb(22.9 m)	688.1(23), 182.77(19.2), 143.41(13.9)
486.8 5	†8.5 14	¹⁰² Y(0.36 s)	151.73(†100), 326.64(†53), 1091.3(†42)
486.8 2	0.9 3	¹¹⁷ Ag(5.34 s)	135.4(48), 386.8(39.9), 298.1(21.1)
486.8	1.3 6	¹⁴⁷ Cs(0.225 s)	85.2(7.3), 245.8(4.5), 109.7(4.5)
• 486.80 15	0.0188 9	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
486.8 3	0.032 5	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
• 486.83 2	0.0020 3	²³¹ Pa(32760 y)	27.36(10.3), 300.07(2.46), 302.65(2.2)
• 486.852 8	0.0241 20	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
486.87 2	0.06	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
486.9 4	0.29 14	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
486.9 5	0.29 8	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
486.98 19	0.075 12	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
487.0 2	0.79 24	⁶⁹ Ni(11.4 s)	1871.1(40.9), 679.7(39.7), 1213.0(39.3)
487 1	†1.5 3	¹⁰³ Mo(67.5 s)	83.4(†100), 423.91(†69), 45.8(†57)
487 1	0.39	¹¹³ Ag(68.7 s)	316.3(18), 392.3(11), 298.58(10)
487.0 2	22.5 16	¹⁶⁸ Dy(8.7 m)	192.5(32.8), 443.3(15.5), 630.4(13.6)
487.0		¹⁹¹ Hg(50.8 m)	252.5(57), 420.1(18.6), 578.6(17.6)
487.0 1	2.3	²²⁷ Ra(42.2 m)	27.36(16), 300.07(4.6), 302.65(4.3)
• 487.015 14	2.65×10 ⁻⁷ 21	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
• 487.021 12	45.5 6	¹⁴⁰ La(1.6781 d)	1596.210(95), 815.772(23.28), 328.762(20.3)
• 487.05 19	0.006 4	¹⁰⁵ Ag(41.29 d)	344.520(41), 280.41(30.2), 644.55(11.1)
487.05 19	†1.8×10 ³ 5	¹⁰⁵ Ag(7.23 m)	319.14(†63000), 306.25(†12800), 442.37(†5900)
487.08 8	0.44 4	²¹⁴ Pb(26.8 m)	351.921(35.8), 295.213(18.5), 241.981(7.50)
487.09 19	0.7 4	¹⁸¹ Re(19.9 h)	365.57(56), 360.70(20), 639.30(6.4)
487.1 1	0.0126 17	¹²¹ I(2.12 h)	212.189(84), 532.08(6.07), 598.74(1.47)
• 487.1 2	0.017 5	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
487.1 4	†2.1 4	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
487.1 2	0.0108 20	²⁵¹ Fm(5.30 h)	880.8(2.19), 453.1(1.45), 405.6(0.99)
487.16 31	0.63 15	¹⁶⁶ Lu(2.65 m)	228.12(77.3), 337.50(41), 367.95(31.4)
487.18 2	1.37 4	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
• 487.2 2	0.0126 19	¹²⁵ Sn(9.64 d)	1067.10(10), 1089.15(4.59), 822.48(4.28)
487.2 2	†0.16 6	¹⁵⁸ Ho(11.3 m)	218.21(†100.0), 98.91(†70), 945.7(†37)
487.2 3	0.0091 20	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
487.29 9	0.165 23	¹⁰³ Tc(54.2 s)	346.380(17.5), 136.079(16.6), 562.90(7.0)
487.3 3	0.60 20	¹¹⁸ Cs(14 s)	337.4(100), 472.8(37.4), 586.6(15.4)
487.3	0.20	¹³³ Pr(6.5 m)	134.3(14), 74.0(10), 315.6(10)
• 487.3 3	†4.4×10 ³	²⁴¹ Am(432.2 y)	59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸)
• 487.3		²⁴¹ Am(432.2 y)	59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸)
487.31 5	4.6 3	⁹⁹ Sr(0.269 s)	125.118(16.1), 536.12(14.0), 1198.12(9.2)
487.38 4	0.118 13	⁷¹ Zn(2.45 m)	511.56(32), 910.27(7.8), 389.88(3.8)
487.38 4	62 3	⁷¹ Zn(3.96 h)	386.28(93), 620.18(57), 511.56(28.4)
487.39 5	1.42 5	¹²⁹ Te(69.6 m)	27.81(16.3), 459.60(7.70), 278.43(0.567)
• 487.39 5	0.00023 5	¹²⁹ Te(33.6 d)	695.88(2.988), 729.57(0.70), 556.65(0.118)
• 487.399 10	1.044 21	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
487.41 6	0.34 5	¹⁹³ Hg(11.8 h)	257.97(61), 407.63(25), 573.25(14.2)
487.5 4	0.47 4	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
487.5 1	10.7 18	¹⁴¹ Gd(24.5 s)	351.1(89), 223.9(64), 574.9(51)
487.59 2	2.77 19	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
487.6 4		¹⁰⁷ Sn(2.90 m)	1129.2(†100), 678.5(†100), 1540.6(†30)
487.6 6	0.202 25	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
487.6 2	0.616 13	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
• 487.6 3	0.0110 14	²²³ Ra(11.435 d)	269.459(13.7), 154.21(5.62), 323.871(3.93)
487.7 4		¹³⁰ Pr(40.0 s)	951.9, 499.0, 1405
487.7	0.81 10	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
487.7 3	0.29 3	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
• 487.70 6	0.212 22	¹⁸⁸ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
487.7 2	†22 2	²⁰³ At(7.4 m)	639.4(†100), 641.5(†55.8), 738.1(†38.4)
• 487.75 23	0.00036 5	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
487.77 10	60 7	¹¹⁸ Ag(3.76 s)	677.13(11.9), 2788.7(11.8), 3224.3(10.5)
487.77 10	57 6	¹¹⁸ Ag(2.0 s)	677.13(53), 1058.39(14.8), 770.90(11.8)
487.8 5	0.14	¹⁰¹ Cd(1.2 m)	98.0(47), 1722.5(11), 1259.3(8)
487.8 1	10.0 5	¹²⁸ La(5.0 m)	284.00(87), 479.24(54), 643.65(14.7)
487.8 1	†1.9 2	²⁰⁰ At(43 s)	665.9(†100), 611.1(†85.0), 484.5(†49.8)
487.86 11	0.55 3	²⁰⁵ At(26.2 m)	719.30(31), 669.41(8.6), 628.88(5.6)
487.873 5	0.18 4	⁷⁵ Br(96.7 m)	286.572(88), 141.3147(6.6), 427.883(4.4)
487.9 2	0.005 2	¹⁷¹ Er(7.516 h)	308.31(64.4), 295.901(28.9), 111.621(20.5)
• 487.92 4	0.039 5	²⁰⁵ Bi(15.31 d)	1764.36(1.368), 703.44(31), 987.62(0.585)
487.93 4	0.70 7	¹⁷⁵ Tm(15.2 m)	514.868(65), 941.23(15), 363.942(12.7)
487.96 8	0.28 5	²⁰⁷ At(1.80 h)	814.41(44.5), 588.33(19.2), 300.654(12.8)
488.0 4	0.41 5	¹³² I(2.295 h)	667.718(99), 772.60(75.6), 954.55(17.6)
488 2	0.09 3	¹³³ Te(12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
488.0 1	1.38 13	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
488.0 5		¹⁸⁵ Pt(33.0 m)	229.60(†100), 135.3(†80), 197.4(†74)
488.1 3	0.26 7	⁹⁹ Ag(124 s)	264.41(65), 832.29(13.5), 805.07(12.5)
488.1 2	0.088 18	¹⁴⁹ Tb(4.118 h)	352.24(29.43), 164.98(26.4), 388.57(18.37)
488.1 2		¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
488.18 12	0.127 12	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
488.19 8	0.034 8	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
488.20 10	0.359 24	⁷³ Ga(4.86 h)	297.32(79.8), 325.70(11.17), 739.42(4.23)
• 488.2 2	0.014 3	²⁴⁵ Bk(4.94 d)	252.80(29.1), 380.8(2.40), 385.0(0.57)
488.24 10	1.38 10	¹⁹⁷ Pb(43 m)	385.85(74), 387.72(25.1), 222.45(24.6)
• 488.26	0.0070 25	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
488.3 6	0.080 19	¹⁰⁷ In(32.4 m)	204.97(47), 505.51(11.9), 320.92(10.2)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
488.3 2	0.092 14	¹⁴² Ba(10.6 m)	255.300(20.5), 1204.3(14.23), 895.2(13.9)
488.3 1	0.097 8	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
• 488.3 5		¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
488.34 16	†0.67 13	¹⁸⁴ Ir(3.09 h)	263.97(†100), 119.80(†45), 390.38(†38)
488.4 2	0.34 7	¹²³ Cs(5.94 m)	97.3(23), 596.7(10.1), 83.3(4.1)
488.4 2	0.34 7	²⁰⁰ Po(11.5 m)	671.0(34.0), 617.7(19.7), 434.4(9.3)
488.45 20	0.11 4	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
488.5 6	0.08 3	⁸⁹ Kr(3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
488.5 3	0.0028	¹⁰⁴ Rh(42.3 s)	555.796(2.0), 1237.2(0.066), 767.72(0.011)
488.5 3	0.00014	¹⁰⁴ Rh(4.34 m)	555.796(0.13), 767.72(0.0065), 1237.2(0.0042)
488.6 5	0.17 5	¹³⁶ Nd(50.65 m)	108.90(32), 40.2(18.9), 574.8(10.4)
• 488.65 15	0.017 3	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
• 488.66 4	0.407 4	¹⁵² Eu(13.542 y)	121.7824(28.4), 1408.011(20.87), 964.131(14.34)
488.7 5	0.011 5	¹⁰⁷ Ru(3.75 m)	194.05(9.9), 847.93(5.3), 462.61(3.66)
488.7 2	†18.6 8	¹³⁶ Pm(107 s)	373.8(†100), 602.7(†38.4), 857.2(†23.4)
488.7 2	†22	¹³⁶ Pm(47 s)	373.8(†100), 862.5(†28), 602.7(†17)
488.7 2	9.2 9	¹³⁶ Pm(107 s)	373.8(15.0), 602.7(12.3), 857.2(12.72)
488.7 1	0.0374 17	²¹⁰ Rn(2.4 h)	458.25(1.7), 648.70(0.843), 570.95(0.840)
488.79 20	0.7 4	¹⁸¹ Re(19.9 h)	365.57(56), 360.70(20), 639.30(6.4)
488.8 4	0.073 18	¹⁶¹ Er(3.21 h)	826.6(3.0), 211.15(12.2), 592.6(3.7)
488.8 10	0.050 14	¹⁶² Tm(21.70 m)	102.00(17.5), 798.68(8.4), 227.52(7)
• 488.82 8	0.074 16	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
488.82 4	0.091 4	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
488.88 4	1.43 10	¹³⁴ I(52.6 m)	847.025(95.4), 884.090(64.9), 1072.547(15.0)
488.9 10	0.25 6	⁷⁴ Kr(11.50 m)	89.65(31), 203.0(18.0), 296.67(9.9)
488.9 5	0.39 10	⁹⁶ Rh(9.90 m)	832.57(100), 685.49(95.7), 631.71(74.5)
489.0 6	0.227 21	¹⁵⁴ Tb(21.5 h)	123.071(26), 1274.436(10.5), 2187.10(9.9)
489.0	0.2	¹⁸⁵ Ir(14.4 h)	254.4(13.3), 1828.8(10), 60.0(5.7)
489.0 2	0.267 11	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
489 1		²¹⁹ Ra(10 ms)	805.2, 592.0, 315.82
489.0		²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
489.039 13		¹⁹² Re(16 s)	467.47(†100), 750.96(†25), 283.2668
• 489.039 13	0.443 4	¹⁹² Ir(73.831 d)	205.79549(3.300), 484.5780(3.184), 374.4852(0.721)
489.049 12	†28.0 6	¹⁴⁸ Tb(60 m)	784.430(†119.0), 1079.025(†16.2), 631.947(†15.1)
489.049 12	5.2 5	¹⁴⁸ Tb(2.20 m)	784.430(100), 631.947(95), 882.3(92)
489.05 5	1.33 11	¹⁰⁷ Ru(3.75 m)	194.05(9.9), 847.93(5.3), 462.61(3.66)
489.1 2	0.053 18	¹⁰¹ Tc(14.22 m)	306.85(88), 545.06(6.0), 127.23(2.86)
• 489.1 2	†0.011	¹⁰¹ Rh(4.34 d)	306.85(†115), 545.06(†6.1), 127.23(†0.85)
489.1 1	42	¹¹¹ Sb(75 s)	154.48(71), 1032.6(10.0), 755.4(5.1)
489.17 7	0.0159 16	⁶² Zn(9.186 h)	596.56(26), 40.84(25.5), 548.35(15.3)
• 489.2 5	0.019 10	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
• 489.23 10	6.5 4	⁴⁷ Ca(4.536 d)	1297.09(74), 807.86(6.5), 767.1(0.199)
• 489.24 3	0.153 8	¹⁴⁷ Nd(10.98 d)	91.105(28), 531.016(13.1), 319.411(1.95)
• 489.25 6	0.140 16	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
489.27 5	1.3 3	¹¹⁵ Sb(32.1 m)	497.358(98), 1236.52(0.58), 1633.72(0.352)
489.3 2	2.9 3	¹²⁶ Ba(100 m)	233.6(19.6), 257.6(7.6), 241.0(6.0)
489.3 4	0.15 8	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
489.40 8	1.23 12	¹⁸⁶ Ir(16.64 h)	296.911(64.0), 137.155(42), 434.849(34.4)
489.4 3	0.13 3	¹⁸⁸ Hg(3.25 m)	66.7(63), 190.1(4.40), 82.7(2.6)
489.48 10	0.55 6	¹⁰⁵ Ru(4.44 h)	724.21(47), 469.37(17.5), 676.36(15.7)
489.49 15	0.43 6	⁹¹ Kr(8.57 s)	108.788(43.5), 506.592(19.1), 612.87(7.7)
489.5	1.0	⁹⁶ Y(9.6 s)	1750.42(89), 915.0(60), 617.1(56)
489.5 4	0.148 10	¹¹⁴ Sb(3.49 m)	1299.90(99), 887.60(17.4), 327.18(7.0)
489.5 6	0.14 6	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
489.5 5	0.61 6	$^{161}\text{Tm}(33 \text{ m})$	45.54(5.00), 1648.1(9.50), 84.40(9.4)
489.5 3	0.50 25	$^{186}\text{Ta}(10.5 \text{ m})$	197.93(50), 214.87(42.3), 510.82(37.5)
489.52 4	2.73 17	$^{204}\text{At}(9.2 \text{ m})$	684.341(95), 516.318(90), 426.253(67.5)
489.6 3	$\dagger 15.9 17$	$^{198}\text{Tl}(1.87 \text{ h})$	636.4($\dagger 202$), 411.8044($\dagger 202$), 587.2($\dagger 185$)
489.61 12	0.23 5	$^{193}\text{Au}(17.65 \text{ h})$	186.17(10.1), 255.57(6.7), 268.22(3.9)
489.7 4	$\dagger 100 8$	$^{71}\text{Cu}(19.5 \text{ s})$	595.2($\dagger 30.5$), 586.5($\dagger 30.2$), 674.8($\dagger 25.4$)
489.7 1	1.04 15	$^{73}\text{Br}(3.4 \text{ m})$	64.9(37.0), 336.0(10.4), 699.8(9.1)
489.7 2	0.28 14	$^{77}\text{Zn}(2.08 \text{ s})$	189.49(28.1), 473.94(19.7), 1832.0(12.4)
489.7 3	0.22 3	$^{120}\text{Xe}(40 \text{ m})$	25.1(30), 72.6(9), 178.1(6.8)
489.7 3	$\dagger 2$	$^{131}\text{Ce}(10.3 \text{ m})$	169.42($\dagger 100$), 414.25($\dagger 68$), 119.18($\dagger 44$)
489.8 4	0.73 10	$^{90}\text{Mo}(5.67 \text{ h})$	257.34(78), 122.370(64.2), 203.13(6.4)
489.8 1	1.4 3	$^{107}\text{Tc}(21.2 \text{ s})$	102.70(21.0), 177.00(9.2), 106.31(7.6)
489.8 1	0.81 6	$^{146}\text{Ba}(2.22 \text{ s})$	140.7(20.2), 251.2(19.6), 121.2(14.2)
489.9 2	0.36 4	$^{76}\text{Br}(16.2 \text{ h})$	559.101(74), 657.041(15.9), 1853.67(14.7)
489.90 20	5.53 12	$^{83}\text{Y}(7.08 \text{ m})$	35.50(0.44), 882.1(6.30), 858.70(3.21)
489.90 20	0.266 6	$^{83}\text{Y}(7.08 \text{ m})$	35.50(0.44), 882.1(6.30), 489.90(5.53)
489.9 4	0.8 3	$^{99}\text{Zr}(2.1 \text{ s})$	469.140(55), 546.13(48.6), 593.990(27.4)
489.9 2	0.0093 17	$^{121}\text{I}(2.12 \text{ h})$	212.189(84), 532.08(6.07), 598.74(1.47)
• 489.9 7	$\dagger 0.08 2$	$^{136}\text{Cs}(13.16 \text{ d})$	818.514($\dagger 100$), 1048.073($\dagger 80$), 340.547($\dagger 42.3$)
489.90 10	0.0034 3	$^{165}\text{Dy}(2.334 \text{ h})$	94.700(3.58), 361.68(0.84), 633.415(0.568)
489.9 6	0.11	$^{203}\text{Bi}(11.76 \text{ h})$	820.3(30), 825.2(14.6), 896.9(13)
489.96 8		$^{148}\text{Pr}(2.0 \text{ m})$	301.702(95), 450.58(50), 697.61(40)
490.0 3	$\dagger 0.9 4$	$^{103}\text{Nb}(1.5 \text{ s})$	102.64($\dagger 100$), 641.1($\dagger 55$), 538.5($\dagger 34.0$)
490.00 16	$\dagger 7.5 11$	$^{181}\text{Pt}(51 \text{ s})$	289.29($\dagger 100$), 111.97($\dagger 100$), 230.15($\dagger 92$)
490.0 4	1.8 3	$^{185}\text{Au}(4.25 \text{ m})$	310.6(13), 243.1(6.6), 77.7(6)
490.1 4	0.37 6	$^{148}\text{Pr}(2.27 \text{ m})$	301.702(61), 1357.78(5.5), 1023.18(4.8)
490.2 4	0.18 4	$^{76}\text{Kr}(14.8 \text{ h})$	315.7(39), 270.2(21.1), 45.48(19.5)
490.2 3	$\dagger 20.0 21$	$^{109}\text{Tc}(0.87 \text{ s})$	194.6($\dagger 100$), 128.7($\dagger 51$), 96.2($\dagger 48$)
490.2 4	0.23 12	$^{185}\text{Au}(4.25 \text{ m})$	310.6(13), 243.1(6.6), 77.7(6)
490.24 17	0.132 3	$^{73}\text{Se}(39.8 \text{ m})$	67.03(2.59), 253.70(2.356), 84.0(2.03)
• 490.26 5	0.126 9	$^{151}\text{Pm}(28.40 \text{ h})$	340.08(23), 167.75(8.3), 275.21(6.8)
490.3 3	0.063 6	$^{186}\text{Hg}(1.38 \text{ m})$	112.1(63), 251.5(55), 191.6(3.7)
490.3 2	$\dagger 20$	$^{238}\text{Pa}(2.3 \text{ m})$	1015.3($\dagger < 100$), 1014.6($\dagger < 100$), 635.18($\dagger 88$)
• 490.32 3	0.160 4	$^{156}\text{Eu}(15.19 \text{ d})$	811.79(9.70), 88.9667(8.4), 1230.68(7.98)
490.33 15	0.0114 24	$^{228}\text{Ac}(6.15 \text{ h})$	911.205(26.6), 968.971(16.2), 338.322(11.3)
• 490.34 20	> 0.00023	$^{129}\text{Te}(33.6 \text{ d})$	695.88(2.988), 729.57(0.70), 556.65(0.118)
• 490.368 5	2.161 21	$^{143}\text{Ce}(33.039 \text{ h})$	293.266(42.80), 57.356(11.7), 664.571(5.69)
490.4 2	0.88 16	$^{135}\text{Nd}(12.4 \text{ m})$	204.02(52), 41.43(23), 441.2(14.9)
490.40 2	0.192 24	$^{147}\text{La}(4.015 \text{ s})$	117.718(12), 186.320(6.48), 438.30(5.04)
490.4 3	$\dagger 0.23 14$	$^{160}\text{Ho}(5.02 \text{ h})$	728.18($\dagger 100$), 879.383($\dagger 65.9$), 962.317($\dagger 59.1$)
490.4 3	0.11 6	$^{160}\text{Ho}(25.6 \text{ m})$	728.18(46.9), 879.383(26.6), 962.317(25.6)
490.4 5	0.45 12	$^{166}\text{Lu}(2.65 \text{ m})$	228.12(77.3), 337.50(41), 367.95(31.4)
490.40 24	$\dagger 1.04 21$	$^{183}\text{Hg}(9.4 \text{ s})$	60.5($\dagger 100$), 159.91($\dagger 21$), 172.70($\dagger 17$)
• 490.444 8	0.414 24	$^{172}\text{Tm}(63.6 \text{ h})$	78.7435(6.5), 1093.657(6.0), 1387.093(5.6)
• 490.444 8	1.91 6	$^{172}\text{Lu}(6.70 \text{ d})$	1093.657(62.5), 900.724(29.8), 181.528(20.6)
490.47 7	9.1 5	$^{202}\text{Pb}(3.53 \text{ h})$	459.72(8.6), 389.94(6.2), 241.1(0.84)
490.5 1	$\dagger 3.8 7$	$^{230}\text{Ra}(93 \text{ m})$	72.0($\dagger 100$), 63.0($\dagger 35.4$), 202.8($\dagger 27.3$)
490.5 5	$\dagger 15.8 18$	$^{244}\text{Bk}(4.35 \text{ h})$	891.5($\dagger 100$), 217.6($\dagger 88$), 921.5($\dagger 19$)
• 490.53 15	0.0011 4	$^{99}\text{Mo}(65.94 \text{ h})$	739.50(12.1), 181.063(6.08), 140.511(4.52)
• 490.6 10	0.034 10	$^{147}\text{Gd}(38.06 \text{ h})$	229.32(63), 396.00(34.3), 929.01(20.2)
490.6 5	$\dagger 1.5 3$	$^{152}\text{Tb}(17.5 \text{ h})$	344.281($\dagger 1500$), 586.294($\dagger 223$), 271.135($\dagger 203$)
490.69 9	2.4 3	$^{105}\text{Tc}(7.6 \text{ m})$	143.26(16), 107.945(14.1), 321.50(11.1)
490.7 3		$^{185}\text{Pt}(33.0 \text{ m})$	229.60($\dagger 100$), 135.3($\dagger 80$), 197.4($\dagger 74$)
490.71 10	3.48 18	$^{190}\text{Re}(3.2 \text{ h})$	186.718(27.8), 605.24(14.9), 557.972(14.3)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
• 490.71 10	0.78 4	¹⁹⁰ Ir(11.78 d)	186.718(52.4), 605.24(39.9), 518.55(34.0)
490.72 11	0.36 5	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
490.748 4	0.33 4	⁷⁵ Br(96.7 m)	286.572(88), 141.3147(6.6), 427.883(4.4)
490.76 20	0.32 4	⁸⁹ Kr(3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
490.78 11	0.108 10	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
490.8 4	0.062 11	¹⁴⁶ Ce(13.52 m)	316.74(56), 218.23(20.8), 264.56(9.0)
490.8 10	0.19 4	²⁰¹ Bi(108 m)	629.1(24.0), 936.2(11.3), 1014.1(10.7)
490.8 4	0.14	²²⁷ Ra(42.2 m)	27.36(16), 300.07(4.6), 302.65(4.3)
• 490.8 4	0.00053 10	²³¹ Pa(32760 y)	27.36(10.3), 300.07(2.46), 302.65(2.2)
490.80 6	0.17	²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
490.9 1	0.9 2	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
490.9 1	0.52 13	¹²¹ Cs(122 s)	179.4(30.2), 196.0(24.1), 459.7(12.0)
490.9 4	5.4 5	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
490.9 4	90 9	¹²⁷ Sn(4.13 m)	1348.0(4.8), 1564.0(4.0), 1584.5
490.9 3	0.015 5	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
490.9 4	0.07 3	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
• 490.95 15	0.0224 7	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
491		¹²⁵ Ce(9.0 s)	56
491.13 11	4.8 6	⁵⁹ Zn(182.0 ms)	913.85(1.1), 422.6(<0.2)
491.15 7	0.107 17	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
491.16 36	0.039 11	¹⁷⁴ Ta(1.05 h)	206.50(58), 91.00(16.0), 1205.92(4.9)
491.20 14	8.5 1	⁸¹ As(33.3 s)	467.72(20), 521.10(1.40), 1406.14(0.998)
• 491.243 11	2.85 6	¹²⁶ I(13.11 d)	388.633(34.1), 879.876(0.754)
491.243 11	5.0 4	¹²⁶ Cs(1.64 m)	388.633(41), 925.24(4.56), 879.876(1.29)
491.269 20		¹⁸⁷ W(23.72 h)	685.774(27.3), 479.531(21.8), 72.001(11.14)
491.27 17	0.275 25	⁹² Sr(2.71 h)	1383.93(90), 953.31(3.52), 430.49(3.28)
491.28 12	0.70 12	¹⁹³ Au(17.65 h)	186.17(10.1), 255.57(6.7), 268.22(3.9)
491.30 27	0.000089 13	⁸¹ Se(57.28 m)	275.988(0.049), 260.21(0.048), 767.1(0.00061)
491.3 3	2.4	¹³⁶ Te(17.5 s)	2077.9(22), 333.99(19), 578.75(18)
491.3 2	0.006	¹⁶⁴ Yb(75.8 m)	40.928(1.147), 675.41(0.38), 390.6(0.31)
491.4 3	0.070 8	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
491.4 5	†19	²²³ Rn(23.2 m)	591.8(†100), 635.2(†76), 416.0(†55)
491.47 4	0.34 6	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
491.47 4	1.46 17	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
491.5	0.12	¹⁴⁷ Ba(0.893 s)	167.4(11), 105.2(4.8), 196.1(4.8)
• 491.5 1	0.031 3	¹⁷⁷ Ta(56.56 h)	112.9498(7.2), 208.3664(0.94), 1057.8(0.29)
491.5 4	0.30 14	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
491.575 10	0.38 5	¹⁰⁹ Rh(80 s)	326.868(54), 426.135(7.7), 178.034(7.6)
491.591 9	2.7 3	²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
491.6 3	3.02 22	¹⁸⁰ Ir(1.5 m)	276.4(56), 132.2(38.1), 699.0(13.4)
491.64 5	0.080 6	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
• 491.64 8	0.050 9	¹⁸⁸ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
491.7 2	0.18 4	¹⁵⁰ Tb(3.48 h)	638.05(72), 496.3(14.8), 792.5(4.39)
491.70 4	1.27 4	¹⁸⁷ Ir(10.5 h)	912.95(4.79), 427.12(4.12), 400.89(3.94)
491.8 2	†0.88 8	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
491.8 5	†12 5	¹⁵⁷ Yb(38.6 s)	230.92(†100), 340.7(†90), 241.7(†74)
491.82 12	0.0041 8	²¹¹ Pb(36.1 m)	404.853(3.78), 832.01(3.52), 427.088(1.76)
491.89 3	0.090 13	¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
491.9 6	†0.23 9	¹⁶⁰ Ho(5.02 h)	728.18(†100), 879.383(†65.9), 962.317(†59.1)
491.9 1	0.37	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
491.9 2	†4.0 4	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
491.9 1	0.274 20	²⁰⁸ Fr(59.1 s)	635.8(10), 778.5(6.8), 325.3(5.2)
491.93 22	0.080 12	⁹³ Kr(1.286 s)	253.42(41.2), 323.89(24.1), 266.83(20.6)
491.93 14	0.00116 23	¹²⁹ Te(69.6 m)	27.81(16.3), 459.60(7.70), 487.39(1.42)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
492.0 4	0.010 4	¹⁰¹ Pd(8.47 h)	296.29(19), 590.44(12.06), 269.67(6.43)
492.0 10	†0.4 2	¹⁸² Ir(15 m)	273.23(†100), 126.79(†77), 236.3(†21.0)
492.0 4	0.35 9	¹⁸⁷ Pt(2.35 h)	106.46(9), 201.52(6.4), 110.04(5.7)
492.08 2	2.79 10	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
492.1 2	0.18 5	¹⁰⁸ Tc(5.17 s)	242.25(82), 465.6(14.3), 707.81(11.4)
492.10 24	0.137 20	¹⁵⁴ Tb(9.4 h)	123.071(30), 247.925(22.1), 540.18(20)
• 492.1 3	0.0060	²³⁹ Np(2.3565 d)	106.125(27.2), 277.599(14.38), 228.183(10.76)
• 492.1 3		²⁴³ Cm(29.1 y)	277.599(14.0), 228.183(10.6), 209.753(3.29)
492.17 16	†<10	¹⁸¹ Pt(51 s)	289.29(†100), 111.97(†100), 230.15(†92)
492.2 1	6.9 7	¹⁴¹ Tb(3.5 s)	293.3(16.8), 343.6(16.3), 198.4(14.8)
492.2 5	†0.05 1	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
492.21 3	1.48 6	¹⁴⁵ Ce(3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)
492.24 10	0.111 10	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
• 492.25 26	0.047 23	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
• 492.3 6	8.03 9	¹¹⁵ Cd(53.46 h)	336.240(45.9), 527.900(27.45), 260.890(1.94)
• 492.3 6	0.0096 2	¹¹⁵ Cd(44.6 d)	933.8(2.000), 1290.580(0.890), 484.470(0.290)
492.30 4	1.53 7	¹⁹⁹ Tl(7.42 h)	455.46(12.4), 208.20597(12.3), 247.26(9.3)
• 492.31 15	0.00328 12	¹⁴⁵ Sm(340 d)	61.25(12), 431.4(0.000052)
492.37 10	0.0242 24	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
492.4 4	1.01 8	⁷⁰ As(52.6 m)	1039.20(81), 1114.1(21.8), 668.3(21.8)
492.4 3	0.0012 6	¹⁷³ Hf(23.6 h)	123.672(83), 296.974(33.9), 139.634(12.7)
• 492.41 8	0.098 7	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
492.48 8	0.49 3	⁹² Y(3.54 h)	934.46(13.9), 1405.28(4.8), 561.03(2.40)
492.50 19	1.3	⁴⁵ K(17.3 m)	174.276(74.4), 1705.6(53), 2353.6(14.12)
492.5 3	1.2 5	¹¹⁸ Cs(14 s)	337.4(100), 472.8(37.4), 586.6(15.4)
492.5 3	0.061 20	¹⁶³ Yb(11.05 m)	860.28(10.1), 63.62(6.5), 123.21(1.98)
492.56 8	0.34 4	¹⁵⁰ Pm(2.68 h)	333.971(68), 1324.51(17.5), 1165.739(15.8)
• 492.58 5	0.569 18	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
492.6	3.6 9	²³ F(2.23 s)	1701.44(33.0), 2129.3(22), 1822.4(15.6)
492.6 1	0.56 5	⁹² Kr(1.840 s)	142.307(64), 1218.6(60), 812.6(14.6)
492.6 3	4.2 3	⁹⁴ Rh(70.6 s)	1430.50(100), 756.23(51), 1072.50(30.7)
492.6 2	3.6 6	¹²⁴ Cs(30.8 s)	353.9(40), 914.8(4.0), 846.9(1.19)
492.6	1.0	¹⁴⁸ Pr(2.27 m)	301.702(61), 1357.78(5.5), 1023.18(4.8)
492.624 5	0.0252 6	¹⁴⁵ Pr(5.984 h)	748.278(0.5250), 675.795(0.514), 72.500(0.261)
492.63 15	0.61 3	⁶⁶ Ge(2.26 h)	43.89(28.7), 381.85(28), 272.97(10.4)
492.63 5	1.21 3	⁹⁰ Kr(32.32 s)	1118.69(39.0), 121.82(35.5), 539.49(30.8)
492.63 5	1.03 19	¹⁰⁸ Sn(10.30 m)	396.44(64.3), 272.75(45.5), 669.08(22.6)
492.66 1	4.826 21	¹³¹ Te(25.0 m)	149.716(69), 452.323(18.18), 1146.96(4.95)
• 492.66 1	<0.30	¹³¹ Te(30 h)	773.67(49.9), 852.21(27.0), 793.75(18.10)
492.68 4	0.0045	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
492.7 2	0.96 24	¹¹⁷ Ag(5.34 s)	135.4(48), 386.8(39.9), 298.1(21.1)
492.7 2	2.1	¹⁴⁵ Ba(4.31 s)	96.6(17), 91.9(7), 65.9(5)
492.7 1	†13.2 15	¹⁷¹ Ta(23.3 m)	49.6(†100), 506.4(†54), 501.8(†22.6)
492.7 1	†1.5 2	¹⁷¹ Ta(23.3 m)	49.6(†100), 506.4(†54), 501.8(†22.6)
492.7 3	0.006	²¹² Bi(60.55 m)	39.858(1.091), 452.83(0.31), 288.07(0.31)
• 492.781 36	0.0113 9	¹²⁹ Cs(32.06 h)	371.918(30.60), 411.490(22.31), 548.945(3.40)
492.80 20	0.025 8	¹⁸⁷ W(23.72 h)	685.774(27.3), 479.531(21.8), 72.001(11.14)
492.8 5		²⁰⁰ Po(11.5 m)	671.0(34.0), 617.7(19.7), 434.4(9.3)
• 492.81 7	0.0186 12	¹⁴⁹ Gd(9.28 d)	149.735(48.2), 298.634(28.6), 346.651(23.9)
492.85 6	0.67 7	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
492.86 10	84	¹⁶⁹ Hf(3.24 m)	369.5(9.7), 123.5(3.9), 68.4(1.6)
492.9 3	18.0 10	⁶⁰ Mn(1.77 s)	823.63(74), 1968.8(53), 2299.3(13.0)
492.9 3	0.035 17	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
492.9 1	72.5 6	¹⁵² Ho(49.5 s)	647.2(92), 613.8(88.4), 683.3(88)
492.9 6	0.034 12	¹⁶⁵ Yb(9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
492.92 20	2.4 3	¹³⁰ In(0.55 s)	2258.79(88), 391.39(11.4), 96.54(4.2)
492.92 20	1.4 3	¹³⁰ In(0.55 s)	1221.24(89), 774.37(46), 89.23(20.2)
492.936 6	4.9 3	⁷⁴ Ga(8.12 m)	595.847(91), 2353.46(44.5), 608.353(14.3)
492.94 15	0.15 4	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
492.95 9		¹³² Ce(3.51 h)	182.11(77), 155.37(10.5), 216.83(4.95)
492.95 12	0.75 8	¹⁹⁷ Pb(43 m)	385.85(74), 387.72(25.1), 222.45(24.6)
492.96 15	0.77 11	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
493.0 1	6.7 14	⁷⁵ Rb(19.0 s)	178.98(<63), 178.97(>51), 187.21(8.7)
493.0 2	4.6 5	¹¹⁸ Cs(14 s)	337.4(100), 472.8(37.4), 586.6(15.4)
493.0 3	0.10 3	¹²¹ Ag(0.78 s)	314.55(32.1), 353.43(19.9), 500.61(9.3)
493		²¹⁹ Fr(20 ms)	530, 352, 189
493.03 10	0.0105 5	¹³⁷ Ce(9.0 h)	447.15(1.8), 10.6(0.8), 436.59(0.265)
493.1 2	0.105 23	¹⁰³ Cd(7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
493.1 2	†21.6 13	¹³⁸ Pm(3.24 m)	520.9(†100), 729.0(†37.8), 1279.1(†11.0)
493.1 2	0.16 3	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
493.1 2	0.0027 3	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
• 493.1 2	†0.034 5	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
493.12 7	†8.6 6	¹⁸⁴ Ir(3.09 h)	263.97(†100), 119.80(†45), 390.38(†38)
• 493.145 7	8.7×10^{-7} 3	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
493.18 10	0.11 3	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
493.2 4	3.2 3	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
493.2 2	†5.7 5	¹⁹⁴ Bi(92 s)	965.4(†100.0), 575.1(†98.0), 280.1(†73.7)
493.3 2	0.37 9	¹⁵² Pm(7.52 m)	244.6989(78), 121.7824(45), 340.48(31.3)
493.3 3	0.138 14	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
493.38 5		¹⁷³ W(7.5 m)	457.68(†100), 130.19(†31.5), 174.8(†29.1)
493.39 5	0.100 9	⁸⁷ Br(55.60 s)	1419.71(22.0), 1476.04(7.9), 1577.60(6.0)
493.4 1	1.50 16	¹³⁵ Nd(12.4 m)	204.02(52), 41.43(23), 441.2(14.9)
• 493.4	0.012	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
• 493.43 9	0.0103 9	¹¹⁰ Ag(249.79 d)	657.7622(94.0), 884.685(72.2), 937.493(34.13)
493.46 4	0.107 4	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
• 493.50 2	0.0094 13	¹⁵² Eu(13.542 y)	344.281(26.58), 778.91(12.96), 411.115(2.231)
493.50 2	†3.2 3	¹⁵² Tb(17.5 h)	344.281(†1500), 586.294(†223), 271.135(†203)
• 493.503 19	0.0313 21	¹⁵² Eu(13.542 y)	121.7824(28.4), 1408.011(20.87), 964.131(14.34)
• 493.51 10	0.047 6	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
493.52 15	†12.1 7	¹⁹³ Tl(21.6 m)	324.37(†100), 1044.7(†59), 676.10(†48)
493.6 3	†2.67 13	¹⁸⁷ Pb(15.2 s)	299.5(†100), 617.2(†2.67), 448.7(†1.33)
• 493.66 4	0.373 8	²⁰⁵ Bi(15.31 d)	1764.36(1.368), 703.44(31), 987.62(0.585)
493.7 2	11.7 12	¹⁰³ Zr(1.3 s)	248(100), 164.05(94), 126.30(84)
493.72 6	0.32 3	¹⁸⁹ Pt(10.87 h)	721.41(9.3), 94.33(7.6), 568.84(7.1)
493.772 2	5.59 15	¹⁹⁹ Pt(30.80 m)	542.993(15), 317.056(4.95), 185.768(3.32)
493.8 5	0.26 5	¹⁰¹ Ag(11.1 m)	261.0(53), 588.0(10.0), 667.3(9.8)
493.8 8	0.42	¹⁰¹ Cd(1.2 m)	98.0(47), 1722.5(11), 1259.3(8)
493.8 3	0.035 17	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)
493.8 3	0.090 9	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
493.83 4	0.138 7	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
493.85 5	0.060 5	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
• 493.89 9	0.066 16	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
493.9 4	1.1 3	¹²⁸ La(5.0 m)	284.00(87), 479.24(54), 643.65(14.7)
• 493.9 1	0.00035 18	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
493.9 5	5.7 11	¹⁹⁶ Pb(37 m)	253.1(27.0), 502.1(26.5), 366.5(11.1)
493.9 1	0.131 11	²²⁸ Fr(39 s)	473.7(10.2), 474.0(7.6), 410.40(6.3)
494.0 3	†30 10	¹¹² Te(2.0 m)	372.70(†100), 296.20(†86), 418.9(†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: $E_{\gamma}(I_{\gamma})$
494.1 4	0.008 4	$^{111}\text{Pd}(23.4 \text{ m})$	580.00(0.8), 70.44(0.78), 1459.0(0.56)
494.1 2	$\dagger 4.9 4$	$^{168}\text{Re}(4.4 \text{ s})$	199.3($\dagger 100$), 363.2($\dagger 95$), 479.8($\dagger 62.8$)
494.1 2	$\dagger 76 12$	$^{191}\text{Tl}(5.22 \text{ m})$	452.6($\dagger 100$), 470.1($\dagger 98$), 391.6($\dagger 96$)
494.164 16	11.4 6	$^{174}\text{Tm}(5.4 \text{ m})$	366.526(92), 992.128(87), 272.918(86)
• 494.169 15	0.0691 14	$^{67}\text{Ga}(3.2612 \text{ d})$	93.311(39.2), 184.577(21.2), 300.219(16.80)
494.2 8	0.25 12	$^{166}\text{Lu}(2.65 \text{ m})$	228.12(77.3), 337.50(41), 367.95(31.4)
494.2 4	$\dagger 15.0 20$	$^{172}\text{W}(6.6 \text{ m})$	38.9($\dagger 100$), 423.3($\dagger 44$), 89.8($\dagger 33.0$)
494.2 3	0.0017 7	$^{211}\text{Pb}(36.1 \text{ m})$	404.853(3.78), 832.01(3.52), 427.088(1.76)
494.3 4	0.06 6	$^{101}\text{Zr}(2.1 \text{ s})$	119.3(10.8), 205.6(6.0), 912.2(3.48)
494.3 4	0.51 23	$^{103}\text{Cd}(7.3 \text{ m})$	1461.81(12), 1448.70(5.55), 1079.90(5.44)
494.3 4	0.18 7	$^{119}\text{Cd}(2.69 \text{ m})$	292.9(36.8), 343.0(16.9), 1609.7(10.9)
494.3 1	6.7 7	$^{141}\text{Tb}(3.5 \text{ s})$	293.3(16.8), 343.6(16.3), 198.4(14.8)
494.3 2	1.2	$^{200}\text{Bi}(36.4 \text{ m})$	1026.5(100), 462.34(98), 419.70(91)
494.31 10	0.87 11	$^{151}\text{Dy}(17.9 \text{ m})$	386.10(19.4), 49.46(18.0), 546.31(14.3)
494.32 17	$\dagger 0.194 22$	$^{153}\text{Pm}(5.4 \text{ m})$	35.842($\dagger 100$), 127.298($\dagger 75$), 28.309($\dagger 34.6$)
• 494.360 8	0.001486 25	$^{169}\text{Yb}(32.026 \text{ d})$	63.12077(44.2), 197.95788(35.8), 177.21402(22.16)
• 494.38 12	0.056 6	$^{153}\text{Tb}(2.34 \text{ d})$	212.038(31.0), 170.504(6.8), 109.758(6.4)
494.4		$^{130}\text{Pr}(40.0 \text{ s})$	951.9, 499.0, 1405
494.4 4	0.3 1	$^{156}\text{Pm}(26.70 \text{ s})$	173.75(52.0), 1147.84(20.5), 117.42(13.8)
• 494.419 16	0.0398 13	$^{147}\text{Eu}(24.1 \text{ d})$	197.299(27), 121.220(22.9), 677.516(9.8)
494.50 20	0.73 10	$^{83}\text{Y}(7.08 \text{ m})$	35.50(0.44), 882.1(6.30), 489.90(5.53)
494.50 20	8.1 11	$^{83}\text{Y}(2.85 \text{ m})$	259.10(54), 421.8(19.5)
494.5 3	0.0030 15	$^{133}\text{La}(3.912 \text{ h})$	278.835(2.50), 302.353(1.648), 290.06(1.413)
494.5		$^{157}\text{Lu}(5.0 \text{ s})$	967.5, 949.8, 880.5
494.52 25	0.10 3	$^{137}\text{Nd}(38.5 \text{ m})$	75.5(17.0), 580.6(13), 306.60(10.0)
494.534 27	23	$^{163}\text{Tb}(19.5 \text{ m})$	351.138(26), 389.734(24.3), 421.860(11.5)
494.55 25	0.59	$^{154}\text{Pm}(2.68 \text{ m})$	184.810(32), 81.99(15.4), 546.66(14.5)
494.6 2	0.23 6	$^{108}\text{In}(58.0 \text{ m})$	875.46(100), 632.96(100), 242.84(41)
494.6 2	1.00 6	$^{149}\text{Dy}(4.20 \text{ m})$	100.8(15.2), 789.4(11.8), 1776.3(11.1)
• 494.6 2	0.011 5	$^{151}\text{Pm}(28.40 \text{ h})$	340.08(23), 167.75(8.3), 275.21(6.8)
494.6 3	$\dagger 0.55 23$	$^{160}\text{Ho}(5.02 \text{ h})$	728.18($\dagger 100$), 879.383($\dagger 65.9$), 962.317($\dagger 59.1$)
494.6 3	0.26 11	$^{160}\text{Ho}(25.6 \text{ m})$	728.18(46.9), 879.383(26.6), 962.317(25.6)
494.60 13	0.191 25	$^{167}\text{Lu}(51.5 \text{ m})$	29.66(14.4), 239.22(8.6), 213.19(3.6)
494.6 2	0.05	$^{185}\text{Au}(4.25 \text{ m})$	310.6(13), 243.1(6.6), 77.7(6)
494.6 10	0.008	$^{214}\text{Bi}(19.9 \text{ m})$	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
494.62 12	0.74 4	$^{149}\text{Pr}(2.26 \text{ m})$	138.447(11.0), 165.087(9.9), 108.520(9.5)
494.68 18	$\dagger 1.6 2$	$^{165}\text{Lu}(10.74 \text{ m})$	132.49($\dagger 100$), 120.60($\dagger 100$), 174.25($\dagger 47.0$)
• 494.69 7	0.060 6	$^{191}\text{Pt}(2.9 \text{ d})$	538.90(13.7), 409.44(8.0), 359.90(6.0)
494.7 2	$\dagger 60$	$^{134}\text{Pm}(24 \text{ s})$	294.2($\dagger 100$), 459.3($\dagger 15$), 631.3($\dagger 10$)
494.7 3	0.050	$^{170}\text{Hf}(16.01 \text{ h})$	164.78(33), 620.7(23), 120.17(19)
• 494.7 1	0.0042 4	$^{177}\text{Ta}(56.56 \text{ h})$	112.9498(7.2), 208.3664(0.94), 1057.8(0.29)
494.85 5	0.076 7	$^{131}\text{Te}(25.0 \text{ m})$	149.716(69), 452.323(18.18), 1146.96(4.95)
494.87 15	0.33 5	$^{183}\text{Ir}(58 \text{ m})$	392.52(10.4), 228.70(6.9), 87.67(5.6)
494.89 10	0.37 6	$^{199}\text{Pb}(90 \text{ m})$	366.90(44.2), 353.39(9.5), 1135.04(7.8)
• 494.90 15	0.015 4	$^{156}\text{Eu}(15.19 \text{ d})$	811.79(9.70), 88.9667(8.4), 1230.68(7.98)
• 494.94 5	0.053 3	$^{165}\text{Tm}(30.06 \text{ h})$	242.917(35.5), 47.155(16.9), 297.369(12.71)
494.98 13	0.0140 22	$^{176}\text{Ta}(8.09 \text{ h})$	1159.28(25), 88.34(12), 1224.93(6)
495.0 1	0.193 22	$^{133}\text{Te}(55.4 \text{ m})$	912.671(55.28), 647.51(19.4), 863.955(15.6)
495.00 2	0.97 6	$^{147}\text{La}(4.015 \text{ s})$	117.718(12), 186.320(6.48), 438.30(5.04)
495.0 2	$\dagger 2.9 1$	$^{203}\text{At}(7.4 \text{ m})$	639.4($\dagger 100$), 641.5($\dagger 55.8$), 738.1($\dagger 38.4$)
495.07 7	0.604 24	$^{133}\text{Ce}(4.9 \text{ h})$	477.22(39), 510.36(20.7), 58.39(19.2)
495.1 2	1.04 8	$^{97}\text{Rb}(169.9 \text{ ms})$	167.1(26), 585.2(21.0), 600.5(10.6)
495.16	>0.0014	$^{95}\text{Tc}(20.0 \text{ h})$	765.794(93.82), 1073.71(3.74), 947.67(1.951)
495.2 10	0.103 22	$^{201}\text{Bi}(108 \text{ m})$	629.1(24.0), 936.2(11.3), 1014.1(10.7)

• $t_{1/2} > 1 \text{ d}$

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
• 495.25 6	0.256 8	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
• 495.28 10	0.047 20	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
495.3 4	0.054 18	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
495.3 4	0.021 8	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
• 495.3 2	0.014 5	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
495.3 3	0.138 14	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
495.309 6	11.2 22	¹⁵¹ Pr(18.90 s)	880.19(13), 189.057(11.8), 484.501(11.3)
495.32 10	0.61 10	¹⁷ Ne(109.2 ms)	
495.354 4	0.102 10	¹¹⁴ Ag(4.6 s)	558.454(20.40), 576.08(1.77), 1301.234(1.31)
495.4 2	0.002 1	¹⁷¹ Er(7.516 h)	308.31(64.4), 295.901(28.9), 111.621(20.5)
495.6 3	1.48 8	⁷³ Zn(23.5 s)	218.1(6.00), 910.5(1.91), 1612.9(0.92)
495.6 2		¹⁰⁶ In(5.2 m)	632.66(92), 1714.90(17.1), 861.16(10.6)
495.66 7	1.57 11	¹⁵⁷ Pm(10.56 s)	160.61(35), 188.052(13.5), 571.27(5.39)
495.7 4		¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
495.7 1	0.58 5	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
495.8 4	0.39 9	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
495.8 2	6.7 9	¹⁴⁰ Gd(15.8 s)	174.8(76), 749.9(70), 379.0(38)
495.8 2	0.50 5	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
495.8 12		¹⁹⁶ Tl(1.84 h)	426.0(84), 610.5(11.9), 635.5(9.8)
495.88 24	0.056 4	⁷² Ga(14.10 h)	834.01(96), 2201.69(25.9), 629.95(24.8)
495.88 5		¹²⁶ Pr(3.1 s)	349.40, 169.55
495.9 1		²²³ Rn(23.2 m)	591.8(†100), 635.2(†76), 416.0(†55)
495.95 9	0.15 7	²⁰⁵ Po(1.66 h)	872.39(37), 1001.21(28.8), 849.83(25.5)
• 495.956 7	0.08 4	²⁰⁰ Tl(26.1 h)	367.943(87), 1205.717(29.9), 579.298(13.8)
• 496.0 5	†0.017 3	¹⁰¹ Rh(4.34 d)	306.85(†115), 545.06(†6.1), 127.23(†0.85)
496.0 6	0.15 10	¹⁰⁵ In(5.07 m)	131.37(41), 260.21(15.7), 604.11(9.2)
496.00 9	0.85 12	¹¹⁸ I(13.7 m)	605.71(86.0), 545.12(10.9), 600.71(10.2)
496.00 9	1.37 17	¹¹⁸ I(8.5 m)	605.71(99), 600.71(92), 614.42(65)
496.0 3	†7.2 8	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
496.0 8	0.041 17	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
496 1	0.0014	²⁵¹ Fm(5.30 h)	425.4(0.95), 480.4(0.392), 358.3(0.315)
496.07 10	†13 1	¹⁶³ Hf(40.0 s)	70.98(†100), 62.14(†64), 45.39(†48)
496.08 15	0.033 10	¹⁰¹ Pd(8.47 h)	296.29(19), 590.44(12.06), 269.67(6.43)
496.1	0.8	¹³³ Pr(6.5 m)	134.3(14), 74.0(10), 315.6(10)
496.1 3	†5.5 17	¹⁵⁵ Nd(8.9 s)	180.574(†100), 418.99(†75), 955.08(†50)
• 496.1 1	0.00045 23	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
496.15 7	0.146 5	²¹⁰ Rn(2.4 h)	458.25(1.7), 648.70(0.843), 570.95(0.840)
496.2 4	0.18 6	¹⁰³ Cd(7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
• 496.2 10	0.052 21	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
496.2 4	0.00017 4	²⁵⁵ Fm(20.07 h)	81.477(0.81), 58.477(0.67), 80.92(0.27)
496.22 4	0.144 6	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
496.23 8	0.034 7	¹³¹ Te(25.0 m)	149.716(69), 452.323(18.18), 1146.96(4.95)
496.231 17	0.639 7	¹⁸³ Os(13.0 h)	381.768(89.6), 114.463(20.63), 167.844(8.81)
496.3	0.18	¹⁴⁸ Pr(2.27 m)	301.702(61), 1357.78(5.5), 1023.18(4.8)
496.3 1	23.5 10	¹⁵⁰ Tb(5.8 m)	638.05(100), 650.4(70), 438.37(42)
496.3 1	14.8 3	¹⁵⁰ Tb(3.48 h)	638.05(72), 792.5(4.39), 650.4(4.03)
496.30 11	†37 3	¹⁵⁹ Yb(1.58 m)	166.16(†500), 177.12(†159), 390.20(†113)
496.30 11	†5 2	¹⁵⁹ Yb(1.58 m)	166.16(†500), 177.12(†159), 390.20(†113)
496.3 5	0.10 4	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
• 496.3 3	0.0025 13	¹⁷² Er(49.3 h)	610.062(44.2), 407.338(42.1), 68.107(3.29)
496.3 2	†1.30 19	¹⁹⁶ Bi(240 s)	1049.21(†21.1), 371.93(†20.8), 689.00(†19.2)
• 496.326 13 47		¹³¹ Ba(11.50 d)	123.805(28.97), 216.078(19.66), 373.246(14.04)
• 496.383 2	1.658 24	¹⁴⁹ Gd(9.28 d)	149.735(48.2), 298.634(28.6), 346.651(23.9)
• 496.39 3	0.0046 8	¹⁵² Eu(13.542 y)	121.7824(28.4), 1408.011(20.87), 964.131(14.34)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
• 496.39 3	0.0046 6	¹⁵² Eu(13.542 y)	344.281(26.58), 778.91(12.96), 411.115(2.231)
496.39 3	†3.2 3	¹⁵² Tb(17.5 h)	344.281(†1500), 586.294(†223), 271.135(†203)
496.4 6	1.2 4	¹³⁰ In(0.55 s)	1221.24(89), 774.37(46), 89.23(20.2)
496.4 1	†2.0 10	¹⁷² Ir(2.0 s)	227.8(†100.0), 378.4(†62.0), 448.4(†40.5)
• 496.404 11	0.077 9	¹⁵⁶ Tb(5.35 d)	534.318(66.6), 199.2132(40.9), 1222.36(31.00)
496.44 6	†36	¹⁹⁷ Ir(5.8 m)	469.72(†100), 430.56(†61), 815.92(†45)
496.5 6	0.22 3	¹²⁴ In(3.17 s)	1131.64(68), 3214.15(21.5), 997.79(21.1)
496.5 6	1.30 20	¹²⁴ In(2.4 s)	1131.64(100), 969.94(52), 1072.85(47)
496.5 2	13.0 13	¹³² Sb(4.10 m)	696.8(100), 973.9(100), 150.6(66)
496.50 25	0.9 3	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
• 496.52 7	0.211 16	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
496.56 5	1.81 10	⁹³ Kr(1.286 s)	253.42(41.2), 323.89(24.1), 266.83(20.6)
496.7 3	†8 5	¹⁵⁵ Tm(45 s)	88.1(†100), 323.2(†65), 507.0(†40)
496.70 15	0.092 23	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
496.7 3	0.0100 20	²⁴⁰ Np(7.22 m)	554.60(20.9), 597.40(11.7), 1496.9(1.33)
496.75 18	0.37 3	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
496.8 3	0.066 11	¹¹¹ Sn(35.3 m)	1152.98(2.7), 1914.70(1.99), 761.97(1.48)
496.8 1	†1.6 3	¹⁷² Ir(2.0 s)	227.8(†100.0), 378.4(†62.0), 448.4(†40.5)
496.88 13	0.87 12	¹⁰⁰ Y(735 ms)	212.531(73), 118.59(15.4), 665.98(7.7)
496.9 2	†25 3	¹³² Pr(1.6 m)	325.5(†100), 822.4(†17.3), 533.1(†15.2)
496.9 2	0.269 22	¹⁴² Gd(70.2 s)	750.2(11.2), 178.90(11.20), 284.4(6.16)
• 496.9 3	0.0016 8	²²⁵ Ac(10.0 d)	99.91(1.01), 150.04(0.80), 99.63(0.62)
• 496.935 16	0.123 4	¹⁶⁶ Ho(1.20×10 ³ y)	184.410(72.6), 810.276(58.08), 711.683(55.32)
496.935 16	0.187 4	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
496.97 13	0.158 16	¹⁴⁴ Ba(11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
• 496.98 13	0.016 5	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
497.0 5	2.61 25	⁷⁰ As(52.6 m)	1039.20(81), 1114.1(21.8), 668.3(21.8)
497.0 8	0.13 5	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
497.0 2	0.079 16	²²⁷ Fr(2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)
• 497.0 5	4.6×10 ⁻⁸ 23	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
• 497.06 4	15.31 15	²⁰⁶ Bi(6.243 d)	803.10(99), 881.01(66.2), 516.18(40.7)
• 497.080 7	90.9 10	¹⁰³ Ru(39.26 d)	610.33(5.75), 443.799(3.27), 557.039(0.8672)
• 497.080 7	0.00396 14	¹⁰³ Pd(16.991 d)	39.757(0.07), 357.47(0.0221), 294.978(0.00280)
497.1 2	1.00 14	¹²² Cs(21.0 s)	331.1(48), 512.0(3.8), 817.9(3.09)
497.1 2	79 5	¹²² Cs(4.5 m)	331.1(94), 638.5(63), 560.3(14.0)
497.1 4	0.021	²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
497.2 6	†8.0 11	¹⁰² Tc(4.35 m)	475.070(†115), 628.05(†35.3), 631.28(†21.3)
497.2 4	8.0×10 ⁻⁵	¹⁰⁹ Pd(13.7012 h)	88.04(1.171), 311.4(0.032), 647.3(0.024)
497.2 3	8.7 18	¹³⁹ Eu(17.9 s)	267.3(31), 155.3(31), 190.1(25)
497.2 4	0.11	²⁰⁹ Rn(28.5 m)	408.32(50.3), 745.78(22.8), 337.45(14.5)
497.22 7	5.2 4	¹⁰⁸ Rh(16.8 s)	433.937(43), 618.84(15.0), 931.15(1.46)
497.22 7	19.3 9	¹⁰⁸ Rh(6.0 m)	433.937(88), 581.1(60), 947.27(49)
497.22 7	0.0022 6	¹⁰⁸ Ag(2.37 m)	433.937(0.50), 618.84(0.261), 1007.22(0.0139)
497.294 7	0.184 22	⁷⁸ As(90.7 m)	613.725(54), 694.916(16.7), 1308.59(13.0)
497.3 2	0.48 6	¹⁰¹ Zr(2.1 s)	119.3(10.8), 205.6(6.0), 912.2(3.48)
497.3 1	0.59 8	¹⁴³ Gd(112 s)	271.94(84), 588.00(15.7), 798.89(10.7)
• 497.3 4	0.0039 7	¹⁴⁵ Eu(5.93 d)	893.73(66), 653.512(15.0), 1658.53(14.9)
497.358 24	0.047 1	¹¹⁵ In(4.486 h)	
497.358 24	98	¹¹⁵ Sb(32.1 m)	489.27(1.3), 1236.52(0.58), 1633.72(0.352)
• 497.36 12	0.009 4	¹²⁵ Sb(2.7582 y)	427.875(30), 600.600(17.86), 635.954(11.31)
497.383 18	6.7 5	⁸⁹ Kr(3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
497.4 5	0.99 13	⁶⁹ Se(27.4 s)	97.98(66), 66.4(24.8), 691.8(16.6)
• 497.47 5	0.13 3	¹⁸⁹ Re(24.3 h)	216.663(5.50), 219.395(4.54), 245.09(3.5)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
497.49 15	0.0061 19	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
497.5 3	†3.3 5	¹⁴² Xe(1.22 s)	571.83(†100), 657.05(†79), 538.24(†77)
• 497.50 15	0.0139 5	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
497.5 2	†3.7 1	²⁰³ At(7.4 m)	639.4(†100), 641.5(†55.8), 738.1(†38.4)
497.6 1		¹¹⁵ Pd(25 s)	342.71(8), 303.87(7), 396.56(6)
497.6 2	0.97 17	¹²¹ Cs(155 s)	153.9(15.2), 239.6(7.7), 427.1(3.63)
497.60 19	1.8 8	¹⁸⁶ Tl(27.5 s)	405.43(92), 402.72(45.9), 356.84(29.3)
497.62 10	0.96 9	⁷⁴ Ga(8.12 m)	595.847(91), 2353.46(44.5), 608.353(14.3)
497.7 3	0.13 3	¹⁷⁷ W(135 m)	115.65(50), 426.98(13.2), 1036.4(10.3)
497.7 2	†100 14	²⁰⁶ Rn(5.67 m)	324.5(†96), 386.6(†61), 773.1(†57)
• 497.768 6	0.036 4	¹⁶⁸ Tm(93.1 d)	198.241(52.39), 815.990(48.99), 447.515(23.05)
497.77 10	0.11 6	¹¹⁷ Cd(2.49 h)	273.349(28), 1303.27(18.4), 344.459(17.9)
497.77 10	†123 9	²⁰⁰ Au(18.7 h)	367.943(†123), 579.298(†121), 255.87(†119)
497.8 6	0.0022	¹⁰⁴ Rh(42.3 s)	555.796(2.0), 1237.2(0.066), 767.72(0.011)
497.8 6	0.00012	¹⁰⁴ Rh(4.34 m)	555.796(0.13), 767.72(0.0065), 1237.2(0.0042)
497.8 6	0.46	¹⁰⁴ Ag(69.2 m)	555.796(92.6), 767.72(65.7), 941.7(25.0)
• 497.8 2	0.0032	²³⁹ Np(2.3565 d)	106.125(27.2), 277.599(14.38), 228.183(10.76)
497.8 2	0.0015 3	²³⁹ Am(11.9 h)	277.599(15.0), 228.183(11.3), 209.753(3.50)
• 497.8 2		²⁴³ Cm(29.1 y)	277.599(14.0), 228.183(10.6), 209.753(3.29)
• 497.81 2	0.045 3	¹⁴³ Ce(33.039 h)	293.266(42.80), 57.356(11.7), 664.571(5.69)
497.9 2	1.67 9	⁶⁰ Cu(23.7 m)	1332.501(88), 1791.6(45.4), 826.06(21.7)
497.9 1	3.9 3	¹¹⁹ Ag(2.1 s)	626.4(13), 366.2(12.1), 399.1(10.9)
497.9 3	0.107 13	¹⁸⁶ Hg(1.38 m)	112.1(63), 251.5(55), 191.6(3.7)
497.9 3	0.22 4	¹⁹⁸ Tl(5.3 h)	411.8044(82), 675.8874(11), 636.4(10.1)
497.96 9	80	¹¹³ Sb(6.67 m)	332.41(14.8), 88.25(2.7), 940.63(2.62)
498 1	0.16 7	⁷⁶ Br(16.2 h)	559.101(74), 657.041(15.9), 1853.67(14.7)
498.0 3	0.72 8	¹⁰⁰ Zr(7.1 s)	504.25(31), 400.48(19.2), 103.7(0.67)
498.0 5	0.007 4	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
498.0 3	4.99 16	¹⁷¹ Re(15.2 s)	568.4(16.1), 102.0(9.7), 1066.0(8.1)
498.0 4	†1.1 2	¹⁸² Ir(15 m)	273.23(†100), 126.79(†77), 236.3(†21.0)
498		²¹⁷ Ac(740 ns)	1105
498 1	0.6	²²⁸ Pa(22 h)	911.205(4.19), 463.005(1.250), 964.770(4.25)
498.0 1	0.062 10	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
498.0 1		²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
498.04 20	0.28 4	⁸⁹ Br(4.40 s)	1097.82(6.00), 997.93(4.26), 953.53(4.26)
498.06	0.010 3	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
498.2 5	0.045 6	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
498.2 7	0.32 10	¹⁵⁹ Eu(18.1 m)	67.8(19), 78.6(9.1), 95.7(7.0)
498.23 16	0.06 3	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
498.23 16	0.38 4	²⁰⁷ At(1.80 h)	814.41(44.5), 588.33(19.2), 300.654(12.8)
498.25 18	0.105 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
498.262 15	5.7 3	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
498.3 5	1.8 8	¹¹⁹ Cs(43.0 s)	176.05(29.7), 225.13(26), 257.9(17.4)
• 498.3 3	>0.049	¹²⁴ Sb(60.20 d)	602.730(97.8), 1690.980(47.3), 722.786(10.76)
498.3 3	25	¹²⁴ Sb(93 s)	645.855(25), 602.730(25), 1101.0(0.50)
498.3 2	1.8 5	¹⁴⁵ Ho(2.4 s)	339.8(15), 312.9(14.3), 334.1(13.5)
498.3 2	0.88 10	¹⁷⁶ Tm(1.9 m)	189.57(44.5), 1069.3(34), 381.8(21.8)
498.4 6	0.8 5	¹⁰² Sr(69 ms)	243.80(53), 150.15(18.0), 93.89(13.4)
498.4 3	0.071 16	²²⁷ Fr(2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)
498.43 78	0.05 3	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
498.45 7	1.25 19	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
498.5 6	2.4 8	⁸⁴ Se(3.1 m)	408.2(100)
498.5 4		¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
498.59 12	0.152 12	⁹⁰ Kr(32.32 s)	1118.69(39.0), 121.82(35.5), 539.49(30.8)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
498.6 4	1.15 20	⁸⁹ Kr(3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
498.6 2	0.113 19	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
498.617 15	1.75 4	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
498.62	0.036 3	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
• 498.62 4	0.093 16	²⁰⁵ Bi(15.31 d)	1764.36(1.368), 703.44(31), 987.62(0.585)
498.62 5	2.4 3	²³⁷ Pa(8.7 m)	853.6(34), 865.1(15.5), 529.26(14.9)
498.65 14	†25 2	¹⁵⁹ Yb(1.58 m)	166.16(†500), 177.12(†159), 390.20(†113)
498.66 12	0.06 3	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
498.7 1		¹³² Ce(3.51 h)	182.11(77), 155.37(10.5), 216.83(4.95)
498.7 5	0.25 8	¹³⁶ Nd(50.65 m)	108.90(32), 40.2(18.9), 574.8(10.4)
498.7 4	†0.7 3	¹⁵⁵ Tm(21.6 s)	226.8(†100), 531.7(†20), 88.1(†17)
498.7 15	0.019 5	¹⁵⁷ Dy(8.14 h)	326.16(92), 182.20(1.84), 83.01(0.62)
498.7 4	0.13 7	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
498.7 2	0.45 5	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
498.7 6	0.7	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
498.72 8	0.200 20	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
• 498.75 3	0.103 3	¹⁷¹ Lu(8.24 d)	739.78(47.8), 19.394(13.7), 667.404(11.04)
498.79 3	0.53 5	¹³² La(4.8 h)	464.55(76), 567.14(15.7), 1909.91(9.0)
• 498.80 5	0.071 7	¹⁸⁹ Re(24.3 h)	216.663(5.50), 219.395(4.54), 245.09(3.5)
498.8 5	†8.6 7	¹⁹⁵ Bi(183 s)	807.6(†100), 831.7(†100), 776.2(†95)
498.8 1	0.087 11	²²⁸ Fr(39 s)	473.7(10.2), 474.0(7.6), 410.40(6.3)
• 498.8 5	0.001	²³⁹ Np(2.3565 d)	106.125(27.2), 277.599(14.38), 228.183(10.76)
• 498.8 5		²⁴³ Cm(29.1 y)	277.599(14.0), 228.183(10.6), 209.753(3.29)
• 498.88 6	0.066 4	¹⁵⁶ Eu(15.19 d)	811.79(9.70), 88.9667(8.4), 1230.68(7.98)
498.9		¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
498.9 3	†15 5	¹⁶³ Lu(238 s)	163.08(†100), 54.00(†88), 396.34(†63)
498.9 1	†2.7 5	¹⁷² Ir(2.0 s)	227.8(†100.0), 378.4(†62.0), 448.4(†40.5)
• 498.90 5	0.040 25	²⁰⁵ Bi(15.31 d)	1764.36(1.368), 703.44(31), 987.62(0.585)
498.97 3	0.354 6	¹⁴⁵ Ce(3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)
499.0 5		¹³⁰ Pr(40.0 s)	951.9, 1405, 1282
499.0 3	13 7	¹⁴⁶ Ho(3.6 s)	682.9(100), 925.3(69), 673.7(55)
499.0	>0.010	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
499.0 2	†4.4 7	²²⁵ Fr(4.0 m)	182.3(†100), 31.50(†91), 225.1(†55)
499.02 4	0.21	²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
499.06 7	0.149 10	²¹⁰ At(8.1 h)	1181.39(99.3), 245.31(79), 1483.39(46.5)
499.08 3	0.34 3	¹⁸² Os(22.10 h)	510.056(52), 180.230(33.5), 263.285(6.71)
499.1 3	0.98 24	¹⁴⁸ Pr(2.27 m)	301.702(61), 1357.78(5.5), 1023.18(4.8)
499.1 5	0.029 12	¹⁶¹ Er(3.21 h)	826.6(3.0), 211.15(12.2), 592.6(3.7)
499.2 4	0.017	¹⁰³ Ag(65.7 m)	118.72(31.2), 148.193(28.3), 266.86(13.3)
499.2 6	0.142 14	¹⁶² Tm(21.70 m)	102.00(17.5), 798.68(8.4), 227.52(7)
499.20 12	0.0014	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
499.26 7	0.77 8	⁹⁹ Sr(0.269 s)	125.118(16.1), 536.12(14.0), 1198.12(9.2)
499.27 14	1.49 16	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
499.3 8	0.4 3	⁸⁶ Br(55.1 s)	1564.92(64), 2751.2(21.1), 1361.65(10.4)
499.3 4	2.0 3	¹⁰⁵ Ru(4.44 h)	724.21(47), 469.37(17.5), 676.36(15.7)
499.3 5	0.23 3	¹⁰⁷ In(32.4 m)	204.97(47), 505.51(11.9), 320.92(10.2)
499.3 1	1.41 18	¹²³ Cs(5.94 m)	97.3(23), 596.7(10.1), 83.3(4.1)
499.31 10	0.21 6	⁸² Rb(6.472 h)	776.517(84), 554.348(62.4), 619.106(37.976)
499.34 4	0.46 5	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
499.36 6	0.00018 6	¹³⁵ La(19.5 h)	480.51(1.5), 874.51(0.164), 587.83(0.1108)
499.36 16	†19 4	¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†33)
• 499.37 5	0.00093 15	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
499.4 10	0.014	¹⁵⁰ Pm(2.68 h)	333.971(68), 1324.51(17.5), 1165.739(15.8)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
499.45 5	0.118 5	⁸¹ Rb(4.576 h)	190.38(64.0), 446.15(23.2), 510.31(5.3)
499.45 5	0.0294 18	⁸¹ Rb(30.5 m)	49.56(0.78), 643.6(0.115), 1194.9(0.112)
499.5 10	0.038 19	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
499.5 10	0.03 3	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
499.5 2	†1.9 4	¹³¹ Pr(1.53 m)	266.13(†100), 72.82(†64), 387.56(†38)
499.5 5	0.14 3	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
499.5 4	0.97 9	¹⁸⁸ Tl(71 s)	412.7(88), 592.0(61), 504.2(23.3)
499.51 17	0.203 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
499.58 25	†0.54 14	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
499.59 12	0.21 5	¹⁴⁴ Ba(11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
499.6 3	0.20 3	⁶³ Fe(6.1 s)	994.8(14.0), 1427.2(4.6), 1299.0(1.23)
499.6 3	0.47 8	⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
499.6 7	0.21 9	¹²⁹ Sb(4.40 h)	812.8(43), 914.6(20.0), 544.7(17.9)
499.60 13	0.40 8	¹⁹⁷ Pb(43 m)	385.85(74), 387.72(25.1), 222.45(24.6)
499.61 20	4.3	¹⁹⁹ Po(4.13 m)	1002.19(19), 1034.3(16), 362.01(7)
• 499.63 4	0.062 16	²⁰⁵ Bi(15.31 d)	1764.36(1.368), 703.44(31), 987.62(0.585)
499.65 5	2.54 20	¹⁹³ Hg(11.8 h)	257.97(61), 407.63(25), 573.25(14.2)
499.66 3	1.47 11	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
499.69 27	1.28 17	⁷⁰ Se(41.1 m)	49.51(35.8), 426.15(29), 376.65(9.43)
499.7 3	17.9 7	⁹⁶ Pd(122 s)	124.70(65), 762.3(50.0), 1098.7(17.3)
499.7 2	2.4 3	¹⁰⁴ In(1.8 m)	658.0(100), 834.1(99), 878.1(29.4)
499.74 16	†10.0 14	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
499.77 22	†1.25 21	¹⁸³ Hg(9.4 s)	60.5(†100), 159.91(†21), 172.70(†17)
499.8 3	0.0007	¹⁰⁰ Tc(15.8 s)	539.59(7), 590.83(5.7), 1512.1(0.44)
499.8 3	0.14 4	¹⁰⁰ Rh(20.8 h)	539.59(78.4), 2376.1(35.3), 1553.4(21)
499.8		¹⁵⁷ Lu(5.0 s)	967.5, 949.8, 880.5
• 499.83 23	0.023 6	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
• 499.876 10	3.624 16	⁷¹ As(65.28 h)	174.954(82.00), 1095.490(4.08), 326.785(3.034)
499.9 3	0.14 9	¹⁵² Pm(7.52 m)	244.6989(78), 121.7824(45), 340.48(31.3)
499.9 2	0.30 7	¹⁵⁹ Er(36 m)	624.5(33), 649.1(23.4), 205.92(9.7)
499.9 7	0.98 14	²⁰¹ Bi(108 m)	629.1(24.0), 936.2(11.3), 1014.1(10.7)
499.94 5	0.69 6	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
499.941 24	0.291 12	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
500.0 5	0.09 3	¹⁰⁰ Cd(49.1 s)	936.55(66), 139.71(6.7), 582.5(6.3)
500.0 10	0.6	¹⁵¹ Ho(35.2 s)	527.4(63), 775.53(9.2), 209.5(5.69)
500.0 1	†4.9 16	¹⁷⁷ Tm(85 s)	104.5(†11.1), 517.5(†22.2), 44.5(†10)
500.0 3	6.0 7	¹⁷⁹ Yb(8.0 m)	592.1(75), 612.3(35.4), 381.4(9.6)
500.02 6	0.097 7	⁸⁸ Kr(2.84 h)	2392.11(34.6), 196.301(25.98), 2195.842(13.18)
500.10 20	0.55 8	¹⁰⁵ Ru(4.44 h)	724.21(47), 469.37(17.5), 676.36(15.7)
500.1 8	0.030 10	¹¹⁶ In(54.41 m)	1293.54(84.4), 1097.3(56.2), 416.86(28.9)
500.1 1	0.37 6	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
500.1 5	0.28 6	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
• 500.1 5	0.000168 20	²⁵³ Es(20.47 d)	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
500.154 16	0.141 22	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
500.16 26	0.38 7	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)
500.20 28	0.30 4	⁹⁹ Nb(2.6 m)	97.785(7), 253.50(3.64), 2641.3(3.64)
500.2 1	9.1 8	¹⁴¹ Tb(3.5 s)	293.3(16.8), 343.6(16.3), 198.4(14.8)
500.22 6	0.362 13	¹³⁸ Xe(14.08 m)	258.411(31.5), 434.562(20.3), 1768.26(16.7)
500.3 3	2.07 15	¹¹³ Rh(2.72 s)	189.7(17.0), 409.3(15.9), 219.6(3.88)
500.3 3	†38.6 35	²³³ Pu(20.9 m)	235.4(†100), 534.8(†90.2), 688.1(†33.3)
500.35 2	0.61 6	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
• 500.35 10	8.8×10^{-6} 8	¹⁶⁹ Yb(32.026 d)	63.12077(44.2), 197.95788(35.8), 177.21402(22.16)
500.40 10	0.43 4	¹⁵⁸ Tm(3.98 m)	192.13(62), 335.10(16.8), 1149.83(7.6)
500.4 5	0.012 3	²¹¹ Pb(36.1 m)	404.853(3.78), 832.01(3.52), 427.088(1.76)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
500.5 2	1.1 3	¹⁰⁸ Sn(10.30 m)	396.44(64.3), 272.75(45.5), 669.08(22.6)
• 500.50 15	0.0099 5	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
500.6 4	1.0 4	¹¹⁷ Ag(5.34 s)	135.4(48), 386.8(39.9), 298.1(21.1)
500.6 5	0.39 9	¹¹⁷ Ag(72.8 s)	135.4(23), 337.7(10.3), 157.1(7.9)
500.6 2	0.014 14	¹¹⁷ Cd(2.49 h)	273.349(28), 1303.27(18.4), 344.459(17.9)
500.6 3	1.1 4	¹⁵² Ho(49.5 s)	647.2(92), 613.8(88.4), 683.3(88)
500.6 4	0.048 16	¹⁷⁷ W(135 m)	115.65(50), 426.98(13.2), 1036.4(10.3)
500.61 10	9.3 6	¹²¹ Ag(0.78 s)	314.55(32.1), 353.43(19.9), 1195.10(6.7)
• 500.7 7	0.017 5	⁷⁹ Kr(35.04 h)	261.29(13), 397.54(9.3), 606.09(8.12)
500.7 4	1.55 16	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
500.7 10	0.65 10	¹⁷² Ta(36.8 m)	214.02(46), 95.23(17.5), 1109.27(12.4)
500.7 3	0.081 10	¹⁸³ Hf(1.067 h)	783.754(66), 73.174(38), 459.069(27)
500.71 14	†1.38 10	¹⁸⁴ Ir(3.09 h)	263.97(†100), 119.80(†45), 390.38(†38)
500.8	>0.13	²³⁰ Fr(19.1 s)	711.0(13.6), 129.1(11.0), 728.4(7.3)
500.90 10	0.74 9	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
500.9 3	1.7 4	¹⁷⁸ Re(13.2 m)	237.3(45), 105.9(23.0), 939.1(8.9)
501.0	0.13	¹⁸⁵ Ir(14.4 h)	254.4(13.3), 1828.8(10), 60.0(5.7)
501.0 5	0.19	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
501.1 5	†1.3 4	¹⁵⁵ Tm(21.6 s)	226.8(†100), 531.7(†20), 88.1(†17)
501.20 9	2.43 14	¹⁰³ Tc(54.2 s)	346.380(17.5), 136.079(16.6), 562.90(7.0)
501.2 4	0.27 9	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
501.2 3	0.36 5	¹²⁹ In(0.61 s)	2118.0(45), 1865.0(32), 769.3(9.1)
501.2 3	0.28 4	²³⁷ Am(73.0 m)	280.23(47.3), 438.4(8.3), 473.5(4.3)
501.23 21	2.17 19	¹⁸⁶ Au(10.7 m)	191.56(62), 298.67(25.4), 764.89(10.5)
• 501.312 11	6.72 7	¹⁴⁸ Pm(41.29 d)	550.284(94.5), 629.987(89), 725.673(32.7)
• 501.312 11	0.971 22	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
501.38 8	†6.75 30	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
• 501.4	0.010 6	¹⁹¹ Pt(2.9 d)	538.90(13.7), 409.44(8.0), 359.90(6.0)
501.4 5	†2.1 4	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
501.4 1	0.9	²²⁷ Ra(42.2 m)	27.36(16), 300.07(4.6), 302.65(4.3)
• 501.4 1	0.0008 3	²³¹ Pa(32760 y)	27.36(10.3), 300.07(2.46), 302.65(2.2)
501.43 5	6.3 5	¹²⁶ In(1.64 s)	1141.11(100), 908.58(99), 111.79(88)
501.45 4	1.46 10	¹⁸⁷ Ir(10.5 h)	912.95(4.79), 427.12(4.12), 400.89(3.94)
501.48 15	0.08 3	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
• 501.5 4	0.012 6	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
501.6 4	0.15 5	⁷³ Ga(4.86 h)	297.32(79.8), 325.70(11.17), 739.42(4.23)
501.6 3	0.05 5	¹²⁷ In(1.09 s)	1597.7(49), 646.1(6.2), 805.1(5.6)
501.6 3	4.7	¹⁷⁰ Hf(16.01 h)	164.78(33), 620.7(23), 120.17(19)
501.7 1	10.0 6	¹³⁵ Nd(12.4 m)	204.02(52), 41.43(23), 441.2(14.9)
501.7 1	†0.5 2	¹⁷² Ir(2.0 s)	227.8(†100.0), 378.4(†62.0), 448.4(†40.5)
501.7 2	0.047 7	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
• 501.713 7	0.0115 8	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
• 501.8 5		¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
501.8 3	†3.8	¹⁵⁴ Nd(25.9 s)	151.703(†800), 799.55(†600), 180.693(†510)
501.8 1	†22.6 23	¹⁷¹ Ta(23.3 m)	49.6(†100), 506.4(†54), 166.2(†19.2)
501.8 3	†2.5 4	¹⁸³ Hg(9.4 s)	60.5(†100), 159.91(†21), 172.70(†17)
501.8 2	†80 4	¹⁹² Bi(37 s)	853.8(†100.0), 504.3(†39), 565.4(†36)
501.90 17	0.35 4	⁸¹ Ga(1.221 s)	216.47(37.4), 828.26(22.1), 711.18(17.6)
501.9 2	2.0 4	¹⁰² Nb(4.3 s)	296.611(79), 1633.10(41), 551.54(30)
501.9	†26	²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
501.94 6	0.84 8	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
501.96 19	†3.5 7	¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†33)
501.97 12	1.6 3	⁹¹ Kr(8.57 s)	108.788(43.5), 506.592(19.1), 612.87(7.7)
501.98 12	0.122 7	¹⁴¹ Cs(24.94 s)	48.53(7.90), 561.63(4.7), 1194.02(3.95)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
502.0 3	†12 2	⁷³ Cu(3.9 s)	449.7(†100), 199.2(†17), 306.8(†10)
502		¹¹⁸ Cs(14 s)	337.4(100), 472.8(37.4), 586.6(15.4)
502.0 8	0.13 4	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
502.0 2	0.0036 8	²¹¹ Pb(36.1 m)	404.853(3.78), 832.01(3.52), 427.088(1.76)
502.0 1	0.027 8	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
502.04 9	0.20 5	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
• 502.06 5	†0.213 16	⁵² Mn(5.591 d)	1434.068(†100.0), 935.538(†94.9), 744.233(†90.6)
502.1 5	26.5 22	¹⁹⁶ Pb(37 m)	253.1(27.0), 366.5(11.1), 191.7(11.1)
502.2 5	0.20 4	¹³⁰ La(8.7 m)	357.4(81.0), 550.7(25.9), 908.0(17.0)
502.2 6	0.017 4	²¹⁴ Bi(19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
502.3	0.14	¹⁴⁷ Ba(0.893 s)	167.4(11), 105.2(4.8), 196.1(4.8)
502.4 7	0.61 6	⁷⁵ Zn(10.2 s)	228.67(28.9), 432.29(20.2), 155.94(17.2)
502.4 3	0.81 8	¹⁷⁷ W(135 m)	115.65(50), 426.98(13.2), 1036.4(10.3)
502.41 15	†20.5 24	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
502.46 4	0.23 9	¹⁷⁴ Tm(5.4 m)	366.526(92), 992.128(87), 272.918(86)
502.5	0.6	⁸³ Zr(44 s)	55.55(8), 104.97(5.70), 475.1(5.1)
502.5 1	0.0160 17	¹²¹ I(2.12 h)	212.189(84), 532.08(6.07), 598.74(1.47)
502.5 3	0.27 6	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
502.53 7	3.38 10	¹⁹⁰ Re(3.2 h)	186.718(27.8), 605.24(14.9), 557.972(14.3)
• 502.53 7	1.25 7	¹⁹⁰ Ir(11.78 d)	186.718(52.4), 605.24(39.9), 518.55(34.0)
502.53 7	92.31 4	¹⁹⁰ Ir(3.25 h)	616.08(93.10), 361.136(89.57), 186.718(66.3)
502.6 8	4.3 6	¹⁰⁴ In(1.8 m)	658.0(100), 834.1(99), 878.1(29.4)
502.6 3	1.9 4	¹³⁰ Sb(6.3 m)	839.49(100), 793.53(86), 182.36(41)
502.7 5	0.00004	²⁵⁵ Fm(20.07 h)	81.477(0.81), 58.477(0.67), 80.92(0.27)
• 502.8 6	0.8 3	¹²⁷ Sb(3.85 d)	685.7(37), 473.0(25.7), 783.7(15.0)
502.8	0.24 9	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
• 502.8 3	0.138 21	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
• 502.82 25	0.050 12	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
502.90 20	0.69 6	⁹¹ Tc(3.14 m)	2450.90(13.5), 1639.90(9.2), 1605.20(7.77)
502.90 20	51.4 22	⁹¹ Tc(3.3 m)	927.60(3.79), 1328.40(2.55), 1362.00(2.5)
502.9 6	0.63 21	¹²¹ Cd(8.3 s)	2059.41(21.0), 1020.89(18.9), 987.81(13.6)
502.9 3	0.13 6	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
502.9 4	0.07 3	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
502.91 3	60 4	⁸⁸ Nb(14.5 m)	1082.53(103), 1057.01(100), 671.20(64)
502.94 9	†4.3 3	¹⁸⁴ Ir(3.09 h)	263.97(†100), 119.80(†45), 390.38(†38)
502.95 6	0.350 25	¹⁴⁶ La(6.27 s)	258.47(64), 924.58(7.45), 702.28(6.43)
502.95 6	26	¹⁴⁶ La(10.0 s)	258.47(93), 409.86(81), 514.75(31)
503.0 4	0.09 3	⁸⁶ Y(14.74 h)	1076.64(83), 627.72(32.6), 1153.01(30.5)
503.0 1	0.72 17	¹⁴² Gd(70.2 s)	750.2(11.2), 178.90(11.20), 284.4(6.16)
503.00 6	1.01 6	¹⁴⁶ Ce(13.52 m)	316.74(56), 218.23(20.8), 264.56(9.0)
503.0 5	1.12 10	¹⁷² Ta(36.8 m)	214.02(46), 95.23(17.5), 1109.27(12.4)
503 1		¹⁷⁹ Os(6.5 m)	65.39(†100), 218.6(†17), 32.3(†17)
• 503.0		¹⁸⁸ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
• 503.004 4	0.360 3	¹³¹ I(8.02070 d)	364.489(81.7), 636.989(7.17), 284.305(6.14)
503.08 7	0.084 9	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
503.1 2	9 3	⁷³ Kr(27.0 s)	177.8(65.8), 62.5(19.1), 454.8(15)
503.15 20	0.11 3	¹⁹⁹ Pb(90 m)	366.90(44.2), 353.39(9.5), 1135.04(7.8)
503.17 2	0.26 4	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
503.26 6	2.16 11	⁷⁹ Ge(19.1 s)	109.58(21), 1505.85(9.2), 100.48(2.70)
503.3 2	0.6	¹⁴⁰ Sm(14.82 m)	225.5(>10), 225.4(10), 140.0(5.0)
• 503.30 4	0.008 5	²⁰⁵ Bi(15.31 d)	1764.36(1.368), 703.44(31), 987.62(0.585)
503.33 10	0.168 9	²⁰⁷ Po(5.80 h)	992.33(59.3), 742.64(28.2), 911.79(16.95)
503.37 20	0.3 1	¹⁵⁶ Pm(26.70 s)	173.75(52.0), 1147.84(20.5), 117.42(13.8)
• 503.387 5	0.1522 21	¹⁵² Eu(13.542 y)	344.281(26.58), 778.91(12.96), 411.115(2.231)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
503.387 5	$\dagger 1.4 6$	$^{152}\text{Tb}(17.5 \text{ h})$	344.281($\dagger 1500$), 586.294($\dagger 223$), 271.135($\dagger 203$)
503.4 3	0.17 4	$^{140}\text{Xe}(13.60 \text{ s})$	805.52(20), 1413.66(12.2), 1315.05(8.2)
503.4 5	0.037 16	$^{161}\text{Er}(3.21 \text{ h})$	826.6(3.0), 211.15(12.2), 592.6(3.7)
503.40 13	0.49 13	$^{207}\text{At}(1.80 \text{ h})$	814.41(44.5), 588.33(19.2), 300.654(12.8)
503.44 6	0.43 8	$^{231}\text{Ac}(7.5 \text{ m})$	282.471(39.0), 307.063(30.4), 221.399(16.8)
503.5	0.9	$^{83}\text{Zr}(44 \text{ s})$	55.55(8), 104.97(5.70), 475.1(5.1)
503.5 2	0.84 6	$^{157}\text{Er}(18.65 \text{ m})$	53.05(24), 391.32(14.2), 121.57(10.1)
503.5 2	0.14 3	$^{230}\text{Ac}(122 \text{ s})$	454.95(8), 508.20(5.15), 1243.9(3.50)
503.5 2	0.030 10	$^{230}\text{Ac}(122 \text{ s})$	454.95(8), 508.20(5.15), 1243.9(3.50)
503.5 2		$^{230}\text{Ac}(122 \text{ s})$	454.95(8), 508.20(5.15), 1243.9(3.50)
• 503.5 2	0.066 11	$^{230}\text{Pa}(17.4 \text{ d})$	951.95(1.65), 918.48(8.2), 454.95(6.27)
• 503.5 2	0.071 11	$^{230}\text{Pa}(17.4 \text{ d})$	951.95(1.65), 918.48(8.2), 454.95(6.27)
• 503.5 2	0.95×10^{-6}	$^{234}\text{U}(2.455 \times 10^5 \text{ y})$	53.20(0.123), 120.90(0.0342), 454.95(0.000025)
503.56 3	0.354 18	$^{147}\text{Pr}(13.4 \text{ m})$	77.9921(15), 314.675(13.2), 641.380(10.0)
503.7 2	0.42 4	$^{78}\text{As}(90.7 \text{ m})$	613.725(54), 694.916(16.7), 1308.59(13.0)
503.7 2	$\dagger 0.7 2$	$^{136}\text{Pm}(107 \text{ s})$	373.8($\dagger 100$), 602.7($\dagger 38.4$), 857.2($\dagger 23.4$)
• 503.7 7	0.0045 22	$^{151}\text{Pm}(28.40 \text{ h})$	340.08(23), 167.75(8.3), 275.21(6.8)
503.8 1	1.74 9	$^{94}\text{Rb}(2.702 \text{ s})$	1309.1(87), 836.9(87.10), 1577.5(31.8)
503.8 1	0.09	$^{95}\text{Rb}(377.5 \text{ ms})$	836.9(2.9), 1089.4(0.14), 1309.1(0.12)
503.8 3	0.010 6	$^{151}\text{Nd}(12.44 \text{ m})$	116.80(43.4), 255.68(16.4), 1180.89(14.8)
503.8 4	0.38 6	$^{161}\text{Tm}(33 \text{ m})$	45.54(5.00), 1648.1(9.50), 84.40(9.4)
• 503.8 5	$2.0 \times 10^{-5} 2$	$^{253}\text{Es}(20.47 \text{ d})$	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
503.823 13	0.186 8	$^{228}\text{Ac}(6.15 \text{ h})$	911.205(26.6), 968.971(16.2), 338.322(11.3)
• 503.823 13	$1.45 \times 10^{-5} 8$	$^{232}\text{U}(68.9 \text{ y})$	57.762(0.200), 129.065(0.0686), 270.243(0.00316)
503.9 1		$^{191}\text{Tl}(5.22 \text{ m})$	452.6($\dagger 100$), 470.1($\dagger 98$), 391.6($\dagger 96$)
503.9 3	0.09 3	$^{198}\text{Tl}(5.3 \text{ h})$	411.8044(82), 675.8874(11), 636.4(10.1)
• 503.9 2	$\dagger 7.5 \times 10^5 14$	$^{237}\text{Pu}(45.2 \text{ d})$	280.40($\dagger 870000$), 298.89($\dagger 7.85 \times 10^6$), 320.75($\dagger 6.48 \times 10^6$)
503.92 20	0.21 4	$^{126}\text{In}(1.60 \text{ s})$	1141.11(55.9), 3344.61(21.6), 969.61(14.9)
503.94 6	0.0701 16	$^{77}\text{Ge}(11.30 \text{ h})$	264.44(54), 211.03(30.8), 215.50(28.6)
• 503.977 12	0.00078	$^{239}\text{Np}(2.3565 \text{ d})$	106.125(27.2), 277.599(14.38), 228.183(10.76)
503.977 12	0.0140 14	$^{239}\text{Am}(11.9 \text{ h})$	277.599(15.0), 228.183(11.3), 209.753(3.50)
504.0 3	0.10	$^{181}\text{Au}(11.4 \text{ s})$	198.60(4.4), 2022.4(4.2), 79.40(4.2)
504.0 3	$\dagger 20.7 24$	$^{233}\text{Pu}(20.9 \text{ m})$	235.4($\dagger 100$), 534.8($\dagger 90.2$), 500.3($\dagger 38.6$)
504.10 15	0.00109 25	$^{165}\text{Dy}(2.334 \text{ h})$	94.700(3.58), 361.68(0.84), 633.415(0.568)
504.13 12	0.0058 8	$^{211}\text{Pb}(36.1 \text{ m})$	404.853(3.78), 832.01(3.52), 427.088(1.76)
504.2 4	0.13 3	$^{177}\text{W}(135 \text{ m})$	115.65(50), 426.98(13.2), 1036.4(10.3)
504.2 1	23.3 14	$^{188}\text{Tl}(71 \text{ s})$	412.7(88), 592.0(61), 772.3(11.9)
504.23 22	0.28 5	$^{202}\text{Bi}(1.72 \text{ h})$	960.67(99), 422.18(83.7), 657.49(60.6)
504.25 4	31 4	$^{100}\text{Zr}(7.1 \text{ s})$	400.48(19.2), 498.0(0.72), 103.7(0.67)
504.25 15	0.070 6	$^{192}\text{Au}(4.94 \text{ h})$	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
• 504.28 5	0.17 5	$^{71}\text{As}(65.28 \text{ h})$	174.954(82.00), 1095.490(4.08), 499.876(3.624)
504.30 21	0.25 9	$^{103}\text{Ag}(65.7 \text{ m})$	118.72(31.2), 148.193(28.3), 266.86(13.3)
504.3 2	18.62 11	$^{148}\text{Ho}(9.59 \text{ s})$	1687.5(82.47), 660.8(58.94), 1677.3(17.4)
504.3 2	$\dagger 39 3$	$^{192}\text{Bi}(37 \text{ s})$	853.8($\dagger 100.0$), 501.8($\dagger 80$), 565.4($\dagger 36$)
• 504.36 4	0.248 22	$^{189}\text{Re}(24.3 \text{ h})$	216.663(5.50), 219.395(4.54), 245.09(3.5)
504.40 20	$\dagger 15.1 17$	$^{106}\text{Mo}(8.4 \text{ s})$	465.70($\dagger 100$), 54.00($\dagger 54$), 618.60($\dagger 25$)
504.4 2	0.48 15	$^{151}\text{Tb}(25 \text{ s})$	379.39(5.9), 830.81(3.10), 522.77(1.43)
504.45 10	60	$^{85}\text{Y}(2.68 \text{ h})$	231.67(84), 913.93(9.0), 409.5(0.84)
504.45 10	1.51 6	$^{85}\text{Y}(4.86 \text{ h})$	231.67(22.8), 2123.8(5.0), 767.40(3.6)
• 504.45 3	0.59 4	$^{241}\text{Cm}(32.8 \text{ d})$	471.805(71), 430.634(4.06), 132.413(3.86)
• 504.45 3		$^{245}\text{Bk}(4.94 \text{ d})$	205.879(0.040), 471.805(0.026), 164.8(0.0084)
504.5 5	0.40 13	$^{120}\text{Xe}(40 \text{ m})$	25.1(30), 72.6(9), 178.1(6.8)
504.5 5	0.27 8	$^{120}\text{Xe}(40 \text{ m})$	25.1(30), 72.6(9), 178.1(6.8)
• 504.57 7	0.138 5	$^{148}\text{Eu}(54.5 \text{ d})$	550.284(98.5), 629.987(71.9), 611.293(20.5)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
504.6 3		¹³¹ Sn(56.0 s)	3267.5, 2470.5, 2039.25
504.6 3		¹³¹ Sn(58.4 s)	367.40, 285.0, 62.9
504.6 3	†2.9 9	¹³¹ Sn(56.0 s)	1226.03(†100), 450.03(†90), 798.50(†86)
504.65 16	0.00058 21	¹⁴⁵ Pr(5.984 h)	748.278(0.5250), 675.795(0.514), 72.500(0.261)
• 504.67 25	0.050 12	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
504.7 5	0.10 3	⁷⁴ Ga(8.12 m)	595.847(91), 2353.46(44.5), 608.353(14.3)
504.7 1	5	¹⁰⁴ Zr(1.2 s)	100.9(6), 445.0(5), 263.7(4.1)
504.7 4	3.7	¹⁵⁴ Ho(3.10 m)	334.6(94), 412.4(79), 477.1(55)
504.70 20	0.45 11	¹⁵⁸ Tm(3.98 m)	192.13(62), 335.10(16.8), 1149.83(7.6)
504.73 8	0.51 12	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
504.77 4	0.0042	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
• 504.795 11	0.0090 18	⁷⁷ Br(57.036 h)	238.996(23), 520.639(22.4), 297.215(4.16)
504.8 5	0.041 6	²³³ Np(36.2 m)	312.17(0.7), 298.89(0.44), 546.9(0.280)
504.8 3	0.19 4	²³⁷ Am(73.0 m)	280.23(47.3), 438.4(8.3), 473.5(4.3)
504.87 21	†2.44 20	¹⁶² Lu(1.37 m)	166.82(†100), 631.87(†26.6), 798.76(†16.9)
504.878 14	1.17 6	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
504.9 3	13	¹⁵⁴ Ho(3.10 m)	334.6(94), 412.4(79), 477.1(55)
504.9 3	1.50 14	¹⁵⁴ Ho(11.76 m)	334.6(84), 412.4(15.0), 873.4(12.5)
504.9 4	0.21 5	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
505.0 5	0.229 15	⁷⁶ Br(16.2 h)	559.101(74), 657.041(15.9), 1853.67(14.7)
505.0 4	0.13 4	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
505 1	0.13	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
505.05 18	1.2 6	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
505.07 8	0.358 6	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
505.09 8	0.229 20	¹⁰⁰ Sr(202 ms)	963.85(22.0), 898.50(18.9), 65.46(15.2)
505.1 3	0.12 5	⁹⁵ Ru(1.643 h)	336.43(70.2), 1096.76(21.0), 626.77(17.8)
505.1 2	9.6 13	¹⁰² Cd(5.5 m)	481.0(63), 1036.6(12.8), 414.8(7.6)
505.1 1	†7.8 7	¹⁰³ Nb(1.5 s)	102.64(†100), 641.1(†55), 538.5(†34.0)
505.1 3	9.0 13	¹³⁷ Nd(38.5 m)	75.5(17.0), 580.6(13), 306.60(10.0)
• 505.121 11	0.093 3	¹⁴⁷ Eu(24.1 d)	197.299(27), 121.220(22.9), 677.516(9.8)
505.16 13	0.146 21	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
505.2 2	1.7	¹⁴⁵ La(24.8 s)	70.0(11), 355.8(3.8), 118.2(3.6)
505.3 4		¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
505.33 5	0.316 10	¹²³ I(13.27 h)	158.97(83), 528.96(1.39), 440.02(0.428)
505.4 1	10.6 5	⁷⁹ Rb(22.9 m)	688.1(23), 182.77(19.2), 143.41(13.9)
505.4 3	0.011 3	¹³⁹ Cs(9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
505.4 1	1.8 4	¹⁵⁹ Er(36 m)	624.5(33), 649.1(23.4), 205.92(9.7)
• 505.40 3	0.138 21	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
505.480 2	0.084 16	¹⁹⁹ Pt(30.80 m)	542.993(15), 493.772(5.59), 317.056(4.95)
505.5 2	9.0 17	¹²⁹ Sn(6.9 m)	1161.31(56.0), 1128.44(50), 760.8(16.8)
505.5 3	0.24 12	¹⁴⁷ La(4.015 s)	117.718(12), 186.320(6.48), 438.30(5.04)
505.5 6	0.0049	²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
505.51 7	11.9 4	¹⁰⁷ In(32.4 m)	204.97(47), 320.92(10.2), 1268.33(5.43)
• 505.521 25	4.80 10	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
• 505.590 9	0.045 3	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
505.61 13	0.0121 22	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
505.64 15	0.141 24	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
505.66 20	0.096 17	¹⁹³ Au(17.65 h)	186.17(10.1), 255.57(6.7), 268.22(3.9)
505.79 3	4.93 20	¹³² I(2.295 h)	667.718(99), 772.60(75.6), 954.55(17.6)
• 505.79 3	0.73 5	¹³² Cs(6.479 d)	667.718(98), 630.19(0.95), 1317.927(0.585)
505.8 3	†1.5	¹⁵⁴ Nd(25.9 s)	151.703(†800), 799.55(†600), 180.693(†510)
505.8 3	†0.6 4	¹⁹⁴ Bi(92 s)	965.4(†100.0), 575.1(†98.0), 280.1(†73.7)
505.9 2	71	¹²⁰ Ag(1.23 s)	697.8(30), 817.1(11), 1323.1(9)
505.9 2	†51	¹²⁰ Ag(0.32 s)	697.8(†51), 925.8(†36), 830.0(†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: $E_{\gamma}(I_{\gamma})$
505.92 8	0.053 4	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
506.0 2	2.1 5	⁷⁹ Rb(22.9 m)	688.1(23), 182.77(19.2), 143.41(13.9)
506.0 10	7.0 18	¹³⁷ Pm(2.4 m)	177.5(40.29), 108.6(35), 233.6(29.57)
• 506.0 10	0.05 3	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
506.00 19	1.05 10	¹⁹⁷ Pb(43 m)	385.85(74), 387.72(25.1), 222.45(24.6)
• 506.093 10	0.00012 3	¹⁴⁹ Pm(53.08 h)	285.95(3.1), 859.46(0.109), 590.88(0.069)
• 506.093 10	0.558 13	¹⁴⁹ Eu(93.1 d)	327.526(4.03), 277.089(3.56), 22.510(2.32)
506.1 1	100	⁶² Fe(68 s)	
506.10 20	0.20 10	¹⁰² Nb(4.3 s)	296.611(79), 1633.10(41), 551.54(30)
• 506.1 4	0.0019 5	¹³¹ Ba(11.50 d)	496.326(47), 123.805(28.97), 216.078(19.66)
506.16 10	0.63 5	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
506.2	0.17 3	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
506.2 5	†92 15	¹⁹⁰ Bi(6.3 s)	773.8(†100), 455.0(†94), 846.4(†70)
506.3 2	†89 6	²⁰² Po(44.7 m)	688.6(†1000), 316.0(†286), 165.7(†174)
506.4 1	†54 6	¹⁷¹ Ta(23.3 m)	49.6(†100), 501.8(†22.6), 166.2(†19.2)
506.4		¹⁹⁹ Po(4.13 m)	1002.19(19), 1034.3(16), 362.01(7)
506.42 2	0.012 12	¹⁴⁷ La(4.015 s)	117.718(12), 186.320(6.48), 438.30(5.04)
506.43 3	0.081 12	¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
• 506.44 4	0.0063 11	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
506.44 4	0.61 12	¹⁵⁴ Tb(9.4 h)	123.071(30), 247.925(22.1), 540.18(20)
506.44 4	4.0 5	¹⁵⁴ Tb(22.7 h)	247.925(79), 346.643(69), 1419.81(46)
506.5 5	0.154 21	²³³ Np(36.2 m)	312.17(0.7), 298.89(0.44), 546.9(0.280)
506.592 9	19.1 13	⁹¹ Kr(8.57 s)	108.788(43.5), 612.87(7.7), 1108.68(7.2)
• 506.6 10	0.09	⁷⁹ Kr(35.04 h)	261.29(13), 397.54(9.3), 606.09(8.12)
506.6 3	0.58 11	¹⁰¹ Ag(11.1 m)	261.0(53), 588.0(10.0), 667.3(9.8)
506.6 5	0.030 20	²²³ Ac(2.10 m)	98.58(0.891), 191.3(0.58), 83.55(0.57)
• 506.68 16	0.00085 6	¹⁶¹ Tb(6.88 d)	25.65150(23.2), 48.91562(17.0), 74.56711(10.2)
506.7 1	0.043 3	⁹¹ Sr(9.63 h)	1024.3(33), 749.8(23.61), 652.9(8.0)
506.7 3	2.0 4	¹³⁰ Sb(39.5 m)	793.53(100), 839.49(100), 331.05(78)
506.75 5	1.29 8	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
• 506.8 2	0.116 20	¹³¹ Te(30 h)	773.67(49.9), 852.21(27.0), 793.75(18.10)
506.8 4	0.0227 20	¹⁷¹ Er(7.516 h)	308.31(64.4), 295.901(28.9), 111.621(20.5)
506.8 4	†4.30 24	²⁰¹ Po(15.3 m)	890.1(†100), 240.1(†71.0), 904.2(†54.8)
506.8 2	0.685 20	²¹⁰ At(8.1 h)	1181.39(99.3), 245.31(79), 1483.39(46.5)
506.9 10	0.04 3	¹¹¹ Ag(64.8 s)	245.422(0.50), 620.3(0.121), 171.28(0.12)
506.9 5	0.18 5	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
506.9 6		¹⁸⁵ Pt(33.0 m)	229.60(†100), 135.3(†80), 197.4(†74)
506.9 1	0.0024 9	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
507.0 5	<0.18	⁸¹ Sr(22.3 m)	153.54(33.8), 147.76(30.1), 443.34(17.5)
507 1	†5.0	¹³⁸ Eu(12.1 s)	346.6(†100), 544.2(†55), 685.4(†41)
507.0 4	†40	¹⁵⁵ Tm(45 s)	88.1(†100), 323.2(†65), 247.0(†28)
507.0 2	0.68 7	¹⁸⁵ Ir(14.4 h)	254.4(13.3), 1828.8(10), 60.0(5.7)
507.10 5	0.067 3	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
• 507.13 15	0.112 16	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
• 507.188 10	†0.97 3	¹³⁶ Cs(13.16 d)	818.514(†100), 1048.073(†80), 340.547(†42.3)
507.2 7	†4.0 6	¹⁰¹ Nb(7.1 s)	276.10(†100), 157.466(†32), 13.5(†32)
507.2 3		¹¹⁹ Pd(0.92 s)	129.9(†100), 256.6(†63), 326.1(†52)
507.2 3	0.44 11	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
507.2 8	0.33 4	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
507.2 2	0.40 7	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
507.2 1	1.67 8	²⁴⁰ Np(61.9 m)	566.34(25.3), 973.9(23.8), 600.57(18.4)
507.2 1	0.70 9	²⁴⁰ Np(7.22 m)	554.60(20.9), 597.40(11.7), 1496.9(1.33)
• 507.2 1	0.072 6	²⁴⁰ Am(50.8 h)	987.76(73.2), 888.80(25.1), 98.860(1.5)

• $t_{1/2} > 1$ 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: $E_\gamma(I_\gamma)$
• 507.2 1	7.8×10^{-6} 24	^{244}Cm (18.10 y)	42.824(.0044100), 98.860(.0001470), 152.63(< 4.9×10^{-7})
507.25 25	5.5 11	^{100}Cd (49.1 s)	936.55(66), 139.71(6.7), 582.5(6.3)
• 507.27 14	0.047 7	^{151}Pm (28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
507.3 4	1.49 18	^{115}Ag (20.0 m)	229.08(18), 212.80(4.4), 472.70(4.0)
507.3 2	0.96 10	^{129}La (11.6 m)	278.6(25), 110.5(16.9), 457.0(8.0)
507.3 1	0.137 19	^{133}Te (12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
507.3 2	0.089 18	^{145}Ce (3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)
507.3 2	\dagger 100 7	^{198}Ir (8 s)	407.21(\dagger 76)
507.3 7	0.66 7	^{199}Bi (27 m)	560.1(22.0), 424.85(22), 841.7(11)
507.3 3	0.040 10	^{249}Es (102.2 m)	379.5(40.4), 813.2(9.2), 375.1(3.3)
• 507.36 6	0.00026 2	^{115}Cd (44.6 d)	933.8(2.000), 1290.580(0.890), 484.470(0.290)
507.4 3	1.4 4	^{81}Ge (7.6 s)	335.98(58.9), 792.94(34), 1495.53(19.9)
507.4 7	85 7	^{89}Nb (1.18 h)	587.83(100), 769.69(6.5), 1277.5(1.6)
507.4 7	0.95 14	^{89}Nb (1.9 h)	1627.20(3.4), 1833.46(3.16), 3092.7(3.0)
507.4 1	0.052 12	^{143}Ba (14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
507.4 2	0.047 18	^{145}Ce (3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)
507.4 4	>0.17	^{156}Tm (83.8 s)	344.55(86), 452.85(17.2), 585.93(14.6)
• 507.4 3	\dagger 0.025 5	^{227}Th (18.72 d)	235.971(\dagger 813), 50.13(\dagger 528), 256.25(\dagger 463)
507.47 3	4.6 5	^{163}Tb (19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
507.5 10	\dagger 1.56 \times 10 ³ 15	^{234}Pa (1.17 m)	1001.03(\dagger 837000), 766.38(\dagger 294000), 742.81(\dagger 80000)
507.56 8	1.32 18	^{187}Pt (2.35 h)	106.46(9), 201.52(6.4), 110.04(5.7)
• 507.591 11	17.7 4	^{121}Te (16.78 d)	573.139(80.3), 470.472(1.41), 65.548(0.259)
507.60 10	14.8 8	^{62}Zn (9.186 h)	596.56(26), 40.84(25.5), 548.35(15.3)
507.6 2	2.1 5	^{101}Ag (11.1 m)	261.0(53), 588.0(10.0), 667.3(9.8)
507.6 3		^{140}Tb (2.4 s)	328.6(\dagger 104), 627.8(\dagger 54)
507.6 3		^{141}Dy (0.9 s)	328.6
507.6 4	0.12 5	^{141}Xe (1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
507.6 2	0.29 6	^{161}Er (3.21 h)	826.6(3.0), 211.15(12.2), 592.6(3.7)
507.64 8	5.03 19	^{97}Zr (16.91 h)	743.36(93), 1147.97(2.61), 355.40(2.09)
507.7 2	0.46 9	^{125}In (2.36 s)	1335.04(71), 1031.75(9.6), 617.88(7.4)
507.79 15	1.4	^{176}Ta (8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
507.8 2	0.06 3	^{98}Nb (51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
507.8 3	1.05 18	^{146}Ba (2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
507.80 20	0.054 11	^{153}Dy (6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
• 507.8 3	1.5×10^{-6} 8	^{169}Yb (32.026 d)	63.12077(44.2), 197.95788(35.8), 177.21402(22.16)
507.8 3	\dagger 6.6 19	^{195}Pb (15 m)	883.1(\dagger 100), 393.7(\dagger 42), 871.0(\dagger 36)
507.84 2	1.020 12	^{147}La (4.015 s)	117.718(12), 186.320(6.48), 438.30(5.04)
507.84 12	0.093 13	^{151}Nd (12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
507.9 1	0.293 5	^{65}Ni (2.5172 h)	1481.84(24), 1115.546(15.43), 366.27(4.81)
507.92 12	0.126 21	^{187}Au (8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
508.0 3	0.062 19	^{90}Kr (32.32 s)	1118.69(39.0), 121.82(35.5), 539.49(30.8)
508.0 2	0.461 24	^{146}Pr (24.15 m)	453.88(48.0), 1523.7(15.6), 735.72(7.5)
508 1	1.27 11	^{164}Tb (3.0 m)	168.838(25.4), 754.80(23.3), 215.07(21)
508 1	0.025 12	^{230}Ac (122 s)	454.95(8), 508.20(5.15), 1243.9(3.50)
• 508 1	0.22 11	^{230}Pa (17.4 d)	951.95(1.65), 918.48(8.2), 454.95(6.27)
508.1 5	1.35 25	^{97}Sr (426 ms)	1905.0(25), 953.8(21.4), 652.2(11.4)
• 508.1 1	0.071 6	^{177}Ta (56.56 h)	112.9498(7.2), 208.3664(0.94), 1057.8(0.29)
508.2 6	0.034 14	^{151}Tb (17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
508.2 2	\dagger 0.61 20	^{158}Ho (11.3 m)	218.21(\dagger 100.0), 98.91(\dagger 70), 945.7(\dagger 37)
508.20	0.16	^{203}Bi (11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
508.20 10	5.15 16	^{230}Ac (122 s)	454.95(8), 1243.9(3.50), 1347.7(1.57)
• 508.20 10	3.6 3	^{230}Pa (17.4 d)	951.95(1.65), 918.48(8.2), 454.95(6.27)
• 508.20 10	0.000015 4	^{234}U (2.455×10^5 y)	53.20(0.123), 120.90(0.0342), 454.95(0.000025)
508.26 20	0.055 15	^{193}Au (17.65 h)	186.17(10.1), 255.57(6.7), 268.22(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: $E_{\gamma}(I_{\gamma})$
508.3 2	$\dagger 6.3 \times 10^{-3}$ 6	¹⁵⁷ Ho(12.6 m)	279.97($\dagger 47600$), 341.16($\dagger 37000$), 193.41($\dagger 15200$)
508.36 23	0.20 12	¹⁸¹ Os(105 m)	238.75(44), 826.77(20), 118.03(12.9)
508.4 5	9	¹⁵⁰ Tm(2.2 s)	1578.9(91), 474.5(86), 207.6(82)
508.4 1	$\dagger 93$ 6	¹⁹¹ Tl(5.22 m)	452.6($\dagger 100$), 470.1($\dagger 98$), 391.6($\dagger 96$)
508.4		²³⁸ Pa(2.3 m)	1015.3($\dagger < 100$), 1014.6($\dagger < 100$), 635.18($\dagger 88$)
508.44 4	1.19 5	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(> 2.8)
508.5 3	4.7 11	¹³⁹ Sm(2.57 m)	273.7(37), 306.7(28.5), 596.3(8.0)
508.5 4		¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
508.6 1	$\dagger 18$ 2	²²⁷ Rn(22.5 s)	162.14($\dagger 100$), 739.2($\dagger 65$), 686.2($\dagger 62$)
508.6 2	$\dagger 3.0$ 10	²²⁹ Ac(62.7 m)	164.522($\dagger 100$), 569.1($\dagger 91$), 261.92($\dagger 39$)
508.7		¹²⁶ Ba(100 m)	233.6(19.6), 257.6(7.6), 241.0(6.0)
508.7 4	$\dagger 5$	¹⁵⁴ Nd(25.9 s)	151.703($\dagger 800$), 799.55($\dagger 600$), 180.693($\dagger 510$)
508.76 11		¹⁴⁴ Cs(1.01 s)	199.326($\dagger 100.0$), 639.00($\dagger 21.2$), 758.96($\dagger 20.6$)
508.8 5	0.0228 18	¹⁴² Pr(19.12 h)	1575.85(3.7)
• 508.87 8	0.174 25	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
508.959 18	0.47 5	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
• 509.0 7	0.0013	¹¹¹ Ag(7.45 d)	342.118(7), 245.422(1.24), 96.73(0.20)
509.0 4	1.5 3	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
509.0 5		¹⁴¹ Gd(24.5 s)	351.1(89), 223.9(64), 574.9(51)
509.0 5		¹⁴¹ Gd(14 s)	215.8(54), 525.9(17), 336.2(17.1)
509.00 20	0.145 17	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
509.1 5	0.15 4	⁸⁹ Kr(3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
509.1 6	0.209 25	¹¹¹ Pd(23.4 m)	580.00(0.8), 70.44(0.78), 1459.0(0.56)
• 509.11 15	0.00232 21	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
509.14 25	$\dagger 21$	¹⁹⁷ Ir(5.8 m)	469.72($\dagger 100$), 430.56($\dagger 61$), 815.92($\dagger 45$)
509.2 3	1.6 3	¹⁶⁵ Tb(2.11 m)	1178.53(13.2), 538.51(7.2), 1292.05(7.0)
509.2 8	$\dagger 2.1 \times 10^3$ 3	²³⁴ Pa(1.17 m)	1001.03($\dagger 837000$), 766.38($\dagger 294000$), 742.81($\dagger 80000$)
509.4	> 0.28	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
509.4 2	$\dagger 5.8$ 5	²³⁰ Ra(93 m)	72.0($\dagger 100$), 63.0($\dagger 35.4$), 202.8($\dagger 27.3$)
509.43 6	0.7 4	¹⁹³ Hg(11.8 h)	257.97(61), 407.63(25), 573.25(14.2)
509.5	0.043	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
509.6 5	0.17 3	⁹¹ Rb(58.4 s)	93.628(33.7), 2564.19(12.5), 3599.67(10.4)
509.6		⁹⁹ Y(1.470 s)	121.761(33), 724.30(14.9), 536.2(6.6)
509.6 2	0.84 12	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
509.7 4	0.78 16	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
509.7 3	0.17 4	¹⁴¹ Cs(24.94 s)	48.53(7.90), 561.63(4.7), 1194.02(3.95)
• 509.7 2	0.00025 10	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
509.9 3	0.68 10	¹⁴⁹ Dy(4.20 m)	100.8(15.2), 789.4(11.8), 1776.3(11.1)
510	0.296 9	⁷³ Se(7.15 h)	360.80(108), 67.03(78), 865.09(0.584)
510	0.14	⁷³ Se(39.8 m)	67.03(2.59), 253.70(2.356), 84.0(2.03)
510.0 2		²²⁷ Ra(42.2 m)	27.36(16), 300.07(4.6), 302.65(4.3)
• 510.0 2	0.0012 3	²³¹ Pa(32760 y)	27.36(10.3), 300.07(2.46), 302.65(2.2)
510.056 10 52		¹⁸² Os(22.10 h)	180.230(33.5), 263.285(6.71), 55.506(5.8)
• 510.07 2	0.125 10	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
• 510.07 3	0.125 10	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
510.1 5	0.12 4	⁸⁹ Kr(3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
510.1 2	> 0.0035	¹⁰⁸ Ag(2.37 m)	433.937(0.50), 618.84(0.261), 1007.22(0.0139)
• 510.1 7	0.009 4	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
510.14 14	0.98 8	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
510.17 12	43 3	⁸³ Se(22.3 m)	356.687(70), 224.8(32.7), 718.10(15.0)
510.17 12	0.21 7	⁸³ Se(70.1 s)	1030.86(21.2), 356.687(18), 987.96(16.1)
510.296 3	0.0123 15	¹⁵⁵ Sm(22.3 m)	104.3346(74.6), 245.771(3.7), 141.4428(1.98)
510.3 4	0.31 10	⁹⁷ Rb(169.9 ms)	167.1(26), 585.2(21.0), 600.5(10.6)
510.3	0.14 5	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: $E_{\gamma}(I_{\gamma})$
510.30 5	0.062 16	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
510.3 7	1.4 3	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
510.31 9	5.3 9	⁸¹ Rb(4.576 h)	190.38(64.0), 446.15(23.2), 456.76(3.02)
510.35 3	0.85 3	¹³⁰ I(12.36 h)	536.09(99), 668.54(96), 739.48(82)
510.35 3	0.0036 5	¹³⁰ I(9.0 m)	536.09(16), 586.05(1.07), 1614.10(0.447)
510.35 3		¹³⁰ Cs(3.46 m)	536.09(†100), 470.8(†8.6), 206.6(†1.7)
510.36 7	20.7 5	¹³³ Ce(4.9 h)	477.22(39), 58.39(19.2), 130.803(17.9)
510.50 10	0.125 19	¹¹⁸ In(4.45 m)	1229.68(96), 1050.69(81.0), 683.08(54.3)
510.50 20	1.13 9	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
510.530 11	1.83 4	¹³³ I(20.8 h)	529.872(87.0), 875.329(4.51), 1298.223(2.35)
• 510.6	0.060 7	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
510.65 15	3.7 21	¹⁰⁵ In(5.07 m)	131.37(41), 260.21(15.7), 604.11(9.2)
510.7 2		¹¹⁵ Pd(25 s)	342.71(8), 303.87(7), 396.56(6)
510.71 16	2.12 24	¹⁴² Cs(1.70 s)	359.598(27.2), 1326.46(12.92), 966.89(9.0)
510.73 8	8.5 5	¹⁰¹ Sr(118 ms)	128.34(18.0), 1124.82(10.9), 1211.28(6.1)
510.73 10	0.43 6	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
510.77 10	22.6 3	²⁰⁸ Tl(3.053 m)	2614.533(99), 583.191(84.5), 860.564(12.42)
510.78 14	0.069 10	⁸⁷ Kr(76.3 m)	402.586(49.6), 2554.8(9.2), 845.43(7.34)
510.8	>0.009	¹³³ I(20.8 h)	529.872(87.0), 875.329(4.51), 1298.223(2.35)
510.82 18	37.5 25	¹⁸⁶ Ta(10.5 m)	197.93(50), 214.87(42.3), 737.86(29)
510.9 3	0.10	¹¹³ Pd(93 s)	95.74(3.3), 643.7(3.0), 739.63(2.4)
510.9 3	0.21	¹⁷⁰ Hf(16.01 h)	164.78(33), 620.7(23), 120.17(19)
510.9 3	8.4 15	¹⁹⁴ Tl(32.8 m)	636.5(99), 428.0(99), 748.9(76)
510.90 10		¹⁹⁹ Pb(90 m)	366.90(44.2), 353.39(9.5), 1135.04(7.8)
511 2	0.8	⁷⁷ Rb(3.75 m)	66.52(57), 178.99(22.2), 393.37(9.7)
511.0 2	0.32 7	¹⁰⁸ Tc(5.17 s)	242.25(82), 465.6(14.3), 707.81(11.4)
511	0.52	¹⁴⁹ Ho(21.1 s)	1090.7(74.8), 1073.2(6.37), 1583.6(4.48)
511		¹⁵⁰ Tb(5.8 m)	638.05(100), 650.4(70), 438.37(42)
• 511.00 25	0.062 12	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
511.0 2	†15 7	¹⁵⁵ Er(5.3 m)	110.12(†100), 241.5(†65), 234.0(†40.0)
511		¹⁶⁷ Yb(17.5 m)	113.34(55.3), 106.18(22.5), 176.25(21)
511.0 1	†20.6 10	¹⁶⁹ Ta(4.9 m)	28.80(†18.3), 192.4(†8), 153.5(†6.3)
511 1	2.3 5	¹⁹¹ Hg(50.8 m)	252.5(57), 420.1(18.6), 578.6(17.6)
511.0 3	1.05 16	¹⁹⁸ Tl(5.3 h)	411.8044(82), 675.8874(11), 636.4(10.1)
511.00	0.31	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
511.0 4	0.03 1	²¹⁴ Pb(26.8 m)	351.921(35.8), 295.213(18.5), 241.981(7.50)
• 511 2	0.076	²²² Rn(3.8235 d)	
511		²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
511.1 5		¹⁷² W(6.6 m)	38.9(†100), 423.3(†44), 89.8(†33.0)
511.1 9	0.55 10	²⁰¹ Bi(108 m)	629.1(24.0), 936.2(11.3), 1014.1(10.7)
511.28 5	0.112 19	¹⁸⁷ Ir(10.5 h)	912.95(4.79), 427.12(4.12), 400.89(3.94)
• 511.36 5	24.1 5	²⁰⁶ Po(8.8 d)	1032.26(32.9), 286.410(23.8), 807.38(22.7)
511.4 4	†6 4	¹⁰⁶ Nb(1.02 s)	171.548(†100), 350.70(†39), 714.00(†30)
511.4	0.48 16	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
511.5 10	0.034 17	²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
• 511.52 3	0.855 16	²⁰⁵ Bi(15.31 d)	1764.36(1.368), 703.44(31), 987.62(0.585)
511.56 4	32	⁷¹ Zn(2.45 m)	910.27(7.8), 389.88(3.8), 121.51(3.0)
511.56 4	28.4 19	⁷¹ Zn(3.96 h)	386.28(93), 487.38(62), 620.18(57)
511.6 3	0.14 4	¹⁰⁴ Tc(18.3 m)	358.0(89), 530.5(15.6), 535.1(14.7)
511.7 5	0.03 2	¹⁰⁷ Rh(21.7 m)	302.77(66), 392.47(8.8), 312.21(4.8)
511.7 3	>1.4	¹⁸⁷ Pt(2.35 h)	106.46(9), 201.52(6.4), 110.04(5.7)
511.765 19	0.647 14	¹⁸⁷ W(23.72 h)	685.774(27.3), 479.531(21.8), 72.001(11.14)
511.842 28 20		¹⁰⁶ Rh(29.80 s)	621.94(9.93), 1050.39(1.56), 616.174(0.75)
511.842 28 85 4		¹⁰⁶ Rh(131 m)	1045.83(30.4), 717.24(28.9), 450.97(24.2)

• $t_{1/2} > 1$ 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: $E_\gamma(I_\gamma)$
511.842 28	17.0 4	$^{106}\text{Ag}(23.96 \text{ m})$	621.94(0.316), 873.48(0.199), 1050.39(0.167)
• 511.842 28	88 3	$^{106}\text{Ag}(8.28 \text{ d})$	1045.83(29.6), 717.24(28.9), 450.97(28.2)
511.9 4	0.50 10	$^{141}\text{Xe}(1.73 \text{ s})$	909.23(24.0), 118.705(16.1), 105.937(9.8)
511.9	0.45 4	$^{146}\text{Ba}(2.22 \text{ s})$	140.7(20.2), 251.2(19.6), 121.2(14.2)
511.9 3		$^{191}\text{Tl}(5.22 \text{ m})$	452.6(†100), 470.1(†98), 391.6(†96)
512 1	1.2 4	$^{45}\text{K}(17.3 \text{ m})$	174.276(74.4), 1705.6(53), 2353.6(14.12)
512 2	2.0 8	$^{72}\text{Br}(78.6 \text{ s})$	862.03(70), 1316.70(17.3), 454.70(13.1)
512 1	0.56 19	$^{98}\text{Nb}(51.3 \text{ m})$	787.374(93), 722.645(73.8), 1168.830(17.8)
512 1	7	$^{104}\text{Sn}(20.8 \text{ s})$	132.7(56), 912.6(42), 401.2(16.2)
512.0 4	3.8 6	$^{122}\text{Cs}(21.0 \text{ s})$	331.1(48), 817.9(3.09), 843.0(1.90)
512.0 4	8.7 12	$^{122}\text{Cs}(4.5 \text{ m})$	331.1(94), 497.1(79), 638.5(63)
512 5	0.41 8	$^{123}\text{Cd}(2.10 \text{ s})$	371.32(51), 1052.28(24.8), 1438.13(8.3)
512.0 10		$^{137}\text{Pm}(2.4 \text{ m})$	177.5(40.29), 108.6(35), 233.6(29.57)
512.0 5	0.16 3	$^{151}\text{Tb}(17.609 \text{ h})$	287.357(28.3), 251.863(26.3), 108.088(24.3)
512.00 20	1.80 9	$^{153}\text{Dy}(6.4 \text{ h})$	80.723(11.10), 213.754(10.90), 99.659(10.51)
• 512.0	0.032 7	$^{154}\text{Eu}(8.593 \text{ y})$	123.071(40.79), 1274.436(35.19), 723.304(20.22)
512.2 2	†37 7	$^{155}\text{Er}(5.3 \text{ m})$	110.12(†100), 241.5(†65), 234.0(†40.0)
512.21 7	0.83 18	$^{145}\text{Ce}(3.01 \text{ m})$	724.33(59), 62.54(13.33), 1148.03(9.15)
512.3 2	0.40 4	$^{176}\text{Ta}(8.09 \text{ h})$	1159.28(25), 88.34(12), 1224.93(6)
• 512.3 3	0.0016 8	$^{193}\text{Os}(30.5 \text{ h})$	139.03(4.27), 460.50(3.95), 73.039(3.2)
512.33 18	†<9	$^{182}\text{Au}(21 \text{ s})$	154.76(†100), 264.33(†40.0), 855.41(†14.5)
512.33 17	†38 10	$^{189}\text{Hg}(7.6 \text{ m})$	320.99(†100), 78.21(†63), 565.42(†48)
512.4 2	0.47 8	$^{231}\text{Ac}(7.5 \text{ m})$	282.471(39.0), 307.063(30.4), 221.399(16.8)
512.4 3	†12.8 28	$^{233}\text{Pu}(20.9 \text{ m})$	235.4(†100), 534.8(†90.2), 500.3(†38.6)
512.42 16		$^{86}\text{Y}(14.74 \text{ h})$	1076.64(83), 627.72(32.6), 1153.01(30.5)
512.5 5	0.54 11	$^{151}\text{Tb}(17.609 \text{ h})$	287.357(28.3), 251.863(26.3), 108.088(24.3)
• 512.5 4	0.022 12	$^{153}\text{Tb}(2.34 \text{ d})$	212.038(31.0), 170.504(6.8), 109.758(6.4)
512.5 5		$^{170}\text{Ta}(6.76 \text{ m})$	100.8(21.0), 221.2(15.7), 860.4(7.39)
• 512.5 3	†1.15×10 ⁴ 23	$^{241}\text{Am}(432.2 \text{ y})$	59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸)
• 512.54 5	0.196 14	$^{172}\text{Lu}(6.70 \text{ d})$	1093.657(62.5), 900.724(29.8), 181.528(20.6)
512.54 12	2.4 4	$^{183}\text{Ir}(58 \text{ m})$	392.52(10.4), 228.70(6.9), 87.67(5.6)
512.57 25	0.0032 7	$^{165}\text{Dy}(2.334 \text{ h})$	94.700(3.58), 361.68(0.84), 633.415(0.568)
512.60 7	0.18 5	$^{100}\text{Y}(735 \text{ ms})$	212.531(73), 118.59(15.4), 665.98(7.7)
512.61 8	0.18 6	$^{145}\text{Ce}(3.01 \text{ m})$	724.33(59), 62.54(13.33), 1148.03(9.15)
512.7	0.31	$^{148}\text{Pr}(2.27 \text{ m})$	301.702(61), 1357.78(5.5), 1023.18(4.8)
512.7	0.013 5	$^{149}\text{Nd}(1.728 \text{ h})$	211.309(25.9), 114.314(19.2), 270.166(10.7)
512.83 5	1.75 11	$^{101}\text{Mo}(14.61 \text{ m})$	191.92(19), 590.91(16.4), 1012.47(12.8)
• 512.918 7	0.00128 20	$^{155}\text{Tb}(5.32 \text{ d})$	86.545(32.0), 105.305(25), 180.103(7.45)
513.0 2	†4	$^{139}\text{I}(2.29 \text{ s})$	527.7(†100), 571.2(†98), 536.6(†67)
513.1 4	2.1 6	$^{118}\text{Cs}(14 \text{ s})$	337.4(100), 472.8(37.4), 586.6(15.4)
513.1 1	1.48 25	$^{167}\text{Lu}(51.5 \text{ m})$	29.66(14.4), 239.22(8.6), 213.19(3.6)
513.1 2	0.92 10	$^{185}\text{Ir}(14.4 \text{ h})$	254.4(13.3), 1828.8(10), 60.0(5.7)
513.2 2	0.20 5	$^{100}\text{Nb}(1.5 \text{ s})$	535.60(45.7), 528.24(9.1), 159.547(8.8)
513.39 10	76	$^{116}\text{Ag}(2.68 \text{ m})$	2478.5(12), 699.58(11), 1213.17(7)
513.39 10	92	$^{116}\text{Ag}(10.4 \text{ s})$	705.82(61), 1028.90(30.4), 708.80(20)
513.4 4	0.020	$^{233}\text{Th}(22.3 \text{ m})$	86.477(2.7), 29.374(2.5), 459.222(1.4)
513.4 1	0.8	$^{234}\text{Pa}(6.70 \text{ h})$	131.30(18), 946.00(13.4), 883.24(9.6)
513.4 1	0.38	$^{234}\text{Pa}(6.70 \text{ h})$	131.30(18), 946.00(13.4), 883.24(9.6)
513.41 18	0.55 5	$^{97}\text{Zr}(16.91 \text{ h})$	743.36(93), 507.64(5.03), 1147.97(2.61)
513.47 5	†4.5 5	$^{160}\text{Ho}(5.02 \text{ h})$	728.18(†100), 879.383(†65.9), 962.317(†59.1)
513.47 5	2.13 21	$^{160}\text{Ho}(25.6 \text{ m})$	728.18(46.9), 879.383(26.6), 962.317(25.6)
513.5 3	†0.8	$^{111}\text{Rh}(11 \text{ s})$	275.4(†100.0), 411.8(†9.42), 230.0(†8.9)
513.6 4	1.6	$^{123}\text{Cs}(5.94 \text{ m})$	97.3(23), 596.7(10.1), 83.3(4.1)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
513.6 2	$\dagger 60$ 9	$^{160}\text{Eu}(38 \text{ s})$	173.19($\dagger 100$), 412.56($\dagger 56$), 822.04($\dagger 49$)
513.6 3	0.028 9	$^{195}\text{Ir}(3.8 \text{ h})$	98.85(10), 684.88(9.4), 432.86(9)
513.6 3	0.26 5	$^{198}\text{Tl}(5.3 \text{ h})$	411.8044(82), 675.8874(11), 636.4(10.1)
• 513.627 14	0.08	$^{165}\text{Tm}(30.06 \text{ h})$	242.917(35.5), 47.155(16.9), 297.369(12.71)
513.73 10	0.20 5	$^{105}\text{Ru}(4.44 \text{ h})$	724.21(47), 469.37(17.5), 676.36(15.7)
• 513.73 20	0.047 9	$^{153}\text{Tb}(2.34 \text{ d})$	212.038(31.0), 170.504(6.8), 109.758(6.4)
• 513.735 14	0.241 18	$^{165}\text{Tm}(30.06 \text{ h})$	242.917(35.5), 47.155(16.9), 297.369(12.71)
513.8	0.28	$^{147}\text{Ce}(56.4 \text{ s})$	268.80(7), 92.9(4.7), 374.23(3.5)
513.8 4	>1.0	$^{203}\text{Bi}(11.76 \text{ h})$	820.3(30), 825.2(14.6), 896.9(13)
513.88 11	0.84 8	$^{139}\text{Xe}(39.68 \text{ s})$	218.59(56), 296.53(21.7), 174.97(11.3)
513.9 4	0.27 8	$^{127}\text{Sn}(2.10 \text{ h})$	1114.3(39), 1095.6(20), 823.1(10.9)
514.0 5	0.09 4	$^{75}\text{Br}(96.7 \text{ m})$	286.572(88), 141.3147(6.6), 427.883(4.4)
514.0 3	$\dagger 13.2$ 23	$^{105}\text{Nb}(2.95 \text{ s})$	94.8($\dagger 100$), 246.9($\dagger 79$), 309.9($\dagger 41.9$)
514.0 2	1.08 11	$^{137}\text{Pr}(1.28 \text{ h})$	836.7(1.8), 433.9(1.28), 160.32(0.97)
514.0 20	0.007 2	$^{145}\text{Gd}(23.0 \text{ m})$	1757.9(34.2), 1880.6(32.6), 1041.8(9.9)
• 514.0 5		$^{233}\text{U}(1.592 \times 10^5 \text{ y})$	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
• 514.0 5	$\dagger 2.6 \times 10^4$ 3	$^{241}\text{Am}(432.2 \text{ y})$	59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$)
• 514.0067 19	0.43	$^{85}\text{Kr}(10.756 \text{ y})$	362.81(2.2×10^{-6}), 151.159(2.2×10^{-6}), 129.820($> 4.3 \times 10^{-7}$)
• 514.0067 19	0.66	$^{85}\text{Sr}(64.84 \text{ d})$	868.5(0.0120), 151.159(0.0012), 362.81(> 0.0010)
514.1 4	0.81 8	$^{101}\text{Mo}(14.61 \text{ m})$	191.92(19), 590.91(16.4), 1012.47(12.8)
514.1	>0.032	$^{195}\text{Tl}(1.16 \text{ h})$	563.52(10.5), 884.47(10.0), 1363.88(8.4)
514.1 3	0.0007	$^{239}\text{U}(23.45 \text{ m})$	74.664(48), 43.533(4.14), 662.24(0.18)
514.2 5	$\dagger 3.8$ 7	$^{191}\text{Tl}(5.22 \text{ m})$	452.6($\dagger 100$), 470.1($\dagger 98$), 391.6($\dagger 96$)
514.38 9	0.17 3	$^{201}\text{Pb}(9.33 \text{ h})$	331.19(79), 361.27(9.9), 945.96(7.4)
514.400 30	2.21 13	$^{134}\text{I}(52.6 \text{ m})$	847.025(95.4), 884.090(64.9), 1072.547(15.0)
514.4 1	$\dagger 1.13$ 3	$^{158}\text{Ho}(11.3 \text{ m})$	218.21($\dagger 100.0$), 98.91($\dagger 70$), 945.7($\dagger 37$)
• 514.4	7.0×10^{-6}	$^{253}\text{Es}(20.47 \text{ d})$	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
514.42 9	1.62 24	$^{202}\text{Bi}(1.72 \text{ h})$	960.67(99), 422.18(83.7), 657.49(60.6)
514.42 6	0.294 24	$^{204}\text{Bi}(11.22 \text{ h})$	899.15(98), 374.72(82), 984.02(59)
• 514.46 19	0.0114 15	$^{103}\text{Ru}(39.26 \text{ d})$	497.080(90.9), 610.33(5.75), 443.799(3.27)
514.50 20	0.163 17	$^{153}\text{Dy}(6.4 \text{ h})$	80.723(11.10), 213.754(10.90), 99.659(10.51)
514.6 3	$\dagger 31$ 3	$^{109}\text{Tc}(0.87 \text{ s})$	194.6($\dagger 100$), 128.7($\dagger 51$), 96.2($\dagger 48$)
514.6 2	0.17 3	$^{245}\text{Pu}(10.5 \text{ h})$	327.428(25.4), 560.13(5.4), 308.222(4.9)
514.7 1	0.46 4	$^{107}\text{Tc}(21.2 \text{ s})$	102.70(21.0), 177.00(9.2), 106.31(7.6)
514.7 4	0.14 5	$^{142}\text{La}(91.1 \text{ m})$	641.285(47), 2397.8(13.3), 2542.7(10.00)
514.7 9	0.36 5	$^{207}\text{At}(1.80 \text{ h})$	814.41(44.5), 588.33(19.2), 300.654(12.8)
514.75 7	0.427 25	$^{146}\text{La}(6.27 \text{ s})$	258.47(64), 924.58(7.45), 702.28(6.43)
514.75 7	31	$^{146}\text{La}(10.0 \text{ s})$	258.47(93), 409.86(81), 502.95(26)
514.78 13	0.19 6	$^{98}\text{Nb}(51.3 \text{ m})$	787.374(93), 722.645(73.8), 1168.830(17.8)
514.79 4	0.086 4	$^{246}\text{Am}(25.0 \text{ m})$	1078.86(27.7), 798.80(25), 1062.04(17.1)
514.8 1		$^{132}\text{Ce}(3.51 \text{ h})$	182.11(77), 155.37(10.5), 216.83(4.95)
514.80 6	0.0052 4	$^{188}\text{Re}(16.98 \text{ h})$	155.032(14.9), 632.99(1.25), 477.99(1.0)
• 514.80 6	0.131 13	$^{188}\text{Ir}(41.5 \text{ h})$	155.032(29.7), 2214.62(18.7), 632.99(18)
514.8 2	$\dagger 1.7$ 1	$^{200}\text{At}(43 \text{ s})$	665.9($\dagger 100$), 611.1($\dagger 85.0$), 484.5($\dagger 49.8$)
514.8 2	1.9 3	$^{227}\text{Fr}(2.47 \text{ m})$	90.035(39), 585.804(29.5), 64.267(14.5)
514.868 7	65 5	$^{175}\text{Tm}(15.2 \text{ m})$	941.23(15), 363.942(12.7), 982.45(10.2)
• 514.95 10	0.0111 20	$^{193}\text{Os}(30.5 \text{ h})$	139.03(4.27), 460.50(3.95), 73.039(3.2)
514.952 45	1.04 10	$^{140}\text{Xe}(13.60 \text{ s})$	805.52(20), 1413.66(12.2), 1315.05(8.2)
515		$^{41}\text{Cl}(38.4 \text{ s})$	1353, 834, 1354.0
515.0 10	0.021 8	$^{63}\text{Zn}(38.47 \text{ m})$	669.62(8), 962.06(6.5), 1412.08(0.75)
515.0 5	0.63 4	$^{123}\text{Cd}(1.82 \text{ s})$	1165.86(25.7), 1027.45(22.6), 2102.81(12.5)
515.0	25	$^{142}\text{Tb}(597 \text{ ms})$	465.0(2.7), 853.1(2.42), 1399.2(2.39)
515 1	0.56 23	$^{163}\text{Tb}(19.5 \text{ m})$	351.138(26), 389.734(24.3), 494.534(23)
515.012 16	0.84 4	$^{163}\text{Tm}(1.810 \text{ h})$	104.320(18.6), 69.229(11.6), 241.305(10.9)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
• 515.05 7	0.00010 4	¹¹⁵ Cd(44.6 d)	933.8(2.000), 1290.580(0.890), 484.470(0.290)
515.06 12	0.38 5	¹⁹⁷ Pb(43 m)	385.85(74), 387.72(25.1), 222.45(24.6)
515.06 10	0.050 5	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
515.07 7	0.23 23	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
• 515.104 6	0.00414 7	¹⁶⁹ Yb(32.026 d)	63.12077(44.2), 197.95788(35.8), 177.21402(22.16)
515.18 20	4.89 14	⁸⁶ Y(14.74 h)	1076.64(83), 627.72(32.6), 1153.01(30.5)
515.2 4	0.41 17	¹⁵⁴ Ho(11.76 m)	334.6(84), 412.4(15.0), 873.4(12.5)
515.2 5	1.4 7	¹⁹⁶ Pb(37 m)	253.1(27.0), 502.1(26.5), 366.5(11.1)
515.2 2	0.17 4	²²⁸ Fr(39 s)	473.7(10.2), 474.0(7.6), 410.40(6.3)
515.3 2	0.23 7	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
515.4 2	0.5	¹⁴⁵ La(24.8 s)	70.0(11), 355.8(3.8), 118.2(3.6)
515.4 2	>0.5	¹⁴⁵ La(24.8 s)	70.0(11), 355.8(3.8), 118.2(3.6)
515.4	>1.1	¹⁴⁹ Er(8.9 s)	1171.0(9.4), 171.5(6.5), 343.9(6.3)
515.4 12	1.4 6	¹⁹⁰ Tl(3.7 m)	416.4(91), 625.4(82), 731.1(37)
515.4 12	1.2 5	¹⁹⁰ Tl(2.6 m)	416.4(79), 625.4(11.1), 683.5(8.7)
• 515.40 5	0.0196 22	²²⁵ Ac(10.0 d)	99.91(1.01), 150.04(0.80), 99.63(0.62)
515.43 8	0.51 8	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
515.43 14	3.91 21	¹⁴⁴ Ba(11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
515.44 14	0.370 11	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
515.467 25	0.0381 19	¹⁶⁵ Dy(2.334 h)	94.700(3.58), 361.68(0.84), 633.415(0.568)
515.467 25	1.53 5	¹⁶⁵ Dy(1.257 m)	361.68(0.534), 153.803(0.242), 95.931(0.039)
• 515.5 2	0.043 2	²³⁸ Np(2.117 d)	984.45(27.8), 1028.54(20.3), 1025.87(9.6)
515.5 2	0.39 4	²³⁸ Am(98 m)	962.77(28), 918.69(23.0), 561.11(10.9)
• 515.5 2	4.5×10^{-6} 15	²⁴² Cm(162.8 d)	44.08(0.0325), 101.90(0.0025), 157.42(0.0014)
• 515.6 4	0.0003 3	⁹⁵ Tc(61 d)	204.117(63.25), 582.082(29.96), 835.149(26.63)
515.6 5	0.14 4	¹³⁶ Sm(47 s)	114.4(36), 747.7(5.4), 485.3(5.0)
515.6 3	1.9 3	¹⁵⁴ Ho(3.10 m)	334.6(94), 412.4(79), 477.1(55)
515.6 1	0.0015 1	²²² Ra(38.0 s)	324.22(2.77), 328.9(0.0043), 472.5(0.0040)
• 515.607 9	5.52 19	²³² Pa(1.31 d)	969.315(41.6), 894.351(19.8), 150.059(10.8)
• 515.607 9	0.00017	²³⁶ Pu(2.858 y)	47.574(0.066), 108.96(0.012), 166.0(0.00066)
515.62 7	0.43 4	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
• 515.65 8	0.989 19	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
515.67 19	0.16 5	¹⁸¹ Re(19.9 h)	365.57(56), 360.70(20), 639.30(6.4)
515.69 8	0.361 16	¹⁸⁷ Ir(10.5 h)	912.95(4.79), 427.12(4.12), 400.89(3.94)
515.7 2	†4.8 7	¹⁵³ Yb(4.2 s)	547.4(†100), 674.1(†61), 369.6(†32)
515.75 9	0.036 5	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
515.78 9	5.0 5	¹³² La(4.8 h)	464.55(76), 567.14(15.7), 1909.91(9.0)
515.78 9	7	¹³² La(24.3 m)	464.55(22), 663.07(11.6), 285.6(7)
515.78 16	0.315 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
515.79 20	0.20 4	¹²⁶ In(1.60 s)	1141.11(55.9), 3344.61(21.6), 969.61(14.9)
515.79 20	1.0 2	¹²⁶ In(1.64 s)	1141.11(100), 908.58(99), 111.79(88)
515.86 7	0.060 5	¹³⁹ Cs(9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
515.9 5	0.11 7	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)
515.9 1	†1.28×10 ⁴ 22	¹⁵⁸ Er(2.29 h)	71.91(†23300), 386.84(†111000), 248.58(†42000)
• 515.95 23	0.029 6	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
516.0		⁴¹ Cl(38.4 s)	1353, 834, 515
516.00 20	0.054 12	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
516.04 12	1.29 9	²⁰⁵ At(26.2 m)	719.30(31), 669.41(8.6), 628.88(5.6)
516.071 15	0.0073 5	¹⁴⁵ Pr(5.984 h)	748.278(0.5250), 675.795(0.514), 72.500(0.261)
516.10 25	0.108 13	¹⁰¹ Tc(14.22 m)	306.85(88), 545.06(6.0), 127.23(2.86)
516.1 1	0.139 25	¹⁴³ Cs(1.78 s)	195.554(13), 232.421(8.32), 306.424(6.80)
516.15 7	0.47	¹⁰⁸ In(58.0 m)	875.46(100), 632.96(100), 242.84(41)
• 516.18 4	40.7 4	²⁰⁶ Bi(6.243 d)	803.10(99), 881.01(66.2), 1718.70(31.8)
516.2 4	0.30 5	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: $E_\gamma(I_\gamma)$
516.2		¹⁵⁷ Lu(5.0 s)	967.5, 949.8, 880.5
516.2.2	1.4	²²⁷ Ra(42.2 m)	27.36(16), 300.07(4.6), 302.65(4.3)
• 516.2.2	0.0010 3	²³¹ Pa(32760 y)	27.36(10.3), 300.07(2.46), 302.65(2.2)
516.21 15	0.080 13	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
516.23 25	†5	¹⁸³ Hg(9.4 s)	60.5(†100), 159.91(†21), 172.70(†17)
• 516.25 6	0.194 14	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
516.28 20	0.68 19	¹⁵⁸ Tm(3.98 m)	192.13(62), 335.10(16.8), 1149.83(7.6)
516.30 14	2.98 21	¹⁴⁴ Ba(11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
516.3 4	0.86 9	¹⁵² Pm(7.52 m)	244.6989(78), 121.7824(45), 340.48(31.3)
• 516.3 4	0.0024 12	¹⁹³ Os(30.5 h)	139.03(4.27), 460.50(3.95), 73.039(3.2)
516.30 5	0.228 16	²²⁶ Fr(48 s)	253.73(22.3), 186.05(16.3), 253.9(2.5)
516.318 10	90 3	²⁰⁴ At(9.2 m)	684.341(95), 426.253(67.5), 609.13(24.6)
516.4 3	0.19 4	¹⁰¹ Sr(118 ms)	128.34(18.0), 1124.82(10.9), 510.73(8.5)
516.4 6	0.013	¹¹¹ Pd(23.4 m)	580.00(0.8), 70.44(0.78), 1459.0(0.56)
516.4 3	0.0036 6	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
• 516.4 3	†0.0114 24	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
516.41 7	21.5 15	⁷⁹ Ga(2.847 s)	464.79(24.2), 1187.28(12.8), 2140.20(7.0)
• 516.545 2	2.69 3	¹⁴⁹ Gd(9.28 d)	149.735(48.2), 298.634(28.6), 346.651(23.9)
516.57 6	3.4 3	⁷⁷ Zn(2.08 s)	189.49(28.1), 473.94(19.7), 1832.0(12.4)
516.59 20	0.30 4	¹⁸⁴ Ta(8.7 h)	414.03(72), 252.848(43), 920.932(32.0)
• 516.6 10	0.031 10	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
516.60 6	†13 3	²³⁴ Pa(1.17 m)	1001.03(†837000), 766.38(†294000), 742.81(†80000)
• 516.60 6	0.313 19	²³⁴ Np(4.4 d)	1558.31(18.72), 1527.21(11.2), 1601.80(9.1)
516.60 13	0.0099 25	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
516.69 2	1.24 8	¹⁴⁷ La(4.015 s)	117.718(12), 186.320(6.48), 438.30(5.04)
516.7 3	0.18 5	¹²¹ Xe(40.1 m)	252.7(13), 132.8(10.9), 445.2(7.7)
516.7 5	†2.14 18	²⁰¹ Po(15.3 m)	890.1(†100), 240.1(†71.0), 904.2(†54.8)
516.74 12	0.43 5	¹³⁸ Cs(33.41 m)	1435.795(76.3), 462.796(30.7), 1009.78(29.8)
516.74 12	0.61 19	¹³⁸ Cs(2.91 m)	1435.795(19), 462.796(18.6), 191.96(15.4)
516.78 5	0.71 4	¹⁴⁷ Pr(13.4 m)	77.9921(15), 314.675(13.2), 641.380(10.0)
• 516.793 14	0.423 14	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
516.9 4	0.24 12	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
516.9 3	†1.4 3	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
517.00 8	0.035 10	⁸⁸ Kr(2.84 h)	2392.11(34.6), 196.301(25.98), 2195.842(13.18)
517.0 3	0.40 7	⁹⁹ Nb(2.6 m)	97.785(7), 253.50(3.64), 2641.3(3.64)
517.0 3	0.83 8	²⁰¹ Au(26 m)	542.6(1.2), 613.2(0.77), 167.43(0.64)
517.0 4	0.0068	²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
517.055 20	6.0 6	²⁰⁸ At(1.63 h)	686.527(98), 660.040(89), 177.595(48.6)
517.07 15	0.51 8	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
517.1 3	0.11 5	¹²¹ Xe(40.1 m)	252.7(13), 132.8(10.9), 445.2(7.7)
517.1 6	†2.8 6	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
• 517.2	0.0004	²³⁵ U(7.038×10 ⁸ y)	85.712(57.2), 143.764(10.96), 163.358(5.08)
517.24 2	0.198 20	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
• 517.29 10	0.040 7	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
517.3 4	2.4 5	¹¹⁶ Cs(3.84 s)	393.5(<0.09), 524.3(76), 615.1(30.4)
517.3 3	0.26 7	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
517.3 1	†1.0 3	¹⁵⁸ Ho(11.3 m)	218.21(†100.0), 98.91(†70), 945.7(†37)
517.4	1.1	⁹⁶ Y(9.6 s)	1750.42(89), 915.0(60), 617.1(56)
517.4 4	0.032 16	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
517.4	0.22	¹⁸⁵ Ir(14.4 h)	254.4(13.3), 1828.8(10), 60.0(5.7)
517.44 4	4.80 20	¹⁴⁹ Pr(2.26 m)	138.447(11.0), 165.087(9.9), 108.520(9.5)
517.5 3	0.10 3	¹¹⁹ Ag(2.1 s)	626.4(13), 366.2(12.1), 399.1(10.9)
• 517.5 4	0.0014 5	¹³¹ Ba(11.50 d)	496.326(47), 123.805(28.97), 216.078(19.66)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
517.5 1	4.5 5	¹⁴¹ Tb(3.5 s)	293.3(16.8), 343.6(16.3), 198.4(14.8)
517.5 5	†22.2 22	¹⁷⁷ Tm(85 s)	104.5(†11.1), 44.5(†10), 589.0(†8.9)
517.6 5	†0.48 7	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
517.62 5	0.076 12	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
517.63 6	†1.9 3	²¹⁵ Bi(7.6 m)	293.54(†100), 271.23(†5.5), 833(†1.4)
517.63 6	0.0443 22	²¹⁹ Rn(3.96 s)	271.23(10.8), 401.81(6.37), 130.59(0.119)
517.7 7	0.16 10	⁹⁰ Mo(5.67 h)	257.34(78), 122.370(64.2), 203.13(6.4)
517.71 4	73	⁵⁵ V(6.54 s)	880.70(18.1), 921.10(4.6), 565.88(4.50)
• 517.766 20	0.341 6	¹⁷¹ Lu(8.24 d)	739.78(47.8), 19.394(13.7), 667.404(11.04)
• 517.78 5	0.0142 22	²²⁵ Ac(10.0 d)	99.91(1.01), 150.04(0.80), 99.63(0.62)
517.8 2	0.41 6	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
517.9 6	0.71 24	¹⁴⁵ Ce(3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)
517.92 9	0.0029	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
518.0	1.3	⁸³ As(13.4 s)	734.60(43), 1113.10(14.7), 2076.70(11.9)
518.0 2	0.33 8	¹⁰⁸ Tc(5.17 s)	242.25(82), 465.6(14.3), 707.81(11.4)
518.0 2	0.059 12	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
518.0 8	1.1 5	¹⁶⁶ Lu(2.12 m)	1427.18(23.0), 2098.6(16.1), 1256.64(15.2)
518.0	†0.35 8	¹⁷⁸ Ir(12 s)	266.1(†100.0), 131.6(†79), 363.1(†39.9)
• 518.011 16	0.0475 21	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
518.011 16	6.1 3	¹⁵⁴ Tb(9.4 h)	123.071(30), 247.925(22.1), 540.18(20)
518.011 16	3.8 3	¹⁵⁴ Tb(22.7 h)	247.925(79), 346.643(69), 1419.81(46)
518.05 2	13.6 5	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
518.09 72	0.05 3	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
518.1 5	†25 8	¹³⁴ Pr(17 m)	1964.1(†100), 1904.3(†100), 1579.9(†100)
• 518.178 8	0.16 5	⁷⁷ Br(57.036 h)	238.996(23), 520.639(22.4), 297.215(4.16)
518.18 5	0.062 3	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
518.2 4	0.19 4	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
518.2 3	0.0060 20	²⁴⁰ Np(7.22 m)	554.60(20.9), 597.40(11.7), 1496.9(1.33)
518.2 5	0.051 17	²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
518.26 25	0.10 3	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
518.30 25	0.78 18	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
518.3 2	0.149 10	²¹⁰ At(8.1 h)	1181.39(99.3), 245.31(79), 1483.39(46.5)
518.4 5		¹⁰⁹ In(4.2 h)	203.5(74), 623.7(5.5), 1148.9(4.3)
518.4 4	0.9 1	¹⁵⁶ Pm(26.70 s)	173.75(52.0), 1147.84(20.5), 117.42(13.8)
518.43 15	0.15 6	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
• 518.45 20	0.027 6	¹⁹⁵ Hg(41.6 h)	261.75(30.9), 560.27(7), 387.87(2.15)
518.46 11	0.32 3	¹⁵⁷ Sm(482 s)	197.870(56.00), 196.461(16.8), 394.351(11.93)
518.48 6	0.088 6	²⁴⁹ Cm(64.15 m)	634.31(1.5), 560.45(0.84), 368.76(0.35)
• 518.48 6	0.00011	²⁵³ Es(20.47 d)	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
518.50 15	0.127 20	⁹³ Sr(7.423 m)	590.238(67), 875.73(24.1), 888.13(21.8)
518.5 3	0.34 10	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
518.50 10	0.42 4	²³⁰ Ac(122 s)	454.95(8), 508.20(5.15), 1243.9(3.50)
• 518.50 10	1.98 11	²³⁰ Pa(17.4 d)	951.95(1.65), 918.48(8.2), 454.95(6.27)
518.55 7	6.7 5	¹⁹⁰ Re(3.2 h)	186.718(27.8), 605.24(14.9), 557.972(14.3)
• 518.55 7	34.0 11	¹⁹⁰ Ir(11.78 d)	186.718(52.4), 605.24(39.9), 557.972(30.1)
518.60 6	0.69 5	⁹⁰ Nb(14.60 h)	1129.224(92.7), 2318.968(82.03), 141.178(66.8)
518.67 6	0.68 4	¹⁰⁰ Sr(202 ms)	963.85(22.0), 898.50(18.9), 65.46(15.2)
518.7		⁴¹ Cl(38.4 s)	1353, 834, 515
518.7 4	†3.3 7	¹⁵⁵ Tm(21.6 s)	226.8(†100), 531.7(†20), 88.1(†17)
518.8 3	0.06 3	¹¹⁷ Cd(3.36 h)	1997.33(26), 1065.98(23.1), 564.397(14.7)
518.8 1	†1.87 17	¹²³ La(17 s)	92.5(†100), 937.3(†43), 153.6(†43)
518.8 1	0.050 6	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
518.8 5	0.45 23	¹⁴¹ Eu(2.7 s)	394.0(0.60), 882.9(0.54), 804.4(0.44)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
518.8 4	0.59 12	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
518.8 4	0.09 3	²²³ Ac(2.10 m)	98.58(0.891), 191.3(0.58), 83.55(0.57)
518.8 1	0.40 5	²⁴¹ Np(13.9 m)	174.94(3.1), 132.99(0.86), 362.4(0.19)
518.8 1	0.04	²⁴¹ Np(13.9 m)	174.94(3.1), 132.99(0.86), 518.8(0.40)
518.86 4	3.15 11	¹⁵⁷ Pm(10.56 s)	160.61(35), 188.052(13.5), 571.27(5.39)
518.89 6	0.233 22	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
518.9 1	0.0101 25	¹²¹ I(2.12 h)	212.189(84), 532.08(6.07), 598.74(1.47)
518.9 2	1.02 10	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
• 518.90 15	0.0099 5	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
• 518.96 3	0.0180 11	¹⁴⁷ Eu(24.1 d)	197.299(27), 121.220(22.9), 677.516(9.8)
519.0 3	0.072 9	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
519.1 2	0.72 14	¹⁰⁰ Rh(20.8 h)	539.59(78.4), 2376.1(35.3), 1553.4(21)
519.1 2	6.2 7	¹¹⁷ Xe(61 s)	28.5(7.0), 221.3(10.0), 32.3(7.6)
519.1 4	0.023 8	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
519.1 2	2.1 5	¹⁹⁶ Bi(308 s)	1049.21(87), 689.00(35.5), 776.6(9.1)
519.1 2	†0.60 14	¹⁹⁶ Bi(240 s)	1049.21(†21.1), 371.93(†20.8), 689.00(†19.2)
519.12 20	0.63 7	¹⁶¹ Yb(4.2 m)	78.20(34), 599.88(25.9), 631.45(13.9)
519.13 5	0.0471 13	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
519.2 2	†27.6 21	¹⁰³ Mo(67.5 s)	83.4(†100), 423.91(†69), 45.8(†57)
519.2 1	†2.0 2	¹⁰⁴ Nb(0.92 s)	192.2(†100), 368.4(†20), 620.2(†19.2)
519.2 4	0.07 3	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
519.2 3	†12.6 15	¹⁹⁸ Tl(1.87 h)	636.4(†202), 411.8044(†202), 587.2(†185)
519.28 15	0.25 3	¹⁰⁷ In(32.4 m)	204.97(47), 505.51(11.9), 320.92(10.2)
519.30 14	0.010 5	¹¹¹ Pd(23.4 m)	580.00(0.8), 70.44(0.78), 1459.0(0.56)
519.30 14	0.150 16	¹¹¹ Pd(5.5 h)	70.44(8.3), 391.25(5.4), 632.80(3.6)
• 519.3 5		¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
519.4 1	0.89 9	¹⁰⁴ Tc(18.3 m)	358.0(89), 530.5(15.6), 535.1(14.7)
519.4	4.9 4	¹⁵² Tb(4.2 m)	344.281(20.8), 411.115(18.8), 471.9(12.2)
519.4 4	0.0177 16	¹⁷¹ Er(7.516 h)	308.31(64.4), 295.901(28.9), 111.621(20.5)
519.4 1	†1.6 13	¹⁷¹ Hf(12.1 h)	122.0(†100), 662.2(†83), 347.18(†47)
519.4 1	†3.4 13	¹⁷¹ Hf(12.1 h)	122.0(†100), 662.2(†83), 347.18(†47)
519.42 18	†4.6 7	¹⁸¹ Pt(51 s)	289.29(†100), 111.97(†100), 230.15(†92)
519.44 8		²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
519.5 2	0.069 10	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
519.5 2	0.081 7	²²⁴ Fr(3.30 m)	215.985(33.1), 131.613(16.3), 836.90(9.8)
519.5 5	0.00015 4	²⁵⁵ Fm(20.07 h)	81.477(0.81), 58.477(0.67), 80.92(0.27)
519.51 15	†5.7 5	¹⁶⁵ Lu(10.74 m)	132.49(†100), 120.60(†100), 174.25(†47.0)
519.6 3	†0.53 7	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
519.6 2	0.42 11	¹⁶⁴ Tb(3.0 m)	168.838(25.4), 754.80(23.3), 215.07(21)
519.6 4	0.105 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
519.6 1	0.39 3	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
519.67 5	0.59 5	¹⁶² Tm(21.70 m)	102.00(17.5), 798.68(8.4), 227.52(7)
519.7 1	0.28 11	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
519.7 2	0.32	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
519.7 3		¹⁸⁵ Pt(33.0 m)	229.60(†100), 135.3(†80), 197.4(†74)
519.78 19	0.096 12	⁹³ Kr(1.286 s)	253.42(41.2), 323.89(24.1), 266.83(20.6)
• 519.788 15	0.019 4	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
• 519.788 15	0.049 7	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
519.8 5	0.59 12	⁷⁴ Kr(11.50 m)	89.65(31), 203.0(18.0), 296.67(9.9)
519.8 3	48.4 10	¹¹⁴ Rh(1.85 s)	332.9(87), 618.7(31), 647.8(28)
519.98 12	0.98 9	⁸⁰ Ga(1.697 s)	659.14(78.0), 1083.47(48.4), 1109.36(18.6)
520.0	0.046	⁴⁴ Ar(11.87 m)	182.6(66), 1703.4(57), 1886.0(31)
520 1	0.30 3	⁷⁷ Ge(11.30 h)	264.44(54), 211.03(30.8), 215.50(28.6)
520 1	0.08 4	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: $E_\gamma(I_\gamma)$
520.0 2	6.3 3	⁹⁷ Rb(169.9 ms)	167.1(26), 585.2(21.0), 600.5(10.6)
520.0 4	0.95 19	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
• 520.085 19	0.461 10	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
520.1 1	0.044 12	¹³³ Te(12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
520.1 2	†85 10	¹⁵¹ Yb(1.6 s)	474.2(†100), 108.4(†52)
520.1 2	0.052 11	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
520.11 7	1.7 3	²⁰² Au(28.8 s)	439.59(10.0), 1125.20(2.30), 1306.38(2.25)
• 520.11 7	0.58 4	²⁰² Tl(12.23 d)	439.59(91), 959.70(0.069)
520.149 17	0.069 5	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
520.20 2	0.024 12	¹⁴⁷ La(4.015 s)	117.718(12), 186.320(6.48), 438.30(5.04)
520.2 8	†1.4 6	¹⁶⁰ Tm(9.4 m)	125.8(†100), 728.5(†37), 264.1(†27)
520.2 4	0.85 10	¹⁷⁶ Tm(1.9 m)	189.57(44.5), 1069.3(34), 381.8(21.8)
520.2 3	0.14 7	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
• 520.230 5	0.0536 15	¹⁵² Eu(13.542 y)	344.281(26.58), 778.91(12.96), 411.115(2.231)
520.230 5	†2.8 9	¹⁵² Tb(17.5 h)	344.281(†1500), 586.294(†223), 271.135(†203)
520.3 4	0.82 8	⁵⁵ Co(17.53 h)	931.3(75), 477.2(20.2), 1408.4(16.88)
520.3 8	0.023 12	¹⁰³ Cd(7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
520.3 4	0.07 3	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
520.32 10	†19 1	¹⁶³ Hf(40.0 s)	70.98(†100), 62.14(†64), 45.39(†48)
520.39 1	0.0576 18	⁸³ Br(2.40 h)	529.635(1.200), 552.63(0.0200), 648.9(0.0124)
• 520.39 1	44.7 22	⁸³ Rb(86.2 d)	529.635(29.3), 552.63(16.0), 790.0(0.657)
520.4 5	15.8 8	⁵⁸ Cr(7.0 s)	682.9(81), 126(75), 289.5(18.8)
520.4 3	†5.4 21	⁷¹ Cu(19.5 s)	489.7(†100), 595.2(†30.5), 586.5(†30.2)
520.4 2	1.9 8	¹⁰³ Zr(1.3 s)	248(100), 164.05(94), 126.30(84)
520.4 2	0.019 12	¹³³ Te(12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
520.4 2	†1.6 3	¹⁶⁹ Ta(4.9 m)	511.0(†20.6), 28.80(†18.3), 192.4(†8)
520.4 6	0.0055 23	²¹⁴ Bi(19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
520.44 6	4.41 18	²⁰⁵ At(26.2 m)	719.30(31), 669.41(8.6), 628.88(5.6)
520.5 2	0.080 6	⁷¹ Zn(2.45 m)	511.56(32), 910.27(7.8), 389.88(3.8)
520.5 2	>0.019	⁷¹ Zn(3.96 h)	386.28(93), 487.38(62), 620.18(57)
520.5 2	0.15	¹⁴⁰ Sm(14.82 m)	225.5(>10), 225.4(10), 140.0(5.0)
520.5 5	1.84 12	¹⁵⁴ Pr(2.3 s)	162.4(15), 932.1(11.7), 70.8(11.22)
520.54 5	0.113 5	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
• 520.639 7	0.558 22	⁷⁷ As(38.83 h)	238.996(1.6), 249.786(0.394), 87.8671(0.202)
• 520.639 7	22.4 4	⁷⁷ Br(57.036 h)	238.996(23), 297.215(4.16), 249.786(2.98)
520.7 1	2.4 5	¹⁵² Ho(49.5 s)	647.2(92), 613.8(88.4), 683.3(88)
520.7 7	0.065 15	¹⁶³ Yb(11.05 m)	860.28(10.1), 63.62(6.5), 123.21(1.98)
520.70 11	1.41 16	¹⁹⁷ Pb(8 m)	385.85(50), 761.14(13.3), 375.48(12.8)
520.74 24	0.055 5	⁷² Ga(14.10 h)	834.01(96), 2201.69(25.9), 629.95(24.8)
520.78 9	0.85 6	²⁰⁷ At(1.80 h)	814.41(44.5), 588.33(19.2), 300.654(12.8)
520.8 3	0.033 3	⁹¹ Sr(9.63 h)	1024.3(33), 749.8(23.61), 652.9(8.0)
520.8 1	0.15 4	⁹⁴ Sr(75.3 s)	1427.7(94), 723.8(2.40), 703.9(2.13)
520.8 4	0.64 18	¹²³ Ag(0.309 s)	263.87(35.9), 409.79(13.2), 591.30(8.2)
520.8 2	0.40 4	¹⁸⁸ Tl(71 s)	412.7(88), 592.0(61), 504.2(23.3)
520.89 6	0.35 6	²⁰¹ Au(26 m)	542.6(1.2), 517.0(0.83), 613.2(0.77)
520.9 3	0.20 4	⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
520.9 2	†100	¹³⁸ Pm(3.24 m)	729.0(†37.8), 493.1(†21.6), 1279.1(†11.0)
• 520.92 4	0.00033 9	¹⁶⁶ Ho(26.83 h)	80.574(6.71), 1379.40(0.93), 1581.89(0.187)
• 520.92 4	0.00028 5	¹⁶⁶ Ho(1.20×10 ³ y)	184.410(72.6), 810.276(58.08), 711.683(55.32)
520.92 4	0.168 17	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
• 520.927 10	0.026 9	²⁰⁰ Tl(26.1 h)	367.943(87), 1205.717(29.9), 579.298(13.8)
520.927 25	0.078 17	¹⁹³ Au(17.65 h)	186.17(10.1), 255.57(6.7), 268.22(3.9)
• 520.99 4	0.160 7	¹⁶⁶ Ho(1.20×10 ³ y)	184.410(72.6), 810.276(58.08), 711.683(55.32)
520.99 4	0.079 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: $E_\gamma(I_\gamma)$
521.0 5	0.12 3	⁷⁴ Ga(8.12 m)	595.847(91), 2353.46(44.5), 608.353(14.3)
521.0 6	†0.50 20	¹⁵⁵ Tm(21.6 s)	226.8(†100), 531.7(†20), 88.1(†17)
521.06 15	0.55 8	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
521.07 15	0.64 9	⁷⁴ Br(46 m)	634.78(91), 728.37(35.6), 634.26(16.4)
521.10 14	1.40 12	⁸¹ As(33.3 s)	467.72(20), 491.20(8.5), 1406.14(0.998)
• 521.1 2	0.032 5	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
• 521.1 20	†9×10 ⁰⁴	²³⁷ Pu(45.2 d)	280.40(†870000), 298.89(†7.85×10 ⁶), 320.75(†6.48×10 ⁶)
521.175 5	†104	¹⁹⁶ Ir(1.40 h)	393.346(†105.2), 447.1(†102.1), 355.684(†102)
• 521.175 5	0.389 9	¹⁹⁶ Au(6.183 d)	355.684(87), 332.983(22.9), 1091.331(0.149)
521.2 6	0.02 1	¹⁰⁷ Rh(21.7 m)	302.77(66), 392.47(8.8), 312.21(4.8)
521.2 2	0.68 15	¹⁴⁸ Ce(56 s)	269.519(17.0), 291.724(16.7), 121.169(13.2)
• 521.28 15	0.0079 8	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
521.28 7	0.42 8	¹⁹⁹ Pb(90 m)	366.90(44.2), 353.39(9.5), 1135.04(7.8)
521.3 1	0.27	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
521.3 5	0.48 14	¹⁷⁸ Re(13.2 m)	237.3(45), 105.9(23.0), 939.1(8.9)
521.3 5	3.9 5	¹⁹¹ Hg(50.8 m)	252.5(57), 420.1(18.6), 578.6(17.6)
• 521.303 3	0.030 4	¹⁶⁸ Tm(93.1 d)	198.241(52.39), 815.990(48.99), 447.515(23.05)
521.33 4	0.00066 22	²⁰⁵ Hg(5.2 m)	203.750(2.2), 415.70(0.0130), 1218.96(0.0062)
521.34 14	0.42 6	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
521.4 1	0.11 4	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
521.4 7	0.16 7	¹⁵⁹ Eu(18.1 m)	67.8(19), 78.6(9.1), 95.7(7.0)
521.4 6	†9 4	¹⁹¹ Hg(49 m)	252.5(†100), 196.3(†65), 224.7(†60)
521.4 1	0.74 5	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
• 521.464 8	0.25 4	²⁰⁰ Tl(26.1 h)	367.943(87), 1205.717(29.9), 579.298(13.8)
521.55 17	0.231 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
521.55 5	4.08 10	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
521.6 2	1.26 14	⁹⁸ Y(0.548 s)	1223.0(36.0), 2941.3(16.7), 1590.9(14.7)
521.6 1		¹²⁵ La(76 s)	67.6(34), 43.6(3.5), 985.2
521.6 3	0.24 4	¹⁴⁹ Dy(4.20 m)	100.8(15.2), 789.4(11.8), 1776.3(11.1)
521.6 1	2.4	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
521.6 7	0.231 22	¹⁹⁹ Bi(27 m)	560.1(22.0), 424.85(22), 841.7(11)
521.7 4	†3.8	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
521.8 5	0.6	¹³⁰ La(8.7 m)	357.4(81.0), 550.7(25.9), 908.0(17.0)
521.8 5	0.40	¹³⁰ La(8.7 m)	357.4(81.0), 550.7(25.9), 908.0(17.0)
521.8 2	†5.7 23	¹⁵⁵ Nd(8.9 s)	180.574(†100), 418.99(†75), 955.08(†50)
• 521.9 2	0.132 14	¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
521.9 2	0.121 9	²¹⁰ Rn(2.4 h)	458.25(1.7), 648.70(0.843), 570.95(0.840)
522.0 3	>0.6	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
522.0 4	0.05 3	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
• 522.06 15	†9×10 ⁰³ 3	²⁴¹ Am(432.2 y)	59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸)
522.07 7	0.0023	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
522.10 13	0.40 3	⁹⁰ Rb(258 s)	831.69(94), 1375.36(16.7), 3317.00(14.4)
522.1 2	2.89 18	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
522.1 2	9.4 7	¹¹⁷ Ag(5.34 s)	135.4(48), 386.8(39.9), 298.1(21.1)
522.1 2	0.37 9	¹¹⁷ Ag(72.8 s)	135.4(23), 337.7(10.3), 157.1(7.9)
522.1 2	0.018 9	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
522.12 5	0.64 8	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
522.13 7	0.247 12	¹⁸⁷ Ir(10.5 h)	912.95(4.79), 427.12(4.12), 400.89(3.94)
522.2 3	0.78 10	¹⁹⁶ Os(34.9 m)	407.9(5.9), 126.2(5.3), 315.4(2.5)
522.22 5	7.5 5	¹⁰⁶ Tc(35.6 s)	270.07(56), 2239.30(13.6), 1969.40(8.9)
• 522.30 30	0.088 18	¹⁰⁶ Ag(8.28 d)	511.842(88), 1045.83(29.6), 717.24(28.9)
522.3	0.432 14	¹⁴¹ Ba(18.27 m)	190.328(46.0), 304.194(25.4), 276.948(23.4)
522.3 1	†11.0 11	¹⁷¹ Ta(23.3 m)	49.6(†100), 506.4(†54), 501.8(†22.6)
522.3	†27 7	¹⁸⁹ Tl(2.3 m)	333.7(†100), 942.2(†69), 451.0(†49)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
• 522.3 1	0.0016 4	²²⁵ Ac(10.0 d)	99.91(1.01), 150.04(0.80), 99.63(0.62)
522.4 8	0.004 4	⁴⁵ K(17.3 m)	174.276(74.4), 1705.6(53), 2353.6(14.12)
• 522.4 4	0.0010 3	¹¹¹ Ag(7.45 d)	342.118(7), 245.422(1.24), 96.73(0.20)
522.4	>0.09	¹³³ I(20.8 h)	529.872(87.0), 875.329(4.51), 1298.223(2.35)
522.4 4	0.38 8	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
522.45 9	0.151 16	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
522.47 9	0.62 11	²⁰⁴ At(9.2 m)	684.341(95), 516.318(90), 426.253(67.5)
• 522.47 5	15.7 3	²⁰⁶ Po(8.8 d)	1032.26(32.9), 511.36(24.1), 286.410(23.8)
522.5 2	1.14 23	⁷⁵ Rb(19.0 s)	178.98(<63), 178.97(>51), 187.21(8.7)
522.5 3	1.25 16	⁹⁷ Rb(169.9 ms)	167.1(26), 585.2(21.0), 600.5(10.6)
522.5 3	0.30 5	¹¹⁷ Cs(8.4 s)	204.8(15.0), 29.7(9.9), 205.6(6.8)
522.5	0.15	¹³³ Pr(6.5 m)	134.3(14), 74.0(10), 315.6(10)
522.5 5	0.90 15	¹⁴⁸ Pr(2.0 m)	301.702(95), 450.58(50), 697.61(40)
522.5 4	2.1 7	¹⁷⁹ Yb(8.0 m)	592.1(75), 612.3(35.4), 381.4(9.6)
522.5 5	†9	²²³ Rn(23.2 m)	591.8(†100), 635.2(†76), 416.0(†55)
522.51 15	†3.8 6	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
522.53 5	0.0457 20	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
522.58 19	0.23 7	¹⁸¹ Re(19.9 h)	365.57(56), 360.70(20), 639.30(6.4)
522.6 3	†16 2	¹¹⁷ Pd(4.3 s)	247.5(†100), 649.9(†41), 323.9(†37)
522.6 3	†0.18 3	¹⁸⁴ Ir(3.09 h)	263.97(†100), 119.80(†45), 390.38(†38)
522.65 9	16.0 5	¹³² I(2.295 h)	667.718(99), 772.60(75.6), 954.55(17.6)
522.66 25	0.073 15	¹⁹³ Au(17.65 h)	186.17(10.1), 255.57(6.7), 268.22(3.9)
522.670 4	0.149 15	¹⁵⁵ Sm(22.3 m)	104.3346(74.6), 245.771(3.7), 141.4428(1.98)
• 522.68 10	0.021 6	¹⁸⁸ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
522.7 2	0.195 23	⁹⁶ Rb(0.199 s)	815.0(78.00), 692.0(8.0), 813.2(7.0)
522.70 13	0.35 5	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
522.757 6	56	²³³ Ac(145 s)	539.599(38), 16.8
522.76 20	0.034 9	¹⁶⁵ Yb(9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
522.77 4	1.43 13	¹⁵¹ Tb(25 s)	379.39(5.9), 830.81(3.10), 504.4(0.48)
522.8 5	0.0040 13	⁸² Rb(1.273 m)	776.517(13), 1395.139(0.471), 698.374(0.133)
522.8 1	†281 43	¹⁵⁷ Ho(12.6 m)	279.97(†47600), 341.16(†37000), 193.41(†15200)
522.82 12	†2.0 3	¹⁸² Au(21 s)	154.76(†100), 264.33(†40.0), 855.41(†14.5)
522.9 3	0.072 10	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
523.0 5	†7.0 10	¹¹³ I(6.6 s)	462.5(†100), 622.4(†74), 351.5(†43)
523		¹²⁹ Sb(17.7 m)	759.8(†100.0), 657.78(†92), 433.76(†73)
• 523.0 5	0.0017 4	¹⁴³ Ce(33.039 h)	293.266(42.80), 57.356(11.7), 664.571(5.69)
• 523 1	0.012	²⁵² Es(471.7 d)	52.33(0.55), 64.42(0.274), 418.5(0.220)
523.13 5	0.37 9	¹⁵² Pm(7.52 m)	244.6989(78), 121.7824(45), 340.48(31.3)
• 523.13 5	0.0148 8	¹⁵² Eu(13.542 y)	121.7824(28.4), 1408.011(20.87), 964.131(14.34)
523.133 17	0.106 8	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
523.18 4	10.1 3	⁸⁰ Ga(1.697 s)	659.14(78.0), 1083.47(48.4), 1109.36(18.6)
• 523.2 2	0.23 6	⁷⁹ Kr(35.04 h)	261.29(13), 397.54(9.3), 606.09(8.12)
523.22 20	1.7 4	¹⁵¹ Pr(18.90 s)	880.19(13), 189.057(11.8), 484.501(11.3)
• 523.277 9	0.039 7	⁷⁷ Br(57.036 h)	238.996(23), 520.639(22.4), 297.215(4.16)
523.28 12	0.170 14	¹⁹⁰ Au(42.8 m)	295.78(71.0), 301.82(23.4), 597.67(9.4)
523.3 3	0.07 3	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
523.3 3	0.05 5	¹²⁷ In(1.09 s)	1597.7(49), 646.1(6.2), 805.1(5.6)
523.3 3	0.66 9	¹⁸⁸ Hg(3.25 m)	66.7(63), 190.1(4.40), 82.7(2.6)
523.31 20	0.64 11	¹⁶⁴ Tb(3.0 m)	168.838(25.4), 754.80(23.3), 215.07(21)
523.36 15	0.26 9	¹³³ Sb(2.5 m)	1096.22(43.0), 817.8(18.5), 2755(12.5)
523.39 11	†4.3 22	¹⁸⁹ Au(28.7 m)	713.17(†100), 812.68(†63), 447.65(†55)
523.4 5	5.1	¹⁰¹ Cd(1.2 m)	98.0(47), 1722.5(11), 1259.3(8)
523.5 4	0.034 12	⁸⁹ Kr(3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
523.5 7	0.43 10	¹²⁷ Ba(12.7 m)	180.8(12), 114.8(9.3), 66.06(2.12)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
523.5 4	0.10 5	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
523.60 10	5.15 25	¹²⁷ Cd(0.43 s)	1235.07(8.3), 376.28(7.5), 1067.0(5.1)
523.6 4	0.17 5	¹³⁶ Nd(50.65 m)	108.90(32), 40.2(18.9), 574.8(10.4)
523.6 4	0.81 7	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
523.66 5	0.234 17	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
523.68 10		¹¹⁵ Pd(25 s)	342.71(8), 303.87(7), 396.56(6)
523.71 4	1.33 5	⁸¹ Sr(2.23 m)	153.54(33.8), 147.76(30.1), 443.34(17.5)
523.75 10	0.119 16	²²⁷ Fr(2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)
523.76 5	3.14 8	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
523.78 4	0.42 5	¹³² Ce(3.51 h)	182.11(77), 155.37(10.5), 216.83(4.95)
523.792 8	88.7 15	⁵⁰ Sc(102.5 s)	1553.768(100), 1121.124(99.5), 2205.722(1.27)
523.8 5	1.59 13	¹²⁹ Sb(4.40 h)	812.8(43), 914.6(20.0), 544.7(17.9)
523.8	0.31	¹⁴⁸ Pr(2.27 m)	301.702(61), 1357.78(5.5), 1023.18(4.8)
• 523.8 4	0.019 9	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
523.8 1	18.3 10	¹⁵⁴ Ho(3.10 m)	334.6(94), 412.4(79), 477.1(55)
523.8 4	0.23 12	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
523.8 3	†0.38 10	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
523.86 3	3.70 11	⁵⁸ Mn(65.3 s)	810.764(<0.026), 1323.09(6.44), 459.160(21.4)
523.88 2	0.38 4	¹⁴⁷ La(4.015 s)	117.718(12), 186.320(6.48), 438.30(5.04)
523.9 3	†9 7	¹⁷ C(193 ms)	1373.8(†100), 1849.5(†92), 1906.7(†29)
523.9 3	†0.5	¹¹¹ Rh(11 s)	275.4(†100.0), 411.8(†9.42), 230.0(†8.9)
523.9 5	0.341 21	¹³⁶ Pr(13.1 m)	552.16(76), 539.75(52), 1092.3(18.5)
523.9 1	0.045 6	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
523.9 5	0.51 5	¹⁶⁶ Lu(2.65 m)	228.12(77.3), 337.50(41), 367.95(31.4)
524	>0.019	⁹⁰ Nb(14.60 h)	1129.224(92.7), 2318.968(82.03), 141.178(66.8)
524.0 1	†11.2 3	⁹⁵ Pd(13.3 s)	1350.9(†105), 716.6(†70.63), 381.8(†50.8)
524.0 5	0.056 20	¹⁵⁶ Ho(56 m)	266.35(54.7), 137.83(51), 366.25(10.73)
524.0 5	†0.6	¹⁸³ Hg(9.4 s)	60.5(†100), 159.91(†21), 172.70(†17)
524.0 2		¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†33)
• 524.0	6.0×10 ⁻⁵	²⁵³ Es(20.47 d)	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
524.02 20	0.08 3	¹⁶² Tm(21.70 m)	102.00(17.5), 798.68(8.4), 227.52(7)
• 524.05 4	0.224 10	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
• 524.05 6		¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
524.1	>0.08	⁸³ Zr(44 s)	55.55(8), 104.97(5.70), 475.1(5.1)
524.10 20	0.33 5	⁹⁹ Pd(21.4 m)	136.00(73), 263.60(15.2), 673.38(6.9)
524.1 1	0.016 5	¹⁰⁷ Ru(3.75 m)	194.05(9.9), 847.93(5.3), 462.61(3.66)
524.1 1	0.25 13	¹⁴³ Cs(1.78 s)	195.554(13), 232.421(8.32), 306.424(6.80)
524.1	10 1	¹⁴⁵ Tb(29.5 s)	257.8(39), 987.8(37), 537.0(23)
524.1 3	0.42	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
524.1 2	0.106 18	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
524.2 1	0.217 12	⁷⁹ Rb(22.9 m)	688.1(23), 182.77(19.2), 143.41(13.9)
524.2 4	0.173 13	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
524.2 3	0.08	¹⁵⁴ Pm(1.73 m)	2057.76(17.1), 1393.9(14.4), 81.99(12.6)
524.2 2	†12 2	¹⁸¹ Pt(51 s)	289.29(†100), 111.97(†100), 230.15(†92)
524.2 3	0.23 11	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
524.28 15	0.34 6	¹²⁵ Cd(0.57 s)	1027.53(25.8), 1173.16(25.1), 736.65(12.6)
524.3 2	76 5	¹¹⁶ Cs(3.84 s)	393.5(<0.09), 615.1(30.4), 622.3(10.4)
• 524.30 5	0.0097 10	¹²⁵ Sn(9.64 d)	1067.10(10), 1089.15(4.59), 822.48(4.28)
524.3	0.460 18	¹⁴¹ Ba(18.27 m)	190.328(46.0), 304.194(25.4), 276.948(23.4)
524.3 1	†29 4	¹⁸⁰ Au(8.1 s)	153.3(†100), 257.6(†26), 861.3(†22.6)
524.3 4	0.0051 9	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
• 524.3 4	†0.0093 19	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
524.31 4	0.562 15	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
524.4 12	0.08 5	⁷⁴ Kr(11.50 m)	89.65(31), 203.0(18.0), 296.67(9.9)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
• 524.4 4	0.0023 4	¹¹¹ Ag(7.45 d)	342.118(7), 245.422(1.24), 96.73(0.20)
524.4 3	0.92 10	¹¹⁸ I(13.7 m)	605.71(86.0), 545.12(10.9), 600.71(10.2)
524.4		¹³¹ La(59 m)	108.081(25.0), 417.783(18.0), 365.162(16.9)
524.4	0.9	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
524.4 3	†13.0 21	²³³ Pu(20.9 m)	235.4(†100), 534.8(†90.2), 500.3(†38.6)
524.44 11	†7.6 6	¹⁴² Xe(1.22 s)	571.83(†100), 657.05(†79), 538.24(†77)
524.45 6	0.08	⁷⁹ Ge(19.1 s)	109.58(21), 1505.85(9.2), 100.48(2.70)
524.45 6	4.4	⁷⁹ Ge(39.0 s)	230.62(61), 542.27(32.6), 755(18)
524.49 19	0.40 8	¹⁸⁴ Au(53.0 s)	162.97(50), 272.98(40), 362.47(17.5)
524.5 3	0.33 7	¹¹⁹ Ag(2.1 s)	626.4(13), 366.2(12.1), 399.1(10.9)
524.5 1	0.026 3	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)
524.5 2	0.46 4	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
524.5 3	0.066 9	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
524.5 10	0.23	²⁰⁸ At(1.63 h)	686.527(98), 660.040(89), 177.595(48.6)
524.54 15	0.168 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
524.6 2	†2.0 6	¹³² Pr(1.6 m)	325.5(†100), 496.9(†25), 822.4(†17.3)
524.6 3	0.19 7	¹⁸¹ Re(19.9 h)	365.57(56), 360.70(20), 639.30(6.4)
524.6 2	†1.48 11	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
524.6	0.035 17	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
524.65 5	1.89 20	¹⁰⁶ In(6.2 m)	632.66(100), 861.16(92), 997.87(48)
524.65 5		¹⁰⁶ In(5.2 m)	632.66(92), 1714.90(17.1), 861.16(10.6)
524.70 10	1.80 23	⁹⁴ Ru(51.8 m)	366.94(75), 891.68(25), 75.5(>0.08)
524.77 25	†16 3	¹⁶⁴ Tm(2.0 m)	91.40(†1500), 1154.66(†366), 768.91(†279)
524.8	0.6	⁸³ Zr(44 s)	55.55(8), 104.97(5.70), 475.1(5.1)
• 524.8 1	0.177 20	¹³¹ Te(30 h)	773.67(49.9), 852.21(27.0), 793.75(18.10)
524.8 4	0.012 6	¹⁴⁵ Ce(3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)
524.835 18	0.30 3	¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
524.9 2	2.3 3	¹⁰⁵ Mo(35.6 s)	85.4(25.0), 76.50(19.3), 147.8(14.8)
524.9 2	0.40 12	¹²⁴ Cs(30.8 s)	353.9(40), 914.8(4.0), 492.6(3.6)
524.9 4	1.0 1	¹⁵⁶ Pm(26.70 s)	173.75(52.0), 1147.84(20.5), 117.42(13.8)
524.90 11	0.059 13	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
524.92 4	0.073 3	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
525.0 15	0.11	⁷⁷ Rb(3.75 m)	66.52(57), 178.99(22.2), 393.37(9.7)
525		⁸² Zr(32 s)	397, 278, 248
525.0 2	0.58 7	¹⁵⁰ Tb(3.48 h)	638.05(72), 496.3(14.8), 792.5(4.39)
525.00 15	4.0 6	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
525.0 4	0.34 6	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
525.0 6	0.015 6	²¹⁴ Bi(19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
525.0 6	0.19 6	²²⁸ Pa(22 h)	911.205(4.19), 463.005(1.250), 964.770(4.25)
• 525.05 15	0.0112 13	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
525.08 20	0.27 3	²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
525.1 4	1.4 4	¹³⁷ Pm(2.4 m)	177.5(40.29), 108.6(35), 233.6(29.57)
525.1 1	0.077 12	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
• 525.14 17	0.0158 16	¹⁹³ Os(30.5 h)	139.03(4.27), 460.50(3.95), 73.039(3.2)
525.2 1	†2.85 24	¹²⁰ Cs(64 s)	322.4(†100), 473.5(†30), 553.4(†19.1)
525.20 20	1.00 14	¹²³ Cd(2.10 s)	371.32(51), 1052.28(24.8), 1438.13(8.3)
525.2 2		¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
525.3 1	†1.03 20	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
525.30 15	0.38 6	¹³⁷ Nd(38.5 m)	75.5(17.0), 580.6(13), 306.60(10.0)
• 525.35 15	0.39 8	⁷⁹ Kr(35.04 h)	261.29(13), 397.54(9.3), 606.09(8.12)
525.4 2	0.138 12	¹⁴⁷ Pr(13.4 m)	77.9921(15), 314.675(13.2), 641.380(10.0)
• 525.410 50	0.156 10	¹²⁴ Sb(60.20 d)	602.730(97.8), 1690.980(47.3), 722.786(10.76)
• 525.410 50	0.036 18	¹²⁴ I(4.18 d)	602.730(60), 1690.980(10.41), 722.786(9.98)
525.43 17	†30 6	¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†33)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
525.46 15	0.13 2	¹²⁶ In(1.60 s)	1141.11(55.9), 3344.61(21.6), 969.61(14.9)
525.46 15	0.64 10	¹²⁶ In(1.64 s)	1141.11(100), 908.58(99), 111.79(88)
525.46 25	†1.8 4	¹⁶⁵ Lu(10.74 m)	132.49(†100), 120.60(†100), 174.25(†47.0)
525.47 12	1.21 7	⁹⁹ Nb(2.6 m)	97.785(7), 253.50(3.64), 2641.3(3.64)
525.5 3	0.40 5	¹⁰⁰ Cd(49.1 s)	936.55(66), 139.71(6.7), 582.5(6.3)
525.50 21	0.068 17	¹⁰³ Tc(54.2 s)	346.380(17.5), 136.079(16.6), 562.90(7.0)
525.5 4	0.09 3	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
525.5 5	†0.40 10	¹⁶² Lu(1.37 m)	166.82(†100), 631.87(†26.6), 798.76(†16.9)
525.5 3	0.17	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
525.55 3	0.42 3	²⁰⁰ Pb(21.5 h)	147.63(37.7), 257.17(4.46), 235.63(4.30)
525.6 4	0.076 19	⁸³ Y(7.08 m)	35.50(0.44), 882.1(6.30), 489.90(5.53)
525.6 1	1.30 14	¹¹¹ Pd(5.5 h)	70.44(8.3), 391.25(5.4), 632.80(3.6)
525.6 3	0.230 23	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
525.63 14	0.28 11	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
• 525.65 4	0.105 8	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
• 525.67 6	0.124 12	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
525.7 2	0.14 6	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
• 525.75 4	0.49 3	¹⁹⁵ Hg(41.6 h)	261.75(30.9), 560.27(7), 387.87(2.15)
525.80 4	0.87 7	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
525.83 2	0.73 4	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
525.84 3	0.231 25	¹³³ Te(12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
525.851 16	8.73 17	¹³¹ La(59 m)	108.081(25.0), 417.783(18.0), 365.162(16.9)
525.9	>0.047	¹³⁶ Nd(50.65 m)	108.90(32), 40.2(18.9), 574.8(10.4)
525.9 2	17 3	¹⁴¹ Gd(14 s)	215.8(54), 336.2(17.1), 120.6(9.3)
525.9 3	0.33 4	¹⁹⁸ Tl(5.3 h)	411.8044(82), 675.8874(11), 636.4(10.1)
525.95 12	0.352 14	¹⁴⁴ Ba(11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
526.0 5	0.18 4	⁸⁸ Nb(7.8 m)	1057.01(89.3), 1082.53(53.9), 399.41(45.7)
526 1	24	¹²⁵ Cs(45 m)	111.8(9), 412(5), 712(3.5)
526.0 5		¹²⁵ La(76 s)	67.6(34), 43.6(3.5), 985.2
526.0 2	17 5	¹⁴¹ Gd(24.5 s)	351.1(89), 223.9(64), 574.9(51)
526.0 3	0.12 5	¹⁵⁰ Tb(3.48 h)	638.05(72), 496.3(14.8), 792.5(4.39)
526.0 4	1.62	¹⁵⁴ Pm(2.68 m)	184.810(32), 81.99(15.4), 546.66(14.5)
526.01 10	3.0 3	¹⁶⁶ Lu(1.41 m)	228.12(15), 102.38(13), 285.07(11.0)
526.01 15	0.44 7	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
526.02 10	†9.2 12	²³⁴ Pa(1.17 m)	1001.03(†837000), 766.38(†294000), 742.81(†80000)
• 526.02 10	0.043 5	²³⁴ Np(4.4 d)	1558.31(18.72), 1527.21(11.2), 1601.80(9.1)
• 526.09 5	0.032 3	²²⁵ Ac(10.0 d)	99.91(1.01), 150.04(0.80), 99.63(0.62)
526.1 1	†4.3 7	¹⁰³ Nb(1.5 s)	102.64(†100), 641.1(†55), 538.5(†34.0)
• 526.10 4	0.097 6	¹⁴⁵ Eu(5.93 d)	893.73(66), 653.512(15.0), 1658.53(14.9)
• 526.1 1	0.0169 19	¹⁷⁷ Ta(56.56 h)	112.9498(7.2), 208.3664(0.94), 1057.8(0.29)
526.1 2	†4.1	²⁵⁶ Es(7.6 h)	861.8(†100), 231.1(†61), 172.6(†49)
526.15 8	0.065 4	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)
526.2 1	0.0031 19	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
526.2 5	5.90 17	¹⁴² Gd(70.2 s)	750.2(11.2), 178.90(11.20), 284.4(6.16)
526.2 3	†0.18 9	¹⁵⁸ Ho(11.3 m)	218.21(†100.0), 98.91(†70), 945.7(†37)
526.2 1	†1.70 17	¹⁷¹ Ta(23.3 m)	49.6(†100), 506.4(†54), 501.8(†22.6)
• 526.2 4	0.0029 21	¹⁷² Er(49.3 h)	610.062(44.2), 407.338(42.1), 68.107(3.29)
526.22 8	0.147 11	²²⁸ Fr(39 s)	473.7(10.2), 474.0(7.6), 410.40(6.3)
526.3 1	†0.65 9	¹²³ La(17 s)	92.5(†100), 937.3(†43), 153.6(†43)
• 526.39 4	5.7×10 ⁻⁸ 19	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
526.4 2	1.3 5	¹¹⁷ Ag(5.34 s)	135.4(48), 386.8(39.9), 298.1(21.1)
526.4 1	0.0151 24	¹²⁶ Cs(1.64 m)	388.633(41), 491.243(5.0), 925.24(4.56)
526.4 7	21 4	¹³² In(0.201 s)	374.3(62), 4040.8(61), 299.2(49)
526.5 1	0.0046 3	¹⁰⁷ Cd(6.50 h)	93.124(1.45), 828.93(0.17), 796.462(0.0665)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
526.5 3	$\dagger 1.3 5$	$^{171}\text{Hf}(12.1 \text{ h})$	122.0($\dagger 100$), 662.2($\dagger 83$), 347.18($\dagger 47$)
526.5 2	0.0063	$^{233}\text{Th}(22.3 \text{ m})$	86.477(2.7), 29.374(2.5), 459.222(1.4)
526.557 14	1.58 7	$^{128}\text{I}(24.99 \text{ m})$	442.901(17), 969.458(0.404), 1140.079(0.0103)
526.557 14	2.41 3	$^{128}\text{Cs}(3.66 \text{ m})$	442.901(26.8), 1140.079(1.168), 969.458(0.630)
526.561 17		$^{135}\text{I}(6.57 \text{ h})$	1260.409(28.90), 1131.511(22.74), 1678.027(9.62)
526.57 4	45 2	$^{128}\text{Sb}(9.01 \text{ h})$	753.82(100), 743.22(100), 314.12(61)
526.6 5	0.03 3	$^{117}\text{Cd}(2.49 \text{ h})$	273.349(28), 1303.27(18.4), 344.459(17.9)
• 526.642 3	0.861 8	$^{71}\text{As}(65.28 \text{ h})$	174.954(82.00), 1095.490(4.08), 499.876(3.624)
526.69 32	0.117 23	$^{103}\text{Cd}(7.3 \text{ m})$	1461.81(12), 1448.70(5.55), 1079.90(5.44)
526.7 2	1.25 16	$^{121}\text{Cs}(122 \text{ s})$	179.4(30.2), 196.0(24.1), 459.7(12.0)
526.7 4	0.29	$^{154}\text{Pm}(2.68 \text{ m})$	184.810(32), 81.99(15.4), 546.66(14.5)
526.7 3	$\dagger 1.3 4$	$^{191}\text{Tl}(5.22 \text{ m})$	452.6($\dagger 100$), 470.1($\dagger 98$), 391.6($\dagger 96$)
526.7 3	0.028 9	$^{195}\text{Ir}(3.8 \text{ h})$	98.85(10), 684.88(9.4), 432.86(9)
526.7 2	0.31 3	$^{236}\text{Pa}(9.1 \text{ m})$	642.35(37.0), 687.59(9.9), 1762.7(6.0)
526.72 8	0.079 13	$^{100}\text{Sr}(202 \text{ ms})$	963.85(22.0), 898.50(18.9), 65.46(15.2)
526.77 6	0.44 5	$^{201}\text{Au}(26 \text{ m})$	542.6(1.2), 517.0(0.83), 613.2(0.77)
• 526.80 6	0.013 8	$^{156}\text{Tb}(5.35 \text{ d})$	534.318(66.6), 199.2132(40.9), 1222.36(31.00)
526.8 5	0.20 6	$^{209}\text{Rn}(28.5 \text{ m})$	408.32(50.3), 745.78(22.8), 337.45(14.5)
526.8 2	$\dagger 6.3 12$	$^{229}\text{Ac}(62.7 \text{ m})$	164.522($\dagger 100$), 569.1($\dagger 91$), 261.92($\dagger 39$)
526.83 15	0.067 6	$^{146}\text{Ce}(13.52 \text{ m})$	316.74(56), 218.23(20.8), 264.56(9.0)
• 526.886 20	0.0131 6	$^{152}\text{Eu}(13.542 \text{ y})$	344.281(26.58), 778.91(12.96), 411.115(2.231)
526.886 20	$\dagger 6.2 5$	$^{152}\text{Tb}(17.5 \text{ h})$	344.281($\dagger 1500$), 586.294($\dagger 223$), 271.135($\dagger 203$)
526.886 20	1.70 12	$^{152}\text{Tb}(4.2 \text{ m})$	344.281(20.8), 411.115(18.8), 471.9(12.2)
526.9 3	0.077 14	$^{187}\text{Au}(8.4 \text{ m})$	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
526.95 11		$^{223}\text{Rn}(23.2 \text{ m})$	591.8($\dagger 100$), 635.2($\dagger 76$), 416.0($\dagger 55$)
527.0 5	0.14 6	$^{117}\text{Cd}(2.49 \text{ h})$	273.349(28), 1303.27(18.4), 344.459(17.9)
527.0 8	$\dagger 2.3 9$	$^{160}\text{Tm}(9.4 \text{ m})$	125.8($\dagger 100$), 728.5($\dagger 37$), 264.1($\dagger 27$)
527.0	0.45	$^{199}\text{Po}(4.13 \text{ m})$	1002.19(19), 1034.3(16), 362.01(7)
527.1 3	0.27 7	$^{163}\text{Tb}(19.5 \text{ m})$	351.138(26), 389.734(24.3), 494.534(23)
527.1 2	$\dagger 1.59 11$	$^{185}\text{Hg}(21.6 \text{ s})$	222.8($\dagger 100.0$), 258.7($\dagger 98$), 212.5($\dagger 58$)
• 527.106 12	0.944 21	$^{165}\text{Tm}(30.06 \text{ h})$	242.917(35.5), 47.155(16.9), 297.369(12.71)
527.17 6	0.50 4	$^{153}\text{Dy}(6.4 \text{ h})$	80.723(11.10), 213.754(10.90), 99.659(10.51)
527.18 5	$\dagger 24$	$^{197}\text{Ir}(5.8 \text{ m})$	469.72($\dagger 100$), 430.56($\dagger 61$), 815.92($\dagger 45$)
527.2 2	0.39 7	$^{104}\text{Tc}(18.3 \text{ m})$	358.0(89), 530.5(15.6), 535.1(14.7)
• 527.20 7	0.10 1	$^{105}\text{Ag}(41.29 \text{ d})$	344.520(41), 280.41(30.2), 644.55(11.1)
527.2 4	1.4 3	$^{185}\text{Au}(4.25 \text{ m})$	310.6(13), 243.1(6.6), 77.7(6)
527.27 7	2.9 3	$^{206}\text{At}(30.0 \text{ m})$	700.66(98), 477.10(86), 395.54(48)
527.3 1	0.11 1	$^{143}\text{La}(14.2 \text{ m})$	620.3(2.34), 643.75(1.55), 621.4(1.52)
527.3 4	$\dagger 3.8$	$^{154}\text{Nd}(25.9 \text{ s})$	151.703($\dagger 800$), 799.55($\dagger 600$), 180.693($\dagger 510$)
527.4 1	3.40 13	$^{143}\text{Cs}(1.78 \text{ s})$	195.554(13), 232.421(8.32), 306.424(6.80)
527.4 1	63	$^{151}\text{Ho}(35.2 \text{ s})$	775.53(9.2), 209.5(5.69), 1549.7(4.6)
527.4 6	$\dagger 95$	$^{157}\text{Ho}(12.6 \text{ m})$	279.97($\dagger 47600$), 341.16($\dagger 37000$), 193.41($\dagger 15200$)
527.4 3	$\dagger 24 3$	$^{206}\text{Rn}(5.67 \text{ m})$	497.7($\dagger 100$), 324.5($\dagger 96$), 386.6($\dagger 61$)
527.4 2	1.14 4	$^{210}\text{At}(8.1 \text{ h})$	1181.39(99.3), 245.31(79), 1483.39(46.5)
527.454 15	0.0805 25	$^{133}\text{La}(3.912 \text{ h})$	278.835(2.50), 302.353(1.648), 290.06(1.413)
527.5 4	$\dagger 1.07 20$	$^{155}\text{Tm}(21.6 \text{ s})$	226.8($\dagger 100$), 531.7($\dagger 20$), 88.1($\dagger 17$)
527.50 30	0.020 4	$^{165}\text{Yb}(9.9 \text{ m})$	80.11(49), 68.86(9.1), 1090.28(4.4)
527.5 4		$^{185}\text{Au}(4.25 \text{ m})$	310.6(13), 243.1(6.6), 77.7(6)
527.51 10		$^{148}\text{Pr}(2.0 \text{ m})$	301.702(95), 450.58(50), 697.61(40)
527.58 10	0.0291 10	$^{166}\text{Tm}(7.70 \text{ h})$	778.817(18.9), 2052.36(17.2), 184.410(16.1)
527.6	0.46 7	$^{141}\text{Ba}(18.27 \text{ m})$	190.328(46.0), 304.194(25.4), 276.948(23.4)
527.6	0.012 3	$^{149}\text{Nd}(1.728 \text{ h})$	211.309(25.9), 114.314(19.2), 270.166(10.7)
527.6 3	0.028 9	$^{151}\text{Nd}(12.44 \text{ m})$	116.80(43.4), 255.68(16.4), 1180.89(14.8)
• 527.61 1	0.070 4	$^{223}\text{Ra}(11.435 \text{ d})$	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: $E_{\gamma}(I_{\gamma})$
527.7 2	$\dagger 100$ 3	$^{139}\text{I}(2.29 \text{ s})$	571.2($\dagger 98$), 536.6($\dagger 67$), 656.0($\dagger 58$)
527.7 2	0.076 11	$^{194}\text{Pb}(12.0 \text{ m})$	581.82(18.8), 1519.45(16.4), 203.82(16.2)
527.8	2.5	$^{80}\text{Zn}(0.545 \text{ s})$	712.53(45.1), 715.40(33.8), 964.93(15.6)
527.8 1	0.68 9	$^{157}\text{Er}(18.65 \text{ m})$	53.05(24), 391.32(14.2), 121.57(10.1)
527.85 5	8.3 11	$^{97}\text{Rh}(46.2 \text{ m})$	189.21(49), 2245.6(14), 421.55(12.7)
527.88 6	0.72 10	$^{204}\text{At}(9.2 \text{ m})$	684.341(95), 516.318(90), 426.253(67.5)
• 527.900 10	27.45 18	$^{115}\text{Cd}(53.46 \text{ h})$	336.240(45.9), 492.3(8.03), 260.890(1.94)
527.9 1	0.39 3	$^{234}\text{Pa}(6.70 \text{ h})$	131.30(18), 946.00(13.4), 883.24(9.6)
527.92 30	0.075	$^{137}\text{I}(24.5 \text{ s})$	1218.00(12.8), 601.05(4.80), 1302.64(4.42)
528.0 2	0.390 24	$^{161}\text{Er}(3.21 \text{ h})$	826.6(3.0), 211.15(12.2), 592.6(3.7)
528 1	0.0040 20	$^{214}\text{Bi}(19.9 \text{ m})$	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
528.022 17	1.27 8	$^{158}\text{Eu}(45.9 \text{ m})$	944.09(25), 977.131(13.6), 79.5104(11)
528.038 3	0.90 16	$^{231}\text{Ac}(7.5 \text{ m})$	282.471(39.0), 307.063(30.4), 221.399(16.8)
528.05 28	1.40 22	$^{99}\text{Rh}(4.7 \text{ h})$	340.71(70), 617.8(12.0), 1261.2(11)
528.17 30	0.094 18	$^{167}\text{Lu}(51.5 \text{ m})$	29.66(14.4), 239.22(8.6), 213.19(3.6)
528.18 14	0.153 20	$^{163}\text{Tm}(1.810 \text{ h})$	104.320(18.6), 69.229(11.6), 241.305(10.9)
528.2 5	1.17 20	$^{97}\text{Sr}(426 \text{ ms})$	1905.0(25), 953.8(21.4), 652.2(11.4)
528.20 10	0.042 14	$^{139}\text{Cs}(9.27 \text{ m})$	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
• 528.24 7	33	$^{99}\text{Rh}(16.1 \text{ d})$	353.05(30.0), 89.65(29.0), 322.41(5.4)
528.24 2	9.1 2	$^{100}\text{Nb}(1.5 \text{ s})$	535.60(45.7), 159.547(8.8), 1022.5(4.9)
528.24 2	8.7 16	$^{100}\text{Nb}(2.99 \text{ s})$	535.60(97.0), 600.5(65.0), 1280.6(23.8)
528.25 5	3.92 6	$^{140}\text{Cs}(63.7 \text{ s})$	602.345(71.1), 908.25(11.6), 1200.25(6.39)
• 528.260 14	0.126 7	$^{172}\text{Tm}(63.6 \text{ h})$	78.7435(6.5), 1093.657(6.0), 1387.093(5.6)
• 528.260 14	4.04 8	$^{172}\text{Lu}(6.70 \text{ d})$	1093.657(62.5), 900.724(29.8), 181.528(20.6)
528.28 6	0.99 11	$^{184}\text{Ta}(8.7 \text{ h})$	414.03(72), 252.848(43), 920.932(32.0)
528.3 5	0.079 25	$^{136}\text{Nd}(50.65 \text{ m})$	108.90(32), 40.2(18.9), 574.8(10.4)
528.35 3	0.125 8	$^{135}\text{Ce}(17.7 \text{ h})$	265.56(41.8), 300.07(23.5), 606.76(18.8)
528.38 2	1.723 20	$^{145}\text{Cs}(0.594 \text{ s})$	175.36(20), 198.93(10.9), 112.46(10.71)
528.4 3	0.135 10	$^{118}\text{I}(13.7 \text{ m})$	605.71(86.0), 545.12(10.9), 600.71(10.2)
528.4 3		$^{118}\text{I}(8.5 \text{ m})$	605.71(99), 600.71(92), 614.42(65)
528.40 16	0.24 5	$^{151}\text{Dy}(17.9 \text{ m})$	386.10(19.4), 49.46(18.0), 546.31(14.3)
528.5 4	1.9 5	$^{116}\text{Cs}(3.84 \text{ s})$	393.5(<0.09), 524.3(76), 615.1(30.4)
528.5 7	0.12 8	$^{127}\text{Sn}(2.10 \text{ h})$	1114.3(39), 1095.6(20), 823.1(10.9)
528.5 2	$\dagger 0.86$ 9	$^{129}\text{Ba}(2.17 \text{ h})$	182.30($\dagger 100$), 1459.1($\dagger 50.0$), 202.38($\dagger 33.7$)
528.5 2	2.38 3	$^{177}\text{W}(135 \text{ m})$	115.65(50), 426.98(13.2), 1036.4(10.3)
528.5 2	0.25 4	$^{183}\text{Au}(42.0 \text{ s})$	161.18(9.4), 214.13(5.9), 313.08(5.0)
• 528.572 10	0.000175 7	$^{169}\text{Yb}(32.026 \text{ d})$	63.12077(44.2), 197.95788(35.8), 177.21402(22.16)
• 528.587 10	0.00012 3	$^{149}\text{Pm}(53.08 \text{ h})$	285.95(3.1), 859.46(0.109), 590.88(0.069)
• 528.587 10	0.508 12	$^{149}\text{Eu}(93.1 \text{ d})$	327.526(4.03), 277.089(3.56), 22.510(2.32)
528.6 3	0.046 19	$^{71}\text{Zn}(3.96 \text{ h})$	386.28(93), 487.38(62), 620.18(57)
528.68 14	0.43 5	$^{197}\text{Pb}(43 \text{ m})$	385.85(74), 387.72(25.1), 222.45(24.6)
528.69 7	0.0148 15	$^{246}\text{Am}(25.0 \text{ m})$	1078.86(27.7), 798.80(25), 1062.04(17.1)
• 528.7 1	0.0541 11	$^{99}\text{Mo}(65.94 \text{ h})$	739.50(12.1), 181.063(6.08), 140.511(4.52)
528.73 9	0.087 9	$^{119}\text{I}(19.1 \text{ m})$	257.52(87), 635.86(2.69), 320.53(2.17)
• 528.76 10	1.62 18	$^{194}\text{Au}(38.02 \text{ h})$	328.455(60), 293.545(10.2), 1468.91(6.3)
528.83 3	>0.2	$^{118}\text{In}(4.45 \text{ m})$	1229.68(96), 1050.69(81.0), 683.08(54.3)
528.83 3	0.7 1	$^{118}\text{In}(5.0 \text{ s})$	1229.68(5.0), 1173.59(0.43), 813.22(0.19)
528.83 3	0.472 22	$^{118}\text{Sb}(3.6 \text{ m})$	1229.68(2.5), 1267.23(0.511), 827.30(0.395)
528.9 1	1.98 20	$^{100}\text{Ag}(2.01 \text{ m})$	665.54(99), 750.67(78), 773.20(24.2)
528.9 3	0.52 10	$^{119}\text{Ag}(2.1 \text{ s})$	626.4(13), 366.2(12.1), 399.1(10.9)
528.9 5	0.23	$^{154}\text{Pm}(2.68 \text{ m})$	184.810(32), 81.99(15.4), 546.66(14.5)
528.90 13	0.71 4	$^{205}\text{At}(26.2 \text{ m})$	719.30(31), 669.41(8.6), 628.88(5.6)
528.96 5	1.39 4	$^{123}\text{I}(13.27 \text{ h})$	158.97(83), 440.02(0.428), 538.54(0.382)
529.0 5	0.09 3	$^{117}\text{Cs}(8.4 \text{ s})$	204.8(15.0), 29.7(9.9), 205.6(6.8)

• $t_{1/2} > 1 \text{ d}$

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
529.0 2	$\dagger 2.1 4$	$^{169}\text{Ta}(4.9 \text{ m})$	511.0($\dagger 20.6$), 28.80($\dagger 18.3$), 192.4($\dagger 8$)
529.0 2	0.14 6	$^{190}\text{Tl}(2.6 \text{ m})$	416.4(79), 625.4(11.1), 683.5(8.7)
529.08 17	0.014 5	$^{176}\text{Ta}(8.09 \text{ h})$	1159.28(25), 88.34(12), 1224.93(6)
529.09 6	2.12 20	$^{132}\text{Sn}(39.7 \text{ s})$	340.53(49), 85.58(48.2), 899.04(44.8)
529.1 1	0.70 7	$^{107}\text{Tc}(21.2 \text{ s})$	102.70(21.0), 177.00(9.2), 106.31(7.6)
529.1 4	1.39 19	$^{121}\text{Xe}(40.1 \text{ m})$	252.7(13), 132.8(10.9), 445.2(7.7)
529.1 3	0.09 3	$^{234}\text{Pa}(6.70 \text{ h})$	131.30(18), 946.00(13.4), 883.24(9.6)
529.1 3		$^{234}\text{Pa}(6.70 \text{ h})$	131.30(18), 946.00(13.4), 883.24(9.6)
• 529.1 7	0.053 8	$^{252}\text{Es}(471.7 \text{ d})$	52.33(0.55), 64.42(0.274), 418.5(0.220)
529.169 22	0.376 9	$^{61}\text{Cu}(3.333 \text{ h})$	282.956(12.2), 656.008(10.77), 67.412(4.23)
• 529.17 20	$\dagger 4.6 \times 10^3$	$^{241}\text{Am}(432.2 \text{ y})$	59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$)
529.2 4	2.48 4	$^{137}\text{Pm}(2.4 \text{ m})$	177.5(40.29), 108.6(35), 233.6(29.57)
• 529.2 10	0.042 21	$^{147}\text{Gd}(38.06 \text{ h})$	229.32(63), 396.00(34.3), 929.01(20.2)
529.26 5	14.9 15	$^{237}\text{Pa}(8.7 \text{ m})$	853.6(34), 865.1(15.5), 540.61(9.3)
529.3 2	0.00036 18	$^{137}\text{Ce}(9.0 \text{ h})$	447.15(1.8), 10.6(0.8), 436.59(0.265)
529.4 3	1.38 14	$^{120}\text{Xe}(40 \text{ m})$	25.1(30), 72.6(9), 178.1(6.8)
529.4 2	0.22 13	$^{133}\text{Sb}(2.5 \text{ m})$	1096.22(43.0), 817.8(18.5), 2755(12.5)
529.4 6	0.05 5	$^{142}\text{La}(91.1 \text{ m})$	641.285(47), 2397.8(13.3), 2542.7(10.00)
529.4 3	0.087 25	$^{155}\text{Ho}(48 \text{ m})$	240.19(12.5), 136.30(5.00), 45.38(5)
529.5 3	$\dagger 0.8$	$^{111}\text{Rh}(11 \text{ s})$	275.4($\dagger 100.0$), 411.8($\dagger 9.42$), 230.0($\dagger 8.9$)
529.50 2	1.26 7	$^{161}\text{Gd}(3.66 \text{ m})$	360.94(0.59), 314.92(22.7), 102.315(13.9)
529.50 13	0.0070 8	$^{249}\text{Cm}(64.15 \text{ m})$	634.31(1.5), 560.45(0.84), 368.76(0.35)
529.59 5	0.49 3	$^{93}\text{Kr}(1.286 \text{ s})$	253.42(41.2), 323.89(24.1), 266.83(20.6)
529.60 15	1.3 2	$^{87}\text{Br}(55.60 \text{ s})$	1419.71(22.0), 1476.04(7.9), 1577.60(6.0)
529.6 4	0.20 7	$^{153}\text{Ho}(2.0 \text{ m})$	295.8(67), 637.0(5.36), 688.5(3.7)
529.6 1	$\dagger 34 6$	$^{189}\text{Au}(28.7 \text{ m})$	713.17($\dagger 100$), 812.68($\dagger 63$), 447.65($\dagger 55$)
529.635 9	1.200 17	$^{83}\text{Br}(2.40 \text{ h})$	520.39(0.0576), 552.63(0.0200), 648.9(0.0124)
• 529.635 9	29.3 13	$^{83}\text{Rb}(86.2 \text{ d})$	520.39(44.7), 552.63(16.0), 790.0(0.657)
529.66 20	0.67 9	$^{125}\text{Cd}(0.57 \text{ s})$	1027.53(25.8), 1173.16(25.1), 736.65(12.6)
529.7 6	$\dagger 0.17 11$	$^{188}\text{Au}(8.84 \text{ m})$	265.63($\dagger 100$), 340.04($\dagger 23.9$), 605.5($\dagger 16.3$)
529.7 4	0.038 9	$^{193}\text{Au}(17.65 \text{ h})$	186.17(10.1), 255.57(6.7), 268.22(3.9)
529.72 5	0.41 6	$^{202}\text{Bi}(1.72 \text{ h})$	960.67(99), 422.18(83.7), 657.49(60.6)
529.75 7	0.33 4	$^{163}\text{Tm}(1.810 \text{ h})$	104.320(18.6), 69.229(11.6), 241.305(10.9)
529.79 3	3.43 22	$^{207}\text{At}(1.80 \text{ h})$	814.41(44.5), 588.33(19.2), 300.654(12.8)
• 529.793 8	0.0118 20	$^{155}\text{Tb}(5.32 \text{ d})$	86.545(32.0), 105.305(25), 180.103(7.45)
529.8 2	0.45 12	$^{173}\text{Ta}(3.14 \text{ h})$	172.2(18), 69.70(5.9), 90.3(5.0)
529.8 7	0.84 14	$^{201}\text{Bi}(108 \text{ m})$	629.1(24.0), 936.2(11.3), 1014.1(10.7)
• 529.801 18	9.69 7	$^{166}\text{Ho}(1.20 \times 10^3 \text{ y})$	184.410(72.6), 810.276(58.08), 711.683(55.32)
529.801 18	0.179 4	$^{166}\text{Tm}(7.70 \text{ h})$	778.817(18.9), 2052.36(17.2), 184.410(16.1)
529.872 11	87.0 17	$^{133}\text{I}(20.8 \text{ h})$	875.329(4.51), 1298.223(2.35), 510.530(1.83)
529.88 14	0.65 9	$^{187}\text{Pt}(2.35 \text{ h})$	106.46(9), 201.52(6.4), 110.04(5.7)
529.9 2	0.08 3	$^{66}\text{Ge}(2.26 \text{ h})$	43.89(28.7), 381.85(28), 272.97(10.4)
529.9 2	0.7 3	$^{117}\text{Ag}(5.34 \text{ s})$	135.4(48), 386.8(39.9), 298.1(21.1)
529.9 2	1.27 14	$^{117}\text{Ag}(72.8 \text{ s})$	135.4(23), 337.7(10.3), 157.1(7.9)
• 529.9 1	0.007 3	$^{225}\text{Ac}(10.0 \text{ d})$	99.91(1.01), 150.04(0.80), 99.63(0.62)
530.0 1	9.0 4	$^{96}\text{Sr}(1.07 \text{ s})$	122.297(76.50), 809.401(71.9), 931.7(11.8)
530 1	23.1 9	$^{97}\text{Y}(1.17 \text{ s})$	1103.0(92.6), 161.4(71.8), 1091(56)
• 530		$^{153}\text{Sm}(46.27 \text{ h})$	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
530		$^{219}\text{Fr}(20 \text{ ms})$	493, 352, 189
530.0 5	0.030 20	$^{223}\text{Ac}(2.10 \text{ m})$	98.58(0.891), 191.3(0.58), 83.55(0.57)
530.0 3	1.62 12	$^{251}\text{Cm}(16.8 \text{ m})$	542.7(10.9), 389.7(1.28), 438.2(1.24)
530.07 7	0.252 13	$^{138}\text{Xe}(14.08 \text{ m})$	258.411(31.5), 434.562(20.3), 1768.26(16.7)
• 530.08 4	0.058 3	$^{189}\text{Re}(24.3 \text{ h})$	216.663(5.50), 219.395(4.54), 245.09(3.5)
530.1 1	0.19 4	$^{94}\text{Sr}(75.3 \text{ s})$	1427.7(94), 723.8(2.40), 703.9(2.13)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
530.1 4	0.53 6	$^{109}\text{In}(4.2 \text{ h})$	203.5(74), 623.7(5.5), 1148.9(4.3)
530.10 17	0.52 10	$^{122}\text{In}(10.3 \text{ s})$	1140.55(98), 1001.58(50.7), 1190.58(20.5)
530.1 2	0.35 3	$^{139}\text{Pm}(4.15 \text{ m})$	402.8(15), 463.1(4.1), 367.8(3.52)
530.1 3	0.066 19	$^{195}\text{Ir}(3.8 \text{ h})$	98.85(10), 684.88(9.4), 432.86(9)
530.1 3	$\dagger 11.1 4$	$^{201}\text{Po}(15.3 \text{ m})$	890.1($\dagger 100$), 240.1($\dagger 71.0$), 904.2($\dagger 54.8$)
530.15 8	0.0159 7	$^{194}\text{Ir}(19.15 \text{ h})$	328.455(13.1), 293.545(2.55), 645.157(1.17)
• 530.15 8	0.60 6	$^{194}\text{Au}(38.02 \text{ h})$	328.455(60), 293.545(10.2), 1468.91(6.3)
530.18 11	0.18	$^{53}\text{V}(1.61 \text{ m})$	1006.14(90), 1289.59(10), 283.14(0.8)
530.2 2	0.17 5	$^{173}\text{Ta}(3.14 \text{ h})$	172.2(18), 69.70(5.9), 90.3(5.0)
530.22 4	4.49 22	$^{81}\text{Ga}(1.221 \text{ s})$	216.47(37.4), 828.26(22.1), 711.18(17.6)
530.22 4	$\dagger 14 5$	$^{82}\text{Ga}(0.602 \text{ s})$	711.18($\dagger 100$), 216.47($\dagger 41$)
530.24 20	$\dagger 0.21 2$	$^{184}\text{Ir}(3.09 \text{ h})$	263.97($\dagger 100$), 119.80($\dagger 45$), 390.38($\dagger 38$)
530.3 4	0.098 21	$^{187}\text{Au}(8.4 \text{ m})$	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
• 530.34 8	0.047 23	$^{169}\text{Lu}(34.06 \text{ h})$	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
530.4 1	$\dagger 3.9 4$	$^{171}\text{Ta}(23.3 \text{ m})$	49.6($\dagger 100$), 506.4($\dagger 54$), 501.8($\dagger 22.6$)
530.42 14	0.12 4	$^{98}\text{Nb}(51.3 \text{ m})$	787.374(93), 722.645(73.8), 1168.830(17.8)
• 530.45 8	0.102 12	$^{153}\text{Tb}(2.34 \text{ d})$	212.038(31.0), 170.504(6.8), 109.758(6.4)
530.47 6	0.232 19	$^{189}\text{Pt}(10.87 \text{ h})$	721.41(9.3), 94.33(7.6), 568.84(7.1)
530.5 8	0.19 6	$^{74}\text{Kr}(11.50 \text{ m})$	89.65(31), 203.0(18.0), 296.67(9.9)
530.5 1	15.6 11	$^{104}\text{Tc}(18.3 \text{ m})$	358.0(89), 535.1(14.7), 884.4(10.9)
530.5 1	0.25 7	$^{107}\text{Tc}(21.2 \text{ s})$	102.70(21.0), 177.00(9.2), 106.31(7.6)
530.5 3	1.00 20	$^{118}\text{Cs}(14 \text{ s})$	337.4(100), 472.8(37.4), 586.6(15.4)
• 530.50 10	0.094 5	$^{170}\text{Lu}(2.00 \text{ d})$	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
530.5 5	$\dagger 0.63 25$	$^{171}\text{Hf}(12.1 \text{ h})$	122.0($\dagger 100$), 662.2($\dagger 83$), 347.18($\dagger 47$)
530.5 1	$\dagger 1.2 2$	$^{172}\text{Ir}(2.0 \text{ s})$	227.8($\dagger 100.0$), 378.4($\dagger 62.0$), 448.4($\dagger 40.5$)
530.5 3	>0.20	$^{184}\text{Au}(53.0 \text{ s})$	162.97(50), 272.98(40), 362.47(17.5)
530.5 2	0.0012	$^{239}\text{U}(23.45 \text{ m})$	74.664(48), 43.533(4.14), 662.24(0.18)
530.59 25	0.85 17	$^{149}\text{Pr}(2.26 \text{ m})$	138.447(11.0), 165.087(9.9), 108.520(9.5)
• 530.6 5	0.095 9	$^{47}\text{Ca}(4.536 \text{ d})$	1297.09(74), 489.23(6.5), 807.86(6.5)
530.6 7	0.12 8	$^{127}\text{Sn}(2.10 \text{ h})$	1114.3(39), 1095.6(20), 823.1(10.9)
530.6 1	0.35 3	$^{146}\text{Ba}(2.22 \text{ s})$	140.7(20.2), 251.2(19.6), 121.2(14.2)
530.6 2	0.43 4	$^{190}\text{Au}(42.8 \text{ m})$	295.78(71.0), 301.82(23.4), 597.67(9.4)
530.6 2	0.21 10	$^{242}\text{U}(16.8 \text{ m})$	67.60(9.6), 55.58(3.90), 585.0(1.92)
530.6 3	0.034 17	$^{245}\text{Pu}(10.5 \text{ h})$	327.428(25.4), 560.13(5.4), 308.222(4.9)
530.65 15	0.0011 4	$^{45}\text{Ti}(184.8 \text{ m})$	720.22(0.154), 1408.6(0.085), 1662.4(0.041)
530.7 1	0.128 15	$^{109}\text{Ru}(34.5 \text{ s})$	206.29(22.0), 225.98(19.6), 1929.05(13.7)
• 530.7 1	0.137 25	$^{131}\text{Te}(30 \text{ h})$	773.67(49.9), 852.21(27.0), 793.75(18.10)
530.7	0.20	$^{133}\text{Pr}(6.5 \text{ m})$	134.3(14), 74.0(10), 315.6(10)
530.7 1	29 3	$^{140}\text{Eu}(1.51 \text{ s})$	1068.0(3.2), 459.9(3.19), 2064.9(0.93)
530.75 17	0.52 11	$^{48}\text{Mn}(158.1 \text{ ms})$	752.15(99.7), 1106.25(39.2), 3676.2(30.4)
530.8 4	0.032 14	$^{135}\text{I}(6.57 \text{ h})$	1260.409(28.90), 1131.511(22.74), 1678.027(9.62)
530.86 21	0.51 8	$^{103}\text{Cd}(7.3 \text{ m})$	1461.81(12), 1448.70(5.55), 1079.90(5.44)
530.9 2	2.5 3	$^{141}\text{Tb}(3.5 \text{ s})$	293.3(16.8), 343.6(16.3), 198.4(14.8)
530.94 8	0.075 5	$^{105}\text{Cd}(55.5 \text{ m})$	961.84(4.69), 346.870(4.20), 1302.459(3.98)
531.0 4	0.75 25	$^{97}\text{Sr}(426 \text{ ms})$	1905.0(25), 953.8(21.4), 652.2(11.4)
531.0 2	1.3 4	$^{102}\text{Cd}(5.5 \text{ m})$	481.0(63), 1036.6(12.8), 505.1(9.6)
531.00 15	0.77 13	$^{137}\text{Nd}(38.5 \text{ m})$	75.5(17.0), 580.6(13), 306.60(10.0)
531 1		$^{181}\text{Au}(11.4 \text{ s})$	198.60(4.4), 2022.4(4.2), 79.40(4.2)
• 531.016 22	13.1 7	$^{147}\text{Nd}(10.98 \text{ d})$	91.105(28), 319.411(1.95), 439.895(1.20)
531.1 1	0.93 12	$^{119}\text{Ag}(2.1 \text{ s})$	626.4(13), 366.2(12.1), 399.1(10.9)
• 531.16 11	0.0027 3	$^{97}\text{Ru}(2.9 \text{ d})$	215.718(86), 324.48(10.79), 569.31(0.873)
531.2 2	6.0 4	$^{69}\text{Cu}(2.85 \text{ m})$	1007.5(23.4), 834.4(13.1), 1429.8(3.42)
531.2 5	1.8 5	$^{110}\text{Rh}(28.5 \text{ s})$	373.80(91), 546.90(42.4), 687.70(25.8)
531.2 2	0.12 5	$^{129}\text{La}(11.6 \text{ m})$	278.6(25), 110.5(16.9), 457.0(8.0)

• $t_{1/2} > 1 \text{ d}$

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
531.2 3	†37 4	¹³⁷ Sm(45 s)	380.5(†100), 163.7(†85), 408.3(†40)
• 531.243 26	0.132 5	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
531.3	0.13	⁴⁴ Ar(11.87 m)	182.6(66), 1703.4(57), 1886.0(31)
531.3 3	0.0464 11	⁷⁷ Ge(11.30 h)	264.44(54), 211.03(30.8), 215.50(28.6)
531.3 5	0.09	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
• 531.3 1	0.0044 11	²²⁵ Ac(10.0 d)	99.91(1.01), 150.04(0.80), 99.63(0.62)
531.33 18	0.43 5	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
• 531.38 15	0.067 6	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
531.419 22	0.39 4	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
531.42 8	1.02 5	¹⁰¹ Tc(14.22 m)	306.85(88), 545.06(6.0), 127.23(2.86)
531.54 4	>0.017	¹⁶⁷ Ho(3.1 h)	346.547(56), 321.336(23.5), 237.873(5.0)
• 531.54 4	1.6	¹⁶⁷ Tm(9.25 d)	207.801(41), 57.0723(4.6), 264.9(>0.07)
531.6 2	0.14	¹⁴² La(91.1 m)	641.285(47), 2397.8(13.3), 2542.7(10.00)
531.6 5	†1.9 4	¹⁹⁸ Tl(1.87 h)	636.4(†202), 411.8044(†202), 587.2(†185)
• 531.61 6	0.00149 12	¹⁴⁹ Pm(53.08 h)	285.95(3.1), 859.46(0.109), 590.88(0.069)
531.65 10	0.350 12	²⁰⁷ Po(5.80 h)	992.33(59.3), 742.64(28.2), 911.79(16.95)
531.7 4	0.89 9	¹²⁸ La(5.0 m)	284.00(87), 479.24(54), 643.65(14.7)
531.7 2	†20 5	¹⁵⁵ Tm(21.6 s)	226.8(†100), 88.1(†17), 1057.2(†13)
531.7 1	†4.3 4	¹⁷² Ir(2.0 s)	227.8(†100.0), 378.4(†62.0), 448.4(†40.5)
• 531.72 35	0.0009 4	¹⁹⁵ Hg(41.6 h)	261.75(30.9), 560.27(7), 387.87(2.15)
531.75 6	3.01 24	⁹⁹ Sr(0.269 s)	125.118(16.1), 536.12(14.0), 1198.12(9.2)
531.8 2	0.28 8	¹⁰⁵ Mo(35.6 s)	85.4(25.0), 76.50(19.3), 147.8(14.8)
531.8 4	0.0042	²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
531.83 5	0.088 3	¹²⁹ Te(69.6 m)	27.81(16.3), 459.60(7.70), 487.39(1.42)
531.86 5	8.75 17	¹⁰³ Ag(65.7 m)	118.72(31.2), 148.193(28.3), 266.86(13.3)
531.9 2	†15.1 4	²⁰³ At(7.4 m)	639.4(†100), 641.5(†55.8), 738.1(†38.4)
531.97 6	0.135 10	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
531.97 3	0.79 7	²⁰⁸ Rn(24.35 m)	426.78(7.07), 251.05(5.02), 350.026(3.34)
531.98 4	0.247 13	¹³⁹ Cs(9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
• 531.99 6	0.083 6	¹⁹³ Os(30.5 h)	139.03(4.27), 460.50(3.95), 73.039(3.2)
532.0 3	0.32 5	¹⁰¹ Ag(11.1 m)	261.0(53), 588.0(10.0), 667.3(9.8)
532.0 1	2.0 5	¹³⁵ Nd(12.4 m)	204.02(52), 41.43(23), 441.2(14.9)
532.0 4	6 4	¹⁴⁰ Gd(15.8 s)	174.8(76), 749.9(70), 379.0(38)
• 532 1	0.019 10	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
532.0 5	2.8 3	²¹² Fr(20.0 m)	1273.8(46), 227.72(43), 1185.6(14.1)
532.03 7	5.4 4	⁸⁷ Br(55.60 s)	1419.71(22.0), 1476.04(7.9), 1577.60(6.0)
532.03 7	0.26 2	⁸⁸ Br(16.5 s)	
532.08 4	6.07 25	¹²¹ I(2.12 h)	212.189(84), 598.74(1.47), 475.28(1.02)
532.1 3	2.35 25	⁹⁴ Tc(293 m)	871.082(100), 702.626(99.6), 849.74(95.7)
532.1 4	0.56 4	¹⁰³ Cd(7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
532.1 7	0.050 12	¹²⁷ Ba(12.7 m)	180.8(12), 114.8(9.3), 66.06(2.12)
• 532.129 8	0.045 6	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
532.13 10	1.17 11	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
532.2 4	3.8	⁵¹ Ca(10.0 s)	861.6(35), 1394.0(27), 1167.5(23)
532.20 20	0.32 7	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
532.2 1	†58 4	¹⁷¹ Ho(53 s)	903.3(†100), 198.6(†88), 279.2(†60)
532.28 4	0.44 7	²⁰² Bi(1.72 h)	960.67(99), 422.18(83.7), 657.49(60.6)
532.3 5	0.239 23	⁸¹ Rb(4.576 h)	190.38(64.0), 446.15(23.2), 510.31(5.3)
532.3 5	0.14 3	¹¹⁷ Cs(8.4 s)	204.8(15.0), 29.7(9.9), 205.6(6.8)
532.3 8	0.027 14	¹⁵⁰ Pm(2.68 h)	333.971(68), 1324.51(17.5), 1165.739(15.8)
532.40 18	0.51 7	⁸⁹ Nb(1.9 h)	1627.20(3.4), 1833.46(3.16), 3092.7(3.0)
532.40 5	0.88 6	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
532.4 6	†3.22 19	²⁰¹ Po(8.9 m)	967.4(†100.0), 964.3(†85), 411.9(†33.0)
532.49 10	0.18	¹³⁷ I(24.5 s)	1218.00(12.8), 601.05(4.80), 1302.64(4.42)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
532.49 4	0.0040 8	¹⁷⁹ Lu(4.59 h)	214.335(11.3), 214.930(0.46), 123.3790(0.45)
532.5 1		¹¹⁵ Pd(25 s)	342.71(8), 303.87(7), 396.56(6)
• 532.5 2	0.034 5	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
532.54 11	0.24 4	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
532.6 1	4.45 25	¹⁵² Tb(4.2 m)	344.281(20.8), 411.115(18.8), 471.9(12.2)
532.63 6	0.39 5	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
• 532.66 10	0.270 22	⁶⁹ Ge(39.05 h)	1107.01(36), 574.17(13.3), 872.14(11.9)
532.68 8	0.109 11	²²⁸ Fr(39 s)	473.7(10.2), 474.0(7.6), 410.40(6.3)
532.7 4	0.24 7	⁷⁸ Ga(5.09 s)	619.40(77), 1186.42(20.1), 567.06(18.2)
532.7 3	2.52 25	¹¹⁸ Ag(2.0 s)	487.77(57), 677.13(53), 1058.39(14.8)
532.71 14	0.6	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
532.75 7	0.002	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
532.77 6	1.35 16	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
532.8 2	2.1	¹⁴⁵ Ba(4.31 s)	96.6(17), 91.9(7), 65.9(5)
532.8 3	†7	¹⁷⁹ Os(6.5 m)	65.39(†100), 218.6(†17), 32.3(†17)
532.82 15	†4.3 4	¹⁶⁵ Lu(10.74 m)	132.49(†100), 120.60(†100), 174.25(†47.0)
532.9 2	2.76 23	¹⁰⁴ In(1.8 m)	658.0(100), 834.1(99), 878.1(29.4)
532.9 8		¹⁴⁴ Cs(1.01 s)	199.326(†100.0), 639.00(†21.2), 758.96(†20.6)
532.91 23	0.63 9	¹⁶¹ Yb(4.2 m)	78.20(34), 599.88(25.9), 631.45(13.9)
532.97 11	0.144 13	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
533.0 5	†0.6 3	¹⁷¹ Hf(12.1 h)	122.0(†100), 662.2(†83), 347.18(†47)
533.0 4	0.21 4	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
533.0	0.08	¹⁸⁵ Ir(14.4 h)	254.4(13.3), 1828.8(10), 60.0(5.7)
• 533		²³⁰ Pa(17.4 d)	951.95(1.65), 918.48(8.2), 454.95(6.27)
533.1 5	0.05 3	¹⁰³ Tc(54.2 s)	346.380(17.5), 136.079(16.6), 562.90(7.0)
533.1 1	0.17 7	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
• 533.1 2	0.0095 6	¹²⁹ Cs(32.06 h)	371.918(30.60), 411.490(22.31), 548.945(3.40)
533.1 3	†15.2 15	¹³² Pr(1.6 m)	325.5(†100), 496.9(†25), 822.4(†17.3)
533.1 3	0.063 25	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
533.10 5	9.4 9	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
533.1 8	†44	¹⁷⁸ Os(5.0 m)	968.7(†100), 1331.1(†94), 594.6(†72)
533.1 2	0.29	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
533.1 5	1.13 6	¹⁹⁹ Bi(27 m)	560.1(22.0), 424.85(22), 841.7(11)
533.1 1	0.0021 3	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
533.12 14	0.021 3	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
• 533.13 3	0.0113 18	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
• 533.14 12	0.087 9	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
533.16 15	0.067 20	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
• 533.2 2	0.0189 16	⁷¹ As(65.28 h)	174.954(82.00), 1095.490(4.08), 499.876(3.624)
533.20 4	0.091 5	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
533.21 16	†24 4	¹⁸¹ Pt(51 s)	289.29(†100), 111.97(†100), 230.15(†92)
533.23 16	0.065 22	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
533.3 1	1.294 23	⁷⁹ Rb(22.9 m)	688.1(23), 182.77(19.2), 143.41(13.9)
• 533.3 2	0.219 17	¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
533.3 5	†5.2 13	¹⁵⁵ Tm(21.6 s)	226.8(†100), 531.7(†20), 88.1(†17)
• 533.34 15	0.034 3	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
533.35 40	0.016 5	¹⁶⁵ Yb(9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
533.4 3	†5.86 22	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
533.4 4	†2.4 6	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
• 533.426 8	0.044 17	²⁰⁰ Tl(26.1 h)	367.943(87), 1205.717(29.9), 579.298(13.8)
533.5 3	0.050	¹⁷⁰ Hf(16.01 h)	164.78(33), 620.7(23), 120.17(19)
533.5 7	0.9 3	¹⁸¹ Os(105 m)	238.75(44), 826.77(20), 118.03(12.9)
533.51 11	0.400 24	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
• 533.56 6	0.085 7	²⁰⁶ Po(8.8 d)	1032.26(32.9), 511.36(24.1), 286.410(23.8)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
• 533.6 2	0.0033 16	⁷¹ As(65.28 h)	174.954(82.00), 1095.490(4.08), 499.876(3.624)
533.66 18	0.29 4	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)
533.69 8	0.19 2	²¹⁴ Pb(26.8 m)	351.921(35.8), 295.213(18.5), 241.981(7.50)
• 533.7 4	0.0014 5	¹³¹ Ba(11.50 d)	496.326(47), 123.805(28.97), 216.078(19.66)
533.7 1	0.083 19	¹⁴⁶ La(6.27 s)	258.47(64), 924.58(7.45), 702.28(6.43)
533.7 2	†0.13 5	¹⁵⁸ Ho(11.3 m)	218.21(†100.0), 98.91(†70), 945.7(†37)
533.7 4	0.050 14	¹⁶² Tm(21.70 m)	102.00(17.5), 798.68(8.4), 227.52(7)
533.8 6	0.0049 16	⁶³ Zn(38.47 m)	669.62(8), 962.06(6.5), 1412.08(0.75)
533.8 4	5.18 7	¹³⁷ Pm(2.4 m)	177.5(40.29), 108.6(35), 233.6(29.57)
533.8 5	1.27 22	¹⁷⁴ Re(2.40 m)	243.4(37), 113.0(19.8), 1002.9(5.62)
533.82 9	12.3 4	⁸⁸ Nb(7.8 m)	1057.01(89.3), 1082.53(53.9), 399.41(45.7)
533.82 17	0.06 3	¹⁸¹ Re(19.9 h)	365.57(56), 360.70(20), 639.30(6.4)
533.87 13	†6	¹⁹⁷ Ir(5.8 m)	469.72(†100), 430.56(†61), 815.92(†45)
533.9 1	0.077 3	⁹¹ Sr(9.63 h)	1024.3(33), 749.8(23.61), 652.9(8.0)
533.9 3	0.69 23	⁹⁹ Sr(0.269 s)	125.118(16.1), 536.12(14.0), 1198.12(9.2)
533.9 1	0.42 5	¹²⁹ La(11.6 m)	278.6(25), 110.5(16.9), 457.0(8.0)
533.9 2	0.15	¹⁴⁰ Sm(14.82 m)	225.5(>10), 225.4(10), 140.0(5.0)
533.94 12	†36 5	¹⁸¹ Pt(51 s)	289.29(†100), 111.97(†100), 230.15(†92)
534.0 6	0.015 6	¹³⁸ Xe(14.08 m)	258.411(31.5), 434.562(20.3), 1768.26(16.7)
534.0 2	†8.5 17	¹⁵⁵ Nd(8.9 s)	180.574(†100), 418.99(†75), 955.08(†50)
534.0 3	0.021 10	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
534.0 4	>0.016	¹⁶⁴ Yb(75.8 m)	40.928(1.147), 675.41(0.38), 390.6(0.31)
534.04 6	0.087 20	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
534.1 1	0.34 6	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
534.1 2	0.34 5	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
534.1	0.5	¹⁹⁵ Pb(15.0 m)	383.64(106.9), 394.21(44), 878.40(24.2)
534.1 1	0.082 10	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
534.11 14	1.8 5	¹⁹⁵ Pb(15.0 m)	383.64(106.9), 394.21(44), 878.40(24.2)
534.2 3	0.09	¹¹³ Pd(93 s)	95.74(3.3), 643.7(3.0), 739.63(2.4)
534.2 6	0.53 16	¹⁶⁶ Lu(2.65 m)	228.12(77.3), 337.50(41), 367.95(31.4)
534.2 3	†10.5 4	²⁰¹ Po(8.9 m)	967.4(†100.0), 964.3(†85), 411.9(†33.0)
• 534.21 20	0.013 6	¹⁸⁸ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
534.22 25	0.67 9	⁹⁹ Nb(2.6 m)	97.785(7), 253.50(3.64), 2641.3(3.64)
• 534.248 7	0.0430 10	¹⁵² Eu(13.542 y)	344.281(26.58), 778.91(12.96), 411.115(2.231)
534.248 7	†0.9 3	¹⁵² Tb(17.5 h)	344.281(†1500), 586.294(†223), 271.135(†203)
• 534.29 7	0.125 19	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
• 534.295 4	3.07 3	¹⁴⁹ Gd(9.28 d)	149.735(48.2), 298.634(28.6), 346.651(23.9)
534.3 1	†3.31 25	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
• 534.318 11	66.6 3	¹⁵⁶ Tb(5.35 d)	199.2132(40.9), 1222.36(31.00), 88.9667(17.7)
534.335 88	0.12 3	²²⁷ Fr(2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)
• 534.38 7	0.28 3	¹⁴⁸ Pm(41.29 d)	550.284(94.5), 629.987(89), 725.673(32.7)
• 534.38 7	0.101 22	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
534.4 4	0.85 9	⁹⁹ Nb(2.6 m)	97.785(7), 253.50(3.64), 2641.3(3.64)
534.40 23	†16.8 20	¹⁸⁴ Tl(11 s)	366.51(†100), 286.80(†39), 340.0(†25)
534.5 1	0.32 8	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
• 534.5 5		¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
534.5 6	0.23 3	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
534.5 1	†16.5 2	²⁰⁰ At(43 s)	665.9(†100), 611.1(†85.0), 484.5(†49.8)
• 534.546 15	0.0211 9	¹²⁹ Cs(32.06 h)	371.918(30.60), 411.490(22.31), 548.945(3.40)
534.6 4	0.54 14	⁷² Cu(6.6 s)	652.4(68), 1004.6(12.0), 1657.7(10.1)
534.6 3	28.4 23	¹¹² Rh(6.8 s)	348.70(87), 560.5(49), 1098.6(39)
534.6 1	0.0044 13	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
534.60 20	0.19 4	¹⁵⁷ Sm(482 s)	197.870(56.00), 196.461(16.8), 394.351(11.93)
534.60 20	0.41 9	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
534.6 3		¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
• 534.65 15	0.0094 5	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
534.67 4	0.079 3	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
534.7 2	0.98 6	¹⁴⁹ Dy(4.20 m)	100.8(15.2), 789.4(11.8), 1776.3(11.1)
• 534.72 7	0.033 4	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
534.730 7	1.90 15	¹⁷⁵ Tm(15.2 m)	514.868(65), 941.23(15), 363.942(12.7)
534.758 7	0.018 9	⁷⁵ Br(96.7 m)	286.572(88), 141.3147(6.6), 427.883(4.4)
534.796 10	0.0500 8	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
534.8 5	0.19	¹⁰¹ Cd(1.2 m)	98.0(47), 1722.5(11), 1259.3(8)
534.80 6	1.35 6	¹⁴³ Cs(1.78 s)	195.554(13), 232.421(8.32), 306.424(6.80)
534.8 3	†90.2 36	²³³ Pu(20.9 m)	235.4(†100), 500.3(†38.6), 688.1(†33.3)
534.88 4	1.05 11	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
534.9 4	0.72 13	¹³⁶ Nd(50.65 m)	108.90(32), 40.2(18.9), 574.8(10.4)
534.90 2	13.2 7	²⁰⁴ Po(3.53 h)	883.984(29.9), 270.068(27.8), 1016.31(24.1)
534.99 14	0.0011 5	⁷⁷ Ge(11.30 h)	264.44(54), 211.03(30.8), 215.50(28.6)
535.0 1	0.41 4	⁹² Kr(1.840 s)	142.307(64), 1218.6(60), 812.6(14.6)
535.0 3	0.20 3	¹⁰⁰ Cd(49.1 s)	936.55(66), 139.71(6.7), 582.5(6.3)
535.0 2	<0.1	¹⁰⁴ Mo(60 s)	68.8(55), 69.7(17.8), 36.3(14)
535	0.12 4	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
535.0 2	†10 3	¹³⁶ Eu(3.3 s)	254.9(†100), 431.4(†34), 458.0(†20)
535.0 4	0.10 5	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
535.0 1	1.14 9	¹⁸⁸ Tl(71 s)	412.7(88), 592.0(61), 504.2(23.3)
535.0 2	0.68 6	¹⁹⁰ Tl(3.7 m)	416.4(91), 625.4(82), 731.1(37)
535.0 2		¹⁹⁰ Tl(2.6 m)	416.4(79), 625.4(11.1), 683.5(8.7)
• 535.0 12	†0.0063 19	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
535.01 14	0.0013	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
535.02 15	0.79 12	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
535.09 18	1.8 5	¹⁸ N(624 ms)	1981.95(83.2), 821.76(49.0), 1651.61(48.9)
535.1 1	14.7 11	¹⁰⁴ Tc(18.3 m)	358.0(89), 530.5(15.6), 884.4(10.9)
535.11 6	0.17 3	²⁰² Bi(1.72 h)	960.67(99), 422.18(83.7), 657.49(60.6)
• 535.143 9	0.293 7	¹⁷² Er(49.3 h)	610.062(44.2), 407.338(42.1), 68.107(3.29)
535.15 5	2.04 25	¹⁹³ Hg(11.8 h)	257.97(61), 407.63(25), 573.25(14.2)
535.2	0.20 12	¹⁴⁸ Ba(0.607 s)	56.08(29.20), 133.53(3.88), 415.78(3.59)
535.2 5	0.36 9	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
535.25 20	†4 1	¹⁶³ Hf(40.0 s)	70.98(†100), 62.14(†64), 45.39(†48)
535.25 12	0.14 3	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
535.3 10	0.34 9	⁷⁴ Kr(11.50 m)	89.65(31), 203.0(18.0), 296.67(9.9)
535.30 10	10.6 6	¹⁰² Zr(2.9 s)	599.60(13.9), 64.50(8.9), 156.60(2.92)
535.33 12	0.44 3	¹⁶⁴ Lu(3.14 m)	123.3(34.0), 740.52(12.2), 262.22(10.8)
535.35 15	3.3 6	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
535.4 3	0.37 8	¹²⁶ Ba(100 m)	233.6(19.6), 257.6(7.6), 241.0(6.0)
535.4 3	0.51 5	¹³² I(2.295 h)	667.718(99), 772.60(75.6), 954.55(17.6)
535.4 2	†4.8	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
535.4 3	†68 14	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
535.42 14	0.29 7	¹⁰⁵ In(5.07 m)	131.37(41), 260.21(15.7), 604.11(9.2)
535.5 6	0.10 6	⁹⁹ Nb(2.6 m)	97.785(7), 253.50(3.64), 2641.3(3.64)
535.5 3	2.3 3	¹⁶⁵ Tb(2.11 m)	1178.53(13.2), 538.51(7.2), 1292.05(7.0)
535.5 5	†1.0	¹⁸³ Hg(9.4 s)	60.5(†100), 159.91(†21), 172.70(†17)
535.5 3	†0.52 6	¹⁹² Tl(9.6 m)	422.8(†100), 634.8(†75.9), 786.3(†31.7)
535.5	>0.013	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
• 535.53 4	0.25	²¹⁰ Bi(3.04×10 ⁶ y)	265.832(50), 304.896(28), 649.42(3.8)
535.577 4	0.114 18	⁷⁵ Br(96.7 m)	286.572(88), 141.3147(6.6), 427.883(4.4)
535.60 3	45.7 1	¹⁰⁰ Nb(1.5 s)	528.24(9.1), 159.547(8.8), 1022.5(4.9)
535.60 3	97.0 22	¹⁰⁰ Nb(2.99 s)	600.5(65.0), 1280.6(23.8), 967.1(19.3)

• $t_{1/2} > 1$ 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: $E_\gamma(I_\gamma)$
535.6 2	0.6	²²⁷ Ra(42.2 m)	27.36(16), 300.07(4.6), 302.65(4.3)
• 535.6 2	0.00059 10	²³¹ Pa(32760 y)	27.36(10.3), 300.07(2.46), 302.65(2.2)
535.61 18	3.46 13	⁸⁵ Y(4.86 h)	231.67(22.8), 2123.8(5.0), 767.40(3.6)
535.62 6	0.300 22	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
• 535.642 21	0.00025 5	¹⁶⁸ Tm(93.1 d)	198.241(52.39), 815.990(48.99), 447.515(23.05)
535.7 2	0.14 3	⁹⁵ Rb(377.5 ms)	352.02(49), 204.02(15.1), 680.7(14.8)
535.7 4	0.007 4	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
535.7 5	†4.8	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
535.7 2	†2.0 6	¹⁹² Bi(37 s)	853.8(†100.0), 501.8(†80), 504.3(†39)
535.7 2	†4.0 2	²⁰³ At(7.4 m)	639.4(†100), 641.5(†55.8), 738.1(†38.4)
535.71 7	0.0044 24	¹⁸³ Os(9.9 h)	1101.94(49.0), 1107.92(22.36), 1034.85(6.02)
• 535.78 8	0.41 4	⁹⁶ Tc(4.28 d)	778.224(100), 849.929(98), 812.581(82)
535.8 5	>0.16	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
535.8 5	†9 2	¹¹⁹ Xe(5.8 m)	231.8(†100), 98.5(†95), 461.5(†91)
• 535.897 12	0.0115 6	¹⁴⁹ Pm(53.08 h)	285.95(3.1), 859.46(0.109), 590.88(0.069)
• 535.897 12	0.048 3	¹⁴⁹ Eu(93.1 d)	327.526(4.03), 277.089(3.56), 22.510(2.32)
535.9 3	0.189 18	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
• 535.95 15	0.0094 5	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
536.0 6	0.035 13	¹¹⁶ In(54.41 m)	1293.54(84.4), 1097.3(56.2), 416.86(28.9)
536.0	0.26	¹⁴⁷ Ba(0.893 s)	167.4(11), 105.2(4.8), 196.1(4.8)
536.0 4	0.017 8	¹⁵² Pm(4.1 m)	121.7824(15.7), 841.586(2.17), 961.06(1.92)
536.0 4	2.4 5	¹⁶⁶ Ta(34.4 s)	158.5(53), 311.8(28.2), 810.1(9.8)
536.0 4	1.6 5	¹⁶⁶ Ta(34.4 s)	158.5(53), 311.8(28.2), 810.1(9.8)
536.0 1	†7.7 8	¹⁷¹ Ta(23.3 m)	49.6(†100), 506.4(†54), 501.8(†22.6)
• 536		²³⁰ Pa(17.4 d)	951.95(1.65), 918.48(8.2), 454.95(6.27)
536 10	>0.015	²⁴³ Bk(4.5 h)	187.1(0.060), 146.4(0.012), 41(0.006)
536.05 3	0.21 3	¹⁸² Re(12.7 h)	67.75001(38.2), 1121.3007(32), 1221.4066(24.8)
536.09 3	99	¹³⁰ I(12.36 h)	668.54(96), 739.48(82), 418.01(34.2)
536.09 3	16	¹³⁰ I(9.0 m)	586.05(1.07), 1614.10(0.447), 1122.15(0.168)
536.09 3	3.8 4	¹³⁰ Cs(29.21 m)	586.05(0.47), 894.5(0.39), 1614.10(0.26)
536.09 3	†100 2	¹³⁰ Cs(3.46 m)	470.8(†8.6), 206.6(†1.7), 510.35
536.1 1	0.81 7	¹⁰⁸ In(39.6 m)	632.96(76), 1986.8(12.4), 3452.2(9.2)
536.1 2	†12.4 13	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
536.1 5	8.0 9	¹⁹¹ Hg(50.8 m)	252.5(57), 420.1(18.6), 578.6(17.6)
536.11 21	1.31 18	¹⁵⁴ Tb(21.5 h)	123.071(26), 1274.436(10.5), 2187.10(9.9)
536.12 5	14.0 11	⁹⁹ Sr(0.269 s)	125.118(16.1), 1198.12(9.2), 2279.42(7.6)
• 536.15 10	0.026 6	¹⁴⁵ Eu(5.93 d)	893.73(66), 653.512(15.0), 1658.53(14.9)
• 536.194 19	0.64 4	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
536.2 4	6.6 10	⁹⁹ Y(1.470 s)	121.761(33), 724.30(14.9), 575.4(6.3)
536.2 3	0.5 3	¹⁶⁴ Tm(5.1 m)	208.08(14.6), 314.97(10), 240.49(7.5)
536.38 16	0.50 6	¹⁴⁸ La(1.05 s)	158.468(55.6), 989.85(9.3), 760.30(8.6)
536.4 10	0.34 9	⁷⁴ Kr(11.50 m)	89.65(31), 203.0(18.0), 296.67(9.9)
536.4 1	0.46 4	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
536.4 3	0.052 5	¹¹² Ag(3.130 h)	617.27(43), 1387.67(5.4), 606.49(3.1)
536.4 3	0.90 8	¹²³ In(5.98 s)	1130.5(63), 1019.7(32), 618.8(2.6)
536.48 8	0.83 9	¹²⁵ Cd(0.57 s)	1027.53(25.8), 1173.16(25.1), 736.65(12.6)
536.6 2	†67 2	¹³⁹ I(2.29 s)	527.7(†100), 571.2(†98), 656.0(†58)
536.6	0.047 21	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
536.6 1	0.095 10	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
536.6 3	0.43 9	¹⁶¹ Yb(4.2 m)	78.20(34), 599.88(25.9), 631.45(13.9)
536.6 3	†15.9 25	²⁰⁶ Rn(5.67 m)	497.7(†100), 324.5(†96), 386.6(†61)
536.67 3	0.127 3	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
536.680 11	†12.7 4	¹⁸⁴ Ta(8.7 h)	414.03(72), 252.848(43), 920.932(32.0)
• 536.680 11	3.30 5	¹⁸⁴ Re(169 d)	252.848(10.7), 216.548(9.43), 920.932(8.14)

• $t_{1/2} > 1$ d

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
536.74 7	6.11 20	⁶⁶ Ge(2.26 h)	43.89(28.7), 381.85(28), 272.97(10.4)
536.74 15	0.21 3	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
536.78 18	0.00156 5	¹⁵⁹ Gd(18.479 h)	363.55(11.4), 58.00(2.15), 348.16(0.234)
536.8 2	0.152 20	¹⁸³ Hf(1.067 h)	783.754(66), 73.174(38), 459.069(27)
536.9 2	3.5 10	¹⁵¹ Er(23.5 s)	638.3(36), 667.2(17), 256.4(15.9)
536.9 2	†1.06 18	²³⁰ Ra(93 m)	72.0(†100), 63.0(†35.4), 202.8(†27.3)
536.94 20	0.055 23	²¹⁴ Bi(19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
537.0	23 2	¹⁴⁵ Tb(29.5 s)	257.8(39), 987.8(37), 1446.8(15)
537.0 2	0.067 17	¹⁹⁹ Pb(90 m)	366.90(44.2), 353.39(9.5), 1135.04(7.8)
537.0 3	0.0054 9	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
• 537.0 3	†0.069 12	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
537.03 16	0.55 13	¹⁸⁷ Pt(2.35 h)	106.46(9), 201.52(6.4), 110.04(5.7)
537.08 5	1.99 25	¹⁹³ Hg(11.8 h)	257.97(61), 407.63(25), 573.25(14.2)
537.1 3	0.008 3	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
• 537.171 29	0.073 7	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
537.2 2	0.070 12	¹⁴² Ba(10.6 m)	255.300(20.5), 1204.3(14.23), 895.2(13.9)
537.2 1	0.082 10	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
537.22 9	0.252 21	¹¹¹ Sn(35.3 m)	1152.98(2.7), 1914.70(1.99), 761.97(1.48)
• 537.22 16	0.0024 8	¹⁴⁷ Eu(24.1 d)	197.299(27), 121.220(22.9), 677.516(9.8)
537.225 18	1.33 3	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
• 537.261 9	24.39 7	¹⁴⁰ Ba(12.752 d)	29.9640(14.1), 162.660(6.21), 304.849(4.30)
537.293 13	0.419 14	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
537.3 2	†2.1 4	¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†33)
537.4 3	0.15 5	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
• 537.45 4	30.5 3	²⁰⁶ Bi(6.243 d)	803.10(99), 881.01(66.2), 516.18(40.7)
537.5 5	†5.0 20	¹⁶³ Lu(238 s)	163.08(†100), 54.00(†88), 396.34(†63)
537.5 2	†4.7 4	²⁰¹ Po(15.3 m)	890.1(†100), 240.1(†71.0), 904.2(†54.8)
537.5 2	†24.8 15	²⁰¹ Po(8.9 m)	967.4(†100.0), 964.3(†85), 411.9(†33.0)
537.58 20	1.01 13	⁷⁸ Zn(1.47 s)	224.75(43.9), 181.68(28.1), 860.30(24.5)
537.6 3	1.3 4	⁷² Br(78.6 s)	862.03(70), 1316.70(17.3), 454.70(13.1)
537.60 4	2.23 16	⁸¹ Rb(4.576 h)	190.38(64.0), 446.15(23.2), 510.31(5.3)
537.6 2	0.031 5	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)
537.6	0.7	¹³³ Pr(6.5 m)	134.3(14), 74.0(10), 315.6(10)
537.6 5	0.28 8	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
• 537.6 5		²³³ U(1.592×10 ⁵ y)	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
537.64 4	8.2 3	¹⁶⁶ Lu(2.65 m)	228.12(77.3), 337.50(41), 367.95(31.4)
• 537.65 11	0.045 7	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
537.69 5	1.18 8	²⁰⁸ Rn(24.35 m)	426.78(7.07), 251.05(5.02), 350.026(3.34)
537.73 10	0.036 7	¹³³ I(20.8 h)	529.872(87.0), 875.329(4.51), 1298.223(2.35)
537.76 13	0.117 16	¹³⁸ Xe(14.08 m)	258.411(31.5), 434.562(20.3), 1768.26(16.7)
• 537.76 6	0.00030 6	¹⁶⁸ Tm(93.1 d)	198.241(52.39), 815.990(48.99), 447.515(23.05)
• 537.79 15	0.0016 6	⁹⁹ Mo(65.94 h)	739.50(12.1), 181.063(6.08), 140.511(4.52)
537.9 2	1.38 8	¹⁰¹ Ag(11.1 m)	261.0(53), 588.0(10.0), 667.3(9.8)
• 537.98 6	0.194 7	¹⁵⁶ Tb(5.35 d)	534.318(66.6), 199.2132(40.9), 1222.36(31.00)
538.0 2	0.066 10	¹⁴¹ Pm(20.90 m)	1223.26(4.74), 886.22(2.44), 193.68(1.61)
• 538.0 10	0.073 21	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
538.0 1	†14.9 15	¹⁷¹ Ta(23.3 m)	49.6(†100), 506.4(†54), 501.8(†22.6)
538.0 3	0.38 4	²⁰⁸ At(1.63 h)	686.527(98), 660.040(89), 177.595(48.6)
• 538.06 8	0.194 22	¹⁸⁸ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
538.1 3	>0.16	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
• 538.1 1	>0.0022	²²⁵ Ac(10.0 d)	99.91(1.01), 150.04(0.80), 99.63(0.62)
• 538.1	>0.0011	²²⁵ Ac(10.0 d)	99.91(1.01), 150.04(0.80), 99.63(0.62)
538.11 10	0.58 9	²³⁶ Pa(9.1 m)	642.35(37.0), 687.59(9.9), 1762.7(6.0)
538.11 10	0.0110 9	²³⁶ Np(22.5 h)	642.35(0.9), 687.59(0.250), 104.234

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
• 538.11 10	1.47×10^{-7} 12	²⁴⁰ Pu(6563 y)	45.242(0.0450), 104.234(0.00708), 160.308(0.000402)
538.15 6		¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
• 538.15 3	0.00033 20	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
538.16 5	0.97 7	¹²⁸ In(0.84 s)	1168.80(40), 935.20(6.5), 1089.53(6.0)
538.18 25	0.27 4	¹⁵⁶ Ho(56 m)	266.35(54.7), 137.83(51), 366.25(10.73)
538.20 8	0.049 3	⁸¹ Se(18.45 m)	275.988(0.7), 290.03(0.55), 828.27(0.280)
538.2 2	0.058 4	¹¹³ Sb(6.67 m)	497.96(80), 332.41(14.8), 88.25(2.7)
538.2 2	8.1 9	¹³⁵ Pr(24 m)	296.12(24), 82.64(13.7), 213.45(13.0)
538.2 3	4.4 17	¹⁵² Ho(161.8 s)	613.8(73), 613.8(14), 1098.0(12)
538.2 15	0.006 3	²¹⁹ Rn(3.96 s)	271.23(10.8), 401.81(6.37), 130.59(0.119)
538.24 7	$\dagger 77$ 4	¹⁴² Xe(1.22 s)	571.83($\dagger 100$), 657.05($\dagger 79$), 618.314($\dagger 72$)
• 538.29 6	0.0042 6	¹⁵² Eu(13.542 y)	121.7824(28.4), 1408.011(20.87), 964.131(14.34)
538.3 2	0.182 25	¹⁰¹ Sr(118 ms)	128.34(18.0), 1124.82(10.9), 510.73(8.5)
538.3 5	0.047	¹⁴² La(91.1 m)	641.285(47), 2397.8(13.3), 2542.7(10.00)
538.33 28	0.19 7	⁸¹ Rb(4.576 h)	190.38(64.0), 446.15(23.2), 510.31(5.3)
538.35 24	0.015 3	¹³⁹ Cs(9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
538.4 4	0.31 16	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
538.4 3	40 7	¹¹⁶ Rh(0.9 s)	340.5(90), 639.4(52), 726.2(38)
538.4 1	1.27 10	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
538.4 3	$\dagger 8.1$ 19	¹⁸⁹ Hg(7.6 m)	320.99($\dagger 100$), 78.21($\dagger 63$), 565.42($\dagger 48$)
538.4 2	$\dagger 0.8$ 4	¹⁹² Bi(37 s)	853.8($\dagger 100.0$), 501.8($\dagger 80$), 504.3($\dagger 39$)
538.400 16	0.66 14	²⁴⁴ Am(10.1 h)	743.971(66), 897.848(28), 153.863(16)
• 538.5 5	0.0066 19	⁷⁹ Kr(35.04 h)	261.29(13), 397.54(9.3), 606.09(8.12)
538.5 7	0.144 20	⁹⁹ Nb(2.6 m)	97.785(7), 253.50(3.64), 2641.3(3.64)
538.5 1	$\dagger 34.0$ 23	¹⁰³ Nb(1.5 s)	102.64($\dagger 100$), 641.1($\dagger 55$), 138.5($\dagger 13.5$)
538.5 2	8.4 6	¹⁴¹ Sm(22.6 m)	196.88(74), 431.6(40.4), 777.6(20.3)
• 538.5 2	$\dagger 1.93 \times 10^6$	²⁰⁸ Po(2.898 y)	291.7($\dagger 9 \times 10^{06}$), 570.4($\dagger 5 \times 10^{06}$), 601.6($\dagger 4.1 \times 10^6$)
538.51 5	7.2 6	¹⁶⁵ Tb(2.11 m)	1178.53(13.2), 1292.05(7.0), 1664.80(6.4)
538.53 12	0.16 3	²⁰⁷ At(1.80 h)	814.41(44.5), 588.33(19.2), 300.654(12.8)
538.54 5	0.382 12	¹²³ I(13.27 h)	158.97(83), 528.96(1.39), 440.02(0.428)
538.55 5	0.160 7	⁵⁹ Cu(81.5 s)	1301.46(14.78), 877.97(11.40), 339.411(7.97)
538.56 4	$\dagger 12.7$ 9	¹⁶⁰ Ho(5.02 h)	728.18($\dagger 100$), 879.383($\dagger 65.9$), 962.317($\dagger 59.1$)
538.56 4	6.0 4	¹⁶⁰ Ho(25.6 m)	728.18(46.9), 879.383(26.6), 962.317(25.6)
538.67 6	0.708 23	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
538.68 5	0.82 14	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
538.7 10	0.103 22	²⁰¹ Bi(108 m)	629.1(24.0), 936.2(11.3), 1014.1(10.7)
538.7 4	0.005	²¹⁴ Pb(26.8 m)	351.921(35.8), 295.213(18.5), 241.981(7.50)
538.76 4	1.89 22	¹³³ Sb(2.5 m)	1096.22(43.0), 817.8(18.5), 2755(12.5)
538.8 4	2.64 19	¹¹³ Rh(2.72 s)	189.7(17.0), 409.3(15.9), 219.6(3.88)
538.8 1	$\dagger 0.35$ 5	¹⁵⁸ Ho(11.3 m)	218.21($\dagger 100.0$), 98.91($\dagger 70$), 945.7($\dagger 37$)
538.8 5	0.24 12	¹⁹⁷ Pb(8 m)	385.85(50), 761.14(13.3), 375.48(12.8)
• 538.8 2	3.0×10^{-7} 2	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
538.9 4	0.29 7	¹²⁵ Cd(0.65 s)	436.29(37), 1099.48(22.3), 2147.19(19.1)
538.9 2	1.95 20	¹²⁶ Ba(100 m)	233.6(19.6), 257.6(7.6), 241.0(6.0)
• 538.90 5	13.7 7	¹⁹¹ Pt(2.9 d)	409.44(8.0), 359.90(6.0), 82.407(4.9)
538.93 10	0.080	¹³⁷ I(24.5 s)	1218.00(12.8), 601.05(4.80), 1302.64(4.42)
539 1	0.008 3	¹¹³ Ag(5.37 h)	298.58(10), 258.8(1.64), 316.3(1.343)
• 539.03 10	0.0211 21	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
539.03 6		¹⁹³ Hg(3.80 h)	861.11($\dagger 100$), 1118.84($\dagger 64$), 789.21($\dagger 36$)
539.03 6	1.0 3	¹⁹³ Hg(11.8 h)	257.97(61), 407.63(25), 573.25(14.2)
• 539.05 15	0.0242 22	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
539.1 3	0.050 13	¹²¹ Xe(40.1 m)	252.7(13), 132.8(10.9), 445.2(7.7)
539.10 4	1.40 4	¹³⁰ I(12.36 h)	536.09(99), 668.54(96), 739.48(82)
• 539.1 5	0.010 5	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
539.11 3	1.7	¹⁸² Hf(61.5 m)	942.80(18.8), 799.64(9.4), 114.3152(6.2)
539.20 20	†15 3	¹⁰⁶ Nb(1.02 s)	171.548(†100), 350.70(†39), 714.00(†30)
539.2 2	1.30 13	¹⁸⁵ Ir(14.4 h)	254.4(13.3), 1828.8(10), 60.0(5.7)
539.20 8	†15	¹⁹⁷ Ir(5.8 m)	469.72(†100), 430.56(†61), 815.92(†45)
539.2 3	1.7 2	²⁰⁰ Bi(36.4 m)	1026.5(100), 462.34(98), 419.70(91)
539.21 25	0.22 6	¹⁹⁰ Re(3.2 h)	186.718(27.8), 605.24(14.9), 557.972(14.3)
539.22 13	0.50 11	²⁰⁴ At(9.2 m)	684.341(95), 516.318(90), 426.253(67.5)
539.224 7	0.115 14	¹⁸⁴ Ta(8.7 h)	414.03(72), 252.848(43), 920.932(32.0)
• 539.224 7	0.327 17	¹⁸⁴ Re(38.0 d)	903.279(37.9), 792.071(37.5), 111.208(17.1)
• 539.224 7	0.0297 16	¹⁸⁴ Re(169 d)	252.848(10.7), 216.548(9.43), 920.932(8.14)
539.29 10	0.114 10	¹⁰⁵ Ru(4.44 h)	724.21(47), 469.37(17.5), 676.36(15.7)
539.3 7	0.67 7	¹⁹⁹ Bi(27 m)	560.1(22.0), 424.85(22), 841.7(11)
539.33 14	0.33 3	¹⁶³ Yb(11.05 m)	860.28(10.1), 63.62(6.5), 123.21(1.98)
• 539.37 15	0.094 14	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
539.4 3	0.21 6	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
539.4 3	1.9 11	¹¹⁴ Rh(1.85 s)	332.9(56), 361.9(20), 694.4(13)
539.4 5	0.65 10	¹⁷⁶ Tm(1.9 m)	189.57(44.5), 1069.3(34), 381.8(21.8)
539.4 2	†22	¹⁷⁷ Os(2.8 m)	84.7(†100), 125.4(†63), 195.8(†61)
539.4 5	†66 12	¹⁹⁰ Bi(6.3 s)	773.8(†100), 455.0(†94), 506.2(†92)
539.49 4	30.8 7	⁹⁰ Kr(32.32 s)	1118.69(39.0), 121.82(35.5), 242.19(9.9)
539.50 8	0.66 8	⁹⁰ Br(1.92 s)	707.05(38.0), 1362.32(11.2), 655.17(7.7)
539.5 5	†0.45 15	¹²⁰ Cs(64 s)	322.4(†100), 473.5(†30), 553.4(†19.1)
539.5 7	0.48 19	¹⁷⁸ Re(13.2 m)	237.3(45), 105.9(23.0), 939.1(8.9)
539.50 15	1.32 11	¹⁹⁵ Pb(15.0 m)	383.64(106.9), 394.21(44), 878.40(24.2)
539.58 20	†4	¹⁸¹ Pt(51 s)	289.29(†100), 111.97(†100), 230.15(†92)
539.59 5	7	¹⁰⁰ Tc(15.8 s)	590.83(5.7), 1512.1(0.44), 822.6(0.068)
539.59 5	78.4 24	¹⁰⁰ Rh(20.8 h)	2376.1(35.3), 1553.4(21), 822.6(20.1)
539.59 5	5900 5	¹⁰⁰ Rh(4.6 m)	687.0(†3500), 1827.2(†1410), 1535.6(†1118)
539.59 4	1.35 9	²⁰⁴ Po(3.53 h)	883.984(29.9), 270.068(27.8), 1016.31(24.1)
539.599 9	38	²³³ Ac(145 s)	522.757(56), 16.8
539.6 4	0.23 8	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
539.6 3	0.96 12	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
539.64 8	0.156 20	¹⁰⁰ Sr(202 ms)	963.85(22.0), 898.50(18.9), 65.46(15.2)
539.7 2	0.205 25	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
539.70 7	†10.0 7	¹⁸⁴ Ir(3.09 h)	263.97(†100), 119.80(†45), 390.38(†38)
539.75 19	52	¹³⁶ Pr(13.1 m)	552.16(76), 1092.3(18.5), 461.0(7.7)
539.75 25		¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
539.77 8	0.29 3	¹⁸⁹ Pt(10.87 h)	721.41(9.3), 94.33(7.6), 568.84(7.1)
539.80 8	0.0060 6	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
539.87 11	†65 7	¹⁶⁸ Lu(5.5 m)	1483.65(†100), 228.58(†97), 111.8(†68)
539.9 6	†2.4 5	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
539.9 1	20	²¹¹ Fr(3.10 m)	918.3(11), 281(6.8), 983(4.0)
539.9 2	†20 3	²²⁹ Ac(62.7 m)	164.522(†100), 569.1(†91), 261.92(†39)
539.93 25	†16 4	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
540.0 1	1.9 4	⁷³ Br(3.4 m)	64.9(37.0), 336.0(10.4), 699.8(9.1)
540.0 5	100	⁸⁴ Nb(12 s)	723.0(23)
540.0 1	0.17 2	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
540.0 3	1.20 11	¹¹⁶ I(2.91 s)	679.1(8)
540 1	3.1	¹²⁵ Cs(45 m)	526(24), 111.8(9), 412(5)
540.0 4	†0.9 3	¹³⁶ Eu(3.3 s)	254.9(†100), 431.4(†34), 458.0(†20)
540.0 21	5.0 4	¹⁴² Eu(1.22 m)	768.1(100), 1023.3(92.0), 556.6(86.6)
540.0 5	0.24 5	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
540 2	0.023 8	¹⁶² Ho(15.0 m)	80.660(8.0), 1319.3(3.8), 1372.8(0.81)
540.0 2	0.065 9	²¹⁰ Rn(2.4 h)	458.25(1.7), 648.70(0.843), 570.95(0.840)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
540.04 9	0.22 4	¹⁶² Yb(18.87 m)	163.35(40.0), 118.70(33.6), 576.10(3.24)
540.05 20	†16 4	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
540.1 5	0.09 3	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
540.1 2	0.48 9	¹¹⁷ Cs(8.4 s)	204.8(15.0), 29.7(9.9), 205.6(6.8)
540.1 3	†8.7 4	²⁰¹ Po(8.9 m)	967.4(†100.0), 964.3(†85), 411.9(†33.0)
540.12 4	5.3 5	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
• 540.15 10	0.206 9	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
540.18 6	20	¹⁵⁴ Tb(9.4 h)	123.071(30), 247.925(22.1), 649.564(10.9)
• 540.187 16	1.40 4	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
• 540.187 16		¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
540.238 11	0.369 10	¹⁷³ Hf(23.6 h)	123.672(83), 296.974(33.9), 139.634(12.7)
540.27 13	0.059 11	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
540.3 2	0.28 11	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
540.3 1	†10.8 13	¹⁷¹ Hf(12.1 h)	122.0(†100), 662.2(†83), 347.18(†47)
• 540.3 2	5.0×10^{-6} 5	²³³ U(1.592×10^5 y)	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
• 540.32 27	0.0019 6	¹⁹⁵ Hg(41.6 h)	261.75(30.9), 560.27(7), 387.87(2.15)
540.36 5	0.395 12	¹⁴⁵ Ce(3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)
540.363 23	7.7 5	¹³² La(4.8 h)	464.55(76), 567.14(15.7), 1909.91(9.0)
540.4 3	0.019 9	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
• 540.4 3	0.048 8	²²⁶ Ac(29 h)	230.37(27), 158.18(17.5), 72.20(0.56)
• 540.4 3	0.000035 15	²³⁰ U(20.8 d)	72.20(0.60), 154.23(0.125), 230.37(0.122)
540.45 3	0.0138 5	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
540.5 5	0.46 11	¹⁴⁸ Ho(9.59 s)	1687.5(82.47), 660.8(58.94), 504.3(18.62)
540.5 2	†248 43	¹⁵⁷ Ho(12.6 m)	279.97(†47600), 341.16(†37000), 193.41(†15200)
540.5 2	0.428 13	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
540.50 15		²²³ Rn(23.2 m)	591.8(†100), 635.2(†76), 416.0(†55)
540.509 10	6.58 23	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
540.516 50	0.0056 6	¹⁶⁵ Dy(2.334 h)	94.700(3.58), 361.68(0.84), 633.415(0.568)
• 540.55 6	0.086 7	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
540.6 3	0.049 10	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
540.61 19	0.28 16	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
540.61 5	9.3 9	²³⁷ Pa(8.7 m)	853.6(34), 865.1(15.5), 529.26(14.9)
540.697 10	0.49 5	¹⁰⁹ Rh(80 s)	326.868(54), 426.135(7.7), 178.034(7.6)
540.7 6	0.026 5	¹¹¹ Pd(23.4 m)	580.00(0.8), 70.44(0.78), 1459.0(0.56)
540.7 5	>0.26	¹³⁷ Nd(38.5 m)	75.5(17.0), 580.6(13), 306.60(10.0)
540.7 3	3.1	¹⁷⁰ Hf(16.01 h)	164.78(33), 620.7(23), 120.17(19)
540.76 10	0.027 3	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
540.8 4	0.25 5	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
540.8 6	0.022 13	¹³⁸ Xe(14.08 m)	258.411(31.5), 434.562(20.3), 1768.26(16.7)
540.825 25	7.6 4	¹³⁴ I(52.6 m)	847.025(95.4), 884.090(64.9), 1072.547(15.0)
540.9 5	0.16 3	⁷⁴ Ga(8.12 m)	595.847(91), 2353.46(44.5), 608.353(14.3)
540.9 2	†21.8 8	¹⁷⁰ Ho(43 s)	812.3(†100.0), 1894.5(†45.2), 78.6(†40)
540.930 7	0.047 6	²⁰⁰ Au(48.4 m)	367.943(19), 1225.479(10.7), 1262.950(3.12)
• 540.930 7	0.026 17	²⁰⁰ Tl(26.1 h)	367.943(87), 1205.717(29.9), 579.298(13.8)
540.96 9	0.261 16	²⁰¹ Pb(9.33 h)	331.19(79), 361.27(9.9), 945.96(7.4)
540.98 12	0.043 9	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
541.0 1	0.739 23	⁷⁹ Rb(22.9 m)	688.1(23), 182.77(19.2), 143.41(13.9)
541.00 6	12.7 7	¹⁰⁶ In(6.2 m)	632.66(100), 861.16(92), 997.87(48)
541.0 3	0.8 3	¹²⁹ Sn(2.23 m)	645.13(100), 80.5(6.6), 913.2(5.0)
541.0 3	0.040 12	¹³⁸ Nd(5.04 h)	325.76(2.84), 199.50(0.53), 341.65(0.40)
541.0 4	†2.8 4	¹⁹⁸ Tl(1.87 h)	636.4(†202), 411.8044(†202), 587.2(†185)
541.06 12	5.17 14	¹⁴⁴ Ba(11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
541.09 10	2.9 4	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
541.2 3	5.8 6	¹¹⁶ Cs(3.84 s)	393.5(<0.09), 524.3(76), 615.1(30.4)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
• 541.2 1	0.188 6	$^{124}\text{I}(4.18 \text{ d})$	602.730(60), 1690.980(10.41), 722.786(9.98)
541.20 6	39.2 8	$^{144}\text{La}(40.8 \text{ s})$	397.440(94.3), 844.8(22.3), 585.02(7.97)
541.2	$\dagger 1.6$	$^{144}\text{Gd}(4.5 \text{ m})$	333.3($\dagger 100$), 2432.6($\dagger 94.8$), 629.5($\dagger 32.4$)
541.2 4	0.94 13	$^{153}\text{Ho}(2.0 \text{ m})$	295.8(67), 637.0(5.36), 688.5(3.7)
541.24 12	0.092 11	$^{176}\text{Ta}(8.09 \text{ h})$	1159.28(25), 88.34(12), 1224.93(6)
541.3 2	0.33 4	$^{108}\text{Tc}(5.17 \text{ s})$	242.25(82), 465.6(14.3), 707.81(11.4)
541.32 21	0.060 10	$^{93}\text{Mo}(6.85 \text{ h})$	949.82(0.120), 689.07(0.070), 385.31(0.060)
• 541.35 8	0.090 19	$^{153}\text{Tb}(2.34 \text{ d})$	212.038(31.0), 170.504(6.8), 109.758(6.4)
• 541.4 1	0.15 3	$^{131}\text{Te}(30 \text{ h})$	773.67(49.9), 852.21(27.0), 793.75(18.10)
541.4 2	0.0045 12	$^{167}\text{Yb}(17.5 \text{ m})$	113.34(55.3), 106.18(22.5), 176.25(21)
541.4 2	$\dagger 0.73 11$	$^{188}\text{Au}(8.84 \text{ m})$	265.63($\dagger 100$), 340.04($\dagger 23.9$), 605.5($\dagger 16.3$)
541.5 2	0.41 7	$^{123}\text{Cs}(5.94 \text{ m})$	97.3(23), 596.7(10.1), 83.3(4.1)
541.5 1	0.0046 18	$^{136}\text{La}(9.87 \text{ m})$	818.514(2.3), 760.50(0.289), 1322.76(0.264)
• 541.5 5	0.0217 12	$^{153}\text{Tb}(2.34 \text{ d})$	212.038(31.0), 170.504(6.8), 109.758(6.4)
541.5 5	2.4 6	$^{164}\text{Ta}(14.2 \text{ s})$	211.05(74), 376.8(22), 605.0(14)
541.5 3	0.25	$^{186}\text{Ta}(10.5 \text{ m})$	197.93(50), 214.87(42.3), 510.82(37.5)
541.51 14	0.12 4	$^{81}\text{Sr}(22.3 \text{ m})$	153.54(33.8), 147.76(30.1), 443.34(17.5)
541.6 3	1.3 3	$^{112}\text{Rh}(3.8 \text{ s})$	348.70(33), 388.20(4), 777.5(3.6)
541.6	0.083 23	$^{141}\text{Ba}(18.27 \text{ m})$	190.328(46.0), 304.194(25.4), 276.948(23.4)
541.65 15	1.06 18	$^{159}\text{Tm}(9.13 \text{ m})$	38.35(5.8), 84.8(5.8), 271.30(5.1)
541.67 18	0.021 3	$^{85}\text{Br}(2.90 \text{ m})$	802.41(2.56), 924.63(1.63), 919.06(0.65)
541.70 20	0.30 3	$^{73}\text{Ga}(4.86 \text{ h})$	297.32(79.8), 325.70(11.17), 739.42(4.23)
541.7 5	0.8 3	$^{185}\text{Ta}(49.4 \text{ m})$	177.59(25.7), 173.68(22.6), 65.86(3.9)
• 541.7 1	0.37 4	$^{191}\text{Pt}(2.9 \text{ d})$	538.90(13.7), 409.44(8.0), 359.90(6.0)
541.7 10	0.041 17	$^{192}\text{Au}(4.94 \text{ h})$	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
541.8 4	0.020 3	$^{123}\text{Sn}(40.06 \text{ m})$	160.33(86), 381.4(0.042), 552.5(0.0103)
541.89 6	0.72 4	$^{93}\text{Sr}(7.423 \text{ m})$	590.238(67), 875.73(24.1), 888.13(21.8)
• 541.9 1	0.0037 5	$^{57}\text{Ni}(35.60 \text{ h})$	1377.63(81.7), 127.164(16.7), 1919.52(12.26)
541.9 9	0.06 3	$^{91}\text{Kr}(8.57 \text{ s})$	108.788(43.5), 506.592(19.1), 612.87(7.7)
541.9	0.6	$^{147}\text{Ba}(0.893 \text{ s})$	167.4(11), 105.2(4.8), 196.1(4.8)
541.9 3	0.62 10	$^{181}\text{Au}(11.4 \text{ s})$	198.60(4.4), 2022.4(4.2), 79.40(4.2)
541.9 3	0.24 3	$^{184}\text{Pt}(17.3 \text{ m})$	154.90(31), 191.97(27), 548.36(23.1)
• 541.9 5	$2.4 \times 10^{-5} 3$	$^{253}\text{Es}(20.47 \text{ d})$	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
542 2	0.073 7	$^{109}\text{In}(4.2 \text{ h})$	203.5(74), 623.7(5.5), 1148.9(4.3)
542.0 5	0.67 11	$^{148}\text{Ho}(9.59 \text{ s})$	1687.5(82.47), 660.8(58.94), 504.3(18.62)
542.0		$^{154}\text{Tm}(3.30 \text{ s})$	625, 601.3, 560.0
542.00 16	0.43 3	$^{187}\text{Au}(8.4 \text{ m})$	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
542.02 9	$\dagger 11$	$^{197}\text{Ir}(5.8 \text{ m})$	469.72($\dagger 100$), 430.56($\dagger 61$), 815.92($\dagger 45$)
542.04 21		$^{186}\text{Ir}(16.64 \text{ h})$	296.911(64.0), 137.155(42), 434.849(34.4)
542.06 3	0.562 15	$^{151}\text{Nd}(12.44 \text{ m})$	116.80(43.4), 255.68(16.4), 1180.89(14.8)
542.1 2	0.21 6	$^{108}\text{In}(58.0 \text{ m})$	875.46(100), 632.96(100), 242.84(41)
542.16 5	1.05 8	$^{195}\text{Tl}(1.16 \text{ h})$	563.52(10.5), 884.47(10.0), 1363.88(8.4)
542.2 5	0.030 12	$^{89}\text{Kr}(3.15 \text{ m})$	220.948(20.1), 586.03(16.6), 904.27(7.2)
542.21 5	0.260 25	$^{199}\text{Tl}(7.42 \text{ h})$	455.46(12.4), 208.20597(12.3), 247.26(9.3)
542.24 3	0.059 6	$^{155}\text{Dy}(9.9 \text{ h})$	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
542.27 7	32.6 18	$^{79}\text{Ge}(39.0 \text{ s})$	230.62(61), 755(18), 634.00(13)
542.3 22	$\dagger 0.85 9$	$^{185}\text{Hg}(21.6 \text{ s})$	222.8($\dagger 100.0$), 258.7($\dagger 98$), 212.5($\dagger 58$)
• 542.4 4	0.000129 23	$^{75}\text{Se}(119.779 \text{ d})$	264.6584(58.50), 136.0008(58.3), 279.5441(24.79)
542.4 1	$\dagger 1.6 2$	$^{172}\text{Ir}(2.0 \text{ s})$	227.8($\dagger 100.0$), 378.4($\dagger 62.0$), 448.4($\dagger 40.5$)
542.4 4	1.12 22	$^{185}\text{Au}(4.25 \text{ m})$	310.6(13), 243.1(6.6), 77.7(6)
• 542.40 20	0.015 4	$^{195}\text{Hg}(41.6 \text{ h})$	261.75(30.9), 560.27(7), 387.87(2.15)
• 542.474 17	0.004 2	$^{155}\text{Tb}(5.32 \text{ d})$	86.545(32.0), 105.305(25), 180.103(7.45)
542.5 2	0.90 16	$^{126}\text{Ba}(100 \text{ m})$	233.6(19.6), 257.6(7.6), 241.0(6.0)
• 542.5 5	0.017 11	$^{153}\text{Tb}(2.34 \text{ d})$	212.038(31.0), 170.504(6.8), 109.758(6.4)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
542.50 7	0.121 20	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
542.5 6	0.22	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
• 542.57 3	4.5 3	¹⁴⁵ Eu(5.93 d)	893.73(66), 653.512(15.0), 1658.53(14.9)
542.6 5	0.07 3	⁶¹ Fe(5.98 m)	1205.07(44), 1027.42(42.7), 297.90(22.2)
542.6 4	0.9 5	⁹⁷ Y(1.17 s)	1103.0(92.6), 161.4(71.8), 1091(56)
542.6 2	0.60 10	¹²¹ Cs(155 s)	153.9(15.2), 239.6(7.7), 427.1(3.63)
542.6 1	†3.85 24	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
• 542.60 20	0.0028 3	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
542.60 13	†22.5 15	¹⁵⁹ Yb(1.58 m)	166.16(†500), 177.12(†159), 390.20(†113)
542.6 2	1.2	²⁰¹ Au(26 m)	517.0(0.83), 613.2(0.77), 167.43(0.64)
• 542.622 11	1.43 8	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
542.7 6	>0.27	¹⁰⁴ Tc(18.3 m)	358.0(89), 530.5(15.6), 535.1(14.7)
542.7 1		¹¹⁸ Ag(2.0 s)	487.77(57), 677.13(53), 1058.39(14.8)
542.7 3	10.9 3	²⁵¹ Cm(16.8 m)	530.0(1.62), 389.7(1.28), 438.2(1.24)
542.71 15	0.027 3	¹³⁹ Cs(9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
542.776 17	1.6 3	¹⁵¹ Pr(18.90 s)	880.19(13), 189.057(11.8), 484.501(11.3)
542.8 10	1.30 7	⁹⁹ Rh(4.7 h)	340.71(70), 617.8(12.0), 1261.2(11)
542.8	†2.1 3	¹²⁰ I(81.0 m)	560.44(†137), 1523.0(†21.1), 640.85(†17.1)
• 542.82 2	0.073 9	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
542.82 21	†3	¹⁸¹ Pt(51 s)	289.29(†100), 111.97(†100), 230.15(†92)
542.872 20	52 3	¹¹⁶ Sb(60.3 m)	1293.54(100), 972.550(72), 407.351(42)
542.9 5	0.07 3	⁸⁸ Nb(7.8 m)	1057.01(89.3), 1082.53(53.9), 399.41(45.7)
542.9 8	0.041 14	¹⁵⁰ Pm(2.68 h)	333.971(68), 1324.51(17.5), 1165.739(15.8)
542.9		¹⁸² Hg(10.83 s)	129.3(†100), 217.7(†75), 413.5(†53)
542.9 4	0.14 7	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
542.92 5	0.040 5	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
• 542.972 25	0.134 7	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
542.993 2	15	¹⁹⁹ Pt(30.80 m)	493.772(5.59), 317.056(4.95), 185.768(3.32)
543.0 5	0.31 16	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
543.0 4	1.43 15	¹¹³ Rh(2.72 s)	189.7(17.0), 409.3(15.9), 219.6(3.88)
543.0 3	0.60 6	¹¹⁷ Cs(8.4 s)	204.8(15.0), 29.7(9.9), 205.6(6.8)
543.0		¹⁶¹ Er(3.21 h)	826.6(3.0), 211.15(12.2), 592.6(3.7)
543 1	>0.17	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
543.05 9	0.13 13	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
543.10 8	0.71 8	¹²⁵ Cd(0.57 s)	1027.53(25.8), 1173.16(25.1), 736.65(12.6)
543.1 1	0.24	²²⁷ Ra(42.2 m)	27.36(16), 300.07(4.6), 302.65(4.3)
543.14 14	0.0009 4	⁴⁵ Ti(184.8 m)	720.22(0.154), 1408.6(0.085), 1662.4(0.041)
543.18 11	0.08	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
543.2 4	0.29 3	⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
543.2 3	0.29 10	¹¹⁷ Ag(5.34 s)	135.4(48), 386.8(39.9), 298.1(21.1)
543.2 3	2.3	¹³⁶ Te(17.5 s)	2077.9(22), 333.99(19), 578.75(18)
543.2 2	3.0 8	¹⁴⁵ Ho(2.4 s)	339.8(15), 312.9(14.3), 334.1(13.5)
• 543.24	>0.0006	¹⁷³ Lu(1.37 y)	272.105(21.2), 78.63(11.87), 100.724(5.24)
543.3 2	2.31 16	¹⁰¹ Ag(11.1 m)	261.0(53), 588.0(10.0), 667.3(9.8)
• 543.3 5	2.9 4	¹²⁷ Sb(3.85 d)	685.7(37), 473.0(25.7), 783.7(15.0)
543.30 6	0.107 13	¹⁶² Tb(7.60 m)	260.070(37.2), 807.53(42.8), 888.20(38.7)
543.3 7	†3.8 9	¹⁹³ Tl(21.6 m)	324.37(†100), 1044.7(†59), 676.10(†48)
543.31 12	0.2997 22	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
543.4 5	4.2 4	⁹⁰ Tc(49.2 s)	1054.3(100), 948.1(100), 944.7(36.6)
543.4	0.034	⁹⁵ Sr(23.90 s)	685.6(23), 2717.3(4.6), 2933.1(4.1)
543.4 3	†3.78 23	²⁰¹ Po(15.3 m)	890.1(†100), 240.1(†71.0), 904.2(†54.8)
543.40 5	0.09 4	²¹⁴ Bi(19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
543.44 3	0.13 13	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
543.5 1	0.0110 17	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: $E_{\gamma}(I_{\gamma})$
543.5 5	0.12 6	¹³³ Te(12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
543.50 15	0.27 5	¹⁵⁶ Tm(83.8 s)	344.55(86), 452.85(17.2), 585.93(14.6)
543.5 5	<0.00024	²⁵⁵ Fm(20.07 h)	81.477(0.81), 58.477(0.67), 80.92(0.27)
543.51 9	0.020 5	¹⁵⁹ Ho(33.05 m)	121.012(36.2), 131.973(23.6), 309.594(17.2)
543.58 26	0.087 16	¹⁶⁴ Yb(75.8 m)	40.928(1.147), 675.41(0.38), 390.6(0.31)
543.6 10	0.045 20	⁹⁰ Rb(158 s)	831.69(28), 1060.70(6.69), 4365.90(5.6)
543.6 2	†29 3	¹³⁰ Sn(1.7 m)	144.9(†100), 899.2(†49), 84.7(†42)
543.62 6	0.42 3	¹⁰⁰ Nb(1.5 s)	535.60(45.7), 528.24(9.1), 159.547(8.8)
543.62 6	6.3 14	¹⁰⁰ Nb(2.99 s)	535.60(97.0), 600.5(65.0), 1280.6(23.8)
543.68 6	0.24 10	²³⁷ Pa(8.7 m)	853.6(34), 865.1(15.5), 529.26(14.9)
543.69 3	0.0731 21	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
543.7 2	0.139 14	⁷⁹ Rb(22.9 m)	688.1(23), 182.77(19.2), 143.41(13.9)
543.7	0.14	¹⁴⁷ Ce(56.4 s)	268.80(7), 92.9(4.7), 374.23(3.5)
543.7 2	†4.6 5	¹⁵² Tb(17.5 h)	344.281(†1500), 586.294(†223), 271.135(†203)
543.8 2	0.40 5	¹¹⁷ Xe(61 s)	28.5(7.0), 221.3(10.0), 32.3(7.6)
543.8 1	0.023 3	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
543.8 1	0.134 21	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
543.83 10	0.54 3	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
543.9 1	3.8 3	¹¹⁹ Ag(2.1 s)	626.4(13), 366.2(12.1), 399.1(10.9)
543.9 2	†0.16 5	¹⁵⁸ Ho(11.3 m)	218.21(†100.0), 98.91(†70), 945.7(†37)
543.9 2	5.7 6	¹⁹⁰ Tl(3.7 m)	416.4(91), 625.4(82), 731.1(37)
543.93 25	0.033 7	¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
543.93 6	0.033 7	¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
543.95 12	†3.2 3	¹⁶⁵ Lu(10.74 m)	132.49(†100), 120.60(†100), 174.25(†47.0)
543.98 10	†3.59×10 ³ 17	²³⁴ Pa(1.17 m)	1001.03(†837000), 766.38(†294000), 742.81(†80000)
544.0 3	†3 1	¹³⁶ Eu(3.3 s)	254.9(†100), 431.4(†34), 458.0(†20)
544.0 1	0.052 5	¹⁴¹ Pm(20.90 m)	1223.26(4.74), 886.22(2.44), 193.68(1.61)
544.0	0.018 10	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
544.0	0.28 4	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
544.0 3	0.04 2	²¹⁴ Pb(26.8 m)	351.921(35.8), 295.213(18.5), 241.981(7.50)
544.1 2	0.16 4	¹⁰⁸ In(58.0 m)	875.46(100), 632.96(100), 242.84(41)
544.1 2	†0.91 8	¹⁹² Tl(9.6 m)	422.8(†100), 634.8(†75.9), 786.3(†31.7)
544.2 2	†55	¹³⁸ Eu(12.1 s)	346.6(†100), 685.4(†41), 399.0(†23)
544.2 2	5.0	¹⁴⁵ Ba(4.31 s)	96.6(17), 91.9(7), 65.9(5)
544.2 2	>5.0	¹⁴⁵ Ba(4.31 s)	96.6(17), 91.9(7), 65.9(5)
544.2 3	0.29 3	¹⁸⁸ Hg(3.25 m)	66.7(63), 190.1(4.40), 82.7(2.6)
• 544.24 5	0.829 22	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
• 544.27 6	0.00248 12	¹⁴⁹ Pm(53.08 h)	285.95(3.1), 859.46(0.109), 590.88(0.069)
544.29 4	0.15 3	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
544.3 1	4.5 18	¹⁴¹ Gd(24.5 s)	351.1(89), 223.9(64), 574.9(51)
544.3	0.026 9	¹⁴⁹ Tb(4.118 h)	352.24(29.43), 164.98(26.4), 388.57(18.37)
• 544.318 8	0.06 3	²⁰⁰ Tl(26.1 h)	367.943(87), 1205.717(29.9), 579.298(13.8)
• 544.39 7	0.036 14	²⁰⁶ Po(8.8 d)	1032.26(32.9), 511.36(24.1), 286.410(23.8)
544.4		⁹⁶ Tc(51.5 m)	778.224(1.9), 1200.231(1.08), 480.705(0.311)
544.4 4	0.35 9	¹⁰³ Cd(7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
• 544.4 6	0.025 9	¹⁹⁴ Au(38.02 h)	328.455(60), 293.545(10.2), 1468.91(6.3)
544.41 4	1.213 15	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
• 544.44 2	0.88 8	²⁵⁴ Es(39.3 h)	648.80(28.4), 693.79(24.3), 688.68(12.3)
544.49 13	0.092 14	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
544.5 4	0.09 3	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
544.5 1	16.2 16	¹³⁰ La(8.7 m)	357.4(81.0), 550.7(25.9), 908.0(17.0)
544.5 5	0.019 9	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
• 544.55 5	0.0207 9	¹¹⁰ Ag(249.79 d)	657.7622(94.0), 884.685(72.2), 937.493(34.13)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
544.58 6	0.0034	$^{239}\text{U}(23.45 \text{ m})$	74.664(48), 43.533(4.14), 662.24(0.18)
• 544.58 6		$^{243}\text{Am}(7370 \text{ y})$	74.664(68), 43.533(5.93), 117.84(0.57)
544.61 16	0.062 10	$^{151}\text{Nd}(12.44 \text{ m})$	116.80(43.4), 255.68(16.4), 1180.89(14.8)
• 544.70 20	6.0×10^{-5}	$^{115}\text{Cd}(44.6 \text{ d})$	933.8(2.000), 1290.580(0.890), 484.470(0.290)
• 544.70 20	2.0×10^{-5}	$^{115}\text{Cd}(44.6 \text{ d})$	933.8(2.000), 1290.580(0.890), 484.470(0.290)
544.7 3	17.9 9	$^{129}\text{Sb}(4.40 \text{ h})$	812.8(43), 914.6(20.0), 1030.1(12.6)
544.7 3		$^{129}\text{Sb}(17.7 \text{ m})$	759.8(\dagger 100.0), 657.78(\dagger 92), 433.76(\dagger 73)
544.7		$^{131}\text{La}(59 \text{ m})$	108.081(25.0), 417.783(18.0), 365.162(16.9)
544.7 4	0.07 3	$^{185}\text{Au}(4.25 \text{ m})$	310.6(13), 243.1(6.6), 77.7(6)
544.73 20	0.29 10	$^{181}\text{Re}(19.9 \text{ h})$	365.57(56), 360.70(20), 639.30(6.4)
544.76 6	0.53 6	$^{153}\text{Dy}(6.4 \text{ h})$	80.723(11.10), 213.754(10.90), 99.659(10.51)
544.8 5	0.9 4	$^{97}\text{Y}(3.75 \text{ s})$	3287.6(18.1), 3401.3(14.1), 1996.6(7.4)
544.8 3	3.38 16	$^{109}\text{Sb}(17.0 \text{ s})$	925.4(32), 1062.8(23.9), 664.5(20.1)
544.8 4	0.25 12	$^{122}\text{In}(10.3 \text{ s})$	1140.55(98), 1001.58(50.7), 1190.58(20.5)
• 544.82 20	0.0056 12	$^{172}\text{Tm}(63.6 \text{ h})$	78.7435(6.5), 1093.657(6.0), 1387.093(5.6)
544.87 53	0.09 4	$^{141}\text{Xe}(1.73 \text{ s})$	909.23(24.0), 118.705(16.1), 105.937(9.8)
544.88 1	0.426 14	$^{131}\text{Te}(25.0 \text{ m})$	149.716(69), 452.323(18.18), 1146.96(4.95)
544.89 3	5.77 23	$^{189}\text{Pt}(10.87 \text{ h})$	721.41(9.3), 94.33(7.6), 568.84(7.1)
544.9	0.14	$^{185}\text{Ir}(14.4 \text{ h})$	254.4(13.3), 1828.8(10), 60.0(5.7)
544.9 3	\dagger 0.016 2	$^{213}\text{Bi}(45.59 \text{ m})$	323.81(\dagger 0.16), 868.0(\dagger 0.012)
545 5	0.0059 4	$^{61}\text{Cu}(3.333 \text{ h})$	282.956(12.2), 656.008(10.77), 67.412(4.23)
545.00 20	0.014 5	$^{105}\text{Cd}(55.5 \text{ m})$	961.84(4.69), 346.870(4.20), 1302.459(3.98)
545.0 4	0.16 8	$^{117}\text{Cd}(3.36 \text{ h})$	1997.33(26), 1065.98(23.1), 564.397(14.7)
545.0 1	91	$^{209}\text{At}(5.41 \text{ h})$	781.9(83.5), 790.2(63.5), 195.0(22.6)
545.06 5	6.0 3	$^{101}\text{Tc}(14.22 \text{ m})$	306.85(88), 127.23(2.86), 184.10(1.69)
• 545.06 5	\dagger 6.1 7	$^{101}\text{Rh}(4.34 \text{ d})$	306.85(\dagger 115), 127.23(\dagger 0.85), 179.62(\dagger 0.77)
545.1 3	0.38 5	$^{118}\text{Cs}(14 \text{ s})$	337.4(100), 472.8(37.4), 586.6(15.4)
545.1 3	\dagger 2.9	$^{191}\text{Tl}(5.22 \text{ m})$	452.6(\dagger 100), 470.1(\dagger 98), 391.6(\dagger 96)
• 545.1 3	2.3×10^{-6} 2	$^{233}\text{U}(1.592 \times 10^5 \text{ y})$	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
545.12 3	10.9 16	$^{118}\text{I}(13.7 \text{ m})$	605.71(86.0), 600.71(10.2), 1338.7(8.4)
545.12 3	2.3 3	$^{118}\text{I}(8.5 \text{ m})$	605.71(99), 600.71(92), 614.42(65)
545.12 11	0.134 12	$^{197}\text{Tl}(2.84 \text{ h})$	425.84(12.9), 152.22(7.2), 1411.34(4.5)
545.2 3	\dagger 1.5 3	$^{120}\text{Cs}(64 \text{ s})$	322.4(\dagger 100), 473.5(\dagger 30), 553.4(\dagger 19.1)
545.2 5	0.13 3	$^{175}\text{Ta}(10.5 \text{ h})$	207.4(14.0), 348.5(12.0), 266.9(10.8)
545.2 2	\dagger 5.7 5	$^{185}\text{Hg}(21.6 \text{ s})$	222.8(\dagger 100.0), 258.7(\dagger 98), 212.5(\dagger 58)
545.2 10	0.046 17	$^{192}\text{Au}(4.94 \text{ h})$	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
545.23 15	1.14 6	$^{77}\text{Rb}(3.75 \text{ m})$	66.52(57), 178.99(22.2), 393.37(9.7)
545.24 20	0.057 8	$^{165}\text{Yb}(9.9 \text{ m})$	80.11(49), 68.86(9.1), 1090.28(4.4)
545.29 6	1.69 25	$^{163}\text{Tb}(19.5 \text{ m})$	351.138(26), 389.734(24.3), 494.534(23)
545.29 12	0.20 5	$^{197}\text{Pb}(43 \text{ m})$	385.85(74), 387.72(25.1), 222.45(24.6)
545.300 13	3.02 11	$^{78}\text{As}(90.7 \text{ m})$	613.725(54), 694.916(16.7), 1308.59(13.0)
545.3 1	0.59 8	$^{143}\text{Gd}(112 \text{ s})$	271.94(84), 588.00(15.7), 798.89(10.7)
545.4 3	0.33 6	$^{83}\text{Y}(7.08 \text{ m})$	35.50(0.44), 882.1(6.30), 489.90(5.53)
545.4 3	2.61 22	$^{123}\text{Cd}(2.10 \text{ s})$	371.32(51), 1052.28(24.8), 1438.13(8.3)
545.4 4	2.33 23	$^{127}\text{Sn}(2.10 \text{ h})$	1114.3(39), 1095.6(20), 823.1(10.9)
545.40 16	0.13 4	$^{162}\text{Yb}(18.87 \text{ m})$	163.35(40.0), 118.70(33.6), 576.10(3.24)
545.4 5	0.14 3	$^{167}\text{Lu}(51.5 \text{ m})$	29.66(14.4), 239.22(8.6), 213.19(3.6)
545.4 1	\dagger 3.0 20	$^{172}\text{Ir}(2.0 \text{ s})$	227.8(\dagger 100.0), 378.4(\dagger 62.0), 448.4(\dagger 40.5)
545.4 4	0.00033 15	$^{223}\text{Fr}(21.8 \text{ m})$	50.13(36.0), 79.72(9.1), 234.81(3.0)
• 545.4 3	$\dagger 7 \times 10^{03}$	$^{241}\text{Am}(432.2 \text{ y})$	59.537(\dagger 60), 26.345(\dagger 1000 $\times 10^9$), 33.195(\dagger 6000 $\times 10^8$)
545.5 5	0.064 18	$^{74}\text{Ga}(8.12 \text{ m})$	595.847(91), 2353.46(44.5), 608.353(14.3)
545.5 1	0.0044 6	$^{127}\text{Cs}(6.25 \text{ h})$	411.95(62.8), 124.70(11.37), 462.31(5.07)
545.5	\dagger 20	$^{148}\text{Cs}(158 \text{ ms})$	141.7(\dagger 100), 687.2(\dagger 23), 633.2(\dagger 19)
545.5	0.009	$^{149}\text{Nd}(1.728 \text{ h})$	211.309(25.9), 114.314(19.2), 270.166(10.7)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
545.50 17	4.5 5	²⁰⁰ Bi(36.4 m)	1026.5(100), 462.34(98), 419.70(91)
545.51 3	26.0 13	⁷⁶ Ga(32.6 s)	562.93(66), 1108.41(15.8), 431.0(9.2)
• 545.54 2	0.367 23	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
545.6 5	1.5 3	¹⁹¹ Hg(50.8 m)	252.5(57), 420.1(18.6), 578.6(17.6)
545.7		⁹⁹ Y(1.470 s)	121.761(33), 724.30(14.9), 536.2(6.6)
545.7 5	†6 3	¹⁰⁶ Nb(1.02 s)	171.548(†100), 350.70(†39), 714.00(†30)
545.7	0.30	¹⁴⁷ Ba(0.893 s)	167.4(11), 105.2(4.8), 196.1(4.8)
545.7	0.57 21	¹⁵⁴ Tb(22.7 h)	247.925(79), 346.643(69), 1419.81(46)
545.7 5	†16.0 20	¹⁷² W(6.6 m)	38.9(†100), 423.3(†44), 89.8(†33.0)
545.7 5	†0.63 10	¹⁸² Ir(15 m)	273.23(†100), 126.79(†77), 236.3(†21.0)
545.74 11	0.22 4	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
• 545.75 15	0.00105 11	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
545.8 2	4.6	¹⁹⁹ Po(5.48 m)	246.0(28), 845.7(23), 206.7(5.1)
545.81 7	0.39 3	⁹³ Sr(7.423 m)	590.238(67), 875.73(24.1), 888.13(21.8)
545.834 20	0.162 5	¹⁶⁵ Dy(2.334 h)	94.700(3.58), 361.68(0.84), 633.415(0.568)
545.89 6	0.230 14	⁵⁹ Cu(81.5 s)	1301.46(14.78), 877.97(11.40), 339.411(7.97)
545.9	†0.83 8	¹³⁵ Pm(49 s)	198.5(†100), 207.2(†70), 463.5(†62)
545.9	2.30 10	¹⁵⁰ Pr(6.19 s)	130.2(32), 722.5(7.0), 852.7(6.1)
545.9 3	0.47 7	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
545.9 2	†85 5	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
545.91 21	0.32 3	⁷⁰ Se(41.1 m)	49.51(35.8), 426.15(29), 376.65(9.43)
545.96 11	0.41 4	⁹¹ Kr(8.57 s)	108.788(43.5), 506.592(19.1), 612.87(7.7)
546.0 5	1.5 8	¹²⁰ In(46.2 s)	1171.3(96), 1023.1(55), 863.7(32.5)
546.00 3	0.652 25	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
546.0 2	>0.047	¹⁴² La(91.1 m)	641.285(47), 2397.8(13.3), 2542.7(10.00)
546.0 2	†0.32	¹⁶⁰ Ho(5.02 h)	728.18(†100), 879.383(†65.9), 962.317(†59.1)
546.0 10	0.51 17	¹⁹¹ Hg(50.8 m)	252.5(57), 420.1(18.6), 578.6(17.6)
546		²¹¹ Pb(36.1 m)	404.853(3.78), 832.01(3.52), 427.088(1.76)
• 546.082 14	0.0144 14	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
546.082 14	0.10 4	¹⁵⁴ Tb(9.4 h)	123.071(30), 247.925(22.1), 540.18(20)
546.082 14		¹⁵⁴ Tb(22.7 h)	247.925(79), 346.643(69), 1419.81(46)
546.1 5	0.17 4	⁸⁸ Nb(14.5 m)	1082.53(103), 1057.01(100), 671.20(64)
546.13 3	48.6 15	⁹⁹ Zr(2.1 s)	469.140(55), 593.990(27.4), 461.70(11.0)
• 546.16 22	1.5×10^{-6} 4	¹⁶⁹ Yb(32.026 d)	63.12077(44.2), 197.95788(35.8), 177.21402(22.16)
546.2 2	0.0093 17	¹²¹ I(2.12 h)	212.189(84), 532.08(6.07), 598.74(1.47)
546.20 14	0.74 4	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
546.25 17	0.337 25	¹⁵⁹ Ho(33.05 m)	121.012(36.2), 131.973(23.6), 309.594(17.2)
• 546.28 9	0.0035 3	¹³¹ Ba(11.50 d)	496.326(47), 123.805(28.97), 216.078(19.66)
546.29 3	0.51 3	¹³³ Te(12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
546.290 22	0.98 6	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
546.29 9	0.269 16	²⁰¹ Pb(9.33 h)	331.19(79), 361.27(9.9), 945.96(7.4)
546.31 10	14.3 4	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 176.40(10.60)
546.4 4	0.35 9	¹⁰³ Cd(7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
546.4 1	†11.6 4	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
546.4 3	0.11 4	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
546.4		¹⁵⁷ Lu(5.0 s)	967.5, 949.8, 880.5
546.4 2	0.19	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
546.40 23	0.0012 5	¹⁹⁵ Hg(9.9 h)	779.80(7), 61.46(6.2), 585.13(1.99)
546.448 20	0.207 13	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
546.448 20	0.038 19	²²⁸ Pa(22 h)	911.205(4.19), 463.005(1.250), 964.770(4.25)
• 546.448 20	1.0×10^{-6} 6	²³² U(68.9 y)	57.762(0.200), 129.065(0.0686), 270.243(0.00316)
546.5 10	6.4 21	³³ Na(8.2 ms)	1242.6(4.2), 704.3(3.7), 484.9(2.2)
546.5 5	0.163 22	⁷⁶ Br(16.2 h)	559.101(74), 657.041(15.9), 1853.67(14.7)
546.5 3	0.13 3	⁹⁷ Rb(169.9 ms)	167.1(26), 585.2(21.0), 600.5(10.6)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
546.5 2	0.34 14	¹¹⁷ Ag(5.34 s)	135.4(48), 386.8(39.9), 298.1(21.1)
546.5 2	14.2 13	¹⁴⁰ Gd(15.8 s)	174.8(76), 749.9(70), 379.0(38)
546.5 4	0.53 3	¹⁴³ Gd(39 s)	258.81(75), 204.77(19.4), 463.7(9.9)
546.5	0.009	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
546.5	†2.7	¹⁹⁸ Bi(693 s)	1063.5(†100), 197.6(†80), 562.4(†79)
546.53 10	0.5	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
546.557 16	7.20 9	¹³⁵ I(6.57 h)	1260.409(28.90), 1131.511(22.74), 1678.027(9.62)
546.6 3	0.016 3	⁸⁵ Br(2.90 m)	802.41(2.56), 924.63(1.63), 919.06(0.65)
546.66 6	14.5	¹⁵⁴ Pm(2.68 m)	184.810(32), 81.99(15.4), 1440.24(12.2)
546.7 2	1.19 5	⁸⁵ Y(4.86 h)	231.67(22.8), 2123.8(5.0), 767.40(3.6)
546.7 4	0.042 9	¹⁰³ Ag(65.7 m)	118.72(31.2), 148.193(28.3), 266.86(13.3)
546.7 10	0.14	¹¹¹ Sb(75 s)	154.48(71), 489.1(42), 1032.6(10.0)
• 546.7 2	0.051 10	¹³¹ Te(30 h)	773.67(49.9), 852.21(27.0), 793.75(18.10)
546.7	4.5	¹⁴⁰ I(0.86 s)	376.657(91), 457.630(59), 936.7(16)
• 546.7 5	0.00087 20	²³¹ Pa(32760 y)	27.36(10.3), 300.07(2.46), 302.65(2.2)
546.77 11		²⁰² Bi(1.72 h)	960.67(99), 422.18(83.7), 657.49(60.6)
546.8 8	9.3 6	⁹⁰ Tc(49.2 s)	1054.3(100), 948.1(100), 944.7(36.6)
546.8 4	0.15 8	¹¹⁷ Cs(8.4 s)	204.8(15.0), 29.7(9.9), 205.6(6.8)
546.802 5	0.159 17	¹⁶⁸ Ho(2.99 m)	741.356(36.6), 821.164(34.5), 815.990(18.6)
• 546.802 5	2.552 21	¹⁶⁸ Tm(93.1 d)	198.241(52.39), 815.990(48.99), 447.515(23.05)
546.86 8	0.227 20	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
546.86 27	†15 3	¹⁶⁴ Tm(2.0 m)	91.40(†1500), 1154.66(†366), 768.91(†279)
546.894 12	0.0304 14	¹⁷³ Hf(23.6 h)	123.672(83), 296.974(33.9), 139.634(12.7)
546.9 5	0.030 12	⁸⁹ Kr(3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
546.90 20	42.4 15	¹¹⁰ Rh(28.5 s)	373.80(91), 687.70(25.8), 838.22(25)
546.90 15	0.38	¹³⁷ Nd(38.5 m)	75.5(17.0), 580.6(13), 306.60(10.0)
546.9 3	0.084 12	¹⁶⁴ Yb(75.8 m)	40.928(1.147), 675.41(0.38), 390.6(0.31)
546.9 7	0.46 4	¹⁹⁹ Bi(27 m)	560.1(22.0), 424.85(22), 841.7(11)
546.9 4	0.280 14	²³³ Np(36.2 m)	312.17(0.7), 298.89(0.44), 506.5(0.154)
546.97	0.17	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
547.00 8	0.368 25	¹¹¹ Pd(23.4 m)	580.00(0.8), 70.44(0.78), 1459.0(0.56)
547.0 3	2.8 3	¹⁴⁷ Tb(1.7 h)	1152.4(100), 694.4(43), 139.9(27.46)
547.0 3	†0.8 3	¹⁷¹ Hf(12.1 h)	122.0(†100), 662.2(†83), 347.18(†47)
547.0 4	0.46 9	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
547.0 2	0.33 9	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
547	†20	²²³ Rn(23.2 m)	591.8(†100), 635.2(†76), 416.0(†55)
547.001 5	10.76 23	¹³⁸ Cs(33.41 m)	1435.795(76.3), 462.796(30.7), 1009.78(29.8)
547.04 25	0.0053 13	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
547.06 2	4.67 8	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
547.1 3	0.28 6	⁸³ Y(7.08 m)	35.50(0.44), 882.1(6.30), 489.90(5.53)
547.1 5	0.0010 5	¹⁴¹ La(3.92 h)	1354.52(1.64), 1693.3(0.074), 2267.0(0.0413)
547.1	0.016 8	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
547.1 4	0.032 7	²¹⁴ Bi(19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
• 547.17 7	0.00161 12	¹⁴⁹ Pm(53.08 h)	285.95(3.1), 859.46(0.109), 590.88(0.069)
547.17 7	4.44 25	¹⁶⁴ Tm(5.1 m)	208.08(14.6), 314.97(10), 240.49(7.5)
547.2 2	1.14 8	¹³² I(2.295 h)	667.718(99), 772.60(75.6), 954.55(17.6)
547.20 7	0.24	¹³⁷ I(24.5 s)	1218.00(12.8), 601.05(4.80), 1302.64(4.42)
547.2	†40	²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
547.21 31	0.040 14	¹⁹⁷ Tl(2.84 h)	425.84(12.9), 152.22(7.2), 1411.34(4.5)
• 547.25 15	0.0385 18	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
547.3	†1.5	¹³¹ Pr(1.53 m)	266.13(†100), 72.82(†64), 387.56(†38)
• 547.3 3	0.30 5	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
547.32 70	0.12 3	¹⁶³ Yb(11.05 m)	860.28(10.1), 63.62(6.5), 123.21(1.98)
547.34 5	0.67 4	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: $E_{\gamma}(I_{\gamma})$
547.35 8	0.0095 12	¹⁵² Eu(9.274 h)	841.586(14.6), 963.37(12.01), 121.7824(7.21)
547.37 7	2.0 3	¹⁰⁰ Y(735 ms)	212.531(73), 118.59(15.4), 665.98(7.7)
547.4	0.010 5	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
547.4 1	†100	¹⁵³ Yb(4.2 s)	674.1(†61), 369.6(†32), 908.8(†25)
547.4 3	†1.6 3	¹⁶⁹ Ta(4.9 m)	511.0(†20.6), 28.80(†18.3), 192.4(†8)
547.43 3	0.0125 21	¹⁶⁷ Yb(17.5 m)	113.34(55.3), 106.18(22.5), 176.25(21)
547.43 6	0.38 8	¹⁹³ Hg(11.8 h)	257.97(61), 407.63(25), 573.25(14.2)
547.5 2	0.9 4	⁹⁸ Y(0.548 s)	1223.0(36.0), 2941.3(16.7), 1590.9(14.7)
547.5 1	5.23 26	¹³⁸ Pr(2.12 h)	1037.8(101), 788.742(100), 302.7(80)
547.5 2	†1.7 3	¹⁵² Tb(17.5 h)	344.281(†1500), 586.294(†223), 271.135(†203)
547.5 6	0.13 3	²²⁸ Pa(22 h)	911.205(4.19), 463.005(1.250), 964.770(4.25)
547.51 35	0.41 9	¹⁷⁴ W(31 m)	35.42(14.1), 428.83(12.7), 328.68(9.5)
• 547.54	>0.00029	¹⁷² Er(49.3 h)	610.062(44.2), 407.338(42.1), 68.107(3.29)
547.6 3	2.7 3	⁹⁸ Sr(0.653 s)	119.353(73), 444.628(39), 428.4(31)
547.69 21	†6.7 11	¹⁴² Xe(1.22 s)	571.83(†100), 657.05(†79), 538.24(†77)
547.7 1	20	⁵¹ Ca(10.0 s)	861.6(35), 1394.0(27), 1167.5(23)
547.7 5	†5.7 5	¹⁰³ Mo(67.5 s)	83.4(†100), 423.91(†69), 45.8(†57)
547.7 1	2.36 18	¹³⁹ Nd(5.50 h)	113.94(40), 737.96(35), 982.2(26.4)
547.80 30	0.27 4	¹¹⁵ Ag(20.0 m)	229.08(18), 212.80(4.4), 472.70(4.0)
547.8 5	0.017 4	¹⁷¹ Er(7.516 h)	308.31(64.4), 295.901(28.9), 111.621(20.5)
547.80 19	0.10	¹⁸⁶ Ta(10.5 m)	197.93(50), 214.87(42.3), 510.82(37.5)
547.84 10	1.14 8	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
547.87 15	0.112 14	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
547.9 4	0.113 13	¹²¹ Xe(40.1 m)	252.7(13), 132.8(10.9), 445.2(7.7)
547.9 3	0.690 18	¹⁷² Ta(36.8 m)	214.02(46), 95.23(17.5), 1109.27(12.4)
547.9 4	†31 8	¹⁸⁰ Yb(2.4 m)	172.9(†100), 375.0(†87), 419.8(†56)
547.93 12	†11.8 12	¹³¹ Ce(10.3 m)	169.42(†100), 414.25(†68), 119.18(†44)
547.96 14	0.087 13	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
548		¹¹⁰ Rh(28.5 s)	373.80(91), 546.90(42.4), 687.70(25.8)
548.0 1	0.0031 6	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
548.0 2	0.152 5	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
548 1	†12	¹⁷⁸ Os(5.0 m)	968.7(†100), 1331.1(†94), 594.6(†72)
548.0 3	0.33 3	²³⁰ Fr(19.1 s)	711.0(13.6), 129.1(11.0), 728.4(7.3)
• 548	0.008	²⁵² Es(471.7 d)	52.33(0.55), 64.42(0.274), 418.5(0.220)
548.1 3	0.58 8	¹⁴⁹ Dy(4.20 m)	100.8(15.2), 789.4(11.8), 1776.3(11.1)
548.1 3	†6	¹⁷⁷ Os(2.8 m)	84.7(†100), 125.4(†63), 195.8(†61)
548.1 3	0.028 9	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
548.1 10	0.14 3	²⁰¹ Bi(108 m)	629.1(24.0), 936.2(11.3), 1014.1(10.7)
548.10 9	0.0020	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
548.3 4	0.19 4	⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
548.3 1	14.0 8	⁹² Kr(1.840 s)	142.307(64), 1218.6(60), 812.6(14.6)
548.3 3	0.018 5	¹⁸³ Os(13.0 h)	381.768(89.6), 114.463(20.63), 167.844(8.81)
548.35 11	15.3 8	⁶² Zn(9.186 h)	596.56(26), 40.84(25.5), 507.60(14.8)
548.36 10	23.1 24	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 70.75(22.6)
548.4 6	0.50 22	¹⁰⁴ In(1.8 m)	658.0(100), 834.1(99), 878.1(29.4)
548.4	0.06	¹⁴⁷ Ba(0.893 s)	167.4(11), 105.2(4.8), 196.1(4.8)
• 548.40 11	0.124 12	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
548.4 7	0.10 3	¹⁵⁶ Ho(56 m)	266.35(54.7), 137.83(51), 366.25(10.73)
548.4 8	†1.7 9	¹⁶⁰ Tm(9.4 m)	125.8(†100), 728.5(†37), 264.1(†27)
548.4 4	0.13 3	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
548.4 3	0.037 9	¹⁹⁷ Tl(2.84 h)	425.84(12.9), 152.22(7.2), 1411.34(4.5)
548.5 1	0.35	¹¹³ Ag(68.7 s)	316.3(18), 392.3(11), 298.58(10)
548.54 20	8.5 6	¹⁶⁴ Tb(3.0 m)	168.838(25.4), 754.80(23.3), 215.07(21)
• 548.546 25	0.342 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: $E_\gamma(I_\gamma)$
548.59 11	0.041 14	¹⁵⁰ Pm(2.68 h)	333.971(68), 1324.51(17.5), 1165.739(15.8)
548.62 9	0.0270 25	¹²¹ I(2.12 h)	212.189(84), 532.08(6.07), 598.74(1.47)
548.65 5	0.56 3	⁸¹ Sr(22.3 m)	153.54(33.8), 147.76(30.1), 443.34(17.5)
548.70 17	0.65 7	⁷⁹ Rb(22.9 m)	688.1(23), 182.77(19.2), 143.41(13.9)
548.7 3	1.65 9	⁹¹ Tc(3.14 m)	2450.90(13.5), 1639.90(9.2), 1605.20(7.77)
548.70 20	3.6 6	¹¹⁵ Te(6.7 m)	770.40(34.2), 723.569(18), 1071.70(12.9)
548.7 3	0.65 12	¹²⁶ Ba(100 m)	233.6(19.6), 257.6(7.6), 241.0(6.0)
548.73 15	0.024 4	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
548.78 13	0.49 3	⁹⁹ Nb(2.6 m)	97.785(7), 253.50(3.64), 2641.3(3.64)
548.8 3	0.21 5	¹²¹ Cs(122 s)	179.4(30.2), 196.0(24.1), 459.7(12.0)
548.8 3	3.96 7	¹³⁷ Pm(2.4 m)	177.5(40.29), 108.6(35), 233.6(29.57)
548.83 6	0.44 7	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
• 548.945 8	3.40 3	¹²⁹ Cs(32.06 h)	371.918(30.60), 411.490(22.31), 39.578(2.97)
548.96 30	0.21 4	¹²⁴ In(3.17 s)	1131.64(68), 3214.15(21.5), 997.79(21.1)
548.96 30	1.20 20	¹²⁴ In(2.4 s)	1131.64(100), 969.94(52), 1072.85(47)
548.99 2	1.15 18	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
549.0 2	†4.61 27	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
549.0 3	0.17 4	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
549 1	2.1 5	¹⁹¹ Hg(50.8 m)	252.5(57), 420.1(18.6), 578.6(17.6)
549.0 1	0.787 11	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
549.0 5	0.5 4	¹⁹⁵ Pb(15.0 m)	383.64(106.9), 394.21(44), 878.40(24.2)
549.02 4	0.471 14	⁸¹ Rb(4.576 h)	190.38(64.0), 446.15(23.2), 510.31(5.3)
549.02 4	0.106 7	⁸¹ Rb(30.5 m)	49.56(0.78), 643.6(0.115), 1194.9(0.112)
549.02 4	0.062 6	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
549.08 8	2.75 17	⁴⁵ Ar(21.48 s)	1020.04(34.0), 3703.2(33.3), 61.35(25.0)
549.1	0.46	⁴³ Ar(5.37 m)	975.0(34), 738.1(15), 1439.5(13)
549.10 20	1.5 3	¹⁰² Zr(2.9 s)	599.60(13.9), 535.30(10.6), 64.50(8.9)
549.1 3	0.25 5	¹²⁷ In(1.09 s)	1597.7(49), 646.1(6.2), 805.1(5.6)
549.1 1	2.7 3	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
549.1 3	5.1 14	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
• 549.2 5	0.07 6	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
549.2 5	†0.80 10	¹⁸² Ir(15 m)	273.23(†100), 126.79(†77), 236.3(†21.0)
549.2 1	0.32 9	²³⁶ Th(37.5 m)	110.8(4.2), 646.6(0.72), 196.0(0.69)
549.2 6	0.034 17	²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
549.23 7	2.31 20	¹³² Sn(39.7 s)	340.53(49), 85.58(48.2), 899.04(44.8)
549.3 3	0.34 15	¹²⁵ Cd(0.57 s)	1027.53(25.8), 1173.16(25.1), 736.65(12.6)
549.3 4	†1.1 3	¹⁵⁵ Tm(21.6 s)	226.8(†100), 531.7(†20), 88.1(†17)
549.30 20	0.28 7	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
549.34 12	0.049 10	⁹⁷ Nb(72.1 m)	658.08(98), 1024.49(1.09), 1268.68(0.148)
• 549.34 12	0.016 3	¹⁴⁵ Eu(5.93 d)	893.73(66), 653.512(15.0), 1658.53(14.9)
549.36 7	0.030 5	²⁴⁹ Cm(64.15 m)	634.31(1.5), 560.45(0.84), 368.76(0.35)
• 549.36 7	3.2×10 ⁻⁵	²⁵³ Es(20.47 d)	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
549.4	†8.0	¹⁰⁷ Mo(3.5 s)	400.3(†100), 65.7(†>92), 384.4(†57.6)
549.4 2	0.31 5	¹⁶¹ Er(3.21 h)	826.6(3.0), 211.15(12.2), 592.6(3.7)
• 549.40 10	0.050 5	¹⁹⁵ Hg(41.6 h)	261.75(30.9), 560.27(7), 387.87(2.15)
549.5 2	0.54 7	¹²⁹ La(11.6 m)	278.6(25), 110.5(16.9), 457.0(8.0)
549.5 8	0.07 3	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
549.6 4	0.35 5	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
549.6 2	0.37 11	¹⁷³ Ta(3.14 h)	172.2(18), 69.70(5.9), 90.3(5.0)
• 549.6 1	0.0060 5	¹⁷⁷ Ta(56.56 h)	112.9498(7.2), 208.3664(0.94), 1057.8(0.29)
549.6 3	0.18 3	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
549.643 14	0.958 21	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
549.69 22	0.29 3	⁷⁰ Se(41.1 m)	49.51(35.8), 426.15(29), 376.65(9.43)
549.73 22	†5.8 13	¹⁸³ Hg(9.4 s)	60.5(†100), 159.91(†21), 172.70(†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: $E_{\gamma}(I_{\gamma})$
549.73 5	0.11 2	²²⁰ Rn(55.6 s)	
549.73 5	†100 9	²¹⁶ Bi(3.6 s)	419.21(†44)
549.8 3	0.108 13	¹⁴⁶ La(6.27 s)	258.47(64), 924.58(7.45), 702.28(6.43)
549.80 20	†4.3 7	¹⁶⁵ Lu(10.74 m)	132.49(†100), 120.60(†100), 174.25(†47.0)
549.83 7	1.30 9	²²⁸ Fr(39 s)	473.7(10.2), 474.0(7.6), 410.40(6.3)
549.832 12	0.437 12	¹⁷³ Hf(23.6 h)	123.672(83), 296.974(33.9), 139.634(12.7)
549.84 40	0.042 11	¹⁶⁴ Yb(75.8 m)	40.928(1.147), 675.41(0.38), 390.6(0.31)
• 549.85 3	0.152 3	²⁰⁵ Bi(15.31 d)	1764.36(1.368), 703.44(31), 987.62(0.585)
549.9 5	†9 3	¹⁰⁶ Nb(1.02 s)	171.548(†100), 350.70(†39), 714.00(†30)
• 549.92 5	0.037 3	¹⁸⁹ Re(24.3 h)	216.663(5.50), 219.395(4.54), 245.09(3.5)
550.0 5	0.26 8	¹⁶¹ Yb(4.2 m)	78.20(34), 599.88(25.9), 631.45(13.9)
550 10	†28	¹⁸⁹ W(11.5 m)	258(†100), 417(†96), 855(†20)
• 550.01 15	0.00019 3	¹⁴⁹ Pm(53.08 h)	285.95(3.1), 859.46(0.109), 590.88(0.069)
550.04 3	0.681 15	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
550.04 7	0.19 4	¹⁸³ Os(9.9 h)	1101.94(49.0), 1107.92(22.36), 1034.85(6.02)
550.1 1	0.7 4	⁷³ Br(3.4 m)	64.9(37.0), 336.0(10.4), 699.8(9.1)
550.1 4	0.00092 10	¹⁰⁷ Cd(6.50 h)	93.124(1.45), 828.93(0.17), 796.462(0.0665)
550.10 10	1.86 13	¹²¹ Ag(0.78 s)	314.55(32.1), 353.43(19.9), 500.61(9.3)
550.1 2	†3.9×10 ² 12	¹⁵⁷ Ho(12.6 m)	279.97(†47600), 341.16(†37000), 193.41(†15200)
550.154 16	1.54 4	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
550.17 11	0.038 5	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
550.2 2	0.39 5	¹⁰¹ Ag(11.1 m)	261.0(53), 588.0(10.0), 667.3(9.8)
550.2 5	2.1	¹⁴⁶ La(10.0 s)	258.47(93), 409.86(81), 514.75(31)
• 550.2 3	0.07 4	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
550.2 5	†0.10 2	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
550.2 4	0.10 3	¹⁹⁸ Tl(5.3 h)	411.8044(82), 675.8874(11), 636.4(10.1)
550.25 15	2.9 6	¹⁰² Nb(4.3 s)	296.611(79), 1633.10(41), 551.54(30)
• 550.251 3	0.0362 18	¹⁶¹ Tb(6.88 d)	25.65150(23.2), 48.91562(17.0), 74.56711(10.2)
• 550.284 12	94.5 7	¹⁴⁸ Pm(41.29 d)	629.987(89), 725.673(32.7), 1013.808(20.20)
• 550.284 12	22.00 16	¹⁴⁸ Pm(5.370 d)	1465.12(22), 914.85(11.46), 611.293(1.021)
• 550.284 12	98.5 22	¹⁴⁸ Eu(54.5 d)	629.987(71.9), 611.293(20.5), 553.231(12.9)
• 550.3 2	0.26 5	¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
• 550.3 5	0.019 12	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
550.3 1	†0.5 2	¹⁷² Ir(2.0 s)	227.8(†100.0), 378.4(†62.0), 448.4(†40.5)
• 550.39 15	0.0022 5	¹³¹ Ba(11.50 d)	496.326(47), 123.805(28.97), 216.078(19.66)
550.4 1	0.028 7	¹³¹ Te(25.0 m)	149.716(69), 452.323(18.18), 1146.96(4.95)
550.4 5	0.044 11	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
550.4 2	1.17 12	¹⁸⁵ Ir(14.4 h)	254.4(13.3), 1828.8(10), 60.0(5.7)
550.4 3	0.32 16	¹⁹⁶ Bi(308 s)	1049.21(87), 689.00(35.5), 776.6(9.1)
550.45 19	0.073 13	¹⁰⁰ Sr(202 ms)	963.85(22.0), 898.50(18.9), 65.46(15.2)
550.5 2	3.2 3	¹³⁰ Sn(3.72 m)	192.5(70), 779.8(59), 70.0(35.5)
550.525 17	0.168 14	¹⁸⁰ Re(2.44 m)	902.795(90), 103.557(22.2), 825.357(9.9)
550.53 7	†1.06 21	¹⁸⁴ Ir(3.09 h)	263.97(†100), 119.80(†45), 390.38(†38)
• 550.53 4	4.2×10 ⁻⁷ 3	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
550.6 5		¹²⁸ Pr(3.1 s)	873, 799, 592
550.6 1	0.72 8	¹⁴² Gd(70.2 s)	750.2(11.2), 178.90(11.20), 284.4(6.16)
550.6 3	0.191 10	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
550.6 1	1.08 6	²³⁶ Pa(9.1 m)	642.35(37.0), 687.59(9.9), 1762.7(6.0)
550.63 6		¹⁹³ Hg(3.80 h)	861.11(†100), 1118.84(†64), 789.21(†36)
550.63 6	1.01 5	¹⁹³ Hg(11.8 h)	257.97(61), 407.63(25), 573.25(14.2)
550.69 14	0.27 4	¹⁹⁷ Pb(43 m)	385.85(74), 387.72(25.1), 222.45(24.6)
550.7 3		¹²² Ba(1.95 m)	388.7, 231.0, 65.8
550.7 1	25.9 16	¹³⁰ La(8.7 m)	357.4(81.0), 908.0(17.0), 544.5(16.2)
550.7 1	5.0	²⁴⁸ Bk(23.7 h)	592.2(>0.015), 41.53

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
550.8	0.17	⁸³ Zr(44 s)	55.55(8), 104.97(5.70), 475.1(5.1)
550.8 1	0.0152 25	¹²¹ I(2.12 h)	212.189(84), 532.08(6.07), 598.74(1.47)
• 550.8 2	0.016 3	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
550.8 2	†7.2 7	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
550.86 19	0.13 4	¹⁶² Yb(18.87 m)	163.35(40.0), 118.70(33.6), 576.10(3.24)
550.88 10	4.9 3	⁹⁴ Y(18.7 m)	918.74(56), 1138.88(6.0), 1671.41(2.46)
550.9 5	0.319 11	¹¹⁶ Te(2.49 h)	93.70(31.4), 628.63(3.22), 102.97(1.95)
550.9	0.099 14	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
550.9	88 5	¹⁵⁰ Ho(26 s)	653.3(100), 803.4(100), 393.9(93)
550.92 17	0.066 10	¹⁴¹ Cs(24.94 s)	48.53(7.90), 561.63(4.7), 1194.02(3.95)
551.0	0.097 14	¹⁴¹ Ba(18.27 m)	190.328(46.0), 304.194(25.4), 276.948(23.4)
551.0 1	4.91 18	²⁰⁹ At(5.41 h)	545.0(91), 781.9(83.5), 790.2(63.5)
551.01 8	1.28 7	¹⁰¹ Sr(118 ms)	128.34(18.0), 1124.82(10.9), 510.73(8.5)
• 551.078 19	0.412 14	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
• 551.08 4	0.00312 20	¹⁴⁰ Ba(12.752 d)	537.261(24.39), 29.9640(14.1), 162.660(6.21)
551.10 10	0.39 7	⁹⁹ Ag(124 s)	264.41(65), 832.29(13.5), 805.07(12.5)
551.1	0.015 7	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
551.20 25	0.86 7	⁹⁰ Rb(258 s)	831.69(94), 1375.36(16.7), 3317.00(14.4)
551.20 25	0.0064 8	⁹⁰ Rb(158 s)	831.69(28), 1060.70(6.69), 4365.90(5.6)
551.2 3	0.73 12	¹²⁶ Ba(100 m)	233.6(19.6), 257.6(7.6), 241.0(6.0)
551.2 2	0.071 20	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
551.2 3	3.02 20	¹⁵⁸ Sm(5.30 m)	189.4(15.2), 363.6(12.4), 324.5(10.6)
551.2 2	†3.5 20	¹⁵⁹ Yb(1.58 m)	166.16(†500), 177.12(†159), 390.20(†113)
551.21 10	0.124 11	⁷⁹ Ge(19.1 s)	109.58(21), 1505.85(9.2), 100.48(2.70)
551.21 10	1.06 10	⁷⁹ Ge(39.0 s)	230.62(61), 542.27(32.6), 755(18)
551.3 3	0.39 3	¹⁵⁹ Eu(18.1 m)	67.8(19), 78.6(9.1), 95.7(7.0)
551.4 4	0.00061 15	¹⁰⁹ Pd(13.7012 h)	88.04(1.171), 311.4(0.032), 647.3(0.024)
551.4 3	0.135 18	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
551.4 3	0.060 15	¹⁴³ Eu(2.63 m)	1107.3(8), 1536.8(3.29), 1912.7(2.13)
551.4 2	0.019 3	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
551.4 2	†35.7 20	²⁰² Po(44.7 m)	688.6(†1000), 316.0(†286), 165.7(†174)
551.46 25	0.44	¹²⁵ Cd(0.57 s)	1027.53(25.8), 1173.16(25.1), 736.65(12.6)
551.47 5	4.07 20	⁷⁷ Zn(2.08 s)	189.49(28.1), 473.94(19.7), 1832.0(12.4)
551.47 13	0.135 16	¹⁴⁴ Ba(11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
• 551.5 1	0.0041 16	⁷¹ As(65.28 h)	174.954(82.00), 1095.490(4.08), 499.876(3.624)
551.5 15	0.0059 24	⁸¹ Rb(30.5 m)	49.56(0.78), 643.6(0.115), 1194.9(0.112)
551.5 6	0.22 6	⁹⁷ Rh(46.2 m)	189.21(49), 2245.6(14), 421.55(12.7)
551.50 5	0.0035 4	¹²⁹ Te(69.6 m)	27.81(16.3), 459.60(7.70), 487.39(1.42)
551.5 3	†4.61 27	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
551.5 6	0.08 3	¹⁷⁷ W(135 m)	115.65(50), 426.98(13.2), 1036.4(10.3)
551.5 1	1.97 10	²⁰⁰ Po(11.5 m)	671.0(34.0), 617.7(19.7), 434.4(9.3)
551.532 18	5.08 11	¹⁸⁷ W(23.72 h)	685.774(27.3), 479.531(21.8), 72.001(11.14)
551.54 3		¹⁰² Nb(1.3 s)	948.85, 397.69, 847.37
551.54 3	30 4	¹⁰² Nb(4.3 s)	296.611(79), 1633.10(41), 447.13(19.6)
551.568 6	0.30 4	⁷⁵ Br(96.7 m)	286.572(88), 141.3147(6.6), 427.883(4.4)
551.60 5	1.61 23	¹¹⁸ I(13.7 m)	605.71(86.0), 545.12(10.9), 600.71(10.2)
551.60 5	2.6 3	¹¹⁸ I(8.5 m)	605.71(99), 600.71(92), 614.42(65)
551.60 5	1.71 17	¹¹⁸ I(8.5 m)	605.71(99), 600.71(92), 614.42(65)
551.6 3	†5.0	¹⁷⁹ Os(6.5 m)	65.39(†100), 218.6(†17), 32.3(†17)
551.7 3	3.4 5	⁹⁸ Cd(9.2 s)	347.18(78), 1176.1(66.3), 107.28(43.7)
551.7 1	0.48 5	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
551.7 2	2.3 5	¹⁵⁹ Er(36 m)	624.5(33), 649.1(23.4), 205.92(9.7)
551.76 5	1.71 6	⁹⁵ Ru(1.643 h)	336.43(70.2), 1096.76(21.0), 626.77(17.8)
551.76 5	0.50 6	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: $E_{\gamma}(I_{\gamma})$
551.79 13	0.088 14	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
551.80 15	0.083 10	⁶⁷ Ge(18.9 m)	167.01(84), 1472.48(4.9), 910.92(3.1)
551.8 5	0.11 3	⁷⁴ Ga(8.12 m)	595.847(91), 2353.46(44.5), 608.353(14.3)
551.8 3	0.17 3	⁷⁸ As(90.7 m)	613.725(54), 694.916(16.7), 1308.59(13.0)
551.8 10	†31	¹⁷⁸ Os(5.0 m)	968.7(†100), 1331.1(†94), 594.6(†72)
551.9 1	†2.9 5	¹⁸⁰ Au(8.1 s)	153.3(†100), 524.3(†29), 257.6(†26)
551.9 3	†8.0 3	²⁰¹ Po(15.3 m)	890.1(†100), 240.1(†71.0), 904.2(†54.8)
551.9 1	0.098 16	²²⁸ Fr(39 s)	473.7(10.2), 474.0(7.6), 410.40(6.3)
551.98 5	0.00139 23	¹²⁹ Te(69.6 m)	27.81(16.3), 459.60(7.70), 487.39(1.42)
551.99 5	0.42 3	¹⁸⁶ Ir(16.64 h)	296.911(64.0), 137.155(42), 434.849(34.4)
552.0 2	0.076 14	⁷⁹ As(9.01 m)	95.73(0.85), 364.9(1.06), 432.1(0.850)
552.00 20	0.39 10	¹⁰² Nb(4.3 s)	296.611(79), 1633.10(41), 551.54(30)
552.0 5	0.27 13	¹⁵³ Ho(2.0 m)	295.8(67), 637.0(5.36), 688.5(3.7)
552.0 3	0.00032 8	¹⁶³ Er(75.0 m)	1113.5(0.0490), 436.1(0.0285), 439.94(0.0276)
• 552.0 1	0.0044 11	²²⁵ Ac(10.0 d)	99.91(1.01), 150.04(0.80), 99.63(0.62)
552.01 3	3.9 3	¹⁶⁴ Lu(3.14 m)	123.3(34.0), 740.52(12.2), 262.22(10.8)
552.07 12	†9.8 8	¹⁶⁵ Lu(10.74 m)	132.49(†100), 120.60(†100), 174.25(†47.0)
552.1 5	0.26 8	¹⁶¹ Yb(4.2 m)	78.20(34), 599.88(25.9), 631.45(13.9)
552.1 3	0.024	²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
552.15 15	0.125 21	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
552.16 19	76 3	¹³⁶ Pr(13.1 m)	539.75(52), 1092.3(18.5), 461.0(7.7)
552.2 2	0.28 6	¹¹¹ Pd(5.5 h)	70.44(8.3), 391.25(5.4), 632.80(3.6)
552.2 1	0.47 3	²²⁶ Fr(48 s)	253.73(22.3), 186.05(16.3), 253.9(2.5)
• 552.2 1	5.4×10 ⁻⁷ 8	²³⁰ Th(7.538×10 ⁴ a)	67.67(0.376), 143.87(0.0486), 253.73(0.0111)
552.4 4	2.9 10	¹⁶⁶ Ta(34.4 s)	158.5(53), 311.8(28.2), 810.1(9.8)
552.4 3	0.112 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
552.4 5	0.0033 3	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
• 552.4 5	†0.019 4	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
552.42 9	0.087 7	⁸¹ Se(18.45 m)	275.988(0.7), 290.03(0.55), 828.27(0.280)
• 552.43 5	0.00028 9	¹²⁹ Te(33.6 d)	695.88(2.988), 729.57(0.70), 556.65(0.118)
552.5 3	1.68 19	⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
552.5 3	0.0103 17	¹²³ Sn(40.06 m)	160.33(86), 381.4(0.042), 541.8(0.020)
552.5 2	1.55 18	²⁰⁹ At(5.41 h)	545.0(91), 781.9(83.5), 790.2(63.5)
552.53 5	25.7 13	¹⁰⁶ In(6.2 m)	632.66(100), 861.16(92), 997.87(48)
552.60 10	0.351 23	¹⁰³ Cd(7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
552.60 14	0.0159 25	¹¹¹ Pd(23.4 m)	580.00(0.8), 70.44(0.78), 1459.0(0.56)
552.60 14	0.024 8	¹¹¹ Pd(5.5 h)	70.44(8.3), 391.25(5.4), 632.80(3.6)
552.63 2	0.0200 11	⁸³ Br(2.40 h)	529.635(1.200), 520.39(0.0576), 648.9(0.0124)
• 552.63 2	16.0 7	⁸³ Rb(86.2 d)	520.39(44.7), 529.635(29.3), 790.0(0.657)
552.69 14	0.84 6	¹³⁶ I(46.9 s)	1313.02(100), 381.359(100), 197.316(78)
552.7 10	0.29 6	²⁰¹ Bi(108 m)	629.1(24.0), 936.2(11.3), 1014.1(10.7)
• 552.760 16	0.0863 24	¹⁴⁹ Gd(9.28 d)	149.735(48.2), 298.634(28.6), 346.651(23.9)
552.8 6	1.6 4	¹⁹¹ Hg(50.8 m)	252.5(57), 420.1(18.6), 578.6(17.6)
552.9 3	1.9 2	⁹⁴ Rh(70.6 s)	1430.50(100), 756.23(51), 1072.50(30.7)
552.9 6	0.85 19	¹¹⁶ Cs(3.84 s)	393.5(<0.09), 524.3(76), 615.1(30.4)
552.9 5	0.21 5	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
552.92 2	0.32 8	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
• 552.92 9	0.00059 3	¹⁴⁹ Pm(53.08 h)	285.95(3.1), 859.46(0.109), 590.88(0.069)
552.948 23	0.686 24	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
• 552.98 14	0.112 6	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
553.00 10	100 10	¹¹⁷ In(43.2 m)	158.562(87), 396.6(0.174), 156.02
553.00 10	0.082 13	¹¹⁷ Sb(2.80 h)	158.562(86), 861.35(0.31), 1004.51(0.21)
553.0 3	1.20 17	¹²¹ Cs(155 s)	153.9(15.2), 239.6(7.7), 427.1(3.63)
553 1	0.6	¹⁴² Gd(70.2 s)	750.2(11.2), 178.90(11.20), 284.4(6.16)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
553.0 2	6 1	¹⁵¹ Er(23.5 s)	638.3(36), 667.2(17), 256.4(15.9)
553.0 3	†32 5	¹⁶³ Lu(238 s)	163.08(†100), 54.00(†88), 396.34(†63)
553.0 3	†0.69 4	¹⁹⁶ Ir(1.40 h)	393.346(†105.2), 521.175(†104), 447.1(†102.1)
553.02 7	0.035 7	¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
553.04 6	0.53 6	²⁰¹ Au(26 m)	542.6(1.2), 517.0(0.83), 613.2(0.77)
553.1	>0.14	⁹⁵ Rh(5.02 m)	941.6(72), 1352.0(20.8), 677.6(5.80)
553.1 3	0.068 23	¹²³ Cs(5.94 m)	97.3(23), 596.7(10.1), 83.3(4.1)
553.1 8	0.020 7	¹⁵⁷ Dy(8.14 h)	326.16(92), 182.20(1.84), 83.01(0.62)
553.1 1	3.04 22	²⁰⁸ Fr(59.1 s)	635.8(10), 778.5(6.8), 325.3(5.2)
553.12 15	0.09 5	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
553.17 5	0.168 24	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
553.20 21	3.36 21	⁸³ Se(22.3 m)	356.687(70), 510.17(43), 224.8(32.7)
553.2 1	0.227 25	¹⁴³ Cs(1.78 s)	195.554(13), 232.421(8.32), 306.424(6.80)
• 553.20 10	0.033 7	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
553.2 3	0.252 25	¹⁸⁶ Hg(1.38 m)	112.1(63), 251.5(55), 191.6(3.7)
553.2 3	4.6 11	¹⁹⁴ Tl(32.8 m)	636.5(99), 428.0(99), 748.9(76)
553.2 1	1.19 23	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
553.2 2	0.48 4	²³⁰ Fr(19.1 s)	711.0(13.6), 129.1(11.0), 728.4(7.3)
• 553.231 14	0.40 4	¹⁴⁸ Pm(41.29 d)	550.284(94.5), 629.987(89), 725.673(32.7)
• 553.231 14	12.9 22	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
• 553.260 15	5.0 22	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
553.3 2	0.30 6	¹⁰¹ Zr(2.1 s)	119.3(10.8), 205.6(6.0), 912.2(3.48)
553.3 2	0.206 11	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
553.38 5	0.273 4	¹²⁶ Cs(1.64 m)	388.633(41), 491.243(5.0), 925.24(4.56)
553.4 5	6.9 7	⁸⁰ Sr(106.3 m)	589.0(39), 175.4(10.1), 378.8(4.2)
553.4 1	†19.1 15	¹²⁰ Cs(64 s)	322.4(†100), 473.5(†30), 601.2(†10.9)
553.4	1.28 10	¹⁵⁰ Pr(6.19 s)	130.2(32), 722.5(7.0), 852.7(6.1)
553.43 4	0.205 15	¹³² La(4.8 h)	464.55(76), 567.14(15.7), 1909.91(9.0)
• 553.45 5	0.69 5	⁶⁹ Ge(39.05 h)	1107.01(36), 574.17(13.3), 872.14(11.9)
553.50 20	1.00 23	¹²³ Ag(0.309 s)	263.87(35.9), 409.79(13.2), 591.30(8.2)
553.5 2	0.022 3	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
553.53 20	0.077 12	⁹³ Kr(1.286 s)	253.42(41.2), 323.89(24.1), 266.83(20.6)
553.6 3	0.08 4	¹⁰⁰ Rh(20.8 h)	539.59(78.4), 2376.1(35.3), 1553.4(21)
553.6 2	0.116 22	²⁰⁷ At(1.80 h)	814.41(44.5), 588.33(19.2), 300.654(12.8)
553.690 35	0.0308 11	¹²⁵ Xe(16.9 h)	188.418(54), 243.378(30.1), 54.968(6.81)
553.7 2	0.23 6	¹⁰⁸ Tc(5.17 s)	242.25(82), 465.6(14.3), 707.81(11.4)
553.7 2	0.062 25	¹³³ Te(12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
553.7 2	†27 4	¹⁵³ Ho(9.3 m)	108.7(†100), 365.9(†92), 161.5(†83)
553.7 1	0.044 15	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
553.8 1	0.30 6	¹⁰⁴ Tc(18.3 m)	358.0(89), 530.5(15.6), 535.1(14.7)
553.8 2	†7.8 8	¹⁰⁵ Nb(2.95 s)	94.8(†100), 246.9(†79), 309.9(†41.9)
• 553.8 1	>0.020	¹²⁴ Sb(60.20 d)	602.730(97.8), 1690.980(47.3), 722.786(10.76)
• 553.8	0.06	¹²⁴ I(4.18 d)	602.730(60), 1690.980(10.41), 722.786(9.98)
553.9 1	†2.28 16	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
553.90 3	0.66 3	¹³⁰ I(12.36 h)	536.09(99), 668.54(96), 739.48(82)
553.9 3	†0.26 8	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
553.94 7	0.62 4	²⁰⁵ At(26.2 m)	719.30(31), 669.41(8.6), 628.88(5.6)
553.98 13	0.89 8	¹⁵⁶ Tm(83.8 s)	344.55(86), 452.85(17.2), 585.93(14.6)
554 1	0.34 11	⁷⁷ Rb(3.75 m)	66.52(57), 178.99(22.2), 393.37(9.7)
554.0 2	†34 3	¹³⁷ Te(2.49 s)	243.3(†100), 469.1(†21), 358.6(†18.8)
554.0 2		¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
554.0 3	0.14 4	¹⁸⁸ Hg(3.25 m)	66.7(63), 190.1(4.40), 82.7(2.6)
554.03 28	0.25 3	¹⁵⁶ Ho(56 m)	266.35(54.7), 137.83(51), 366.25(10.73)
554.1 2	2.94 8	¹²⁹ Ba(2.23 h)	6.545(23.7), 214.30(13.4), 220.83(8.54)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
554.1 3	0.7 4	¹⁴³ Gd(39 s)	258.81(75), 204.77(19.4), 463.7(9.9)
554.1 3	0.08	¹⁷⁰ Hf(16.01 h)	164.78(33), 620.7(23), 120.17(19)
554.12 28	0.50 3	⁹⁹ Nb(2.6 m)	97.785(7), 253.50(3.64), 2641.3(3.64)
554.13 11	0.24 4	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
554.16 15	0.76 14	¹⁰⁷ In(32.4 m)	204.97(47), 505.51(11.9), 320.92(10.2)
554.2 1	0.030 3	¹²¹ I(2.12 h)	212.189(84), 532.08(6.07), 598.74(1.47)
554.2 3	0.73 15	¹³⁹ Sm(2.57 m)	273.7(37), 306.7(28.5), 596.3(8.0)
554.2 1	3.4 3	¹⁴¹ Tb(3.5 s)	293.3(16.8), 343.6(16.3), 198.4(14.8)
554.2 2	2.2 3	¹⁵² Ho(49.5 s)	647.2(92), 613.8(88.4), 683.3(88)
554.2 4	0.061 24	¹⁶¹ Er(3.21 h)	826.6(3.0), 211.15(12.2), 592.6(3.7)
554.20 24	†5.4 8	¹⁸⁴ Tl(11 s)	366.51(†100), 286.80(†39), 340.0(†25)
554.25 8	0.60	¹⁵⁴ Pm(1.73 m)	2057.76(17.1), 1393.9(14.4), 81.99(12.6)
• 554.3 6	0.012 9	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
554.3 2	†3.5 5	¹⁵³ Yb(4.2 s)	547.4(†100), 674.1(†61), 369.6(†32)
• 554.348 2	70.8 7	⁸² Br(35.30 h)	776.517(83.5), 619.106(43.4), 698.374(28.49)
554.348 2	62.4 8	⁸² Rb(6.472 h)	776.517(84), 619.106(37.976), 1044.002(32.068)
554.37 5	0.133 6	⁸⁹ Br(4.40 s)	1097.82(6.00), 997.93(4.26), 953.53(4.26)
554.37 5	5.07 12	⁹⁰ Kr(32.32 s)	1118.69(39.0), 121.82(35.5), 539.49(30.8)
554.4 2	1.52 23	²³¹ Ac(7.5 m)	282.471(39.0), 307.063(30.4), 221.399(16.8)
554.4 2	0.0220 17	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
554.42 30	0.078 6	¹⁰⁷ Rh(21.7 m)	302.77(66), 392.47(8.8), 312.21(4.8)
554.5	>0.0009	¹³³ I(20.8 h)	529.872(87.0), 875.329(4.51), 1298.223(2.35)
554.5 1	†6.9 7	¹⁷¹ Ta(23.3 m)	49.6(†100), 506.4(†54), 501.8(†22.6)
554.56 1	0.28 7	¹⁷⁴ Tm(5.4 m)	366.526(92), 992.128(87), 272.918(86)
554.58 3	0.27 3	¹⁸² Os(22.10 h)	510.056(52), 180.230(33.5), 263.285(6.71)
554.6 6	0.41 21	¹⁰⁵ In(5.07 m)	131.37(41), 260.21(15.7), 604.11(9.2)
• 554.6 2	0.016 3	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
554.6 3	†23	¹⁵⁴ Nd(25.9 s)	151.703(†800), 799.55(†600), 180.693(†510)
554.6 5	0.47 6	¹⁷⁶ Tm(1.9 m)	189.57(44.5), 1069.3(34), 381.8(21.8)
554.6 2	0.59 7	²⁰⁹ At(5.41 h)	545.0(91), 781.9(83.5), 790.2(63.5)
554.60 7	20.9 5	²⁴⁰ Np(7.22 m)	597.40(11.7), 1496.9(1.33), 817.89(1.28)
• 554.60 7	0.01	²⁴⁰ Am(50.8 h)	987.76(73.2), 888.80(25.1), 98.860(1.5)
• 554.60 7	0.000079 5	²⁴⁴ Cm(18.10 y)	42.824(.0044100), 98.860(.0001470), 152.63(<4.9×10 ⁻⁷)
• 554.64 6	1.56 6	²⁰⁶ Po(8.8 d)	1032.26(32.9), 511.36(24.1), 286.410(23.8)
• 554.66 6	0.017 4	¹⁵⁶ Eu(15.19 d)	811.79(9.70), 88.9667(8.4), 1230.68(7.98)
554.68 6	0.0146 15	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
554.7	5.1 6	¹⁴⁷ Tb(1.7 h)	1152.4(100), 694.4(43), 139.9(27.46)
554.7 3	2.7 5	²⁰⁴ Au(39.8 s)	436.551(91), 1511.10(25.2), 691.80(24.0)
554.73 2	1.03 4	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
554.77 4	3.54 18	¹⁴⁷ Pr(13.4 m)	77.9921(15), 314.675(13.2), 641.380(10.0)
554.8 5	0.20 8	¹¹⁰ Ru(14.6 s)	112.2(25.00), 166.1(0.65), 116.1(0.45)
554.83 3	0.378 6	¹⁴⁵ Ce(3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)
• 554.843 3	0.0198 23	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
554.9 5	0.0035	²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
554.92 16	0.065 12	¹⁰³ Tc(54.2 s)	346.380(17.5), 136.079(16.6), 562.90(7.0)
• 554.94 10	0.0054 5	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
555.0 4	0.08 3	¹¹⁷ Cs(8.4 s)	204.8(15.0), 29.7(9.9), 205.6(6.8)
555.0 3	1.20 13	¹²¹ Cs(122 s)	179.4(30.2), 196.0(24.1), 459.7(12.0)
555.0 2	0.11 6	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
555.01 20	>0.11	⁶⁶ Ge(2.26 h)	43.89(28.7), 381.85(28), 272.97(10.4)
555.02 9	1.53 17	²³⁷ Pa(8.7 m)	853.6(34), 865.1(15.5), 529.26(14.9)
555.10 10	0.21 11	¹²⁵ Cd(0.57 s)	1027.53(25.8), 1173.16(25.1), 736.65(12.6)
555.12 10	0.047 5	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)

• $t_{1/2} > 1$ d

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
555.15 6	3.71 24	¹⁴¹ Cs(24.94 s)	48.53(7.90), 561.63(4.7), 1194.02(3.95)
555.15 10	2.99 21	²²⁷ Fr(2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)
555.2 9	0.48 24	¹¹⁷ Ag(5.34 s)	135.4(48), 386.8(39.9), 298.1(21.1)
555.2 9	0.7 4	¹¹⁷ Ag(72.8 s)	135.4(23), 337.7(10.3), 157.1(7.9)
• 555.2 2	1.69 20	¹²⁶ Sb(12.46 d)	695.03(100), 666.331(100), 414.81(83.3)
555.2 2	0.015 3	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
555.2 2	†6.3 6	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
555.22 10	0.0063 5	²⁵⁰ Bk(3.217 h)	989.12(45), 1031.85(35.6), 1028.65(4.91)
555.23 12	0.034 7	¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
555.3 1	†8.4 8	¹⁰⁴ Nb(0.92 s)	192.2(†100), 368.4(†20), 620.2(†19.2)
555.3 4		¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
• 555.30 10	0.038 4	²⁰⁶ Bi(6.243 d)	803.10(99), 881.01(66.2), 516.18(40.7)
555.36 13	0.028 19	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
555.4 3	0.66 6	⁹⁶ Rb(0.199 s)	815.0(78.00), 692.0(8.0), 813.2(7.0)
555.4 3	0.8	⁹⁷ Rb(169.9 ms)	815.0(100), 692.0(16.5), 414.3(15.0)
555.40 9	†4.8 6	¹²⁶ Cd(0.506 s)	260.09(†100), 428.11(†83.7), 688.23(†5.9)
555.4 4	†0.45 23	¹⁶⁰ Ho(5.02 h)	728.18(†100), 879.383(†65.9), 962.317(†59.1)
555.4 3	†3.1 6	¹⁸³ Hg(9.4 s)	60.5(†100), 159.91(†21), 172.70(†17)
555.41 15	0.104 12	⁹³ Kr(1.286 s)	253.42(41.2), 323.89(24.1), 266.83(20.6)
555.5 3	0.50 6	⁹⁵ Y(10.3 m)	954.00(16), 2175.6(7.00), 3576.0(6.4)
555.5 4	0.65 14	¹³⁶ Sm(47 s)	114.4(36), 747.7(5.4), 485.3(5.0)
555.5 2	0.199 14	¹⁴⁰ Cs(63.7 s)	602.345(71.1), 908.25(11.6), 1200.25(6.39)
555.5 2	†6.2×10 ³ 6	¹⁵⁷ Ho(12.6 m)	279.97(†47600), 341.16(†37000), 193.41(†15200)
555.50 15	1.45 8	¹⁶¹ Yb(4.2 m)	78.20(34), 599.88(25.9), 631.45(13.9)
555.5 3	0.25 3	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
555.5 2	†3.9 4	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
555.57 7	1.94 10	⁹¹ Kr(8.57 s)	108.788(43.5), 506.592(19.1), 612.87(7.7)
555.57 5		⁹¹ Sr(9.63 h)	1024.3(33), 749.8(23.61), 652.9(8.0)
555.6 3	1.48 18	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
• 555.6 5	0.016 9	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
555.6 3	3.2 9	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
555.70 30	1.6 4	¹¹⁵ Te(6.7 m)	770.40(34.2), 723.569(18), 1071.70(12.9)
555.7 1	0.157 25	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
555.72 7	0.047 4	⁸⁷ Br(55.60 s)	1419.71(22.0), 1476.04(7.9), 1577.60(6.0)
555.796 23	2.0	¹⁰⁴ Rh(42.3 s)	1237.2(0.066), 767.72(0.011), 1238.0(0.010)
555.796 23	0.13	¹⁰⁴ Rh(4.34 m)	767.72(0.0065), 1237.2(0.0042), 758.76(0.00094)
555.796 23	92.6 9	¹⁰⁴ Ag(69.2 m)	767.72(65.7), 941.7(25.0), 926.2(12.5)
555.796 23	91	¹⁰⁴ Ag(33.5 m)	1238.0(3.87), 2276.7(2.46), 1781.8(2.1)
555.88 9	0.59 3	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
555.89 7	0.191 9	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)
555.9 2	4.7 4	¹¹⁸ Cs(14 s)	337.4(100), 472.8(37.4), 586.6(15.4)
555.9 2	>0.35	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
555.9 4	1.4 3	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
555.95 9	0.117 13	¹³⁸ Xe(14.08 m)	258.411(31.5), 434.562(20.3), 1768.26(16.7)
556.0 2	4.7 4	¹¹⁸ Cs(14 s)	337.4(100), 472.8(37.4), 586.6(15.4)
556.0 2	0.14 3	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
556.0 2	†50 6	¹³⁴ Pr(11 m)	293.5(†100), 299.0(†100), 1196.8(†100)
556.0 2	†50 6	¹³⁴ Pr(17 m)	1964.1(†100), 1904.3(†100), 1579.9(†100)
• 556	0.0032 8	¹⁹³ Os(30.5 h)	139.03(4.27), 460.50(3.95), 73.039(3.2)
• 556.0 2	0.198 22	²³⁰ Pa(17.4 d)	951.95(1.65), 918.48(8.2), 454.95(6.27)
556.05 13	0.0031 4	¹²³ I(13.27 h)	158.97(83), 528.96(1.39), 440.02(0.428)
556.086 7	0.29 4	¹⁷⁵ Tm(15.2 m)	514.868(65), 941.23(15), 363.942(12.7)
556.1 1	0.04 2	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
556.1 1	0.28 4	¹¹¹ Pd(5.5 h)	70.44(8.3), 391.25(5.4), 632.80(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: $E_\gamma(I_\gamma)$
556.10 20	1.6 3	¹²³ Ag(0.309 s)	263.87(35.9), 409.79(13.2), 591.30(8.2)
556.1 5	0.19 4	²²⁸ Pa(22 h)	911.205(4.19), 463.005(1.250), 964.770(4.25)
556.17 8	0.020 3	¹³³ I(20.8 h)	529.872(87.0), 875.329(4.51), 1298.223(2.35)
556.2 4	†5.7 12	¹⁹⁵ Bi(183 s)	807.6(†100), 831.7(†100), 776.2(†95)
556.3 1	6	¹¹⁵ Pd(25 s)	342.71(8), 303.87(7), 396.56(6)
556.3 2	0.045 3	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
556.4 5	0.314 17	⁹⁷ Pd(3.10 m)	265.26(56), 475.2(26.7), 792.70(13.8)
556.4 3	0.13 5	⁹⁹ Sr(0.269 s)	125.118(16.1), 536.12(14.0), 1198.12(9.2)
556.4 3	†1.00 21	¹⁴⁴ Cs(1.01 s)	199.326(†100.0), 639.00(†21.2), 758.96(†20.6)
556.40 23	0.30 5	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)
556.489 12	0.0123 12	¹⁷³ Hf(23.6 h)	123.672(83), 296.974(33.9), 139.634(12.7)
556.5 1	†0.35 6	¹⁵⁸ Ho(11.3 m)	218.21(†100.0), 98.91(†70), 945.7(†37)
556.5 5	0.00156 18	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
• 556.5 5	†0.0138 24	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
• 556.52 4	1.92 19	¹⁰² Rh(207 d)	
556.52 4	91 7	¹⁰² Ag(12.9 m)	719.40(58), 1744.99(17.3), 1581.54(13.7)
556.52 4	48 4	¹⁰² Ag(7.7 m)	1834.7(9.8), 2054.4(6.6), 2159.6(5.0)
556.53 13	2.3	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
• 556.56 3	0.0190 10	¹⁵² Eu(13.542 y)	121.7824(28.4), 1408.011(20.87), 964.131(14.34)
556.57 5	0.026 4	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
• 556.577 7	0.10 4	²⁰⁰ Tl(26.1 h)	367.943(87), 1205.717(29.9), 579.298(13.8)
556.6 1	1.56 12	¹⁰¹ Zr(2.1 s)	119.3(10.8), 205.6(6.0), 912.2(3.48)
556.6 4	1.42 19	¹¹⁶ Cs(3.84 s)	393.5(<0.09), 524.3(76), 615.1(30.4)
556.6 2	86.6 30	¹⁴² Eu(1.22 m)	768.1(100), 1023.3(92.0), 1016.1(11.0)
556.6 3	0.067 15	¹⁴³ Eu(2.63 m)	1107.3(8), 1536.8(3.29), 1912.7(2.13)
556.6 4	0.07 4	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
556.64 24	0.11 3	¹⁸² Re(12.7 h)	67.75001(38.2), 1121.3007(32), 1221.4066(24.8)
• 556.64 32	0.044 15	¹⁹⁵ Hg(41.6 h)	261.75(30.9), 560.27(7), 387.87(2.15)
• 556.65 5	0.118 4	¹²⁹ Te(33.6 d)	695.88(2.988), 729.57(0.70), 817.04(0.091)
556.7 1	0.11 4	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
556.7 5	0.020 3	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
556.73 14	0.6	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
556.8 1	3.36 24	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
556.8 2	0.30 5	¹⁴⁹ Dy(4.20 m)	100.8(15.2), 789.4(11.8), 1776.3(11.1)
556.83 9	0.44 5	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
• 556.87 1	0.0317 17	¹⁴³ Ce(33.039 h)	293.266(42.80), 57.356(11.7), 664.571(5.69)
556.9 1	†3.33 30	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
556.9	0.79 16	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
557 1	0.043	⁷⁷ Ge(11.30 h)	264.44(54), 211.03(30.8), 215.50(28.6)
557.0 3	†20 3	⁸⁴ Zr(25.9 m)	112.5(†100), 44.9(†48), 372.9(†41)
557.0 4		¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
557.0 2	6.4 6	¹⁹⁰ Tl(3.7 m)	416.4(91), 625.4(82), 731.1(37)
557.0 2	>1.3	¹⁹⁰ Tl(2.6 m)	416.4(79), 625.4(11.1), 683.5(8.7)
557.0	0.052 23	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
• 557.039 20	0.8672 9	¹⁰³ Ru(39.26 d)	497.080(90.9), 610.33(5.75), 443.799(3.27)
557.079 3	0.65 4	¹⁶⁸ Ho(2.99 m)	741.356(36.6), 821.164(34.5), 815.990(18.6)
• 557.079 3	0.215 10	¹⁶⁸ Tm(93.1 d)	198.241(52.39), 815.990(48.99), 447.515(23.05)
557.1 9	†5	¹⁵⁵ Er(5.3 m)	110.12(†100), 241.5(†65), 234.0(†40.0)
557.1 2	0.070 17	¹⁷³ Ta(3.14 h)	172.2(18), 69.70(5.9), 90.3(5.0)
557.1 4	0.028 3	²³³ Np(36.2 m)	312.17(0.7), 298.89(0.44), 546.9(0.280)
557.154 66	5.0 4	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
557.19 7	0.22 3	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
557.2 1	0.104 9	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)
557.2 3	0.25 3	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: $E_\gamma(I_\gamma)$
557.24 5	1.77 8	$^{119}\text{I}(19.1 \text{ m})$	257.52(87), 635.86(2.69), 320.53(2.17)
557.24 6	$\dagger 8.6 20$	$^{234}\text{Pa}(1.17 \text{ m})$	1001.03($\dagger 837000$), 766.38($\dagger 294000$), 742.81($\dagger 80000$)
• 557.24 6	0.214 13	$^{234}\text{Np}(4.4 \text{ d})$	1558.31(18.72), 1527.21(11.2), 1601.80(9.1)
• 557.26 9	0.059 5	$^{153}\text{Tb}(2.34 \text{ d})$	212.038(31.0), 170.504(6.8), 109.758(6.4)
557.30 20	0.161 16	$^{89}\text{Kr}(3.15 \text{ m})$	220.948(20.1), 586.03(16.6), 904.27(7.2)
557.3 2	16.5 18	$^{128}\text{Sn}(59.07 \text{ m})$	482.3(59), 75.1(27.7), 680.5(15.9)
557.3 10	$\dagger 7.1 \times 10^2 16$	$^{234}\text{Pa}(1.17 \text{ m})$	1001.03($\dagger 837000$), 766.38($\dagger 294000$), 742.81($\dagger 80000$)
• 557.3 5	$3.8 \times 10^{-8} 19$	$^{239}\text{Pu}(24110 \text{ y})$	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
• 557.36 6	1.30 12	$^{193}\text{Os}(30.5 \text{ h})$	139.03(4.27), 460.50(3.95), 73.039(3.2)
• 557.38 4	0.185 21	$^{165}\text{Tm}(30.06 \text{ h})$	242.917(35.5), 47.155(16.9), 297.369(12.71)
557.4 4	0.059 5	$^{67}\text{Ge}(18.9 \text{ m})$	167.01(84), 1472.48(4.9), 910.92(3.1)
557.4 4	0.022 9	$^{151}\text{Nd}(12.44 \text{ m})$	116.80(43.4), 255.68(16.4), 1180.89(14.8)
557.46 11	0.092 14	$^{153}\text{Dy}(6.4 \text{ h})$	80.723(11.10), 213.754(10.90), 99.659(10.51)
• 557.497 25	0.519 19	$^{173}\text{Lu}(1.37 \text{ y})$	272.105(21.2), 78.63(11.87), 100.724(5.24)
557.5 1	0.121 19	$^{98}\text{Nb}(51.3 \text{ m})$	787.374(93), 722.645(73.8), 1168.830(17.8)
557.5 1	22.3 18	$^{141}\text{Gd}(24.5 \text{ s})$	351.1(89), 223.9(64), 574.9(51)
557.5	0.58 5	$^{147}\text{La}(4.015 \text{ s})$	117.718(12), 186.320(6.48), 438.30(5.04)
557.5 1	0.36 4	$^{150}\text{Tb}(3.48 \text{ h})$	638.05(72), 496.3(14.8), 792.5(4.39)
557.5 1	0.00091 20	$^{188}\text{Re}(16.98 \text{ h})$	155.032(14.9), 632.99(1.25), 477.99(1.0)
557.514 18	0.291 6	$^{166}\text{Tm}(7.70 \text{ h})$	778.817(18.9), 2052.36(17.2), 184.410(16.1)
• 557.581 7	0.2699 25	$^{154}\text{Eu}(8.593 \text{ y})$	123.071(40.79), 1274.436(35.19), 723.304(20.22)
557.581 7	0.31 6	$^{154}\text{Tb}(9.4 \text{ h})$	123.071(30), 247.925(22.1), 540.18(20)
557.581 7	5.4 4	$^{154}\text{Tb}(21.5 \text{ h})$	123.071(26), 1274.436(10.5), 2187.10(9.9)
557.59 4	0.22 3	$^{191}\text{Au}(3.18 \text{ h})$	586.45(17), 277.88(7.2), 674.19(6.8)
557.6 2	>0.35	$^{155}\text{Ho}(48 \text{ m})$	240.19(12.5), 136.30(5.00), 45.38(5)
557.6 5	$\dagger 0.6$	$^{171}\text{Hf}(12.1 \text{ h})$	122.0($\dagger 100$), 662.2($\dagger 83$), 347.18($\dagger 47$)
557.7 3	11.3 23	$^{133}\text{Ce}(97 \text{ m})$	97.261(<0.22), 76.9(15.8), 376.7(0.9)
557.7 1	0.246 10	$^{142}\text{Ba}(10.6 \text{ m})$	255.300(20.5), 1204.3(14.23), 895.2(13.9)
557.7 4	$\dagger 1.00 19$	$^{189}\text{Hg}(7.6 \text{ m})$	320.99($\dagger 100$), 78.21($\dagger 63$), 565.42($\dagger 48$)
557.7 7	0.43 4	$^{201}\text{Bi}(108 \text{ m})$	629.1(24.0), 936.2(11.3), 1014.1(10.7)
557.76 9	2.24 10	$^{45}\text{Ar}(21.48 \text{ s})$	1020.04(34.0), 3703.2(33.3), 61.35(25.0)
557.76 7	9.18 11	$^{146}\text{Cs}(0.343 \text{ s})$	181.02(57.0), 332.38(6.44), 738.97(3.02)
• 557.8 9	$3.5 \times 10^{-5} 12$	$^{75}\text{Se}(119.779 \text{ d})$	264.6584(58.50), 136.0008(58.3), 279.5441(24.79)
557.8 3	6.2 12	$^{114}\text{Rh}(1.85 \text{ s})$	332.9(87), 519.8(48.4), 618.7(31)
557.8 2	2.1 4	$^{117}\text{Ag}(5.34 \text{ s})$	135.4(48), 386.8(39.9), 298.1(21.1)
557.8 2	$\dagger 1.7 3$	$^{194}\text{Bi}(92 \text{ s})$	965.4($\dagger 100.0$), 575.1($\dagger 98.0$), 280.1($\dagger 73.7$)
557.80 10	3.5 3	$^{197}\text{Pb}(43 \text{ m})$	385.85(74), 387.72(25.1), 222.45(24.6)
557.82 19	$\dagger 7.5 9$	$^{142}\text{Xe}(1.22 \text{ s})$	571.83($\dagger 100$), 657.05($\dagger 79$), 538.24($\dagger 77$)
557.85 10	0.53 9	$^{157}\text{Tm}(3.63 \text{ m})$	455.00(9.3), 385.5(8.8), 348.40(8.4)
557.85 12	$\dagger 0.41 12$	$^{184}\text{Ir}(3.09 \text{ h})$	263.97($\dagger 100$), 119.80($\dagger 45$), 390.38($\dagger 38$)
557.9 5	0.0595 22	$^{73}\text{Se}(7.15 \text{ h})$	360.80(108), 67.03(78), 865.09(0.584)
557.9 4	0.34 17	$^{156}\text{Tm}(83.8 \text{ s})$	344.55(86), 452.85(17.2), 585.93(14.6)
557.9		$^{238}\text{Pa}(2.3 \text{ m})$	1015.3($\dagger <100$), 1014.6($\dagger <100$), 635.18($\dagger 88$)
557.96 40	0.023 8	$^{165}\text{Yb}(9.9 \text{ m})$	80.11(49), 68.86(9.1), 1090.28(4.4)
557.972 14	28.2 18	$^{190}\text{Re}(3.1 \text{ m})$	186.718(48.4), 223.811(26.0), 569.310(25.1)
557.972 14	14.3 10	$^{190}\text{Re}(3.2 \text{ h})$	186.718(27.8), 605.24(14.9), 569.310(13.7)
• 557.972 14	30.1 9	$^{190}\text{Ir}(11.78 \text{ d})$	186.718(52.4), 605.24(39.9), 518.55(34.0)
558.0 1	0.165 17	$^{94}\text{Rb}(2.702 \text{ s})$	1309.1(87), 836.9(87.10), 1577.5(31.8)
558 1	0.028 19	$^{97}\text{Zr}(16.91 \text{ h})$	743.36(93), 507.64(5.03), 1147.97(2.61)
558.0	4.6	$^{144}\text{Tb}(4.25 \text{ s})$	743.0(12), 1001.6(7), 959.36(4.7)
558.0	0.010	$^{149}\text{Nd}(1.728 \text{ h})$	211.309(25.9), 114.314(19.2), 270.166(10.7)
558.0 4	$\dagger 0.50 10$	$^{155}\text{Tm}(21.6 \text{ s})$	226.8($\dagger 100$), 531.7($\dagger 20$), 88.1($\dagger 17$)
558.0	>0.039	$^{197}\text{Tl}(2.84 \text{ h})$	425.84(12.9), 152.22(7.2), 1411.34(4.5)
558.0 2	0.093 21	$^{234}\text{Pa}(6.70 \text{ h})$	131.30(18), 946.00(13.4), 883.24(9.6)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
558.0 2		²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
558.02 3	16.1 4	⁷⁷ Ge(11.30 h)	264.44(54), 211.03(30.8), 215.50(28.6)
558.09 7	0.58 19	¹⁸⁶ Ir(16.64 h)	296.911(64.0), 137.155(42), 434.849(34.4)
558.1 2	0.0024 3	¹⁰⁹ Pd(13.7012 h)	88.04(1.171), 311.4(0.032), 647.3(0.024)
• 558.1 2	0.03 1	¹³¹ Te(30 h)	773.67(49.9), 852.21(27.0), 793.75(18.10)
558.1 3	0.010 3	¹³⁹ Cs(9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
• 558.1 2	0.0040 8	¹⁵² Eu(13.542 y)	344.281(26.58), 778.91(12.96), 411.115(2.231)
558.1 2	†2.5 3	¹⁵² Tb(17.5 h)	344.281(†1500), 586.294(†223), 271.135(†203)
558.10 15	2.1 4	¹⁸¹ Re(19.9 h)	365.57(56), 360.70(20), 639.30(6.4)
558.14 10	0.038 5	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
558.2 3	0.265 16	⁸⁵ Y(4.86 h)	231.67(22.8), 2123.8(5.0), 767.40(3.6)
558.2 2	†100 3	⁹⁴ Pd(9.0 s)	723.9(†12.1), 54.6(†11), 797.8(†7.1)
558.2 6	0.20 4	⁹⁹ Rh(4.7 h)	340.71(70), 617.8(12.0), 1261.2(11)
558.2 2	†10.6 7	¹⁶⁸ Re(4.4 s)	199.3(†100), 363.2(†95), 479.8(†62.8)
558.2 11	†0.08 8	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
558.27 9	0.31 5	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
558.3 1	0.254 14	⁷⁹ Rb(22.9 m)	688.1(23), 182.77(19.2), 143.41(13.9)
558.3 3	†1.7 3	¹¹¹ Rh(11 s)	275.4(†100.0), 411.8(†9.42), 230.0(†8.9)
558.3 4	0.33 20	¹²¹ Cs(155 s)	153.9(15.2), 239.6(7.7), 427.1(3.63)
558.30 15	0.60 14	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
558.30 10	0.41 9	²⁰⁴ At(9.2 m)	684.341(95), 516.318(90), 426.253(67.5)
• 558.372 10	0.0152 9	¹⁴⁹ Pm(53.08 h)	285.95(3.1), 859.46(0.109), 590.88(0.069)
• 558.372 10	0.052 4	¹⁴⁹ Eu(93.1 d)	327.526(4.03), 277.089(3.56), 22.510(2.32)
558.38 9	0.43 13	¹³³ Sb(2.5 m)	1096.22(43.0), 817.8(18.5), 2755(12.5)
558.38 5	2.55 14	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
558.4 2	0.084 6	¹¹² Sb(51.4 s)	1257.05(96), 990.70(14.3), 670.0(3.7)
558.4 2	0.34 5	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
558.454 12	20.40 6	¹¹⁴ Ag(4.6 s)	576.08(1.77), 1301.234(1.31), 1995.06(1.22)
558.454 12	†>3.4×10 ⁴	¹¹⁴ In(71.9 s)	576.08(†2000), 747.15(†>93)
• 558.454 12	†185 13	¹¹⁴ In(49.51 d)	725.298(†185)
558.50 6	0.097 6	⁸⁹ Br(4.40 s)	1097.82(6.00), 997.93(4.26), 953.53(4.26)
558.5 5	0.12 4	¹²⁶ Ba(100 m)	233.6(19.6), 257.6(7.6), 241.0(6.0)
558.5 4	†0.45 23	¹⁶⁰ Ho(5.02 h)	728.18(†100), 879.383(†65.9), 962.317(†59.1)
558.5 4	0.21 11	¹⁶⁰ Ho(25.6 m)	728.18(46.9), 879.383(26.6), 962.317(25.6)
558.5 2	0.00059 10	¹⁶³ Er(75.0 m)	1113.5(0.0490), 436.1(0.0285), 439.94(0.0276)
558.52 21	0.013 3	¹¹² Ag(3.130 h)	617.27(43), 1387.67(5.4), 606.49(3.1)
558.52 21		¹¹² In(14.97 m)	617.27(4.6), 606.49(1.111), 1253.43(0.218)
558.7 3	23.1 21	¹⁴⁰ Gd(15.8 s)	174.8(76), 749.9(70), 379.0(38)
558.7 5	5.4 8	¹⁹⁰ Re(3.2 h)	186.718(27.8), 605.24(14.9), 557.972(14.3)
• 558.741 29	0.316 14	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
558.8 4	0.037 19	⁸¹ Sr(22.3 m)	153.54(33.8), 147.76(30.1), 443.34(17.5)
558.8 2	0.49 11	¹⁰⁸ In(58.0 m)	875.46(100), 632.96(100), 242.84(41)
558.8 3	†26.9 25	²³³ Pu(20.9 m)	235.4(†100), 534.8(†90.2), 500.3(†38.6)
558.9 1	0.060 12	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
• 558.90 15	0.0157 18	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
558.9 2	†17.2 17	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
559 2		⁷² Kr(17.2 s)	415.1(34.7), 310.0(28.5), 162.2(16.3)
559.0		⁹⁹ Cd(16 s)	342.6(†100), 671.8(†31), 1583.3(†28)
559.0 3	†28 3	¹³⁷ Sm(45 s)	380.5(†100), 163.7(†85), 408.3(†40)
559.0 2	3	¹⁵¹ Er(23.5 s)	638.3(36), 667.2(17), 256.4(15.9)
559.0 2	0.11 3	¹⁷³ Ta(3.14 h)	172.2(18), 69.70(5.9), 90.3(5.0)
559.0 9	†0.4 2	¹⁸² Ir(15 m)	273.23(†100), 126.79(†77), 236.3(†21.0)
559.0 6	0.16	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
559.0 1	8.19 25	²⁰⁶ Fr(15.9 s)	575.3(12), 628.6(3.6), 161.4(1.2)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
559.01 8	†0.56 11	¹⁸⁴ Ir(3.09 h)	263.97(†100), 119.80(†45), 390.38(†38)
• 559.07 10	6.45 23	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
559.1 3	6.3 5	¹⁰⁴ Cd(57.7 m)	83.7(47), 709.6(19.5), 66.8(2.40)
• 559.101 5	45	⁷⁶ As(26.32 h)	657.041(6.2), 1216.104(3.42), 1212.94(1.44)
559.101 5	74	⁷⁶ Br(16.2 h)	657.041(15.9), 1853.67(14.7), 1216.104(8.8)
559.101 5	<0.6	⁷⁶ Br(1.31 s)	771.756(<0.6)
559.14 4	0.14 3	⁶⁹ As(15.2 m)	232.69(11), 145.95(4.96), 86.78(3.44)
559.2 3	0.023 8	¹⁶⁸ Ho(2.99 m)	741.356(36.6), 821.164(34.5), 815.990(18.6)
559.2 3	0.07 4	²⁰⁵ Po(1.66 h)	872.39(37), 1001.21(28.8), 849.83(25.5)
559.2 4	0.21 5	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
559.2 2	0.072 21	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
559.24 10	0.109 10	¹⁰⁵ Ru(4.44 h)	724.21(47), 469.37(17.5), 676.36(15.7)
559.24 15	†18.0 15	¹⁵⁹ Yb(1.58 m)	166.16(†500), 177.12(†159), 390.20(†113)
• 559.28 6	0.49 5	¹⁹³ Os(30.5 h)	139.03(4.27), 460.50(3.95), 73.039(3.2)
• 559.3 5		¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
559.3 5	0.14 7	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
559.3 2	0.097 15	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
559.34 24	2.6 3	⁷² Br(78.6 s)	862.03(70), 1316.70(17.3), 454.70(13.1)
559.34 15	1.44 15	¹²¹ Cd(13.5 s)	324.976(49.5), 1040.26(16.8), 349.937(12.9)
• 559.35 10	0.222 9	⁸³ Sr(32.41 h)	762.65(30), 381.53(14.1), 418.37(4.41)
• 559.374 4	0.136 8	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
559.4 2	†3.3 5	¹⁰¹ Nb(7.1 s)	276.10(†100), 157.466(†32), 13.5(†32)
559.4 5	1.00 25	¹⁵¹ Ho(35.2 s)	527.4(63), 775.53(9.2), 209.5(5.69)
559.4 4	0.0466 19	¹⁷¹ Er(7.516 h)	308.31(64.4), 295.901(28.9), 111.621(20.5)
559.42 20	0.89 11	¹⁶⁴ Tb(3.0 m)	168.838(25.4), 754.80(23.3), 215.07(21)
559.44 8	0.032 5	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
559.5 2	1.9 5	¹²² Cs(4.5 m)	331.1(94), 497.1(79), 638.5(63)
559.5 1	0.113 13	¹⁴³ Cs(1.78 s)	195.554(13), 232.421(8.32), 306.424(6.80)
559.5 2	†1.63 13	¹⁹² Tl(9.6 m)	422.8(†100), 634.8(†75.9), 786.3(†31.7)
• 559.510 4	0.008 3	¹⁶⁸ Tm(93.1 d)	198.241(52.39), 815.990(48.99), 447.515(23.05)
559.57 5	†20.2 5	¹⁴⁴ Cs(1.01 s)	199.326(†100.0), 639.00(†21.2), 758.96(†20.6)
559.59 5	2.0 3	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
559.6 3	0.10 4	⁸⁸ Br(16.5 s)	775.28(63), 802.14(13.13), 1440.69(4.72)
559.6 1	0.7	¹⁴⁹ Dy(0.490 s)	361.4(0.8), 290.7(0.8), 786.6(0.8)
559.63 4	>0.06	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
559.63 14	0.0213 7	¹⁵⁹ Gd(18.479 h)	363.55(11.4), 58.00(2.15), 348.16(0.234)
559.7 3	0.21 5	¹⁰³ Tc(54.2 s)	346.380(17.5), 136.079(16.6), 562.90(7.0)
559.7 4	0.089 20	¹³² I(2.295 h)	667.718(99), 772.60(75.6), 954.55(17.6)
559.7 5	†0.8	¹⁷⁹ Os(6.5 m)	65.39(†100), 218.6(†17), 32.3(†17)
559.80 15	1.47 15	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
559.86 2	0.891 20	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
559.9 2	0.121 13	¹⁴³ La(14.2 m)	620.3(2.34), 643.75(1.55), 621.4(1.52)
559.92 8	0.201 20	⁹³ Sr(7.423 m)	590.238(67), 875.73(24.1), 888.13(21.8)
560.0 5	0.05 3	⁹⁵ Ru(1.643 h)	336.43(70.2), 1096.76(21.0), 626.77(17.8)
560.0	0.027 5	¹⁰⁷ Ru(3.75 m)	194.05(9.9), 847.93(5.3), 462.61(3.66)
560.0		¹⁵⁴ Tm(3.30 s)	542.0, 625, 601.3
560.0 2	0.028 4	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
• 560	0.0028 8	¹⁹³ Os(30.5 h)	139.03(4.27), 460.50(3.95), 73.039(3.2)
560.05 6	0.0061 4	¹²⁹ Te(69.6 m)	27.81(16.3), 459.60(7.70), 487.39(1.42)
560.09 7	0.59 24	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
560.1 2	0.081 11	⁶⁵ Ga(15.2 m)	115.09(54), 61.20(11.4), 153.0(8.9)
560.1 3	0.126 13	¹²¹ Xe(40.1 m)	252.7(13), 132.8(10.9), 445.2(7.7)
560.1 2	†0.17 7	¹⁵⁸ Ho(11.3 m)	218.21(†100.0), 98.91(†70), 945.7(†37)
560.1 7	22.0 21	¹⁹⁹ Bi(27 m)	424.85(22), 841.7(11), 946.0(10.8)

• $t_{1/2} > 1$ d

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
560.13 5	5.4 5	²⁴⁵ Pu(10.5 h)	327.428(25.4), 308.222(4.9), 376.676(3.2)
560.13		²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
560.2 3	6.9 6	¹¹⁶ Cs(3.84 s)	393.5(<0.09), 524.3(76), 615.1(30.4)
560.2 4	0.57 6	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
560.21 2	0.95 4	¹¹⁸ In(4.45 m)	1229.68(96), 1050.69(81.0), 683.08(54.3)
• 560.24 13	0.0039 7	¹⁴⁵ Eu(5.93 d)	893.73(66), 653.512(15.0), 1658.53(14.9)
• 560.27 4	7	¹⁹⁵ Hg(41.6 h)	261.75(30.9), 387.87(2.15), 200.38(0.79)
560.28 18	0.121 17	¹⁷⁴ Ta(1.05 h)	206.50(58), 91.00(16.0), 1205.92(4.9)
560.3	0.30	⁸³ As(13.4 s)	734.60(43), 1113.10(14.7), 2076.70(11.9)
560.3 3	0.070 9	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
560.3 3	0.09 3	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
560.3 2	14.0 19	¹²² Cs(4.5 m)	331.1(94), 497.1(79), 638.5(63)
560.3 2	0.017 5	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
• 560.3 1	>0.31	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
560.3 3	0.12	¹⁵⁴ Pm(1.73 m)	2057.76(17.1), 1393.9(14.4), 81.99(12.6)
560.3		¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
560.32 11	1.87 10	¹¹⁰ In(4.9 h)	657.7622(98.3), 884.685(92.9), 937.493(68.4)
• 560.34 4	0.033 3	⁹⁷ Ru(2.9 d)	215.718(86), 324.48(10.79), 569.31(0.873)
• 560.369 15	0.027 6	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
• 560.369 15	0.098 7	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
560.42 2	1.86 7	²⁰⁸ Rn(24.35 m)	426.78(7.07), 251.05(5.02), 350.026(3.34)
560.44 2	†137	¹²⁰ I(81.0 m)	1523.0(†21.1), 640.85(†17.1), 601.11(†10.8)
560.44 2	100	¹²⁰ I(53 m)	601.11(87), 614.62(67), 976(35)
560.45 3	0.84 6	²⁴⁹ Cm(64.15 m)	634.31(1.5), 368.76(0.35), 621.87(0.182)
• 560.45 3	4.0×10 ⁻⁵	²⁵³ Es(20.47 d)	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
560.46 13	0.60 6	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
560.48 20	2.12 16	¹⁶¹ Yb(4.2 m)	78.20(34), 599.88(25.9), 631.45(13.9)
560.5 1	13.2 23	⁸² As(13.6 s)	654.6(72), 343.5(58), 1895.4(39)
560.5 3	49 4	¹¹² Rh(6.8 s)	348.70(87), 1098.6(39), 359.7(30)
560.5 1	24 3	¹⁴¹ Gd(24.5 s)	351.1(89), 223.9(64), 574.9(51)
560.5	0.041 23	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
560.51 5	0.12 3	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
• 560.55 15	0.0166 22	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
560.6 2	†27 2	¹⁹¹ Pb(2.18 m)	387.1(†100), 712.2(†46), 613.5(†40)
560.69 10	1.35 3	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
560.7 3	†3.1 16	¹⁰⁵ Nb(2.95 s)	94.8(†100), 246.9(†79), 309.9(†41.9)
560.7	0.008	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
560.7 2	3.7 4	¹⁵² Ho(49.5 s)	647.2(92), 613.8(88.4), 683.3(88)
• 560.71 5	0.58 4	¹⁰⁵ Ag(41.29 d)	344.520(41), 280.41(30.2), 644.55(11.1)
560.71 5	†294 81	¹⁰⁵ Ag(7.23 m)	319.14(†63000), 306.25(†12800), 442.37(†5900)
560.74 5	3.82 17	⁷⁷ Zn(2.08 s)	189.49(28.1), 473.94(19.7), 1832.0(12.4)
560.77 3	0.0686 23	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
560.8 3	†0.91 15	¹²⁰ Cs(64 s)	322.4(†100), 473.5(†30), 553.4(†19.1)
560.8	†3.1	¹⁴⁴ Gd(4.5 m)	333.3(†100), 2432.6(†94.8), 629.5(†32.4)
560.81 38	0.12 3	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
560.87 15	0.30 9	¹³³ Sb(2.5 m)	1096.22(43.0), 817.8(18.5), 2755(12.5)
560.9 3	0.09 3	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
561.0 3	1.08 9	¹²⁸ La(5.0 m)	284.00(87), 479.24(54), 643.65(14.7)
561.00 10	0.82 6	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)
561.03 6	2.40 14	⁹² Y(3.54 h)	934.46(13.9), 1405.28(4.8), 448.34(2.34)
• 561.03 6	>0.0045	⁹² Nb(10.15 d)	934.46(99), 912.73(1.78), 1847.27(0.85)
• 561.03 6	100	⁹² Nb(3.47×10 ⁷ y)	934.46(100)
561.1 5	0.28 12	¹²⁶ Ba(100 m)	233.6(19.6), 257.6(7.6), 241.0(6.0)
561.1 2	†1.59 11	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
561.1 2	0.36 7	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
561.1 2	0.08 3	²⁴¹ Np(13.9 m)	174.94(3.1), 132.99(0.86), 518.8(0.40)
• 561.11 7	0.114 2	²³⁸ Np(2.117 d)	984.45(27.8), 1028.54(20.3), 1025.87(9.6)
561.11 7	10.9 6	²³⁸ Am(98 m)	962.77(28), 918.69(23.0), 605.13(7.6)
• 561.11 7	0.00015 4	²⁴² Cm(162.8 d)	44.08(0.0325), 101.90(0.0025), 157.42(0.0014)
561.2	3.2	⁴³ Ar(5.37 m)	975.0(34), 738.1(15), 1439.5(13)
561.2 2	0.120 12	⁹³ Ru(59.7 s)	680.68(6), 1434.73(0.73), 1015.90(0.42)
561.2 2	0.29 5	¹¹⁹ Ag(2.1 s)	626.4(13), 366.2(12.1), 399.1(10.9)
• 561.2 5	0.00104 21	¹⁵² Eu(13.542 y)	121.7824(28.4), 1408.011(20.87), 964.131(14.34)
561.2 7	0.11 5	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
561.21	0.07	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
• 561.29 3	0.053 5	²⁰⁵ Bi(15.31 d)	1764.36(1.368), 703.44(31), 987.62(0.585)
561.3 2	0.065 12	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
561.4 5	0.06 3	⁶¹ Fe(5.98 m)	1205.07(44), 1027.42(42.7), 297.90(22.2)
561.4 5	0.083 21	⁸⁴ Br(31.80 m)	881.610(42), 1897.761(14.7), 3927.5(6.8)
561.4 3	0.29 5	¹⁴⁹ Dy(4.20 m)	100.8(15.2), 789.4(11.8), 1776.3(11.1)
561.4 1	0.068 17	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
561.46 32	†9.0 15	¹⁶⁴ Tm(2.0 m)	91.40(†1500), 1154.66(†366), 768.91(†279)
561.52 30	0.079 11	¹⁶³ Yb(11.05 m)	860.28(10.1), 63.62(6.5), 123.21(1.98)
561.56 22	0.17 3	⁷⁰ Se(41.1 m)	49.51(35.8), 426.15(29), 376.65(9.43)
561.6 3	0.29 5	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
561.6 4	0.15 4	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
561.6 3	0.013 3	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
561.60 25		¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
561.604 11	0.120 3	⁹⁰ Nb(14.60 h)	1129.224(92.7), 2318.968(82.03), 141.178(66.8)
561.63 6	4.7 3	¹⁴¹ Cs(24.94 s)	48.53(7.90), 1194.02(3.95), 588.79(3.79)
• 561.67 10	0.013 3	⁹⁵ Nb(34.975 d)	765.794(100), 204.117(0.028)
561.67 10	0.014 6	⁹⁵ Tc(20.0 h)	765.794(93.82), 1073.71(3.74), 947.67(1.951)
561.7	0.189 23	¹⁴¹ Ba(18.27 m)	190.328(46.0), 304.194(25.4), 276.948(23.4)
561.785 16	1.100 25	¹³¹ La(59 m)	108.081(25.0), 417.783(18.0), 365.162(16.9)
561.8 4	0.18 4	⁷³ Ga(4.86 h)	297.32(79.8), 325.70(11.17), 739.42(4.23)
561.8 2	†2.7 6	¹³² Pr(1.6 m)	325.5(†100), 496.9(†25), 822.4(†17.3)
561.8 6	0.0010 5	¹⁴¹ La(3.92 h)	1354.52(1.64), 1693.3(0.074), 2267.0(0.0413)
561.8 4	0.0029 10	¹⁶⁷ Yb(17.5 m)	113.34(55.3), 106.18(22.5), 176.25(21)
562.0 5	0.179 19	⁹¹ Tc(3.14 m)	2450.90(13.5), 1639.90(9.2), 1605.20(7.77)
562.0 3	†2.7 6	¹⁸³ Hg(9.4 s)	60.5(†100), 159.91(†21), 172.70(†17)
562.08 21	0.046 6	⁸⁹ Rb(15.15 m)	1031.94(58), 1248.19(42.6), 2196.02(13.3)
562.08 18	0.029 7	¹⁰⁰ Sr(202 ms)	963.85(22.0), 898.50(18.9), 65.46(15.2)
562.1 1	1.05 11	⁹⁷ Rh(46.2 m)	189.21(49), 2245.6(14), 421.55(12.7)
562.1 2	0.370 19	¹⁴⁶ Pr(24.15 m)	453.88(48.0), 1523.7(15.6), 735.72(7.5)
• 562.1 3	0.019 3	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
562.10 20	0.071 22	²⁰⁷ At(1.80 h)	814.41(44.5), 588.33(19.2), 300.654(12.8)
562.15 4	11.41 13	⁷⁸ Rb(17.66 m)	454.97(63), 692.86(12.56), 3438.16(10.8)
562.15 4	0.28 8	⁷⁸ Rb(5.74 m)	454.97(81), 664.44(38.3), 1109.72(13.12)
562.16 7		⁸³ Br(2.40 h)	529.635(1.200), 520.39(0.0576), 552.63(0.0200)
• 562.16 7	0.0085 9	⁸³ Rb(86.2 d)	520.39(44.7), 529.635(29.3), 552.63(16.0)
562.2 4	0.15 5	¹⁰³ Cd(7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
562.2 2	†2.9 4	¹³¹ Ce(10.3 m)	169.42(†100), 414.25(†68), 119.18(†44)
562.2 4	†2.5 7	¹⁴² Xe(1.22 s)	571.83(†100), 657.05(†79), 538.24(†77)
562.2 6	5.11 17	¹⁵⁴ Pr(2.3 s)	162.4(15), 932.1(11.7), 70.8(11.22)
562.248 25	0.639 23	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
562.3	0.09	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
562.37 5	0.74 4	⁸¹ Ga(1.221 s)	216.47(37.4), 828.26(22.1), 711.18(17.6)

• $t_{1/2} > 1$ 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: $E_\gamma(I_\gamma)$
562.4	0.49	$^{148}\text{Pr}(2.27\text{ m})$	301.702(61), 1357.78(5.5), 1023.18(4.8)
562.4 4		$^{185}\text{Au}(4.25\text{ m})$	310.6(13), 243.1(6.6), 77.7(6)
562.4 2	$\dagger 79$	$^{198}\text{Bi}(693\text{ s})$	1063.5($\dagger 100$), 197.6($\dagger 80$), 317.9($\dagger 37.5$)
562.4 2	$\dagger 6.4$ 12	$^{229}\text{Ac}(62.7\text{ m})$	164.522($\dagger 100$), 569.1($\dagger 91$), 261.92($\dagger 39$)
• 562.413 12	0.000118 4	$^{169}\text{Yb}(32.026\text{ d})$	63.12077(44.2), 197.95788(35.8), 177.21402(22.16)
562.5 3	0.24 3	$^{120}\text{Xe}(40\text{ m})$	25.1(30), 72.6(9), 178.1(6.8)
562.5 1	0.074 3	$^{151}\text{Tb}(17.609\text{ h})$	287.357(28.3), 251.863(26.3), 108.088(24.3)
562.5 4	$\dagger 16$ 3	$^{163}\text{Lu}(238\text{ s})$	163.08($\dagger 100$), 54.00($\dagger 88$), 396.34($\dagger 63$)
• 562.5 1	35 2	$^{194}\text{Ir}(171\text{ d})$	482.833(97), 328.455(93), 600.5(62)
562.5 7	0.35 5	$^{201}\text{Bi}(108\text{ m})$	629.1(24.0), 936.2(11.3), 1014.1(10.7)
562.500 4	0.87 4	$^{228}\text{Ac}(6.15\text{ h})$	911.205(26.6), 968.971(16.2), 338.322(11.3)
562.500 4	0.69 19	$^{228}\text{Pa}(22\text{ h})$	911.205(4.19), 463.005(1.250), 964.770(4.25)
562.5 3	1.0 3	$^{251}\text{Cm}(16.8\text{ m})$	542.7(10.9), 530.0(1.62), 389.7(1.28)
562.6 3	$\dagger 1.1$ 3	$^{83}\text{Ge}(1.85\text{ s})$	306.51($\dagger 100.0$), 1193.77($\dagger 20.5$), 1525.50($\dagger 13.6$)
562.6 3	0.33 10	$^{159}\text{Er}(36\text{ m})$	624.5(33), 649.1(23.4), 205.92(9.7)
• 562.6 3	0.084 6	$^{194}\text{Au}(38.02\text{ h})$	328.455(60), 293.545(10.2), 1468.91(6.3)
• 562.64 8	35 2	$^{194}\text{Ir}(171\text{ d})$	482.833(97), 328.455(93), 600.5(62)
562.73 5	0.237 15	$^{151}\text{Nd}(12.44\text{ m})$	116.80(43.4), 255.68(16.4), 1180.89(14.8)
562.79 12	0.0011 4	$^{123}\text{I}(13.27\text{ h})$	158.97(83), 528.96(1.39), 440.02(0.428)
562.79 4	0.146 13	$^{135}\text{Ce}(17.7\text{ h})$	265.56(41.8), 300.07(23.5), 606.76(18.8)
562.8	0.123 22	$^{43}\text{Ti}(509\text{ ms})$	2288.2(4.40), 845.2(2.77), 2458.5(0.91)
562.8 1	0.11 4	$^{107}\text{Tc}(21.2\text{ s})$	102.70(21.0), 177.00(9.2), 106.31(7.6)
• 562.8 5		$^{233}\text{U}(1.592\times 10^5\text{ y})$	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
562.8 4	0.070	$^{233}\text{Th}(22.3\text{ m})$	86.477(2.7), 29.374(2.5), 459.222(1.4)
562.8 3	0.036 10	$^{234}\text{Pa}(6.70\text{ h})$	131.30(18), 946.00(13.4), 883.24(9.6)
562.81 10	0.032 7	$^{201}\text{Pb}(9.33\text{ h})$	331.19(79), 361.27(9.9), 945.96(7.4)
• 562.82 20	>0.00047	$^{129}\text{Te}(33.6\text{ d})$	695.88(2.988), 729.57(0.70), 556.65(0.118)
• 562.87 13	0.0036 5	$^{131}\text{Ba}(11.50\text{ d})$	496.326(47), 123.805(28.97), 216.078(19.66)
562.90 9	7.0 5	$^{103}\text{Tc}(54.2\text{ s})$	346.380(17.5), 136.079(16.6), 210.21(6.8)
562.9 4	0.8 4	$^{103}\text{Cd}(7.3\text{ m})$	1461.81(12), 1448.70(5.55), 1079.90(5.44)
562.93 3	66	$^{76}\text{Ga}(32.6\text{ s})$	545.51(26.0), 1108.41(15.8), 431.0(9.2)
562.93 8	0.23 3	$^{152}\text{Pm}(4.1\text{ m})$	121.7824(15.7), 841.586(2.17), 961.06(1.92)
• 562.93 8	0.025 4	$^{152}\text{Eu}(13.542\text{ y})$	121.7824(28.4), 1408.011(20.87), 964.131(14.34)
562.93 8	0.226 3	$^{152}\text{Eu}(9.274\text{ h})$	841.586(14.6), 963.37(12.01), 121.7824(7.21)
• 563.0 2	0.0155 19	$^{125}\text{Sn}(9.64\text{ d})$	1067.10(10), 1089.15(4.59), 822.48(4.28)
• 563.00 15	0.0430 13	$^{170}\text{Lu}(2.00\text{ d})$	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
563.0 4	0.14 3	$^{177}\text{W}(135\text{ m})$	115.65(50), 426.98(13.2), 1036.4(10.3)
563.0 3	0.076 12	$^{181}\text{Au}(11.4\text{ s})$	198.60(4.4), 2022.4(4.2), 79.40(4.2)
• 563.05 30	$\dagger 7\times 10^{03}$	$^{241}\text{Am}(432.2\text{ y})$	59.537($\dagger 60$), 26.345($\dagger 1000\times 10^9$), 33.195($\dagger 6000\times 10^8$)
563.1 3	0.76 17	$^{160}\text{Yb}(4.8\text{ m})$	173.74(42.0), 215.78(20.2), 140.35(9.3)
• 563.178 5	1.20 6	$^{76}\text{As}(26.32\text{ h})$	559.101(45), 657.041(6.2), 1216.104(3.42)
563.178 5	3.6 6	$^{76}\text{Br}(16.2\text{ h})$	559.101(74), 657.041(15.9), 1853.67(14.7)
• 563.197 7	3.68 19	$^{232}\text{Pa}(1.31\text{ d})$	969.315(41.6), 894.351(19.8), 150.059(10.8)
• 563.197 7	0.00010	$^{236}\text{Pu}(2.858\text{ y})$	47.574(0.066), 108.96(0.012), 166.0(0.00066)
563.2		$^{99}\text{Cd}(16\text{ s})$	342.6($\dagger 100$), 671.8($\dagger 31$), 1583.3($\dagger 28$)
563.2 7	0.176 22	$^{199}\text{Bi}(27\text{ m})$	560.1(22.0), 424.85(22), 841.7(11)
563.21 3	0.0601 19	$^{166}\text{Tm}(7.70\text{ h})$	778.817(18.9), 2052.36(17.2), 184.410(16.1)
• 563.227 15	8.38 5	$^{134}\text{Cs}(2.062\text{ y})$	604.699(97.56), 795.845(85.44), 569.315(15.43)
563.227 15	0.359 9	$^{134}\text{La}(6.45\text{ m})$	604.699(5.05), 1554.934(0.414), 1732.129(0.234)
• 563.243 15	0.400 23	$^{169}\text{Lu}(34.06\text{ h})$	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
563.3 4	0.8 4	$^{103}\text{Cd}(7.3\text{ m})$	1461.81(12), 1448.70(5.55), 1079.90(5.44)
563.3 2	2.3 8	$^{145}\text{Ho}(2.4\text{ s})$	339.8(15), 312.9(14.3), 334.1(13.5)
563.3 5	$\dagger 1.7$ 3	$^{152}\text{Tb}(17.5\text{ h})$	344.281($\dagger 1500$), 586.294($\dagger 223$), 271.135($\dagger 203$)
563.4 4	0.16 8	$^{127}\text{Sn}(2.10\text{ h})$	1114.3(39), 1095.6(20), 823.1(10.9)

• $t_{1/2} > 1\text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
• 563.4		¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
563.41 20	†0.56 5	¹⁸⁴ Ir(3.09 h)	263.97(†100), 119.80(†45), 390.38(†38)
• 563.42 4	0.50 3	¹⁸⁹ Re(24.3 h)	216.663(5.50), 219.395(4.54), 245.09(3.5)
• 563.48 6	0.0095 13	⁹⁵ Tc(61 d)	204.117(63.25), 582.082(29.96), 835.149(26.63)
• 563.48 10	0.0102 11	¹⁴⁹ Gd(9.28 d)	149.735(48.2), 298.634(28.6), 346.651(23.9)
563.49 22	†4.5	¹⁹⁷ Ir(5.8 m)	469.72(†100), 430.56(†61), 815.92(†45)
563.5 2	3.1 4	¹⁵² Ho(49.5 s)	647.2(92), 613.8(88.4), 683.3(88)
563.5 3	†25.0 10	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
563.52 5	10.5 5	¹⁹⁵ Tl(1.16 h)	884.47(10.0), 1363.88(8.4), 242.15(4.3)
563.53 16	0.42 3	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
563.68 19	4.23 21	⁵⁴ V(49.8 s)	834.848(97.1), 989.01(80.1), 2259.35(45.6)
563.7 2	8.3 4	¹⁴² Eu(1.22 m)	768.1(100), 1023.3(92.0), 556.6(86.6)
563.7 15	†1.3 3	²¹⁵ Bi(7.6 m)	293.54(†100), 271.23(†5.5), 517.63(†1.9)
563.7 15	>0.0032	²¹⁹ Rn(3.96 s)	271.23(10.8), 401.81(6.37), 130.59(0.119)
563.8 1	11.7 15	⁹⁸ Sr(0.653 s)	119.353(73), 444.628(39), 428.4(31)
563.8	0.009 4	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
563.80 5	0.13 3	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
563.8 5	2.5 6	¹⁶⁴ Tb(3.0 m)	168.838(25.4), 754.80(23.3), 215.07(21)
563.8 3	0.9	²⁰⁷ Hg(2.9 m)	351.059(77), 997.1(69), 1637.1(30)
563.9 2	0.0012	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
564.0 3	0.31 5	¹⁹⁸ Tl(5.3 h)	411.8044(82), 675.8874(11), 636.4(10.1)
564.021 8	0.07 3	¹⁵² Pm(4.1 m)	121.7824(15.7), 841.586(2.17), 961.06(1.92)
• 564.021 8	0.468 13	¹⁵² Eu(13.542 y)	121.7824(28.4), 1408.011(20.87), 964.131(14.34)
564.03 4	0.39	⁵³ V(1.61 m)	1006.14(90), 1289.59(10), 283.14(0.8)
564.081 8	0.053 6	²⁰⁰ Au(48.4 m)	367.943(19), 1225.479(10.7), 1262.950(3.12)
• 564.081 8	0.035 17	²⁰⁰ Tl(26.1 h)	367.943(87), 1205.717(29.9), 579.298(13.8)
564.1 4	0.17 3	⁸⁸ Nb(7.8 m)	1057.01(89.3), 1082.53(53.9), 399.41(45.7)
• 564.119 17	69	¹²² Sb(2.70 d)	692.794(3.78), 1256.901(0.80), 793.278(0.016)
564.119 17	18	¹²² I(3.63 m)	692.794(1.325), 793.278(1.297), 683.647(0.778)
• 564.183 17	2.31 14	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
564.19 24	0.52 3	¹⁷² Ta(36.8 m)	214.02(46), 95.23(17.5), 1109.27(12.4)
564.2	†2	¹³¹ Ce(10.3 m)	169.42(†100), 414.25(†68), 119.18(†44)
564.3 2	†1.17 11	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
564.34 9	0.305 21	¹¹¹ Sn(35.3 m)	1152.98(2.7), 1914.70(1.99), 761.97(1.48)
• 564.39 20	0.007 6	¹⁰⁵ Ag(41.29 d)	344.520(41), 280.41(30.2), 644.55(11.1)
564.397 16	14.7 8	¹¹⁷ Cd(3.36 h)	1997.33(26), 1065.98(23.1), 1432.91(13.4)
564.4	11	¹⁴⁰ I(0.86 s)	376.657(91), 457.630(59), 936.7(16)
564.4 1	0.55 7	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
564.4 1	0.22 3	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
564.4 6	†0.14 5	¹⁶⁰ Ho(5.02 h)	728.18(†100), 879.383(†65.9), 962.317(†59.1)
564.4 6	0.064 21	¹⁶⁰ Ho(25.6 m)	728.18(46.9), 879.383(26.6), 962.317(25.6)
564.4 5	0.98 9	²¹² Fr(20.0 m)	1273.8(46), 227.72(43), 1185.6(14.1)
564.42 8	0.20 10	¹⁴⁰ Pm(5.95 m)	1028.19(100), 773.74(100), 419.57(92)
• 564.45 20	0.096 18	⁸³ Sr(32.41 h)	762.65(30), 381.53(14.1), 418.37(4.41)
564.5 5	0.22 7	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
564.5 5	0.27 10	¹²¹ Cs(155 s)	153.9(15.2), 239.6(7.7), 427.1(3.63)
564.5 3	2.6 9	¹³² Pm(6.3 s)	212.5(88), 397.2(23), 610.4(12.3)
564.56 7	0.211 15	¹⁰⁰ Sr(202 ms)	963.85(22.0), 898.50(18.9), 65.46(15.2)
564.69 15	0.041 3	¹⁸⁷ Ir(10.5 h)	912.95(4.79), 427.12(4.12), 400.89(3.94)
564.7 10	0.21 4	²⁰¹ Bi(108 m)	629.1(24.0), 936.2(11.3), 1014.1(10.7)
564.79 8	13.27 24	⁴⁷ K(17.5 s)	2013.45(93), 586.01(79.7), 2578.26(5.60)
564.86 21	0.17 3	⁷⁰ Se(41.1 m)	49.51(35.8), 426.15(29), 376.65(9.43)
• 564.86 15	0.0033 7	¹⁴⁵ Eu(5.93 d)	893.73(66), 653.512(15.0), 1658.53(14.9)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
564.96 5	0.012 4	¹⁸⁷ W(23.72 h)	685.774(27.3), 479.531(21.8), 72.001(11.14)
565.0 2	1.81 20	⁹⁵ Rb(377.5 ms)	352.02(49), 204.02(15.1), 680.7(14.8)
565.0 2	†7	⁹⁶ Rb(0.199 s)	352.02(†700), 204.02(†200), 680.7(†121)
565	0.21 8	¹⁰¹ Pd(8.47 h)	296.29(19), 590.44(12.06), 269.67(6.43)
565.0 5	0.117 25	¹¹⁵ Ag(20.0 m)	229.08(18), 212.80(4.4), 472.70(4.0)
• 565.00 4	0.353 20	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
• 565.0 4	0.028 9	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
565.0 5	†0.6	¹⁸³ Hg(9.4 s)	60.5(†100), 159.91(†21), 172.70(†17)
565.0 2	†17.0 2	²⁰⁰ At(43 s)	665.9(†100), 611.1(†85.0), 484.5(†49.8)
565	†14	²²³ Rn(23.2 m)	591.8(†100), 635.2(†76), 416.0(†55)
565.0 2	0.209 17	²⁴⁹ Es(102.2 m)	379.5(40.4), 813.2(9.2), 375.1(3.3)
565.03 14	1.32 16	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
565.04 14	†4.7 9	¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†33)
565.1 2	0.30 5	¹¹⁷ Xe(61 s)	28.5(7.0), 221.3(10.0), 32.3(7.6)
565.13 4	0.49 5	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
565.16 23	0.64 3	¹⁵⁶ Ho(56 m)	266.35(54.7), 137.83(51), 366.25(10.73)
565.19 8	0.207 16	⁹⁰ Kr(32.32 s)	1118.69(39.0), 121.82(35.5), 539.49(30.8)
565.2 2	†1.7 5	¹³⁶ Pm(107 s)	373.8(†100), 602.7(†38.4), 857.2(†23.4)
565.2 1	1.03 6	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
565.23 2	0.540 13	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
565.3 3	0.23 5	⁹⁷ Rb(169.9 ms)	167.1(26), 585.2(21.0), 600.5(10.6)
565.3 5	0.07 3	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
565.3 4	0.20 7	¹⁵⁹ Er(36 m)	624.5(33), 649.1(23.4), 205.92(9.7)
565.31 5	0.10 3	¹⁶⁴ Lu(3.14 m)	123.3(34.0), 740.52(12.2), 262.22(10.8)
565.33 12	2.59 24	¹⁵⁴ Tb(22.7 h)	247.925(79), 346.643(69), 1419.81(46)
565.36 10	0.40 12	¹⁸⁶ Ir(16.64 h)	296.911(64.0), 137.155(42), 434.849(34.4)
565.4 3	0.09 3	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
565.4 5	0.09 3	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
565.4 2	†36 3	¹⁹² Bi(37 s)	853.8(†100.0), 501.8(†80), 504.3(†39)
565.4 1	0.179 16	²²⁶ Fr(48 s)	253.73(22.3), 186.05(16.3), 253.9(2.5)
565.42 4	0.050 17	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
565.42 11	†48 3	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 434.52(†47)
565.44 5	>0.13	¹⁰⁸ Sn(10.30 m)	396.44(64.3), 272.75(45.5), 669.08(22.6)
565.48 15	0.22 5	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
565.5 3	0.09	¹⁰⁴ Tc(18.3 m)	358.0(89), 530.5(15.6), 535.1(14.7)
565.5 2	†20 6	¹⁵³ Ho(9.3 m)	108.7(†100), 365.9(†92), 161.5(†83)
565.5 2	0.40 13	¹⁵³ Ho(2.0 m)	295.8(67), 637.0(5.36), 688.5(3.7)
565.52 4	0.94 6	¹³⁴ I(52.6 m)	847.025(95.4), 884.090(64.9), 1072.547(15.0)
565.55 12	3.2 3	²⁰⁶ At(30.0 m)	700.66(98), 477.10(86), 395.54(48)
• 565.56 5	0.0414 24	¹⁷² Tm(63.6 h)	78.7435(6.5), 1093.657(6.0), 1387.093(5.6)
565.57 10	1.00 18	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
565.6 3	2.59 4	¹³⁷ Pm(2.4 m)	177.5(40.29), 108.6(35), 233.6(29.57)
565.6 2	0.33	¹⁴⁰ Sm(14.82 m)	225.5(>10), 225.4(10), 140.0(5.0)
565.7 3	0.20 6	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
565.70 3	1.31 10	¹⁵⁰ Pm(2.68 h)	333.971(68), 1324.51(17.5), 1165.739(15.8)
565.7 1	1.12 7	¹⁵⁰ Tb(3.48 h)	638.05(72), 496.3(14.8), 792.5(4.39)
565.718 20	0.132 4	¹⁶⁵ Dy(2.334 h)	94.700(3.58), 361.68(0.84), 633.415(0.568)
565.73 10	0.11	¹³⁷ I(24.5 s)	1218.00(12.8), 601.05(4.80), 1302.64(4.42)
• 565.732 7	0.427 14	⁷⁷ Br(57.036 h)	238.996(23), 520.639(22.4), 297.215(4.16)
565.8 7	0.12 8	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
• 565.80 15	0.0125 7	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
565.8 1	0.349 22	²²⁸ Fr(39 s)	473.7(10.2), 474.0(7.6), 410.40(6.3)
565.8 3	0.154 20	²³⁸ Am(98 m)	962.77(28), 918.69(23.0), 561.11(10.9)
565.82 5	0.195 19	⁷¹ Zn(3.96 h)	386.28(93), 487.38(62), 620.18(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: $E_\gamma(I_\gamma)$
565.85 10	0.0340 18	¹⁵⁹ Ho(33.05 m)	121.012(36.2), 131.973(23.6), 309.594(17.2)
565.88 4	4.50 15	⁵⁵ V(6.54 s)	517.71(73), 880.70(18.1), 921.10(4.6)
565.9 1	3.44 8	¹⁰¹ Pd(8.47 h)	296.29(19), 590.44(12.06), 269.67(6.43)
565.9 3		¹⁴⁶ Dy(29 s)	2156.8, 1915.7, 1876.7
565.9 1		²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
565.992 13	18.3 9	¹³⁴ Te(41.8 m)	767.20(29.0), 210.465(22.3), 277.951(20.9)
566.0 5	†16.2 16	⁸⁸ Se(1.52 s)	159.2(†100), 259.2(†82), 1903.7(†64)
566.0 3	0.34 5	¹²⁷ In(1.09 s)	1597.7(49), 646.1(6.2), 805.1(5.6)
566	†6.9	¹⁶³ Lu(238 s)	163.08(†100), 54.00(†88), 396.34(†63)
566		¹⁸⁴ Au(53.0 s)	162.97(50), 272.98(40), 362.47(17.5)
566.0 2	4.61 23	¹⁹⁰ Pb(1.2 m)	942.20(34), 151.19(8.92), 598.3(8.0)
566.0 2	†2.5	²⁵⁶ Es(7.6 h)	861.8(†100), 231.1(†61), 172.6(†49)
566.04 6	0.220 15	⁸¹ Se(18.45 m)	275.988(0.7), 290.03(0.55), 828.27(0.280)
566.04 6		⁸¹ Se(57.28 m)	275.988(0.049), 260.21(0.048), 767.1(0.00061)
566.1 5	0.29 15	¹⁴⁰ Pm(5.95 m)	1028.19(100), 773.74(100), 419.57(92)
566.1	0.11	¹⁴⁷ Ba(0.893 s)	167.4(11), 105.2(4.8), 196.1(4.8)
566.12 5	0.0425 25	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
566.14 10	0.0020	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
566.16 23	0.046 13	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
• 566.2 3	0.034 9	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
566.2 5	†4.6	¹⁵⁴ Nd(25.9 s)	151.703(†800), 799.55(†600), 180.693(†510)
566.2 4	†0.31 13	¹⁸⁴ Ir(3.09 h)	263.97(†100), 119.80(†45), 390.38(†38)
566.2 7	0.43 9	²⁰⁵ At(26.2 m)	719.30(31), 669.41(8.6), 628.88(5.6)
566.21 9	†7.59 23	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
566.24 9	0.56 6	²⁰⁸ At(1.63 h)	686.527(98), 660.040(89), 177.595(48.6)
566.28 4	0.341 17	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
566.3 2	0.29 9	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
566.34 6	25.3 13	²⁴⁰ Np(61.9 m)	973.9(23.8), 600.57(18.4), 895.8(13.6)
566.37 8	4.6 5	⁸⁰ Zn(0.545 s)	712.53(45.1), 715.40(33.8), 964.93(15.6)
566.4 5	†11.0 20	¹⁶³ Lu(238 s)	163.08(†100), 54.00(†88), 396.34(†63)
566.4 4	†0.31 10	¹⁹⁶ Ir(1.40 h)	393.346(†105.2), 521.175(†104), 447.1(†102.1)
• 566.421 8	0.1294 21	¹⁵² Eu(13.542 y)	121.7824(28.4), 1408.011(20.87), 964.131(14.34)
566.437 8	0.45 4	⁷⁵ Br(96.7 m)	286.572(88), 141.3147(6.6), 427.883(4.4)
• 566.49 5	0.077 7	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
566.5 2	0.028 4	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)
566.5	0.348 24	¹³⁰ La(8.7 m)	357.4(81.0), 550.7(25.9), 908.0(17.0)
566.5	0.07	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
566.5 2	0.053 14	¹⁷³ Ta(3.14 h)	172.2(18), 69.70(5.9), 90.3(5.0)
• 566.59 8	0.212 21	¹⁸⁸ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
566.6 2	0.0124 22	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
566.6 3	†1.53 20	²⁰¹ Po(15.3 m)	890.1(†100), 240.1(†71.0), 904.2(†54.8)
566.62 5	0.73 11	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
566.7 1	0.73 4	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
566.7 2	22 2	¹⁵⁰ Tb(5.8 m)	638.05(100), 650.4(70), 438.37(42)
566.7 4	†4.7 9	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
566.85 16	0.47 8	¹⁴⁹ Pr(2.26 m)	138.447(11.0), 165.087(9.9), 108.520(9.5)
566.87 2	0.606 25	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
566.9 5	>0.13	¹⁶⁵ Dy(2.334 h)	94.700(3.58), 361.68(0.84), 633.415(0.568)
566.90 10	0.126 10	¹⁶⁵ Yb(9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
566.91 12	†2.5 2	¹⁶⁵ Lu(10.74 m)	132.49(†100), 120.60(†100), 174.25(†47.0)
566.92 22	0.71 9	¹⁶¹ Yb(4.2 m)	78.20(34), 599.88(25.9), 631.45(13.9)
567.0 1	3.8 3	¹²⁸ La(5.0 m)	284.00(87), 479.24(54), 643.65(14.7)
567.00 15	0.32 7	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
567 1	0.42 11	¹⁶⁴ Tb(3.0 m)	168.838(25.4), 754.80(23.3), 215.07(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: $E_{\gamma}(I_{\gamma})$
567.0 7	0.13 7	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
567.0 5	†0.7 3	¹⁹⁸ Tl(1.87 h)	636.4(†202), 411.8044(†202), 587.2(†185)
• 567.0	5.1×10^{-5}	²⁵³ Es(20.47 d)	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
567.05 11	0.166 12	⁹³ Kr(1.286 s)	253.42(41.2), 323.89(24.1), 266.83(20.6)
567.06 16	18.2 9	⁷⁸ Ga(5.09 s)	619.40(77), 1186.42(20.1), 1025.11(12.4)
567.1 3	0.027 7	¹³¹ La(59 m)	108.081(25.0), 417.783(18.0), 365.162(16.9)
567.1 4	0.003 3	¹³³ I(20.8 h)	529.872(87.0), 875.329(4.51), 1298.223(2.35)
567.1 3	0.13 3	²³⁶ Th(37.5 m)	110.8(4.2), 646.6(0.72), 196.0(0.69)
• 567.14 3	0.234 9	¹³² Cs(6.479 d)	464.55(1.73), 1031.70(0.125)
567.14 3	15.7 12	¹³² La(4.8 h)	464.55(76), 1909.91(9.0), 663.07(9.0)
567.14 3	4.5 9	¹³² La(24.3 m)	464.55(22), 663.07(11.6), 285.6(7)
567.2 3	0.44 22	¹⁸¹ Os(105 m)	238.75(44), 826.77(20), 118.03(12.9)
567.2 5	†0.19 14	¹⁸⁴ Ir(3.09 h)	263.97(†100), 119.80(†45), 390.38(†38)
567.2 3	0.35 4	¹⁸⁸ Hg(3.25 m)	66.7(63), 190.1(4.40), 82.7(2.6)
567.2 5	†3.9 17	¹⁹³ Hg(3.80 h)	861.11(†100), 1118.84(†64), 789.21(†36)
567.210 18	0.009 4	¹⁸³ Os(13.0 h)	381.768(89.6), 114.463(20.63), 167.844(8.81)
567.24 24	1.00 9	⁹⁷ Rh(46.2 m)	189.21(49), 2245.6(14), 421.55(12.7)
567.26 4	0.21 1	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
567.3 2	1.16 8	¹⁴⁸ Ho(9.59 s)	1687.5(82.47), 660.8(58.94), 504.3(18.62)
567.3 3	0.072 10	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
567.31 13	0.19 3	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
567.33 4	0.102 6	¹³¹ Te(25.0 m)	149.716(69), 452.323(18.18), 1146.96(4.95)
567.4 2	†36 3	¹¹³ I(6.6 s)	462.5(†100), 622.4(†74), 351.5(†43)
567.4 4	0.041 13	¹¹⁶ In(54.41 m)	1293.54(84.4), 1097.3(56.2), 416.86(28.9)
567.4 4	0.6 2	¹²⁹ Sn(2.23 m)	645.13(100), 80.5(6.6), 913.2(5.0)
567.43 21	3.3 5	¹⁸⁶ Ta(10.5 m)	197.93(50), 214.87(42.3), 510.82(37.5)
567.5 3	0.35 4	¹²⁷ Ba(12.7 m)	180.8(12), 114.8(9.3), 66.06(2.12)
• 567.5 5		¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
567.56	0.017 3	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
567.57 42	0.42 10	¹⁷⁴ W(31 m)	35.42(14.1), 428.83(12.7), 328.68(9.5)
567.58 4	0.145 14	¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
• 567.61 6	0.022 7	¹⁵⁶ Tb(5.35 d)	534.318(66.6), 199.2132(40.9), 1222.36(31.00)
567.66 11		²²³ Rn(23.2 m)	591.8(†100), 635.2(†76), 416.0(†55)
567.70 20	1.15 8	¹⁰⁷ Rh(21.7 m)	302.77(66), 392.47(8.8), 312.21(4.8)
567.7 3	0.8	¹¹³ Pd(93 s)	95.74(3.3), 643.7(3.0), 739.63(2.4)
567.7 2	†357 71	¹⁵⁷ Ho(12.6 m)	279.97(†47600), 341.16(†37000), 193.41(†15200)
567.71 20	0.101 11	¹⁶³ Yb(11.05 m)	860.28(10.1), 63.62(6.5), 123.21(1.98)
567.72 5	0.114 9	¹³⁹ Cs(9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
567.72 5	0.042 9	¹³⁹ Cs(9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
567.8 1	0.54 3	²²⁸ Fr(39 s)	473.7(10.2), 474.0(7.6), 410.40(6.3)
567.83 15	0.31 3	¹⁶⁴ Lu(3.14 m)	123.3(34.0), 740.52(12.2), 262.22(10.8)
• 567.87 13	0.00282 9	¹⁰³ Ru(39.26 d)	497.080(90.9), 610.33(5.75), 443.799(3.27)
567.90 15	5.2 3	¹⁰⁰ Cd(49.1 s)	936.55(66), 139.71(6.7), 582.5(6.3)
• 568.067 7	0.857 18	⁷⁷ Br(57.036 h)	238.996(23), 520.639(22.4), 297.215(4.16)
568.1 5	0.10 4	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
568.1 3	0.81 3	¹⁷⁷ W(135 m)	115.65(50), 426.98(13.2), 1036.4(10.3)
568.20 4	3.84 13	⁹⁹ Ag(124 s)	264.41(65), 832.29(13.5), 805.07(12.5)
568.2 2	0.28 7	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
568.27 12	0.21 3	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
568.29 10	0.17 3	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
• 568.36 7	0.0186 12	¹⁴⁹ Pm(53.08 h)	285.95(3.1), 859.46(0.109), 590.88(0.069)
• 568.36 7	0.000024 8	¹⁴⁹ Eu(93.1 d)	327.526(4.03), 277.089(3.56), 22.510(2.32)
568.39 6	2.8 3	¹¹⁵ Te(5.8 m)	723.569(30), 1380.58(23.0), 1326.83(22.7)
568.4 2	1.67 7	⁸⁵ Y(4.86 h)	231.67(22.8), 2123.8(5.0), 767.40(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: $E_{\gamma}(I_{\gamma})$
568.4 2	0.00086 9	¹⁶³ Er(75.0 m)	1113.5(0.0490), 436.1(0.0285), 439.94(0.0276)
568.4 3	16.1 6	¹⁷¹ Re(15.2 s)	102.0(9.7), 1066.0(8.1), 434.9(7.6)
568.4 9	0.06 2	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
568.485 10	0.0083 10	¹⁷³ Hf(23.6 h)	123.672(83), 296.974(33.9), 139.634(12.7)
568.5 3	†2.4 4	⁷⁵ Ga(126 s)	253.0(†100), 574.8(†31.6), 885.6(†11.1)
568.5 6	0.8 3	¹⁶⁶ Lu(1.41 m)	228.12(15), 102.38(13), 285.07(11.0)
568.5 3	†1.7 5	¹⁷¹ Hf(12.1 h)	122.0(†100), 662.2(†83), 347.18(†47)
568.5 7	0.55 9	²⁰⁵ At(26.2 m)	719.30(31), 669.41(8.6), 628.88(5.6)
568.53 6	0.306 16	¹³⁸ Xe(14.08 m)	258.411(31.5), 434.562(20.3), 1768.26(16.7)
568.7 1	0.199 9	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)
568.7 1	†0.6 2	¹⁷² Ir(2.0 s)	227.8(†100.0), 378.4(†62.0), 448.4(†40.5)
568.72 10	>1.5	¹⁵⁷ Pm(10.56 s)	160.61(35), 188.052(13.5), 571.27(5.39)
568.80 12	58.0 3	⁹⁶ Nb(23.35 h)	778.224(96.45), 459.88(26.62), 849.929(20.45)
• 568.80 12	0.92 6	⁹⁶ Tc(4.28 d)	778.224(100), 849.929(98), 812.581(82)
568.80 12	0.0026 8	⁹⁶ Tc(51.5 m)	778.224(1.9), 1200.231(1.08), 480.705(0.311)
568.8 15	0.65 13	¹¹⁷ Te(62 m)	719.7(65), 1716.4(15.9), 2300.0(11.2)
• 568.80 8	0.053 4	¹⁹¹ Pt(2.9 d)	538.90(13.7), 409.44(8.0), 359.90(6.0)
568.821 6	0.080 6	¹⁶⁸ Ho(2.99 m)	741.356(36.6), 821.164(34.5), 815.990(18.6)
• 568.821 6	0.006 3	¹⁶⁸ Tm(93.1 d)	198.241(52.39), 815.990(48.99), 447.515(23.05)
568.84 5	7.1 3	¹⁸⁹ Pt(10.87 h)	721.41(9.3), 94.33(7.6), 243.37(7.0)
568.88 17	†6.5 10	¹⁸¹ Pt(51 s)	289.29(†100), 111.97(†100), 230.15(†92)
568.89 5	0.42 3	¹⁰⁷ Ru(3.75 m)	194.05(9.9), 847.93(5.3), 462.61(3.66)
568.89 4	†7.5 15	¹⁶⁴ Tm(2.0 m)	91.40(†1500), 1154.66(†366), 768.91(†279)
568.9 10	0.17 6	⁷⁷ Rb(3.75 m)	66.52(57), 178.99(22.2), 393.37(9.7)
568.9 3	0.28 5	¹⁴⁹ Dy(4.20 m)	100.8(15.2), 789.4(11.8), 1776.3(11.1)
568.9 2	3.6 4	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
568.91 4	0.582 16	⁸¹ Rb(4.576 h)	190.38(64.0), 446.15(23.2), 510.31(5.3)
568.94 13	0.069 10	¹¹⁸ In(4.45 m)	1229.68(96), 1050.69(81.0), 683.08(54.3)
568.95 10	†4.7 5	¹³¹ Ce(5.0 m)	230.43(†100), 436.85(†7.3), 462.9(†6.9)
569.00 19	0.20 3	⁹¹ Kr(8.57 s)	108.788(43.5), 506.592(19.1), 612.87(7.7)
569		¹¹⁶ Pd(12.4 s)	279.3, 178.3, 215.8
569.0 3	0.38 5	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
569 1	11.1 6	¹⁵⁴ Ho(11.76 m)	334.6(84), 412.4(15.0), 873.4(12.5)
569.0		¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
569.0 3	0.051 3	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
• 569.0 3	†0.037 7	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
569.07 24	0.20 6	⁹⁵ Y(10.3 m)	954.00(16), 2175.6(7.00), 3576.0(6.4)
569.1 3	0.25 5	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
569.1 1		¹²⁵ La(76 s)	67.6(34), 43.6(3.5), 985.2
569.1 1	2.52 7	¹⁵⁰ Tb(3.48 h)	638.05(72), 496.3(14.8), 792.5(4.39)
569.1 2	†91 12	²²⁹ Ac(62.7 m)	164.522(†100), 261.92(†39), 146.345(†35)
569.11 15	1.80 20	¹²⁴ In(2.4 s)	1131.64(100), 969.94(52), 1072.85(47)
569.2 1	0.924 23	⁷⁹ Rb(22.9 m)	688.1(23), 182.77(19.2), 143.41(13.9)
569.20 5	0.604 19	⁹⁰ Kr(32.32 s)	1118.69(39.0), 121.82(35.5), 539.49(30.8)
569.2 3	0.040 11	¹¹¹ Sn(35.3 m)	1152.98(2.7), 1914.70(1.99), 761.97(1.48)
569.2 2	0.29 10	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
569.22 12	0.0787 16	⁷⁷ Ge(11.30 h)	264.44(54), 211.03(30.8), 215.50(28.6)
• 569.23	0.0101 8	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
569.26 3	4.8 3	²⁰² Bi(1.72 h)	960.67(99), 422.18(83.7), 657.49(60.6)
569.3 3	5.8 6	¹⁰⁸ In(58.0 m)	875.46(100), 632.96(100), 242.84(41)
569.3 1	†1.19 9	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
569.3 1	3.4 3	¹⁸⁸ Tl(71 s)	412.7(88), 592.0(61), 504.2(23.3)
569.30 20	0.23 5	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
• 569.31 4	0.873 17	⁹⁷ Ru(2.9 d)	215.718(86), 324.48(10.79), 460.57(0.121)

• $t_{1/2} > 1$ 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: $E_\gamma(I_\gamma)$
569.310 14	25.1 13	¹⁹⁰ Re(3.1 m)	186.718(48.4), 557.972(28.2), 223.811(26.0)
569.310 14	13.7 10	¹⁹⁰ Re(3.2 h)	186.718(27.8), 605.24(14.9), 557.972(14.3)
• 569.310 14	28.5 9	¹⁹⁰ Ir(11.78 d)	186.718(52.4), 605.24(39.9), 518.55(34.0)
• 569.315 15	15.43 11	¹³⁴ Cs(2.062 y)	604.699(97.56), 795.845(85.44), 801.932(8.73)
569.4 1	2.8 3	¹³⁰ La(8.7 m)	357.4(81.0), 550.7(25.9), 908.0(17.0)
569.4 5	†1.5 4	¹⁸³ Hg(9.4 s)	60.5(†100), 159.91(†21), 172.70(†17)
569.4 3	0.40 5	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
569.4 5	1.2	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
• 569.4 2	3.6×10^{-6} 4	²³³ U(1.592×10 ⁵ y)	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
569.45 8	96	¹²² Ag(0.48 s)	759.70(33), 650.20(20), 798.4(12)
569.45 8		¹²² Ag(1.5 s)	759.70
569.5 3	0.74 5	¹⁰⁰ Ag(2.01 m)	665.54(99), 750.67(78), 773.20(24.2)
• 569.5 5		¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
569.5 8	1.8 10	¹⁸⁶ Pt(2.0 h)	276.7(0), 611.5(6.0), 635.6(>3.8)
569.5 1	8.2 8	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
569.6 2	1.1 3	¹²⁹ Sn(2.23 m)	645.13(100), 80.5(6.6), 913.2(5.0)
569.6 8	0.056 12	¹³³ Te(12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
• 569.6 6	>0.14	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
569.6	0.44 20	¹⁴⁸ Ba(0.607 s)	56.08(29.20), 133.53(3.88), 415.78(3.59)
569.6 2	0.070 17	¹⁷³ Ta(3.14 h)	172.2(18), 69.70(5.9), 90.3(5.0)
569.6	†<6	²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
569.64 22	0.15 6	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
569.7 4	0.06 6	¹⁰¹ Zr(2.1 s)	119.3(10.8), 205.6(6.0), 912.2(3.48)
569.7 2	48	¹⁶⁷ Dy(6.20 m)	259.33(27.9), 310.26(25.0), 250.03(9.6)
569.702 2	0.00159 20	²⁰⁷ Tl(4.77 m)	897.80(0.260), 328.12(0.00140)
• 569.702 2	97.74 3	²⁰⁷ Bi(31.55 y)	1063.662(74.5), 1770.237(6.87), 1442.20(0.130)
569.702 2		²¹¹ Po(25.2 s)	897.80(1.65), 1063.662
569.702 2	0.5	²¹¹ Po(0.516 s)	897.80(0.561), 328.12(0.0033)
569.71 6	0.36 12	¹⁸⁶ Ir(16.64 h)	296.911(64.0), 137.155(42), 434.849(34.4)
569.71 6	1.44 20	¹⁸⁶ Ir(2.0 h)	137.155(27), 767.508(21.2), 630.354(18.0)
569.73 14	5.7 3	¹⁶¹ Yb(4.2 m)	78.20(34), 599.88(25.9), 631.45(13.9)
569.77 11	0.113 16	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
569.79 15	0.098 6	¹⁴¹ Cs(24.94 s)	48.53(7.90), 561.63(4.7), 1194.02(3.95)
569.8 1	5.6 3	⁹² Rb(4.492 s)	814.98(33), 2820.6(6.2), 1712.3(4.3)
569.8 1	800	⁹³ Rb(5.84 s)	814.98(†27000), 963.5(†460), 393.5(†380)
569.8 3	0.043 11	¹¹² Ag(3.130 h)	617.27(43), 1387.67(5.4), 606.49(3.1)
569.8 7	0.4 3	¹⁸¹ Os(105 m)	238.75(44), 826.77(20), 118.03(12.9)
• 569.81 3	0.145 7	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
569.9 11	0.7 3	¹¹⁷ Ag(5.34 s)	135.4(48), 386.8(39.9), 298.1(21.1)
569.90 11	0.48 4	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
• 569.91 9	0.0051 17	¹⁴³ Ce(33.039 h)	293.266(42.80), 57.356(11.7), 664.571(5.69)
569.92 4	0.517 22	⁵⁷ Mn(87.2 s)	122.0614(13.9), 14.41300(10.56), 692.03(5.50)
• 569.92 4	0.017 1	⁵⁷ Co(271.79 d)	122.0614(85.60), 136.4743(10.68), 14.41300(9.16)
570.0 14	2.1 15	¹¹⁵ Te(6.7 m)	770.40(34.2), 723.569(18), 1071.70(12.9)
570 2	10.5 6	¹⁵⁴ Ho(3.10 m)	334.6(94), 412.4(79), 477.1(55)
570 2	11.1 6	¹⁵⁴ Ho(11.76 m)	334.6(84), 412.4(15.0), 873.4(12.5)
570.0 1	†0.15 7	¹⁵⁸ Ho(11.3 m)	218.21(†100.0), 98.91(†70), 945.7(†37)
570.1 1	0.62 7	⁹² Ru(3.65 m)	213.81(96), 259.32(92), 134.57(65.5)
570.1 4	0.58 8	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
570.10 15	0.24 7	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
570.16 5	1.19 6	⁹³ Kr(1.286 s)	253.42(41.2), 323.89(24.1), 266.83(20.6)
570.2 3	1.69 18	¹²⁹ In(0.61 s)	2118.0(45), 1865.0(32), 769.3(9.1)
570.2 2	0.17 7	¹²⁹ La(11.6 m)	278.6(25), 110.5(16.9), 457.0(8.0)
• 570.2 5	0.016 12	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)

• $t_{1/2} > 1$ d

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
570.2 1	$\dagger 1.24 \times 10^3$ 24	^{157}Ho (12.6 m)	279.97($\dagger 47600$), 341.16($\dagger 37000$), 193.41($\dagger 15200$)
• 570.203 18	0.0069 5	^{196}Au (6.183 d)	355.684(87), 332.983(22.9), 521.175(0.389)
570.26 19	0.46 12	^{181}Re (19.9 h)	365.57(56), 360.70(20), 639.30(6.4)
570.3		^{131}La (59 m)	108.081(25.0), 417.783(18.0), 365.162(16.9)
570.3 5	$\dagger 1.2$	^{179}Os (6.5 m)	65.39($\dagger 100$), 218.6($\dagger 17$), 32.3($\dagger 17$)
570.3 3	>0.011	^{249}Es (102.2 m)	379.5(40.4), 813.2(9.2), 375.1(3.3)
570.3 3	0.054 14	^{249}Es (102.2 m)	379.5(40.4), 813.2(9.2), 375.1(3.3)
570.32 2	0.072 24	^{147}La (4.015 s)	117.718(12), 186.320(6.48), 438.30(5.04)
570.35 19	1.48 19	^{29}S (187 ms)	1383.51(19), 1953.83(17.02), 2422.5(15.5)
570.4 2	2.9 5	^{103}Zr (1.3 s)	248(100), 164.05(94), 126.30(84)
• 570.4 8	0.0082 21	^{165}Tm (30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
• 570.4 3	$\dagger 5 \times 10^{06}$	^{208}Po (2.898 y)	291.7($\dagger 9 \times 10^{06}$), 601.6($\dagger 4.1 \times 10^6$), 861.9($\dagger 2.8 \times 10^6$)
• 570.42 21	0.0221 16	^{71}As (65.28 h)	174.954(82.00), 1095.490(4.08), 499.876(3.624)
570.449 20	0.191 6	^{155}Dy (9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
570.50 12	3.47 5	^{144}Ba (11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
• 570.5 6	>0.14	^{147}Gd (38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
570.5	0.016	^{149}Tb (4.118 h)	352.24(29.43), 164.98(26.4), 388.57(18.37)
570.51 21	1.7 3	^{105}In (5.07 m)	131.37(41), 260.21(15.7), 604.11(9.2)
570.51 7	0.24	^{137}I (24.5 s)	1218.00(12.8), 601.05(4.80), 1302.64(4.42)
570.52 15	0.47 8	^{125}Cd (0.57 s)	1027.53(25.8), 1173.16(25.1), 736.65(12.6)
570.56 6	0.108 9	^{105}Cd (55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
570.57 7	0.062 7	^{88}Kr (2.84 h)	2392.11(34.6), 196.301(25.98), 2195.842(13.18)
570.6 6	0.30 9	^{128}La (5.0 m)	284.00(87), 479.24(54), 643.65(14.7)
570.6 5	0.05 5	^{142}La (91.1 m)	641.285(47), 2397.8(13.3), 2542.7(10.00)
• 570.60 3	1.225 6	^{205}Bi (15.31 d)	1764.36(1.368), 703.44(31), 987.62(0.585)
570.7 5	0.24	^{101}Cd (1.2 m)	98.0(47), 1722.5(11), 1259.3(8)
570.70 7	1.63 8	^{143}Cs (1.78 s)	195.554(13), 232.421(8.32), 306.424(6.80)
570.70 10	1.12 4	^{151}Dy (17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)
570.7 3		^{167}Lu (51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
570.72 10	0.80 9	^{149}Pr (2.26 m)	138.447(11.0), 165.087(9.9), 108.520(9.5)
570.74 5	1.95 16	^{162}Tm (21.70 m)	102.00(17.5), 798.68(8.4), 227.52(7)
570.75 15	0.34 8	^{134}I (52.6 m)	847.025(95.4), 884.090(64.9), 1072.547(15.0)
570.76 10	0.46	^{176}Ta (8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
570.8 4	0.14 5	^{76}Kr (14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
570.8 4	0.07 3	^{109}In (4.2 h)	203.5(74), 623.7(5.5), 1148.9(4.3)
570.8 1	0.76 12	^{119}Ag (2.1 s)	626.4(13), 366.2(12.1), 399.1(10.9)
570.8 6	0.031 11	^{179}Re (19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
570.8 3	$\dagger 3.9$ 10	^{192}Bi (37 s)	853.8($\dagger 100.0$), 501.8($\dagger 80$), 504.3($\dagger 39$)
570.81 5	24.8 17	^{59}Mn (4.6 s)	726.7(42), 472.71(29.0), 591.20(9.4)
• 570.89 3	0.000125 11	^{169}Yb (32.026 d)	63.12077(44.2), 197.95788(35.8), 177.21402(22.16)
570.9 7	0.11 5	^{140}Xe (13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
570.9 1	$\dagger 3.2$ 3	^{171}Ta (23.3 m)	49.6($\dagger 100$), 506.4($\dagger 54$), 501.8($\dagger 22.6$)
570.9 4		^{185}Au (4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
570.9 1	0.65 5	^{226}Fr (48 s)	253.73(22.3), 186.05(16.3), 253.9(2.5)
• 570.9 1	3.3×10^{-6} 5	^{230}Th (7.538 $\times 10^4$ y)	97.67(0.376), 143.87(0.0486), 253.73(0.0111)
570.91 2	1.14 8	^{147}La (4.015 s)	117.718(12), 186.320(6.48), 438.30(5.04)
570.91 10	0.168 16	^{228}Ac (6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
570.93 10	53 2	^{98}Ag (46.7 s)	863.1(100), 678.5(85), 452.0(11.0)
570.93 9	3.2 3	^{166}Lu (1.41 m)	228.12(15), 102.38(13), 285.07(11.0)
570.937 13	1.56 8	^{157}Eu (15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
570.95 7	0.840 22	^{210}Rn (2.4 h)	458.25(1.7), 648.70(0.843), 72.70(0.59)
570.96 27	0.242 7	^{73}Se (39.8 m)	67.03(2.59), 253.70(2.356), 84.0(2.03)
• 570.990 23	5.55 4	^{166}Ho (1.20 $\times 10^3$ y)	84.410(72.6), 810.276(58.08), 711.683(55.32)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
571	$\dagger 2.7$	$^{107}\text{Sn}(2.90 \text{ m})$	1129.2($\dagger 100$), 678.5($\dagger 100$), 1540.6($\dagger 30$)
571.0 3	$\dagger 4.3$	$^{113}\text{Ru}(0.80 \text{ s})$	263.2($\dagger 100$), 211.7($\dagger 31.0$), 337.5($\dagger 27.9$)
571.0 2	0.096 21	$^{135}\text{Ce}(17.7 \text{ h})$	265.56(41.8), 300.07(23.5), 606.76(18.8)
571.00 20	0.228 19	$^{153}\text{Dy}(6.4 \text{ h})$	80.723(11.10), 213.754(10.90), 99.659(10.51)
571.0		$^{201}\text{At}(89 \text{ s})$	417.9, 6.5
• 571.0 1	0.0044 11	$^{225}\text{Ac}(10.0 \text{ d})$	99.91(1.01), 150.04(0.80), 99.63(0.62)
571.06 4	4.52 16	$^{80}\text{Ga}(1.697 \text{ s})$	659.14(78.0), 1083.47(48.4), 1109.36(18.6)
571.06 10	0.16 4	$^{133}\text{Ce}(4.9 \text{ h})$	477.22(39), 510.36(20.7), 58.39(19.2)
571.06 2	1.54 6	$^{145}\text{Cs}(0.594 \text{ s})$	175.36(20), 198.93(10.9), 112.46(10.71)
• 571.08 9	0.00242 22	$^{149}\text{Pm}(53.08 \text{ h})$	285.95(3.1), 859.46(0.109), 590.88(0.069)
• 571.1 6	0.0055 8	$^{79}\text{Kr}(35.04 \text{ h})$	261.29(13), 397.54(9.3), 606.09(8.12)
571.1 2	0.59 6	$^{228}\text{Pa}(22 \text{ h})$	911.205(4.19), 463.005(1.250), 964.770(4.25)
571.10 10	0.107 25	$^{230}\text{Ac}(122 \text{ s})$	454.95(8), 508.20(5.15), 1243.9(3.50)
• 571.10 10	1.08 6	$^{230}\text{Pa}(17.4 \text{ d})$	951.95(1.65), 918.48(8.2), 454.95(6.27)
571.19 20	$\dagger 0.55 5$	$^{184}\text{Ir}(3.09 \text{ h})$	263.97($\dagger 100$), 119.80($\dagger 45$), 390.38($\dagger 38$)
571.2 3	$\dagger 98.3$	$^{139}\text{I}(2.29 \text{ s})$	527.7($\dagger 100$), 536.6($\dagger 67$), 656.0($\dagger 58$)
571.20 10	0.217 25	$^{158}\text{Tm}(3.98 \text{ m})$	192.13(62), 335.10(16.8), 1149.83(7.6)
571.2 4	0.19 13	$^{162}\text{Tm}(21.70 \text{ m})$	102.00(17.5), 798.68(8.4), 227.52(7)
571.2 4	0.15 10	$^{162}\text{Tm}(24.3 \text{ s})$	811.52(6.5), 798.68(5.2), 227.52(5)
• 571.259 15	0.413 10	$^{150}\text{Eu}(35.8 \text{ y})$	333.971(96), 439.401(80.4), 584.274(52.6)
571.27 4	5.39 14	$^{157}\text{Pm}(10.56 \text{ s})$	160.61(35), 188.052(13.5), 850.50(4.76)
• 571.28 8	0.062 12	$^{153}\text{Tb}(2.34 \text{ d})$	212.038(31.0), 170.504(6.8), 109.758(6.4)
571.3	$\dagger 10$	$^{138}\text{Eu}(12.1 \text{ s})$	346.6($\dagger 100$), 544.2($\dagger 55$), 685.4($\dagger 41$)
571.3 2	0.0066 14	$^{167}\text{Yb}(17.5 \text{ m})$	113.34(55.3), 106.18(22.5), 176.25(21)
571.30 9	0.26	$^{176}\text{Ta}(8.09 \text{ h})$	1159.28(25), 88.34(12), 1224.93(6)
571.35 5	0.368 24	$^{79}\text{Ga}(2.847 \text{ s})$	464.79(24.2), 516.41(21.5), 1187.28(12.8)
571.36 14	0.24 4	$^{183}\text{Au}(42.0 \text{ s})$	161.18(9.4), 214.13(5.9), 313.08(5.0)
571.4 2	$\dagger 4.5 9$	$^{187}\text{Hg}(1.9 \text{ m})$	233.38($\dagger 100$), 376.34($\dagger 38$), 240.26($\dagger 33$)
• 571.498 9	0.139 9	$^{76}\text{As}(26.32 \text{ h})$	559.101(45), 657.041(6.2), 1216.104(3.42)
571.498 9	0.44 22	$^{76}\text{Br}(16.2 \text{ h})$	559.101(74), 657.041(15.9), 1853.67(14.7)
571.5 3	0.65 10	$^{176}\text{Tm}(1.9 \text{ m})$	189.57(44.5), 1069.3(34), 381.8(21.8)
571.55 5	0.030 11	$^{164}\text{Yb}(75.8 \text{ m})$	40.928(1.147), 675.41(0.38), 390.6(0.31)
571.6 2	0.65 10	$^{121}\text{Cs}(122 \text{ s})$	179.4(30.2), 196.0(24.1), 459.7(12.0)
571.6 5	$\dagger 216 12$	$^{202}\text{At}(181 \text{ s})$	677.4($\dagger 230$), 442.9($\dagger 109$)
571.65 8		$^{223}\text{Rn}(23.2 \text{ m})$	591.8($\dagger 100$), 635.2($\dagger 76$), 416.0($\dagger 55$)
571.69 19	0.186 13	$^{101}\text{Mo}(14.61 \text{ m})$	191.92(19), 590.91(16.4), 1012.47(12.8)
571.74 5	3.0 2	$^{126}\text{In}(1.64 \text{ s})$	1141.11(100), 908.58(99), 111.79(88)
• 571.8 5	0.00053 10	$^{231}\text{Pa}(32760 \text{ y})$	27.36(10.3), 300.07(2.46), 302.65(2.2)
571.83 6	$\dagger 100 5$	$^{142}\text{Xe}(1.22 \text{ s})$	657.05($\dagger 79$), 538.24($\dagger 77$), 618.314($\dagger 72$)
• 571.83 8	0.0048 8	$^{152}\text{Eu}(13.542 \text{ y})$	121.7824(28.4), 1408.011(20.87), 964.131(14.34)
571.885 4	0.019 4	$^{155}\text{Sm}(22.3 \text{ m})$	104.3346(74.6), 245.771(3.7), 141.4428(1.98)
571.9 3	0.0250 25	$^{133}\text{La}(3.912 \text{ h})$	278.835(2.50), 302.353(1.648), 290.06(1.413)
571.9	>1.5	$^{145}\text{Ba}(4.31 \text{ s})$	96.6(17), 91.9(7), 65.9(5)
571.9 2	1.5	$^{145}\text{Ba}(4.31 \text{ s})$	96.6(17), 91.9(7), 65.9(5)
571.9 5	0.071 11	$^{163}\text{Yb}(11.05 \text{ m})$	860.28(10.1), 63.62(6.5), 123.21(1.98)
571.94 8	4.3 3	$^{83}\text{Se}(22.3 \text{ m})$	356.687(70), 510.17(43), 224.8(32.7)
571.96 16	0.21 3	$^{93}\text{Sr}(7.423 \text{ m})$	590.238(67), 875.73(24.1), 888.13(21.8)
• 571.962 7	0.213 9	$^{148}\text{Pm}(41.29 \text{ d})$	550.284(94.5), 629.987(89), 725.673(32.7)
• 571.962 7	9.56 22	$^{148}\text{Eu}(54.5 \text{ d})$	550.284(98.5), 629.987(71.9), 611.293(20.5)
572	0.009 5	$^{105}\text{Ru}(4.44 \text{ h})$	724.21(47), 469.37(17.5), 676.36(15.7)
572 1	0.025 12	$^{133}\text{Te}(12.5 \text{ m})$	312.072(62), 407.63(27.1), 1333.21(10.67)
572.0 5	0.57 21	$^{135}\text{Nd}(12.4 \text{ m})$	204.02(52), 41.43(23), 441.2(14.9)
572 1	0.6	$^{142}\text{Gd}(70.2 \text{ s})$	750.2(11.2), 178.90(11.20), 284.4(6.16)
572.00 20	0.33 3	$^{153}\text{Dy}(6.4 \text{ h})$	80.723(11.10), 213.754(10.90), 99.659(10.51)

• $t_{1/2} > 1 \text{ d}$

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
572.0 10	$\dagger 8.7 \times 10^{-2}$ 17	$^{234}\text{Pa}(1.17 \text{ m})$	1001.03($\dagger 837000$), 766.38($\dagger 294000$), 742.81($\dagger 80000$)
572.1	$\dagger < 6$	$^{238}\text{Pa}(2.3 \text{ m})$	1015.3($\dagger < 100$), 1014.6($\dagger < 100$), 635.18($\dagger 88$)
572.19 15	0.075 21	$^{195}\text{Tl}(1.16 \text{ h})$	563.52(10.5), 884.47(10.0), 1363.88(8.4)
572.2 2	$\dagger 3.9$ 6	$^{103}\text{Nb}(1.5 \text{ s})$	102.64($\dagger 100$), 641.1($\dagger 55$), 538.5($\dagger 34.0$)
572.2 2	0.30	$^{140}\text{Sm}(14.82 \text{ m})$	225.5(> 10), 225.4(10), 140.0(5.0)
• 572.20 5	1.25 3	$^{170}\text{Lu}(2.00 \text{ d})$	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
572.2 4	0.20 4	$^{175}\text{Ta}(10.5 \text{ h})$	207.4(14.0), 348.5(12.0), 266.9(10.8)
572.2 2	$\dagger 3.2$ 3	$^{185}\text{Hg}(21.6 \text{ s})$	222.8($\dagger 100.0$), 258.7($\dagger 98$), 212.5($\dagger 58$)
572.24 10	2.02 13	$^{121}\text{Cd}(8.3 \text{ s})$	2059.41(21.0), 1020.89(18.9), 987.81(13.6)
• 572.255 15	0.263 4	$^{71}\text{As}(65.28 \text{ h})$	174.954(82.00), 1095.490(4.08), 499.876(3.624)
572.26 2	10.4 3	$^{135}\text{Ce}(17.7 \text{ h})$	265.56(41.8), 300.07(23.5), 606.76(18.8)
572.29 10	0.154 16	$^{228}\text{Ac}(6.15 \text{ h})$	911.205(26.6), 968.971(16.2), 338.322(11.3)
572.29 10	0.46 13	$^{228}\text{Pa}(22 \text{ h})$	911.205(4.19), 463.005(1.250), 964.770(4.25)
• 572.3 3	0.0369 18	$^{75}\text{Se}(119.779 \text{ d})$	264.6584(58.50), 136.0008(58.3), 279.5441(24.79)
572.3 2	0.17 4	$^{133}\text{Sb}(2.5 \text{ m})$	1096.22(43.0), 817.8(18.5), 2755(12.5)
572.3 2	0.78 14	$^{139}\text{Nd}(5.50 \text{ h})$	113.94(40), 737.96(35), 982.2(26.4)
572.3	0.262 23	$^{141}\text{Ba}(18.27 \text{ m})$	190.328(46.0), 304.194(25.4), 276.948(23.4)
572.4 3	2.6 7	$^{60}\text{Zn}(2.38 \text{ m})$	670.3(64), 61.4(26), 273.4(10.9)
572.4 4	0.13 6	$^{95}\text{Ru}(1.643 \text{ h})$	336.43(70.2), 1096.76(21.0), 626.77(17.8)
572.4 4	0.33 5	$^{120}\text{Xe}(40 \text{ m})$	25.1(30), 72.6(9), 178.1(6.8)
572.4 1	0.107 17	$^{143}\text{Ba}(14.33 \text{ s})$	211.475(25), 798.79(15.6), 980.45(11.55)
572.4	14 2	$^{145}\text{Tb}(29.5 \text{ s})$	257.8(39), 987.8(37), 537.0(23)
572.4 5	$\dagger 0.83$ 21	$^{183}\text{Hg}(9.4 \text{ s})$	60.5($\dagger 100$), 159.91($\dagger 21$), 172.70($\dagger 17$)
572.46 14	$\dagger 22.0$ 15	$^{159}\text{Yb}(1.58 \text{ m})$	166.16($\dagger 500$), 177.12($\dagger 159$), 390.20($\dagger 113$)
572.5 2	0.18 6	$^{101}\text{Zr}(2.1 \text{ s})$	119.3(10.8), 205.6(6.0), 912.2(3.48)
572.5 4	0.059 20	$^{132}\text{I}(2.295 \text{ h})$	667.718(99), 772.60(75.6), 954.55(17.6)
• 572.5 2	0.052 11	$^{151}\text{Pm}(28.40 \text{ h})$	340.08(23), 167.75(8.3), 275.21(6.8)
572.5 6	0.020 9	$^{151}\text{Tb}(17.609 \text{ h})$	287.357(28.3), 251.863(26.3), 108.088(24.3)
572.50 25	0.11 3	$^{159}\text{Tm}(9.13 \text{ m})$	38.35(5.8), 84.8(5.8), 271.30(5.1)
572.6 5	0.07 4	$^{98}\text{Nb}(51.3 \text{ m})$	787.374(93), 722.645(73.8), 1168.830(17.8)
• 572.6 2	< 0.005	$^{129}\text{Cs}(32.06 \text{ h})$	371.918(30.60), 411.490(22.31), 548.945(3.40)
572.6 3	0.106 15	$^{181}\text{Au}(11.4 \text{ s})$	198.60(4.4), 2022.4(4.2), 79.40(4.2)
• 572.686 15	0.1563 14	$^{131}\text{Ba}(11.50 \text{ d})$	496.326(47), 123.805(28.97), 216.078(19.66)
• 572.7 2	0.06 3	$^{131}\text{Te}(30 \text{ h})$	773.67(49.9), 852.21(27.0), 793.75(18.10)
572.7 5	0.15 5	$^{140}\text{Xe}(13.60 \text{ s})$	805.52(20), 1413.66(12.2), 1315.05(8.2)
572.71 17	0.095 24	$^{227}\text{Fr}(2.47 \text{ m})$	90.035(39), 585.804(29.5), 64.267(14.5)
• 572.731 12	0.108 14	$^{169}\text{Lu}(34.06 \text{ h})$	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
572.76 6	0.050 10	$^{93}\text{Mo}(6.85 \text{ h})$	949.82(0.120), 689.07(0.070), 541.32(0.060)
572.8 8	0.014	$^{150}\text{Pm}(2.68 \text{ h})$	333.971(68), 1324.51(17.5), 1165.739(15.8)
572.83 15	0.072 11	$^{214}\text{Bi}(19.9 \text{ m})$	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
572.87 10	1.5 4	$^{110}\text{Rh}(3.2 \text{ s})$	373.80(54), 439.79(6.5), 796.83(5.3)
572.9 3	18	$^{170}\text{Hf}(16.01 \text{ h})$	164.78(33), 620.7(23), 120.17(19)
572.9 4	0.14 7	$^{185}\text{Au}(4.25 \text{ m})$	310.6(13), 243.1(6.6), 77.7(6)
572.9 1	1.87 10	$^{242}\text{U}(16.8 \text{ m})$	67.60(9.6), 55.58(3.90), 585.0(1.92)
572.968 12	1.99 22	$^{75}\text{Br}(96.7 \text{ m})$	286.572(88), 141.3147(6.6), 427.883(4.4)
573		$^{92}\text{Br}(0.343 \text{ s})$	769($\dagger 100$), 1446($\dagger 10$), 1035($\dagger 6$)
573.0 3	0.16 3	$^{97}\text{Rb}(169.9 \text{ ms})$	167.1(26), 585.2(21.0), 600.5(10.6)
• 573.0 2	6.7 3	$^{126}\text{Sb}(12.46 \text{ d})$	695.03(100), 666.331(100), 414.81(83.3)
• 573.0 8	0.16 5	$^{147}\text{Gd}(38.06 \text{ h})$	229.32(63), 396.00(34.3), 929.01(20.2)
573.0 5	0.018 9	$^{151}\text{Nd}(12.44 \text{ m})$	116.80(43.4), 255.68(16.4), 1180.89(14.8)
573.1 4	0.26 5	$^{100}\text{Cd}(49.1 \text{ s})$	936.55(66), 139.71(6.7), 582.5(6.3)
573.1 1	0.93 9	$^{157}\text{Tm}(3.63 \text{ m})$	455.00(9.3), 385.5(8.8), 348.40(8.4)
573.1 4	$\dagger 1.4$ 2	$^{168}\text{W}(51 \text{ s})$	178.5($\dagger 100$), 145.5($\dagger < 2$), 352.2($\dagger 1.8$)
• 573.139 11	80.3 17	$^{121}\text{Te}(16.78 \text{ d})$	507.591(17.7), 470.472(1.41), 65.548(0.259)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
573.2 3	19	⁸⁷ Se(5.85 s)	242.5(37), 334.0(35), 468.0(18)
573.20 10	3.6 1	⁸⁸ Nb(7.8 m)	1057.01(89.3), 1082.53(53.9), 399.41(45.7)
• 573.2 2	0.029 7	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
573.23 4	0.281 11	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
573.25 50	0.040 4	¹³⁷ Pr(1.28 h)	836.7(1.8), 433.9(1.28), 514.0(1.08)
573.25 6	14.2 10	¹⁹³ Hg(11.8 h)	257.97(61), 407.63(25), 932.37(6.7)
573.27 6	0.073 7	⁸⁸ Kr(2.84 h)	2392.11(34.6), 196.301(25.98), 2195.842(13.18)
• 573.33 10	0.0194 20	¹⁹³ Os(30.5 h)	139.03(4.27), 460.50(3.95), 73.039(3.2)
• 573.36 9	0.012 3	¹¹⁰ Ag(249.79 d)	657.7622(94.0), 884.685(72.2), 937.493(34.13)
573.36 4	0.0048 7	¹³⁵ Xe(9.14 h)	249.770(90), 608.151(2.90), 408.009(0.359)
573.37 19	1.4 3	¹⁸⁶ Tl(27.5 s)	405.43(92), 402.72(45.9), 356.84(29.3)
573.4 2	0.32 4	¹⁵⁰ Tb(3.48 h)	638.05(72), 496.3(14.8), 792.5(4.39)
573.4 1	†0.40 4	¹⁷¹ Ta(23.3 m)	49.6(†100), 506.4(†54), 501.8(†22.6)
573.4 4	0.17 6	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
573.4 2	0.0080 20	²⁴⁰ Np(7.22 m)	554.60(20.9), 597.40(11.7), 1496.9(1.33)
573.5	0.34	¹⁴⁴ Tb(4.25 s)	743.0(12), 1001.6(7), 959.36(4.7)
573.5 2	0.16 5	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
573.5 2	0.0098 15	¹⁷¹ Er(7.516 h)	308.31(64.4), 295.901(28.9), 111.621(20.5)
• 573.55 12	0.0066 13	¹⁴⁵ Eu(5.93 d)	893.73(66), 653.512(15.0), 1658.53(14.9)
573.6 2	0.29 4	¹⁰⁰ Nb(1.5 s)	535.60(45.7), 528.24(9.1), 159.547(8.8)
573.6 4	0.23 7	¹²³ Cs(5.94 m)	97.3(23), 596.7(10.1), 83.3(4.1)
573.6 4		¹³⁰ Pr(40.0 s)	951.9, 499.0, 1405
573.66 7	25	⁸² Y(9.5 s)	602.14(10), 737.35(2.3), 1175.58(1.0)
573.68 9	0.54 8	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
573.68 13	0.00052 16	¹⁸⁷ W(23.72 h)	685.774(27.3), 479.531(21.8), 72.001(11.14)
• 573.7 5	0.019 12	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
573.7 5	†0.5 2	¹⁸⁵ Pt(33.0 m)	229.60(†100), 135.3(†80), 197.4(†74)
573.7 4	0.042	²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
• 573.72 9		²⁰⁶ Bi(6.243 d)	803.10(99), 881.01(66.2), 516.18(40.7)
573.8 10	0.037	¹⁶¹ Er(3.21 h)	826.6(3.0), 211.15(12.2), 592.6(3.7)
573.84 10	0.46 3	²²⁷ Fr(2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)
• 573.88 4	0.622 12	²⁰⁵ Bi(15.31 d)	1764.36(1.368), 703.44(31), 987.62(0.585)
• 573.882 12	0.344 14	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
573.90 30	0.089 10	¹¹⁴ Sb(3.49 m)	1299.90(99), 887.60(17.4), 327.18(7.0)
573.9 5	0.087 25	¹²⁷ Ba(12.7 m)	180.8(12), 114.8(9.3), 66.06(2.12)
573.9 2	1.8 5	¹²⁹ Sn(6.9 m)	1161.31(56.0), 1128.44(50), 760.8(16.8)
• 573.94 20	†1.25×10 ⁴ 19	²⁴¹ Am(432.2 y)	59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸)
574.0 2	5.6 7	¹²² Cs(4.5 m)	331.1(94), 497.1(79), 638.5(63)
• 574 1	0.019 10	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
574.0 1	0.45 6	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
574.0 1	4.0 3	¹⁸⁸ Tl(71 s)	412.7(88), 592.0(61), 504.2(23.3)
574		¹⁸⁸ Tl(71 s)	412.7(88), 592.0(61), 504.2(23.3)
574.0 3	0.11 3	²³⁸ Am(98 m)	962.77(28), 918.69(23.0), 561.11(10.9)
• 574.01 30	0.000105 11	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
574.05 2	0.14 4	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
574.08 30	0.15 3	¹²⁴ In(3.17 s)	1131.64(68), 3214.15(21.5), 997.79(21.1)
574.08 30	0.90 20	¹²⁴ In(2.4 s)	1131.64(100), 969.94(52), 1072.85(47)
574.1 3	0.16 5	¹⁰¹ Sr(118 ms)	128.34(18.0), 1124.82(10.9), 510.73(8.5)
574.1 2	†1.9 3	²²⁵ Fr(4.0 m)	182.3(†100), 31.50(†91), 225.1(†55)
574.11 3	1.22 6	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
574.11	0.72 11	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
574.14 23	0.076 13	¹⁷⁴ Ta(1.05 h)	206.50(58), 91.00(16.0), 1205.92(4.9)
574.17 3	0.033	⁶⁹ Zn(13.76 h)	

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
• 574.17 3	13.3 11	⁶⁹ Ge(39.05 h)	1107.01(36), 872.14(11.9), 1336.72(4.5)
574.2 4	0.22 5	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
574.2 7	0.24 5	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
574.5 5	0.038 5	¹¹⁶ Te(2.49 h)	93.70(31.4), 628.63(3.22), 102.97(1.95)
574.5 1	0.70 6	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
574.5 10	0.13 3	²⁰⁸ At(1.63 h)	686.527(98), 660.040(89), 177.595(48.6)
574.6 3	12.7 8	⁶⁹ Ni(11.4 s)	1871.1(40.9), 679.7(39.7), 1213.0(39.3)
574.6 4	0.47 5	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
• 574.643 7	1.187 23	⁷⁷ Br(57.036 h)	238.996(23), 520.639(22.4), 297.215(4.16)
574.67 3	6.74 21	⁸¹ Sr(22.3 m)	153.54(33.8), 147.76(30.1), 443.34(17.5)
574.68 20	0.139 17	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)
574.69 4	0.17 3	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
574.7 10	0.25 5	¹⁹⁷ Pb(43 m)	385.85(74), 387.72(25.1), 222.45(24.6)
574.8 1	†31.6 20	⁷⁵ Ga(126 s)	253.0(†100), 885.6(†11.1), 177.0(†10.7)
574.8 5	†4.8 6	¹⁰³ Mo(67.5 s)	83.4(†100), 423.91(†69), 45.8(†57)
574.8 1	10.4 10	¹³⁶ Nd(50.65 m)	108.90(32), 40.2(18.9), 149.1(6.9)
• 574.8 3	0.070 8	²²⁶ Ac(29 h)	230.37(27), 158.18(17.5), 72.20(0.56)
• 574.8 3	0.00030 4	²³⁰ U(20.8 d)	72.20(0.60), 154.23(0.125), 230.37(0.122)
574.83 5	0.87 6	⁸¹ Ga(1.221 s)	216.47(37.4), 828.26(22.1), 711.18(17.6)
574.9 4	0.03 3	⁶⁵ Ga(15.2 m)	115.09(54), 61.20(11.4), 153.0(8.9)
574.9 2	0.029 3	⁷¹ Zn(2.45 m)	511.56(32), 910.27(7.8), 389.88(3.8)
574.9 2	0.112 9	⁷¹ Zn(3.96 h)	386.28(93), 487.38(62), 620.18(57)
574.9 1	0.031 5	¹³¹ Te(25.0 m)	149.716(69), 452.323(18.18), 1146.96(4.95)
574.9 1	51 5	¹⁴¹ Gd(24.5 s)	351.1(89), 223.9(64), 361.2(37)
574.90 4	0.100 10	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
574.9 3	15.4 13	¹⁸¹ Lu(3.5 m)	652.5(22.0), 205.94(16.1), 805.7(8.8)
574.9 4	†1.9 6	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
574.9 5	†3.8 6	¹⁹³ Tl(21.6 m)	324.37(†100), 1044.7(†59), 676.10(†48)
• 574.97 7	0.117 9	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
574.97 14	†8.1 10	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
574.98 15	0.101 17	¹⁹⁹ Pb(90 m)	366.90(44.2), 353.39(9.5), 1135.04(7.8)
575.0 1	0.130 20	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
575.0 1	3.2 3	¹¹¹ Pd(5.5 h)	70.44(8.3), 391.25(5.4), 632.80(3.6)
575 1		¹⁹¹ Hg(49 m)	252.5(†100), 196.3(†65), 224.7(†60)
575.0 1		¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
575.0 4	†70 14	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
575.0 1	3.1 4	¹⁹⁸ Pb(2.40 h)	290.3(36), 365.4(19), 173.4(18)
575.05 10	2.4 7	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
575.06 10	0.24 3	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
575.07 12	0.85 10	¹⁰⁵ Ru(4.44 h)	724.21(47), 469.37(17.5), 676.36(15.7)
• 575.1 10	0.0029 11	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
575.1 2	2.83 20	¹⁶³ Gd(68 s)	287.79(25), 214.0(11.5), 1562.1(9.0)
575.1 1	†98.0 14	¹⁹⁴ Bi(92 s)	965.4(†100.0), 280.1(†73.7), 421.1(†59.9)
575.1 2	0.41 7	²⁰⁰ Po(11.5 m)	671.0(34.0), 617.7(19.7), 434.4(9.3)
575.12 26	0.046 13	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
575.2 7	0.13 4	¹⁰³ Cd(7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
575.3 3	0.37 9	¹⁰⁶ In(5.2 m)	632.66(92), 1714.90(17.1), 861.16(10.6)
575.3 1	12	²⁰⁶ Fr(15.9 s)	559.0(8.19), 628.6(3.6), 161.4(1.2)
• 575.305 11	0.068 5	⁷⁶ As(26.32 h)	559.101(45), 657.041(6.2), 1216.104(3.42)
575.33 10	0.76 3	¹⁰³ Ag(65.7 m)	118.72(31.2), 148.193(28.3), 266.86(13.3)
575.33 38	†6.0 15	¹⁶⁴ Tm(2.0 m)	91.40(†1500), 1154.66(†366), 768.91(†279)
575.35 10	1.5 3	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
575.4 3	6.3 5	⁹⁹ Y(1.470 s)	121.761(33), 724.30(14.9), 536.2(6.6)
575.4 1	27 3	¹⁴⁰ Gd(15.8 s)	174.8(76), 749.9(70), 379.0(38)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
575.4 3	0.008 3	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
575.4 2	†0.50 23	¹⁶⁰ Ho(5.02 h)	728.18(†100), 879.383(†65.9), 962.317(†59.1)
575.5 4	0.26 3	¹⁵⁹ Eu(18.1 m)	67.8(19), 78.6(9.1), 95.7(7.0)
575.5 10	†0.9 5	¹⁷¹ Hf(12.1 h)	122.0(†100), 662.2(†83), 347.18(†47)
575.5 1	0.027 8	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
• 575.51 8	0.031 8	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
• 575.52 5	0.210 21	¹⁹⁵ Hg(41.6 h)	261.75(30.9), 560.27(7), 387.87(2.15)
575.558 20	0.0787 24	¹⁶⁵ Dy(2.334 h)	94.700(3.58), 361.68(0.84), 633.415(0.568)
575.6 2	0.35 5	¹⁰¹ Ag(11.1 m)	261.0(53), 588.0(10.0), 667.3(9.8)
575.6 2	†5.2 10	²²⁹ Ac(62.7 m)	164.522(†100), 569.1(†91), 261.92(†39)
• 575.64 16	0.021 6	¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
575.7 5	2.02 24	¹³⁰ La(8.7 m)	357.4(81.0), 550.7(25.9), 908.0(17.0)
575.7 4	0.021 8	¹³⁸ Cs(33.41 m)	1435.795(76.3), 462.796(30.7), 1009.78(29.8)
575.7 3	†2.0 3	¹⁵⁵ Tm(21.6 s)	226.8(†100), 531.7(†20), 88.1(†17)
• 575.7 7	†0.0081 19	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
• 575.75 21	0.13 3	⁹⁹ Rh(16.1 d)	528.24(33), 353.05(30.0), 89.65(29.0)
575.75 21	0.38 4	⁹⁹ Rh(4.7 h)	340.71(70), 617.8(12.0), 1261.2(11)
575.8		¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
575.85 5	0.263 11	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
575.9 5	0.162 8	⁷³ Se(7.15 h)	360.80(108), 67.03(78), 865.09(0.584)
• 575.95 25	0.0195 9	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
575.97 8	0.130 23	¹³⁵ I(6.57 h)	1260.409(28.90), 1131.511(22.74), 1678.027(9.62)
• 575.97 10	0.046 5	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
576.0 3	0.12 3	⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
• 576.0 2	0.065 9	¹⁴⁶ Gd(48.27 d)	154.57(47), 115.51(44.0), 114.71(44.0)
576	0.0008	²¹² Bi(60.55 m)	39.858(1.091), 452.83(0.31), 288.07(0.31)
576.01 7	0.53	¹³⁷ I(24.5 s)	1218.00(12.8), 601.05(4.80), 1302.64(4.42)
576.03 12	0.45 10	¹⁴⁹ Pr(2.26 m)	138.447(11.0), 165.087(9.9), 108.520(9.5)
576.08 4	1.77 14	¹¹⁴ Ag(4.6 s)	558.454(20.40), 1301.234(1.31), 1995.06(1.22)
576.08 4	2000 21	¹¹⁴ In(71.9 s)	558.454(†>34000), 747.15(†>93)
576.1 6	0.04 3	⁹⁵ Ru(1.643 h)	336.43(70.2), 1096.76(21.0), 626.77(17.8)
576.1 5	0.014 9	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
576.10 4	3.24 20	¹⁶² Yb(18.87 m)	163.35(40.0), 118.70(33.6), 44.65(3.04)
576.1 7	0.07 7	¹⁷² Ta(36.8 m)	214.02(46), 95.23(17.5), 1109.27(12.4)
576.1	0.14	¹⁸⁵ Ir(14.4 h)	254.4(13.3), 1828.8(10), 60.0(5.7)
576.1 4	0.0012 3	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
576.18 5	0.197 11	¹¹⁸ In(4.45 m)	1229.68(96), 1050.69(81.0), 683.08(54.3)
576.2 5	0.24	¹³⁰ La(8.7 m)	357.4(81.0), 550.7(25.9), 908.0(17.0)
• 576.2	0.044 7	¹⁵⁶ Tb(5.35 d)	534.318(66.6), 199.2132(40.9), 1222.36(31.00)
576.2 3	†13	¹⁷⁷ Os(2.8 m)	84.7(†100), 125.4(†63), 195.8(†61)
• 576.21 4	0.188 6	²⁰⁵ Bi(15.31 d)	1764.36(1.368), 703.44(31), 987.62(0.585)
576.27 8	0.37 3	⁸⁰ Ge(29.5 s)	265.36(27.0), 110.4(6.5), 1564.3(4.9)
576.3 4	3.35 12	⁵¹ Sc(12.4 s)	1437.3(52), 2144.1(31.8), 1567.5(14.9)
576.3 2	0.4	¹⁴⁰ Sm(14.82 m)	225.5(>10), 225.4(10), 140.0(5.0)
576.3 2	0.20 6	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
576.3 5	0.10 3	¹⁸⁴ Ta(8.7 h)	414.03(72), 252.848(43), 920.932(32.0)
576.33 8	0.0066 11	¹⁸⁷ W(23.72 h)	685.774(27.3), 479.531(21.8), 72.001(11.14)
• 576.36 10	0.112 10	²⁰⁶ Bi(6.243 d)	803.10(99), 881.01(66.2), 516.18(40.7)
576.38 3	1.01 8	¹³² Ce(3.51 h)	182.11(77), 155.37(10.5), 216.83(4.95)
• 576.396 12	0.70 6	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
576.4 2	0.38 5	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
576.4 3	0.26 4	¹⁴⁹ Dy(4.20 m)	100.8(15.2), 789.4(11.8), 1776.3(11.1)
• 576.4 1	0.118 9	¹⁹¹ Pt(2.9 d)	538.90(13.7), 409.44(8.0), 359.90(6.0)
576.42 28	0.32 3	¹³⁷ Nd(38.5 m)	75.5(17.0), 580.6(13), 306.60(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: $E_{\gamma}(I_{\gamma})$
576.5 4	12.1 10	⁷² Kr(17.2 s)	415.1(34.7), 310.0(28.5), 162.2(16.3)
576.5 6	0.29 4	¹⁷⁰ Ta(6.76 m)	100.8(21.0), 221.2(15.7), 860.4(7.39)
576.5 2	†9 2	¹⁸¹ Ir(4.90 m)	107.64(†100), 1639.6(†52), 318.9(†46)
576.5 3	0.13 3	¹⁸⁸ Hg(3.25 m)	66.7(63), 190.1(4.40), 82.7(2.6)
576.50 20	0.54 6	²⁰⁸ At(1.63 h)	686.527(98), 660.040(89), 177.595(48.6)
576.51 7	0.17 5	¹¹⁵ Te(5.8 m)	723.569(30), 1380.58(23.0), 1326.83(22.7)
576.53 5		²²³ Rn(23.2 m)	591.8(†100), 635.2(†76), 416.0(†55)
576.57 4	0.85 3	¹⁸⁷ Ir(10.5 h)	912.95(4.79), 427.12(4.12), 400.89(3.94)
576.6	0.75 9	⁹⁵ Sr(23.90 s)	685.6(23), 2717.3(4.6), 2933.1(4.1)
576.6 1	0.44 14	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
576.6 1	1.8 4	¹⁰⁸ Tc(5.17 s)	242.25(82), 465.6(14.3), 707.81(11.4)
576.6 8	0.033 6	¹⁵⁷ Dy(8.14 h)	326.16(92), 182.20(1.84), 83.01(0.62)
576.6 2	†1.7 5	¹⁹² Bi(37 s)	853.8(†100.0), 501.8(†80), 504.3(†39)
• 576.62 10	0.014 3	¹⁰⁵ Ag(41.29 d)	344.520(41), 280.41(30.2), 644.55(11.1)
576.7 3	0.227 16	⁸⁵ Y(4.86 h)	231.67(22.8), 2123.8(5.0), 767.40(3.6)
576.70 20	0.93 4	⁸⁸ Nb(7.8 m)	1057.01(89.3), 1082.53(53.9), 399.41(45.7)
576.7	0.26 13	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
576.74 10	0.111 11	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
• 576.8 4	0.016 9	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
576.8 5	†0.9 3	¹⁸⁵ Pt(33.0 m)	229.60(†100), 135.3(†80), 197.4(†74)
576.82 11		¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
• 576.835 18	0.302 13	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
576.85 7	0.045 9	¹⁸⁹ Pt(10.87 h)	721.41(9.3), 94.33(7.6), 568.84(7.1)
576.9 4	0.09 3	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
576.9 6	0.025 3	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
576.9 2	†2.12 21	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
576.96 10	5.7 3	⁸⁹ Kr(3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
577.0 4	0.019 5	¹⁰⁵ Ru(4.44 h)	724.21(47), 469.37(17.5), 676.36(15.7)
577.0 3	1.07 20	¹⁵³ Ho(2.0 m)	295.8(67), 637.0(5.36), 688.5(3.7)
577.0 5	0.11 4	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
577.0 2	†9.8 2	²⁰³ At(7.4 m)	639.4(†100), 641.5(†55.8), 738.1(†38.4)
577.09 2	5.14 17	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
577.1 3	0.055 16	⁹⁰ Kr(32.32 s)	1118.69(39.0), 121.82(35.5), 539.49(30.8)
577.10 9	0.55 4	²⁰⁵ At(26.2 m)	719.30(31), 669.41(8.6), 628.88(5.6)
577.10 8	0.98 6	²⁰⁹ Rn(28.5 m)	408.32(50.3), 745.78(22.8), 337.45(14.5)
577.17 4	0.946 25	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
577.2 3	0.15 4	⁷³ Ga(4.86 h)	297.32(79.8), 325.70(11.17), 739.42(4.23)
577.2 5	1.20 17	⁷⁷ Rb(3.75 m)	66.52(57), 178.99(22.2), 393.37(9.7)
577.2 1	†10.7 8	¹⁶⁰ Lu(36.1 s)	243.2(†100), 395.4(†21.0), 1115.3(†6.8)
577.25 15	†2.5 3	¹³¹ Ce(5.0 m)	230.43(†100), 436.85(†7.3), 462.9(†6.9)
577.29 4	1.20 9	¹⁷⁵ Tm(15.2 m)	514.868(65), 941.23(15), 363.942(12.7)
577.3 2	0.172 23	⁹⁶ Rb(0.199 s)	815.0(78.00), 692.0(8.0), 813.2(7.0)
577.3 3	0.55 11	¹¹⁸ Cs(14 s)	337.4(100), 472.8(37.4), 586.6(15.4)
577.3	0.050 13	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
577.3 2	†7 3	¹³⁶ Eu(3.3 s)	254.9(†100), 431.4(†34), 458.0(†20)
577.3 1	0.045 5	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
577.36 15	0.50 8	¹²⁵ Cd(0.57 s)	1027.53(25.8), 1173.16(25.1), 736.65(12.6)
577.36 4	0.400 15	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
577.40 20	0.042 9	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
577.49 9	>0.0017	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
577.49	>0.0017	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
577.50 20	0.992 14	⁷³ Se(39.8 m)	67.03(2.59), 253.70(2.356), 84.0(2.03)
577.5 2	3.7 5	⁸⁴ As(5.5 s)	1455.1(49), 667.1(20.7), 2086.6(4.7)
577.5 2	0.96 14	⁸⁵ As(2.028 s)	1455.1(16), 667.1(6.8), 1244.6(0.64)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
577.5 1	0.09 4	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
577.5 4	0.23 12	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
577.6 2	0.035 9	¹⁷³ Ta(3.14 h)	172.2(18), 69.70(5.9), 90.3(5.0)
577.60 20	0.044 5	¹⁹³ Au(17.65 h)	186.17(10.1), 255.57(6.7), 268.22(3.9)
577.69 12	0.35 5	¹⁵⁷ Sm(482 s)	197.870(56.00), 196.461(16.8), 394.351(11.93)
577.7 2	0.068 10	¹⁴² Ba(10.6 m)	255.300(20.5), 1204.3(14.23), 895.2(13.9)
577.70 5	4.06 25	¹⁶⁶ Lu(2.65 m)	228.12(77.3), 337.50(41), 367.95(31.4)
577.7 4	0.24 6	¹⁷⁷ W(135 m)	115.65(50), 426.98(13.2), 1036.4(10.3)
577.7 5	†1.5 4	¹⁸³ Hg(9.4 s)	60.5(†100), 159.91(†21), 172.70(†17)
577.8 3	0.89 24	¹⁴¹ Sm(22.6 m)	196.88(74), 431.6(40.4), 777.6(20.3)
577.8	0.17	¹⁴⁷ Ba(0.893 s)	167.4(11), 105.2(4.8), 196.1(4.8)
577.9 5	0.05 3	¹⁰¹ Ag(11.1 m)	261.0(53), 588.0(10.0), 667.3(9.8)
577.9 4	2.4 3	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
577.9 2	1.9 5	¹²⁹ Sn(6.9 m)	1161.31(56.0), 1128.44(50), 760.8(16.8)
577.9 3	†<0.15	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
577.9 3	†3.4 7	¹⁴² Xe(1.22 s)	571.83(†100), 657.05(†79), 538.24(†77)
577.9	1.2	¹⁴⁷ Ce(56.4 s)	268.80(7), 92.9(4.7), 374.23(3.5)
577.9 2	0.00051 19	¹⁶¹ Ho(2.48 h)	25.65150(27), 103.062(3.9), 77.414(1.91)
577.9 3	0.0084 22	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
577.91 15	0.245 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
577.95 3	8.5 4	¹⁴⁷ Pr(13.4 m)	77.9921(15), 314.675(13.2), 641.380(10.0)
577.97 10	4.4 3	¹⁹⁷ Tl(2.84 h)	425.84(12.9), 152.22(7.2), 1411.34(4.5)
578.0 7	0.5 4	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
578.0 2	0.43 8	¹¹⁹ Ag(2.1 s)	626.4(13), 366.2(12.1), 399.1(10.9)
578.0 3	0.64 6	¹²⁷ Ba(12.7 m)	180.8(12), 114.8(9.3), 66.06(2.12)
578.0 5	†3.8 19	¹⁹⁵ Pb(15 m)	883.1(†100), 393.7(†42), 871.0(†36)
• 578.02 22	0.032 6	¹⁹⁵ Hg(41.6 h)	261.75(30.9), 560.27(7), 387.87(2.15)
• 578.049 16	0.166 4	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
578.06 18	0.60 7	⁹⁰ Br(1.92 s)	707.05(38.0), 1362.32(11.2), 655.17(7.7)
578.080 11	0.0235 12	¹⁷³ Hf(23.6 h)	123.672(83), 296.974(33.9), 139.634(12.7)
578.09 4	1.33 5	¹⁴² La(91.1 m)	641.285(47), 2397.8(13.3), 2542.7(10.00)
578.1 2	0.00133 10	¹⁶³ Er(75.0 m)	1113.5(0.0490), 436.1(0.0285), 439.94(0.0276)
578.13 2	1.5 5	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
578.2	13	¹⁴⁵ Dy(13.6 s)	639.6(12), 804.3(10), 39.7
578.2 2	0.18 6	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
578.22 7	0.40	¹³⁷ I(24.5 s)	1218.00(12.8), 601.05(4.80), 1302.64(4.42)
578.26 20	0.0015 4	¹²³ I(13.27 h)	158.97(83), 528.96(1.39), 440.02(0.428)
578.38 9	0.0084 8	¹⁰⁶ Rh(29.80 s)	511.842(20), 621.94(9.93), 1050.39(1.56)
578.38 9	0.0065 8	¹⁰⁶ Ag(23.96 m)	511.842(17.0), 621.94(0.316), 873.48(0.199)
578.5		¹³⁰ Pr(40.0 s)	951.9, 499.0, 1405
• 578.5 7	†0.0081 19	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
• 578.5 2	4.9×10 ⁻⁶ 5	²³³ U(1.592×10 ⁵ y)	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
578.55 5	<1.0	⁶⁸ Cu(3.75 m)	1339.96(12.0), 1077.35(12), 1041.3(9.6)
578.55 5	1.7 4	⁶⁸ Cu(31.1 s)	1077.35(64), 1260.97(12.5), 1883.09(2.4)
578.55 5	0.030 4	⁶⁸ Ga(67.629 m)	1077.35(3.0), 1883.09(0.130), 1260.97(0.0900)
578.56 4	7.3 4	²⁰² Bi(1.72 h)	960.67(99), 422.18(83.7), 657.49(60.6)
578.58 16	0.066 7	¹⁶⁵ Yb(9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
578.6 6	0.33 11	⁹⁷ Rh(46.2 m)	189.21(49), 2245.6(14), 421.55(12.7)
578.6 3	1.0	¹⁴⁵ Ba(4.31 s)	96.6(17), 91.9(7), 65.9(5)
578.6 5	0.020 6	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
578.6 3	17.6 18	¹⁹¹ Hg(50.8 m)	252.5(57), 420.1(18.6), 274.2(13)
• 578.66 15	0.0035 3	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
578.66 15	†2.1 3	¹⁶⁵ Lu(10.74 m)	132.49(†100), 120.60(†100), 174.25(†47.0)
578.7 1	0.059 4	⁶⁶ Ga(9.49 h)	1039.30(37), 2752.01(23.38), 833.50(5.89)

• $t_{1/2} > 1$ 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: $E_\gamma(I_\gamma)$
578.7 4	$\dagger 2.1 6$	$^{113}\text{Ru}(0.80 \text{ s})$	263.2($\dagger 100$), 211.7($\dagger 31.0$), 337.5($\dagger 27.9$)
578.7 3	0.17 3	$^{181}\text{Au}(11.4 \text{ s})$	198.60(4.4), 2022.4(4.2), 79.40(4.2)
578.72 11	0.0010 4	$^{187}\text{W}(23.72 \text{ h})$	685.774(27.3), 479.531(21.8), 72.001(11.14)
578.73 17	0.084 10	$^{93}\text{Kr}(1.286 \text{ s})$	253.42(41.2), 323.89(24.1), 266.83(20.6)
578.75 3	18	$^{136}\text{Te}(17.5 \text{ s})$	2077.9(22), 333.99(19), 2569.4(15)
578.75 3		$^{137}\text{Te}(2.49 \text{ s})$	738.2, 630.7, 333.99
578.8 2	$\dagger 2.9 3$	$^{185}\text{Hg}(21.6 \text{ s})$	222.8($\dagger 100.0$), 258.7($\dagger 98$), 212.5($\dagger 58$)
• 578.853 9	2.96 7	$^{77}\text{Br}(57.036 \text{ h})$	238.996(23), 520.639(22.4), 297.215(4.16)
578.9 1	2.70 25	$^{95}\text{Rb}(377.5 \text{ ms})$	352.02(49), 204.02(15.1), 680.7(14.8)
578.9 1	$\dagger 14$	$^{96}\text{Rb}(0.199 \text{ s})$	352.02($\dagger 700$), 204.02($\dagger 200$), 680.7($\dagger 121$)
578.9 4	0.22 7	$^{139}\text{Sm}(2.57 \text{ m})$	273.7(37), 306.7(28.5), 596.3(8.0)
• 578.91 6	0.445 8	$^{156}\text{Tb}(5.35 \text{ d})$	534.318(66.6), 199.2132(40.9), 1222.36(31.00)
579.0 6	0.057 15	$^{139}\text{Pm}(4.15 \text{ m})$	402.8(15), 463.1(4.1), 367.8(3.52)
579.04 14	0.024 10	$^{88}\text{Kr}(2.84 \text{ h})$	2392.11(34.6), 196.301(25.98), 2195.842(13.18)
579.04 4	0.39 4	$^{153}\text{Dy}(6.4 \text{ h})$	80.723(11.10), 213.754(10.90), 99.659(10.51)
579.08 15	0.06	$^{176}\text{Ta}(8.09 \text{ h})$	1159.28(25), 88.34(12), 1224.93(6)
579.2 3	0.65 13	$^{151}\text{Pr}(18.90 \text{ s})$	880.19(13), 189.057(11.8), 484.501(11.3)
579.2 3	0.229 19	$^{152}\text{Tb}(4.2 \text{ m})$	344.281(20.8), 411.115(18.8), 471.9(12.2)
579.2 6	$\dagger 2.5$	$^{177}\text{Os}(2.8 \text{ m})$	84.7($\dagger 100$), 125.4($\dagger 63$), 195.8($\dagger 61$)
579.28 3	0.075 5	$^{149}\text{Nd}(1.728 \text{ h})$	211.309(25.9), 114.314(19.2), 270.166(10.7)
579.298 13	0.040 6	$^{200}\text{Au}(48.4 \text{ m})$	367.943(19), 1225.479(10.7), 1262.950(3.12)
579.298 13	$\dagger 121 9$	$^{200}\text{Au}(18.7 \text{ h})$	497.77($\dagger 123$), 367.943($\dagger 123$), 255.87($\dagger 119$)
• 579.298 13	13.8 7	$^{200}\text{Tl}(26.1 \text{ h})$	367.943(87), 1205.717(29.9), 828.320(10.8)
579.36 5	2.44 11	$^{107}\text{Ru}(3.75 \text{ m})$	194.05(9.9), 847.93(5.3), 462.61(3.66)
579.4 5	$\dagger 35 4$	$^{102}\text{Y}(0.36 \text{ s})$	151.73($\dagger 100$), 326.64($\dagger 53$), 1091.3($\dagger 42$)
579.4 2	3.4 6	$^{129}\text{Sn}(6.9 \text{ m})$	1161.31(56.0), 1128.44(50), 760.8(16.8)
579.4 1	0.056 6	$^{139}\text{Xe}(39.68 \text{ s})$	218.59(56), 296.53(21.7), 174.97(11.3)
579.4 3	0.23 4	$^{167}\text{Dy}(6.20 \text{ m})$	569.7(48), 259.33(27.9), 310.26(25.0)
• 579.40 5	0.448 13	$^{170}\text{Lu}(2.00 \text{ d})$	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
579.4 3	$\dagger 2.7 6$	$^{183}\text{Hg}(9.4 \text{ s})$	60.5($\dagger 100$), 159.91($\dagger 21$), 172.70($\dagger 17$)
579.4 8	1.2 9	$^{186}\text{Pt}(2.0 \text{ h})$	276.7(0), 611.5(6.0), 635.6(>3.8)
• 579.4 3	$8.6 \times 10^{-8} 17$	$^{239}\text{Pu}(24110 \text{ y})$	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
579.510 13	1.59 4	$^{163}\text{Tm}(1.810 \text{ h})$	104.320(18.6), 69.229(11.6), 241.305(10.9)
579.6 5	0.74 7	$^{169}\text{Ho}(4.7 \text{ m})$	788.4(21.2), 853.0(11.2), 760.8(10)
579.68 14	0.076 13	$^{138}\text{Xe}(14.08 \text{ m})$	258.411(31.5), 434.562(20.3), 1768.26(16.7)
579.7	0.4 1	$^{36}\text{P}(5.6 \text{ s})$	3290.7(100), 901.8(70.4), 1638.2(35.3)
579.7 3	0.8 3	$^{153}\text{Ho}(2.0 \text{ m})$	295.8(67), 637.0(5.36), 688.5(3.7)
• 579.73 3	2.3325 6	$^{205}\text{Bi}(15.31 \text{ d})$	1764.36(1.368), 703.44(31), 987.62(0.585)
• 579.78 6	1.06 4	$^{206}\text{Po}(8.8 \text{ d})$	1032.26(32.9), 511.36(24.1), 286.410(23.8)
579.8 3	0.088 18	$^{75}\text{Br}(96.7 \text{ m})$	286.572(88), 141.3147(6.6), 427.883(4.4)
• 579.8 3	0.10 3	$^{131}\text{Te}(30 \text{ h})$	773.67(49.9), 852.21(27.0), 793.75(18.10)
579.8 5	0.042 9	$^{151}\text{Tb}(17.609 \text{ h})$	287.357(28.3), 251.863(26.3), 108.088(24.3)
• 579.854 5	0.00192 3	$^{169}\text{Yb}(32.026 \text{ d})$	63.12077(44.2), 197.95788(35.8), 177.21402(22.16)
• 579.88 4	0.127 9	$^{153}\text{Tb}(2.34 \text{ d})$	212.038(31.0), 170.504(6.8), 109.758(6.4)
579.9	$\dagger 3.6$	$^{144}\text{Gd}(4.5 \text{ m})$	333.3($\dagger 100$), 2432.6($\dagger 94.8$), 629.5($\dagger 32.4$)
579.9 3	1.2 3	$^{176}\text{Re}(5.3 \text{ m})$	240.17(48), 109.08(25.0), 848.7(4.0)
579.9 3	0.122 18	$^{181}\text{Au}(11.4 \text{ s})$	198.60(4.4), 2022.4(4.2), 79.40(4.2)
579.92 10	0.051 6	$^{168}\text{Ho}(2.99 \text{ m})$	741.356(36.6), 821.164(34.5), 815.990(18.6)
579.97 9	0.056 5	$^{105}\text{Cd}(55.5 \text{ m})$	961.84(4.69), 346.870(4.20), 1302.459(3.98)
580.00 8	0.8	$^{111}\text{Pd}(23.4 \text{ m})$	70.44(0.78), 1459.0(0.56), 650.4(0.552)
580.0 5	0.10 3	$^{167}\text{Lu}(51.5 \text{ m})$	29.66(14.4), 239.22(8.6), 213.19(3.6)
580.03 4	0.408 24	$^{89}\text{Br}(4.40 \text{ s})$	1097.82(6.00), 997.93(4.26), 953.53(4.26)
• 580.1 4	0.008 3	$^{105}\text{Ag}(41.29 \text{ d})$	344.520(41), 280.41(30.2), 644.55(11.1)
580.1 4	$\dagger 5.0 \times 10^2$	$^{105}\text{Ag}(7.23 \text{ m})$	319.14($\dagger 63000$), 306.25($\dagger 12800$), 442.37($\dagger 5900$)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
580.1 4		¹³⁰ Pr(40.0 s)	951.9, 499.0, 1405
580.1 3	0.42 4	¹³⁹ Pm(4.15 m)	402.8(15), 463.1(4.1), 367.8(3.52)
580.1 3	0.35 9	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
580.15 4	0.35 5	²¹⁴ Pb(26.8 m)	351.921(35.8), 295.213(18.5), 241.981(7.50)
580.16 6	0.94 4	¹⁰³ Ag(65.7 m)	118.72(31.2), 148.193(28.3), 266.86(13.3)
580.2 3	0.018 9	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
580.2 1	†0.6 1	¹⁵⁸ Ho(11.3 m)	218.21(†100.0), 98.91(†70), 945.7(†37)
580.23 5	0.242 24	⁷⁹ Ga(2.847 s)	464.79(24.2), 516.41(21.5), 1187.28(12.8)
580.25 25	0.23 4	⁹⁵ Y(10.3 m)	954.00(16), 2175.6(7.00), 3576.0(6.4)
580.3	0.33	⁸³ Zr(44 s)	55.55(8), 104.97(5.70), 475.1(5.1)
580.3 10	†2 1	¹⁵⁹ Yb(1.58 m)	166.16(†500), 177.12(†159), 390.20(†113)
580.3 1	0.08	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
580.399 25	1.00 8	²⁰⁸ Rn(24.35 m)	426.78(7.07), 251.05(5.02), 350.026(3.34)
580.4 1	0.121 24	⁷⁹ Ga(2.847 s)	464.79(24.2), 516.41(21.5), 1187.28(12.8)
580.4	>0.039	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
580.4	2.2	¹⁴⁷ Ce(56.4 s)	268.80(7), 92.9(4.7), 374.23(3.5)
580.4 3	0.21 5	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)
• 580.4		²²³ Ra(11.435 d)	269.459(13.7), 154.21(5.62), 323.871(3.93)
580.5 10	0.6	¹⁵¹ Ho(35.2 s)	527.4(63), 775.53(9.2), 209.5(5.69)
580.5 10	0.54 18	¹⁸⁵ Ta(49.4 m)	177.59(25.7), 173.68(22.6), 65.86(3.9)
580.5 2	†5.9 6	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
• 580.505 65	0.0044 5	⁹⁹ Mo(65.94 h)	739.50(12.1), 181.063(6.08), 140.511(4.52)
580.57 10	4.79 14	⁸⁶ Y(14.74 h)	1076.64(83), 627.72(32.6), 1153.01(30.5)
580.58 61	0.06 3	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
580.6 3	0.77 8	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
580.6 1	13	¹³⁷ Nd(38.5 m)	75.5(17.0), 306.60(10.0), 781.6(9.3)
580.60 10	0.210 22	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
580.65 5	>0.0007	⁸⁵ Kr(4.480 h)	151.159(75.0), 129.820(0.300), 450.85(0.011)
580.65 5	†0.086 9	⁸⁵ Sr(67.63 m)	151.159(†1272), 129.820(†15), 731.812(†1.45)
580.7 4	0.44 10	¹⁴² Eu(1.22 m)	768.1(100), 1023.3(92.0), 556.6(86.6)
• 580.7 6	0.052 21	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
580.7 3	†43.3 19	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
580.7 2	0.0070 20	²⁴⁰ Np(7.22 m)	554.60(20.9), 597.40(11.7), 1496.9(1.33)
580.75 20	0.035 3	¹⁵⁹ Ho(33.05 m)	121.012(36.2), 131.973(23.6), 309.594(17.2)
580.77 18	0.56 5	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
580.8 8	0.06 6	⁹⁵ Ru(1.643 h)	336.43(70.2), 1096.76(21.0), 626.77(17.8)
580.82	0.0659 22	¹⁵⁹ Gd(18.479 h)	363.55(11.4), 58.00(2.15), 348.16(0.234)
580.83 15	0.53 8	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
580.9 5	0.081 22	¹⁰⁹ In(4.2 h)	203.5(74), 623.7(5.5), 1148.9(4.3)
580.9		¹⁵⁷ Lu(5.0 s)	967.5, 949.8, 880.5
580.9 3	0.0084 22	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
580.903 19	0.112 19	¹⁸⁰ Re(2.44 m)	902.795(90), 103.557(22.2), 825.357(9.9)
580.95 25	0.9 3	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
580.97 8	†32 17	¹⁹³ Hg(3.80 h)	861.11(†100), 1118.84(†64), 789.21(†36)
581.0 4	0.6	⁹⁹ Zr(2.1 s)	469.140(55), 546.13(48.6), 593.990(27.4)
581.0 10	0.47 16	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
581 1	13.3 18	¹³⁷ Pm(2.4 m)	177.5(40.29), 108.6(35), 233.6(29.57)
581.0 1	4.0 4	¹⁵⁹ Er(36 m)	624.5(33), 649.1(23.4), 205.92(9.7)
581.0 5	0.15 5	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
581.0 6	1.2 3	¹⁶⁶ Lu(1.41 m)	228.12(15), 102.38(13), 285.07(11.0)
581.0 2	†1.0 3	¹⁶⁸ Re(4.4 s)	199.3(†100), 363.2(†95), 479.8(†62.8)
581.1 3	0.145 19	⁸³ Y(7.08 m)	35.50(0.44), 882.1(6.30), 489.90(5.53)
581.1 2	60 4	¹⁰⁸ Rh(6.0 m)	433.937(88), 947.27(49), 901.31(28)
581.1 5	0.0011 5	¹⁴¹ La(3.92 h)	1354.52(1.64), 1693.3(0.074), 2267.0(0.0413)

• $t_{1/2} > 1$ d

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
• 581.1 6	0.0045 14	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
581.1 2	†1.2 2	²⁰³ At(7.4 m)	639.4(†100), 641.5(†55.8), 738.1(†38.4)
581.1 2	0.20 4	²³⁶ Th(37.5 m)	110.8(4.2), 646.6(0.72), 196.0(0.69)
581.12 10	0.62 6	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
581.19 10	†81 10	²³⁴ Pa(1.17 m)	1001.03(†837000), 766.38(†294000), 742.81(†80000)
• 581.19 10	0.38 4	²³⁴ Np(4.4 d)	1558.31(18.72), 1527.21(11.2), 1601.80(9.1)
581.2 4	0.27 9	¹⁰⁴ Tc(18.3 m)	358.0(89), 530.5(15.6), 535.1(14.7)
581.26 6	0.363 22	¹⁰⁰ Sr(202 ms)	963.85(22.0), 898.50(18.9), 65.46(15.2)
581.29 9	0.70 10	¹⁰⁶ In(6.2 m)	632.66(100), 861.16(92), 997.87(48)
• 581.30 12	0.0010 5	⁹⁹ Mo(65.94 h)	739.50(12.1), 181.063(6.08), 140.511(4.52)
581.3 4	0.0015 3	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
581.36 14	0.060 9	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
581.38 15	0.50 11	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
581.39 8	0.0120 12	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
• 581.398 8	6.0 3	²³² Pa(1.31 d)	969.315(41.6), 894.351(19.8), 150.059(10.8)
581.4 2	0.36 6	¹⁰¹ Zr(2.1 s)	119.3(10.8), 205.6(6.0), 912.2(3.48)
581.4 4	0.132 12	¹⁴⁷ Pr(13.4 m)	77.9921(15), 314.675(13.2), 641.380(10.0)
581.4 6	3.4 2	¹⁵⁴ Pr(2.3 s)	162.4(15), 932.1(11.7), 70.8(11.22)
581.4 4	†4.2 6	¹⁸² Ir(15 m)	273.23(†100), 126.79(†77), 236.3(†21.0)
581.5 3	0.51 8	⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
581.57 5	0.274 14	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
581.6 2	0.35 7	⁸³ Se(22.3 m)	356.687(70), 510.17(43), 224.8(32.7)
• 581.60 12	0.0197 20	¹⁴⁵ Eu(5.93 d)	893.73(66), 653.512(15.0), 1658.53(14.9)
581.6 3	>0.016	¹⁶⁴ Yb(75.8 m)	40.928(1.147), 675.41(0.38), 390.6(0.31)
581.7 5	0.21 5	¹⁰¹ Ag(11.1 m)	261.0(53), 588.0(10.0), 667.3(9.8)
581.7 1	0.184 12	¹⁴³ La(14.2 m)	620.3(2.34), 643.75(1.55), 621.4(1.52)
581.7 5	†1.9 4	¹⁸³ Hg(9.4 s)	60.5(†100), 159.91(†21), 172.70(†17)
581.7 1	0.53 4	²³⁰ Ac(122 s)	454.95(8), 508.20(5.15), 1243.9(3.50)
• 581.7 1	0.132 16	²³⁰ Pa(17.4 d)	951.95(1.65), 918.48(8.2), 454.95(6.27)
• 581.7 1	0.000012 5	²³⁴ U(2.455×10 ⁵ y)	53.20(0.123), 120.90(0.0342), 454.95(0.000025)
581.8 5		⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
581.8 2	†3.6 8	¹³¹ Pr(1.53 m)	266.13(†100), 72.82(†64), 387.56(†38)
• 581.8 6	0.016 12	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
581.80 10	0.19 3	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
581.82 10	18.8 7	¹⁹⁴ Pb(12.0 m)	1519.45(16.4), 203.82(16.2), 367.80(8.1)
581.9 3	0.96 14	¹¹⁷ Ag(5.34 s)	135.4(48), 386.8(39.9), 298.1(21.1)
581.9 1	1.83 13	²³⁰ Fr(19.1 s)	711.0(13.6), 129.1(11.0), 728.4(7.3)
581.93 9	8.6 3	¹¹⁰ In(4.9 h)	657.7622(98.3), 884.685(92.9), 937.493(68.4)
• 581.97 8	0.485 25	²⁰⁶ Bi(6.243 d)	803.10(99), 881.01(66.2), 516.18(40.7)
581.99 4		¹⁸⁷ W(23.72 h)	685.774(27.3), 479.531(21.8), 72.001(11.14)
582.0 3	0.21 3	⁶³ Fe(6.1 s)	994.8(14.0), 1427.2(4.6), 1299.0(1.23)
582.00 10	4.26 17	⁸³ As(13.4 s)	734.60(43), 1113.10(14.7), 2076.70(11.9)
582.0 3	0.33 7	¹³⁹ Sm(2.57 m)	273.7(37), 306.7(28.5), 596.3(8.0)
582.0 2	0.54 10	²⁰⁰ Po(11.5 m)	671.0(34.0), 617.7(19.7), 434.4(9.3)
• 582.082 3	†101 13	⁹⁵ Nb(86.6 h)	204.117(†4290), 786.198(†29), 820.624(†0.7)
• 582.082 3	29.96 5	⁹⁵ Tc(61 d)	204.117(63.25), 835.149(26.63), 786.198(8.66)
• 582.096 12	0.894 7	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
582.12 20	1.26 17	¹⁶⁰ Yb(4.8 m)	173.74(42.0), 215.78(20.2), 140.35(9.3)
582.2 1	†210 76	¹⁵⁷ Ho(12.6 m)	279.97(†47600), 341.16(†37000), 193.41(†15200)
582.2 2	†5.5 5	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
582.25 21	2.8 3	⁹⁷ Rh(46.2 m)	189.21(49), 2245.6(14), 421.55(12.7)
582.3 2	0.035 10	⁸⁷ Kr(76.3 m)	402.586(49.6), 2554.8(9.2), 845.43(7.34)
582.3	7	¹⁴⁰ I(0.86 s)	376.657(91), 457.630(59), 936.7(16)
• 582.3 2	0.189 20	¹⁴⁴ Pm(363 d)	696.510(99), 618.01(98.6), 476.8(42.0)

• $t_{1/2} > 1$ 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: $E_\gamma(I_\gamma)$
582.3 1	$\dagger 20.2 8$	$^{172}\text{Ir}(2.0 \text{ s})$	227.8($\dagger 100.0$), 378.4($\dagger 62.0$), 448.4($\dagger 40.5$)
582.3 3	0.11 3	$^{195}\text{Tl}(1.16 \text{ h})$	563.52(10.5), 884.47(10.0), 1363.88(8.4)
582.30 5	0.96 15	$^{202}\text{Bi}(1.72 \text{ h})$	960.67(99), 422.18(83.7), 657.49(60.6)
582.35 9	0.074 3	$^{151}\text{Tb}(17.609 \text{ h})$	287.357(28.3), 251.863(26.3), 108.088(24.3)
582.4 1	$\dagger 74 4$	$^{191}\text{Tl}(5.22 \text{ m})$	452.6($\dagger 100$), 470.1($\dagger 98$), 391.6($\dagger 96$)
582.49 24	$\dagger 4.4 7$	$^{142}\text{Xe}(1.22 \text{ s})$	571.83($\dagger 100$), 657.05($\dagger 79$), 538.24($\dagger 77$)
582.5 3	6.3 4	$^{100}\text{Cd}(49.1 \text{ s})$	936.55(66), 139.71(6.7), 507.25(5.5)
582.5 1	0.65 7	$^{107}\text{Tc}(21.2 \text{ s})$	102.70(21.0), 177.00(9.2), 106.31(7.6)
582.5 3	0.060 10	$^{153}\text{Dy}(6.4 \text{ h})$	80.723(11.10), 213.754(10.90), 99.659(10.51)
582.54 3	0.782 16	$^{77}\text{Ge}(11.30 \text{ h})$	264.44(54), 211.03(30.8), 215.50(28.6)
• 582.567 3	0.0016 10	$^{168}\text{Tm}(93.1 \text{ d})$	198.241(52.39), 815.990(48.99), 447.515(23.05)
• 582.60 11	0.0009 6	$^{129}\text{Cs}(32.06 \text{ h})$	371.918(30.60), 411.490(22.31), 548.945(3.40)
• 582.6	0.058 7	$^{156}\text{Tb}(5.35 \text{ d})$	534.318(66.6), 199.2132(40.9), 1222.36(31.00)
582.6 4	0.123 20	$^{156}\text{Ho}(56 \text{ m})$	266.35(54.7), 137.83(51), 366.25(10.73)
• 582.6	$\dagger 2.3 \times 10^3 12$	$^{241}\text{Am}(432.2 \text{ y})$	59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$)
582.63 22	$\dagger 8.6 13$	$^{181}\text{Pt}(51 \text{ s})$	289.29($\dagger 100$), 111.97($\dagger 100$), 230.15($\dagger 92$)
582.63 8	2.68 4	$^{192}\text{Au}(4.94 \text{ h})$	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
582.67 5	0.65 3	$^{204}\text{Po}(3.53 \text{ h})$	883.984(29.9), 270.068(27.8), 1016.31(24.1)
• 582.797 6	$6.15 \times 10^{-7} 18$	$^{239}\text{Pu}(24110 \text{ y})$	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
582.84 13	1.4	$^{183}\text{Au}(42.0 \text{ s})$	161.18(9.4), 214.13(5.9), 313.08(5.0)
582.88 20	0.93 13	$^{121}\text{Ag}(0.78 \text{ s})$	314.55(32.1), 353.43(19.9), 500.61(9.3)
582.9 9	0.090 24	$^{101}\text{Mo}(14.61 \text{ m})$	191.92(19), 590.91(16.4), 1012.47(12.8)
582.9 3	1.0 2	$^{128}\text{Sb}(9.01 \text{ h})$	753.82(100), 743.22(100), 314.12(61)
582.9	0.018 8	$^{149}\text{Nd}(1.728 \text{ h})$	211.309(25.9), 114.314(19.2), 270.166(10.7)
582.92 14	0.41	$^{183}\text{Au}(42.0 \text{ s})$	161.18(9.4), 214.13(5.9), 313.08(5.0)
• 582.93 15	0.018 4	$^{105}\text{Ag}(41.29 \text{ d})$	344.520(41), 280.41(30.2), 644.55(11.1)
583.0 3	1.36 12	$^{97}\text{Pd}(3.10 \text{ m})$	265.26(56), 475.2(26.7), 792.70(13.8)
583.0 5	0.7 4	$^{113}\text{Te}(1.7 \text{ m})$	814.4(22), 1018.1(13.0), 1181.0(12.3)
583.0	1.2	$^{134}\text{Nd}(8.5 \text{ m})$	163.2(58), 288.9(13), 216.8(12)
583 1	0.32 19	$^{162}\text{Tm}(24.3 \text{ s})$	811.52(6.5), 798.68(5.2), 227.52(5)
583.0 5	0.11 4	$^{167}\text{Lu}(51.5 \text{ m})$	29.66(14.4), 239.22(8.6), 213.19(3.6)
583 1	>0.17	$^{181}\text{Au}(11.4 \text{ s})$	198.60(4.4), 2022.4(4.2), 79.40(4.2)
583.0 5	$\dagger 2.9$	$^{191}\text{Tl}(5.22 \text{ m})$	452.6($\dagger 100$), 470.1($\dagger 98$), 391.6($\dagger 96$)
• 583 1	0.00442 17	$^{231}\text{Pa}(32760 \text{ y})$	27.36(10.3), 300.07(2.46), 302.65(2.2)
583.02 9	$\dagger 100$	$^{22}\text{Mg}(3.857 \text{ s})$	73.97($\dagger 59.5$), 1279.9($\dagger 5.71$)
583.03 3	0.049 13	$^{149}\text{Nd}(1.728 \text{ h})$	211.309(25.9), 114.314(19.2), 270.166(10.7)
• 583.1 2	0.026 3	$^{151}\text{Pm}(28.40 \text{ h})$	340.08(23), 167.75(8.3), 275.21(6.8)
583.1 5	$\dagger 1.9 4$	$^{183}\text{Hg}(9.4 \text{ s})$	60.5($\dagger 100$), 159.91($\dagger 21$), 172.70($\dagger 17$)
583.17 6	0.084 5	$^{105}\text{Cd}(55.5 \text{ m})$	961.84(4.69), 346.870(4.20), 1302.459(3.98)
583.191 2	84.5 7	$^{208}\text{Tl}(3.053 \text{ m})$	2614.533(99), 510.77(22.6), 860.564(12.42)
583.191 2	2.0	$^{212}\text{Po}(45.1 \text{ s})$	2614.533(2.6)
583.2 2	0.71 5	$^{164}\text{Tm}(5.1 \text{ m})$	208.08(14.6), 314.97(10), 240.49(7.5)
583.20 18	1.10 15	$^{186}\text{Ta}(10.5 \text{ m})$	197.93(50), 214.87(42.3), 510.82(37.5)
583.26 3	10.5 11	$^{98}\text{Y}(2.0 \text{ s})$	1223.0(80), 620.505(63), 647.58(53)
583.26 3	2.34 22	$^{98}\text{Y}(0.548 \text{ s})$	1223.0(36.0), 2941.3(16.7), 1590.9(14.7)
583.29 12	2.82 5	$^{144}\text{Ba}(11.5 \text{ s})$	103.855(23.30), 430.48(18.3), 172.828(15.4)
583.3 5	0.52 8	$^{117}\text{I}(2.22 \text{ m})$	325.9(75), 274.4(20.4), 661.5(5.1)
583.3 4	3.3 3	$^{127}\text{Sn}(2.10 \text{ h})$	1114.3(39), 1095.6(20), 823.1(10.9)
583.3 4	$\dagger 1.5 5$	$^{129}\text{Sb}(17.7 \text{ m})$	759.8($\dagger 100.0$), 657.78($\dagger 92$), 433.76($\dagger 73$)
583.3 2	$\dagger 0.45 18$	$^{160}\text{Ho}(5.02 \text{ h})$	728.18($\dagger 100$), 879.383($\dagger 65.9$), 962.317($\dagger 59.1$)
583.3 4	$\dagger 8.6 20$	$^{233}\text{Pu}(20.9 \text{ m})$	235.4($\dagger 100$), 534.8($\dagger 90.2$), 500.3($\dagger 38.6$)
583.34 3	2.18 13	$^{207}\text{At}(1.80 \text{ h})$	814.41(44.5), 588.33(19.2), 300.654(12.8)
583.38 9	0.55 6	$^{75}\text{Zn}(10.2 \text{ s})$	228.67(28.9), 432.29(20.2), 155.94(17.2)
583.4 3	0.28 8	$^{141}\text{Sm}(22.6 \text{ m})$	196.88(74), 431.6(40.4), 777.6(20.3)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
• 583.4 2	0.194 15	¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
• 583.4 5	0.019 8	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
583.41 5	0.114 11	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
583.43 5	0.97 6	⁹⁹ Sr(0.269 s)	125.118(16.1), 536.12(14.0), 1198.12(9.2)
583.5 3	0.41 12	¹²⁶ Ba(100 m)	233.6(19.6), 257.6(7.6), 241.0(6.0)
583.5 2		¹³¹ Sn(56.0 s)	3267.5, 2470.5, 2039.25
583.5 2		¹³¹ Sn(58.4 s)	367.40, 285.0, 62.9
583.5 2	†5.2 10	¹³¹ Sn(56.0 s)	1226.03(†100), 450.03(†90), 798.50(†86)
583.5 3	0.18 7	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
583.5 5	0.64 21	¹⁶⁴ Tb(3.0 m)	168.838(25.4), 754.80(23.3), 215.07(21)
583.5 2	0.0130 22	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
583.5 2	<0.2	²³⁶ Pa(9.1 m)	642.35(37.0), 687.59(9.9), 1762.7(6.0)
583.53 9	†40 6	¹⁶⁸ Lu(5.5 m)	1483.65(†100), 228.58(†97), 111.8(†68)
583.55 3	†41	²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
583.6 5	0.09 3	⁸⁷ Br(55.60 s)	1419.71(22.0), 1476.04(7.9), 1577.60(6.0)
583.6 5	0.023 7	¹⁰³ Tc(54.2 s)	346.380(17.5), 136.079(16.6), 562.90(7.0)
583.6 5	0.26 6	¹¹¹ Pd(5.5 h)	70.44(8.3), 391.25(5.4), 632.80(3.6)
583.6 3	0.046 13	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
583.6	0.18 6	¹⁴⁸ Ba(0.607 s)	56.08(29.20), 133.53(3.88), 415.78(3.59)
583.6 3	0.67 17	¹⁸⁰ Ir(1.5 m)	276.4(56), 132.2(38.1), 699.0(13.4)
583.6 3	†5.8 3	²⁰¹ Po(15.3 m)	890.1(†100), 240.1(†71.0), 904.2(†54.8)
• 583.63 7	0.076 6	¹⁹¹ Pt(2.9 d)	538.90(13.7), 409.44(8.0), 359.90(6.0)
583.7 3	0.4 1	¹⁴⁸ Ho(9.59 s)	1687.5(82.47), 660.8(58.94), 504.3(18.62)
583.78 14	0.10 3	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
583.8 3	0.029 15	⁹⁵ Rb(377.5 ms)	352.02(49), 204.02(15.1), 680.7(14.8)
583.8 3	†>1.4	⁹⁶ Rb(0.199 s)	352.02(†700), 204.02(†200), 680.7(†121)
583.8 3	0.21 3	¹¹³ Ag(5.37 h)	298.58(10), 258.8(1.64), 316.3(1.343)
583.8 3	3.6	¹¹³ Ag(68.7 s)	316.3(18), 392.3(11), 298.58(10)
583.8 2	0.093 12	¹¹⁶ Te(2.49 h)	93.70(31.4), 628.63(3.22), 102.97(1.95)
583.8	†10.1 15	¹³¹ Ce(10.3 m)	169.42(†100), 414.25(†68), 119.18(†44)
583.8 4	†0.50 20	¹⁵⁵ Tm(21.6 s)	226.8(†100), 531.7(†20), 88.1(†17)
583.84 9	1.33 4	⁸² Rb(6.472 h)	776.517(84), 554.348(62.4), 619.106(37.976)
583.9 3	†7 2	¹³⁶ Eu(3.3 s)	254.9(†100), 431.4(†34), 458.0(†20)
583.9 1	1.04 5	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)
583.9	>0.026	¹⁹⁷ Tl(2.84 h)	425.84(12.9), 152.22(7.2), 1411.34(4.5)
583.9 1	0.37 7	²⁴⁰ Np(61.9 m)	566.34(25.3), 973.9(23.8), 600.57(18.4)
583.98 6	7.0 7	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
584.0 3	0.62 9	¹⁰⁴ Tc(18.3 m)	358.0(89), 530.5(15.6), 535.1(14.7)
584.0 1	0.61 20	¹⁰⁸ Tc(5.17 s)	242.25(82), 465.6(14.3), 707.81(11.4)
584.0 1	0.53 6	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
584.0 2	0.338 20	²¹⁰ At(8.1 h)	1181.39(99.3), 245.31(79), 1483.39(46.5)
584.06 42	0.009 4	¹³⁷ Pr(1.28 h)	836.7(1.8), 433.9(1.28), 514.0(1.08)
584.07 7	0.64 8	¹⁶² Yb(18.87 m)	163.35(40.0), 118.70(33.6), 576.10(3.24)
584.1 2	†1.5 1	⁷⁵ Ga(126 s)	253.0(†100), 574.8(†31.6), 885.6(†11.1)
584.1 1	†1.92 16	¹⁹² Tl(9.6 m)	422.8(†100), 634.8(†75.9), 786.3(†31.7)
584.1 7	0.154 22	¹⁹⁹ Bi(27 m)	560.1(22.0), 424.85(22), 841.7(11)
584.1 1	0.175 21	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
584.18 8	1.2 3	¹⁰² Nb(4.3 s)	296.611(79), 1633.10(41), 551.54(30)
584.2 4	0.24 6	¹⁰⁹ In(4.2 h)	203.5(74), 623.7(5.5), 1148.9(4.3)
584.2 4	1.5 3	¹¹⁶ Cs(3.84 s)	393.5(<0.09), 524.3(76), 615.1(30.4)
• 584.2 11	0.33 18	¹²⁷ Sb(3.85 d)	685.7(37), 473.0(25.7), 783.7(15.0)
584.21 9	6.49 20	¹¹⁰ In(4.9 h)	657.7622(98.3), 884.685(92.9), 937.493(68.4)
584.27 25	0.067 14	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
• 584.274 12	52.6 14	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 737.455(9.60)

• $t_{1/2} > 1$ 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: $E_\gamma(I_\gamma)$
584.3 6	0.34 4	¹⁷⁰ Ta(6.76 m)	100.8(21.0), 221.2(15.7), 860.4(7.39)
584.3 10	0.14 3	²⁰¹ Bi(108 m)	629.1(24.0), 936.2(11.3), 1014.1(10.7)
• 584.32 2	2.84 20	²⁵⁴ Es(39.3 h)	648.80(28.4), 693.79(24.3), 688.68(12.3)
• 584.35 15	0.0119 7	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
584.4 5	†8.3	¹¹² Te(2.0 m)	372.70(†100), 296.20(†86), 418.9(†57)
584.4 3	†1.8 4	¹²⁰ Cs(64 s)	322.4(†100), 473.5(†30), 553.4(†19.1)
584.43 4	5.5 5	¹⁸⁶ Ir(16.64 h)	296.911(64.0), 137.155(42), 434.849(34.4)
584.43 4	1.10 22	¹⁸⁶ Ir(2.0 h)	137.155(27), 767.508(21.2), 630.354(18.0)
• 584.49 20	0.00091 10	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
584.5 6	3.2 12	⁶⁹ Ni(11.4 s)	1871.1(40.9), 679.7(39.7), 1213.0(39.3)
584.5 4	0.30 14	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
584.52 6	9.8 3	⁸⁶ Nb(88 s)	751.74(97.8), 914.81(78.1), 1003.24(37.4)
584.55 5	3.56 16	²⁰¹ Pb(9.33 h)	331.19(79), 361.27(9.9), 945.96(7.4)
584.56 17	10.9 11	¹¹⁰ Rh(28.5 s)	373.80(91), 546.90(42.4), 687.70(25.8)
584.6 5	0.15 3	¹¹⁵ Ag(20.0 m)	229.08(18), 212.80(4.4), 472.70(4.0)
584.6 3	0.29 5	¹²¹ Cs(122 s)	179.4(30.2), 196.0(24.1), 459.7(12.0)
• 584.6 6	0.031 21	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
584.6 5	†6.0 10	¹⁷² W(6.6 m)	38.9(†100), 423.3(†44), 89.8(†33.0)
584.7 15	0.4 1	⁴⁶ Ar(8.4 s)	1944.30(100), 1020.3(0.8), 288.1(0.7)
• 584.725 17	0.336 10	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
584.734 10	0.175 5	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
584.8 1	0.147 20	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
584.8 2	0.37 11	¹⁵² Pm(7.52 m)	244.6989(78), 121.7824(45), 340.48(31.3)
584.8 2	6.1 17	¹⁵² Ho(161.8 s)	613.8(73), 613.8(14), 1098.0(12)
584.8 3	0.06 3	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
584.81 5	0.066 7	¹³¹ La(59 m)	108.081(25.0), 417.783(18.0), 365.162(16.9)
584.82 15	0.033 4	⁶³ Zn(38.47 m)	669.62(8), 962.06(6.5), 1412.08(0.75)
584.86 9	0.091 7	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
• 584.9 4	0.0086 16	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
584.9 2	0.019 3	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
584.9 2	†17 3	¹⁸⁵ Pt(33.0 m)	229.60(†100), 135.3(†80), 197.4(†74)
584.97 7	0.070 10	¹⁸⁹ Pt(10.87 h)	721.41(9.3), 94.33(7.6), 568.84(7.1)
585.0 2	0.59 7	⁹² Ru(3.65 m)	213.81(96), 259.32(92), 134.57(65.5)
585.0 2	†1.9 4	¹⁰³ Nb(1.5 s)	102.64(†100), 641.1(†55), 538.5(†34.0)
585 1	0.010 5	¹¹³ Ag(5.37 h)	298.58(10), 258.8(1.64), 316.3(1.343)
585.0 1	4.9 4	¹¹⁹ Cd(2.20 m)	1025.0(24.8), 2021.3(22.6), 720.7(17.9)
• 585.00 20	0.0005 3	¹²⁹ Cs(32.06 h)	371.918(30.60), 411.490(22.31), 548.945(3.40)
585.0 1	1.92 10	²⁴² U(16.8 m)	67.60(9.6), 55.58(3.90), 572.9(1.87)
585.02 9	7.97 24	¹⁴⁴ La(40.8 s)	397.440(94.3), 541.20(39.2), 844.8(22.3)
585.03	13.00 18	²⁵ Na(59.1 s)	974.72(14.95), 389.70(12.68), 1611.711(9.48)
585.03	0.023 5	²⁵ Al(7.183 s)	1611.711(0.79), 974.72(0.024), 389.70(0.023)
• 585.041 15	1.193 14	¹³¹ Ba(11.50 d)	496.326(47), 123.805(28.97), 216.078(19.66)
585.1 3	0.20 5	¹⁰⁴ Tc(18.3 m)	358.0(89), 530.5(15.6), 535.1(14.7)
585.12 5	0.32 5	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
585.13 5	1.99 8	¹⁹⁵ Hg(9.9 h)	779.80(7), 61.46(6.2), 180.11(1.90)
585.2 2	21.0 7	⁹⁷ Rb(169.9 ms)	167.1(26), 600.5(10.6), 520.0(6.3)
585.2 5	0.75 25	⁹⁷ Sr(426 ms)	1905.0(25), 953.8(21.4), 652.2(11.4)
• 585.2	3.7×10 ⁻⁵	²⁵³ Es(20.47 d)	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
585.22 3	1.45 12	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
585.24 17	0.49 5	¹⁹⁷ Tl(2.84 h)	425.84(12.9), 152.22(7.2), 1411.34(4.5)
585.24 17	0.41 5	¹⁹⁷ Tl(2.84 h)	425.84(12.9), 152.22(7.2), 1411.34(4.5)
585.3 2	0.21 3	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
585.39 11	0.270 17	¹⁴¹ Cs(24.94 s)	48.53(7.90), 561.63(4.7), 1194.02(3.95)
585.40	>0.0037	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: $E_\gamma(I_\gamma)$
585.4 3	0.039 9	$^{112}\text{Ag}(3.130 \text{ h})$	617.27(43), 1387.67(5.4), 606.49(3.1)
585.4 5	0.29 10	$^{117}\text{Ag}(5.34 \text{ s})$	135.4(48), 386.8(39.9), 298.1(21.1)
585.4 5	0.04 3	$^{195}\text{Tl}(1.16 \text{ h})$	563.52(10.5), 884.47(10.0), 1363.88(8.4)
• 585.443 10	1.57 3	$^{77}\text{Br}(57.036 \text{ h})$	238.996(23), 520.639(22.4), 297.215(4.16)
585.46 20	0.018 6	$^{157}\text{Eu}(15.18 \text{ h})$	63.929(23.0), 410.723(17.5), 370.509(11.0)
585.5 23		$^{87}\text{Mo}(13.4 \text{ s})$	262.5(\dagger 100), 397.0(\dagger 33)
585.5 4	\dagger 0.9 3	$^{155}\text{Tm}(21.6 \text{ s})$	226.8(\dagger 100), 531.7(\dagger 20), 88.1(\dagger 17)
585.5 3	0.47 7	$^{159}\text{Er}(36 \text{ m})$	624.5(33), 649.1(23.4), 205.92(9.7)
585.5	0.7	$^{199}\text{Po}(4.13 \text{ m})$	1002.19(19), 1034.3(16), 362.01(7)
585.54 6	0.0311 18	$^{159}\text{Ho}(33.05 \text{ m})$	121.012(36.2), 131.973(23.6), 309.594(17.2)
585.59 6	0.026 7	$^{153}\text{Dy}(6.4 \text{ h})$	80.723(11.10), 213.754(10.90), 99.659(10.51)
585.6 15	0.55 18	$^{68}\text{Cu}(3.75 \text{ m})$	1339.96(12.0), 1077.35(12), 1041.3(9.6)
585.6 3	0.113 13	$^{121}\text{Xe}(40.1 \text{ m})$	252.7(13), 132.8(10.9), 445.2(7.7)
585.6 5	\dagger 0.9 3	$^{126}\text{Cd}(0.506 \text{ s})$	260.09(\dagger 100), 428.11(\dagger 83.7), 688.23(\dagger 5.9)
585.6 1	0.045 6	$^{139}\text{Xe}(39.68 \text{ s})$	218.59(56), 296.53(21.7), 174.97(11.3)
585.6 1	3.5 3	$^{141}\text{Tb}(3.5 \text{ s})$	293.3(16.8), 343.6(16.3), 198.4(14.8)
585.6 2	0.31 4	$^{146}\text{Ba}(2.22 \text{ s})$	140.7(20.2), 251.2(19.6), 121.2(14.2)
585.62 6	0.21 5	$^{183}\text{Os}(9.9 \text{ h})$	1101.94(49.0), 1107.92(22.36), 1034.85(6.02)
585.7 2	0.53 7	$^{142}\text{Gd}(70.2 \text{ s})$	750.2(11.2), 178.90(11.20), 284.4(6.16)
585.8 1	0.11 1	$^{107}\text{Tc}(21.2 \text{ s})$	102.70(21.0), 177.00(9.2), 106.31(7.6)
585.8 3	\dagger 4.5 9	$^{120}\text{Cs}(64 \text{ s})$	322.4(\dagger 100), 473.5(\dagger 30), 553.4(\dagger 19.1)
• 585.80 7		$^{156}\text{Eu}(15.19 \text{ d})$	811.79(9.70), 88.9667(8.4), 1230.68(7.98)
• 585.80 7	0.047	$^{156}\text{Eu}(15.19 \text{ d})$	811.79(9.70), 88.9667(8.4), 1230.68(7.98)
• 585.80 15	0.0152 9	$^{170}\text{Lu}(2.00 \text{ d})$	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
585.804 49	29.5 15	$^{227}\text{Fr}(2.47 \text{ m})$	90.035(39), 64.267(14.5), 433.824(5.1)
585.86 20	0.051 8	$^{90}\text{Kr}(32.32 \text{ s})$	1118.69(39.0), 121.82(35.5), 539.49(30.8)
585.9 2	0.22 4	$^{92}\text{Kr}(1.840 \text{ s})$	142.307(64), 1218.6(60), 812.6(14.6)
585.9 4	1.1 3	$^{101}\text{Ag}(11.1 \text{ m})$	261.0(53), 588.0(10.0), 667.3(9.8)
585.9	>15	$^{156}\text{Tm}(83.8 \text{ s})$	344.55(86), 452.85(17.2), 585.93(14.6)
585.9 2	4.2 4	$^{164}\text{Tb}(3.0 \text{ m})$	168.838(25.4), 754.80(23.3), 215.07(21)
585.93 8	14.6 8	$^{156}\text{Tm}(83.8 \text{ s})$	344.55(86), 452.85(17.2), 585.9(>15)
585.944 6	0.18 3	$^{75}\text{Br}(96.7 \text{ m})$	286.572(88), 141.3147(6.6), 427.883(4.4)
585.97 10	0.85 9	$^{106}\text{Rh}(131 \text{ m})$	511.842(85), 1045.83(30.4), 717.24(28.9)
• 585.97 10	0.44 10	$^{106}\text{Ag}(8.28 \text{ d})$	511.842(88), 1045.83(29.6), 717.24(28.9)
586.0 4	0.019 7	$^{138}\text{Xe}(14.08 \text{ m})$	258.411(31.5), 434.562(20.3), 1768.26(16.7)
586.0 3	\dagger 2.3 4	$^{183}\text{Hg}(9.4 \text{ s})$	60.5(\dagger 100), 159.91(\dagger 21), 172.70(\dagger 17)
586.01 8	79.7 14	$^{47}\text{K}(17.5 \text{ s})$	2013.45(93), 564.79(13.27), 2578.26(5.60)
586.03 4	16.6 9	$^{89}\text{Kr}(3.15 \text{ m})$	220.948(20.1), 904.27(7.2), 1472.76(6.9)
586.05 3	1.69 6	$^{130}\text{I}(12.36 \text{ h})$	536.09(99), 668.54(96), 739.48(82)
586.05 3	1.07 3	$^{130}\text{I}(9.0 \text{ m})$	536.09(16), 1614.10(0.447), 1122.15(0.168)
586.05 3	0.47 5	$^{130}\text{Cs}(29.21 \text{ m})$	536.09(3.8), 894.5(0.39), 1614.10(0.26)
586.05 3		$^{130}\text{Cs}(3.46 \text{ m})$	536.09(\dagger 100), 470.8(\dagger 8.6), 206.6(\dagger 1.7)
586.05 17	1.15 15	$^{184}\text{Au}(53.0 \text{ s})$	162.97(50), 272.98(40), 362.47(17.5)
• 586.06 9	0.020 3	$^{145}\text{Eu}(5.93 \text{ d})$	893.73(66), 653.512(15.0), 1658.53(14.9)
• 586.092 5	1.53×10^{-7} 15	$^{239}\text{Pu}(24110 \text{ y})$	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
586.1 5		$^{88}\text{Nb}(14.5 \text{ m})$	1082.53(103), 1057.01(100), 671.20(64)
586.1 2	0.004 2	$^{171}\text{Er}(7.516 \text{ h})$	308.31(64.4), 295.901(28.9), 111.621(20.5)
586.1 3	\dagger 2.0 4	$^{189}\text{Hg}(7.6 \text{ m})$	320.99(\dagger 100), 78.21(\dagger 63), 565.42(\dagger 48)
• 586.111 42	0.0129 12	$^{129}\text{Cs}(32.06 \text{ h})$	371.918(30.60), 411.490(22.31), 548.945(3.40)
586.13 15	0.26 4	$^{101}\text{Sr}(118 \text{ ms})$	128.34(18.0), 1124.82(10.9), 510.73(8.5)
586.15 13	\dagger 3.5 7	$^{131}\text{Pr}(1.53 \text{ m})$	266.13(\dagger 100), 72.82(\dagger 64), 387.56(\dagger 38)
586.16 3	5.1 3	$^{80}\text{Ga}(1.697 \text{ s})$	659.14(78.0), 1083.47(48.4), 1109.36(18.6)
586.2 3	3.5 20	$^{118}\text{Cs}(14 \text{ s})$	337.4(100), 472.8(37.4), 586.6(15.4)
• 586.2 3	0.022 9	$^{153}\text{Tb}(2.34 \text{ d})$	212.038(31.0), 170.504(6.8), 109.758(6.4)

• $t_{1/2} > 1 \text{ d}$

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
586.2 4	0.24 3	¹⁵⁶ Ho(56 m)	266.35(54.7), 137.83(51), 366.25(10.73)
586.2 2	0.59 13	¹⁹⁶ Os(34.9 m)	407.9(5.9), 126.2(5.3), 315.4(2.5)
586.294 6	0.0130 9	¹⁵² Eu(9.274 h)	344.281(2.44), 1314.67(0.956), 970.38(0.604)
• 586.294 6	0.459 10	¹⁵² Eu(13.542 y)	344.281(26.58), 778.91(12.96), 411.115(2.231)
586.294 6	†223 14	¹⁵² Tb(17.5 h)	344.281(†1500), 271.135(†203), 778.91(†137)
586.294 6	1.42 12	¹⁵² Tb(4.2 m)	344.281(20.8), 411.115(18.8), 471.9(12.2)
• 586.30 3	2.58 10	¹³¹ Te(30 h)	773.67(49.9), 852.21(27.0), 793.75(18.10)
586.3 2	0.17	¹⁴⁰ Sm(14.82 m)	225.5(>10), 225.4(10), 140.0(5.0)
586.3 1	0.072 10	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
586.4 3	0.28 11	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
586.4 2	0.09 4	²³⁶ Th(37.5 m)	110.8(4.2), 646.6(0.72), 196.0(0.69)
586.44 3	0.163 6	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
• 586.44 15	0.035 6	¹⁸⁸ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
586.45 3	17	¹⁹¹ Au(3.18 h)	277.88(7.2), 674.19(6.8), 283.91(6.7)
586.45 7	0.0063 5	²⁵⁰ Bk(3.217 h)	989.12(45), 1031.85(35.6), 1028.65(4.91)
586.45 7	0.39 10	²⁵⁰ Es(2.22 h)	989.12(13.3), 1031.85(10.6), 828.82(5.5)
586.46 17	†4.2 6	¹⁸¹ Pt(51 s)	289.29(†100), 111.97(†100), 230.15(†92)
586.5 4	†30.2 21	⁷¹ Cu(19.5 s)	489.7(†100), 595.2(†30.5), 674.8(†25.4)
586.5 4	0.44 15	⁹³ Sr(7.423 m)	590.238(67), 875.73(24.1), 888.13(21.8)
586.5 6	2.0 4	¹⁰³ In(65 s)	187.97(55), 720.32(13.9), 739.95(10.1)
• 586.59 20	†1.31×10 ⁴ 20	²⁴¹ Am(432.2 y)	59.537(†60), 26.345(†1000×10 ⁸), 33.195(†6000×10 ⁸)
586.6 2	15.4 20	¹¹⁸ Cs(14 s)	337.4(100), 472.8(37.4), 590.6(11.0)
586.6 1	†20 2	¹⁵³ Yb(4.2 s)	547.4(†100), 674.1(†61), 369.6(†32)
586.6		¹⁵⁷ Lu(5.0 s)	967.5, 949.8, 880.5
586.61 2	0.36 6	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
586.62 20	1.53 5	⁹⁶ Rh(9.90 m)	832.57(100), 685.49(95.7), 631.71(74.5)
586.7 1	0.0232 25	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
586.7 3	0.107 7	¹⁹⁰ Au(42.8 m)	295.78(71.0), 301.82(23.4), 597.67(9.4)
586.71 4	0.618 19	¹³³ Te(12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
586.71 8	0.298 16	¹⁸⁷ Ir(10.5 h)	912.95(4.79), 427.12(4.12), 400.89(3.94)
586.72 9	0.09	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
586.8 5	0.27 5	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
586.8 3	0.21 3	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
586.87	>0.00038	⁴² K(12.360 h)	1524.70(18), 312.6(0.336), 899.43(0.0515)
586.9 2	0.015 3	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)
586.9 2	†2.2 3	¹³⁶ Pm(107 s)	373.8(†100), 602.7(†38.4), 857.2(†23.4)
586.9 4	0.63 4	¹³⁷ Pm(2.4 m)	177.5(40.29), 108.6(35), 233.6(29.57)
587.0 1	0.31	⁴³ Ar(5.37 m)	975.0(34), 738.1(15), 1439.5(13)
587	†1	⁹² Br(0.343 s)	769(†100), 1446(†10), 1035(†6)
587.0 3	0.94 10	¹⁴⁴ La(40.8 s)	397.440(94.3), 541.20(39.2), 844.8(22.3)
587.0 4	†3.8	¹⁵⁴ Nd(25.9 s)	151.703(†800), 799.55(†600), 180.693(†510)
587.0	†0.8 2	¹⁷⁸ Ir(12 s)	266.1(†100.0), 131.6(†79), 363.1(†39.9)
587.0 2	0.86 9	²³⁰ Fr(19.1 s)	711.0(13.6), 129.1(11.0), 728.4(7.3)
587.0 2	<0.2	²³⁶ Pa(9.1 m)	642.35(37.0), 687.59(9.9), 1762.7(6.0)
587	†1.0	²⁵⁶ Es(7.6 h)	861.8(†100), 231.1(†61), 172.6(†49)
587.01 5	4.21 6	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
587.02 8	1.34 10	¹⁵⁰ Pm(2.68 h)	333.971(68), 1324.51(17.5), 1165.739(15.8)
587.04 8	0.49 5	²⁰⁵ At(26.2 m)	719.30(31), 669.41(8.6), 628.88(5.6)
587.1 4	†3.0 8	¹⁴² Xe(1.22 s)	571.83(†100), 657.05(†79), 538.24(†77)
587.1 3	0.33	¹⁷⁰ Hf(16.01 h)	164.78(33), 620.7(23), 120.17(19)
• 587.15 15	0.030 5	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
587.19 18	0.69 17	¹⁸¹ Re(19.9 h)	365.57(56), 360.70(20), 639.30(6.4)
587.2 3	0.12 6	¹⁰¹ Zr(2.1 s)	119.3(10.8), 205.6(6.0), 912.2(3.48)
587.2 3	0.78 18	¹⁰¹ Zr(2.1 s)	119.3(10.8), 205.6(6.0), 912.2(3.48)

• $t_{1/2} > 1$ d

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
• 587.20 2	0.267 3	¹⁴³ Ce(33.039 h)	293.266(42.80), 57.356(11.7), 664.571(5.69)
587.2	0.053 18	¹⁴⁹ Tb(4.118 h)	352.24(29.43), 164.98(26.4), 388.57(18.37)
587.2 3	0.20 4	¹⁹⁸ Tl(5.3 h)	411.8044(82), 675.8874(11), 636.4(10.1)
587.2 3	†185	¹⁹⁸ Tl(1.87 h)	636.4(†202), 411.8044(†202), 226.2(†19)
587.3 5	0.66 17	¹²⁸ La(5.0 m)	284.00(87), 479.24(54), 643.65(14.7)
587.3 4	0.11 4	¹³⁹ Sm(2.57 m)	273.7(37), 306.7(28.5), 596.3(8.0)
587.3 3	1.22 19	¹⁵⁴ Ho(3.10 m)	334.6(94), 412.4(79), 477.1(55)
587.37 15	0.0071 24	¹³⁹ Pr(4.41 h)	1347.33(0.47), 1630.67(0.343), 255.11(0.236)
587.4 3	1.22 19	¹⁵⁴ Ho(3.10 m)	334.6(94), 412.4(79), 477.1(55)
587.4 3	0.79 8	¹⁵⁴ Ho(11.76 m)	334.6(84), 412.4(15.0), 873.4(12.5)
587.44 24	0.121 7	⁷² Ga(14.10 h)	834.01(96), 2201.69(25.9), 629.95(24.8)
• 587.44 6	0.063 12	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
587.46 2	15.6 5	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
• 587.47 20	0.00036 4	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
587.5 4	0.119 11	⁸⁵ Y(4.86 h)	231.67(22.8), 2123.8(5.0), 767.40(3.6)
587.5 3	0.063 6	¹⁸⁶ Hg(1.38 m)	112.1(63), 251.5(55), 191.6(3.7)
• 587.52 6	0.117 4	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
587.6 4	0.100 19	¹³³ Te(12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
587.60 15	0.09 4	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
587.6 6	†8.9 10	¹⁹⁵ Bi(183 s)	807.6(†100), 831.7(†100), 776.2(†95)
• 587.64 8	0.30 3	⁶⁹ Ge(39.05 h)	1107.01(36), 574.17(13.3), 872.14(11.9)
587.66 13	0.55 6	¹⁴¹ Cs(24.94 s)	48.53(7.90), 561.63(4.7), 1194.02(3.95)
587.7 2	2.6 4	⁶⁵ Ge(30.9 s)	649.7(33), 62.0(27), 809.1(21.5)
587.7	0.040 20	²⁰⁸ Tl(3.053 m)	2614.533(99), 583.191(84.5), 510.77(22.6)
587.77 4	0.023	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
• 587.77 4		²⁴³ Am(7370 y)	74.664(68), 43.533(5.93), 117.84(0.57)
• 587.78 3	0.0040 8	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
587.8 5	0.072 14	¹⁴⁶ Pr(24.15 m)	453.88(48.0), 1523.7(15.6), 735.72(7.5)
587.8 5	0.45 5	¹⁵⁴ Tb(21.5 h)	123.071(26), 1274.436(10.5), 2187.10(9.9)
587.8 2	0.21 5	¹⁷³ Ta(3.14 h)	172.2(18), 69.70(5.9), 90.3(5.0)
587.83 9	100	⁸⁹ Nb(1.18 h)	507.4(85), 769.69(6.5), 1277.5(1.6)
587.83 9	1.39 17	⁸⁹ Nb(1.9 h)	1627.20(3.4), 1833.46(3.16), 3092.7(3.0)
587.83 2	0.1108 8	¹³⁵ La(19.5 h)	480.51(1.5), 874.51(0.164), 220.94(0.0541)
587.90 16	0.051 10	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
587.95 6	0.149 8	²⁴ Al(2.053 s)	1368.633(96.0), 7069.50(43.0), 2754.028(41.2)
588.0 10	0.17 6	⁹⁴ Y(18.7 m)	918.74(56), 1138.88(6.0), 550.88(4.9)
588.0 2	10.0 5	¹⁰¹ Ag(11.1 m)	261.0(53), 667.3(9.8), 1173.9(8.94)
588.00 3	15.7 11	¹⁴³ Gd(112 s)	271.94(84), 798.89(10.7), 668.10(9.7)
• 588.02 9	0.136 10	¹⁹¹ Pt(2.9 d)	538.90(13.7), 409.44(8.0), 359.90(6.0)
588.16 8	0.052 3	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
588.2 3	0.113 24	⁷⁷ Kr(74.4 m)	129.64(81), 146.59(37.3), 312.0(3.7)
588.2 5	0.04 2	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
588.2 2	†1.6×10 ³ 6	¹⁵⁸ Er(2.29 h)	71.91(†23300), 386.84(†111000), 248.58(†42000)
588.2 11	0.108 25	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
588.22 7	0.90 5	⁹¹ Kr(8.57 s)	108.788(43.5), 506.592(19.1), 612.87(7.7)
588.28 17	0.087 5	⁷³ Se(39.8 m)	67.03(2.59), 253.70(2.356), 84.0(2.03)
588.28 6	0.052 14	¹³⁵ I(6.57 h)	1260.409(28.90), 1131.511(22.74), 1678.027(9.62)
588.3 2	0.60 8	⁹⁷ Rb(169.9 ms)	167.1(26), 585.2(21.0), 600.5(10.6)
588.3 2	4.86 8	¹⁰⁰ Rh(20.8 h)	539.59(78.4), 2376.1(35.3), 1553.4(21)
588.3 3	†0.7 2	¹²⁰ Cs(64 s)	322.4(†100), 473.5(†30), 553.4(†19.1)
588.3 1	0.099 25	¹²⁹ La(11.6 m)	278.6(25), 110.5(16.9), 457.0(8.0)
588.3 6	0.12 4	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
588.30 2	6.87 25	²⁰⁴ At(9.2 m)	684.341(95), 516.318(90), 426.253(67.5)
588.33 2	19.2 10	²⁰⁷ At(1.80 h)	814.41(44.5), 300.654(12.8), 467.12(7.1)

• $t_{1/2} > 1$ 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: $E_\gamma(I_\gamma)$
588.34 5	0.050 5	⁷¹ Zn(3.96 h)	386.28(93), 487.38(62), 620.18(57)
588.4 2	†2.8 6	¹³¹ Ce(10.3 m)	169.42(†100), 414.25(†68), 119.18(†44)
588.4 4	0.07 4	¹³⁹ Sm(2.57 m)	273.7(37), 306.7(28.5), 596.3(8.0)
588.4 2	0.090 14	¹⁴² Ba(10.6 m)	255.300(20.5), 1204.3(14.23), 895.2(13.9)
588.5 2	0.23 4	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
588.5 3	0.0057 21	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
• 588.549 8	0.603 12	¹²⁹ Cs(32.06 h)	371.918(30.60), 411.490(22.31), 548.945(3.40)
588.565 50	0.0033 3	¹⁶⁵ Dy(2.334 h)	94.700(3.58), 361.68(0.84), 633.415(0.568)
• 588.5845 7	4.515 14	¹⁹² Ir(73.831 d)	316.50791(82.81), 468.07152(47.83), 308.45692(30.00)
588.5845 7	0.296 17	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
588.6 3	0.39 7	¹⁵⁹ Eu(18.1 m)	67.8(19), 78.6(9.1), 95.7(7.0)
588.6 2	†1.48 11	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
588.605 9	1.168 21	⁶¹ Cu(3.333 h)	282.956(12.2), 656.008(10.77), 67.412(4.23)
588.7 3	0.63 15	¹⁶⁰ Yb(4.8 m)	173.74(42.0), 215.78(20.2), 140.35(9.3)
588.7 10	0.8 3	¹⁸⁵ Ta(49.4 m)	177.59(25.7), 173.68(22.6), 65.86(3.9)
588.79 7	3.79 24	¹⁴¹ Cs(24.94 s)	48.53(7.90), 561.63(4.7), 1194.02(3.95)
588.8 1		¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
588.8	0.124 18	¹⁴¹ Ba(18.27 m)	190.328(46.0), 304.194(25.4), 276.948(23.4)
588.8 10	0.065 17	¹⁶³ Yb(11.05 m)	860.28(10.1), 63.62(6.5), 123.21(1.98)
588.825 18	56 2	¹³⁸ I(6.49 s)	875.23(9.2), 2262.19(3.86), 483.700(3.53)
588.825 18	900	¹³⁹ I(2.29 s)	483.700(†260), 875.23(†70), 1464.0(†4.9)
588.84 8	0.123 10	¹³⁸ Xe(14.08 m)	258.411(31.5), 434.562(20.3), 1768.26(16.7)
588.9 1	0.064 5	¹⁰⁷ Ru(3.75 m)	194.05(9.9), 847.93(5.3), 462.61(3.66)
588.9 1	0.18	¹¹³ Ag(68.7 s)	316.3(18), 392.3(11), 298.58(10)
589.0 3	2.0	⁶⁷ As(42.5 s)	122.7(19.2), 120.8(9.3), 243.6(7.8)
589.0 5	39 4	⁸⁰ Sr(106.3 m)	175.4(10.1), 553.4(6.9), 378.8(4.2)
589	>0.08	⁹⁹ Sr(0.269 s)	125.118(16.1), 536.12(14.0), 1198.12(9.2)
589.0 20	0.015 3	¹⁴⁵ Gd(23.0 m)	1757.9(34.2), 1880.6(32.6), 1041.8(9.9)
589.0 3	†16.4 24	¹⁴⁷ Ho(5.8 s)	189.1(†100), 883.9(†100), 486.7(†61)
589.0 1	†8.9 22	¹⁷⁷ Tm(85 s)	104.5(†11.1), 517.5(†22.2), 44.5(†10)
589.0 5	†1.50 20	¹⁸² Ir(15 m)	273.23(†100), 126.79(†77), 236.3(†21.0)
589.0 6	0.00075 18	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
• 589.0 6	†0.0037 12	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
• 589.00 10	0.0024 4	²⁴⁹ Cf(351 y)	388.16(66), 333.37(14.6), 252.80(2.50)
589.10 6	0.277 16	¹⁸⁷ Ir(10.5 h)	912.95(4.79), 427.12(4.12), 400.89(3.94)
589.1 2	0.379 11	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
589.12 20	0.104 13	¹⁶⁴ Yb(75.8 m)	40.928(1.147), 675.41(0.38), 390.6(0.31)
589.13 9	0.101 21	¹⁰³ Tc(54.2 s)	346.380(17.5), 136.079(16.6), 562.90(7.0)
589.13 11	0.069 11	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
589.135 23	0.122 4	¹⁸⁷ W(23.72 h)	685.774(27.3), 479.531(21.8), 72.001(11.14)
589.182 16	0.140 4	¹⁹⁴ Ir(19.15 h)	328.455(13.1), 293.545(2.55), 645.157(1.17)
• 589.182 16	0.246 18	¹⁹⁴ Au(38.02 h)	328.455(60), 293.545(10.2), 1468.91(6.3)
589.2 8	>0.08	²²⁸ Pa(22 h)	911.205(4.19), 463.005(1.250), 964.770(4.25)
589.21 28	0.24 5	¹⁵⁶ Ho(56 m)	266.35(54.7), 137.83(51), 366.25(10.73)
• 589.29 25	0.00101 25	⁹⁵ Tc(61 d)	204.117(63.25), 582.082(29.96), 835.149(26.63)
589.3 1	0.346 19	¹⁴⁶ Pr(24.15 m)	453.88(48.0), 1523.7(15.6), 735.72(7.5)
• 589.3 1	0.42 9	¹⁴⁶ Pm(5.53 y)	453.88(65), 735.72(22.5), 146.4(0.21)
• 589.35 4	0.046 5	¹⁴⁷ Nd(10.98 d)	91.105(28), 531.016(13.1), 319.411(1.95)
589.4 1	0.80 11	¹³⁹ Nd(29.7 m)	405.12(7), 1074.2(2.5), 669.0(1.52)
589.40 12	0.32 3	¹⁴⁴ Ba(11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
589.5 2	1.90 22	¹³⁹ Sm(2.57 m)	273.7(37), 306.7(28.5), 596.3(8.0)
589.5 5	†0.04 2	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
589.6 5	0.20 4	¹²⁵ Sn(9.52 m)	332.10(97.2), 1404.0(0.70), 1483.9(0.18)
589.61 3	0.326 15	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: $E_\gamma(I_\gamma)$
589.7 3	$\dagger 9.7$ 21	$^{109}\text{Tc}(0.87 \text{ s})$	194.6($\dagger 100$), 128.7($\dagger 51$), 96.2($\dagger 48$)
589.8 2	2.3 5	$^{122}\text{Cs}(4.5 \text{ m})$	331.1(94), 497.1(79), 638.5(63)
589.8 2	$\dagger 0.70$ 8	$^{129}\text{Ba}(2.17 \text{ h})$	182.30($\dagger 100$), 1459.1($\dagger 50.0$), 202.38($\dagger 33.7$)
589.8 4	0.084 6	$^{139}\text{Xe}(39.68 \text{ s})$	218.59(56), 296.53(21.7), 174.97(11.3)
589.9 6	0.0010 5	$^{141}\text{La}(3.92 \text{ h})$	1354.52(1.64), 1693.3(0.074), 2267.0(0.0413)
589.9 7	$\dagger 0.85$ 5	$^{148}\text{Tb}(60 \text{ m})$	784.430($\dagger 119.0$), 489.049($\dagger 28.0$), 1079.025($\dagger 16.2$)
589.9 1	0.0162 22	$^{176}\text{Ta}(8.09 \text{ h})$	1159.28(25), 88.34(12), 1224.93(6)
• 589.912 15	1.82 8	$^{165}\text{Tm}(30.06 \text{ h})$	242.917(35.5), 47.155(16.9), 297.369(12.71)
590.0 3	1.8 9	$^{118}\text{Cs}(14 \text{ s})$	337.4(100), 472.8(37.4), 586.6(15.4)
590.0 8	0.038 21	$^{135}\text{Ce}(17.7 \text{ h})$	265.56(41.8), 300.07(23.5), 606.76(18.8)
590.0 1	11.6 18	$^{141}\text{Gd}(24.5 \text{ s})$	351.1(89), 223.9(64), 574.9(51)
590.0 10	3.3 11	$^{181}\text{Lu}(3.5 \text{ m})$	652.5(22.0), 205.94(16.1), 574.9(15.4)
590.0	0.15	$^{185}\text{Ir}(14.4 \text{ h})$	254.4(13.3), 1828.8(10), 60.0(5.7)
• 590.0 7	0.084 8	$^{252}\text{Es}(471.7 \text{ d})$	52.33(0.55), 64.42(0.274), 418.5(0.220)
590.10 19	5.6 13	$^{101}\text{Mo}(14.61 \text{ m})$	191.92(19), 590.91(16.4), 1012.47(12.8)
590.1	0.45	$^{149}\text{Ho}(21.1 \text{ s})$	1090.7(74.8), 1073.2(6.37), 1583.6(4.48)
590.2 1	0.99 3	$^{200}\text{Po}(11.5 \text{ m})$	671.0(34.0), 617.7(19.7), 434.4(9.3)
590.238 20	67 4	$^{93}\text{Sr}(7.423 \text{ m})$	875.73(24.1), 888.13(21.8), 710.312(21.4)
590.24 2	0.072 8	$^{128}\text{Cs}(3.66 \text{ m})$	442.901(26.8), 526.557(2.41), 1140.079(1.168)
• 590.28 15	$\dagger 2.86 \times 10^4$ 20	$^{241}\text{Am}(432.2 \text{ y})$	59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$)
• 590.28		$^{241}\text{Am}(432.2 \text{ y})$	59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$)
590.3 2	0.053 4	$^{137}\text{Pr}(1.28 \text{ h})$	836.7(1.8), 433.9(1.28), 514.0(1.08)
590.3 1	0.11	$^{143}\text{Cs}(1.78 \text{ s})$	195.554(13), 232.421(8.32), 306.424(6.80)
590.3 10	0.036 10	$^{234}\text{Pa}(6.70 \text{ h})$	131.30(18), 946.00(13.4), 883.24(9.6)
590.40 8	3.24 18	$^{101}\text{Sr}(118 \text{ ms})$	128.34(18.0), 1124.82(10.9), 510.73(8.5)
590.4 3	$\dagger 1.8$ 4	$^{103}\text{Nb}(1.5 \text{ s})$	102.64($\dagger 100$), 641.1($\dagger 55$), 538.5($\dagger 34.0$)
590.4 3	0.075 25	$^{105}\text{Mo}(35.6 \text{ s})$	85.4(25.0), 76.50(19.3), 147.8(14.8)
590.4 3	1.57 18	$^{120}\text{Xe}(40 \text{ m})$	25.1(30), 72.6(9), 178.1(6.8)
590.41 26	0.131 16	$^{136}\text{Pr}(13.1 \text{ m})$	552.16(76), 539.75(52), 1092.3(18.5)
590.44 6	12.06 19	$^{101}\text{Pd}(8.47 \text{ h})$	296.29(19), 269.67(6.43), 24.46(3.90)
590.44 5	0.117 5	$^{105}\text{Cd}(55.5 \text{ m})$	961.84(4.69), 346.870(4.20), 1302.459(3.98)
• 590.5 1	0.025 8	$^{71}\text{As}(65.28 \text{ h})$	174.954(82.00), 1095.490(4.08), 499.876(3.624)
590.6 2	11.0 16	$^{118}\text{Cs}(14 \text{ s})$	337.4(100), 472.8(37.4), 586.6(15.4)
• 590.67 15	0.0232 22	$^{166}\text{Ho}(1.20 \times 10^3 \text{ y})$	184.410(72.6), 810.276(58.08), 711.683(55.32)
590.7 5	2.02 22	$^{97}\text{Pd}(3.10 \text{ m})$	265.26(56), 475.2(26.7), 792.70(13.8)
590.7 1	0.310 14	$^{142}\text{Ba}(10.6 \text{ m})$	255.300(20.5), 1204.3(14.23), 895.2(13.9)
• 590.701 12	0.70 4	$^{169}\text{Lu}(34.06 \text{ h})$	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
590.8 2	0.34 17	$^{143}\text{Gd}(112 \text{ s})$	271.94(84), 588.00(15.7), 798.89(10.7)
590.8 2	0.19	$^{145}\text{Ba}(4.31 \text{ s})$	96.6(17), 91.9(7), 65.9(5)
590.8 7	0.253 22	$^{199}\text{Bi}(27 \text{ m})$	560.1(22.0), 424.85(22), 841.7(11)
590.83 5	5.7 4	$^{100}\text{Tc}(15.8 \text{ s})$	539.59(7), 1512.1(0.44), 822.6(0.068)
590.83 5	1.18 4	$^{100}\text{Rh}(20.8 \text{ h})$	539.59(78.4), 2376.1(35.3), 1553.4(21)
590.84 14	0.50 4	$^{187}\text{Au}(8.4 \text{ m})$	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
• 590.85 10	0.032 5	$^{150}\text{Eu}(35.8 \text{ y})$	333.971(96), 439.401(80.4), 584.274(52.6)
• 590.85 15	0.0363 13	$^{170}\text{Lu}(2.00 \text{ d})$	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
590.85	0.13	$^{203}\text{Bi}(11.76 \text{ h})$	820.3(30), 825.2(14.6), 896.9(13)
• 590.88 1	0.069 3	$^{149}\text{Pm}(53.08 \text{ h})$	285.95(3.1), 859.46(0.109), 22.510(>0.050)
• 590.88 1	0.000096 8	$^{149}\text{Eu}(93.1 \text{ d})$	327.526(4.03), 277.089(3.56), 22.510(2.32)
590.90 10	0.35 3	$^{98}\text{Nb}(51.3 \text{ m})$	787.374(93), 722.645(73.8), 1168.830(17.8)
590.9 4	0.0047 16	$^{167}\text{Yb}(17.5 \text{ m})$	113.34(55.3), 106.18(22.5), 176.25(21)
590.91 3	16.4 15	$^{101}\text{Mo}(14.61 \text{ m})$	191.92(19), 1012.47(12.8), 695.60(7.2)
• 590.96 20	0.00096 10	$^{153}\text{Sm}(46.27 \text{ h})$	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
591.0 4	0.42 16	$^{97}\text{Rb}(169.9 \text{ ms})$	167.1(26), 585.2(21.0), 600.5(10.6)
591.0 2	0.5	$^{145}\text{La}(24.8 \text{ s})$	70.0(11), 355.8(3.8), 118.2(3.6)

• $t_{1/2} > 1 \text{ d}$

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
591.0 3	0.25	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
591.09 11	0.39 13	¹³³ Sb(2.5 m)	1096.22(43.0), 817.8(18.5), 2755(12.5)
591.097 19	0.157 15	¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
591.1 6	0.07 3	¹³² I(2.295 h)	667.718(99), 772.60(75.6), 954.55(17.6)
591.17 11	†24 4	¹⁸¹ Pt(51 s)	289.29(†100), 111.97(†100), 230.15(†92)
591.20 3	9.4 8	⁵⁹ Mn(4.6 s)	726.7(42), 472.71(29.0), 570.81(24.8)
591.20 15	0.080 10	¹⁰⁵ Ru(4.44 h)	724.21(47), 469.37(17.5), 676.36(15.7)
• 591.2 4	0.025 12	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
591.24 10	0.22 3	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
591.243 48	0.94 9	⁹⁶ Nb(23.35 h)	778.224(96.45), 568.80(58.0), 459.88(26.62)
• 591.243 48	0.11 6	⁹⁶ Tc(4.28 d)	778.224(100), 849.929(98), 812.581(82)
591.30 5	8.2 5	¹²³ Ag(0.309 s)	263.87(35.9), 409.79(13.2), 116.41(7.58)
591.3 1	1.10 8	¹⁴² Gd(70.2 s)	750.2(11.2), 178.90(11.20), 284.4(6.16)
591.3 2	23 3	¹⁵⁰ Ho(72 s)	803.4(90), 653.3(15.3), 983(9)
591.32 8	0.72 3	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
591.36 7	1.19 5	⁹⁵ Ru(1.643 h)	336.43(70.2), 1096.76(21.0), 626.77(17.8)
591.4 5	†0.15 2	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
591.5 4	>0.35	¹³⁷ Pm(2.4 m)	177.5(40.29), 108.6(35), 233.6(29.57)
591.58 10	0.45 8	¹⁶² Yb(18.87 m)	163.35(40.0), 118.70(33.6), 576.10(3.24)
591.6 1	†4.6 6	¹⁷¹ Hf(12.1 h)	122.0(†100), 662.2(†83), 347.18(†47)
591.6 3	0.17 3	²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
591.612 15	0.027 7	¹⁸³ Os(13.0 h)	381.768(89.6), 114.463(20.63), 167.844(8.81)
591.62 8	0.139 20	²⁰² Bi(1.72 h)	960.67(99), 422.18(83.7), 657.49(60.6)
591.67 16	0.18 3	¹⁴⁴ Ba(11.5 s)	103.855(23.30), 430.48(18.3), 172.828(15.4)
• 591.677 7	0.29 5	²⁰⁰ Tl(26.1 h)	367.943(87), 1205.717(29.9), 579.298(13.8)
591.7 4	1.00 13	¹²⁸ La(5.0 m)	284.00(87), 479.24(54), 643.65(14.7)
591.7	0.45	¹⁴⁷ Ba(0.893 s)	167.4(11), 105.2(4.8), 196.1(4.8)
591.7	3.8	¹⁴⁹ Ho(58 s)	1034.6(99.7), 1736.4(28.0), 372.1(25.3)
591.75 14	0.169 13	¹⁴¹ Cs(24.94 s)	48.53(7.90), 561.63(4.7), 1194.02(3.95)
591.75 15	3.2 4	¹⁸⁴ Au(53.0 s)	162.97(50), 272.98(40), 362.47(17.5)
• 591.763 5	4.990 25	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
591.763 5	0.12 6	¹⁵⁴ Tb(9.4 h)	123.071(30), 247.925(22.1), 540.18(20)
591.8 5	0.020 6	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
591.8 8	0.04 3	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
• 591.8	0.044 5	²⁰⁶ Po(8.8 d)	1032.26(32.9), 511.36(24.1), 286.410(23.8)
591.8 5	†100	²²³ Rn(23.2 m)	635.2(†76), 416.0(†55), 654.0(†44)
591.86 8	0.32 10	¹⁸⁶ Ir(16.64 h)	296.911(64.0), 137.155(42), 434.849(34.4)
591.9 3	0.29 10	¹¹⁷ Ag(5.34 s)	135.4(48), 386.8(39.9), 298.1(21.1)
591.9 3	0.10 5	¹²⁷ In(1.09 s)	1597.7(49), 646.1(6.2), 805.1(5.6)
591.9 1	0.039 9	²¹⁰ Rn(2.4 h)	458.25(1.7), 648.70(0.843), 570.95(0.840)
591.94 13	0.36 5	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
591.96 20	0.7 3	¹⁸¹ Os(105 m)	238.75(44), 826.77(20), 118.03(12.9)
592 1		¹²⁸ Pr(3.1 s)	550.6, 873, 799
592.0 3	0.23 7	¹⁵⁹ Er(36 m)	624.5(33), 649.1(23.4), 205.92(9.7)
592.0 1	61 3	¹⁸⁸ Tl(71 s)	412.7(88), 504.2(23.3), 772.3(11.9)
592.0 1	0.10 4	¹⁹⁹ Tl(7.42 h)	455.46(12.4), 208.20597(12.3), 247.26(9.3)
592.0 3		²¹⁹ Ra(10 ms)	805.2, 489, 315.82
• 592.074 4	1.318 23	¹⁸⁵ Os(93.6 d)	646.116(78.0), 874.813(6.29), 880.523(5.17)
592.10 9	0.105 23	¹⁰³ Tc(54.2 s)	346.380(17.5), 136.079(16.6), 562.90(7.0)
592.1 4	0.40 8	¹³⁰ La(8.7 m)	357.4(81.0), 550.7(25.9), 908.0(17.0)
592.1 4	75 4	¹⁷⁹ Yb(8.0 m)	612.3(35.4), 381.4(9.6), 653.7(9.2)
• 592.137 7	0.0196 20	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
592.19 15	3.9 8	¹²² In(10.8 s)	1140.55(100), 1001.58(98.4), 103.74(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: $E_{\gamma}(I_{\gamma})$
592.2 1	0.143 11	¹⁰⁷ Ru(3.75 m)	194.05(9.9), 847.93(5.3), 462.61(3.66)
592.2	>0.015	²⁴⁸ Bk(23.7 h)	550.7(5.0), 41.53
592.22 5	0.0325 17	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
592.3 4	2.06 19	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
592.3 1	0.261 23	²¹¹ Rn(14.6 h)	674.1(45), 1362.9(32.5), 678.4(28.9)
592.30 15	0.0030 6	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
592.4 5	1.9 10	¹²⁰ In(46.2 s)	1171.3(96), 1023.1(55), 863.7(32.5)
• 592.4 2	0.041 9	¹²⁴ I(4.18 d)	602.730(60), 1690.980(10.41), 722.786(9.98)
592.4 2	0.027 9	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
592.5 3	1.24	¹⁵⁴ Pm(2.68 m)	184.810(32), 81.99(15.4), 546.66(14.5)
592.577 38	0.0165 12	¹³⁴ La(6.45 m)	604.699(5.05), 1554.934(0.414), 563.227(0.359)
592.59 10	1.20 13	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
592.6 2	†29 1	¹³⁹ I(2.29 s)	527.7(†100), 571.2(†98), 536.6(†67)
• 592.60 10	0.034 7	¹⁵⁶ Tb(5.35 d)	534.318(66.6), 199.2132(40.9), 1222.36(31.00)
592.6 1	3.7 4	¹⁶¹ Er(3.21 h)	826.6(3.0), 211.15(12.2), 314.77(2.49)
592.7 3	†7 2	¹³⁶ Eu(3.3 s)	254.9(†100), 431.4(†34), 458.0(†20)
592.73 6	3.0 3	¹⁰⁶ In(6.2 m)	632.66(100), 861.16(92), 997.87(48)
• 592.83 3	0.353 7	¹⁴⁸ Pm(5.370 d)	1465.12(22), 550.284(22.00), 914.85(11.46)
592.9 8	1.2 4	⁹⁰ Tc(49.2 s)	1054.3(100), 948.1(100), 944.7(36.6)
592.9 4	0.128 10	¹¹⁴ Sb(3.49 m)	1299.90(99), 887.60(17.4), 327.18(7.0)
592.9 7	0.32 10	¹²¹ Ag(0.78 s)	314.55(32.1), 353.43(19.9), 500.61(9.3)
592.9 3	†0.9 1	¹³⁸ Pm(3.24 m)	520.9(†100), 729.0(†37.8), 493.1(†21.6)
593		⁹² Br(0.343 s)	769(†100), 1446(†10), 1035(†6)
• 593.0 2	7.5 4	¹²⁶ Sb(12.46 d)	695.03(100), 666.331(100), 414.81(83.3)
593.0 2	0.17 3	¹³³ Te(12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
593.1 1	0.094 3	⁹¹ Sr(9.63 h)	1024.3(33), 749.8(23.61), 652.9(8.0)
593.1 2	30	¹⁰² In(24 s)	776.6(100), 861.1(96), 397.7(12)
593.1 3	0.33 7	¹³⁵ Pr(24 m)	296.12(24), 82.64(13.7), 213.45(13.0)
593.1 2	2.95 22	¹⁴¹ Eu(40.0 s)	394.0(9), 384.5(5.6), 382.9(2.97)
593.1 2	0.0120 6	²¹⁷ At(32.3 ms)	258.5(0.056), 334, 455
593.16 6	0.022 7	⁹⁵ Tc(20.0 h)	765.794(93.82), 1073.71(3.74), 947.67(1.951)
593.20 8	0.0066 17	¹⁷³ Hf(23.6 h)	123.672(83), 296.974(33.9), 139.634(12.7)
593.23 3	1.29 7	⁹¹ Rb(58.4 s)	93.628(33.7), 2564.19(12.5), 3599.67(10.4)
593.25 14	0.48 19	⁹⁶ Nb(23.35 h)	778.224(96.45), 568.80(58.0), 459.88(26.62)
593.3 5	0.025 6	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
593.3 2	†15.8 7	²⁰¹ Po(15.3 m)	890.1(†100), 240.1(†71.0), 904.2(†54.8)
• 593.31 9	0.00225 19	¹²⁷ Te(109 d)	57.61(0.50), 658.89(0.0122), 650.91(0.00028)
• 593.35 10	0.33 7	¹⁹⁴ Au(38.02 h)	328.455(60), 293.545(10.2), 1468.91(6.3)
• 593.37 5	0.0426 15	¹⁹² Ir(73.831 d)	316.50791(82.81), 468.07152(47.83), 308.45692(30.00)
593.37 5	0.783 23	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
593.390	11.26 8	⁴³ K(22.3 h)	372.760(87), 617.490(79.2), 396.861(11.85)
593.390	0.0022 7	⁴³ Sc(3.891 h)	372.760(23), 1931.3(0.0151), 1558.5(0.0084)
• 593.4 5		¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
593.41 10	0.73 4	⁸³ Se(22.3 m)	356.687(70), 510.17(43), 224.8(32.7)
593.46 24	0.35 3	⁹⁹ Nb(2.6 m)	97.785(7), 253.50(3.64), 2641.3(3.64)
593.5 2	0.06 4	⁶¹ Zn(89.1 s)	475.0(16.85), 1660.5(7.80), 970.0(2.57)
593.5 5	0.66 24	¹⁰¹ Zr(2.1 s)	119.3(10.8), 205.6(6.0), 912.2(3.48)
• 593.5 2	0.0101 20	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
593.5 5	0.33 4	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)
593.5 2	†12.1 12	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
593.7 3	†29.0 20	⁹⁴ Kr(0.20 s)	629.2(†100), 764.5(†71), 219.466(†67.4)
593.7 3	†2.0 8	¹⁵⁵ Nd(8.9 s)	180.574(†100), 418.99(†75), 955.08(†50)
593.7 5	0.28 8	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
593.7 6	0.034 17	²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
593.731 22	1.12 3	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
593.8 2	0.57 6	⁹⁶ Rh(9.90 m)	832.57(100), 685.49(95.7), 631.71(74.5)
593.8 3	†1.5 2	¹¹¹ Rh(11 s)	275.4(†100.0), 411.8(†9.42), 230.0(†8.9)
593.8 1	0.11 4	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
593.8 3	†16	¹⁷⁹ Os(6.5 m)	65.39(†100), 218.6(†17), 32.3(†17)
593.80 12	1.18 18	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
593.81 18	1.10 14	⁹³ Sr(7.423 m)	590.238(67), 875.73(24.1), 888.13(21.8)
593.990 20	27.4 8	⁹⁹ Zr(2.1 s)	469.140(55), 546.13(48.6), 461.70(11.0)
594.0 2	3.9 5	¹³⁵ Nd(12.4 m)	204.02(52), 41.43(23), 441.2(14.9)
594.02 5	0.081 5	¹³⁹ Cs(9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
• 594.06 8	0.096 12	¹⁸⁸ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
594.080 22	1.44 4	¹³¹ La(59 m)	108.081(25.0), 417.783(18.0), 365.162(16.9)
594.1 2	0.57 6	⁹⁶ Rh(9.90 m)	832.57(100), 685.49(95.7), 631.71(74.5)
594.1 3	†21 4	¹³⁴ Pr(11 m)	293.5(†100), 299.0(†100), 1196.8(†100)
594.1 3	†21 4	¹³⁴ Pr(17 m)	1964.1(†100), 1904.3(†100), 1579.9(†100)
594.1 2	13.6 18	¹⁵⁰ Tm(2.2 s)	1578.9(91), 474.5(86), 207.6(82)
594.2 3	0.54 6	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
594.2 1	0.50 5	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
• 594.2 1	0.0017 9	²²⁵ Ac(10.0 d)	99.91(1.01), 150.04(0.80), 99.63(0.62)
594.24 17	0.29 5	¹⁵⁷ Sm(482 s)	197.870(56.00), 196.461(16.8), 394.351(11.93)
594.291 19	0.0625 20	¹⁹⁴ Ir(19.15 h)	328.455(13.1), 293.545(2.55), 645.157(1.17)
• 594.291 19	0.12 3	¹⁹⁴ Au(38.02 h)	328.455(60), 293.545(10.2), 1468.91(6.3)
594.3 2	0.59 7	⁹² Ru(3.65 m)	213.81(96), 259.32(92), 134.57(65.5)
594.3 3	1.0 2	¹²⁸ Sb(9.01 h)	753.82(100), 743.22(100), 314.12(61)
594.3 3	3.3 5	¹²⁸ Sb(10.4 m)	753.82(96.4), 743.22(96), 314.12(89)
594.3 1	0.58 5	¹⁴³ Gd(112 s)	271.94(84), 588.00(15.7), 798.89(10.7)
594.40 5	0.028 3	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
• 594.409 15	0.563 7	¹⁶⁶ Ho(1.20×10 ³ y)	184.410(72.6), 810.276(58.08), 711.683(55.32)
594.409 15	3.46 8	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
594.50 5	0.346 17	¹²¹ I(2.12 h)	212.189(84), 532.08(6.07), 598.74(1.47)
594.5 1	0.020 5	¹²¹ I(2.12 h)	212.189(84), 532.08(6.07), 598.74(1.47)
• 594.5 4	>0.0021	¹⁴³ Ce(33.039 h)	293.266(42.80), 57.356(11.7), 664.571(5.69)
594.5 3	3.5 5	¹⁶⁶ Ta(34.4 s)	158.5(53), 311.8(28.2), 810.1(9.8)
594.5 2	0.29 4	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
594.5 3	0.32 5	²³⁶ Pa(9.1 m)	642.35(37.0), 687.59(9.9), 1762.7(6.0)
• 594.538 19	0.419 25	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
594.58 6	0.107 11	¹⁸⁹ Pt(10.87 h)	721.41(9.3), 94.33(7.6), 568.84(7.1)
594.6 5	0.09 6	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
• 594.6 3	0.031 12	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
594.6 8	†72	¹⁷⁸ Os(5.0 m)	968.7(†100), 1331.1(†94), 685.0(†65)
594.65 12	0.065 19	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
594.7 2	0.36 18	⁹⁷ Y(3.75 s)	3287.6(18.1), 3401.3(14.1), 1996.6(7.4)
594.7 2	1.4 7	⁹⁷ Y(1.17 s)	1103.0(92.6), 161.4(71.8), 1091(56)
594.70 6	0.084 9	¹³⁷ Xe(3.818 m)	455.490(31), 848.95(0.62), 1783.43(0.415)
594.7 2	0.41 5	¹⁴¹ Eu(40.0 s)	394.0(9), 384.5(5.6), 382.9(2.97)
594.74 15	2.33 20	¹²¹ Cd(13.5 s)	324.976(49.5), 1040.26(16.8), 349.937(12.9)
594.77 7	0.21 10	¹⁸³ Hf(1.067 h)	783.754(66), 73.174(38), 459.069(27)
594.8 1	0.006 6	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
• 594.80 3	0.265 17	¹⁴⁷ Nd(10.98 d)	91.105(28), 531.016(13.1), 319.411(1.95)
594.86 14	0.124 18	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
• 594.89 4	0.193 7	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
594.9 2	2.62 12	⁶⁹ Cu(2.85 m)	1007.5(23.4), 834.4(13.1), 531.2(6.0)
594.9 2	0.0124 22	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: $E_\gamma(I_\gamma)$
• 594.9		¹⁸⁵ Os(93.6 d)	646.116(78.0), 874.813(6.29), 880.523(5.17)
594.97 6	0.109 17	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
595 3		⁴⁶ K(105 s)	1346.0(100), 1228.7(6.4), 1675(3.5)
595.0 2	†1.6 3	¹³¹ Ce(5.0 m)	230.43(†100), 436.85(†7.3), 462.9(†6.9)
595.0 2	†4.7 5	¹⁶⁹ Ta(4.9 m)	511.0(†20.6), 28.80(†18.3), 192.4(†8)
595.013 11	0.057 7	¹³ B(17.36 ms)	3683.921(7.6), 3089.049(<0.7), 3853.170(<0.5)
595.03 5	0.37 6	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
595.06 7	39 2	⁸⁰ Y(35 s)	385.86(100), 1185.20(20), 756.53(13)
595.1 3	†1.0 1	¹⁰⁴ Nb(0.92 s)	192.2(†100), 368.4(†20), 620.2(†19.2)
595.1 5	0.47	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
595.2 5	16.8 17	⁷⁰ As(52.6 m)	1039.20(81), 1114.1(21.8), 668.3(21.8)
595.2 5	†30.5 18	⁷¹ Cu(19.5 s)	489.7(†100), 586.5(†30.2), 674.8(†25.4)
595.2	0.09 3	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
595.2	0.22 3	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
595.2 2	0.16	²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
595.24 15	0.301 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
595.29 16	†88 8	¹⁶⁴ Tm(2.0 m)	91.40(†1500), 1154.66(†366), 768.91(†279)
595.3 3	<0.5	⁷³ Br(3.4 m)	64.9(37.0), 336.0(10.4), 699.8(9.1)
595.3 1	0.050 6	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
595.35 5	0.238 17	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
595.362 20	11.2 6	¹³⁴ I(52.6 m)	847.025(95.4), 884.090(64.9), 1072.547(15.0)
• 595.380 20	0.0017 2	¹¹⁵ Cd(53.46 h)	336.240(45.9), 527.900(27.45), 492.3(8.03)
595.4 2	>0.00027	⁴⁹ Cr(42.3 m)	90.639(53.20), 152.928(30.32), 62.289(16.39)
595.40 20	†17.9 20	¹⁰⁶ Mo(8.4 s)	465.70(†100), 54.00(†54), 618.60(†25)
595.4 1	4.6 2	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
595.4 5	0.126 12	¹¹¹ Pd(5.5 h)	70.44(8.3), 391.25(5.4), 632.80(3.6)
595.4 3	†23.9 14	¹⁹⁴ Bi(92 s)	965.4(†100.0), 575.1(†98.0), 280.1(†73.7)
595.4 2	0.093 21	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
595.43 13	0.28 8	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
595.43 10	0.53 3	²⁰⁵ At(26.2 m)	719.30(31), 669.41(8.6), 628.88(5.6)
595.46 2	0.20	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
595.5 4	3.35 6	¹⁰³ In(65 s)	187.97(55), 720.32(13.9), 739.95(10.1)
595.5 3	1.0 2	¹³⁰ Sb(39.5 m)	793.53(100), 839.49(100), 331.05(78)
595.5 1	0.102 8	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
• 595.6 1	0.082 8	⁷¹ As(65.28 h)	174.954(82.00), 1095.490(4.08), 499.876(3.624)
• 595.6 4	0.099 21	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
595.6 7	0.37 5	¹⁷² Ta(36.8 m)	214.02(46), 95.23(17.5), 1109.27(12.4)
595.7 5	3.4 14	¹¹⁸ Pd(1.9 s)	125.4(34), 125.4(34), 224.2(20.1)
595.7 1	0.84 8	¹¹⁹ Ag(2.1 s)	626.4(13), 366.2(12.1), 399.1(10.9)
• 595.70 15	0.0314 9	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
595.8 3	0.152 10	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
595.8 1	0.109 11	²²⁸ Fr(39 s)	473.7(10.2), 474.0(7.6), 410.40(6.3)
• 595.8 3	0.015 3	²⁴¹ Cm(32.8 d)	471.805(71), 430.634(4.06), 132.413(3.86)
• 595.83 4	3.9×10 ⁻⁸ 20	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
595.84 15	0.13 2	¹²⁶ In(1.60 s)	1141.11(55.9), 3344.61(21.6), 969.61(14.9)
595.84 15	0.61 10	¹²⁶ In(1.64 s)	1141.11(100), 908.58(99), 111.79(88)
595.847 6	91	⁷⁴ Ga(8.12 m)	2353.46(44.5), 608.353(14.3), 867.898(8.7)
• 595.847 6	59 3	⁷⁴ As(17.77 d)	608.353(0.552), 1204.208(0.285), 887.19(0.0255)
595.87 13	0.22 3	⁹³ Rb(5.84 s)	432.61(17.4), 986.05(6.8), 213.429(6.7)
595.87 7	0.299 19	¹⁴⁶ La(6.27 s)	258.47(64), 924.58(7.45), 702.28(6.43)
595.9 1	0.45 9	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
595.9 3	0.22 3	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
595.90 10	0.34 3	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
595.9 2	†1.09 12	¹⁹² Tl(9.6 m)	422.8(†100), 634.8(†75.9), 786.3(†31.7)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
595.94 9	0.397 15	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
• 595.95 13	0.023 7	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
595.99 6	0.270 18	⁸⁹ Br(4.40 s)	1097.82(6.00), 997.93(4.26), 953.53(4.26)
596.0 3	0.023 6	⁸⁹ Rb(15.15 m)	1031.94(58), 1248.19(42.6), 2196.02(13.3)
596	†1.8	¹⁰⁷ Sn(2.90 m)	1129.2(†100), 678.5(†100), 1540.6(†30)
596.0	4.3 5	¹⁴⁷ Cs(0.225 s)	85.2(7.3), 245.8(4.5), 109.7(4.5)
596.0 4	0.32 7	¹⁵⁹ Eu(18.1 m)	67.8(19), 78.6(9.1), 95.7(7.0)
596 1	†0.23 14	¹⁶⁰ Ho(5.02 h)	728.18(†100), 879.383(†65.9), 962.317(†59.1)
596 1	>0.0017	¹⁷³ Hf(23.6 h)	123.672(83), 296.974(33.9), 139.634(12.7)
596.0 4		¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
596.0 8	0.011	²¹⁴ Bi(19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
596 1	0.00099 15	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
• 596 1	†0.0007 3	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
596.02 9	0.063 7	¹⁶⁸ Ho(2.99 m)	741.356(36.6), 821.164(34.5), 815.990(18.6)
596.1 3	1.7 4	¹⁵¹ Pr(18.90 s)	880.19(13), 189.057(11.8), 484.501(11.3)
596.14 7	27.9 19	⁷¹ Zn(3.96 h)	386.28(93), 487.38(62), 620.18(57)
596.15 13	1.31 15	⁹³ Sr(7.423 m)	590.238(67), 875.73(24.1), 888.13(21.8)
596.19 12	0.147 17	¹⁷⁴ Ta(1.05 h)	206.50(58), 91.00(16.0), 1205.92(4.9)
596.20 10	1.5 5	⁹⁹ Ag(124 s)	264.41(65), 832.29(13.5), 805.07(12.5)
596.2 4	0.026 10	¹³⁸ Cs(33.41 m)	1435.795(76.3), 462.796(30.7), 1009.78(29.8)
596.2	†3.2 2	²⁰³ At(7.4 m)	639.4(†100), 641.5(†55.8), 738.1(†38.4)
596.2 1	0.18 18	²⁰⁹ At(5.41 h)	545.0(91), 781.9(83.5), 790.2(63.5)
596.2 1	0.47 18	²⁰⁹ At(5.41 h)	545.0(91), 781.9(83.5), 790.2(63.5)
596.22 12	0.042 6	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
596.3 2	8.0 7	¹³⁹ Sm(2.57 m)	273.7(37), 306.7(28.5), 782.0(6.9)
596.3 2	0.50 5	¹⁴¹ Eu(40.0 s)	394.0(9), 384.5(5.6), 382.9(2.97)
596.4 1	0.92 15	⁹⁶ Sr(1.07 s)	122.297(76.50), 809.401(71.9), 931.7(11.8)
596.4 4	0.25 4	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
596.4 3	0.4	²⁰⁷ Hg(2.9 m)	351.059(77), 997.1(69), 1637.1(30)
• 596.41 15	0.026 6	¹⁸⁸ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
596.48 20	0.21 5	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
596.5 10	0.09 3	¹²² In(10.3 s)	1140.55(98), 1001.58(50.7), 1190.58(20.5)
• 596.5 3	0.0016 5	¹³¹ Ba(11.50 d)	496.326(47), 123.805(28.97), 216.078(19.66)
• 596.53 4	0.053 10	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
• 596.53 4	0.021 12	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
596.56 13	26	⁶² Zn(9.186 h)	40.84(25.5), 548.35(15.3), 507.60(14.8)
596.6 7	0.165 22	¹⁹⁹ Bi(27 m)	560.1(22.0), 424.85(22), 841.7(11)
596.64 8	0.47 3	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
596.7 1	10.1 14	¹²³ Cs(5.94 m)	97.3(23), 83.3(4.1), 307.0(3.9)
• 596.72 15	0.0121 13	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
596.73 10	0.36 9	²⁰⁴ At(9.2 m)	684.341(95), 516.318(90), 426.253(67.5)
• 596.75 15	0.064 14	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
596.76 21	0.071 16	²²⁷ Fr(2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)
596.77 10	1.57 6	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)
596.78 8	†5.30 10	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
596.8 2	†2.4 8	¹⁸⁵ Pt(33.0 m)	229.60(†100), 135.3(†80), 197.4(†74)
596.8 2	1.00 11	¹⁹⁸ Tl(5.3 h)	411.8044(82), 675.8874(11), 636.4(10.1)
596.85 12	1.41 24	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
596.9 1	†3.0 3	¹²³ La(17 s)	92.5(†100), 937.3(†43), 153.6(†43)
596.9 1		²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
596.9 1	0.196 21	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
• 596.941 20	0.040 7	¹⁵⁶ Tb(5.35 d)	534.318(66.6), 199.2132(40.9), 1222.36(31.00)
• 597.0 2	0.066 25	¹³¹ Te(30 h)	773.67(49.9), 852.21(27.0), 793.75(18.10)

• $t_{1/2} > 1$ d

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
597.0 3	0.17	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
597.0 4		¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
597.0 10	0.80 17	¹⁹¹ Hg(50.8 m)	252.5(57), 420.1(18.6), 578.6(17.6)
597.0 3	0.146 17	²³⁸ Am(98 m)	962.77(28), 918.69(23.0), 561.11(10.9)
597.10 15	0.030 7	¹⁰⁵ Ru(4.44 h)	724.21(47), 469.37(17.5), 676.36(15.7)
597.1 1	0.032 11	¹⁰⁷ Ru(3.75 m)	194.05(9.9), 847.93(5.3), 462.61(3.66)
597.1 1	0.057 5	¹⁴¹ Pm(20.90 m)	1223.26(4.74), 886.22(2.44), 193.68(1.61)
597.12 20	0.093 19	¹⁵⁸ Tm(3.98 m)	192.13(62), 335.10(16.8), 1149.83(7.6)
597.14 4	0.25 3	⁶⁶ Ge(2.26 h)	43.89(28.7), 381.85(28), 272.97(10.4)
597.16 22	0.059 13	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
597.19 30	0.049 10	¹⁶⁵ Yb(9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
597.2 3	0.15 6	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
597.2 4	0.51 9	¹⁴⁴ La(40.8 s)	397.440(94.3), 541.20(39.2), 844.8(22.3)
597.2 4	0.59 12	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
597.2 15		¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
597.2 1	0.21	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
597.25 21	0.445 23	⁷⁷ Rb(3.75 m)	66.52(57), 178.99(22.2), 393.37(9.7)
597.27 6	0.0078 4	¹⁰⁷ Cd(6.50 h)	93.124(1.45), 828.93(0.17), 796.462(0.0665)
597.3 5	0.11 5	¹⁰⁹ Rh(80 s)	326.868(54), 426.135(7.7), 178.034(7.6)
597.3 2	†8.5 9	¹⁵³ Yb(4.2 s)	547.4(†100), 674.1(†61), 369.6(†32)
597.34 20	0.13	¹¹⁷ Cd(3.36 h)	1997.33(26), 1065.98(23.1), 564.397(14.7)
597.36 14	0.38 3	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
597.4 5	1.33 14	⁸⁵ Se(31.7 s)	345.2(<0.23), 3396.6(7.4), 1427.2(7.0)
597.4 1	4.4 4	¹⁵¹ Er(0.58 s)	789.4(5.1), 297.2(3.7), 414.1(2.7)
597.4 6	0.14 11	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
597.40 7	11.7 3	²⁴⁰ Np(7.22 m)	554.60(20.9), 1496.9(1.33), 817.89(1.28)
• 597.40 7	0.005	²⁴⁰ Am(50.8 h)	987.76(73.2), 888.80(25.1), 98.860(1.5)
• 597.40 7	4.9×10 ⁻⁵	²⁴⁴ Cm(18.10 y)	42.824(.0044100), 98.860(.0001470), 152.63(<4.9×10 ⁻⁷)
597.48 2	0.28 6	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
• 597.48 8	†7.4×10 ⁴ 3	²⁴¹ Am(432.2 y)	59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸)
597.5 6	0.080 14	¹⁵⁷ Dy(8.14 h)	326.16(92), 182.20(1.84), 83.01(0.62)
597.5 3	†2.9×10 ² 14	¹⁵⁷ Ho(12.6 m)	279.97(†47600), 341.16(†37000), 193.41(†15200)
597.58 9	0.324 24	²⁰¹ Pb(9.33 h)	331.19(79), 361.27(9.9), 945.96(7.4)
597.6 3	0.014 14	¹¹⁷ Cd(2.49 h)	273.349(28), 1303.27(18.4), 344.459(17.9)
597.6 2	0.24 3	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
597.6 3	†4.9 9	¹⁶⁰ Tm(9.4 m)	125.8(†100), 728.5(†37), 264.1(†27)
597.6 3	0.26 6	¹⁶⁰ Tm(74.5 s)	264.1(9), 125.8(6.5), 375.8(2.4)
597.6 1	†24 3	²²⁷ Rn(22.5 s)	162.14(†100), 739.2(†65), 686.2(†62)
597.67 7	9.4 6	¹⁹⁰ Au(42.8 m)	295.78(71.0), 301.82(23.4), 2382.6(5.1)
• 597.7 1	0.079 9	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
• 597.7 1	0.009 8	¹⁷⁷ Ta(56.56 h)	112.9498(7.2), 208.3664(0.94), 1057.8(0.29)
597.7 4	0.0266 21	²³³ Np(36.2 m)	312.17(0.7), 298.89(0.44), 546.9(0.280)
• 597.73 2	0.0056 3	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
597.8 5	0.33	⁴⁵ Ar(21.48 s)	1020.04(34.0), 3703.2(33.3), 61.35(25.0)
597.8 3	2.00 20	⁷⁷ Zn(2.08 s)	189.49(28.1), 473.94(19.7), 1832.0(12.4)
597.8 2	2.82 18	¹⁰¹ Zr(2.1 s)	119.3(10.8), 205.6(6.0), 912.2(3.48)
597.8 2	0.36 4	¹³⁶ I(83.4 s)	1313.02(67), 1321.08(24.8), 2289.6(10.4)
597.8 8	0.079 8	¹⁴⁶ Pr(24.15 m)	453.88(48.0), 1523.7(15.6), 735.72(7.5)
597.8 3	0.25	¹⁸⁶ Ta(10.5 m)	197.93(50), 214.87(42.3), 510.82(37.5)
597.8 3	4.11 19	¹⁸⁶ Tl(27.5 s)	405.43(92), 402.72(45.9), 356.84(29.3)
597.9 3	0.52 7	¹¹⁹ Cd(2.69 m)	292.9(36.8), 343.0(16.9), 1609.7(10.9)
597.9 2	1.22 11	¹⁴¹ Eu(40.0 s)	394.0(9), 384.5(5.6), 382.9(2.97)
597.9 1	0.39 3	¹⁴⁵ Ce(3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)
597.9 2	†52 3	²⁰² Po(44.7 m)	688.6(†1000), 316.0(†286), 165.7(†174)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
• 597.98 3	1.67×10^{-6} 5	$^{239}\text{Pu}(24110 \text{ y})$	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
• 598.0 10	0.009 5	$^{151}\text{Pm}(28.40 \text{ h})$	340.08(23), 167.75(8.3), 275.21(6.8)
598.06 5	0.028 3	$^{149}\text{Nd}(1.728 \text{ h})$	211.309(25.9), 114.314(19.2), 270.166(10.7)
598.1 3	0.56 4	$^{88}\text{Nb}(7.8 \text{ m})$	1057.01(89.3), 1082.53(53.9), 399.41(45.7)
598.1 4	0.21 5	$^{172}\text{Ta}(36.8 \text{ m})$	214.02(46), 95.23(17.5), 1109.27(12.4)
• 598.1 3	0.0007 3	$^{193}\text{Os}(30.5 \text{ h})$	139.03(4.27), 460.50(3.95), 73.039(3.2)
598.12 3	0.253 13	$^{163}\text{Tm}(1.810 \text{ h})$	104.320(18.6), 69.229(11.6), 241.305(10.9)
598.13 6	0.21	$^{204}\text{Bi}(11.22 \text{ h})$	899.15(98), 374.72(82), 984.02(59)
598.14 20	0.29 6	$^{137}\text{Nd}(38.5 \text{ m})$	75.5(17.0), 580.6(13), 306.60(10.0)
• 598.15 20	0.062 12	$^{153}\text{Tb}(2.34 \text{ d})$	212.038(31.0), 170.504(6.8), 109.758(6.4)
• 598.15 15	0.0323 13	$^{170}\text{Lu}(2.00 \text{ d})$	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
598.17 18	0.0133 25	$^{139}\text{Cs}(9.27 \text{ m})$	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
598.2 2	0.60 6	$^{101}\text{Ag}(11.1 \text{ m})$	261.0(53), 588.0(10.0), 667.3(9.8)
598.2 2	1.1 3	$^{129}\text{Sn}(2.23 \text{ m})$	645.13(100), 80.5(6.6), 913.2(5.0)
598.2 1	0.077 7	$^{210}\text{Rn}(2.4 \text{ h})$	458.25(1.7), 648.70(0.843), 570.95(0.840)
• 598.22 2	0.0062 7	$^{154}\text{Eu}(8.593 \text{ y})$	123.071(40.79), 1274.436(35.19), 723.304(20.22)
598.22 2	1.41 14	$^{154}\text{Tb}(9.4 \text{ h})$	123.071(30), 247.925(22.1), 540.18(20)
598.22 2	0.73 10	$^{154}\text{Tb}(22.7 \text{ h})$	247.925(79), 346.643(69), 1419.81(46)
598.246 9	0.33 4	$^{75}\text{Br}(96.7 \text{ m})$	286.572(88), 141.3147(6.6), 427.883(4.4)
598.3 5	0.24 4	$^{107}\text{In}(32.4 \text{ m})$	204.97(47), 505.51(11.9), 320.92(10.2)
598.3 2	8.0 6	$^{190}\text{Pb}(1.2 \text{ m})$	942.20(34), 151.19(8.92), 142.2(7)
598.4 2	0.27 7	$^{146}\text{Ba}(2.22 \text{ s})$	140.7(20.2), 251.2(19.6), 121.2(14.2)
• 598.4 3	>0.0016	$^{153}\text{Sm}(46.27 \text{ h})$	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
• 598.42 15	0.00022 3	$^{149}\text{Pm}(53.08 \text{ h})$	285.95(3.1), 859.46(0.109), 590.88(0.069)
598.43 18	0.071 16	$^{227}\text{Fr}(2.47 \text{ m})$	90.035(39), 585.804(29.5), 64.267(14.5)
598.44 5	0.75 9	$^{98}\text{Rh}(8.7 \text{ m})$	652.43(94), 745.36(5.3), 1817.0(4.7)
598.44 5	4.6 5	$^{98}\text{Rh}(3.5 \text{ m})$	652.43(96), 745.36(78), 1144.52(8.5)
598.46 5	0.066 11	$^{118}\text{In}(4.45 \text{ m})$	1229.68(96), 1050.69(81.0), 683.08(54.3)
598.5 7	$\dagger 6$ 3	$^{112}\text{Te}(2.0 \text{ m})$	372.70($\dagger 100$), 296.20($\dagger 86$), 418.9($\dagger 57$)
598.5 2	$\dagger 11.8$ 12	$^{131}\text{Ce}(10.3 \text{ m})$	169.42($\dagger 100$), 414.25($\dagger 68$), 119.18($\dagger 44$)
598.54 5	0.117 9	$^{105}\text{Cd}(55.5 \text{ m})$	961.84(4.69), 346.870(4.20), 1302.459(3.98)
• 598.6 2	0.014 3	$^{105}\text{Ag}(41.29 \text{ d})$	344.520(41), 280.41(30.2), 644.55(11.1)
598.6	0.40	$^{147}\text{Ba}(0.893 \text{ s})$	167.4(11), 105.2(4.8), 196.1(4.8)
598.6 2	0.025 4	$^{176}\text{Ta}(8.09 \text{ h})$	1159.28(25), 88.34(12), 1224.93(6)
598.60 8	0.39 4	$^{182}\text{Re}(12.7 \text{ h})$	67.75001(38.2), 1121.3007(32), 1221.4066(24.8)
598.7 3	0.152 11	$^{194}\text{Pb}(12.0 \text{ m})$	581.82(18.8), 1519.45(16.4), 203.82(16.2)
• 598.72 2	0.093 4	$^{223}\text{Ra}(11.435 \text{ d})$	269.459(13.7), 154.21(5.62), 323.871(3.93)
598.74 5	1.47 6	$^{121}\text{I}(2.12 \text{ h})$	212.189(84), 532.08(6.07), 475.28(1.02)
598.764 19	2.10 4	$^{166}\text{Tm}(7.70 \text{ h})$	778.817(18.9), 2052.36(17.2), 184.410(16.1)
598.8 3	5.2 3	$^{96}\text{Pd}(122 \text{ s})$	124.70(65), 762.3(50.0), 499.7(17.9)
598.8 7	0.12 5	$^{103}\text{Cd}(7.3 \text{ m})$	1461.81(12), 1448.70(5.55), 1079.90(5.44)
598.8 2	2.1	$^{145}\text{Ba}(4.31 \text{ s})$	96.6(17), 91.9(7), 65.9(5)
598.8 3	0.12 3	$^{245}\text{Pu}(10.5 \text{ h})$	327.428(25.4), 560.13(5.4), 308.222(4.9)
598.9 2	0.41 16	$^{76}\text{Br}(16.2 \text{ h})$	559.101(74), 657.041(15.9), 1853.67(14.7)
• 598.94 4	0.0193 10	$^{149}\text{Gd}(9.28 \text{ d})$	149.735(48.2), 298.634(28.6), 346.651(23.9)
• 598.96 4	0.006 4	$^{154}\text{Eu}(8.593 \text{ y})$	123.071(40.79), 1274.436(35.19), 723.304(20.22)
• 598.974 6	0.0023 3	$^{155}\text{Tb}(5.32 \text{ d})$	86.545(32.0), 105.305(25), 180.103(7.45)
599.0 5	$\dagger 13.0$ 11	$^{103}\text{Mo}(67.5 \text{ s})$	83.4($\dagger 100$), 423.91($\dagger 69$), 45.8($\dagger 57$)
599 1		$^{207}\text{At}(1.80 \text{ h})$	814.41(44.5), 588.33(19.2), 300.654(12.8)
599.0 4	0.24 8	$^{207}\text{Rn}(9.25 \text{ m})$	344.53(46), 747.15(14.2), 402.68(11.9)
599.032 11	0.149 19	$^{180}\text{Re}(2.44 \text{ m})$	902.795(90), 103.557(22.2), 825.357(9.9)
• 599.1 7	0.008 3	$^{151}\text{Pm}(28.40 \text{ h})$	340.08(23), 167.75(8.3), 275.21(6.8)
599.1 4	0.047	$^{233}\text{Th}(22.3 \text{ m})$	86.477(2.7), 29.374(2.5), 459.222(1.4)
599.11 14	0.140 14	$^{187}\text{Au}(8.4 \text{ m})$	1331.81(7.0), 1408.23(3.06), 914.73(3.02)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
599.14 22	0.023 6	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
599.2 4	0.20 7	⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
599.2 3	0.26 3	¹⁶³ Yb(11.05 m)	860.28(10.1), 63.62(6.5), 123.21(1.98)
599.2 2	0.82 10	¹⁶⁷ Dy(6.20 m)	569.7(48), 259.33(27.9), 310.26(25.0)
599.2 3	0.32 5	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
599.22 15	0.10 4	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
599.3 5	>0.22	¹⁰⁹ In(4.2 h)	203.5(74), 623.7(5.5), 1148.9(4.3)
599.3 2		¹¹⁵ Pd(25 s)	342.71(8), 303.87(7), 396.56(6)
• 599.3 2	0.012 9	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
599.30 10	0.53 8	²⁰² Bi(1.72 h)	960.67(99), 422.18(83.7), 657.49(60.6)
599.3 1	1.90 13	²³⁰ Fr(19.1 s)	711.0(13.6), 129.1(11.0), 728.4(7.3)
599.35 25	0.54 5	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
• 599.35 10	0.0039 17	¹⁹² Ir(73.831 d)	316.50791(82.81), 468.07152(47.83), 308.45692(30.00)
599.4	0.267 23	¹⁴¹ Ba(18.27 m)	190.328(46.0), 304.194(25.4), 276.948(23.4)
599.4 3	0.37 4	¹⁸⁸ Hg(3.25 m)	66.7(63), 190.1(4.40), 82.7(2.6)
599.4 4	0.58 5	²⁰⁹ Rn(28.5 m)	408.32(50.3), 745.78(22.8), 337.45(14.5)
599.42 2	1.1	¹⁴⁷ La(4.015 s)	117.718(12), 186.320(6.48), 438.30(5.04)
• 599.5 3	0.013 8	⁸² Br(35.30 h)	776.517(83.5), 554.348(70.8), 619.106(43.4)
599.5 3	0.27 8	¹⁵⁹ Er(36 m)	624.5(33), 649.1(23.4), 205.92(9.7)
599.5 2	†9.1 12	¹⁹² Bi(37 s)	853.8(†100.0), 501.8(†80), 504.3(†39)
599.52 20	0.088 12	⁸⁹ Kr(3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
• 599.52 3	2.085 11	¹⁵⁶ Eu(15.19 d)	811.79(9.70), 88.9667(8.4), 1230.68(7.98)
599.57 30	0.049 10	¹⁶⁵ Yb(9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
• 599.6 5	0.0021 10	⁹⁹ Mo(65.94 h)	739.50(12.1), 181.063(6.08), 140.511(4.52)
599.60 10	13.9 3	¹⁰² Zr(2.9 s)	535.30(10.6), 64.50(8.9), 156.60(2.92)
599.6 1	10.7 18	¹⁴¹ Gd(24.5 s)	351.1(89), 223.9(64), 574.9(51)
599.6 7		¹⁸⁶ Ir(16.64 h)	296.911(64.0), 137.155(42), 434.849(34.4)
599.6 10	0.06 3	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
• 599.6 2	2.0×10 ⁻⁷ 2	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
• 599.62 4	0.280 22	¹⁸⁹ Re(24.3 h)	216.663(5.50), 219.395(4.54), 245.09(3.5)
599.66 5	0.36 3	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
599.66 4	1.78 6	¹⁹⁵ Hg(9.9 h)	779.80(7), 61.46(6.2), 585.13(1.99)
599.69 16	0.0026 9	¹²³ I(13.27 h)	158.97(83), 528.96(1.39), 440.02(0.428)
599.7 3	0.17 5	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
599.7 3	0.41 20	²⁰⁰ Po(11.5 m)	671.0(34.0), 617.7(19.7), 434.4(9.3)
599.7 1	0.24 3	²³⁶ Th(37.5 m)	110.8(4.2), 646.6(0.72), 196.0(0.69)
599.8	0.44	⁹⁶ Y(9.6 s)	1750.42(89), 915.0(60), 617.1(56)
599.8 1	1.841 20	¹⁴² Ba(10.6 m)	255.300(20.5), 1204.3(14.23), 895.2(13.9)
599.80 10	0.186 19	¹⁵⁸ Tm(3.98 m)	192.13(62), 335.10(16.8), 1149.83(7.6)
599.8 4	0.23 4	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
599.8 3	†7	¹⁷⁹ Os(6.5 m)	65.39(†100), 218.6(†17), 32.3(†17)
• 599.81 3	12.49 12	¹⁴⁸ Pm(41.29 d)	550.284(94.5), 629.987(89), 725.673(32.7)
• 599.81 3	0.344 7	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
599.82 9	2.62 15	²⁰⁵ Po(1.66 h)	872.39(37), 1001.21(28.8), 849.83(25.5)
599.85 6	0.028 8	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
• 599.86 4	0.138 19	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
• 599.862 19		¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
599.88 10	25.9 12	¹⁶¹ Yb(4.2 m)	78.20(34), 631.45(13.9), 569.73(5.7)
599.9 4	0.27 4	¹⁰⁰ Rh(20.8 h)	539.59(78.4), 2376.1(35.3), 1553.4(21)
600.0 2	†20 4	⁸⁴ Zr(25.9 m)	112.5(†100), 44.9(†48), 372.9(†41)
600.0 2	0.9 4	⁹⁸ Y(0.548 s)	1223.0(36.0), 2941.3(16.7), 1590.9(14.7)
600.0 4	4.1 5	⁹⁹ Y(1.470 s)	121.761(33), 724.30(14.9), 536.2(6.6)
600.0 10	0.063 18	⁹⁹ Rh(4.7 h)	340.71(70), 617.8(12.0), 1261.2(11)
600 1	3.1	¹²⁵ Cs(45 m)	526(24), 111.8(9), 412(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: $E_{\gamma}(I_{\gamma})$
600.0 6	0.13 3	$^{132}\text{I}(2.295 \text{ h})$	667.718(99), 772.60(75.6), 954.55(17.6)
600.0 2	$\dagger 3.8 4$	$^{185}\text{Hg}(21.6 \text{ s})$	222.8($\dagger 100.0$), 258.7($\dagger 98$), 212.5($\dagger 58$)
600.0 5	0.008 3	$^{214}\text{Bi}(19.9 \text{ m})$	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
600.01 15	$\dagger 21.9 24$	$^{189}\text{Hg}(7.6 \text{ m})$	320.99($\dagger 100$), 78.21($\dagger 63$), 565.42($\dagger 48$)
600.1 3	0.80 20	$^{118}\text{Cs}(14 \text{ s})$	337.4(100), 472.8(37.4), 586.6(15.4)
600.1 1	0.13 3	$^{132}\text{I}(2.295 \text{ h})$	667.718(99), 772.60(75.6), 954.55(17.6)
600.1 1	14.0 7	$^{132}\text{I}(1.387 \text{ h})$	173.7(8.8), 614.0(2.5), 610.0(1.47)
• 600.16 5	$\dagger 0.39 1$	$^{52}\text{Mn}(5.591 \text{ d})$	1434.068($\dagger 100.0$), 935.538($\dagger 94.9$), 744.233($\dagger 90.6$)
600.2 3	4.4 4	$^{98}\text{Sr}(0.653 \text{ s})$	119.353(73), 444.628(39), 428.4(31)
600.2 3	0.54 4	$^{99}\text{Nb}(2.6 \text{ m})$	97.785(7), 253.50(3.64), 2641.3(3.64)
600.2 4	$\dagger 5 3$	$^{113}\text{Ru}(0.80 \text{ s})$	263.2($\dagger 100$), 211.7($\dagger 31.0$), 337.5($\dagger 27.9$)
600.2	0.64 23	$^{148}\text{Ba}(0.607 \text{ s})$	56.08(29.20), 133.53(3.88), 415.78(3.59)
600.2 4	0.0041 12	$^{167}\text{Yb}(17.5 \text{ m})$	113.34(55.3), 106.18(22.5), 176.25(21)
600.2 6	$\dagger 238 48$	$^{177}\text{Re}(14 \text{ m})$	196.85($\dagger 1200$), 79.65($\dagger 1010$), 84.3($\dagger 890$)
600.3	3.6	$^{144}\text{Tb}(4.25 \text{ s})$	743.0(12), 1001.6(7), 959.36(4.7)
600.3 3	0.25 4	$^{184}\text{Au}(53.0 \text{ s})$	162.97(50), 272.98(40), 362.47(17.5)
600.31 15	1.7 3	$^{123}\text{Ag}(0.309 \text{ s})$	263.87(35.9), 409.79(13.2), 591.30(8.2)
600.33 29	0.023 3	$^{73}\text{Se}(7.15 \text{ h})$	360.80(108), 67.03(78), 865.09(0.584)
600.4 5	$\dagger 267 67$	$^{157}\text{Ho}(12.6 \text{ m})$	279.97($\dagger 47600$), 341.16($\dagger 37000$), 193.41($\dagger 15200$)
600.4 5	0.055 16	$^{227}\text{Fr}(2.47 \text{ m})$	90.035(39), 585.804(29.5), 64.267(14.5)
600.44 15	0.086 10	$^{87}\text{Br}(55.60 \text{ s})$	1419.71(22.0), 1476.04(7.9), 1577.60(6.0)
600.5 2	10.6 4	$^{97}\text{Rb}(169.9 \text{ ms})$	167.1(26), 585.2(21.0), 520.0(6.3)
600.5 1	0.55 5	$^{100}\text{Nb}(1.5 \text{ s})$	535.60(45.7), 528.24(9.1), 159.547(8.8)
600.5 1	65.0 16	$^{100}\text{Nb}(2.99 \text{ s})$	535.60(97.0), 1280.6(23.8), 967.1(19.3)
600.5 4	10.5 6	$^{128}\text{La}(5.0 \text{ m})$	284.00(87), 479.24(54), 643.65(14.7)
• 600.5 1	62 3	$^{194}\text{Ir}(171 \text{ d})$	482.833(97), 328.455(93), 687.7(59)
600.5 7	1.7 5	$^{194}\text{Tl}(32.8 \text{ m})$	636.5(99), 428.0(99), 748.9(76)
600.57 6	18.4 9	$^{240}\text{Np}(61.9 \text{ m})$	566.34(25.3), 973.9(23.8), 895.8(13.6)
• 600.57 6	0.014 6	$^{240}\text{Am}(50.8 \text{ h})$	987.76(73.2), 888.80(25.1), 98.860(1.5)
600.6 6	>0.19	$^{97}\text{Zr}(16.91 \text{ h})$	743.36(93), 507.64(5.03), 1147.97(2.61)
• 600.600 4	17.86 5	$^{125}\text{Sb}(2.7582 \text{ y})$	427.875(30), 635.954(11.31), 463.365(10.493)
600.6 2	1.5 3	$^{129}\text{Sn}(2.23 \text{ m})$	645.13(100), 80.5(6.6), 913.2(5.0)
600.6 10	$\dagger 42$	$^{178}\text{Os}(5.0 \text{ m})$	968.7($\dagger 100$), 1331.1($\dagger 94$), 594.6($\dagger 72$)
• 600.607 8	0.001131 21	$^{169}\text{Yb}(32.026 \text{ d})$	63.12077(44.2), 197.95788(35.8), 177.21402(22.16)
600.64 10	0.65 9	$^{195}\text{Tl}(1.16 \text{ h})$	563.52(10.5), 884.47(10.0), 1363.88(8.4)
600.65 6	2.14 25	$^{193}\text{Hg}(11.8 \text{ h})$	257.97(61), 407.63(25), 573.25(14.2)
• 600.66 5	0.00049	$^{226}\text{Ra}(1600 \text{ y})$	186.10(3.50), 262.27(0.0049), 414.60(0.00030)
600.7 4	$\dagger 8.6 13$	$^{87}\text{Nb}(2.6 \text{ m})$	200.95($\dagger 100$), 470.63($\dagger 73$), 1066.8($\dagger 37$)
600.7 2	0.042 12	$^{103}\text{Tc}(54.2 \text{ s})$	346.380(17.5), 136.079(16.6), 562.90(7.0)
600.7 3	0.088 13	$^{121}\text{Xe}(40.1 \text{ m})$	252.7(13), 132.8(10.9), 445.2(7.7)
600.7 3	0.00060 15	$^{223}\text{Fr}(21.8 \text{ m})$	50.13(36.0), 79.72(9.1), 234.81(3.0)
600.7 2	0.082 25	$^{230}\text{Ac}(122 \text{ s})$	454.95(8), 508.20(5.15), 1243.9(3.50)
600.71 2	10.2 14	$^{118}\text{I}(13.7 \text{ m})$	605.71(86.0), 545.12(10.9), 1338.7(8.4)
600.71 2	92 6	$^{118}\text{I}(8.5 \text{ m})$	605.71(99), 614.42(65), 1257.7(24.2)
600.8 10	0.014	$^{150}\text{Pm}(2.68 \text{ h})$	333.971(68), 1324.51(17.5), 1165.739(15.8)
600.8 3	0.028 10	$^{151}\text{Nd}(12.44 \text{ m})$	116.80(43.4), 255.68(16.4), 1180.89(14.8)
600.8 1	0.202 11	$^{228}\text{Fr}(39 \text{ s})$	473.7(10.2), 474.0(7.6), 410.40(6.3)
600.9 5	0.27 5	$^{107}\text{In}(32.4 \text{ m})$	204.97(47), 505.51(11.9), 320.92(10.2)
600.91 21	0.020 5	$^{85}\text{Br}(2.90 \text{ m})$	802.41(2.56), 924.63(1.63), 919.06(0.65)
600.94 3	5.54 11	$^{72}\text{Ga}(14.10 \text{ h})$	834.01(96), 2201.69(25.9), 629.95(24.8)
• 600.94 3	0.315 8	$^{72}\text{As}(26.0 \text{ h})$	834.01(80), 629.95(7.92), 1463.95(1.107)
601 1	0.013 5	$^{111}\text{Sn}(35.3 \text{ m})$	1152.98(2.7), 1914.70(1.99), 761.97(1.48)
601.0 3	0.8	$^{111}\text{Sb}(75 \text{ s})$	154.48(71), 489.1(42), 1032.6(10.0)
601.0 2	$\dagger 0.60 10$	$^{129}\text{Ba}(2.17 \text{ h})$	182.30($\dagger 100$), 1459.1($\dagger 50.0$), 202.38($\dagger 33.7$)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
601.0 30	0.020 6	^{163}Yb (11.05 m)	860.28(10.1), 63.62(6.5), 123.21(1.98)
601.05 7	4.80	^{137}I (24.5 s)	1218.00(12.8), 1302.64(4.42), 1220.07(3.5)
601.05 7	1.1	^{138}I (6.49 s)	385.15(0.06)
• 601.09 20	0.028 7	^{188}Ir (41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
• 601.1 1	0.0031 9	^{225}Ac (10.0 d)	99.91(1.01), 150.04(0.80), 99.63(0.62)
• 601.1 1	0.0007	^{225}Ac (10.0 d)	99.91(1.01), 150.04(0.80), 99.63(0.62)
601.11 2	\dagger 10.8 22	^{120}I (81.0 m)	560.44(\dagger 137), 1523.0(\dagger 21.1), 640.85(\dagger 17.1)
601.11 2	87 9	^{120}I (53 m)	560.44(100), 614.62(67), 976(35)
601.16 8	\dagger 4.8 3	^{184}Ir (3.09 h)	263.97(\dagger 100), 119.80(\dagger 45), 390.38(\dagger 38)
601.17 7	2.99 17	^{106}Rh (131 m)	511.842(85), 1045.83(30.4), 717.24(28.9)
• 601.17 7	1.61 9	^{106}Ag (8.28 d)	511.842(88), 1045.83(29.6), 717.24(28.9)
601.2 2	\dagger 10.9 9	^{120}Cs (64 s)	322.4(\dagger 100), 473.5(\dagger 30), 553.4(\dagger 19.1)
601.2 2	\dagger 8.2 6	^{137}Te (2.49 s)	243.3(\dagger 100), 554.0(\dagger 34), 469.1(\dagger 21)
601.2 4	0.56 9	^{139}Nd (5.50 h)	113.94(40), 737.96(35), 982.2(26.4)
601.20 20	0.115 23	^{159}Tm (9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
601.2 2	\dagger 10 2	^{227}Rn (22.5 s)	162.14(\dagger 100), 739.2(\dagger 65), 686.2(\dagger 62)
• 601.201 15	0.0588 14	^{149}Gd (9.28 d)	149.735(48.2), 298.634(28.6), 346.651(23.9)
601.23 6	0.039 6	^{153}Dy (6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
601.3 2	1.01 7	^{129}La (11.6 m)	278.6(25), 110.5(16.9), 457.0(8.0)
601.3		^{154}Tm (3.30 s)	542.0, 625, 560.0
601.3	0.14	^{185}Ir (14.4 h)	254.4(13.3), 1828.8(10), 60.0(5.7)
601.40 20		^{106}In (6.2 m)	632.66(100), 861.16(92), 997.87(48)
601.4 4	2.98 14	^{146}Pr (24.15 m)	453.88(48.0), 1523.7(15.6), 735.72(7.5)
• 601.450 4	5.88 19	^{147}Eu (24.1 d)	197.299(27), 121.220(22.9), 677.516(9.8)
601.48 5	0.074 4	^{139}Cs (9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
601.48 18	0.50 25	^{186}Ta (10.5 m)	197.93(50), 214.87(42.3), 510.82(37.5)
601.5 4	0.32 16	^{130}La (8.7 m)	357.4(81.0), 550.7(25.9), 908.0(17.0)
601.5 2	0.127 17	^{133}Te (55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
601.5 2	\dagger 24 1	^{139}I (2.29 s)	527.7(\dagger 100), 571.2(\dagger 98), 536.6(\dagger 67)
601.5 1	0.443 15	^{143}Ba (14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
601.5 3	2.1	^{199}Po (4.13 m)	1002.19(19), 1034.3(16), 362.01(7)
601.551 8	0.015 6	^{200}Au (48.4 m)	367.943(19), 1225.479(10.7), 1262.950(3.12)
601.6 3	0.16 5	^{97}Rb (169.9 ms)	167.1(26), 585.2(21.0), 600.5(10.6)
601.6 1	0.050 13	^{143}Cs (1.78 s)	195.554(13), 232.421(8.32), 306.424(6.80)
• 601.6 2	\dagger 4.1 \times 10 ⁶	^{208}Po (2.898 y)	291.7(\dagger 9 \times 10 ⁰⁶), 570.4(\dagger 5 \times 10 ⁰⁶), 861.9(\dagger 2.8 \times 10 ⁰⁶)
601.7 2	0.279 17	^{94}Rb (2.702 s)	1309.1(87), 836.9(87.10), 1577.5(31.8)
601.73 13	0.129 18	^{183}Au (42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
601.75 3	0.342 23	^{132}La (4.8 h)	464.55(76), 567.14(15.7), 1909.91(9.0)
601.75 3	1.3 5	^{132}La (24.3 m)	464.55(22), 663.07(11.6), 285.6(7)
601.79 2		^{147}La (4.015 s)	117.718(12), 186.320(6.48), 438.30(5.04)
601.8 3	0.009	^{164}Yb (75.8 m)	40.928(1.147), 675.41(0.38), 390.6(0.31)
601.84 7	1.2 6	^{139}Xe (39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
601.88 6	7.62 11	^{148}La (1.05 s)	158.468(55.6), 989.85(9.3), 760.30(8.6)
601.9 2	\dagger 2.5 9	^{172}Ir (2.0 s)	227.8(\dagger 100.0), 378.4(\dagger 62.0), 448.4(\dagger 40.5)
601.95 8	0.60 5	^{202}Pb (3.53 h)	490.47(9.1), 459.72(8.6), 389.94(6.2)
602.0 5	0.22	^{125}Cd (0.57 s)	1027.53(25.8), 1173.16(25.1), 736.65(12.6)
602.039 3	4.187 21	^{131}Te (25.0 m)	149.716(69), 452.323(18.18), 1146.96(4.95)
• 602.039 3	0.40 15	^{131}Te (30 h)	773.67(49.9), 852.21(27.0), 793.75(18.10)
602.05 20	1.33 18	^{130}In (0.55 s)	1221.24(89), 774.37(46), 89.23(20.2)
602.1 5	0.092 20	^{115}Ag (20.0 m)	229.08(18), 212.80(4.4), 472.70(4.0)
602.1 2	0.017 6	^{133}Te (55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
602.1 4	0.63 5	^{167}Lu (51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
602.14 7	10	^{82}Y (9.5 s)	573.66(25), 737.35(2.3), 1175.58(1.0)
602.2 1	0.35 4	^{143}Cs (1.78 s)	195.554(13), 232.421(8.32), 306.424(6.80)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
602.2 2	0.88 7	¹⁵⁹ Eu(18.1 m)	67.8(19), 78.6(9.1), 95.7(7.0)
602.2 3	0.11	¹⁷⁰ Hf(16.01 h)	164.78(33), 620.7(23), 120.17(19)
602.345 27	71.1 21	¹⁴⁰ Cs(63.7 s)	908.25(11.6), 1200.25(6.39), 2330.50(4.99)
602.37 14	1.38 7	⁹⁷ Zr(16.91 h)	743.36(93), 507.64(5.03), 1147.97(2.61)
602.4	†3.5	¹³⁸ Eu(12.1 s)	346.6(†100), 544.2(†55), 685.4(†41)
602.4 2	0.043 21	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
602.4 5	†1.00 15	¹⁸² Ir(15 m)	273.23(†100), 126.79(†77), 236.3(†21.0)
• 602.5 4	0.0009 5	⁷⁶ As(26.32 h)	559.101(45), 657.041(6.2), 1216.104(3.42)
602.5 1	8.8 9	⁸⁴ Y(40 m)	793.3(99), 974.6(75), 1040.2(56)
602.5 1	0.0080 5	¹⁰⁹ Pd(13.7012 h)	88.04(1.171), 311.4(0.032), 647.3(0.024)
602.5 3	0.23 3	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
602.5	0.06	¹⁴⁷ Ba(0.893 s)	167.4(11), 105.2(4.8), 196.1(4.8)
602.5 2	0.119 20	²¹⁰ At(8.1 h)	1181.39(99.3), 245.31(79), 1483.39(46.5)
602.5 8	>0.06	²²⁸ Pa(22 h)	911.205(4.19), 463.005(1.250), 964.770(4.25)
602.54 13	0.0510 23	⁸¹ Rb(4.576 h)	190.38(64.0), 446.15(23.2), 510.31(5.3)
602.54 6	0.232 12	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
602.57 10	1.73 13	¹²¹ Ag(0.78 s)	314.55(32.1), 353.43(19.9), 500.61(9.3)
602.58 18	†2.1 4	¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†33)
602.6 4	0.18 3	⁹³ Rb(5.84 s)	432.61(17.4), 986.05(6.8), 213.429(6.7)
602.6 4	3.3 17	⁹⁹ Y(1.470 s)	121.761(33), 724.30(14.9), 536.2(6.6)
602.6 1	0.310 24	¹³⁷ Pr(1.28 h)	836.7(1.8), 433.9(1.28), 514.0(1.08)
602.6 4	0.10 5	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
602.6 3	0.154 14	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
602.6 1	0.54 3	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
• 602.62 3	0.029 9	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
• 602.62 3	0.30	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
602.67 24	0.25 4	¹⁵⁴ Tb(21.5 h)	123.071(26), 1274.436(10.5), 2187.10(9.9)
602.68 4	0.0047	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
• 602.688 9	0.0338 14	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
602.688 9	0.08 4	¹⁵⁴ Tb(9.4 h)	123.071(30), 247.925(22.1), 540.18(20)
602.688 9	0.25 4	¹⁵⁴ Tb(21.5 h)	123.071(26), 1274.436(10.5), 2187.10(9.9)
602.7 3	0.0664 16	⁶⁵ Ga(15.2 m)	115.09(54), 61.20(11.4), 153.0(8.9)
602.7	†1.05 10	¹³⁵ Pm(49 s)	198.5(†100), 207.2(†70), 463.5(†62)
602.7 2	†38.4 6	¹³⁶ Pm(107 s)	373.8(†100), 857.2(†23.4), 862.5(†19.0)
602.7 2	†17	¹³⁶ Pm(47 s)	373.8(†100), 862.5(†28), 488.7(†22)
602.7 2	12.3 3	¹³⁶ Pm(107 s)	373.8(15.0), 857.2(12.72), 814.7(30.9)
602.73 3	1.208 20	¹²³ Cd(2.10 s)	371.32(51), 1052.28(24.8), 1438.13(8.3)
• 602.730 3	97.8 3	¹²⁴ Sb(60.20 d)	1690.980(47.3), 722.786(10.76), 645.855(7.38)
602.730 3	25	¹²⁴ Sb(93 s)	645.855(25), 498.3(25), 1101.0(0.50)
• 602.730 3	60	¹²⁴ I(4.18 d)	1690.980(10.41), 722.786(9.98), 1509.49(2.989)
602.8 2	0.22 4	¹⁵⁰ Tb(3.48 h)	638.05(72), 496.3(14.8), 792.5(4.39)
602.8 3	†13	¹⁵⁴ Nd(25.9 s)	151.703(†800), 799.55(†600), 180.693(†510)
602.8 2	†4.1	²⁵⁶ Es(7.6 h)	861.8(†100), 231.1(†61), 172.6(†49)
602.837 7	0.13 4	¹⁷⁵ Tm(15.2 m)	514.868(65), 941.23(15), 363.942(12.7)
602.85 3	2.83 13	⁹¹ Rb(58.4 s)	93.628(33.7), 2564.19(12.5), 3599.67(10.4)
602.87 10	†15.0 15	¹³¹ Ce(10.3 m)	169.42(†100), 414.25(†68), 119.18(†44)
602.9 1	0.71 20	⁹⁹ Ag(124 s)	264.41(65), 832.29(13.5), 805.07(12.5)
602.9 3		¹⁴⁷ La(4.015 s)	117.718(12), 186.320(6.48), 438.30(5.04)
602.9 4	0.30 8	¹⁵⁴ Ho(11.76 m)	334.6(84), 412.4(15.0), 873.4(12.5)
602.91 7	0.46 4	¹⁷⁴ Ta(1.05 h)	206.50(58), 91.00(16.0), 1205.92(4.9)
602.95 9	0.44 4	¹⁰⁰ Sr(202 ms)	963.85(22.0), 898.50(18.9), 65.46(15.2)
602.95 10	0.024 4	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
602.97 22	†5.0 7	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
602.98 24	0.102 13	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)

• $t_{1/2} > 1$ d

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
603.0 3	0.063 13	⁸³ Y(7.08 m)	35.50(0.44), 882.1(6.30), 489.90(5.53)
603.0 4	0.0112 24	¹¹³ Sb(6.67 m)	497.96(80), 332.41(14.8), 88.25(2.7)
603.0 3	1.7 3	¹²⁸ Sb(9.01 h)	753.82(100), 743.22(100), 314.12(61)
• 603.0 6	0.011 3	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
• 603.060 10	0.0039 9	¹¹⁰ Ag(249.79 d)	657.7622(94.0), 884.685(72.2), 937.493(34.13)
603.060 10	0.078 20	¹¹⁰ In(69.1 m)	657.7622(98), 2129.53(2.13), 2211.49(1.76)
603.08 12	0.0268 18	¹⁵⁹ Ho(33.05 m)	121.012(36.2), 131.973(23.6), 309.594(17.2)
603.1 5	0.023 11	¹¹¹ Pd(23.4 m)	580.00(0.8), 70.44(0.78), 1459.0(0.56)
603.1 4	0.145 15	¹³⁹ Pm(4.15 m)	402.8(15), 463.1(4.1), 367.8(3.52)
603.15 3	5.2 9	¹⁸² Hf(61.5 m)	942.80(18.8), 799.64(9.4), 114.3152(6.2)
603.2 1	0.670 23	⁷⁹ Rb(22.9 m)	688.1(23), 182.77(19.2), 143.41(13.9)
603.2 1	0.17 4	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
603.21 13	0.042 10	⁸⁸ Kr(2.84 h)	2392.11(34.6), 196.301(25.98), 2195.842(13.18)
• 603.25 15	0.0008 5	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
603.26 6	4.42 13	¹¹⁵ Te(5.8 m)	723.569(30), 1380.58(23.0), 1326.83(22.7)
603.3 4	0.015 5	⁵¹ Mn(46.2 m)	749.07(0.26), 1148.01(0.078), 1164.40(0.076)
603.3 5	0.07 3	⁶¹ Fe(5.98 m)	1205.07(44), 1027.42(42.7), 297.90(22.2)
603.30 8	0.53 3	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
603.3	†2.8	¹⁴⁴ Gd(4.5 m)	333.3(†100), 2432.6(†94.8), 629.5(†32.4)
603.3 3	0.084 17	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
603.3 3	0.40 7	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
• 603.3 1	0.0022 11	²²⁵ Ac(10.0 d)	99.91(1.01), 150.04(0.80), 99.63(0.62)
603.35 11	0.0064 9	²⁴⁹ Cm(64.15 m)	634.31(1.5), 560.45(0.84), 368.76(0.35)
• 603.39 15	>0.0033	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
• 603.5 5	4.43 11	¹²⁷ Sb(3.85 d)	685.7(37), 473.0(25.7), 783.7(15.0)
603.5 3	0.61 3	¹³⁰ I(12.36 h)	536.09(99), 668.54(96), 739.48(82)
603.5 3	0.000204 16	¹³⁰ I(9.0 m)	536.09(16), 586.05(1.07), 1614.10(0.447)
603.5 1	37.0 4	¹³⁵ Te(19.0 s)	266.8(10.36), 870.3(7.73), 1133.3(1.74)
603.54 25	0.19	¹⁵⁴ Pm(1.73 m)	2057.76(17.1), 1393.9(14.4), 81.99(12.6)
603.57 5	0.0163 6	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
603.59 18	1.7 6	¹⁰² Ag(12.9 m)	556.52(91), 719.40(58), 1744.99(17.3)
603.6 1	0.23 9	¹⁵² Pm(7.52 m)	244.6989(78), 121.7824(45), 340.48(31.3)
603.70 6	1.09 6	⁷⁹ Ge(19.1 s)	109.58(21), 1505.85(9.2), 100.48(2.70)
603.7 4	0.59 12	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
603.76 8	0.052 4	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)
• 603.798 17	0.108 8	¹⁵⁶ Tb(5.35 d)	534.318(66.6), 199.2132(40.9), 1222.36(31.00)
603.8 1	0.197 8	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
603.8 5	0.36 7	²⁰⁷ At(1.80 h)	814.41(44.5), 588.33(19.2), 300.654(12.8)
603.806 9	0.011 4	¹⁵⁵ Sm(22.3 m)	104.3346(74.6), 245.771(3.7), 141.4428(1.98)
603.9	0.36	¹⁴⁷ Ce(56.4 s)	268.80(7), 92.9(4.7), 374.23(3.5)
603.9 6	†1.8	¹⁷⁷ Os(2.8 m)	84.7(†100), 125.4(†63), 195.8(†61)
604.00 5	1.34 7	¹⁰⁷ In(32.4 m)	204.97(47), 505.51(11.9), 320.92(10.2)
• 604.0 6	0.0081 22	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
604.0 4	0.20 5	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
604.04 2	0.304 8	⁹⁵ Tc(20.0 h)	765.794(93.82), 1073.71(3.74), 947.67(1.951)
604.07 14	1.20 6	¹⁴⁹ Pr(2.26 m)	138.447(11.0), 165.087(9.9), 108.520(9.5)
604.1 2	0.39 5	¹⁰⁴ Mo(60 s)	68.8(55), 69.7(17.8), 36.3(14)
604.11 12	9.2 5	¹⁰⁵ In(5.07 m)	131.37(41), 260.21(15.7), 668.23(7.8)
604.2 2	0.22	¹⁴⁰ Sm(14.82 m)	225.5(>10), 225.4(10), 140.0(5.0)
604.21 10	2.83 18	⁷⁴ Ga(8.12 m)	595.847(91), 2353.46(44.5), 608.353(14.3)
604.22 6	0.049 3	¹³⁹ Cs(9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
604.3 2	0.55 5	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
604.3 2	0.418 20	¹⁴² Ba(10.6 m)	255.300(20.5), 1204.3(14.23), 895.2(13.9)
604.3 4	0.79 16	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: $E_\gamma(I_\gamma)$
604.31 6	0.053 9	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
604.4 2	0.0030 12	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
• 604.4 1	0.022 3	¹⁷⁷ Ta(56.56 h)	112.9498(7.2), 208.3664(0.94), 1057.8(0.29)
• 604.41464 21.23 6		¹⁹² Ir(73.831 d)	316.50791(82.81), 468.07152(47.83), 308.45692(30.00)
604.41464 21.009 23		¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
604.5 10	>0.09	⁶¹ Zn(89.1 s)	475.0(16.85), 1660.5(7.80), 970.0(2.57)
604.5 3	0.22 7	⁷⁶ Br(16.2 h)	559.101(74), 657.041(15.9), 1853.67(14.7)
604.553 15	0.198 4	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
604.56 3	2.80 13	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
604.57 3	0.420 24	¹⁴⁷ Pr(13.4 m)	77.9921(15), 314.675(13.2), 641.380(10.0)
604.6 4	1.1 5	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
604.6 1	0.026	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
604.6 2	†1.70 21	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
• 604.6		¹⁹¹ Pt(2.9 d)	538.90(13.7), 409.44(8.0), 359.90(6.0)
604.6 3	0.052 21	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
• 604.65 19	0.031 14	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
• 604.699 15	97.56 32	¹³⁴ Cs(2.062 y)	795.845(85.44), 569.315(15.43), 801.932(8.73)
604.699 15	5.05 14	¹³⁴ La(6.45 m)	1554.934(0.414), 563.227(0.359), 1732.129(0.234)
604.7 2	0.49 6	⁹⁵ Rb(377.5 ms)	352.02(49), 204.02(15.1), 680.7(14.8)
604.7 2	†2.1	⁹⁶ Rb(0.199 s)	352.02(†700), 204.02(†200), 680.7(†121)
604.7 3	0.34 5	¹¹⁹ Ag(2.1 s)	626.4(13), 366.2(12.1), 399.1(10.9)
604.7 3	0.28 6	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
604.73 15	0.21 3	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
604.761 16	3.28 11	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
604.80 20	0.40 5	⁸⁸ Nb(7.8 m)	1057.01(89.3), 1082.53(53.9), 399.41(45.7)
604.8 3	0.32 4	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
604.9 3	0.37 6	¹⁰⁰ Rh(20.8 h)	539.59(78.4), 2376.1(35.3), 1553.4(21)
604.9 1	5.0 11	¹²⁹ Sn(6.9 m)	1161.31(56.0), 1128.44(50), 760.8(16.8)
604.9 3	0.73 22	¹⁸⁰ Ir(1.5 m)	276.4(56), 132.2(38.1), 699.0(13.4)
605.0 5	0.0041 16	¹⁵² Eu(9.274 h)	841.586(14.6), 963.37(12.01), 121.7824(7.21)
605.0 5	14 1	¹⁶⁴ Ta(14.2 s)	211.05(74), 376.8(22), 862.0(10.0)
605.0 10	0.13 3	²⁰⁸ At(1.63 h)	686.527(98), 660.040(89), 177.595(48.6)
605.1 3	1.75 25	⁸⁴ Br(31.80 m)	881.610(42), 1897.761(14.7), 3927.5(6.8)
605.10 20	0.291 17	¹¹² Sb(51.4 s)	1257.05(96), 990.70(14.3), 670.0(3.7)
605.1 2	†3.6 3	¹²⁰ Cs(64 s)	322.4(†100), 473.5(†30), 553.4(†19.1)
605.11 4	1.27 6	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
• 605.13 9	0.081 4	²³⁸ Np(2.117 d)	984.45(27.8), 1028.54(20.3), 1025.87(9.6)
605.13 9	7.6 5	²³⁸ Am(98 m)	962.77(28), 918.69(23.0), 561.11(10.9)
• 605.13 9	0.00011 3	²⁴² Cm(162.8 d)	44.08(0.0325), 101.90(0.0025), 157.42(0.0014)
605.2 6	0.71 18	¹⁰⁴ Tc(18.3 m)	358.0(89), 530.5(15.6), 535.1(14.7)
605.2 3		¹⁷⁰ Hf(16.01 h)	164.78(33), 620.7(23), 120.17(19)
605.2 2	†23 3	²²⁹ Ac(62.7 m)	164.522(†100), 569.1(†91), 261.92(†39)
605.21 12	1.50 4	¹⁹⁰ Au(42.8 m)	295.78(71.0), 301.82(23.4), 597.67(9.4)
605.24 5	16.3 9	¹⁹⁰ Re(3.1 m)	186.718(48.4), 557.972(28.2), 223.811(26.0)
605.24 5	14.9 10	¹⁹⁰ Re(3.2 h)	186.718(27.8), 557.972(14.3), 569.310(13.7)
• 605.24 5	39.9 14	¹⁹⁰ Ir(11.78 d)	186.718(52.4), 518.55(34.0), 557.972(30.1)
605.25 10	0.17	¹⁶⁴ Lu(3.14 m)	123.3(34.0), 740.52(12.2), 262.22(10.8)
605.28 6	1.02 6	¹⁴¹ Cs(24.94 s)	48.53(7.90), 561.63(4.7), 1194.02(3.95)
605.30 7	1.55 6	¹⁴³ Cs(1.78 s)	195.554(13), 232.421(8.32), 306.424(6.80)
605.3 4	0.24 5	¹⁵⁶ Ho(56 m)	266.35(54.7), 137.83(51), 366.25(10.73)
605.30 15	0.28 6	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
605.4 3	>0.029	¹¹⁰ In(69.1 m)	657.7622(98), 2129.53(2.13), 2211.49(1.76)
• 605.4 2	1.4	¹²⁶ Sb(12.46 d)	695.03(100), 666.331(100), 414.81(83.3)
605.40 5	0.56 4	²⁰⁰ Pb(21.5 h)	147.63(37.7), 257.17(4.46), 235.63(4.30)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
605.4 5	0.171 17	$^{209}\text{Rn}(28.5 \text{ m})$	408.32(50.3), 745.78(22.8), 337.45(14.5)
• 605.45 25	0.025 12	$^{153}\text{Tb}(2.34 \text{ d})$	212.038(31.0), 170.504(6.8), 109.758(6.4)
605.5 2	$\dagger 16.3 6$	$^{188}\text{Au}(8.84 \text{ m})$	265.63($\dagger 100$), 340.04($\dagger 23.9$), 405.49($\dagger 9.1$)
605.51 10	1.06 6	$^{121}\text{Ag}(0.78 \text{ s})$	314.55(32.1), 353.43(19.9), 500.61(9.3)
605.51 10	$\dagger 83$	$^{154}\text{Nd}(25.9 \text{ s})$	151.703($\dagger 800$), 799.55($\dagger 600$), 180.693($\dagger 510$)
605.54 18	0.50 8	$^{97}\text{Rh}(46.2 \text{ m})$	189.21(49), 2245.6(14), 421.55(12.7)
605.54 8		$^{223}\text{Rn}(23.2 \text{ m})$	591.8($\dagger 100$), 635.2($\dagger 76$), 416.0($\dagger 55$)
605.55 2	0.117 7	$^{131}\text{Te}(25.0 \text{ m})$	149.716(69), 452.323(18.18), 1146.96(4.95)
605.56 8	$\dagger 22.0 14$	$^{142}\text{Xe}(1.22 \text{ s})$	571.83($\dagger 100$), 657.05($\dagger 79$), 538.24($\dagger 77$)
605.6 2	0.092 16	$^{79}\text{Rb}(22.9 \text{ m})$	688.1(23), 182.77(19.2), 143.41(13.9)
605.6 3	5.2 5	$^{98}\text{Rb}(96 \text{ ms})$	144.224(73), 289.4(68), 3010.5(23.4)
• 605.6 2	0.017 3	$^{171}\text{Lu}(8.24 \text{ d})$	739.78(47.8), 19.394(13.7), 667.404(11.04)
605.7 4	0.50 6	$^{136}\text{Nd}(50.65 \text{ m})$	108.90(32), 40.2(18.9), 574.8(10.4)
605.7 2	$\dagger 3.8 4$	$^{185}\text{Hg}(21.6 \text{ s})$	222.8($\dagger 100.0$), 258.7($\dagger 98$), 212.5($\dagger 58$)
605.71 2	86.0 11	$^{118}\text{I}(13.7 \text{ m})$	545.12(10.9), 600.71(10.2), 1338.7(8.4)
605.71 2	99 6	$^{118}\text{I}(8.5 \text{ m})$	600.71(92), 614.42(65), 1257.7(24.2)
605.79 14	$\dagger 4.0 4$	$^{165}\text{Lu}(10.74 \text{ m})$	132.49($\dagger 100$), 120.60($\dagger 100$), 174.25($\dagger 47.0$)
605.8 2	0.012 3	$^{119}\text{I}(19.1 \text{ m})$	257.52(87), 635.86(2.69), 320.53(2.17)
605.8 3	0.027 9	$^{151}\text{Nd}(12.44 \text{ m})$	116.80(43.4), 255.68(16.4), 1180.89(14.8)
605.8 6	0.039 22	$^{199}\text{Pb}(90 \text{ m})$	366.90(44.2), 353.39(9.5), 1135.04(7.8)
605.9 6		$^{110}\text{Te}(18.6 \text{ s})$	894.8, 219.1, 107.5
605.9 2	0.94 11	$^{141}\text{Eu}(40.0 \text{ s})$	394.0(9), 384.5(5.6), 382.9(2.97)
605.9 2	0.14 5	$^{141}\text{Eu}(2.7 \text{ s})$	394.0(0.60), 882.9(0.54), 518.8(0.45)
• 605.9	0.024	$^{146}\text{Eu}(4.59 \text{ d})$	747.2(98), 633.03(43), 634.07(37)
• 605.9 5	0.0097 25	$^{151}\text{Pm}(28.40 \text{ h})$	340.08(23), 167.75(8.3), 275.21(6.8)
605.9 4	0.6 3	$^{198}\text{Pb}(2.40 \text{ h})$	290.3(36), 365.4(19), 173.4(18)
• 605.93 3	0.163 11	$^{165}\text{Tm}(30.06 \text{ h})$	242.917(35.5), 47.155(16.9), 297.369(12.71)
• 605.93 3	0.162 10	$^{165}\text{Tm}(30.06 \text{ h})$	242.917(35.5), 47.155(16.9), 297.369(12.71)
• 605.95 3	0.025 4	$^{205}\text{Bi}(15.31 \text{ d})$	1764.36(1.368), 703.44(31), 987.62(0.585)
606.0 4	0.31 5	$^{141}\text{Eu}(40.0 \text{ s})$	394.0(9), 384.5(5.6), 382.9(2.97)
606.0 3	0.40 4	$^{188}\text{Hg}(3.25 \text{ m})$	66.7(63), 190.1(4.40), 82.7(2.6)
606.0 10	$\dagger 1.0 4$	$^{198}\text{Tl}(1.87 \text{ h})$	636.4($\dagger 202$), 411.8044($\dagger 202$), 587.2($\dagger 185$)
606.0 7	0.209 22	$^{199}\text{Bi}(27 \text{ m})$	560.1(22.0), 424.85(22), 841.7(11)
606.02 15	0.56 3	$^{163}\text{Yb}(11.05 \text{ m})$	860.28(10.1), 63.62(6.5), 123.21(1.98)
606.05 8	1.2 3	$^{168}\text{Lu}(6.7 \text{ m})$	198.82(28), 979.22(20), 896.12(15)
• 606.09 10	8.12 20	$^{79}\text{Kr}(35.04 \text{ h})$	261.29(13), 397.54(9.3), 306.47(2.6)
606.1 2	$\dagger 6.6 16$	$^{105}\text{Nb}(2.95 \text{ s})$	94.8($\dagger 100$), 246.9($\dagger 79$), 309.9($\dagger 41.9$)
606.1 2	1.0	$^{145}\text{La}(24.8 \text{ s})$	70.0(11), 355.8(3.8), 118.2(3.6)
606.10 7	1.62 8	$^{240}\text{Np}(61.9 \text{ m})$	566.34(25.3), 973.9(23.8), 600.57(18.4)
606.10 7	0.67 7	$^{240}\text{Np}(7.22 \text{ m})$	554.60(20.9), 597.40(11.7), 1496.9(1.33)
• 606.10 7	0.070 8	$^{240}\text{Am}(50.8 \text{ h})$	987.76(73.2), 888.80(25.1), 98.860(1.5)
• 606.10 7	$7.3 \times 10^{-6} 10$	$^{244}\text{Cm}(18.10 \text{ y})$	42.824(.0044100), 98.860(.0001470), 152.63($< 4.9 \times 10^{-7}$)
606.17 12	1.71 24	$^{183}\text{Au}(42.0 \text{ s})$	161.18(9.4), 214.13(5.9), 313.08(5.0)
606.2 2	$\dagger 7.0 9$	$^{159}\text{Yb}(1.58 \text{ m})$	166.16($\dagger 500$), 177.12($\dagger 159$), 390.20($\dagger 113$)
606.24 25	0.049 8	$^{165}\text{Yb}(9.9 \text{ m})$	80.11(49), 68.86(9.1), 1090.28(4.4)
606.27 10	$\dagger 0.75 6$	$^{184}\text{Ir}(3.09 \text{ h})$	263.97($\dagger 100$), 119.80($\dagger 45$), 390.38($\dagger 38$)
606.3 4	0.08 3	$^{95}\text{Ru}(1.643 \text{ h})$	336.43(70.2), 1096.76(21.0), 626.77(17.8)
606.3 3	$\dagger 0.40 5$	$^{129}\text{Ba}(2.17 \text{ h})$	182.30($\dagger 100$), 1459.1($\dagger 50.0$), 202.38($\dagger 33.7$)
606.3	0.7	$^{147}\text{Ce}(56.4 \text{ s})$	268.80(7), 92.9(4.7), 374.23(3.5)
• 606.34 7	1.2	$^{82}\text{Br}(35.30 \text{ h})$	776.517(83.5), 554.348(70.8), 619.106(43.4)
606.34 7	2.01 6	$^{82}\text{Rb}(6.472 \text{ h})$	776.517(84), 554.348(62.4), 619.106(37.976)
606.4 2	0.119 7	$^{163}\text{Tm}(1.810 \text{ h})$	104.320(18.6), 69.229(11.6), 241.305(10.9)
606.42 6	0.0017 3	$^{145}\text{Pr}(5.984 \text{ h})$	748.278(0.5250), 675.795(0.514), 72.500(0.261)
606.425 20	3.30 17	$^{158}\text{Eu}(45.9 \text{ m})$	944.09(25), 977.131(13.6), 79.5104(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: $E_\gamma(I_\gamma)$
606.43 5	9.0 6	⁷⁵ Zn(10.2 s)	228.67(28.9), 432.29(20.2), 155.94(17.2)
606.49 12	3.1 3	¹¹² Ag(3.130 h)	617.27(43), 1387.67(5.4), 694.66(3.0)
606.49 12	1.111 19	¹¹² In(14.97 m)	617.27(4.6), 1253.43(0.218), 851.10(0.144)
606.5 8	0.25 6	⁷⁴ Kr(11.50 m)	89.65(31), 203.0(18.0), 296.67(9.9)
606.5 4	0.33 3	⁷⁷ Kr(74.4 m)	129.64(81), 146.59(37.3), 312.0(3.7)
606.52 10	0.67 10	¹²⁵ Cd(0.57 s)	1027.53(25.8), 1173.16(25.1), 736.65(12.6)
606.6 2	1.15 12	⁹⁶ Rb(0.199 s)	815.0(78.00), 692.0(8.0), 813.2(7.0)
606.6 2	0.1	⁹⁷ Rb(169.9 ms)	815.0(100), 692.0(16.5), 414.3(15.0)
606.6 2	†0.41 23	¹⁶⁰ Ho(5.02 h)	728.18(†100), 879.383(†65.9), 962.317(†59.1)
606.6 2	†10	²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
606.6 15	†2	²⁵⁶ Es(7.6 h)	861.8(†100), 231.1(†61), 172.6(†49)
606.66 5	0.0107 6	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
606.67 16	0.010 5	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
606.68 6	0.01 1	²⁸ Mg(20.91 h)	30.6383(95), 1342.27(52.6), 941.72(38.3)
606.7 3	1.48 11	⁹¹ Tc(3.3 m)	502.90(51.4), 927.60(3.79), 1328.40(2.55)
606.7 1	0.11 4	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
606.7	0.018 9	¹⁴⁹ Tb(4.118 h)	352.24(29.43), 164.98(26.4), 388.57(18.37)
606.7 2	†11.3 23	¹⁵⁵ Tm(21.6 s)	226.8(†100), 531.7(†20), 88.1(†17)
• 606.718 3	5.026 21	¹²⁵ Sb(2.7582 y)	427.875(30), 600.600(17.86), 635.954(11.31)
606.73 7	0.155 23	¹³² Ce(3.51 h)	182.11(77), 155.37(10.5), 216.83(4.95)
606.76 2	18.8 5	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 518.05(13.6)
606.8 3	0.21 4	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
606.8 2	1.95 17	¹²⁸ La(5.0 m)	284.00(87), 479.24(54), 643.65(14.7)
606.8 1	†3.9 4	¹⁷¹ Ta(23.3 m)	49.6(†100), 506.4(†54), 501.8(†22.6)
• 606.9 2	1.20×10^{-7} 12	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
606.91 15	1.2	¹⁸⁶ Au(10.7 m)	191.56(62), 298.67(25.4), 764.89(10.5)
607.0 3	0.11	¹¹³ Pd(93 s)	95.74(3.3), 643.7(3.0), 739.63(2.4)
607.0 3	0.6 4	¹⁵² Ho(49.5 s)	647.2(92), 613.8(88.4), 683.3(88)
607 1	0.85 11	¹⁶⁴ Tb(3.0 m)	168.838(25.4), 754.80(23.3), 215.07(21)
607.1 5	0.016 5	¹¹¹ Sn(35.3 m)	1152.98(2.7), 1914.70(1.99), 761.97(1.48)
607.1 2	0.046 23	¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
607.10 18	†2.7	¹⁸³ Hg(9.4 s)	60.5(†100), 159.91(†21), 172.70(†17)
• 607.141 18	0.49 5	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
607.17 18		¹⁸⁶ Au(10.7 m)	191.56(62), 298.67(25.4), 764.89(10.5)
607.20 5	3.53 17	⁷⁹ Ga(2.847 s)	464.79(24.2), 516.41(21.5), 1187.28(12.8)
607.220 20	3.74 3	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
607.3 8	0.17 11	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
• 607.324 29	0.167 5	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
607.33 11	1.72 15	¹⁴⁸ Ba(0.607 s)	56.08(29.20), 133.53(3.88), 415.78(3.59)
607.4 3	4.0 4	⁷⁰ As(52.6 m)	1039.20(81), 1114.1(21.8), 668.3(21.8)
607.4 1		¹¹⁵ Pd(25 s)	342.71(8), 303.87(7), 396.56(6)
607.4 3		¹¹⁶ Rh(0.9 s)	340.5(90), 639.4(52), 538.4(40)
• 607.5 4	0.025 12	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
607.5 3	6.1 5	¹⁸⁶ Tl(27.5 s)	405.43(92), 402.72(45.9), 356.84(29.3)
607.5 3	†7.1 7	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
607.5 4	0.0033 15	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
• 607.5 4	†0.0114 24	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
607.5 3	0.010 6	²³⁰ Ac(122 s)	454.95(8), 508.20(5.15), 1243.9(3.50)
• 607.5 3	0.049 22	²³⁰ Pa(17.4 d)	951.95(1.65), 918.48(8.2), 454.95(6.27)
607.54 6	2.6 10	¹⁸⁹ Pt(10.87 h)	721.41(9.3), 94.33(7.6), 568.84(7.1)
607.59 3	5.5 10	¹⁸⁹ Pt(10.87 h)	721.41(9.3), 94.33(7.6), 568.84(7.1)
607.59 5	0.0039 4	¹⁹⁴ Ir(19.15 h)	328.455(13.1), 293.545(2.55), 645.157(1.17)
• 607.59 5	0.288 18	¹⁹⁴ Au(38.02 h)	328.455(60), 293.545(10.2), 1468.91(6.3)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
607.6 3	0.032 11	$^{103}\text{Tc}(54.2 \text{ s})$	346.380(17.5), 136.079(16.6), 562.90(7.0)
607.6 2	$\dagger 7.7 \text{ 9}$	$^{131}\text{Ce}(10.3 \text{ m})$	169.42($\dagger 100$), 414.25($\dagger 68$), 119.18($\dagger 44$)
607.6 2	0.263 15	$^{143}\text{Eu}(2.63 \text{ m})$	1107.3(8), 1536.8(3.29), 1912.7(2.13)
607.64 15	8.3 9	$^{195}\text{Pb}(15.0 \text{ m})$	383.64(106.9), 394.21(44), 878.40(24.2)
607.68 5	2.28 24	$^{162}\text{Yb}(18.87 \text{ m})$	163.35(40.0), 118.70(33.6), 576.10(3.24)
607.69 13	0.20 6	$^{95}\text{Ru}(1.643 \text{ h})$	336.43(70.2), 1096.76(21.0), 626.77(17.8)
607.8 4	0.7 6	$^{105}\text{In}(5.07 \text{ m})$	131.37(41), 260.21(15.7), 604.11(9.2)
607.8 1	0.38 7	$^{146}\text{Ba}(2.22 \text{ s})$	140.7(20.2), 251.2(19.6), 121.2(14.2)
607.88 3	1.36 5	$^{81}\text{Sr}(22.3 \text{ m})$	153.54(33.8), 147.76(30.1), 443.34(17.5)
607.9 2	1.01 12	$^{141}\text{Sm}(22.6 \text{ m})$	196.88(74), 431.6(40.4), 777.6(20.3)
607.94 8	0.15 3	$^{78}\text{Rb}(17.66 \text{ m})$	454.97(63), 692.86(12.56), 562.15(11.41)
607.94 8	0.032 16	$^{78}\text{Rb}(5.74 \text{ m})$	454.97(81), 664.44(38.3), 1109.72(13.12)
608.02 4	2.07 24	$^{164}\text{Lu}(3.14 \text{ m})$	123.3(34.0), 740.52(12.2), 262.22(10.8)
608.05 10	2.24 24	$^{140}\text{Xe}(13.60 \text{ s})$	805.52(20), 1413.66(12.2), 1315.05(8.2)
608.1		$^{75}\text{Rb}(19.0 \text{ s})$	178.98(<63), 178.97(>51), 187.21(8.7)
608.1 4	0.11 5	$^{185}\text{Au}(4.25 \text{ m})$	310.6(13), 243.1(6.6), 77.7(6)
608.151 12	2.90 9	$^{135}\text{Xe}(9.14 \text{ h})$	249.770(90), 408.009(0.359), 158.260(0.290)
608.2 2	$\dagger 22.1 \text{ 17}$	$^{103}\text{Mo}(67.5 \text{ s})$	83.4($\dagger 100$), 423.91($\dagger 69$), 45.8($\dagger 57$)
608.2 3	0.022 8	$^{143}\text{Ba}(14.33 \text{ s})$	211.475(25), 798.79(15.6), 980.45(11.55)
608.2 8	0.11 5	$^{156}\text{Ho}(56 \text{ m})$	266.35(54.7), 137.83(51), 366.25(10.73)
608.2 5	$\dagger 1.4 \text{ 3}$	$^{164}\text{Hf}(111 \text{ s})$	122.1($\dagger 100$), 153.3($\dagger 47$), 313.7($\dagger 22$)
608.2 1	17.9 14	$^{192}\text{Pb}(3.5 \text{ m})$	1195.4(47), 167.5(13.6), 781.6(8.5)
608.2 8		$^{196}\text{Pb}(37 \text{ m})$	253.1(27.0), 502.1(26.5), 366.5(11.1)
608.27 25	$\dagger < 11$	$^{184}\text{Tl}(11 \text{ s})$	366.51($\dagger 100$), 286.80($\dagger 39$), 340.0($\dagger 25$)
608.29 10	2.01 15	$^{86}\text{Y}(14.74 \text{ h})$	1076.64(83), 627.72(32.6), 1153.01(30.5)
608.3 2	0.14	$^{140}\text{Sm}(14.82 \text{ m})$	225.5(>10), 225.4(10), 140.0(5.0)
608.3 3	0.33 6	$^{142}\text{Cs}(1.70 \text{ s})$	359.598(27.2), 1326.46(12.92), 966.89(9.0)
608.30 12	0.45 7	$^{183}\text{Au}(42.0 \text{ s})$	161.18(9.4), 214.13(5.9), 313.08(5.0)
608.3 10	0.0043 22	$^{219}\text{Rn}(3.96 \text{ s})$	271.23(10.8), 401.81(6.37), 130.59(0.119)
608.35 5	1.07 6	$^{101}\text{Mo}(14.61 \text{ m})$	191.92(19), 590.91(16.4), 1012.47(12.8)
608.353 5	14.3 7	$^{74}\text{Ga}(8.12 \text{ m})$	595.847(91), 2353.46(44.5), 867.898(8.7)
• 608.353 5	0.552 12	$^{74}\text{As}(17.77 \text{ d})$	595.847(59), 1204.208(0.285), 887.19(0.0255)
608.36 20		$^{191}\text{Au}(3.18 \text{ h})$	586.45(17), 277.88(7.2), 674.19(6.8)
608.4 1	0.400 24	$^{113}\text{Sb}(6.67 \text{ m})$	497.96(80), 332.41(14.8), 88.25(2.7)
608.40 8	3.7 4	$^{163}\text{Tb}(19.5 \text{ m})$	351.138(26), 389.734(24.3), 494.534(23)
608.4 4	0.037	$^{171}\text{Er}(7.516 \text{ h})$	308.31(64.4), 295.901(28.9), 111.621(20.5)
608.4 3	1.06 19	$^{178}\text{Re}(13.2 \text{ m})$	237.3(45), 105.9(23.0), 939.1(8.9)
608.5 5	2.4 8	$^{105}\text{Tc}(7.6 \text{ m})$	143.26(16), 107.945(14.1), 321.50(11.1)
608.5 5	0.41 8	$^{126}\text{Ba}(100 \text{ m})$	233.6(19.6), 257.6(7.6), 241.0(6.0)
608.5 9		$^{197}\text{Pb}(43 \text{ m})$	385.85(74), 387.72(25.1), 222.45(24.6)
• 608.527 16	0.451 14	$^{165}\text{Tm}(30.06 \text{ h})$	242.917(35.5), 47.155(16.9), 297.369(12.71)
608.55 11	0.258 12	$^{81}\text{Rb}(4.576 \text{ h})$	190.38(64.0), 446.15(23.2), 510.31(5.3)
608.6 1	1.18 9	$^{51}\text{Ti}(5.76 \text{ m})$	320.0842(93), 928.6(6.9)
608.6 3	2.5 3	$^{77}\text{Rb}(3.75 \text{ m})$	66.52(57), 178.99(22.2), 393.37(9.7)
608.60 14	0.119 17	$^{103}\text{Ag}(65.7 \text{ m})$	118.72(31.2), 148.193(28.3), 266.86(13.3)
608.6 5	$\dagger 6.2 \text{ 10}$	$^{113}\text{I}(6.6 \text{ s})$	462.5($\dagger 100$), 622.4($\dagger 74$), 351.5($\dagger 43$)
608.6 1	0.55 6	$^{140}\text{Eu}(1.51 \text{ s})$	530.7(29), 1068.0(3.2), 459.9(3.19)
608.69 17	0.0167 18	$^{159}\text{Ho}(33.05 \text{ m})$	121.012(36.2), 131.973(23.6), 309.594(17.2)
608.698 5	1.68 18	$^{75}\text{Br}(96.7 \text{ m})$	286.572(88), 141.3147(6.6), 427.883(4.4)
608.8 6	0.53 14	$^{117}\text{Ag}(5.34 \text{ s})$	135.4(48), 386.8(39.9), 298.1(21.1)
608.8 3	0.21	$^{170}\text{Hf}(16.01 \text{ h})$	164.78(33), 620.7(23), 120.17(19)
608.84 13	1.46 12	$^{156}\text{Tm}(83.8 \text{ s})$	344.55(86), 452.85(17.2), 585.93(14.6)
608.9 4	0.27 8	$^{161}\text{Tm}(33 \text{ m})$	45.54(5.00), 1648.1(9.50), 84.40(9.4)
• 608.9 2	$1.16 \times 10^{-7} \text{ 12}$	$^{239}\text{Pu}(24110 \text{ y})$	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
608.93 10	0.28 3	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
608.98 10	†8.6 5	¹⁶⁵ Lu(10.74 m)	132.49(†100), 120.60(†100), 174.25(†47.0)
609.0 1	0.31	⁴⁵ Ar(21.48 s)	1020.04(34.0), 3703.2(33.3), 61.35(25.0)
609.0 3	2.56 19	¹¹³ Rh(2.72 s)	189.7(17.0), 409.3(15.9), 219.6(3.88)
609.0	0.37 4	¹⁴¹ Ba(18.27 m)	190.328(46.0), 304.194(25.4), 276.948(23.4)
609.0 2	0.02	¹⁷¹ Er(7.516 h)	308.31(64.4), 295.901(28.9), 111.621(20.5)
609.0 3	0.086 13	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
609.0 4	0.10 5	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
• 609 1	0.0073 3	²³¹ Pa(32760 y)	27.36(10.3), 300.07(2.46), 302.65(2.2)
609.04 29	0.58 12	⁷⁷ Rb(3.75 m)	66.52(57), 178.99(22.2), 393.37(9.7)
609.1 3	1.3 3	⁸¹ Ge(7.6 s)	335.98(58.9), 792.94(34), 1495.53(19.9)
609.1 3	1.4 3	⁸¹ Ge(7.6 s)	93.10(26), 335.98(12.8), 197.30(12.3)
609.1 8	1.8	¹⁰¹ Cd(1.2 m)	98.0(47), 1722.5(11), 1259.3(8)
609.1 4	3.35 6	¹⁰³ In(65 s)	187.97(55), 720.32(13.9), 739.95(10.1)
609.1 1	8.2 5	¹²⁸ La(5.0 m)	284.00(87), 479.24(54), 643.65(14.7)
609.13 3	24.6 8	²⁰⁴ At(9.2 m)	684.341(95), 516.318(90), 426.253(67.5)
609.20 10	0.055 4	⁷³ Se(7.15 h)	360.80(108), 67.03(78), 865.09(0.584)
609.2 2	1.05 12	⁷⁴ Kr(11.50 m)	89.65(31), 203.0(18.0), 296.67(9.9)
609.2 2	†1.0 1	¹⁰⁴ Nb(0.92 s)	192.2(†100), 368.4(†20), 620.2(†19.2)
609.2 4	0.030	²⁴⁹ Es(102.2 m)	379.5(40.4), 813.2(9.2), 375.1(3.3)
• 609.22 10	0.0134 14	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
609.23 15	†16.2 24	¹⁵⁵ Nd(8.9 s)	180.574(†100), 418.99(†75), 955.08(†50)
• 609.25 10	0.047 5	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
609.25 9	0.076 11	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
609.27 17	1.5 4	¹⁸⁶ Au(10.7 m)	191.56(62), 298.67(25.4), 764.89(10.5)
609.3 5	1.1 4	¹¹³ Te(1.7 m)	814.4(22), 1018.1(13.0), 1181.0(12.3)
609.3 2	0.22 5	¹²⁹ La(11.6 m)	278.6(25), 110.5(16.9), 457.0(8.0)
609.3 2	0.76 5	¹⁴³ Gd(39 s)	258.81(75), 204.77(19.4), 463.7(9.9)
609.3 3	0.07 4	¹⁵⁰ Tb(3.48 h)	638.05(72), 496.3(14.8), 792.5(4.39)
609.3 5	†0.50 23	¹⁶⁰ Ho(5.02 h)	728.18(†100), 879.383(†65.9), 962.317(†59.1)
609.3 9	0.16 8	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
609.3 3	0.225 23	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
609.312 7	44.8 5	²¹⁴ Bi(19.9 m)	1764.494(15.36), 1120.287(14.80), 1238.110(5.86)
609.312 7	0.124 7	²¹⁸ Rn(35 ms)	
• 609.32 4	0.056 3	²²³ Ra(11.435 d)	269.459(13.7), 154.21(5.62), 323.871(3.93)
609.38 20	0.138 24	⁸⁹ Br(4.40 s)	1097.82(6.00), 997.93(4.26), 953.53(4.26)
609.38 4	0.043 7	²¹¹ Pb(36.1 m)	404.853(3.78), 832.01(3.52), 427.088(1.76)
609.4 2	2.3 8	¹⁰³ Zr(1.3 s)	248(100), 164.05(94), 126.30(84)
609.4 2	0.05 5	¹⁰⁷ Ru(3.75 m)	194.05(9.9), 847.93(5.3), 462.61(3.66)
• 609.4 1	0.182 20	¹³¹ Te(30 h)	773.67(49.9), 852.21(27.0), 793.75(18.10)
609.4 2	†5.5 16	¹³¹ Pr(1.53 m)	266.13(†100), 72.82(†64), 387.56(†38)
609.41 19	2.88 14	⁸³ Se(22.3 m)	356.687(70), 510.17(43), 224.8(32.7)
609.41 12	0.32 4	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
609.44 30	0.026 8	¹⁶⁵ Yb(9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
609.45 5	0.108 9	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
609.45 7	0.156 21	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
609.45 10		¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
• 609.47 10	0.024 7	¹⁵⁶ Tb(5.35 d)	534.318(66.6), 199.2132(40.9), 1222.36(31.00)
609.49 13	0.31 4	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
609.5 1	0.155 4	⁶⁵ Ni(2.5172 h)	1481.84(24), 1115.546(15.43), 366.27(4.81)
609.5 1	2.0 3	¹⁰⁴ Tc(18.3 m)	358.0(89), 530.5(15.6), 535.1(14.7)
• 609.5 7	0.004 3	¹⁰⁵ Ag(41.29 d)	344.520(41), 280.41(30.2), 644.55(11.1)
609.5 7	†1.06×10 ³ 13	¹⁰⁵ Ag(7.23 m)	319.14(†63000), 306.25(†12800), 442.37(†5900)

• $t_{1/2} > 1$ d

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
609.5		¹⁰⁸ Rh(16.8 s)	433.937(43), 618.84(15.0), 497.22(5.2)
609.5 4	0.31 4	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
609.5 3	5.8 4	¹⁴⁸ Er(4.6 s)	1311.8(8.9), 244.0(7.1), 315.3(6.9)
609.5 5	†21 6	¹⁵⁷ Yb(38.6 s)	230.92(†100), 340.7(†90), 241.7(†74)
609.6 1	3.1 3	¹⁰⁰ Ag(2.01 m)	665.54(99), 750.67(78), 773.20(24.2)
609.60 30	0.7	¹¹⁶ Ag(2.68 m)	513.39(76), 2478.5(12), 699.58(11)
609.6 1	0.038 6	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
609.6 5	0.54 5	¹⁶⁹ Ho(4.7 m)	788.4(21.2), 853.0(11.2), 760.8(10)
609.7	0.34	¹⁴⁴ Tb(4.25 s)	743.0(12), 1001.6(7), 959.36(4.7)
609.7 3	0.86 10	¹⁸⁴ Au(53.0 s)	162.97(50), 272.98(40), 362.47(17.5)
609.8	0.043	⁸³ As(13.4 s)	734.60(43), 1113.10(14.7), 2076.70(11.9)
609.8 5	2.8 3	⁸⁵ Se(31.7 s)	345.2(<0.23), 3396.6(7.4), 1427.2(7.0)
609.8 5	0.45 23	¹¹⁷ I(2.22 m)	325.9(75), 274.4(20.4), 661.5(5.1)
609.8 5	0.039 10	¹³² I(2.295 h)	667.718(99), 772.60(75.6), 954.55(17.6)
609.9 2	9.9 4	¹²⁰ In(47.3 s)	1171.3(100), 1023.1(97.4), 197.3(80.6)
609.9 1	0.025 6	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
609.9 3	2.0 4	¹³² Sb(2.79 m)	973.9(99), 696.8(86), 989.6(14.9)
609.9 4	0.026 4	¹³⁷ Pr(1.28 h)	836.7(1.8), 433.9(1.28), 514.0(1.08)
609.94 4	0.079 4	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
609.98 9	0.044 7	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
610.0 5		¹²⁵ La(76 s)	67.6(34), 43.6(3.5), 985.2
610.0 3	†0.06 1	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
610.0 8	1.47 21	¹³² I(1.387 h)	600.1(14.0), 173.7(8.8), 614.0(2.5)
610.0 3	0.085	²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
610.05 23	0.0011 3	¹²³ I(13.27 h)	158.97(83), 528.96(1.39), 440.02(0.428)
• 610.062 2	44.2 10	¹⁷² Er(49.3 h)	407.338(42.1), 68.107(3.29), 446.025(2.96)
610.1 4	0.18 3	⁹³ Rb(5.84 s)	432.61(17.4), 986.05(6.8), 213.429(6.7)
610.1 2	0.124 25	¹²⁹ La(11.6 m)	278.6(25), 110.5(16.9), 457.0(8.0)
610.1 7	0.28 3	¹⁹⁹ Bi(27 m)	560.1(22.0), 424.85(22), 841.7(11)
610.1 2	0.38 8	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
610.12 10	3.40 25	¹⁸⁶ Ta(10.5 m)	197.93(50), 214.87(42.3), 510.82(37.5)
610.191 3	0.015 6	¹⁹⁹ Pt(30.80 m)	542.993(15), 493.772(5.59), 317.056(4.95)
610.2 7	0.018 10	⁸⁹ Kr(3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
• 610.2 5	0.012 9	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
610.2 2	†3.0×10 ² 12	¹⁵⁷ Ho(12.6 m)	279.97(†47600), 341.16(†37000), 193.41(†15200)
610.2 3	0.20 6	¹⁵⁹ Er(36 m)	624.5(33), 649.1(23.4), 205.92(9.7)
610.294 50	0.0053 5	¹⁶⁵ Dy(2.334 h)	94.700(3.58), 361.68(0.84), 633.415(0.568)
• 610.33 20	5.75 5	¹⁰³ Ru(39.26 d)	497.080(90.9), 443.799(3.27), 557.039(0.8672)
• 610.381 7	0.0215 21	⁷⁷ Br(57.036 h)	238.996(23), 520.639(22.4), 297.215(4.16)
610.4 3	12.3 18	¹³² Pm(6.3 s)	212.5(88), 397.2(23), 823.5(11.4)
610.4 3	0.81 12	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
610.4 7	0.29 6	²⁰¹ Bi(108 m)	629.1(24.0), 936.2(11.3), 1014.1(10.7)
• 610.43 10	1.59 14	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
610.43 4		²²³ Rn(23.2 m)	591.8(†100), 635.2(†76), 416.0(†55)
610.46 7	0.60 6	⁸⁷ Br(55.60 s)	1419.71(22.0), 1476.04(7.9), 1577.60(6.0)
610.5	†2.7	¹⁰⁷ Sn(2.90 m)	1129.2(†100), 678.5(†100), 1540.6(†30)
610.5 3	†2.3 5	¹⁷¹ Hf(12.1 h)	122.0(†100), 662.2(†83), 347.18(†47)
610.5 5	11.9 12	¹⁹⁶ Tl(1.84 h)	426.0(84), 635.5(9.8), 1495.8(8.2)
610.5 5	†30 3	¹⁹⁶ Tl(1.41 h)	426.0(†540), 635.5(†304), 695.6(†243)
610.57 9	3.5 3	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
610.58 18	0.62 9	⁹⁷ Rh(46.2 m)	189.21(49), 2245.6(14), 421.55(12.7)
610.6 3	0.78 13	⁹⁹ Ag(124 s)	264.41(65), 832.29(13.5), 805.07(12.5)
610.6 2	3.9 6	¹¹⁵ Te(6.7 m)	770.40(34.2), 723.569(18), 1071.70(12.9)
610.6 5	0.30 14	¹⁵⁴ Ho(11.76 m)	334.6(84), 412.4(15.0), 873.4(12.5)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
610.6 5	4.7 10	¹⁹¹ Hg(50.8 m)	252.5(57), 420.1(18.6), 578.6(17.6)
• 610.616 17	0.479 14	¹⁶⁵ Tm(30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
610.62 12		¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
610.64 10	0.024 5	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
610.68 11	3.93 15	¹⁸⁷ Ir(10.5 h)	912.95(4.79), 427.12(4.12), 400.89(3.94)
610.77 5	4.8 13	¹⁰⁶ In(6.2 m)	632.66(100), 861.16(92), 997.87(48)
610.77 5	2.0 7	¹⁰⁶ In(5.2 m)	632.66(92), 1714.90(17.1), 861.16(10.6)
610.8 3	1.5 3	⁷⁶ Rb(39.1 s)	2571.3(47), 424.0(43.4), 355.6(8.2)
610.8 3	0.0028 11	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
610.89 20	20.1 13	¹⁶⁴ Tb(3.0 m)	168.838(25.4), 754.80(23.3), 215.07(21)
610.9 2	0.81 9	¹¹⁷ Cs(8.4 s)	204.8(15.0), 29.7(9.9), 205.6(6.8)
610.9	0.9	¹⁴⁵ Ba(4.31 s)	96.6(17), 91.9(7), 65.9(5)
610.93 6	1.07 7	⁹³ Sr(7.423 m)	590.238(67), 875.73(24.1), 888.13(21.8)
610.96 14	0.0614 16	⁷⁷ Ge(11.30 h)	264.44(54), 211.03(30.8), 215.50(28.6)
611	>0.023	⁶⁰ Cu(23.7 m)	1332.501(88), 1791.6(45.4), 826.06(21.7)
611 1	0.04 1	⁸⁷ Zr(1.68 h)	1227(1.0), 1209.8(0.33), 1024(0.28)
611.0 5	0.045 10	¹¹³ Ag(5.37 h)	298.58(10), 258.8(1.64), 316.3(1.343)
611.0 1	0.68 7	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)
611.0 3	0.172 18	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
611.046	56 14	⁴² Ti(199 ms)	2222.6(0.67), 636.4(0.7), 975.25(0.6)
611.1 3	0.047 9	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
611.1 1	†85.0 6	²⁰⁰ At(43 s)	665.9(†100), 484.5(†49.8), 565.0(†17.0)
611.16 2	1.09 6	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
611.16 8	1.3	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
611.19 8	0.26 3	¹⁵⁸ Tm(3.98 m)	192.13(62), 335.10(16.8), 1149.83(7.6)
611.2 2	3.2 5	¹²³ Cs(5.94 m)	97.3(23), 596.7(10.1), 83.3(4.1)
611.2 5	0.49 8	¹²⁶ Ba(100 m)	233.6(19.6), 257.6(7.6), 241.0(6.0)
611.2 2	0.021 8	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
611.24 9	†1.15 8	¹⁸⁴ Ir(3.09 h)	263.97(†100), 119.80(†45), 390.38(†38)
• 611.293 8	5.46 9	¹⁴⁸ Pm(41.29 d)	550.284(94.5), 629.987(89), 725.673(32.7)
• 611.293 8	1.021 11	¹⁴⁸ Pm(5.370 d)	1465.12(22), 550.284(22.00), 914.85(11.46)
• 611.293 8	20.5 4	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 553.231(12.9)
611.3 2	0.66 7	¹⁰¹ Ag(11.1 m)	261.0(53), 588.0(10.0), 667.3(9.8)
611.3 4	0.018 4	¹¹¹ Pd(23.4 m)	580.00(0.8), 70.44(0.78), 1459.0(0.56)
611.3 3	5.7 5	¹¹⁶ Cs(3.84 s)	393.5(<0.09), 524.3(76), 615.1(30.4)
611.3	0.018 5	¹⁴¹ Ba(18.27 m)	190.328(46.0), 304.194(25.4), 276.948(23.4)
611.37 8	1.02 7	⁷⁸ Rb(5.74 m)	454.97(81), 664.44(38.3), 1109.72(13.12)
611.38 10	0.57 5	¹⁰⁷ In(32.4 m)	204.97(47), 505.51(11.9), 320.92(10.2)
611.4 2	0.094 10	¹⁰¹ Pd(8.47 h)	296.29(19), 590.44(12.06), 269.67(6.43)
611.4 2	1.2	²²⁷ Ra(42.2 m)	27.36(16), 300.07(4.6), 302.65(4.3)
611.407 18	0.777 23	¹³¹ La(59 m)	108.081(25.0), 417.783(18.0), 365.162(16.9)
• 611.46 25	0.015 4	¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
611.5 10	0.19 6	⁷⁴ Kr(11.50 m)	89.65(31), 203.0(18.0), 296.67(9.9)
611.5 8	0.24 6	⁸⁷ Br(55.60 s)	1419.71(22.0), 1476.04(7.9), 1577.60(6.0)
611.5 4	6.0 6	¹⁸⁶ Pt(2.0 h)	276.7(0), 635.6(>3.8), 366.7(2.3)
611.51 14	0.140 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
• 611.55 3	1.408 22	¹⁶⁶ Ho(1.20×10 ³ y)	184.410(72.6), 810.276(58.08), 711.683(55.32)
611.6 5	0.30	⁸⁶ Se(15.3 s)	2441.1(43.0), 2660.0(21.6), 48.3(15.4)
611.60 11	0.50 5	¹⁰⁰ Y(735 ms)	212.531(73), 118.59(15.4), 665.98(7.7)
611.6 5	0.14 3	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
611.6 5	>0.35	¹³⁷ Pm(2.4 m)	177.5(40.29), 108.6(35), 233.6(29.57)
611.7 3	0.29 11	¹³⁹ Sm(2.57 m)	273.7(37), 306.7(28.5), 596.3(8.0)
611.74 4	0.0022 11	¹⁸⁷ W(23.72 h)	685.774(27.3), 479.531(21.8), 72.001(11.14)
611.79 14	0.83 10	¹⁹⁷ Pb(43 m)	385.85(74), 387.72(25.1), 222.45(24.6)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
611.8 1	1.3 3	¹⁴¹ Tb(3.5 s)	293.3(16.8), 343.6(16.3), 198.4(14.8)
611.8 2	5.96 10	¹⁷⁷ W(135 m)	115.65(50), 426.98(13.2), 1036.4(10.3)
611.8 4	0.43 9	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
611.81 7	2.89 6	¹⁴⁸ La(1.05 s)	158.468(55.6), 989.85(9.3), 760.30(8.6)
611.83 6	2.60 6	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
611.83 6	0.25 4	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
611.84 10	9.8 6	⁶⁸ As(151.6 s)	1015.96(78), 761.61(33.8), 651.12(32.1)
611.88 15	0.25 4	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
611.9 2	1.08 5	⁸⁵ Y(4.86 h)	231.67(22.8), 2123.8(5.0), 767.40(3.6)
611.9 5	†4.3 14	¹¹² Te(2.0 m)	372.70(†100), 296.20(†86), 418.9(†57)
611.9 3	0.67 8	¹⁸⁴ Au(53.0 s)	162.97(50), 272.98(40), 362.47(17.5)
611.9 3	†2.1 4	¹⁸⁵ Pt(33.0 m)	229.60(†100), 135.3(†80), 197.4(†74)
611.93 6	0.88 5	¹⁴³ Cs(1.78 s)	195.554(13), 232.421(8.32), 306.424(6.80)
612.00 10	5.7 3	⁸⁶ Zr(16.5 h)	242.80(96), 29.10(21.6), 135.6(0.47)
612.0 3	6.5 7	⁹⁸ Ag(46.7 s)	863.1(100), 678.5(85), 570.93(53)
612.0 2	0.17 11	²³² Ac(119 s)	665.0(15.3), 1899(8.9), 1959(5.4)
612.0 1	0.38 3	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
• 612.02 3	0.107 3	¹⁰³ Ru(39.26 d)	497.080(90.9), 610.33(5.75), 443.799(3.27)
612.098 7	0.011 6	²⁰⁰ Au(48.4 m)	367.943(19), 1225.479(10.7), 1262.950(3.12)
• 612.098 7	0.24 4	²⁰⁰ Tl(26.1 h)	367.943(87), 1205.717(29.9), 579.298(13.8)
• 612.15 15	0.0417 13	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
612.2 5	†22 10	¹⁷ C(193 ms)	1373.8(†100), 1849.5(†92), 1906.7(†29)
612.2 3	0.95 14	⁷² Cu(6.6 s)	652.4(68), 1004.6(12.0), 1657.7(10.1)
612.2 2	0.114 22	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
612.2 5	†0.18 9	¹⁶⁰ Ho(5.02 h)	728.18(†100), 879.383(†65.9), 962.317(†59.1)
612.2 4	0.07 3	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
612.22 7	0.083 10	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
612.25 8	0.93 7	¹⁵⁰ Pm(2.68 h)	333.971(68), 1324.51(17.5), 1165.739(15.8)
612.3 4	35.4 21	¹⁷⁹ Yb(8.0 m)	592.1(75), 381.4(9.6), 653.7(9.2)
612.3 1	5.0 5	²³² Ac(119 s)	665.0(15.3), 1899(8.9), 1959(5.4)
612.39 11	0.31 5	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
612.4 3	0.63 13	⁸⁸ Br(16.5 s)	775.28(63), 802.14(13.13), 1440.69(4.72)
612.4 3	†4.3	¹⁷⁹ Os(6.5 m)	65.39(†100), 218.6(†17), 32.3(†17)
612.44 5	0.165 9	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)
• 612.46564 20 309 17		¹⁹² Ir(73.831 d)	316.50791(82.81), 468.07152(47.83), 308.45692(30.00)
612.46564 20		¹⁹² Ir(1.45 m)	295.95827, 316.50791
612.46564 20 34 4		¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
612.5 2	4.8 6	⁷⁹ Sr(2.25 m)	39.41(28), 105.00(21.8), 413.8(7.6)
612.6		¹³⁰ Pr(40.0 s)	951.9, 499.0, 1405
• 612.69 3	>0.09	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
• 612.693 28		¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
612.70 20	0.38 3	¹¹² Sb(51.4 s)	1257.05(96), 990.70(14.3), 670.0(3.7)
• 612.70 3	0.093 6	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
612.8 3	0.29 3	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
612.8 2	†3.2 3	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
612.82 4	4.5 5	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
• 612.834 6	9.5×10^{-7} 5	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
612.87 6	7.7 4	⁹¹ Kr(8.57 s)	108.788(43.5), 506.592(19.1), 1108.68(7.2)
612.9 3	0.18 6	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
612.97 8	0.245 24	¹⁴¹ Cs(24.94 s)	48.53(7.90), 561.63(4.7), 1194.02(3.95)
613 3	<3.8	¹⁴ B(13.8 ms)	6092.4(86), 6726.5(8.6), 1248(<5.6)
613.0 2	†16.0 8	¹¹⁰ Tc(0.92 s)	240.67(†100), 372.1(†17.0), 619.2(†14)
613.0	0.19	¹⁴⁹ Ho(21.1 s)	1090.7(74.8), 1073.2(6.37), 1583.6(4.48)
613 1	†26	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: $E_{\gamma}(I_{\gamma})$
613.054 18	0.670 17	$^{163}\text{Tm}(1.810 \text{ h})$	104.320(18.6), 69.229(11.6), 241.305(10.9)
613.06 4	1.200 24	$^{141}\text{Xe}(1.73 \text{ s})$	909.23(24.0), 118.705(16.1), 105.937(9.8)
613.06 8	1.37 7	$^{228}\text{Fr}(39 \text{ s})$	473.7(10.2), 474.0(7.6), 410.40(6.3)
• 613.1 5	0.012 9	$^{153}\text{Tb}(2.34 \text{ d})$	212.038(31.0), 170.504(6.8), 109.758(6.4)
613.13 15	0.45 7	$^{183}\text{Au}(42.0 \text{ s})$	161.18(9.4), 214.13(5.9), 313.08(5.0)
613.2 3	0.77 7	$^{201}\text{Au}(26 \text{ m})$	542.6(1.2), 517.0(0.83), 167.43(0.64)
• 613.288 10	0.094 3	$^{154}\text{Eu}(8.593 \text{ y})$	123.071(40.79), 1274.436(35.19), 723.304(20.22)
613.3 4	0.06 3	$^{141}\text{Cs}(24.94 \text{ s})$	48.53(7.90), 561.63(4.7), 1194.02(3.95)
613.36 3	1.1 3	$^{182}\text{Hf}(61.5 \text{ m})$	942.80(18.8), 799.64(9.4), 114.3152(6.2)
613.4 3	0.050 8	$^{111}\text{Sn}(35.3 \text{ m})$	1152.98(2.7), 1914.70(1.99), 761.97(1.48)
613.4 3	0.017 5	$^{139}\text{Cs}(9.27 \text{ m})$	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
613.4	0.17	$^{147}\text{Ba}(0.893 \text{ s})$	167.4(11), 105.2(4.8), 196.1(4.8)
613.4 2	1.27 10	$^{159}\text{Eu}(18.1 \text{ m})$	67.8(19), 78.6(9.1), 95.7(7.0)
613.493 13	0.00308 22	$^{128}\text{I}(24.99 \text{ m})$	442.901(17), 526.557(1.58), 969.458(0.404)
613.493 13	0.351 11	$^{128}\text{Cs}(3.66 \text{ m})$	442.901(26.8), 526.557(2.41), 1140.079(1.168)
613.5 4	0.24 7	$^{105}\text{Cd}(55.5 \text{ m})$	961.84(4.69), 346.870(4.20), 1302.459(3.98)
613.5 10	0.10 6	$^{105}\text{Cd}(55.5 \text{ m})$	961.84(4.69), 346.870(4.20), 1302.459(3.98)
613.5 2	†40 2	$^{191}\text{Pb}(2.18 \text{ m})$	387.1(†100), 712.2(†46), 936.8(†37)
613.52 3	0.32 4	$^{133}\text{Te}(12.5 \text{ m})$	312.072(62), 407.63(27.1), 1333.21(10.67)
613.52 20	0.047 7	$^{165}\text{Yb}(9.9 \text{ m})$	80.11(49), 68.86(9.1), 1090.28(4.4)
613.6 3	2.28 22	$^{109}\text{In}(4.2 \text{ h})$	203.5(74), 623.7(5.5), 1148.9(4.3)
613.6 2		$^{130}\text{Pr}(40.0 \text{ s})$	951.9, 499.0, 1405
613.6 4	†1.5	$^{154}\text{Nd}(25.9 \text{ s})$	151.703(†800), 799.55(†600), 180.693(†510)
613.6 3	0.019 9	$^{195}\text{Ir}(3.8 \text{ h})$	98.85(10), 684.88(9.4), 432.86(9)
613.6 3	0.0021 6	$^{223}\text{Fr}(21.8 \text{ m})$	50.13(36.0), 79.72(9.1), 234.81(3.0)
613.66 33	†1.0 3	$^{165}\text{Lu}(10.74 \text{ m})$	132.49(†100), 120.60(†100), 174.25(†47.0)
613.68 10	†4.8 5	$^{182}\text{Au}(21 \text{ s})$	154.76(†100), 264.33(†40.0), 855.41(†14.5)
613.69 4	0.779 22	$^{143}\text{Ba}(14.33 \text{ s})$	211.475(25), 798.79(15.6), 980.45(11.55)
613.725 3	54	$^{78}\text{As}(90.7 \text{ m})$	694.916(16.7), 1308.59(13.0), 828.189(8.1)
613.725 3	14	$^{78}\text{Br}(6.46 \text{ m})$	884.861(0.068), 694.916(0.058), 1923.15(0.0490)
613.73 14	0.017 6	$^{157}\text{Eu}(15.18 \text{ h})$	63.929(23.0), 410.723(17.5), 370.509(11.0)
613.8 2	1.8 3	$^{135}\text{Pr}(24 \text{ m})$	296.12(24), 82.64(13.7), 213.45(13.0)
613.8 2	73 14	$^{152}\text{Ho}(161.8 \text{ s})$	613.8(14), 1098.0(12), 838.0(10)
613.8 3	14 3	$^{152}\text{Ho}(161.8 \text{ s})$	613.8(73), 1098.0(12), 838.0(10)
613.8 2	88.4 4	$^{152}\text{Ho}(49.5 \text{ s})$	647.2(92), 683.3(88), 492.9(72.5)
613.8 3	13.2 4	$^{152}\text{Ho}(49.5 \text{ s})$	647.2(92), 613.8(88.4), 683.3(88)
613.8 3	0.16 5	$^{159}\text{Er}(36 \text{ m})$	624.5(33), 649.1(23.4), 205.92(9.7)
613.81 30	0.036	$^{137}\text{I}(24.5 \text{ s})$	1218.00(12.8), 601.05(4.80), 1302.64(4.42)
613.86 8	†1.96 14	$^{184}\text{Ir}(3.09 \text{ h})$	263.97(†100), 119.80(†45), 390.38(†38)
613.88 10	0.71 8	$^{195}\text{Tl}(1.16 \text{ h})$	563.52(10.5), 884.47(10.0), 1363.88(8.4)
613.89 4	0.243 19	$^{81}\text{Ga}(1.221 \text{ s})$	216.47(37.4), 828.26(22.1), 711.18(17.6)
• 613.9 3	0.035 19	$^{169}\text{Lu}(34.06 \text{ h})$	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
• 613.92 2	0.0149 9	$^{149}\text{Pm}(53.08 \text{ h})$	285.95(3.1), 859.46(0.109), 590.88(0.069)
• 613.92 2	0.00026 1	$^{149}\text{Eu}(93.1 \text{ d})$	327.526(4.03), 277.089(3.56), 22.510(2.32)
614	>0.022	$^{60}\text{Cu}(23.7 \text{ m})$	1332.501(88), 1791.6(45.4), 826.06(21.7)
614.0 3	4.0 10	$^{99}\text{Y}(1.470 \text{ s})$	121.761(33), 724.30(14.9), 536.2(6.6)
614	†1.2	$^{120}\text{I}(81.0 \text{ m})$	560.44(†137), 1523.0(†21.1), 640.85(†17.1)
614.0 8	2.5 7	$^{132}\text{I}(1.387 \text{ h})$	600.1(14.0), 173.7(8.8), 610.0(1.47)
• 614.00 20	0.0090 5	$^{170}\text{Lu}(2.00 \text{ d})$	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
614.1 4	0.20 16	$^{100}\text{Ag}(2.01 \text{ m})$	665.54(99), 750.67(78), 773.20(24.2)
614.1 4	1.8 9	$^{100}\text{Ag}(2.24 \text{ m})$	665.54(86), 750.67(>26), 1693.9(14.7)
614.1 5	2.1 5	$^{180}\text{Ir}(1.5 \text{ m})$	276.4(56), 132.2(38.1), 699.0(13.4)
614.11 18	0.280 21	$^{187}\text{Au}(8.4 \text{ m})$	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
614.2 9	0.05 3	$^{87}\text{Br}(55.60 \text{ s})$	1419.71(22.0), 1476.04(7.9), 1577.60(6.0)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
614.2 1	1.16 9	$^{104}\text{Tc}(18.3 \text{ m})$	358.0(89), 530.5(15.6), 535.1(14.7)
614.2 4	1.81 12	$^{109}\text{Sn}(18.0 \text{ m})$	1099.4(30), 649.90(28.0), 1321.3(11.9)
614.2 1	0.168 18	$^{149}\text{Tb}(4.118 \text{ h})$	352.24(29.43), 164.98(26.4), 388.57(18.37)
• 614.22 3	0.0120 13	$^{143}\text{Ce}(33.039 \text{ h})$	293.266(42.80), 57.356(11.7), 664.571(5.69)
614.229 24	0.47 3	$^{153}\text{Dy}(6.4 \text{ h})$	80.723(11.10), 213.754(10.90), 99.659(10.51)
614.25 7	1.59 7	$^{205}\text{Po}(1.66 \text{ h})$	872.39(37), 1001.21(28.8), 849.83(25.5)
614.26 6	1.70 15	$^{158}\text{Tm}(3.98 \text{ m})$	192.13(62), 335.10(16.8), 1149.83(7.6)
• 614.265 50	0.0139 25	$^{71}\text{As}(65.28 \text{ h})$	174.954(82.00), 1095.490(4.08), 499.876(3.624)
614.281 6	21.0 18	$^{108}\text{Rh}(6.0 \text{ m})$	433.937(88), 581.1(60), 947.27(49)
• 614.281 6	89.8 18	$^{108}\text{Ag}(418 \text{ y})$	722.938(90.8), 433.937(90)
614.3 5	1.00 25	$^{104}\text{In}(1.8 \text{ m})$	658.0(100), 834.1(99), 878.1(29.4)
614.30 10	0.52 4	$^{151}\text{Dy}(17.9 \text{ m})$	386.10(19.4), 49.46(18.0), 546.31(14.3)
614.3 1	0.00333 12	$^{163}\text{Er}(75.0 \text{ m})$	1113.5(0.0490), 436.1(0.0285), 439.94(0.0276)
614.3 2	†5.0 5	$^{185}\text{Hg}(21.6 \text{ s})$	222.8(†100.0), 258.7(†98), 212.5(†58)
614.3 3	0.17 4	$^{188}\text{Hg}(3.25 \text{ m})$	66.7(63), 190.1(4.40), 82.7(2.6)
614.3 5	†56 11	$^{191}\text{Tl}(5.22 \text{ m})$	452.6(†100), 470.1(†98), 391.6(†96)
614.32 10	0.50 13	$^{193}\text{Hg}(11.8 \text{ h})$	257.97(61), 407.63(25), 573.25(14.2)
614.38 9	0.211 16	$^{90}\text{Kr}(32.32 \text{ s})$	1118.69(39.0), 121.82(35.5), 539.49(30.8)
614.39 20	0.51 5	$^{77}\text{Ge}(11.30 \text{ h})$	264.44(54), 211.03(30.8), 215.50(28.6)
614.39 20	0.089 9	$^{77}\text{Ge}(11.30 \text{ h})$	264.44(54), 211.03(30.8), 215.50(28.6)
614.39 20	0.044 6	$^{77}\text{Ge}(52.9 \text{ s})$	215.50(21), 194.76(0.408), 419.75(0.094)
614.4 5	0.476 22	$^{97}\text{Pd}(3.10 \text{ m})$	265.26(56), 475.2(26.7), 792.70(13.8)
614.4 5	†1.3	$^{183}\text{Hg}(9.4 \text{ s})$	60.5(†100), 159.91(†21), 172.70(†17)
614.4 10	0.19 4	$^{201}\text{Bi}(108 \text{ m})$	629.1(24.0), 936.2(11.3), 1014.1(10.7)
614.4		$^{206}\text{At}(30.0 \text{ m})$	700.66(98), 477.10(86), 395.54(48)
614.40 5	6.2 6	$^{206}\text{At}(30.0 \text{ m})$	700.66(98), 477.10(86), 395.54(48)
614.42 2	65 6	$^{118}\text{I}(8.5 \text{ m})$	605.71(99), 600.71(92), 1257.7(24.2)
614.5 1	1.46 9	$^{142}\text{Gd}(70.2 \text{ s})$	750.2(11.2), 178.90(11.20), 284.4(6.16)
614.5 2	0.342 18	$^{147}\text{Pr}(13.4 \text{ m})$	77.9921(15), 314.675(13.2), 641.380(10.0)
614.5 2	0.22 4	$^{183}\text{Au}(42.0 \text{ s})$	161.18(9.4), 214.13(5.9), 313.08(5.0)
614.58 7	7.2 7	$^{80}\text{Zn}(0.545 \text{ s})$	712.53(45.1), 715.40(33.8), 964.93(15.6)
614.6 2	†5.3 8	$^{131}\text{Ce}(10.3 \text{ m})$	169.42(†100), 414.25(†68), 119.18(†44)
614.62 4	67 13	$^{120}\text{I}(53 \text{ m})$	560.44(100), 601.11(87), 976(35)
• 614.63 10	0.204 8	$^{156}\text{Tb}(5.35 \text{ d})$	534.318(66.6), 199.2132(40.9), 1222.36(31.00)
614.64 13	†8.1 10	$^{189}\text{Hg}(7.6 \text{ m})$	320.99(†100), 78.21(†63), 565.42(†48)
614.67 15	0.64 5	$^{124}\text{In}(3.17 \text{ s})$	1131.64(68), 3214.15(21.5), 997.79(21.1)
614.7 1	0.13 4	$^{157}\text{Er}(18.65 \text{ m})$	53.05(24), 391.32(14.2), 121.57(10.1)
614.7 3	0.60 8	$^{181}\text{Au}(11.4 \text{ s})$	198.60(4.4), 2022.4(4.2), 79.40(4.2)
614.8 4	0.53 11	$^{185}\text{Au}(4.25 \text{ m})$	310.6(13), 243.1(6.6), 77.7(6)
614.8 4	0.66 13	$^{185}\text{Au}(4.25 \text{ m})$	310.6(13), 243.1(6.6), 77.7(6)
614.82 91	0.046 17	$^{174}\text{Ta}(1.05 \text{ h})$	206.50(58), 91.00(16.0), 1205.92(4.9)
614.83 13	0.029 4	$^{155}\text{Dy}(9.9 \text{ h})$	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
• 614.854 3	0.0304 20	$^{155}\text{Tb}(5.32 \text{ d})$	86.545(32.0), 105.305(25), 180.103(7.45)
614.87 5	5.0 5	$^{98}\text{Rh}(3.5 \text{ m})$	652.43(96), 745.36(78), 1144.52(8.5)
• 614.89 10	0.10 3	$^{79}\text{Kr}(35.04 \text{ h})$	261.29(13), 397.54(9.3), 606.09(8.12)
614.9 1	2.07 11	$^{73}\text{Br}(3.4 \text{ m})$	64.9(37.0), 336.0(10.4), 699.8(9.1)
614.9 3	†0.55 7	$^{129}\text{Ba}(2.17 \text{ h})$	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
614.9 4	0.100 25	$^{228}\text{Pa}(22 \text{ h})$	911.205(4.19), 463.005(1.250), 964.770(4.25)
615 1	4.1 6	$^{70}\text{As}(52.6 \text{ m})$	1039.20(81), 1114.1(21.8), 668.3(21.8)
615.0 5	0.22	$^{125}\text{Cd}(0.57 \text{ s})$	1027.53(25.8), 1173.16(25.1), 736.65(12.6)
615.1 3	30.4 19	$^{116}\text{Cs}(3.84 \text{ s})$	393.5(<0.09), 524.3(76), 622.3(10.4)
615.1 2	0.75 12	$^{117}\text{Cs}(8.4 \text{ s})$	204.8(15.0), 29.7(9.9), 205.6(6.8)
615.10 9	1.38 13	$^{123}\text{Cd}(2.10 \text{ s})$	371.32(51), 1052.28(24.8), 1438.13(8.3)
615.17 10	0.26 19	$^{74}\text{Br}(25.4 \text{ m})$	634.78(64), 219.05(18.1), 634.26(14.1)

• $t_{1/2} > 1 \text{ d}$

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
615.17 10	6.7 7	⁷⁴ Br(46 m)	634.78(91), 728.37(35.6), 634.26(16.4)
615.182 26	0.331 22	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
615.2 2	†0.35 11	¹⁵⁸ Ho(11.3 m)	218.21(†100.0), 98.91(†70), 945.7(†37)
615.2	†8	²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
615.21 8	2.26 18	¹⁴⁸ Pr(2.27 m)	301.702(61), 1357.78(5.5), 1023.18(4.8)
• 615.21 3	0.233 18	¹⁸¹ Hf(42.39 d)	482.182(80.50), 133.024(43.3), 345.916(15.12)
615.22 9	0.103 16	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
615.26 4	0.358 20	²¹⁰ At(8.1 h)	1181.39(99.3), 245.31(79), 1483.39(46.5)
615.28 7	28 1	¹⁸⁶ Ta(10.5 m)	197.93(50), 214.87(42.3), 510.82(37.5)
615.3 2	0.16 5	¹⁷³ Ta(3.14 h)	172.2(18), 69.70(5.9), 90.3(5.0)
615.3 4	0.33 7	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
• 615.365 2	0.526 3	⁷¹ As(65.28 h)	174.954(82.00), 1095.490(4.08), 499.876(3.624)
615.39 12	0.27 3	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
615.4 3	4.3 5	¹⁹⁰ Tl(3.7 m)	416.4(91), 625.4(82), 731.1(37)
615.4 3	>0.8	¹⁹⁰ Tl(2.6 m)	416.4(79), 625.4(11.1), 683.5(8.7)
• 615.41 20	0.00084 8	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
615.42 15	0.194 13	¹⁹⁰ Re(3.1 m)	186.718(48.4), 557.972(28.2), 223.811(26.0)
615.42 15	0.175 18	¹⁹⁰ Re(3.2 h)	186.718(27.8), 605.24(14.9), 557.972(14.3)
• 615.42 15	0.47 3	¹⁹⁰ Ir(11.78 d)	186.718(52.4), 605.24(39.9), 518.55(34.0)
615.49 19	0.31 3	¹⁸⁶ Au(10.7 m)	191.56(62), 298.67(25.4), 764.89(10.5)
615.5 1	0.027 5	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)
615.6 1	1.04 10	¹³⁷ Nd(38.5 m)	75.5(17.0), 580.6(13), 306.60(10.0)
615.6 3	0.47	¹⁷⁰ Hf(16.01 h)	164.78(33), 620.7(23), 120.17(19)
• 615.7 1	0.0020 15	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
615.7 3	0.40 5	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
615.7 2	†2.6 10	¹⁹² Bi(37 s)	853.8(†100.0), 501.8(†80), 504.3(†39)
615.7 2	†0.82 21	¹⁹⁴ Bi(92 s)	965.4(†100.0), 575.1(†98.0), 280.1(†73.7)
615.78 6	0.044 12	²¹⁴ Bi(19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
615.8 4	†13.5 16	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
615.90 7	0.067 5	⁹⁶ Tc(51.5 m)	778.224(1.9), 1200.231(1.08), 480.705(0.311)
615.9 3	0.019 9	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
615.9 4	†0.46 5	¹⁹⁶ Ir(1.40 h)	393.346(†105.2), 521.175(†104), 447.1(†102.1)
• 615.963 15	0.096 7	¹⁶⁶ Ho(1.20×10 ³ y)	184.410(72.6), 810.276(58.08), 711.683(55.32)
615.963 15	0.144 3	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
616 1	†1.5 3	¹⁰³ Mo(67.5 s)	83.4(†100), 423.91(†69), 45.8(†57)
616.0 1	0.15 10	¹⁴³ Cs(1.78 s)	195.554(13), 232.421(8.32), 306.424(6.80)
616 1	0.0009	²⁵¹ Fm(5.30 h)	425.4(0.95), 480.4(0.392), 358.3(0.315)
• 616.05 3	0.0090 8	¹⁵² Eu(13.542 y)	121.7824(28.4), 1408.011(20.87), 964.131(14.34)
616.08 14	1.03 8	¹⁹⁰ Re(3.2 h)	186.718(27.8), 605.24(14.9), 557.972(14.3)
616.08 14	93.10 3	¹⁹⁰ Ir(3.25 h)	502.53(92.31), 361.136(89.57), 186.718(66.3)
616.1 4	0.23 4	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
616.17 4	0.045 7	¹⁸⁹ Pt(10.87 h)	721.41(9.3), 94.33(7.6), 568.84(7.1)
616.174 24	0.75 8	¹⁰⁶ Rh(29.80 s)	511.842(20), 621.94(9.93), 1050.39(1.56)
616.174 24	20.2 14	¹⁰⁶ Rh(131 m)	511.842(85), 1045.83(30.4), 717.24(28.9)
616.174 24	0.142 5	¹⁰⁶ Ag(23.96 m)	511.842(17.0), 621.94(0.316), 873.48(0.199)
• 616.174 24	21.6 6	¹⁰⁶ Ag(8.28 d)	511.842(88), 1045.83(29.6), 717.24(28.9)
616.2	0.010	¹⁴⁸ Dy(3.1 m)	620.24(96), 1247.2(1.4), 178.3(0.5)
• 616.2 4	0.019 9	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
616.2 4	0.10 4	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
616.2 3	†1.7 3	¹⁶⁰ Lu(36.1 s)	243.2(†100), 395.4(†21.0), 577.2(†10.7)
616.2 4	0.07 3	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
616.2 1	1.56 8	¹⁹⁰ Au(42.8 m)	295.78(71.0), 301.82(23.4), 597.67(9.4)
616.2 4	0.22 6	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
616.22 3	0.082 5	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)

• $t_{1/2} > 1$ d

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
616.26 10	0.37 5	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
616.29 23	†1.8 4	¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†33)
616.3 2	1.8 4	⁸¹ Ge(7.6 s)	335.98(58.9), 792.94(34), 1495.53(19.9)
• 616.3 3	†0.0034	¹⁰¹ Rh(4.34 d)	306.85(†115), 545.06(†6.1), 127.23(†0.85)
• 616.3	4.2×10^{-6}	²⁵³ Es(20.47 d)	41.79(0.050), 389.11(0.0264), 387.1(0.00810)
616.4	†2	¹³¹ Ce(10.3 m)	169.42(†100), 414.25(†68), 119.18(†44)
616.42 10	1.1 1	¹⁹⁷ Pb(43 m)	385.85(74), 387.72(25.1), 222.45(24.6)
• 616.49 2	1.284 13	⁹⁵ Tc(61 d)	204.117(63.25), 582.082(29.96), 835.149(26.63)
616.5 2	0.86 5	⁸⁵ Y(4.86 h)	231.67(22.8), 2123.8(5.0), 767.40(3.6)
616.5 2	†33 3	⁸⁷ Nb(2.6 m)	200.95(†100), 470.63(†73), 1066.8(†37)
616.5 3	0.00181 8	¹⁵⁹ Gd(18.479 h)	363.55(11.4), 58.00(2.15), 348.16(0.234)
616.5 6	†1.0	¹⁷⁹ Os(6.5 m)	65.39(†100), 218.6(†17), 32.3(†17)
616.5 4	0.16 9	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
616.5 3	0.19 4	¹⁹⁵ Ir(3.8 h)	98.85(10), 684.88(9.4), 432.86(9)
616.51 11	0.101 7	⁹³ Kr(1.286 s)	253.42(41.2), 323.89(24.1), 266.83(20.6)
616.561 15	10.4 3	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
616.6 1	7	⁸⁰ Br(17.68 m)	639.6(0.261), 703.9(0.19), 1256.3(0.074)
616.6 1	25	⁸⁰ Rb(34 s)	703.9(1.88), 639.6(1.50), 1256.3(0.57)
616.67 7	6.9 4	¹⁰⁰ Y(735 ms)	212.531(73), 118.59(15.4), 665.98(7.7)
616.7 1	0.198 22	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
616.79 8	1.0	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
616.83 25	†<8	¹⁸⁴ Tl(11 s)	366.51(†100), 286.80(†39), 340.0(†25)
616.84 10	0.68 12	¹⁶² Yb(18.87 m)	163.35(40.0), 118.70(33.6), 576.10(3.24)
616.9 2	0.038 17	¹³⁵ I(6.57 h)	1260.409(28.90), 1131.511(22.74), 1678.027(9.62)
616.91 21	0.027 5	¹³⁹ Cs(9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
617 1	0.17	⁷⁷ Rb(3.75 m)	66.52(57), 178.99(22.2), 393.37(9.7)
617 1	0.041 17	⁸⁹ Nb(1.9 h)	1627.20(3.4), 1833.46(3.16), 3092.7(3.0)
617.0 10	4.0×10^{-5} 4	¹⁰⁴ Rh(4.34 m)	555.796(0.13), 767.72(0.0065), 1237.2(0.0042)
617.0 10	0.56 19	¹⁰⁴ Ag(69.2 m)	555.796(92.6), 767.72(65.7), 941.7(25.0)
617.0 3	2.0 3	¹³⁵ Nd(12.4 m)	204.02(52), 41.43(23), 441.2(14.9)
617.0	0.14 3	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
• 617.0 5	0.023 7	¹⁶⁶ Ho(1.20×10^3 y)	184.410(72.6), 810.276(58.08), 711.683(55.32)
617.0 3	†1.2 2	¹⁸² Au(21 s)	154.76(†100), 264.33(†40.0), 855.41(†14.5)
617.0 5	0.10 3	¹⁹⁸ Tl(5.3 h)	411.8044(82), 675.8874(11), 636.4(10.1)
617.0 2	0.052 21	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
617.0 2		²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
617.1	56	⁹⁶ Y(9.6 s)	1750.42(89), 915.0(60), 1106.88(49)
617.1 4	0.15 6	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
617.1 3	0.033 12	²¹⁴ Bi(19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
• 617.10 10	1.34×10^{-6} 7	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
617.1 2	0.21 4	²³⁶ Pa(9.1 m)	642.35(37.0), 687.59(9.9), 1762.7(6.0)
617.2 4	0.28 11	⁹⁷ Rh(46.2 m)	189.21(49), 2245.6(14), 421.55(12.7)
617.2 3	†2.67 13	¹⁸⁷ Pb(15.2 s)	299.5(†100), 493.6(†2.67), 448.7(†1.33)
617.2 4	0.25	¹⁹⁹ Po(4.13 m)	1002.19(19), 1034.3(16), 362.01(7)
617.20 4	1.80 11	²⁰⁷ At(1.80 h)	814.41(44.5), 588.33(19.2), 300.654(12.8)
617.27 19	43	¹¹² Ag(3.130 h)	1387.67(5.4), 606.49(3.1), 694.66(3.0)
617.27 19	4.6	¹¹² In(14.97 m)	606.49(1.111), 1253.43(0.218), 851.10(0.144)
617.30 15	0.27 3	¹⁰⁷ In(32.4 m)	204.97(47), 505.51(11.9), 320.92(10.2)
617.34 10	0.051 5	¹⁰¹ Tc(14.22 m)	306.85(88), 545.06(6.0), 127.23(2.86)
• 617.34 10	0.011 4	¹²² Sb(2.70 d)	564.119(69), 692.794(3.78), 1256.901(0.80)
617.34 10	0.0245 18	¹²² I(3.63 m)	564.119(18), 692.794(1.325), 793.278(1.297)
• 617.36 11	0.065 4	²³⁸ Np(2.117 d)	984.45(27.8), 1028.54(20.3), 1025.87(9.6)
• 617.36 11	0.009	²³⁸ Np(2.117 d)	984.45(27.8), 1028.54(20.3), 1025.87(9.6)
617.36 11	0.73 6	²³⁸ Am(98 m)	962.77(28), 918.69(23.0), 561.11(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: $E_{\gamma}(I_{\gamma})$
• 617.36 11	0.000008 2	²⁴² Cm(162.8 d)	44.08(0.0325), 101.90(0.0025), 157.42(0.0014)
• 617.36 11	1.6×10 ⁻⁷	²⁴² Cm(162.8 d)	44.08(0.0325), 101.90(0.0025), 157.42(0.0014)
617.4	0.49	¹³³ Pr(6.5 m)	134.3(14), 74.0(10), 315.6(10)
617.4 1	4.7 5	¹⁴¹ Tb(3.5 s)	293.3(16.8), 343.6(16.3), 198.4(14.8)
617.4 3	0.17 3	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
• 617.4 4	0.043 8	²²⁶ Ac(29 h)	230.37(27), 158.18(17.5), 72.20(0.56)
• 617.4 4	0.000040 20	²³⁰ U(20.8 d)	72.20(0.60), 154.23(0.125), 230.37(0.122)
617.41 9	0.08 3	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
617.490	79.2 6	⁴³ K(22.3 h)	372.760(87), 396.861(11.85), 593.390(11.26)
617.5 3	0.12 4	⁸⁷ Br(55.60 s)	1419.71(22.0), 1476.04(7.9), 1577.60(6.0)
617.5 3	0.07 4	¹¹¹ Pd(5.5 h)	70.44(8.3), 391.25(5.4), 632.80(3.6)
617.50 7	0.34 8	¹¹⁷ Cd(3.36 h)	1997.33(26), 1065.98(23.1), 564.397(14.7)
617.5 3	0.33 13	¹⁵³ Ho(2.0 m)	295.8(67), 637.0(5.36), 688.5(3.7)
617.5 6	†4.6 9	¹⁶⁰ Tm(9.4 m)	125.8(†100), 728.5(†37), 264.1(†27)
617.6 3	0.16 5	¹⁰¹ Ag(11.1 m)	261.0(53), 588.0(10.0), 667.3(9.8)
617.6 10	0.09 5	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
617.67 11	1.9 3	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
• 617.682 25	0.236 19	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
617.7 2	0.114 6	⁷⁵ Ge(82.78 m)	264.6584(11), 198.6031(1.19), 468.8(0.223)
• 617.7 2	0.0046 12	⁷⁵ Se(119.779 d)	264.6584(58.50), 136.0008(58.3), 279.5441(24.79)
617.7 2	1.65 24	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
617.70 17	0.0153 6	¹⁵⁹ Gd(18.479 h)	363.55(11.4), 58.00(2.15), 348.16(0.234)
617.7 1	19.7 10	²⁰⁰ Po(11.5 m)	671.0(34.0), 434.4(9.3), 796.7(7.9)
• 617.71 20	0.00116 11	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
617.77 16	0.34 5	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
617.8 3	12.0 10	⁹⁹ Rh(4.7 h)	340.71(70), 1261.2(11), 936.7(2.20)
617.8 1	1.04 7	¹²⁹ La(11.6 m)	278.6(25), 110.5(16.9), 457.0(8.0)
• 617.8 4	0.019 9	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
617.80 7	2.20 9	²⁰⁵ At(26.2 m)	719.30(31), 669.41(8.6), 628.88(5.6)
617.82 20	12.1 9	¹⁶⁴ Tb(3.0 m)	168.838(25.4), 754.80(23.3), 215.07(21)
• 617.85 7	1.16 5	¹⁰⁵ Ag(41.29 d)	344.520(41), 280.41(30.2), 644.55(11.1)
617.85 7	†69 56	¹⁰⁵ Ag(7.23 m)	319.14(†63000), 306.25(†12800), 442.37(†5900)
617.88 10	7.4 4	¹²⁵ In(2.36 s)	1335.04(71), 1031.75(9.6), 744.62(5.2)
617.9 10	0.11 5	¹⁰⁹ Rh(80 s)	326.868(54), 426.135(7.7), 178.034(7.6)
617.9	0.008 3	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
617.974 17	0.544 12	¹³³ I(20.8 h)	529.872(87.0), 875.329(4.51), 1298.223(2.35)
618.0 3	0.078 18	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
618.0 5	0.022 4	¹⁵⁹ Ho(33.05 m)	121.012(36.2), 131.973(23.6), 309.594(17.2)
618.0 11	0.12 4	¹⁷³ Ta(3.14 h)	172.2(18), 69.70(5.9), 90.3(5.0)
618.01 3	†1.5 6	¹⁴⁴ Pr(7.2 m)	1631.4(†2.8), 1885.0(†0.9), 814.1
• 618.01 3	98.6 10	¹⁴⁴ Pm(363 d)	696.510(99), 476.8(42.0), 778.5(1.51)
• 618.12 5	0.037 4	¹⁴⁰ La(1.6781 d)	1596.210(95), 487.021(45.5), 815.772(23.28)
• 618.13 10	3.6 5	⁹⁹ Rh(16.1 d)	528.24(33), 353.05(30.0), 89.65(29.0)
618.153 17	0.0241 12	¹⁷³ Hf(23.6 h)	123.672(83), 296.974(33.9), 139.634(12.7)
618.17 14	1.37 3	¹⁵⁶ Ho(56 m)	266.35(54.7), 137.83(51), 366.25(10.73)
618.2 10		⁷⁷ Ga(13.2 s)	469.4(†100), 458.6(†48), 2187.3
618.2 2	0.61 4	⁸³ Y(7.08 m)	35.50(0.44), 882.1(6.30), 489.90(5.53)
618.23 5	0.95 14	¹⁶⁴ Lu(3.14 m)	123.3(34.0), 740.52(12.2), 262.22(10.8)
618.241 11	0.823 25	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
618.25 10	0.29 3	²⁰⁴ Bi(11.22 h)	899.15(98), 374.72(82), 984.02(59)
618.3 4	0.35 4	⁹² Ru(3.65 m)	213.81(96), 259.32(92), 134.57(65.5)
618.3 2	†5.0 7	¹¹⁴ Cs(0.57 s)	449.7(†100), 698.2(†11.8), 758.2(†3.0)
618.3 4	0.25 8	¹⁶¹ Tm(33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
618.314 16	†72 4	¹⁴² Xe(1.22 s)	571.83(†100), 657.05(†79), 538.24(†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: $E_\gamma(I_\gamma)$
• 618.334 6	2.04×10^{-6} 6	$^{239}\text{Pu}(24110 \text{ y})$	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
618.34 12	0.50 25	$^{186}\text{Ta}(10.5 \text{ m})$	197.93(50), 214.87(42.3), 510.82(37.5)
618.361 20	6.28 14	$^{187}\text{W}(23.72 \text{ h})$	685.774(27.3), 479.531(21.8), 72.001(11.14)
618.37 12	$\dagger 2.5$ 3	$^{83}\text{Ge}(1.85 \text{ s})$	306.51($\dagger 100.0$), 1193.77($\dagger 20.5$), 1525.50($\dagger 13.6$)
618.40 16	0.93 7	$^{61}\text{Fe}(5.98 \text{ m})$	1205.07(44), 1027.42(42.7), 297.90(22.2)
618.4 3		$^{146}\text{Dy}(29 \text{ s})$	2156.8, 1915.7, 1876.7
618.41 14	0.000129 20	$^{127}\text{Te}(9.35 \text{ h})$	417.95(1.0), 360.32(0.1346), 202.860(0.0580)
• 618.41 14	0.0142 8	$^{127}\text{Xe}(36.4 \text{ d})$	202.860(68), 172.132(25.5), 374.991(17.2)
618.5 5	0.10 5	$^{109}\text{Ru}(34.5 \text{ s})$	206.29(22.0), 225.98(19.6), 1929.05(13.7)
618.5 1	0.29 10	$^{143}\text{Cs}(1.78 \text{ s})$	195.554(13), 232.421(8.32), 306.424(6.80)
618.5 2	$\dagger 70$ 10	$^{191}\text{Tl}(5.22 \text{ m})$	452.6($\dagger 100$), 470.1($\dagger 98$), 391.6($\dagger 96$)
618.59 4	0.100 6	$^{155}\text{Dy}(9.9 \text{ h})$	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
618.60 20	$\dagger 25$ 3	$^{106}\text{Mo}(8.4 \text{ s})$	465.70($\dagger 100$), 54.00($\dagger 54$), 595.40($\dagger 17.9$)
618.6 5	1.76 22	$^{109}\text{In}(4.2 \text{ h})$	203.5(74), 623.7(5.5), 1148.9(4.3)
618.6 2	1.5 4	$^{129}\text{Sn}(2.23 \text{ m})$	645.13(100), 80.5(6.6), 913.2(5.0)
618.7 4	1.52 23	$^{65}\text{Ge}(30.9 \text{ s})$	649.7(33), 62.0(27), 809.1(21.5)
618.7 3	31 3	$^{114}\text{Rh}(1.85 \text{ s})$	332.9(87), 519.8(48.4), 647.8(28)
618.7 2	0.097 18	$^{167}\text{Lu}(51.5 \text{ m})$	29.66(14.4), 239.22(8.6), 213.19(3.6)
• 618.7 4	0.009 3	$^{191}\text{Pt}(2.9 \text{ d})$	538.90(13.7), 409.44(8.0), 359.90(6.0)
618.8 4	0.30 10	$^{118}\text{Cs}(14 \text{ s})$	337.4(100), 472.8(37.4), 586.6(15.4)
618.8 3	2.6 2	$^{123}\text{In}(5.98 \text{ s})$	1130.5(63), 1019.7(32), 845.5(1.3)
618.8 5	$\dagger 0.10$ 2	$^{188}\text{Au}(8.84 \text{ m})$	265.63($\dagger 100$), 340.04($\dagger 23.9$), 605.5($\dagger 16.3$)
618.8 6	0.36	$^{203}\text{Bi}(11.76 \text{ h})$	820.3(30), 825.2(14.6), 896.9(13)
618.84 5	15.0 13	$^{108}\text{Rh}(16.8 \text{ s})$	433.937(43), 497.22(5.2), 931.15(1.46)
618.84 5	0.261 13	$^{108}\text{Ag}(2.37 \text{ m})$	433.937(0.50), 1007.22(0.0139), 510.1(>0.0035)
618.9 6	0.25 6	$^{74}\text{Kr}(11.50 \text{ m})$	89.65(31), 203.0(18.0), 296.67(9.9)
618.9 10	0.082 17	$^{201}\text{Bi}(108 \text{ m})$	629.1(24.0), 936.2(11.3), 1014.1(10.7)
• 618.95 10	0.0739 22	$^{170}\text{Lu}(2.00 \text{ d})$	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
619.0 10	0.012 12	$^{127}\text{Ba}(12.7 \text{ m})$	180.8(12), 114.8(9.3), 66.06(2.12)
• 619.00 10	3.61 16	$^{147}\text{Gd}(38.06 \text{ h})$	229.32(63), 396.00(34.3), 929.01(20.2)
619.0 3	0.078 18	$^{153}\text{Dy}(6.4 \text{ h})$	80.723(11.10), 213.754(10.90), 99.659(10.51)
619.0 2	0.036 10	$^{234}\text{Pa}(6.70 \text{ h})$	131.30(18), 946.00(13.4), 883.24(9.6)
619.01 4	0.37 3	$^{151}\text{Nd}(12.44 \text{ m})$	116.80(43.4), 255.68(16.4), 1180.89(14.8)
• 619.01 2	$\dagger 5.94 \times 10^5$ 6	$^{241}\text{Am}(432.2 \text{ y})$	59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$)
• 619.04 4	0.0250 12	$^{181}\text{Hf}(42.39 \text{ d})$	482.182(80.50), 133.024(43.3), 345.916(15.12)
619.08 5	1.08 3	$^{90}\text{Kr}(32.32 \text{ s})$	1118.69(39.0), 121.82(35.5), 539.49(30.8)
619.1 4	0.21 3	$^{86}\text{Y}(14.74 \text{ h})$	1076.64(83), 627.72(32.6), 1153.01(30.5)
• 619.106 4	43.4 4	$^{82}\text{Br}(35.30 \text{ h})$	776.517(83.5), 554.348(70.8), 698.374(28.49)
619.106 4	<0.0049	$^{82}\text{Br}(6.13 \text{ m})$	776.517(0.26), 698.374(0.0340), 1474.88(0.0198)
619.106 4	37.976 8	$^{82}\text{Rb}(6.472 \text{ h})$	776.517(84), 554.348(62.4), 1044.002(32.068)
619.2 2	$\dagger 14$ 1	$^{110}\text{Tc}(0.92 \text{ s})$	240.67($\dagger 100$), 372.1($\dagger 17.0$), 613.0($\dagger 16.0$)
619.2 1	0.58 6	$^{137}\text{Nd}(38.5 \text{ m})$	75.5(17.0), 580.6(13), 306.60(10.0)
619.2 3	0.66 15	$^{139}\text{Sm}(2.57 \text{ m})$	273.7(37), 306.7(28.5), 596.3(8.0)
619.2 3	$\dagger 5.8$ 7	$^{191}\text{Tl}(5.22 \text{ m})$	452.6($\dagger 100$), 470.1($\dagger 98$), 391.6($\dagger 96$)
619.2 3	0.047 9	$^{195}\text{Ir}(3.8 \text{ h})$	98.85(10), 684.88(9.4), 432.86(9)
619.23 4	0.867 22	$^{143}\text{Ba}(14.33 \text{ s})$	211.475(25), 798.79(15.6), 980.45(11.55)
619.25 12	2.86 24	$^{45}\text{Ar}(21.48 \text{ s})$	1020.04(34.0), 3703.2(33.3), 61.35(25.0)
• 619.28 3	1.21×10^{-6} 8	$^{239}\text{Pu}(24110 \text{ y})$	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
• 619.3 4	0.0042 10	$^{111}\text{Ag}(7.45 \text{ d})$	342.118(7), 245.422(1.24), 96.73(0.20)
619.3 5	0.059 10	$^{114}\text{Sb}(3.49 \text{ m})$	1299.90(99), 887.60(17.4), 327.18(7.0)
619.3 3	0.28 9	$^{159}\text{Tm}(9.13 \text{ m})$	38.35(5.8), 84.8(5.8), 271.30(5.1)
619.3 3	0.121 20	$^{163}\text{Yb}(11.05 \text{ m})$	860.28(10.1), 63.62(6.5), 123.21(1.98)
619.303 12	3.55 18	$^{157}\text{Eu}(15.18 \text{ h})$	63.929(23.0), 410.723(17.5), 370.509(11.0)
619.40 16	77 4	$^{78}\text{Ga}(5.09 \text{ s})$	1186.42(20.1), 567.06(18.2), 1025.11(12.4)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
619.4 4	0.45 9	¹⁷⁵ Ta(10.5 h)	207.4(14.0), 348.5(12.0), 266.9(10.8)
619.4 4	0.30 6	¹⁷⁷ W(135 m)	115.65(50), 426.98(13.2), 1036.4(10.3)
619.4 2	†1.79 12	¹⁹² Tl(9.6 m)	422.8(†100), 634.8(†75.9), 786.3(†31.7)
619.42 4	0.0020 4	²⁰⁵ Hg(5.2 m)	203.750(2.2), 415.70(0.0130), 1218.96(0.0062)
619.44 10	0.065 9	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
619.45 12	0.040 6	¹⁰¹ Pd(8.47 h)	296.29(19), 590.44(12.06), 269.67(6.43)
619.46 15	>0.08	⁶⁶ Ge(2.26 h)	43.89(28.7), 381.85(28), 272.97(10.4)
619.49 25	0.0028 11	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
619.5 4	0.39 4	⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
619.5 3	0.090 9	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
619.55 15	0.88 16	¹⁶² Yb(18.87 m)	163.35(40.0), 118.70(33.6), 576.10(3.24)
• 619.69 10	0.159 22	²³⁰ Pa(17.4 d)	951.95(1.65), 918.48(8.2), 454.95(6.27)
619.7 3	1.6 3	¹³¹ Sb(23.03 m)	943.4(47), 933.1(26.1), 642.30(23)
619.7 5	0.022 13	¹³⁸ Xe(14.08 m)	258.411(31.5), 434.562(20.3), 1768.26(16.7)
619.7 3	0.018 5	¹³⁹ Cs(9.27 m)	1283.23(8.3), 627.24(1.78), 1420.66(0.91)
619.7 1	2.05 9	¹⁴² Gd(70.2 s)	750.2(11.2), 178.90(11.20), 284.4(6.16)
619.7 3	†1.6 3	¹⁵⁵ Tm(21.6 s)	226.8(†100), 531.7(†20), 88.1(†17)
619.8 4	0.191 22	¹⁰⁹ In(4.2 h)	203.5(74), 623.7(5.5), 1148.9(4.3)
619.8 1	†0.75 13	¹²⁹ Ba(2.17 h)	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
619.8 3	0.41 4	²³⁰ Fr(19.1 s)	711.0(13.6), 129.1(11.0), 728.4(7.3)
619.9 2	1.13 17	¹²¹ Cs(155 s)	153.9(15.2), 239.6(7.7), 427.1(3.63)
619.9 3	†3.9 9	¹⁵⁹ Yb(1.58 m)	166.16(†500), 177.12(†159), 390.20(†113)
620.00 7	0.078 9	¹¹⁹ I(19.1 m)	257.52(87), 635.86(2.69), 320.53(2.17)
620 1	0.031 12	¹³³ Te(12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
620 1	2.79 80	¹⁴⁸ Ho(9.59 s)	1687.5(82.47), 660.8(58.94), 504.3(18.62)
620.0 1	0.52 5	²²⁶ Fr(48 s)	253.73(22.3), 186.05(16.3), 253.9(2.5)
• 620.0 1	8.0×10^{-7} 12	²³⁰ Th(7.538×10^4 y)	67.67(0.376), 143.87(0.0486), 253.73(0.0111)
• 620.026 35	0.0023 9	⁹⁹ Mo(65.94 h)	739.50(12.1), 181.063(6.08), 140.511(4.52)
620.03 18	0.22 3	¹⁰⁵ In(5.07 m)	131.37(41), 260.21(15.7), 604.11(9.2)
• 620.04 3	0.90 6	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
• 620.04 20	0.20 4	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
620.09 16	0.35 4	¹⁰³ Cd(7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
620.1 1	1.77 3	⁹¹ Sr(9.63 h)	1024.3(33), 749.8(23.61), 652.9(8.0)
• 620.1 5		¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
620.1 5	0.031 6	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
620.1 5	0.81 9	²¹² Fr(20.0 m)	1273.8(46), 227.72(43), 1185.6(14.1)
620.11 9	7.6 4	⁸⁶ Nb(88 s)	751.74(97.8), 914.81(78.1), 1003.24(37.4)
• 620.111 17	1.437 14	¹³¹ Ba(11.50 d)	496.326(47), 123.805(28.97), 216.078(19.66)
620.18 4	57 3	⁷¹ Zn(3.96 h)	386.28(93), 487.38(62), 511.56(28.4)
620.2 1	†19.2 20	¹⁰⁴ Nb(0.92 s)	192.2(†100), 368.4(†20), 836.3(†18.4)
• 620.20 5	0.90 10	¹²⁶ Sb(12.46 d)	695.03(100), 666.331(100), 414.81(83.3)
620.20 5	1.54 17	¹²⁶ Sb(19.15 m)	414.81(86), 666.331(86), 695.03(82)
620.2 2	0.19 3	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
620.20 3	1.09 10	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
620.2	†25	²⁰⁵ Rn(2.8 m)	264.9(†100), 464.5(†25), 675.0(†20)
620.24 4	96	¹⁴⁸ Dy(3.1 m)	1247.2(1.4), 178.3(0.5), 950.8(0.39)
• 620.3 2	0.019 3	¹¹¹ Ag(7.45 d)	342.118(7), 245.422(1.24), 96.73(0.20)
620.3 2	0.121 9	¹¹¹ Ag(64.8 s)	245.422(0.50), 171.28(0.12), 752.7(0.043)
620.3 4	0.45 8	¹¹⁷ Cs(8.4 s)	204.8(15.0), 29.7(9.9), 205.6(6.8)
620.3 3	0.049 12	¹⁴² Ba(10.6 m)	255.300(20.5), 1204.3(14.23), 895.2(13.9)
620.3 1	2.34 12	¹⁴³ La(14.2 m)	643.75(1.55), 621.4(1.52), 798.14(1.18)
620.31 20	0.71 10	¹²¹ Ag(0.78 s)	314.55(32.1), 353.43(19.9), 500.61(9.3)
• 620.360 3	2.787 18	¹¹⁰ Ag(249.79 d)	657.7622(94.0), 884.685(72.2), 937.493(34.13)
620.37 5	0.082 5	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)

• $t_{1/2} > 1$ d

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
620.37 5	0.31 13	²²⁸ Pa(22 h)	911.205(4.19), 463.005(1.250), 964.770(4.25)
620.4 3	0.0036	²¹² Bi(60.55 m)	39.858(1.091), 452.83(0.31), 288.07(0.31)
620.47 3	1.85 11	²⁰⁸ Rn(24.35 m)	426.78(7.07), 251.05(5.02), 350.026(3.34)
• 620.48 5	5.76 6	²⁰⁶ Bi(6.243 d)	803.10(99), 881.01(66.2), 516.18(40.7)
620.5 3	†2.4 3	¹⁸⁵ Pt(33.0 m)	229.60(†100), 135.3(†80), 197.4(†74)
620.505 19	63 3	⁹⁸ Y(2.0 s)	1223.0(80), 647.58(53), 1801.5(40)
• 620.52	0.0092 5	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
• 620.590 17	0.007 3	¹⁶⁸ Tm(93.1 d)	198.241(52.39), 815.990(48.99), 447.515(23.05)
620.594 16	0.57 3	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
620.6 2	0.27 4	⁸⁶ Zr(16.5 h)	242.80(96), 29.10(21.6), 612.00(5.7)
• 620.6 2	0.072 7	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
620.6 5	†0.23 9	¹⁶⁰ Ho(5.02 h)	728.18(†100), 879.383(†65.9), 962.317(†59.1)
620.6 1	0.94 10	²⁴² Np(2.2 m)	735.93(5), 780.44(2.76), 1473.1(2.34)
620.61 2	0.51 8	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
620.61 2	0.28 8	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
620.635 20	0.097 4	¹⁶⁵ Dy(2.334 h)	94.700(3.58), 361.68(0.84), 633.415(0.568)
620.7	0.071 18	¹⁴⁹ Tb(4.118 h)	352.24(29.43), 164.98(26.4), 388.57(18.37)
620.7 3	23	¹⁷⁰ Hf(16.01 h)	164.78(33), 120.17(19), 572.9(18)
620.7 2	0.32 9	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
620.71 30	0.032	¹³⁷ I(24.5 s)	1218.00(12.8), 601.05(4.80), 1302.64(4.42)
620.77 14	1.79 10	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
620.8 2	†16.0 12	¹⁰³ Mo(67.5 s)	83.4(†100), 423.91(†69), 45.8(†57)
620.8 4	0.122 20	¹⁵⁰ Pm(2.68 h)	333.971(68), 1324.51(17.5), 1165.739(15.8)
620.8 4	0.032 5	¹⁵⁰ Eu(12.8 h)	333.971(4.0), 406.52(2.81), 1165.739(0.257)
620.8 4	0.048 11	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
620.80 8	2.41 21	¹⁹⁰ Au(42.8 m)	295.78(71.0), 301.82(23.4), 597.67(9.4)
620.8 2	2.1 3	¹⁹⁶ Bi(308 s)	1049.21(87), 689.00(35.5), 776.6(9.1)
620.8 2	†0.60 9	¹⁹⁶ Bi(240 s)	1049.21(†21.1), 371.93(†20.8), 689.00(†19.2)
620.9 2	0.39 20	¹³² I(2.295 h)	667.718(99), 772.60(75.6), 954.55(17.6)
620.9 2	1.6 3	¹³⁵ Pr(24 m)	296.12(24), 82.64(13.7), 213.45(13.0)
• 620.9 2	2.2×10^{-6} 3	²³³ U(1.592×10^5 y)	42.44(0.0862), 97.134(0.020), 54.699(0.0182)
620.94 24	0.31 4	¹⁷² Ta(36.8 m)	214.02(46), 95.23(17.5), 1109.27(12.4)
620.95 4	0.275 14	¹⁵⁹ Ho(33.05 m)	121.012(36.2), 131.973(23.6), 309.594(17.2)
620.96 10	0.22 3	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
620.98 18	0.055 11	⁶⁹ As(15.2 m)	232.69(11), 145.95(4.96), 86.78(3.44)
621.0		¹³³ Pr(6.5 m)	134.3(14), 74.0(10), 315.6(10)
621.0 5	†16 4	¹⁶³ Lu(238 s)	163.08(†100), 54.00(†88), 396.34(†63)
621.0 3	0.13	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
621.0 5	0.08 3	¹⁹⁸ Tl(5.3 h)	411.8044(82), 675.8874(11), 636.4(10.1)
621.02	0.41	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
621.03 23	0.089 3	¹⁷¹ Er(7.516 h)	308.31(64.4), 295.901(28.9), 111.621(20.5)
621.04 10	0.071 10	¹⁰⁵ Ru(4.44 h)	724.21(47), 469.37(17.5), 676.36(15.7)
621.1 4	1.3 6	¹⁰² Cd(5.5 m)	481.0(63), 1036.6(12.8), 505.1(9.6)
621.2 3	1.58 20	¹³² I(2.295 h)	667.718(99), 772.60(75.6), 954.55(17.6)
621.2 2	†15 3	¹⁵⁷ Yb(38.6 s)	230.92(†100), 340.7(†90), 241.7(†74)
621.25 6	0.57 9	²⁰⁴ At(9.2 m)	684.341(95), 516.318(90), 426.253(67.5)
621.26 8	0.0096 13	¹⁹⁴ Ir(19.15 h)	328.455(13.1), 293.545(2.55), 645.157(1.17)
• 621.26 8	0.60 6	¹⁹⁴ Au(38.02 h)	328.455(60), 293.545(10.2), 1468.91(6.3)
621.3 9	0.04 3	⁹⁰ Kr(32.32 s)	1118.69(39.0), 121.82(35.5), 539.49(30.8)
621.3 3	0.792 24	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
621.3 3	2.3 8	¹²³ Ag(0.309 s)	263.87(35.9), 409.79(13.2), 591.30(8.2)
621.3 5	0.50 22	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
621.3 2	0.036 10	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
621.4 1	1.52 8	¹⁴³ La(14.2 m)	620.3(2.34), 643.75(1.55), 798.14(1.18)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
• 621.4 5	0.039 10	¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
• 621.40 15	0.043 5	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
• 621.4 5	†0.0037 12	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
621.5 8	0.025 12	¹²⁷ Ba(12.7 m)	180.8(12), 114.8(9.3), 66.06(2.12)
621.5 1	0.301 20	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
621.5	†16.2	¹⁴⁴ Gd(4.5 m)	333.3(†100), 2432.6(†94.8), 629.5(†32.4)
621.5 10	0.18 4	²⁰⁸ At(1.63 h)	686.527(98), 660.040(89), 177.595(48.6)
621.5 5	†15	²²³ Rn(23.2 m)	591.8(†100), 635.2(†76), 416.0(†55)
621.542 14	0.538 15	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
621.55 7	1.89 11	¹⁵⁷ Pm(10.56 s)	160.61(35), 188.052(13.5), 571.27(5.39)
621.56 5	0.110 5	⁸⁹ Br(4.40 s)	1097.82(6.00), 997.93(4.26), 953.53(4.26)
621.6 2	0.30 4	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
621.63 19	0.57 9	⁸³ Se(22.3 m)	356.687(70), 510.17(43), 224.8(32.7)
621.65 46	0.048 15	¹⁷⁴ Ta(1.05 h)	206.50(58), 91.00(16.0), 1205.92(4.9)
621.7 2	51 3	⁵² Fe(45.9 s)	929.5(100), 869.9(93), 2037.6(50)
621.7 1	1.96 12	⁹⁴ Sr(75.3 s)	1427.7(94), 723.8(2.40), 703.9(2.13)
621.7 3	1.22 13	¹³⁹ Nd(29.7 m)	405.12(7), 1074.2(2.5), 669.0(1.52)
621.7 1	†3.6 4	¹⁷¹ Ta(23.3 m)	49.6(†100), 506.4(†54), 501.8(†22.6)
621.7 3	3.1 3	¹⁷⁶ Tm(1.9 m)	189.57(44.5), 1069.3(34), 381.8(21.8)
621.7 2	†2.8 1	²⁰³ At(7.4 m)	639.4(†100), 641.5(†55.8), 738.1(†38.4)
• 621.771 24	0.0258 9	⁹⁹ Mo(65.94 h)	739.50(12.1), 181.063(6.08), 140.511(4.52)
621.790 25	10.6 6	¹³⁴ I(52.6 m)	847.025(95.4), 884.090(64.9), 1072.547(15.0)
• 621.79 8	0.0053 7	¹⁴⁵ Eu(5.93 d)	893.73(66), 653.512(15.0), 1658.53(14.9)
621.8 5	2.4 4	³¹ Al(644 ms)	2316.7(18), 1694.93(10.4), 752.42(5.2)
621.8	0.55 24	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
621.8 5	0.28 8	¹⁴⁴ La(40.8 s)	397.440(94.3), 541.20(39.2), 844.8(22.3)
• 621.8 5	0.520 21	¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
621.8 3	0.048 10	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
• 621.80	>0.00017	¹⁷³ Lu(1.37 y)	272.105(21.2), 78.63(11.87), 100.724(5.24)
621.85 2	0.393 25	¹³⁵ Ce(17.7 h)	265.56(41.8), 300.07(23.5), 606.76(18.8)
621.87 20		¹⁸⁶ Ta(10.5 m)	197.93(50), 214.87(42.3), 510.82(37.5)
621.87 6	0.182 13	²⁴⁹ Cm(64.15 m)	634.31(1.5), 560.45(0.84), 368.76(0.35)
621.874 27	8.0 6	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
621.88 9	0.089 7	¹⁰¹ Tc(14.22 m)	306.85(88), 545.06(6.0), 127.23(2.86)
621.9 3	0.47 14	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
621.9 4	0.47 4	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
621.9 3	†4.0 6	¹⁸¹ Pt(51 s)	289.29(†100), 111.97(†100), 230.15(†92)
621.9 4	2.7 4	¹⁸⁶ Tl(27.5 s)	405.43(92), 402.72(45.9), 356.84(29.3)
621.94 3	9.93 12	¹⁰⁶ Rh(29.80 s)	511.842(20), 1050.39(1.56), 616.174(0.75)
621.94 3	0.316 8	¹⁰⁶ Ag(23.96 m)	511.842(17.0), 873.48(0.199), 1050.39(0.167)
621.974 19	0.335 13	¹⁹⁴ Ir(19.15 h)	328.455(13.1), 293.545(2.55), 645.157(1.17)
• 621.974 19	1.68 18	¹⁹⁴ Au(38.02 h)	328.455(60), 293.545(10.2), 1468.91(6.3)
• 621.98 20	0.025 6	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
• 622.0 4	0.0059 15	¹¹¹ Ag(7.45 d)	342.118(7), 245.422(1.24), 96.73(0.20)
622.0 3	0.25 7	¹²⁹ La(11.6 m)	278.6(25), 110.5(16.9), 457.0(8.0)
622.0 5	†8 3	¹⁷⁷ Tm(85 s)	104.5(†11.1), 517.5(†22.2), 44.5(†10)
622.0 2	0.62 6	¹⁸⁸ Tl(71 s)	412.7(88), 592.0(61), 504.2(23.3)
622.01 5	0.85 4	¹⁴¹ Pm(20.90 m)	1223.26(4.74), 886.22(2.44), 193.68(1.61)
622.1 2	14.5 4	¹⁰⁴ In(1.8 m)	658.0(100), 834.1(99), 878.1(29.4)
622.1 2	2.3 8	¹⁴⁵ Ho(2.4 s)	339.8(15), 312.9(14.3), 334.1(13.5)
622.2 1	8.78 18	⁷⁹ Rb(22.9 m)	688.1(23), 182.77(19.2), 143.41(13.9)
622.2 4	0.101 20	¹⁶³ Yb(11.05 m)	860.28(10.1), 63.62(6.5), 123.21(1.98)
622.3 2	0.098 20	⁹⁵ Rb(377.5 ms)	352.02(49), 204.02(15.1), 680.7(14.8)
622.3 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: $E_\gamma(I_\gamma)$
622.3 3	10.4 10	^{116}Cs (3.84 s)	393.5(<0.09), 524.3(76), 615.1(30.4)
622.3 4	0.43 14	^{161}Tm (33 m)	45.54(5.00), 1648.1(9.50), 84.40(9.4)
622.340 19	3.19 15	^{186}Ir (16.64 h)	296.911(64.0), 137.155(42), 434.849(34.4)
622.4 2	\dagger 74 3	^{113}I (6.6 s)	462.5(\dagger 100), 351.5(\dagger 43), 567.4(\dagger 36)
622.47 11	0.172 20	^{100}Sr (202 ms)	963.85(22.0), 898.50(18.9), 65.46(15.2)
622.5 5	2.65 21	^{95}Rh (5.02 m)	941.6(72), 1352.0(20.8), 677.6(5.80)
622.5 5	0.47 17	^{97}Sr (426 ms)	1905.0(25), 953.8(21.4), 652.2(11.4)
622.5 2	1.5 3	^{100}Nb (1.5 s)	535.60(45.7), 528.24(9.1), 159.547(8.8)
622.5 2	\dagger 4.2 4	^{185}Hg (21.6 s)	222.8(\dagger 100.0), 258.7(\dagger 98), 212.5(\dagger 58)
622.50 15	1.32 18	^{187}Pt (2.35 h)	106.46(9), 201.52(6.4), 110.04(5.7)
622.52 10	0.89 3	^{162}Tb (7.60 m)	260.070(37.2), 807.53(42.8), 888.20(38.7)
622.53 8	0.19	^{204}Bi (11.22 h)	899.15(98), 374.72(82), 984.02(59)
622.6 2	2.0 7	^{103}Zr (1.3 s)	248(100), 164.05(94), 126.30(84)
• 622.605 22	0.161 12	^{172}Lu (6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
622.7	0.7	^{148}Pr (2.27 m)	301.702(61), 1357.78(5.5), 1023.18(4.8)
• 622.705 35	0.0131 8	^{71}As (65.28 h)	174.954(82.00), 1095.490(4.08), 499.876(3.624)
• 622.75 20	0.0246 18	^{170}Lu (2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
622.751 13	0.97 7	^{157}Eu (15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
622.76 10	\dagger 0.84 5	^{153}Pm (5.4 m)	35.842(\dagger 100), 127.298(\dagger 75), 28.309(\dagger 34.6)
622.8 4	0.27 5	^{85}Zr (7.86 m)	454.20(45), 416.3(27.0), 1198.4(4.8)
622.8 2	0.066 12	^{142}Ba (10.6 m)	255.300(20.5), 1204.3(14.23), 895.2(13.9)
622.8 2	\dagger 22.2 15	^{152}Tb (17.5 h)	344.281(\dagger 1500), 586.294(\dagger 223), 271.135(\dagger 203)
622.8 2	0.22 3	^{183}Ir (58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
622.83 23	0.427 20	^{210}At (8.1 h)	1181.39(99.3), 245.31(79), 1483.39(46.5)
622.9 4	0.18 7	^{139}Sm (2.57 m)	273.7(37), 306.7(28.5), 596.3(8.0)
622.90 15	0.22 9	^{157}Tm (3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
622.97 10	1.80 14	^{149}Pr (2.26 m)	138.447(11.0), 165.087(9.9), 108.520(9.5)
623.0 3	0.17 6	^{75}Kr (4.3 m)	132.43(67), 154.66(20.8), 153.15(8.0)
623	>0.019	^{90}Nb (14.60 h)	1129.224(92.7), 2318.968(82.03), 141.178(66.8)
623.0 5	\dagger 1.5 4	^{183}Hg (9.4 s)	60.5(\dagger 100), 159.91(\dagger 21), 172.70(\dagger 17)
623.0 8	0.0013 4	^{251}Fm (5.30 h)	425.4(0.95), 480.4(0.392), 358.3(0.315)
• 623.026 15	0.166 14	^{169}Lu (34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
623.04 30	0.017 11	^{130}I (12.36 h)	536.09(99), 668.54(96), 739.48(82)
623.10 10	0.5 1	^{193}Hg (11.8 h)	257.97(61), 407.63(25), 573.25(14.2)
• 623.1 3	0.012 3	^{241}Cm (32.8 d)	471.805(71), 430.634(4.06), 132.413(3.86)
623.11 17	0.18 3	^{183}Au (42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
623.13 6	0.16 6	^{189}Pt (10.87 h)	721.41(9.3), 94.33(7.6), 568.84(7.1)
623.15 10	0.07 4	^{189}Pt (10.87 h)	721.41(9.3), 94.33(7.6), 568.84(7.1)
623.2 2	8.0×10^{-5} 4	^{104}Rh (4.34 m)	555.796(0.13), 767.72(0.0065), 1237.2(0.0042)
623.2 2	2.5 5	^{104}Ag (69.2 m)	555.796(92.6), 767.72(65.7), 941.7(25.0)
623.20 9	0.276 17	^{111}Pd (23.4 m)	580.00(0.8), 70.44(0.78), 1459.0(0.56)
623.20 9	0.40 12	^{111}Pd (5.5 h)	70.44(8.3), 391.25(5.4), 632.80(3.6)
623.27 20	0.011 3	^{228}Ac (6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
623.27 20	0.0088 19	^{228}Pa (22 h)	911.205(4.19), 463.005(1.250), 964.770(4.25)
• 623.29 15	0.0057 19	^{95}Tc (61 d)	204.117(63.25), 582.082(29.96), 835.149(26.63)
623.3 2	0.28 11	^{133}Te (55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
623.38 23	\dagger 1.3 3	^{165}Lu (10.74 m)	132.49(\dagger 100), 120.60(\dagger 100), 174.25(\dagger 47.0)
• 623.393 27	0.195 6	^{165}Tm (30.06 h)	242.917(35.5), 47.155(16.9), 297.369(12.71)
623.4 6	0.007 4	^{45}K (17.3 m)	174.276(74.4), 1705.6(53), 2353.6(14.12)
• 623.4	0.008 4	^{223}Ra (11.435 d)	269.459(13.7), 154.21(5.62), 323.871(3.93)
623.48 5	\dagger 24.2 15	^{173}W (7.5 m)	457.68(\dagger 100), 130.19(\dagger 31.5), 174.8(\dagger 29.1)
623.5 8	3.2 3	^{31}Na (17.0 ms)	2243.9(10.4), 171.1(4.8), 2022.2(3.8)
623.5 3	0.082 20	^{153}Dy (6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
623.5 2	\dagger 6	^{256}Es (7.6 h)	861.8(\dagger 100), 231.1(\dagger 61), 172.6(\dagger 49)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
623.502 6	0.0238 6	¹⁴⁵ Pr(5.984 h)	748.278(0.5250), 675.795(0.514), 72.500(0.261)
623.6 2	0.77 5	¹⁰¹ Ag(11.1 m)	261.0(53), 588.0(10.0), 667.3(9.8)
623.6 4	2.17 6	¹⁰⁹ Sn(18.0 m)	1099.4(30), 649.90(28.0), 1321.3(11.9)
623.6	†19	²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 635.18(†88)
623.64 16	0.052 6	⁹³ Kr(1.286 s)	253.42(41.2), 323.89(24.1), 266.83(20.6)
623.7 1	1.35 6	⁹² Kr(1.840 s)	142.307(64), 1218.6(60), 812.6(14.6)
623.70 20	0.066 5	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
623.7 3	5.5 3	¹⁰⁹ In(4.2 h)	203.5(74), 1148.9(4.3), 426.25(4.12)
623.72 29	1.79 20	¹⁰⁶ In(6.2 m)	632.66(100), 861.16(92), 997.87(48)
• 623.75 8	0.26 3	¹⁸⁸ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
• 623.8 7	†0.024 3	¹⁰¹ Rh(4.34 d)	306.85(†115), 545.06(†6.1), 127.23(†0.85)
623.8 5	0.31 6	¹³⁷ Nd(38.5 m)	75.5(17.0), 580.6(13), 306.60(10.0)
623.8 5	0.00051 12	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
• 623.8 5	†0.0098 24	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
623.8 5	0.075 13	²²⁸ Pa(22 h)	911.205(4.19), 463.005(1.250), 964.770(4.25)
623.9 3	0.075 25	¹⁵⁵ Ho(48 m)	240.19(12.5), 136.30(5.00), 45.38(5)
623.9 2	0.0023 4	¹⁸⁸ Re(16.98 h)	155.032(14.9), 632.99(1.25), 477.99(1.0)
623.9 2	†5.0 2	²⁰³ At(7.4 m)	639.4(†100), 641.5(†55.8), 738.1(†38.4)
623.93	0.17	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
624.0 2	1.0 3	¹⁰² Zr(2.9 s)	599.60(13.9), 535.30(10.6), 64.50(8.9)
624.0 10	0.017 4	¹¹¹ Pd(23.4 m)	580.00(0.8), 70.44(0.78), 1459.0(0.56)
624.0 1	0.019 1	¹¹³ Ag(5.37 h)	298.58(10), 258.8(1.64), 316.3(1.343)
• 624 1	0.066 22	¹²⁷ Sb(3.85 d)	685.7(37), 473.0(25.7), 783.7(15.0)
624.0 3	0.83 18	¹⁶⁴ Tm(5.1 m)	208.08(14.6), 314.97(10), 240.49(7.5)
624 2	1.4 3	¹⁶⁸ Lu(6.7 m)	198.82(28), 979.22(20), 896.12(15)
624.00 4	0.007	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
• 624.08 6	1.41 7	¹⁹¹ Pt(2.9 d)	538.90(13.7), 409.44(8.0), 359.90(6.0)
624.10 20	0.9 3	¹⁰² Nb(4.3 s)	296.611(79), 1633.10(41), 551.54(30)
624.1	3 1	¹⁵⁰ Ho(26 s)	653.3(100), 803.4(100), 393.9(93)
624.2 1	0.84 6	⁷⁵ Zn(10.2 s)	228.67(28.9), 432.29(20.2), 155.94(17.2)
624.2 9	0.088 17	⁸⁹ Nb(1.9 h)	1627.20(3.4), 1833.46(3.16), 3092.7(3.0)
624.2 2	†2.9 9	¹⁷¹ Hf(12.1 h)	122.0(†100), 662.2(†83), 347.18(†47)
624.2 3	†2.5 3	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
624.2 5	0.064 6	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
624.2 1	0.35 3	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
624.3 3	0.014 3	⁶³ Zn(38.47 m)	669.62(8), 962.06(6.5), 1412.08(0.75)
624.3 2	†2	¹³⁹ I(2.29 s)	527.7(†100), 571.2(†98), 536.6(†67)
624.3 7	0.095 6	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
• 624.312 9	0.0282 6	¹²⁹ Cs(32.06 h)	371.918(30.60), 411.490(22.31), 548.945(3.40)
624.32 6	0.74 5	⁹⁹ Sr(0.269 s)	125.118(16.1), 536.12(14.0), 1198.12(9.2)
624.34 5	0.097 3	¹²⁹ Te(69.6 m)	27.81(16.3), 459.60(7.70), 487.39(1.42)
624.4 5	1.01 9	¹¹⁰ Sb(23.0 s)	1211.87(92), 985.03(31.2), 1243.6(13.4)
624.4 3	†0.7	¹⁵⁸ Ho(11.3 m)	218.21(†100.0), 98.91(†70), 945.7(†37)
624.4	†16.3 6	¹⁷⁸ Ir(12 s)	266.1(†100.0), 131.6(†79), 363.1(†39.9)
624.4 1	0.148 16	²³⁰ Ac(122 s)	454.95(8), 508.20(5.15), 1243.9(3.50)
• 624.4 1	0.045 11	²³⁰ Pa(17.4 d)	951.95(1.65), 918.48(8.2), 454.95(6.27)
• 624.4 1	0.82×10 ⁻⁶	²³⁴ U(2.455×10 ⁵ y)	53.20(0.123), 120.90(0.0342), 454.95(0.000025)
624.4 4	0.22 3	²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
624.5 1	33 3	¹⁵⁹ Er(36 m)	649.1(23.4), 205.92(9.7), 165.9(5.0)
624.5 3	†1.8 2	¹⁸² Au(21 s)	154.76(†100), 264.33(†40.0), 855.41(†14.5)
624.54 12	0.19 4	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)
624.57 5	0.0833 25	¹²³ I(13.27 h)	158.97(83), 528.96(1.39), 440.02(0.428)
624.6 4	0.14	¹⁵⁴ Pm(1.73 m)	2057.76(17.1), 1393.9(14.4), 81.99(12.6)
624.7 1	0.00113 3	¹⁴⁴ Pr(17.28 m)	696.510(1.3), 2185.662(0.694), 1489.160(0.278)

• $t_{1/2} > 1$ d

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
624.7 4	0.24 13	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
624.7 3	†2.65 18	²⁰¹ Po(15.3 m)	890.1(†100), 240.1(†71.0), 904.2(†54.8)
• 624.75 14	0.081 10	¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 634.07(37)
• 624.754 5	4.37×10^{-7} 20	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
624.76 9	0.182 4	⁷⁷ Ge(11.30 h)	264.44(54), 211.03(30.8), 215.50(28.6)
624.78 7	1.03 7	²⁰⁵ Po(1.66 h)	872.39(37), 1001.21(28.8), 849.83(25.5)
• 624.78 2	$>2.0 \times 10^{-8}$	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
624.8 1	†100	¹⁵¹ Yb(1.6 s)	1050.2(†100), 1245.6(†100), 1332.2(†100)
624.85 88	0.04 3	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
• 624.885 4	0.00490 18	¹⁶⁹ Yb(32.026 d)	63.12077(44.2), 197.95788(35.8), 177.21402(22.16)
624.9 3	8.2 12	⁹⁸ Cd(9.2 s)	347.18(78), 1176.1(66.3), 107.28(43.7)
624.9 3	0.151 23	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
624.91 10	0.00359 22	¹⁰⁷ Cd(6.50 h)	93.124(1.45), 828.93(0.17), 796.462(0.0665)
624.98 13	†14 3	¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†33)
625.0 3	2.6 3	⁶⁹ Se(27.4 s)	97.98(66), 66.4(24.8), 691.8(16.6)
625.0 5	0.08 3	¹⁰³ Tc(54.2 s)	346.380(17.5), 136.079(16.6), 562.90(7.0)
625.0		¹⁰⁷ Sn(2.90 m)	1129.2(†100), 678.5(†100), 1540.6(†30)
625		¹²⁶ La(54 s)	460, 340, 256.10
625		¹⁵⁴ Tm(3.30 s)	542.0, 601.3, 560.0
625.05 5	0.059 14	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
625.1 2	2.98 14	¹⁹⁰ Au(42.8 m)	295.78(71.0), 301.82(23.4), 597.67(9.4)
625.1 5	†35 3	²⁰² Po(44.7 m)	688.6(†1000), 316.0(†286), 165.7(†174)
• 625.18 10	4.7 3	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
625.2 4	1.05 21	¹⁰³ Cd(7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
625.2 7	>0.11	²⁰⁹ Rn(28.5 m)	408.32(50.3), 745.78(22.8), 337.45(14.5)
625.23 8	1.18 8	¹⁴³ Gd(112 s)	271.94(84), 588.00(15.7), 798.89(10.7)
• 625.257 6	0.320 3	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
625.257 6	0.23 4	¹⁵⁴ Tb(9.4 h)	123.071(30), 247.925(22.1), 540.18(20)
625.257 6	0.163 7	¹⁵⁴ Tb(21.5 h)	123.071(26), 1274.436(10.5), 2187.10(9.9)
625.257 6		¹⁵⁴ Tb(22.7 h)	247.925(79), 346.643(69), 1419.81(46)
625.27 20	0.6 1	¹⁵⁶ Pm(26.70 s)	173.75(52.0), 1147.84(20.5), 117.42(13.8)
625.29 46	0.41 12	¹⁶⁶ Lu(2.65 m)	228.12(77.3), 337.50(41), 367.95(31.4)
625.30 20	1.13 4	⁸⁸ Nb(7.8 m)	1057.01(89.3), 1082.53(53.9), 399.41(45.7)
625.3 4	1.04 20	⁹⁶ Pd(122 s)	124.70(65), 762.3(50.0), 499.7(17.9)
625.3 3	0.094 22	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
625.3 6	0.66 22	¹⁶⁶ Lu(1.41 m)	228.12(15), 102.38(13), 285.07(11.0)
625.3 3	2.86 18	¹⁸⁶ Tl(27.5 s)	405.43(92), 402.72(45.9), 356.84(29.3)
625.3 2	0.129 13	²⁴⁹ Es(102.2 m)	379.5(40.4), 813.2(9.2), 375.1(3.3)
625.4	3.59 9	¹⁴¹ Ba(18.27 m)	190.328(46.0), 304.194(25.4), 276.948(23.4)
625.4 8	0.08 6	¹⁵⁶ Ho(56 m)	266.35(54.7), 137.83(51), 366.25(10.73)
625.4 2	82 8	¹⁹⁰ Tl(3.7 m)	416.4(91), 731.1(37), 839.7(24)
625.4 2	11.1 24	¹⁹⁰ Tl(2.6 m)	416.4(79), 683.5(8.7), 1099.9(7.1)
625.5 4	0.170 25	¹⁰³ Ag(65.7 m)	118.72(31.2), 148.193(28.3), 266.86(13.3)
625.5 3	7.0 9	¹¹⁴ Rh(1.85 s)	332.9(87), 519.8(48.4), 618.7(31)
625.5 7	0.050 12	¹²⁷ Ba(12.7 m)	180.8(12), 114.8(9.3), 66.06(2.12)
625.511 19	1.089 25	¹⁸⁷ W(23.72 h)	685.774(27.3), 479.531(21.8), 72.001(11.14)
• 625.568 20	0.310 7	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
625.6 5	0.10 3	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
625.6 3	2.4 4	¹³¹ Sb(23.03 m)	943.4(47), 933.1(26.1), 642.30(23)
625.6 2	0.034 9	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
625.6 2	0.014 4	¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
625.6 1	0.180 11	²²⁸ Fr(39 s)	473.7(10.2), 474.0(7.6), 410.40(6.3)
625.605 24	0.040 5	⁶¹ Cu(3.333 h)	282.956(12.2), 656.008(10.77), 67.412(4.23)
625.63 4	0.26 4	¹⁷⁵ Tm(15.2 m)	514.868(65), 941.23(15), 363.942(12.7)

• $t_{1/2} > 1$ 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: $E_\gamma(I_\gamma)$
625.66 7	†142 15	²³⁴ Pa(1.17 m)	1001.03(†837000), 766.38(†294000), 742.81(†80000)
• 625.66 7	0.076 7	²³⁴ Np(4.4 d)	1558.31(18.72), 1527.21(11.2), 1601.80(9.1)
625.7 3	0.018 18	¹⁴⁹ Tb(4.118 h)	352.24(29.43), 164.98(26.4), 388.57(18.37)
625.7 4	0.098 24	¹⁶¹ Er(3.21 h)	826.6(3.0), 211.15(12.2), 592.6(3.7)
625.7 3	0.18 3	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
625.76 13	0.09 3	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
625.9 3	†28 3	¹¹⁷ Pd(4.3 s)	247.5(†100), 649.9(†41), 323.9(†37)
625.9 2	†2.9 4	¹³¹ Ce(10.3 m)	169.42(†100), 414.25(†68), 119.18(†44)
625.918 13	0.0300 12	¹⁷³ Hf(23.6 h)	123.672(83), 296.974(33.9), 139.634(12.7)
• 625.95 4	0.311 13	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
626.0 3	2.16 19	¹⁰⁴ Cd(57.7 m)	83.7(47), 709.6(19.5), 559.1(6.3)
626.0 2	3.82 22	¹²⁸ La(5.0 m)	284.00(87), 479.24(54), 643.65(14.7)
626.0 4	†2.6 10	¹⁵⁵ Nd(8.9 s)	180.574(†100), 418.99(†75), 955.08(†50)
• 626	0.022 4	¹⁵⁶ Eu(15.19 d)	811.79(9.70), 88.9667(8.4), 1230.68(7.98)
626.0 10	0.57 11	¹⁶⁴ Tb(3.0 m)	168.838(25.4), 754.80(23.3), 215.07(21)
626.0 4	†1.8 4	¹⁸⁵ Pt(33.0 m)	229.60(†100), 135.3(†80), 197.4(†74)
626.0 1	0.90 14	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
626.1 3	3.9 5	¹¹² Rh(6.8 s)	348.70(87), 560.5(49), 1098.6(39)
626.1	†1.5	¹⁴⁸ Cs(158 ms)	141.7(†100), 687.2(†23), 545.5(†20)
626.1 2	0.017 3	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
626.11 4	0.0234 14	²⁵⁰ Bk(3.217 h)	989.12(45), 1031.85(35.6), 1028.65(4.91)
626.11 4	1.18 10	²⁵⁰ Es(2.22 h)	989.12(13.3), 1031.85(10.6), 828.82(5.5)
626.17 10	†0.9 3	¹⁰¹ Nb(7.1 s)	276.10(†100), 157.466(†32), 13.5(†32)
626.20 10	0.60 4	⁸⁹ Kr(3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
626.21 9	1.74 6	¹⁰³ Cd(7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
626.22 10	0.15 8	¹⁹³ Hg(11.8 h)	257.97(61), 407.63(25), 573.25(14.2)
• 626.259 10	0.214 13	¹¹⁰ Ag(249.79 d)	657.7622(94.0), 884.685(72.2), 937.493(34.13)
626.259 10	1.47 10	¹¹⁰ In(4.9 h)	657.7622(98.3), 884.685(92.9), 937.493(68.4)
• 626.28 10	0.277 8	¹⁵⁶ Tb(5.35 d)	534.318(66.6), 199.2132(40.9), 1222.36(31.00)
626.3 1	0.022 3	¹²¹ I(2.12 h)	212.189(84), 532.08(6.07), 598.74(1.47)
626.36 6	0.224 19	⁸¹ Ga(1.221 s)	216.47(37.4), 828.26(22.1), 711.18(17.6)
626.37 20	0.6 1	¹⁵⁶ Pm(26.70 s)	173.75(52.0), 1147.84(20.5), 117.42(13.8)
626.40 5	5.6 6	⁷⁷ Zn(2.08 s)	189.49(28.1), 473.94(19.7), 1832.0(12.4)
626.4 1	0.090 11	¹⁰⁷ Ru(3.75 m)	194.05(9.9), 847.93(5.3), 462.61(3.66)
626.4 1	0.37 3	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
626.4 2	13	¹¹⁹ Ag(2.1 s)	366.2(12.1), 399.1(10.9), 213.4(8.8)
626.4 5	0.10 3	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
626.4 6	0.0040	²¹⁴ Bi(19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
• 626.422 10	0.08 4	²⁰⁰ Tl(26.1 h)	367.943(87), 1205.717(29.9), 579.298(13.8)
626.45 13	0.84 11	⁸⁰ Ge(29.5 s)	265.36(27.0), 110.4(6.5), 1564.3(4.9)
626.49 8	0.285 19	⁹⁰ Kr(32.32 s)	1118.69(39.0), 121.82(35.5), 539.49(30.8)
626.5 4	0.20 5	¹¹⁷ Cs(8.4 s)	204.8(15.0), 29.7(9.9), 205.6(6.8)
626.537 17	0.059 22	¹⁸⁰ Re(2.44 m)	902.795(90), 103.557(22.2), 825.357(9.9)
626.56 27	0.7 3	⁵⁴ V(49.8 s)	834.848(97.1), 989.01(80.1), 2259.35(45.6)
626.56 9	†3.61 25	¹⁸⁴ Ir(3.09 h)	263.97(†100), 119.80(†45), 390.38(†38)
626.58 6	2.92 11	¹⁴³ Cs(1.78 s)	195.554(13), 232.421(8.32), 306.424(6.80)
626.6 3	0.050 13	¹²¹ Xe(40.1 m)	252.7(13), 132.8(10.9), 445.2(7.7)
626.63 9	0.44 3	²⁰⁸ At(1.63 h)	686.527(98), 660.040(89), 177.595(48.6)
626.69 12	3.2 3	⁷⁷ Rb(3.75 m)	66.52(57), 178.99(22.2), 393.37(9.7)
626.7 3	0.146 10	¹¹⁸ I(13.7 m)	605.71(86.0), 545.12(10.9), 600.71(10.2)
626.7 3	0.114 23	¹²³ Cs(5.94 m)	97.3(23), 596.7(10.1), 83.3(4.1)
626.7 3	2.8 3	¹³⁰ Sb(39.5 m)	793.53(100), 839.49(100), 331.05(78)
626.7 3	1.0 3	¹⁵¹ Pr(18.90 s)	880.19(13), 189.057(11.8), 484.501(11.3)
• 626.70 3	0.585 6	²⁰⁵ Bi(15.31 d)	1764.36(1.368), 703.44(31), 987.62(0.585)

• $t_{1/2} > 1$ d

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
626.73	0.36	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
626.77 3	17.8 5	⁹⁵ Ru(1.643 h)	336.43(70.2), 1096.76(21.0), 1178.66(5.16)
626.77 4	1.91 11	²⁰⁷ At(1.80 h)	814.41(44.5), 588.33(19.2), 300.654(12.8)
626.8 1	0.043 3	⁹¹ Sr(9.63 h)	1024.3(33), 749.8(23.61), 652.9(8.0)
626.8 3	†381 95	¹⁵⁷ Ho(12.6 m)	279.97(†47600), 341.16(†37000), 193.41(†15200)
626.81 25	0.30 7	¹²⁵ Cd(0.57 s)	1027.53(25.8), 1173.16(25.1), 736.65(12.6)
626.89 11	0.95 17	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
626.9 2	0.23 5	²³⁶ Pa(9.1 m)	642.35(37.0), 687.59(9.9), 1762.7(6.0)
626.94 9	0.11 3	¹¹⁷ Cd(2.49 h)	273.349(28), 1303.27(18.4), 344.459(17.9)
627.0 4	0.28 7	⁹⁹ Pd(21.4 m)	136.00(73), 263.60(15.2), 673.38(6.9)
627.0 1	0.39 3	¹⁰¹ Tc(14.22 m)	306.85(88), 545.06(6.0), 127.23(2.86)
627.0 4	1.28 23	¹⁰³ Cd(7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
627.0 2	0.22 5	¹⁰⁴ Tc(18.3 m)	358.0(89), 530.5(15.6), 535.1(14.7)
627.0 5	0.043 11	¹¹⁵ Ag(20.0 m)	229.08(18), 212.80(4.4), 472.70(4.0)
627	0.07	¹⁴⁸ Dy(3.1 m)	620.24(96), 1247.2(1.4), 178.3(0.5)
• 627.041 20	0.836 14	¹⁷¹ Lu(8.24 d)	739.78(47.8), 19.394(13.7), 667.404(11.04)
627.08 3	2.35 9	¹⁸⁹ Pt(10.87 h)	721.41(9.3), 94.33(7.6), 568.84(7.1)
627.10 7	10.3 6	⁶³ Ga(32.4 s)	637.04(11), 192.94(5.7), 650.14(4.9)
627.1 3	5.1 5	¹³⁰ Sb(6.3 m)	839.49(100), 793.53(86), 182.36(41)
• 627.18 20	†5.6×10 ³ 17	²⁴¹ Am(432.2 y)	59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸)
627.2 2	0.56 6	¹⁸⁵ Ir(14.4 h)	254.4(13.3), 1828.8(10), 60.0(5.7)
627.2 1	1.50 9	¹⁸⁸ Tl(71 s)	412.7(88), 592.0(61), 504.2(23.3)
627.21 20	0.69 7	⁸⁶ Y(48 m)	1153.01(0.69), 1076.64(0.69), 98.68
627.23 20	0.014 3	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
627.24 3	1.78 9	¹³⁹ Cs(9.27 m)	1283.23(8.3), 1420.66(0.91), 2110.91(0.76)
627.26 15	0.24	¹¹⁷ Cd(3.36 h)	1997.33(26), 1065.98(23.1), 564.397(14.7)
627.3 2	0.14 10	¹¹⁴ Sb(3.49 m)	1299.90(99), 887.60(17.4), 327.18(7.0)
627.3 2	0.98 10	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
627.4 19	†0.8 1	¹⁴² Xe(1.22 s)	571.83(†100), 657.05(†79), 538.24(†77)
627.40 11	1.0 3	¹⁸² Hf(61.5 m)	942.80(18.8), 799.64(9.4), 114.3152(6.2)
627.44 15	0.228 12	¹⁴⁷ Pr(13.4 m)	77.9921(15), 314.675(13.2), 641.380(10.0)
627.45 30	0.206 21	¹⁴⁰ Cs(63.7 s)	602.345(71.1), 908.25(11.6), 1200.25(6.39)
627.5 5	>0.18	¹³⁷ Nd(38.5 m)	75.5(17.0), 580.6(13), 306.60(10.0)
627.5 3	0.27 3	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
627.5 4	0.30 4	¹⁸⁴ Au(53.0 s)	162.97(50), 272.98(40), 362.47(17.5)
627.6 6	†1.0	¹⁷⁹ Os(6.5 m)	65.39(†100), 218.6(†17), 32.3(†17)
627.6 7	0.51 6	¹⁹⁹ Bi(27 m)	560.1(22.0), 424.85(22), 841.7(11)
627.7 3	0.23 5	⁷⁵ Kr(4.3 m)	132.43(67), 154.66(20.8), 153.15(8.0)
627.7 3	0.180 18	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
627.7 3	0.063 17	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
627.7	†25	¹⁶³ Ta(10.6 s)	396.0(†100), 451.1(†70), 448.7(†60)
627.7 3	0.064 20	¹⁷⁹ Re(19.5 m)	430.221(28), 289.968(26.9), 1680.244(13.0)
627.7 1	0.20 5	¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
627.72 10	32.6 10	⁸⁶ Y(14.74 h)	1076.64(83), 1153.01(30.5), 777.35(22.4)
627.72 20	0.014	¹¹⁹ Te(16.03 h)	644.01(84), 699.85(10.1), 1749.65(3.95)
627.79 16	0.13 4	¹⁸¹ Re(19.9 h)	365.57(56), 360.70(20), 639.30(6.4)
627.8 4	0.0008 3	⁶² Zn(9.186 h)	596.56(26), 40.84(25.5), 548.35(15.3)
627.8 3	†54 9	¹⁴⁰ Tb(2.4 s)	328.6(†104), 507.6
627.84 10	†0.33 3	¹⁵³ Pm(5.4 m)	35.842(†100), 127.298(†75), 28.309(†34.6)
627.87 18	0.33 5	¹⁹⁷ Pb(43 m)	385.85(74), 387.72(25.1), 222.45(24.6)
• 627.884 85	0.0017 4	¹²⁹ Cs(32.06 h)	371.918(30.60), 411.490(22.31), 548.945(3.40)
627.9 3	1.99 22	⁹⁹ Zr(2.1 s)	469.140(55), 546.13(48.6), 593.990(27.4)
627.9 3	†9.7 15	¹⁰⁹ Tc(0.87 s)	194.6(†100), 128.7(†51), 96.2(†48)
627.9 10	0.014	¹⁵⁰ Pm(2.68 h)	333.971(68), 1324.51(17.5), 1165.739(15.8)

• $t_{1/2} > 1$ 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: $E_\gamma(I_\gamma)$
627.9 5	$\dagger 0.66$ 19	$^{164}\text{Hf}(111 \text{ s})$	122.1($\dagger 100$), 153.3($\dagger 47$), 313.7($\dagger 22$)
627.95 5	7.0 4	$^{75}\text{Zn}(10.2 \text{ s})$	228.67(28.9), 432.29(20.2), 155.94(17.2)
627.960 30	2.20 13	$^{134}\text{I}(52.6 \text{ m})$	847.025(95.4), 884.090(64.9), 1072.547(15.0)
628.0 2	$\dagger 13.2$	$^{113}\text{I}(6.6 \text{ s})$	462.5($\dagger 100$), 622.4($\dagger 74$), 351.5($\dagger 43$)
628.0 3	$\dagger 0.31$ 5	$^{129}\text{Ba}(2.17 \text{ h})$	182.30($\dagger 100$), 1459.1($\dagger 50.0$), 202.38($\dagger 33.7$)
628.0	0.7	$^{144}\text{Tb}(4.25 \text{ s})$	743.0(12), 1001.6(7), 959.36(4.7)
628.0 3	0.033 21	$^{195}\text{Tl}(1.16 \text{ h})$	563.52(10.5), 884.47(10.0), 1363.88(8.4)
628.03 6	6.7 6	$^{158}\text{Tm}(3.98 \text{ m})$	192.13(62), 335.10(16.8), 1149.83(7.6)
628.05 4	$\dagger 35.3$ 23	$^{102}\text{Tc}(4.35 \text{ m})$	475.070($\dagger 115$), 631.28($\dagger 21.3$), 1615.3($\dagger 20.8$)
628.05 4	0.78 8	$^{102}\text{Tc}(5.28 \text{ s})$	475.070(7), 468.59(0.88), 865.5(0.87)
• 628.05 4	8.3 4	$^{102}\text{Rh}(2.9 \text{ y})$	475.070(95), 631.28(55.9), 697.49(43.9)
• 628.05 4	$\dagger 4.6$ 4	$^{102}\text{Rh}(207 \text{ d})$	475.070($\dagger 47$), 1103.16($\dagger 2.99$), 468.59($\dagger 2.99$)
628.1 2	0.074 25	$^{129}\text{La}(11.6 \text{ m})$	278.6(25), 110.5(16.9), 457.0(8.0)
628.1 6	0.016 5	$^{165}\text{Yb}(9.9 \text{ m})$	80.11(49), 68.86(9.1), 1090.28(4.4)
628.1 3	0.16 3	$^{194}\text{Pb}(12.0 \text{ m})$	581.82(18.8), 1519.45(16.4), 203.82(16.2)
628.1 1	0.24 4	$^{234}\text{Pa}(6.70 \text{ h})$	131.30(18), 946.00(13.4), 883.24(9.6)
628.14 25	1.34	$^{154}\text{Pm}(2.68 \text{ m})$	184.810(32), 81.99(15.4), 546.66(14.5)
628.2 2	2.6 4	$^{119}\text{Ag}(2.1 \text{ s})$	626.4(13), 366.2(12.1), 399.1(10.9)
628.2 2	0.0118 17	$^{121}\text{I}(2.12 \text{ h})$	212.189(84), 532.08(6.07), 598.74(1.47)
628.2 5	$\dagger 3.8 \times 10^2$	$^{157}\text{Ho}(12.6 \text{ m})$	279.97($\dagger 47600$), 341.16($\dagger 37000$), 193.41($\dagger 15200$)
628.26 22	0.00158 25	$^{123}\text{I}(13.27 \text{ h})$	158.97(83), 528.96(1.39), 440.02(0.428)
• 628.30 20	0.008 4	$^{195}\text{Hg}(41.6 \text{ h})$	261.75(30.9), 560.27(7), 387.87(2.15)
628.37 4	2.70 13	$^{174}\text{Tm}(5.4 \text{ m})$	366.526(92), 992.128(87), 272.918(86)
• 628.37 4	0.0145 17	$^{174}\text{Lu}(142 \text{ d})$	272.918(0.550), 992.128(0.546), 176.645(0.470)
628.4 3	0.74 14	$^{91}\text{Tc}(3.14 \text{ m})$	2450.90(13.5), 1639.90(9.2), 1605.20(7.77)
628.4 2	0.079 18	$^{149}\text{Tb}(4.118 \text{ h})$	352.24(29.43), 164.98(26.4), 388.57(18.37)
• 628.4 3	0.75 9	$^{190}\text{Ir}(11.78 \text{ d})$	186.718(52.4), 605.24(39.9), 518.55(34.0)
628.402 24	0.164 5	$^{131}\text{La}(59 \text{ m})$	108.081(25.0), 417.783(18.0), 365.162(16.9)
628.47 12	0.29 4	$^{162}\text{Yb}(18.87 \text{ m})$	163.35(40.0), 118.70(33.6), 576.10(3.24)
628.5 2	0.209 17	$^{249}\text{Es}(102.2 \text{ m})$	379.5(40.4), 813.2(9.2), 375.1(3.3)
628.55 25	0.067 8	$^{193}\text{Au}(17.65 \text{ h})$	186.17(10.1), 255.57(6.7), 268.22(3.9)
628.6 2	16.7 5	$^{61}\text{Mn}(0.71 \text{ s})$	206.8(8.2), 391.0(1.1), 422.0(0.68)
628.6 1	$\dagger 1.87$ 17	$^{123}\text{La}(17 \text{ s})$	92.5($\dagger 100$), 937.3($\dagger 43$), 153.6($\dagger 43$)
• 628.6 2	8.4×10^{-5} 19	$^{127}\text{Te}(109 \text{ d})$	57.61(0.50), 658.89(0.0122), 593.31(0.00225)
628.6 1	2.66 8	$^{141}\text{Sm}(22.6 \text{ m})$	196.88(74), 431.6(40.4), 777.6(20.3)
628.6 1	3.6 3	$^{206}\text{Fr}(15.9 \text{ s})$	575.3(12), 559.0(8.19), 161.4(1.2)
628.6 1	1.10 23	$^{207}\text{Rn}(9.25 \text{ m})$	344.53(46), 747.15(14.2), 402.68(11.9)
628.63 26	3.22 21	$^{116}\text{Te}(2.49 \text{ h})$	93.70(31.4), 102.97(1.95), 637.9(0.755)
628.7 2	4.1 2	$^{142}\text{Eu}(1.22 \text{ m})$	768.1(100), 1023.3(92.0), 556.6(86.6)
628.704 28	0.099 15	$^{157}\text{Eu}(15.18 \text{ h})$	63.929(23.0), 410.723(17.5), 370.509(11.0)
628.75 9	31 2	$^{128}\text{Sb}(9.01 \text{ h})$	753.82(100), 743.22(100), 314.12(61)
628.759 5	0.025 6	$^{200}\text{Au}(48.4 \text{ m})$	367.943(19), 1225.479(10.7), 1262.950(3.12)
• 628.759 5	1.00 8	$^{200}\text{Tl}(26.1 \text{ h})$	367.943(87), 1205.717(29.9), 579.298(13.8)
628.8 7	0.25 9	$^{74}\text{Kr}(11.50 \text{ m})$	89.65(31), 203.0(18.0), 296.67(9.9)
628.8 2	0.91 23	$^{75}\text{Rb}(19.0 \text{ s})$	178.98(<63), 178.97(>51), 187.21(8.7)
628.8 3	0.60 7	$^{141}\text{Xe}(1.73 \text{ s})$	909.23(24.0), 118.705(16.1), 105.937(9.8)
628.8 1	0.238 25	$^{230}\text{Ac}(122 \text{ s})$	454.95(8), 508.20(5.15), 1243.9(3.50)
628.86 49	0.062 10	$^{174}\text{Ta}(1.05 \text{ h})$	206.50(58), 91.00(16.0), 1205.92(4.9)
628.88 7	5.6 4	$^{205}\text{At}(26.2 \text{ m})$	719.30(31), 669.41(8.6), 520.44(4.41)
628.9 4	$\dagger 7$	$^{135}\text{Pm}(49 \text{ s})$	198.5($\dagger 100$), 207.2($\dagger 70$), 463.5($\dagger 62$)
628.9 3	2.8 4	$^{169}\text{Ho}(4.7 \text{ m})$	788.4(21.2), 853.0(11.2), 760.8(10)
628.92 6	0.13 4	$^{95}\text{Ru}(1.643 \text{ h})$	336.43(70.2), 1096.76(21.0), 626.77(17.8)
629.0 1	0.33 11	$^{133}\text{Te}(55.4 \text{ m})$	912.671(55.28), 647.51(19.4), 863.955(15.6)
629.0 10	2.7 5	$^{246}\text{Am}(39 \text{ m})$	679.0(53), 205.0(36), 152.9(25)

• $t_{1/2} > 1 \text{ d}$

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
• 629.10 10		¹⁵⁶ Tb(5.35 d)	534.318(66.6), 199.2132(40.9), 1222.36(31.00)
629.1 4	1.6 1	¹⁹⁶ Os(34.9 m)	407.9(5.9), 126.2(5.3), 315.4(2.5)
629.1 2	24.0 12	²⁰¹ Bi(108 m)	936.2(11.3), 1014.1(10.7), 786.4(9.5)
629.2 2	†100	⁹⁴ Kr(0.20 s)	764.5(†71), 219.466(†67.4), 358.8(†39.4)
629.2 4	0.017 4	¹¹² Ag(3.130 h)	617.27(43), 1387.67(5.4), 606.49(3.1)
629.2 2	†0.9 3	¹⁵⁸ Ho(11.3 m)	218.21(†100.0), 98.91(†70), 945.7(†37)
629.2 1	1.33 20	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
629.23 3	0.099 3	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
629.3 4	†100 7	¹⁸³ Pt(43 s)	316.7(†53), 328.8(†36), 312.6(†28)
629.32 7	7.0 4	¹⁶⁶ Lu(2.65 m)	228.12(77.3), 337.50(41), 367.95(31.4)
629.4 4	2.3 3	⁶⁹ Ni(11.4 s)	1871.1(40.9), 679.7(39.7), 1213.0(39.3)
629.4 3	0.50 5	¹⁰⁰ Cd(49.1 s)	936.55(66), 139.71(6.7), 582.5(6.3)
629.40 5	0.046 5	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
629.4 1	0.35 5	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
629.5	†32.4	¹⁴⁴ Gd(4.5 m)	333.3(†100), 2432.6(†94.8), 347.1(†27.9)
629.6 4	0.013 7	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
629.64 7	2.7 3	¹⁸⁷ Pt(2.35 h)	106.46(9), 201.52(6.4), 110.04(5.7)
629.7 8	†150 69	¹⁰⁵ Ag(7.23 m)	319.14(†63000), 306.25(†12800), 442.37(†5900)
• 629.70 4	0.360 16	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
629.74 5	0.163 15	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
629.75 20	0.34 3	⁸⁹ Kr(3.15 m)	220.948(20.1), 586.03(16.6), 904.27(7.2)
629.755 73	0.111 16	²²⁷ Fr(2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)
629.85 7	1.34 3	²⁰⁷ Po(5.80 h)	992.33(59.3), 742.64(28.2), 911.79(16.95)
629.89 10	†6.9 4	¹⁶⁵ Lu(10.74 m)	132.49(†100), 120.60(†100), 174.25(†47.0)
629.9 6	0.073 22	¹⁰⁹ In(4.2 h)	203.5(74), 623.7(5.5), 1148.9(4.3)
629.9 2	0.0152 17	¹²¹ I(2.12 h)	212.189(84), 532.08(6.07), 598.74(1.47)
629.9 3	0.62 7	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
629.95 3	24.8 5	⁷² Ga(14.10 h)	834.01(96), 2201.69(25.9), 2507.82(12.78)
• 629.95 3	7.92 14	⁷² As(26.0 h)	834.01(80), 1463.95(1.107), 1050.73(0.984)
629.95 20		¹¹⁸ Ag(3.76 s)	487.77(60), 677.13(11.9), 2788.7(11.8)
• 629.987 8	89	¹⁴⁸ Pm(41.29 d)	550.284(94.5), 725.673(32.7), 1013.808(20.20)
• 629.987 8	71.9 16	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 611.293(20.5), 553.231(12.9)
630.0 1	0.44 18	¹⁰⁴ Tc(18.3 m)	358.0(89), 530.5(15.6), 535.1(14.7)
630 1	†24 3	¹¹⁷ Pd(4.3 s)	247.5(†100), 649.9(†41), 323.9(†37)
630.1 2	1.13 18	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
630.102 14	2.7 3	²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
630.102		²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
630.14 7	2.22 13	⁹¹ Kr(8.57 s)	108.788(43.5), 506.592(19.1), 612.87(7.7)
630.19 2	13.3 4	¹³² I(2.295 h)	667.718(99), 772.60(75.6), 954.55(17.6)
• 630.19 2	0.95 3	¹³² Cs(6.479 d)	667.718(98), 505.79(0.73), 1317.927(0.585)
630.2 3	1.6 3	¹¹⁸ Cs(14 s)	337.4(100), 472.8(37.4), 586.6(15.4)
630.2 2	0.7	¹⁴⁹ Dy(0.490 s)	361.4(0.8), 290.7(0.8), 786.6(0.8)
630.2 2	0.17 7	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
630.237 19	0.189 3	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
630.24 10	†1.25 7	¹⁵³ Pm(5.4 m)	35.842(†100), 127.298(†75), 28.309(†34.6)
630.3 3	0.069 15	⁹⁵ Rb(377.5 ms)	352.02(49), 204.02(15.1), 680.7(14.8)
630.3 3	0.9 4	¹⁰⁴ Tc(18.3 m)	358.0(89), 530.5(15.6), 535.1(14.7)
630.3 3	0.0010 4	¹⁰⁴ Rh(42.3 s)	358.0(0.0160)
630.3	0.99	¹⁴⁹ Ho(21.1 s)	1090.7(74.8), 1073.2(6.37), 1583.6(4.48)
630.3 2	†1.4 4	¹⁵⁸ Ho(11.3 m)	218.21(†100.0), 98.91(†70), 945.7(†37)
630.3 7	†0.18 9	¹⁶⁰ Ho(5.02 h)	728.18(†100), 879.383(†65.9), 962.317(†59.1)
630.3 7	0.09 4	¹⁶⁰ Ho(25.6 m)	728.18(46.9), 879.383(26.6), 962.317(25.6)
630.3 3	0.20 3	¹⁶⁴ Lu(3.14 m)	123.3(34.0), 740.52(12.2), 262.22(10.8)
630.3 1	0.68 3	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: $E_\gamma(I_\gamma)$
• 630.33 26	0.000105 11	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
• 630.354 14	0.0230 25	¹⁸⁶ Re(90.64 h)	137.155(8.22), 767.508(0.0255), 333.4(0.000058)
630.354 14	4.42 19	¹⁸⁶ Ir(16.64 h)	296.911(64.0), 137.155(42), 434.849(34.4)
630.354 14	18.0 14	¹⁸⁶ Ir(2.0 h)	137.155(27), 767.508(21.2), 773.276(13.5)
630.37 13	0.043 9	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)
630.37 16	†13 1	¹⁵⁹ Yb(1.58 m)	166.16(†500), 177.12(†159), 390.20(†113)
630.4		¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
630.4 3	13.6 11	¹⁶⁸ Dy(8.7 m)	192.5(32.8), 487.0(22.5), 443.3(15.5)
630.5 2	0.06	¹⁴⁰ Sm(14.82 m)	225.5(>10), 225.4(10), 140.0(5.0)
630.5 3	†3.2	¹⁴⁹ Tb(4.16 m)	795.9(†111), 651(†37), 164.98(†8.3)
630.5 2		¹⁴⁹ Tm(0.9 s)	796.2(18), 158.8(12.3), 416.7(11)
630.5 1	†2.50 25	¹⁷¹ Ta(23.3 m)	49.6(†100), 506.4(†54), 501.8(†22.6)
630.5 6	†11.0 20	¹⁷² W(6.6 m)	38.9(†100), 423.3(†44), 89.8(†33.0)
630.58 3	0.140 5	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
630.58 14	3.3 3	¹⁹⁵ Pb(15.0 m)	383.64(106.9), 394.21(44), 878.40(24.2)
630.6 3	0.291 23	⁸¹ Sr(22.3 m)	153.54(33.8), 147.76(30.1), 443.34(17.5)
• 630.60 5	0.0376 19	¹¹⁰ Ag(249.79 d)	657.7622(94.0), 884.685(72.2), 937.493(34.13)
630.6 3	†1.0 2	²⁰³ At(7.4 m)	639.4(†100), 641.5(†55.8), 738.1(†38.4)
630.7 2		¹³⁰ Pr(40.0 s)	951.9, 499.0, 1405
630.7 2	11	¹³⁶ Te(17.5 s)	2077.9(22), 333.99(19), 578.75(18)
630.7 2		¹³⁷ Te(2.49 s)	738.2, 578.75, 333.99
630.7 2	0.005 1	¹⁷¹ Er(7.516 h)	308.31(64.4), 295.901(28.9), 111.621(20.5)
• 630.706 17	0.438 19	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
630.80 30	0.038 14	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
630.8 6	0.14 7	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
630.8 3	0.19	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
630.83 37	0.46 7	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
630.85 15	0.06	¹⁸³ Au(42.0 s)	161.18(9.4), 214.13(5.9), 313.08(5.0)
• 630.9 3	0.030 6	⁸³ Sr(32.41 h)	762.65(30), 381.53(14.1), 418.37(4.41)
630.9 5	†3.5	¹⁷⁹ Os(6.5 m)	65.39(†100), 218.6(†17), 32.3(†17)
630.9 3	†2.8 4	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
630.91 13	18 3	¹⁹⁰ Re(3.1 m)	186.718(48.4), 557.972(28.2), 223.811(26.0)
630.91 13	0.44 6	¹⁹⁰ Re(3.2 h)	186.718(27.8), 605.24(14.9), 557.972(14.3)
• 630.91 13	2.9 3	¹⁹⁰ Ir(11.78 d)	186.718(52.4), 605.24(39.9), 518.55(34.0)
630.97 16	0.19 3	⁹³ Sr(7.423 m)	590.238(67), 875.73(24.1), 888.13(21.8)
630.97 1	0.308 20	²¹⁰ At(8.1 h)	1181.39(99.3), 245.31(79), 1483.39(46.5)
631		⁹² Br(0.343 s)	769(†100), 1446(†10), 1035(†6)
631.0 3	9.4 10	⁹⁸ Rb(96 ms)	144.224(73), 289.4(68), 3010.5(23.4)
631.0 3	0.76 22	¹⁰⁴ In(1.8 m)	658.0(100), 834.1(99), 878.1(29.4)
631.0 3	1.6 3	¹¹⁸ Cs(14 s)	337.4(100), 472.8(37.4), 586.6(15.4)
631.0 2	†2.12 21	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
• 631	0.84 23	¹⁹⁰ Ir(11.78 d)	186.718(52.4), 605.24(39.9), 518.55(34.0)
631.023 4	0.017 5	¹⁵⁵ Sm(22.3 m)	104.3346(74.6), 245.771(3.7), 141.4428(1.98)
• 631.05 2	0.1315 24	¹⁷¹ Lu(8.24 d)	739.78(47.8), 19.394(13.7), 667.404(11.04)
631.09 3	0.07	²³⁹ U(23.45 m)	74.664(48), 43.533(4.14), 662.24(0.18)
• 631.09 3	0.00034	²⁴³ Am(7370 y)	74.664(68), 43.533(5.93), 117.84(0.57)
631.1 3	1.04 13	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
631.1 5	0.021	¹⁸² Os(22.10 h)	510.056(52), 180.230(33.5), 263.285(6.71)
631.2 15		¹⁷³ Ta(3.14 h)	172.2(18), 69.70(5.9), 90.3(5.0)
631.2 4	0.017 6	²¹⁴ Bi(19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
631.22 9	0.464 23	⁸³ Se(70.1 s)	1030.86(21.2), 356.687(18), 987.96(16.1)
631.22 18	†12.1 23	¹⁸⁹ Au(28.7 m)	713.17(†100), 812.68(†63), 447.65(†55)
631.26 19	0.24 8	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
631.28 5	†21.3 11	$^{102}\text{Tc}(4.35 \text{ m})$	475.070(†115), 628.05(†35.3), 1615.3(†20.8)
• 631.28 5	55.9 20	$^{102}\text{Rh}(2.9 \text{ y})$	475.070(95), 697.49(43.9), 766.84(33.9)
• 631.28 5	†0.10 3	$^{102}\text{Rh}(207 \text{ d})$	475.070(†47), 628.05(†4.6), 1103.16(†2.99)
631.3 1	0.554 10	$^{91}\text{Sr}(9.63 \text{ h})$	1024.3(33), 749.8(23.61), 652.9(8.0)
631.3 4	0.126 13	$^{121}\text{Xe}(40.1 \text{ m})$	252.7(13), 132.8(10.9), 445.2(7.7)
631.3 3	†0.38 5	$^{129}\text{Ba}(2.17 \text{ h})$	182.30(†100), 1459.1(†50.0), 202.38(†33.7)
631.3 2	†10	$^{134}\text{Pm}(24 \text{ s})$	294.2(†100), 494.7(†60), 459.3(†15)
• 631.3 5	0.32 9	$^{146}\text{Eu}(4.59 \text{ d})$	747.2(98), 633.03(43), 634.07(37)
631.3 4	0.70 9	$^{184}\text{Au}(53.0 \text{ s})$	162.97(50), 272.98(40), 362.47(17.5)
631.38 6	0.0134 7	$^{137}\text{Ce}(9.0 \text{ h})$	447.15(1.8), 10.6(0.8), 436.59(0.265)
631.4 2	0.047 19	$^{98}\text{Nb}(51.3 \text{ m})$	787.374(93), 722.645(73.8), 1168.830(17.8)
631.45 10	13.9 7	$^{161}\text{Yb}(4.2 \text{ m})$	78.20(34), 599.88(25.9), 569.73(5.7)
631.480 13	0.420 24	$^{147}\text{Pr}(13.4 \text{ m})$	77.9921(15), 314.675(13.2), 641.380(10.0)
• 631.5 3	0.006	$^{124}\text{I}(4.18 \text{ d})$	602.730(60), 1690.980(10.41), 722.786(9.98)
• 631.52 15	0.20 3	$^{71}\text{As}(65.28 \text{ h})$	174.954(82.00), 1095.490(4.08), 499.876(3.624)
631.6 7	0.54 12	$^{127}\text{Sn}(2.10 \text{ h})$	1114.3(39), 1095.6(20), 823.1(10.9)
631.6 1	2.9 3	$^{207}\text{Rn}(9.25 \text{ m})$	344.53(46), 747.15(14.2), 402.68(11.9)
631.62 10	0.0718 19	$^{166}\text{Tm}(7.70 \text{ h})$	778.817(18.9), 2052.36(17.2), 184.410(16.1)
631.63 9	8	$^{96}\text{Y}(9.6 \text{ s})$	1750.42(89), 915.0(60), 617.1(56)
631.70 15	0.041 5	$^{101}\text{Tc}(14.22 \text{ m})$	306.85(88), 545.06(6.0), 127.23(2.86)
631.70 6	0.64 4	$^{119}\text{I}(19.1 \text{ m})$	257.52(87), 635.86(2.69), 320.53(2.17)
631.7 3	†0.3 1	$^{120}\text{Cs}(64 \text{ s})$	322.4(†100), 473.5(†30), 553.4(†19.1)
631.7 1	1.06 9	$^{142}\text{Gd}(70.2 \text{ s})$	750.2(11.2), 178.90(11.20), 284.4(6.16)
631.703 3	3.21 10	$^{168}\text{Ho}(2.99 \text{ m})$	741.356(36.6), 821.164(34.5), 815.990(18.6)
• 631.703 3	8.91 5	$^{168}\text{Tm}(93.1 \text{ d})$	198.241(52.39), 815.990(48.99), 447.515(23.05)
631.71 7	74.5 19	$^{96}\text{Rh}(9.90 \text{ m})$	832.57(100), 685.49(95.7), 741.87(29.4)
631.72 18	1.01 11	$^{184}\text{Pt}(17.3 \text{ m})$	154.90(31), 191.97(27), 548.36(23.1)
631.73 28	0.051 19	$^{137}\text{Nd}(38.5 \text{ m})$	75.5(17.0), 580.6(13), 306.60(10.0)
631.77 12	1.59 9	$^{99}\text{Nb}(2.6 \text{ m})$	97.785(7), 253.50(3.64), 2641.3(3.64)
631.77 5	1.6 1	$^{126}\text{In}(1.60 \text{ s})$	1141.11(55.9), 3344.61(21.6), 969.61(14.9)
631.80 4	2.80 18	$^{117}\text{Cd}(3.36 \text{ h})$	1997.33(26), 1065.98(23.1), 564.397(14.7)
631.8 4	0.116 13	$^{139}\text{Pm}(4.15 \text{ m})$	402.8(15), 463.1(4.1), 367.8(3.52)
631.82 3	6.95 16	$^{77}\text{Ge}(11.30 \text{ h})$	264.44(54), 211.03(30.8), 215.50(28.6)
631.83 4	3.22 14	$^{208}\text{At}(1.63 \text{ h})$	686.527(98), 660.040(89), 177.595(48.6)
631.84 8	0.80 7	$^{100}\text{Y}(735 \text{ ms})$	212.531(73), 118.59(15.4), 665.98(7.7)
631.87 5	†26.6 4	$^{162}\text{Lu}(1.37 \text{ m})$	166.82(†100), 798.76(†16.9), 320.72(†15.19)
631.88 15	0.079 16	$^{204}\text{Bi}(11.22 \text{ h})$	899.15(98), 374.72(82), 984.02(59)
631.947 17	†15.1 3	$^{148}\text{Tb}(60 \text{ m})$	784.430(†119.0), 489.049(†28.0), 1079.025(†16.2)
631.947 17	95 5	$^{148}\text{Tb}(2.20 \text{ m})$	784.430(100), 882.3(92), 394.6(86)
632.0 4	0.28 11	$^{133}\text{Te}(55.4 \text{ m})$	912.671(55.28), 647.51(19.4), 863.955(15.6)
632.0 3	†4.0	$^{183}\text{Hg}(9.4 \text{ s})$	60.5(†100), 159.91(†21), 172.70(†17)
632.00 17	0.18 3	$^{202}\text{Bi}(1.72 \text{ h})$	960.67(99), 422.18(83.7), 657.49(60.6)
• 632.0 10	0.030 10	$^{223}\text{Ra}(11.435 \text{ d})$	269.459(13.7), 154.21(5.62), 323.871(3.93)
632.1 1	†35 2	$^{148}\text{Er}(4.6 \text{ s})$	1653.4(†100), 387.7(†88), 197.1(†71)
632.1 3	0.30 9	$^{149}\text{Pr}(2.26 \text{ m})$	138.447(11.0), 165.087(9.9), 108.520(9.5)
632.1 5	†2.3 8	$^{191}\text{Tl}(5.22 \text{ m})$	452.6(†100), 470.1(†98), 391.6(†96)
632.1 3	†14.4 22	$^{206}\text{Rn}(5.67 \text{ m})$	497.7(†100), 324.5(†96), 386.6(†61)
632.12 9	0.07	$^{176}\text{Ta}(8.09 \text{ h})$	1159.28(25), 88.34(12), 1224.93(6)
632.15 15		$^{191}\text{Tl}(5.22 \text{ m})$	452.6(†100), 470.1(†98), 391.6(†96)
632.2 1	0.0194 17	$^{121}\text{I}(2.12 \text{ h})$	212.189(84), 532.08(6.07), 598.74(1.47)
632.23 5	0.046 9	$^{157}\text{Eu}(15.18 \text{ h})$	63.929(23.0), 410.723(17.5), 370.509(11.0)
• 632.25 5	4.47 5	$^{206}\text{Bi}(6.243 \text{ d})$	803.10(99), 881.01(66.2), 516.18(40.7)
632.3 2	†5.5 3	$^{75}\text{Ga}(126 \text{ s})$	253.0(†100), 574.8(†31.6), 885.6(†11.1)
632.30 22	0.262 24	$^{95}\text{Y}(10.3 \text{ m})$	954.00(16), 2175.6(7.00), 3576.0(6.4)

• $t_{1/2} > 1 \text{ d}$

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
632.3 4	$\dagger 2.0$ 3	¹⁸² Ir(15 m)	273.23($\dagger 100$), 126.79($\dagger 77$), 236.3($\dagger 21.0$)
• 632.3 7	$\dagger 0.0089$ 24	²²⁷ Th(18.72 d)	235.971($\dagger 813$), 50.13($\dagger 528$), 256.25($\dagger 463$)
632.32 19	0.27 3	⁹⁹ Sr(0.269 s)	125.118(16.1), 536.12(14.0), 1198.12(9.2)
632.34 10	0.151 14	¹⁰⁵ Ru(4.44 h)	724.21(47), 469.37(17.5), 676.36(15.7)
• 632.35 10	1.71 7	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
• 632.386 45	0.098 10	¹²⁴ Sb(60.20 d)	602.730(97.8), 1690.980(47.3), 722.786(10.76)
632.4 5	0.25 6	¹³⁶ Nd(50.65 m)	108.90(32), 40.2(18.9), 574.8(10.4)
632.4 10	0.014 3	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
632.42 3	3.9 3	¹³³ Sb(2.5 m)	1096.22(43.0), 817.8(18.5), 2755(12.5)
632.5 1	5.6 4	¹²⁸ La(5.0 m)	284.00(87), 479.24(54), 643.65(14.7)
632.5 10		¹⁷⁸ Os(5.0 m)	968.7($\dagger 100$), 1331.1($\dagger 94$), 594.6($\dagger 72$)
• 632.56 10	$\dagger 1.0 \times 10^6$	¹³³ Ba(38.9 h)	
632.6 3	0.19 5	⁹² Kr(1.840 s)	142.307(64), 1218.6(60), 812.6(14.6)
632.6 2	0.036 10	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
632.65 15	0.0021 5	²²³ Fr(21.8 m)	50.13(36.0), 79.72(9.1), 234.81(3.0)
632.66 4	100	¹⁰⁶ In(6.2 m)	861.16(92), 997.87(48), 1009.27(30.3)
632.66 4	92	¹⁰⁶ In(5.2 m)	1714.90(17.1), 861.16(10.6), 1933.60(8.4)
• 632.67 10		¹⁵⁶ Tb(5.35 d)	534.318(66.6), 199.2132(40.9), 1222.36(31.00)
632.7 3	0.042	¹⁷⁰ Hf(16.01 h)	164.78(33), 620.7(23), 120.17(19)
632.71 10	0.56 5	⁵⁸ Mn(65.3 s)	810.764(<0.026), 1323.09(6.44), 459.160(21.4)
632.765 8	0.98 3	¹³³ La(3.912 h)	278.835(2.50), 302.353(1.648), 290.06(1.413)
632.77 9	0.90 8	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
• 632.79 8	0.039 5	¹⁵⁶ Eu(15.19 d)	811.79(9.70), 88.9667(8.4), 1230.68(7.98)
632.8 3	$\dagger 8.7$ 10	¹¹¹ Ru(2.12 s)	303.8($\dagger 100$), 211.7($\dagger 77.7$), 382.0($\dagger 41.3$)
632.80 20	3.6 3	¹¹¹ Pd(5.5 h)	70.44(8.3), 391.25(5.4), 575.0(3.2)
632.8 2	0.049 25	¹²⁹ La(11.6 m)	278.6(25), 110.5(16.9), 457.0(8.0)
632.8 3	0.0012 7	¹⁵² Eu(9.274 h)	344.281(2.44), 1314.67(0.956), 970.38(0.604)
• 632.8 3	0.047 23	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
632.9 2	1.5	¹⁴⁵ La(24.8 s)	70.0(11), 355.8(3.8), 118.2(3.6)
632.9 7	4.5 8	¹⁶³ Gd(68 s)	287.79(25), 214.0(11.5), 1562.1(9.0)
• 632.9 1	0.029 3	¹⁷⁷ Ta(56.56 h)	112.9498(7.2), 208.3664(0.94), 1057.8(0.29)
• 632.93 15	$\dagger 1.26 \times 10^4$ 19	²⁴¹ Am(432.2 y)	59.537($\dagger 60$), 26.345($\dagger 1000 \times 10^9$), 33.195($\dagger 6000 \times 10^8$)
632.96 2	1.76 9	¹⁰⁸ Ag(2.37 m)	
632.96 2	76	¹⁰⁸ In(39.6 m)	1986.8(12.4), 3452.2(9.2), 1529.7(7.3)
632.96 2	100 4	¹⁰⁸ In(58.0 m)	875.46(100), 242.84(41), 1032.85(35)
632.99 2	1.25 4	¹⁸⁸ Re(16.98 h)	155.032(14.9), 477.99(1.0), 931.34(0.545)
• 632.99 2	18 3	¹⁸⁸ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 477.99(15)
633.0 3	2.5	⁶⁷ As(42.5 s)	122.7(19.2), 120.8(9.3), 243.6(7.8)
633 1	0.02 1	⁸⁷ Zr(1.68 h)	1227(1.0), 1209.8(0.33), 1024(0.28)
633.0 2	0.72 22	¹¹⁹ Cd(2.20 m)	1025.0(24.8), 2021.3(22.6), 720.7(17.9)
633.0 2	0.7 4	¹¹⁹ Cd(2.20 m)	1025.0(24.8), 2021.3(22.6), 720.7(17.9)
633.0 5	0.42 21	¹⁶⁴ Tb(3.0 m)	168.838(25.4), 754.80(23.3), 215.07(21)
633.0	$\dagger 3.1$ 6	¹⁷⁸ Ir(12 s)	266.1($\dagger 100.0$), 131.6($\dagger 79$), 363.1($\dagger 39.9$)
633	1.0 6	¹⁹⁰ Re(3.2 h)	186.718(27.8), 605.24(14.9), 557.972(14.3)
633.0 5	0.06	²³⁸ Am(98 m)	962.77(28), 918.69(23.0), 561.11(10.9)
• 633.03 14	2.15 20	¹⁴⁶ Pm(5.53 y)	747.2(34.0)
• 633.03 14	43 7	¹⁴⁶ Eu(4.59 d)	747.2(98), 634.07(37), 1533.8(6.05)
633.03 20	0.16 5	¹⁸¹ Re(19.9 h)	365.57(56), 360.70(20), 639.30(6.4)
633.04 10	0.086 9	¹⁰⁰ Sr(202 ms)	963.85(22.0), 898.50(18.9), 65.46(15.2)
• 633.071 20	0.080 9	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
• 633.090 6	2.53×10^{-6} 3	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
633.14 10	0.055 6	²¹⁴ Bi(19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
• 633.18 10	0.0240 24	¹⁹¹ Pt(2.9 d)	538.90(13.7), 409.44(8.0), 359.90(6.0)
633.2	$\dagger 19$	¹⁴⁸ Cs(158 ms)	141.7($\dagger 100$), 687.2($\dagger 23$), 545.5($\dagger 20$)

• $t_{1/2} > 1$ d

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
633.2 3	0.23 3	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
633.3 6	0.39 4	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
633.3 2	0.57 6	²³⁰ Fr(19.1 s)	711.0(13.6), 129.1(11.0), 728.4(7.3)
• 633.32 10	6.9×10^{-6} 5	¹⁶⁹ Yb(32.026 d)	63.12077(44.2), 197.95788(35.8), 177.21402(22.16)
633.35 15	0.042 17	¹⁰³ Ag(65.7 m)	118.72(31.2), 148.193(28.3), 266.86(13.3)
633.4 5	0.0025 12	¹³⁷ Xe(3.818 m)	455.490(31), 848.95(0.62), 1783.43(0.415)
633.4 2	0.29 7	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
633.4 5	†4.7	¹⁷⁹ Os(6.5 m)	65.39(†100), 218.6(†17), 32.3(†17)
633.4 4	0.13 7	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
633.415 20	0.568 12	¹⁶⁵ Dy(2.334 h)	94.700(3.58), 361.68(0.84), 715.328(0.534)
• 633.440 25	0.048 6	⁷¹ As(65.28 h)	174.954(82.00), 1095.490(4.08), 499.876(3.624)
633.46 7	0.27	¹³⁷ I(24.5 s)	1218.00(12.8), 601.05(4.80), 1302.64(4.42)
633.5 3	0.107 20	⁹³ Sr(7.423 m)	590.238(67), 875.73(24.1), 888.13(21.8)
633.5 6	0.068 14	¹⁵⁰ Pm(2.68 h)	333.971(68), 1324.51(17.5), 1165.739(15.8)
633.5 3	†1.20 5	¹⁹⁶ Ir(1.40 h)	393.346(†105.2), 521.175(†104), 447.1(†102.1)
633.5 2	0.20 4	²⁴⁰ Np(61.9 m)	566.34(25.3), 973.9(23.8), 600.57(18.4)
633.7	5.9 8	³⁵ Si(0.78 s)	4100.7(36.5), 3859.5(32.7), 2386.3(31.6)
633.7 2	0.131 17	⁹⁴ Rb(2.702 s)	1309.1(87), 836.9(87.10), 1577.5(31.8)
633.7 5	2.75 21	¹²⁹ Sb(4.40 h)	812.8(43), 914.6(20.0), 544.7(17.9)
633.70 3	1.013 12	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
633.7 5	1.3	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
• 633.75 25	0.0090 5	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
633.77 9	0.145 13	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
633.8 3	†3.1 5	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
633.8 4	>1.4	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
633.9 5	0.035 12	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
634.0 8	0.23 6	⁷⁷ Rb(3.75 m)	66.52(57), 178.99(22.2), 393.37(9.7)
634.00 6	0.26	⁷⁹ Ge(19.1 s)	109.58(21), 1505.85(9.2), 100.48(2.70)
634.00 6	13	⁷⁹ Ge(39.0 s)	230.62(61), 542.27(32.6), 755(18)
634.00 30	0.030 10	¹¹⁴ Sb(3.49 m)	1299.90(99), 887.60(17.4), 327.18(7.0)
634.0 2	0.0152 17	¹²¹ I(2.12 h)	212.189(84), 532.08(6.07), 598.74(1.47)
634.0 2	†2	¹³⁹ I(2.29 s)	527.7(†100), 571.2(†98), 536.6(†67)
634.0 3	0.030 7	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
• 634	0.015 6	¹⁵⁶ Tb(5.35 d)	534.318(66.6), 199.2132(40.9), 1222.36(31.00)
634.0 3	0.16 3	¹⁹⁰ Au(42.8 m)	295.78(71.0), 301.82(23.4), 597.67(9.4)
634.0 2	†9	²⁵⁶ Es(7.6 h)	861.8(†100), 231.1(†61), 172.6(†49)
634.05 2	0.0207 6	¹³⁵ La(19.5 h)	480.51(1.5), 874.51(0.164), 587.83(0.1108)
634.06 15	0.93 10	¹¹⁵ Te(5.8 m)	723.569(30), 1380.58(23.0), 1326.83(22.7)
• 634.07 11	37 6	¹⁴⁶ Eu(4.59 d)	747.2(98), 633.03(43), 1533.8(6.05)
634.10 20	1.00 10	¹⁰⁶ In(6.2 m)	632.66(100), 861.16(92), 997.87(48)
634.1 6	†0.46 15	¹⁵² Tb(17.5 h)	344.281(†1500), 586.294(†223), 271.135(†203)
634.1 5	†14 4	¹⁶³ Lu(238 s)	163.08(†100), 54.00(†88), 396.34(†63)
634.15 20	0.50 25	¹⁸⁶ Ta(10.5 m)	197.93(50), 214.87(42.3), 510.82(37.5)
634.18 10	0.0109 21	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
634.2 1	0.034 6	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
634.2 2	0.98 7	¹⁵² Tb(4.2 m)	344.281(20.8), 411.115(18.8), 471.9(12.2)
634.20 15	0.30 7	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
634.2 2	†5.0 5	¹⁹⁵ Bi(183 s)	807.6(†100), 831.7(†100), 776.2(†95)
634.21 11	0.110 23	¹⁶² Ho(67.0 m)	185.005(28.6), 1220.0(22.5), 282.864(11.3)
• 634.26 15	0.036	⁷⁴ As(17.77 d)	634.78(15.4), 1269.06(0.0018)
634.26 15	14.1 19	⁷⁴ Br(25.4 m)	634.78(64), 219.05(18.1), 2615.2(7.37)
634.26 15	16.4 23	⁷⁴ Br(46 m)	634.78(91), 728.37(35.6), 1269.06(8.8)
634.3 2	†10.2 13	¹⁰⁶ Mo(8.4 s)	465.70(†100), 54.00(†54), 618.60(†25)
634.3 2		²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)

• $t_{1/2} > 1$ 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: $E_\gamma(I_\gamma)$
634.3 2	0.134 21	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
634.31 2	1.5 1	²⁴⁹ Cm(64.15 m)	560.45(0.84), 368.76(0.35), 621.87(0.182)
634.39 3	2.08 4	⁷⁷ Ge(11.30 h)	264.44(54), 211.03(30.8), 215.50(28.6)
634.4 13	0.32 14	¹⁴ B(13.8 ms)	6092.4(86), 6726.5(8.6), 1248(<5.6)
634.4 1	0.006 3	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
634.4		¹⁶¹ Er(3.21 h)	826.6(3.0), 211.15(12.2), 592.6(3.7)
634.4	†9.5 8	¹⁷⁸ Ir(12 s)	266.1(†100.0), 131.6(†79), 363.1(†39.9)
634.5 15	0.45 13	¹¹⁷ Te(62 m)	719.7(65), 1716.4(15.9), 2300.0(11.2)
634.5 2	0.11 4	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
634.5 5	0.170 7	¹⁶² Tm(21.70 m)	102.00(17.5), 798.68(8.4), 227.52(7)
• 634.51 9	0.0009 4	¹⁵⁵ Tb(5.32 d)	86.545(32.0), 105.305(25), 180.103(7.45)
634.54 6	0.366 12	¹⁴⁵ Ce(3.01 m)	724.33(59), 62.54(13.33), 1148.03(9.15)
634.59 25		¹⁹¹ Au(3.18 h)	586.45(17), 277.88(7.2), 674.19(6.8)
634.6 5	†24 3	¹⁶⁴ Tm(2.0 m)	91.40(†1500), 1154.66(†366), 768.91(†279)
634.6 5	1.23 19	¹⁶⁴ Tm(5.1 m)	208.08(14.6), 314.97(10), 240.49(7.5)
• 634.61 30	0.00032 8	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
634.7 1		¹²⁵ La(76 s)	67.6(34), 43.6(3.5), 985.2
• 634.78 10	15.4 5	⁷⁴ As(17.77 d)	634.26(0.036), 1269.06(0.0018)
634.78 10	64	⁷⁴ Br(25.4 m)	219.05(18.1), 634.26(14.1), 2615.2(7.37)
634.78 10	91	⁷⁴ Br(46 m)	728.37(35.6), 634.26(16.4), 1269.06(8.8)
634.78 10	0.091 25	⁸⁶ Y(14.74 h)	1076.64(83), 627.72(32.6), 1153.01(30.5)
634.8 5	0.28 4	⁹² Ru(3.65 m)	213.81(96), 259.32(92), 134.57(65.5)
634.8 5	†4.0	¹⁸³ Hg(9.4 s)	60.5(†100), 159.91(†21), 172.70(†17)
634.8 1	†75.9 39	¹⁹² Tl(9.6 m)	422.8(†100), 786.3(†31.7), 745.5(†26.8)
634.9 7	0.27 8	¹²⁷ Sn(2.10 h)	1114.3(39), 1095.6(20), 823.1(10.9)
634.9	0.45	¹⁵⁰ Pr(6.19 s)	130.2(32), 722.5(7.0), 852.7(6.1)
634.93 12	†5.0 7	¹³¹ Ce(10.3 m)	169.42(†100), 414.25(†68), 119.18(†44)
634.98 5	0.146 5	¹⁸⁸ Re(16.98 h)	155.032(14.9), 632.99(1.25), 477.99(1.0)
• 634.98 5	5.0 7	¹⁸⁸ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
635.0 8	0.47	¹⁰¹ Cd(1.2 m)	98.0(47), 1722.5(11), 1259.3(8)
635.0 10	0.0033 17	¹¹¹ Pd(23.4 m)	580.00(0.8), 70.44(0.78), 1459.0(0.56)
• 635		¹²⁴ I(4.18 d)	602.730(60), 1690.980(10.41), 722.786(9.98)
635.0 4	0.27 10	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
635.0 4	†2.4 8	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
• 635	0.010	²¹⁰ Bi(3.04×10 ⁶ y)	265.832(50), 304.896(28), 649.42(3.8)
635.02 12	1.06 6	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
635.04 30	0.059 19	¹³⁷ Nd(38.5 m)	75.5(17.0), 580.6(13), 306.60(10.0)
635.1 1	0.86 9	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
635.1 4	0.4	¹⁴⁰ Pm(5.95 m)	1028.19(100), 773.74(100), 419.57(92)
635.1 4	0.45 7	¹⁸⁴ Au(53.0 s)	162.97(50), 272.98(40), 362.47(17.5)
635.1 4	0.79 16	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
635.18 3	†88	²³⁸ Pa(2.3 m)	1015.3(†<100), 1014.6(†<100), 448.3(†76)
635.2 5	0.29 7	⁹⁸ Sr(0.653 s)	119.353(73), 444.628(39), 428.4(31)
635.2 3	0.50 20	¹¹⁸ Cs(14 s)	337.4(100), 472.8(37.4), 586.6(15.4)
635.2 1	0.57 6	¹⁴⁶ Ba(2.22 s)	140.7(20.2), 251.2(19.6), 121.2(14.2)
635.2 5	†76	²²³ Rn(23.2 m)	591.8(†100), 416.0(†55), 654.0(†44)
635.21 11	0.23 3	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
635.3 4	0.33 10	¹⁵⁹ Er(36 m)	624.5(33), 649.1(23.4), 205.92(9.7)
635.3 4	>0.11	²⁰⁹ Rn(28.5 m)	408.32(50.3), 745.78(22.8), 337.45(14.5)
635.31 4	4.5 17	¹⁰⁰ Nb(2.99 s)	535.60(97.0), 600.5(65.0), 1280.6(23.8)
635.40 30	0.478 9	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
635.40 2	1.70 6	¹¹⁸ In(4.45 m)	1229.68(96), 1050.69(81.0), 683.08(54.3)
635.4 2	>0.05	¹⁷³ Ta(3.14 h)	172.2(18), 69.70(5.9), 90.3(5.0)
635.4 3	0.35 5	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: $E_\gamma(I_\gamma)$
• 635.410 15	>0.30	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
635.44 17	0.45 9	¹⁰⁵ In(5.07 m)	131.37(41), 260.21(15.7), 604.11(9.2)
635.50 20	0.014 5	¹⁰⁵ Ru(4.44 h)	724.21(47), 469.37(17.5), 676.36(15.7)
635.5 3	0.031 19	¹⁵⁸ Tm(3.98 m)	192.13(62), 335.10(16.8), 1149.83(7.6)
635.5 5	0.7 3	¹⁷⁸ Re(13.2 m)	237.3(45), 105.9(23.0), 939.1(8.9)
635.5 1	9.8 10	¹⁹⁶ Tl(1.84 h)	426.0(84), 610.5(11.9), 1495.8(8.2)
635.5 1	†304 46	¹⁹⁶ Tl(1.41 h)	426.0(†540), 695.6(†243), 610.5(†30)
635.56 16	20.9 11	⁷⁸ Zn(1.47 s)	224.75(43.9), 181.68(28.1), 860.30(24.5)
635.6 2	9.9 10	¹³² Sb(2.79 m)	973.9(99), 696.8(86), 989.6(14.9)
635.6 5	0.045 15	¹⁴¹ Eu(2.7 s)	394.0(0.60), 882.9(0.54), 518.8(0.45)
635.6 3	0.37 6	¹⁴⁹ Dy(4.20 m)	100.8(15.2), 789.4(11.8), 1776.3(11.1)
635.6 4	>3.8	¹⁸⁶ Pt(2.0 h)	276.7(0), 611.5(6.0), 366.7(2.3)
635.6 3	0.08 3	²³⁰ Ac(122 s)	454.95(8), 508.20(5.15), 1243.9(3.50)
635.7 3	1.6 3	¹³⁰ Sb(39.5 m)	793.53(100), 839.49(100), 331.05(78)
635.7 1	1.78 10	¹³⁸ Pr(2.12 h)	1037.8(101), 788.742(100), 302.7(80)
635.7	0.067 13	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
635.7 4	0.13 7	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
635.71 6	0.051 10	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
635.75 9	0.046 9	¹⁵⁷ Eu(15.18 h)	63.929(23.0), 410.723(17.5), 370.509(11.0)
635.8 3	0.068 23	¹²³ Cs(5.94 m)	97.3(23), 596.7(10.1), 83.3(4.1)
635.8 2	0.069 25	¹³³ Te(12.5 m)	312.072(62), 407.63(27.1), 1333.21(10.67)
635.8 2	10	²⁰⁸ Fr(59.1 s)	778.5(6.8), 325.3(5.2), 553.1(3.04)
635.824 18	0.11	¹²⁵ Xe(16.9 h)	188.418(54), 243.378(30.1), 54.968(6.81)
635.842 18	0.12	¹²⁵ Xe(16.9 h)	188.418(54), 243.378(30.1), 54.968(6.81)
635.86 5	2.69 9	¹¹⁹ I(19.1 m)	257.52(87), 320.53(2.17), 557.24(1.77)
635.90 15	0.64 10	¹²¹ Ag(0.78 s)	314.55(32.1), 353.43(19.9), 500.61(9.3)
• 635.954 5	11.31 9	¹²⁵ Sb(2.7582 y)	427.875(30), 600.600(17.86), 463.365(10.493)
636.0 5	8.6 20	⁷³ Kr(27.0 s)	177.8(65.8), 62.5(19.1), 454.8(15)
636 2	0.074 22	⁷⁶ Br(16.2 h)	559.101(74), 657.041(15.9), 1853.67(14.7)
636.0 10	0.42 21	⁸³ Se(22.3 m)	356.687(70), 510.17(43), 224.8(32.7)
636.00 10	1.43 13	⁹⁹ Ag(124 s)	264.41(65), 832.29(13.5), 805.07(12.5)
636.0 7	0.57 24	¹⁰⁴ In(1.8 m)	658.0(100), 834.1(99), 878.1(29.4)
636.0 3	†6.7 1	¹¹⁴ Te(15.2 m)	90.28(†100), 83.8(†67), 1417.6(†32)
• 636 1	0.006	¹⁹¹ Pt(2.9 d)	538.90(13.7), 409.44(8.0), 359.90(6.0)
636.0 4	0.14 7	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
• 636.05 10	0.0003	¹⁴⁹ Eu(93.1 d)	327.526(4.03), 277.089(3.56), 22.510(2.32)
636.1 4	0.21 17	¹⁰⁵ In(5.07 m)	131.37(41), 260.21(15.7), 604.11(9.2)
636.10 5	0.239 16	¹⁰⁷ Ru(3.75 m)	194.05(9.9), 847.93(5.3), 462.61(3.66)
• 636.11 7	0.49 16	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
• 636.11 3	1.45 5	¹⁷³ Lu(1.37 y)	272.105(21.2), 78.63(11.87), 100.724(5.24)
636.2 2		¹⁰⁶ In(6.2 m)	632.66(100), 861.16(92), 997.87(48)
636.2 2		¹⁰⁶ In(5.2 m)	632.66(92), 1714.90(17.1), 861.16(10.6)
636.2	0.317 14	¹⁴¹ Ba(18.27 m)	190.328(46.0), 304.194(25.4), 276.948(23.4)
636.2	0.052 10	¹⁴⁹ Nd(1.728 h)	211.309(25.9), 114.314(19.2), 270.166(10.7)
• 636.20 3	1.42 9	¹⁵¹ Pm(28.40 h)	340.08(23), 167.75(8.3), 275.21(6.8)
636.26 2	36 2	¹²⁸ Sb(9.01 h)	753.82(100), 743.22(100), 314.12(61)
636.26 10	1.65 20	¹³⁴ Te(41.8 m)	767.20(29.0), 210.465(22.3), 277.951(20.9)
636.27 10	0.382 13	⁷⁸ Rb(17.66 m)	454.97(63), 692.86(12.56), 562.15(11.41)
636.27 10	0.089 24	⁷⁸ Rb(5.74 m)	454.97(81), 664.44(38.3), 1109.72(13.12)
636.3 1	0.0100 5	¹⁰⁹ Pd(13.7012 h)	88.04(1.171), 311.4(0.032), 647.3(0.024)
636.3 3	0.31 5	¹⁴⁹ Dy(4.20 m)	100.8(15.2), 789.4(11.8), 1776.3(11.1)
636.3 2	0.6 3	²⁰⁸ Fr(59.1 s)	635.8(10), 778.5(6.8), 325.3(5.2)
• 636.31 10		¹⁵⁶ Tb(5.35 d)	534.318(66.6), 199.2132(40.9), 1222.36(31.00)
• 636.32 12	0.084 19	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)

• $t_{1/2} > 1$ d

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

$E_\gamma(\Delta E)$	$I_\gamma(\Delta I)$	Decay Parent	Associated γ -rays: $E_\gamma(I_\gamma)$
636.389 14	6.2 3	¹⁸⁶ Ir(16.64 h)	296.911(64.0), 137.155(42), 434.849(34.4)
636.389 14	1.8 5	¹⁸⁶ Ir(2.0 h)	137.155(27), 767.508(21.2), 630.354(18.0)
636.39 8	0.16 1	⁸⁷ Br(55.60 s)	1419.71(22.0), 1476.04(7.9), 1577.60(6.0)
636.4	0.7 3	⁴² Ti(199 ms)	611.046(56), 2222.6(0.67), 975.25(0.6)
636.4 2	1.19 11	⁹⁸ Y(0.548 s)	1223.0(36.0), 2941.3(16.7), 1590.9(14.7)
636.4 3	1.46 12	¹⁴⁸ Pr(2.27 m)	301.702(61), 1357.78(5.5), 1023.18(4.8)
636.4 2	0.034 7	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
636.4 8	†2.3 9	¹⁶⁰ Tm(9.4 m)	125.8(†100), 728.5(†37), 264.1(†27)
636.4 3	†18 7	¹⁹³ Tl(21.6 m)	324.37(†100), 1044.7(†59), 676.10(†48)
636.4 3	10.1 7	¹⁹⁸ Tl(5.3 h)	411.8044(82), 675.8874(11), 1200.6(9.7)
636.4 3	†202 19	¹⁹⁸ Tl(1.87 h)	411.8044(†202), 587.2(†185), 226.2(†19)
• 636.45 25	0.0020 2	¹⁵³ Sm(46.27 h)	103.1807(31.4), 69.67340(4.85), 97.4316(0.847)
636.5 4	4.3 4	¹¹⁰ Sb(23.0 s)	1211.87(92), 985.03(31.2), 1243.6(13.4)
636.5 4	0.22 11	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
• 636.50 5	0.0093 6	¹⁴⁹ Pm(53.08 h)	285.95(3.1), 859.46(0.109), 590.88(0.069)
• 636.50 5	0.00015 1	¹⁴⁹ Eu(93.1 d)	327.526(4.03), 277.089(3.56), 22.510(2.32)
636.5 2	†23 23	¹⁹⁴ Tl(33.0 m)	428.0(†100), 645.20(†13), 1040.3(†5.6)
636.5 2	99 5	¹⁹⁴ Tl(32.8 m)	428.0(99), 748.9(76), 734.9(22)
636.5 2	†1.90 23	²⁰¹ Po(15.3 m)	890.1(†100), 240.1(†71.0), 904.2(†54.8)
• 636.6 3		¹⁰⁵ Ag(41.29 d)	344.520(41), 280.41(30.2), 644.55(11.1)
636.6 1	0.05	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
636.7 3	1.4 5	⁸⁰ Zn(0.545 s)	712.53(45.1), 715.40(33.8), 964.93(15.6)
636.7 4	0.81 9	⁸⁵ Zr(7.86 m)	454.20(45), 416.3(27.0), 1198.4(4.8)
636.7 2	1.7 4	¹⁵² Ho(49.5 s)	647.2(92), 613.8(88.4), 683.3(88)
636.7 2	†27 5	¹⁷⁴ Er(3.3 m)	100.4(†100), 708.4(†93), 766.9(†92)
636.72 12	0.012 3	²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
636.72 12		²⁴⁶ Am(25.0 m)	1078.86(27.7), 798.80(25), 1062.04(17.1)
636.79 10	0.192 13	¹⁶⁵ Yb(9.9 m)	80.11(49), 68.86(9.1), 1090.28(4.4)
636.80 10	0.39 5	¹⁰² Tc(5.28 s)	475.070(7), 468.59(0.88), 865.5(0.87)
• 636.80 10	†0.24 3	¹⁰² Rh(207 d)	475.070(†47), 628.05(†4.6), 1103.16(†2.99)
• 636.80 20	0.022 4	¹⁷⁰ Lu(2.00 d)	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
636.8 5	†1.04 21	¹⁸³ Hg(9.4 s)	60.5(†100), 159.91(†21), 172.70(†17)
636.85 15	0.25 3	²⁰⁵ At(26.2 m)	719.30(31), 669.41(8.6), 628.88(5.6)
• 636.86 7	0.029 5	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
• 636.88 3	1.53 11	²⁴¹ Cm(32.8 d)	471.805(71), 430.634(4.06), 132.413(3.86)
636.9 2	5.4 9	¹⁰³ Zr(1.3 s)	248(100), 164.05(94), 126.30(84)
636.9 1	1.8 3	¹⁴¹ Tb(3.5 s)	293.3(16.8), 343.6(16.3), 198.4(14.8)
636.9 3	†0.09 5	¹⁶⁰ Ho(5.02 h)	728.18(†100), 879.383(†65.9), 962.317(†59.1)
636.90 12	0.31 4	¹⁸⁷ Ir(10.5 h)	912.95(4.79), 427.12(4.12), 400.89(3.94)
• 636.989 4	7.17 9	¹³¹ I(8.02070 d)	364.489(81.7), 284.305(6.14), 80.185(2.62)
637.0 2	5.36 20	¹⁵³ Ho(2.0 m)	295.8(67), 688.5(3.7), 1276.5(3.3)
637 1	0.20 7	¹⁶³ Tb(19.5 m)	351.138(26), 389.734(24.3), 494.534(23)
637 1	1.4 3	¹⁹¹ Hg(50.8 m)	252.5(57), 420.1(18.6), 578.6(17.6)
637.01 10	0.24 3	¹⁸⁴ Pt(17.3 m)	154.90(31), 191.97(27), 548.36(23.1)
637.03 19	0.119 8	¹¹¹ Sn(35.3 m)	1152.98(2.7), 1914.70(1.99), 761.97(1.48)
637.04 7	11	⁶³ Ga(32.4 s)	627.10(10.3), 192.94(5.7), 650.14(4.9)
637.1 2	0.205 22	⁷⁸ As(90.7 m)	613.725(54), 694.916(16.7), 1308.59(13.0)
637.1 4	2.9 10	¹²⁰ In(46.2 s)	1171.3(96), 1023.1(55), 863.7(32.5)
637.1 8	0.018	¹⁵⁷ Dy(8.14 h)	326.16(92), 182.20(1.84), 83.01(0.62)
637.1 8	0.02	¹⁵⁷ Dy(8.14 h)	326.16(92), 182.20(1.84), 83.01(0.62)
637.12 8	0.284 20	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
637.13 20	0.10 4	¹⁶² Yb(18.87 m)	163.35(40.0), 118.70(33.6), 576.10(3.24)
637.2 1	0.45	¹⁵⁴ Pm(2.68 m)	184.810(32), 81.99(15.4), 546.66(14.5)
637.2 2	0.38 6	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: $E_{\gamma}(I_{\gamma})$
637.27 2	2.49 22	²⁰⁷ At(1.80 h)	814.41(44.5), 588.33(19.2), 300.654(12.8)
637.28 15	†3.3 5	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
637.3 3	1.7 4	⁸¹ Ge(7.6 s)	335.98(58.9), 792.94(34), 1495.53(19.9)
637.3 3	1.49 14	¹¹⁷ Ag(5.34 s)	135.4(48), 386.8(39.9), 298.1(21.1)
• 637.3 2	>0.04	¹³¹ Te(30 h)	773.67(49.9), 852.21(27.0), 793.75(18.10)
637.3 2	3.02 16	¹⁴⁹ Dy(4.20 m)	100.8(15.2), 789.4(11.8), 1776.3(11.1)
637.4 2	1.8 4	¹⁰⁸ In(58.0 m)	875.46(100), 632.96(100), 242.84(41)
637.4 3	†17	¹⁵⁴ Nd(25.9 s)	151.703(†800), 799.55(†600), 180.693(†510)
637.41 7	0.255 16	⁶² Zn(9.186 h)	596.56(26), 40.84(25.5), 548.35(15.3)
637.46 2	1.54 6	¹⁴⁵ Cs(0.594 s)	175.36(20), 198.93(10.9), 112.46(10.71)
637.46 9	0.52 4	²⁰⁸ At(1.63 h)	686.527(98), 660.040(89), 177.595(48.6)
637.5 4	0.097 16	⁸⁵ Y(4.86 h)	231.67(22.8), 2123.8(5.0), 767.40(3.6)
637.5 5	0.047 19	⁹⁸ Nb(51.3 m)	787.374(93), 722.645(73.8), 1168.830(17.8)
637.5 6	0.4 3	¹⁰⁵ In(5.07 m)	131.37(41), 260.21(15.7), 604.11(9.2)
637.61 28	0.10 3	¹³⁷ Nd(38.5 m)	75.5(17.0), 580.6(13), 306.60(10.0)
637.717 5		²³⁵ Pa(24.5 m)	652.053, 659.3, 645.896
• 637.717 5	6.0×10^{-7}	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
• 637.795 5	1.9×10^{-6}	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
• 637.8 5	0.44 15	¹²⁷ Sb(3.85 d)	685.7(37), 473.0(25.7), 783.7(15.0)
• 637.8 3	0.0056 21	¹⁹⁵ Hg(41.6 h)	261.75(30.9), 560.27(7), 387.87(2.15)
637.8 2	2.7 5	¹⁹⁶ Bi(308 s)	1049.21(87), 689.00(35.5), 776.6(9.1)
• 637.826 24	0.014 7	¹⁵⁰ Eu(35.8 y)	333.971(96), 439.401(80.4), 584.274(52.6)
637.9 5	2.4	¹⁰¹ Cd(1.2 m)	98.0(47), 1722.5(11), 1259.3(8)
637.9 5	0.755 21	¹¹⁶ Te(2.49 h)	93.70(31.4), 628.63(3.22), 102.97(1.95)
637.90 13	0.023 3	¹⁵¹ Tb(17.609 h)	287.357(28.3), 251.863(26.3), 108.088(24.3)
637.9 3	0.18 3	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
637.9	0.6	¹⁹⁰ Hg(20.0 m)	142.6(68), 171.5(4.8), 154.7(2.5)
637.97 9	0.43 5	²⁰¹ Pb(9.33 h)	331.19(79), 361.27(9.9), 945.96(7.4)
637.98 16	0.27 3	¹⁶⁴ Lu(3.14 m)	123.3(34.0), 740.52(12.2), 262.22(10.8)
638.00 9	26.2 8	⁸⁸ Nb(7.8 m)	1057.01(89.3), 1082.53(53.9), 399.41(45.7)
638.0 5	0.29 7	¹¹⁹ Ag(2.1 s)	626.4(13), 366.2(12.1), 399.1(10.9)
638.0 3	†2.5 6	¹³¹ Ce(10.3 m)	169.42(†100), 414.25(†68), 119.18(†44)
• 638.03 8	0.00095 4	¹¹³ Sn(115.09 d)	391.690(64), 255.06(1.82), 382.6(>0.000060)
• 638.05 35	0.045 9	⁸³ Sr(32.41 h)	762.65(30), 381.53(14.1), 418.37(4.41)
638.05 10	100	¹⁵⁰ Tb(5.8 m)	650.4(70), 438.37(42), 827.48(41)
638.05 10	72	¹⁵⁰ Tb(3.48 h)	496.3(14.8), 792.5(4.39), 650.4(4.03)
638.06 17	†5.8 9	¹⁸¹ Pt(51 s)	289.29(†100), 111.97(†100), 230.15(†92)
638.10 10	0.82 5	⁷⁴ Ga(8.12 m)	595.847(91), 2353.46(44.5), 608.353(14.3)
638.1 5	0.035 12	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
638.1 4	0.14 7	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
638.12 23	0.233 25	¹⁶⁴ Yb(75.8 m)	40.928(1.147), 675.41(0.38), 390.6(0.31)
638.2 5	>0.08	⁶¹ Zn(89.1 s)	475.0(16.85), 1660.5(7.80), 970.0(2.57)
638.2 3	0.039 10	⁹⁵ Rb(377.5 ms)	352.02(49), 204.02(15.1), 680.7(14.8)
638.2 2	0.70 20	¹¹⁸ Cs(14 s)	337.4(100), 472.8(37.4), 586.6(15.4)
638.2 10	0.12 6	¹⁵⁶ Ho(56 m)	266.35(54.7), 137.83(51), 366.25(10.73)
638.3 2	36 2	¹⁵¹ Er(23.5 s)	667.2(17), 256.4(15.9), 100.3(10.7)
• 638.31 10	0.099 22	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
638.4 4	†13 3	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
638.5 3	0.30 4	¹²⁰ Xe(40 m)	25.1(30), 72.6(9), 178.1(6.8)
638.5 2	63 5	¹²² Cs(4.5 m)	331.1(94), 497.1(79), 560.3(14.0)
638.5 2	†6	¹³⁹ I(2.29 s)	527.7(†100), 571.2(†98), 536.6(†67)
638.50 16	†2.9 3	¹⁶⁵ Lu(10.74 m)	132.49(†100), 120.60(†100), 174.25(†47.0)
638.5 1	†3.1 5	¹⁸⁰ Au(8.1 s)	153.3(†100), 524.3(†29), 257.6(†26)
638.5 2	0.29 3	¹⁸⁵ Ir(14.4 h)	254.4(13.3), 1828.8(10), 60.0(5.7)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
638.6 5	0.09 4	¹¹⁵ Ag(20.0 m)	229.08(18), 212.80(4.4), 472.70(4.0)
638.6 3	†2.8 8	¹⁵⁹ Yb(1.58 m)	166.16(†500), 177.12(†159), 390.20(†113)
638.61 2	1.32 4	¹¹⁸ In(4.45 m)	1229.68(96), 1050.69(81.0), 683.08(54.3)
638.61 12		¹⁸⁷ W(23.72 h)	685.774(27.3), 479.531(21.8), 72.001(11.14)
638.65 4	0.0033 11	¹⁸⁷ W(23.72 h)	685.774(27.3), 479.531(21.8), 72.001(11.14)
638.66 10	0.222 24	¹⁰⁵ Ru(4.44 h)	724.21(47), 469.37(17.5), 676.36(15.7)
638.7 3	0.32 13	⁸⁸ Br(16.5 s)	775.28(63), 802.14(13.13), 1440.69(4.72)
638.7 1	0.086 16	¹⁰⁰ Rh(20.8 h)	539.59(78.4), 2376.1(35.3), 1553.4(21)
638.7 3	0.28 4	¹⁰³ Tc(54.2 s)	346.380(17.5), 136.079(16.6), 562.90(7.0)
638.7 1	0.56 7	¹⁰⁷ Tc(21.2 s)	102.70(21.0), 177.00(9.2), 106.31(7.6)
638.7 3	2.50 25	¹²⁷ In(1.09 s)	1597.7(49), 646.1(6.2), 805.1(5.6)
638.7 3	†51 10	²³⁴ Ac(44 s)	1847(†100), 1912(†91), 688.5(†87)
638.79 22	†2.30 23	¹⁸² Ir(15 m)	273.23(†100), 126.79(†77), 236.3(†21.0)
638.8 10	1.3	¹⁵¹ Ho(35.2 s)	527.4(63), 775.53(9.2), 209.5(5.69)
638.8	†16.7 6	¹⁷⁸ Ir(12 s)	266.1(†100.0), 131.6(†79), 363.1(†39.9)
638.8 4	†<2.7	¹⁸² Au(21 s)	154.76(†100), 264.33(†40.0), 855.41(†14.5)
638.8 3	†3 1	²⁰³ At(7.4 m)	639.4(†100), 641.5(†55.8), 738.1(†38.4)
638.83 8	0.20	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
638.9 2	0.055 15	¹⁰⁹ Ru(34.5 s)	206.29(22.0), 225.98(19.6), 1929.05(13.7)
638.9 5	2.47 15	¹¹⁷ I(2.22 m)	325.9(75), 274.4(20.4), 661.5(5.1)
638.97 18	0.0404 11	⁷⁷ Ge(11.30 h)	264.44(54), 211.03(30.8), 215.50(28.6)
639.0 1	1.04 15	⁷³ Br(3.4 m)	64.9(37.0), 336.0(10.4), 699.8(9.1)
639.0 2	3.1 2	¹¹⁷ Xe(61 s)	28.5(7.0), 221.3(10.0), 32.3(7.6)
639 1		¹¹⁹ Te(16.03 h)	644.01(84), 699.85(10.1), 1749.65(3.95)
639.00 16	0.133 13	¹⁴¹ Cs(24.94 s)	48.53(7.90), 561.63(4.7), 1194.02(3.95)
639.00 5	†21.2 4	¹⁴⁴ Cs(1.01 s)	199.326(†100.0), 758.96(†20.6), 559.57(†20.2)
639.0 5	0.024 10	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
639.0 1	0.65 14	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
639.0 2	0.082 12	¹⁸³ Ir(58 m)	392.52(10.4), 228.70(6.9), 87.67(5.6)
639.0 4	0.63 10	¹⁹³ Hg(11.8 h)	257.97(61), 407.63(25), 573.25(14.2)
• 639.09 10	0.0075 12	¹⁹³ Os(30.5 h)	139.03(4.27), 460.50(3.95), 73.039(3.2)
639.1 2	7.0 17	¹⁰⁰ Nb(2.99 s)	535.60(97.0), 600.5(65.0), 1280.6(23.8)
639.1 10	0.030 10	¹¹⁶ In(54.41 m)	1293.54(84.4), 1097.3(56.2), 416.86(28.9)
639.18 15	1.32 12	¹⁴⁰ Xe(13.60 s)	805.52(20), 1413.66(12.2), 1315.05(8.2)
639.2 2	†3.3 3	¹⁸⁵ Hg(21.6 s)	222.8(†100.0), 258.7(†98), 212.5(†58)
639.256 7	6.4 4	¹⁷⁵ Tm(15.2 m)	514.868(65), 941.23(15), 363.942(12.7)
639.3 3	7.1 7	¹¹⁶ Cs(3.84 s)	393.5(<0.09), 524.3(76), 615.1(30.4)
639.3 2	0.26 4	¹³³ Ce(4.9 h)	477.22(39), 510.36(20.7), 58.39(19.2)
639.30 14	6.4 13	¹⁸¹ Re(19.9 h)	365.57(56), 360.70(20), 953.42(3.6)
639.3 3	0.063 6	¹⁸⁶ Hg(1.38 m)	112.1(63), 251.5(55), 191.6(3.7)
639.3 2	†7.5 15	¹⁸⁷ Hg(1.9 m)	233.38(†100), 376.34(†38), 240.26(†33)
639.35 25	3.6 4	⁵⁴ V(49.8 s)	834.848(97.1), 989.01(80.1), 2259.35(45.6)
639.37 20	0.033 11	²¹⁴ Bi(19.9 m)	609.312(44.8), 1764.494(15.36), 1120.287(14.80)
639.4 3	52 7	¹¹⁶ Rh(0.9 s)	340.5(90), 538.4(40), 726.2(38)
639.4 3	0.022	¹⁷⁰ Hf(16.01 h)	164.78(33), 620.7(23), 120.17(19)
639.4 2	0.48 6	¹⁷⁰ Ta(6.76 m)	100.8(21.0), 221.2(15.7), 860.4(7.39)
639.4 2	†100	²⁰³ At(7.4 m)	641.5(†55.8), 738.1(†38.4), 656.4(†26.6)
639.4 2	0.22	²²⁷ Ra(42.2 m)	27.36(16), 300.07(4.6), 302.65(4.3)
639.47 7	†3.74 14	¹⁴⁸ Tb(60 m)	784.430(†119.0), 489.049(†28.0), 1079.025(†16.2)
• 639.477 14	0.0484 25	⁷¹ As(65.28 h)	174.954(82.00), 1095.490(4.08), 499.876(3.624)
• 639.5 10	0.0036 14	⁷⁶ As(26.32 h)	559.101(45), 657.041(6.2), 1216.104(3.42)
639.5 10	0.14 4	⁷⁶ Br(16.2 h)	559.101(74), 657.041(15.9), 1853.67(14.7)
639.5 4	0.09 5	¹⁴² La(91.1 m)	641.285(47), 2397.8(13.3), 2542.7(10.00)
639.50 10	1.36 10	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
639.56 16	0.258 20	²¹⁰ At(8.1 h)	1181.39(99.3), 245.31(79), 1483.39(46.5)
639.6 1	0.261 20	⁸⁰ Br(17.68 m)	616.6(7), 703.9(0.19), 1256.3(0.074)
639.6 1	1.50 15	⁸⁰ Rb(34 s)	616.6(25), 703.9(1.88), 1256.3(0.57)
639.6 2	†100 11	¹³⁴ Pr(11 m)	293.5(†100), 299.0(†100), 1196.8(†100)
639.6 2	†100 11	¹³⁴ Pr(17 m)	1964.1(†100), 1904.3(†100), 1579.9(†100)
639.6 2	0.62 6	¹⁴⁰ Pm(9.2 s)	773.74(5.0), 477.1(2.6), 1204.8(1.9)
639.6 3	12	¹⁴⁵ Dy(13.6 s)	578.2(13), 804.3(10), 39.7
639.62 7	†0.8 3	¹⁰¹ Nb(7.1 s)	276.10(†100), 157.466(†32), 13.5(†32)
639.70 8	5.4 5	¹⁰⁵ In(5.07 m)	131.37(41), 260.21(15.7), 604.11(9.2)
• 639.7 2	0.90 10	¹²⁶ Sb(12.46 d)	695.03(100), 666.331(100), 414.81(83.3)
• 639.72 2	0.0084 6	⁹⁷ Ru(2.9 d)	215.718(86), 324.48(10.79), 569.31(0.873)
639.74 11	0.59 3	⁶⁶ Ge(2.26 h)	43.89(28.7), 381.85(28), 272.97(10.4)
639.8 3	0.32 3	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
639.9	0.09	⁴³ Ar(5.37 m)	975.0(34), 738.1(15), 1439.5(13)
639.9	2.6 7	⁹⁹ Y(1.470 s)	121.761(33), 724.30(14.9), 536.2(6.6)
639.9 1	8.2 6	¹⁰⁰ Ag(2.01 m)	665.54(99), 750.67(78), 773.20(24.2)
639.90 30	3.1	¹¹⁶ Ag(2.68 m)	513.39(76), 2478.5(12), 699.58(11)
639.92 10	0.86 7	¹⁹⁷ Tl(2.84 h)	425.84(12.9), 152.22(7.2), 1411.34(4.5)
• 639.97 4	8.7×10^{-6} 2	²³⁹ Pu(24110 y)	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
640	†>0.23	¹⁶⁰ Ho(5.02 h)	728.18(†100), 879.383(†65.9), 962.317(†59.1)
640	>0.11	¹⁶⁰ Ho(25.6 m)	728.18(46.9), 879.383(26.6), 962.317(25.6)
640.0 4	0.099 21	¹⁶² Tm(21.70 m)	102.00(17.5), 798.68(8.4), 227.52(7)
640 1	0.06 3	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
640.0 5	0.105 21	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
• 640		²⁴³ Cm(29.1 y)	277.599(14.0), 228.183(10.6), 209.753(3.29)
• 640.04 3	0.090 4	¹⁶⁶ Ho(1.20×10^3 y)	184.410(72.6), 810.276(58.08), 711.683(55.32)
640.04 3	0.0497 15	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
640.06 11	2.91 6	¹⁴⁶ Cs(0.343 s)	181.02(57.0), 557.76(9.18), 332.38(6.44)
640.1 7	†4.6 9	¹⁶⁰ Tm(9.4 m)	125.8(†100), 728.5(†37), 264.1(†27)
640.11 3	0.062 8	¹⁸³ Os(13.0 h)	381.768(89.6), 114.463(20.63), 167.844(8.81)
640.2 3	†11.4 12	¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
640.24 8	2.64 24	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
640.34 4	0.056 5	²²⁸ Ac(6.15 h)	911.205(26.6), 968.971(16.2), 338.322(11.3)
640.34 4	0.06 3	²²⁸ Pa(22 h)	911.205(4.19), 463.005(1.250), 964.770(4.25)
640.4 2	0.074 11	¹⁶³ Tm(1.810 h)	104.320(18.6), 69.229(11.6), 241.305(10.9)
640.44 18	0.50 8	¹⁵⁶ Tm(83.8 s)	344.55(86), 452.85(17.2), 585.93(14.6)
640.46 8	0.061 9	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
640.55 8	0.55 8	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
640.58 10	0.566 24	¹⁰⁷ In(32.4 m)	204.97(47), 505.51(11.9), 320.92(10.2)
640.6 3	†0.49 12	⁹⁵ Pd(13.3 s)	1350.9(†105), 716.6(†70.63), 381.8(†50.8)
640.6 5	2.8 22	¹⁰³ In(65 s)	187.97(55), 720.32(13.9), 739.95(10.1)
640.6 3	0.57 8	¹²⁶ Ba(100 m)	233.6(19.6), 257.6(7.6), 241.0(6.0)
640.8 7	0.21 5	¹⁰³ Cd(7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
640.8 3	0.8 3	¹¹² Rh(6.8 s)	348.70(87), 560.5(49), 1098.6(39)
640.8 1	0.082 3	¹²¹ I(2.12 h)	212.189(84), 532.08(6.07), 598.74(1.47)
640.8 2	†7 1	¹⁸⁵ Pt(33.0 m)	229.60(†100), 135.3(†80), 197.4(†74)
640.85 5	†17.1 8	¹²⁰ I(81.0 m)	560.44(†137), 1523.0(†21.1), 601.11(†10.8)
640.9 4	0.20 7	⁷⁶ Kr(14.8 h)	315.7(39), 270.2(21.1), 45.48(19.5)
640.90 20	0.42 14	¹⁰² Zr(2.9 s)	599.60(13.9), 535.30(10.6), 64.50(8.9)
640.9 3	0.62 12	¹⁴⁹ Dy(4.20 m)	100.8(15.2), 789.4(11.8), 1776.3(11.1)
640.9 2	>0.05	¹⁷³ Ta(3.14 h)	172.2(18), 69.70(5.9), 90.3(5.0)
640.97 5	0.035 14	¹⁸⁷ W(23.72 h)	685.774(27.3), 479.531(21.8), 72.001(11.14)
640.97 7	0.056 17	¹⁸⁹ Pt(10.87 h)	721.41(9.3), 94.33(7.6), 568.84(7.1)
641.0	0.28 3	¹⁵⁷ Er(18.65 m)	53.05(24), 391.32(14.2), 121.57(10.1)

• $t_{1/2} > 1$ 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: $E_\gamma(I_\gamma)$
641.00	0.53 18	²⁰⁷ At(1.80 h)	814.41(44.5), 588.33(19.2), 300.654(12.8)
641.00	>0.36	²⁰⁷ At(1.80 h)	814.41(44.5), 588.33(19.2), 300.654(12.8)
• 641.0 5	†0.0012 4	²²⁷ Th(18.72 d)	235.971(†813), 50.13(†528), 256.25(†463)
• 641 2		²⁴¹ Pu(14.35 y)	148.567(†309000), 103.680(†69400), 77.10(†35100)
• 641.01 10	0.071 8	¹⁵⁶ Tb(5.35 d)	534.318(66.6), 199.2132(40.9), 1222.36(31.00)
641.072 15	1.25 3	¹⁵⁵ Dy(9.9 h)	226.918(68.4), 184.564(3.37), 1089.8(>2.8)
641.10 10		⁸⁶ Zr(16.5 h)	242.80(96), 29.10(21.6), 612.00(5.7)
641.1 1	†55 3	¹⁰³ Nb(1.5 s)	102.64(†100), 538.5(†34.0), 138.5(†13.5)
641.19 7	1.44 24	¹⁴¹ Xe(1.73 s)	909.23(24.0), 118.705(16.1), 105.937(9.8)
641.2 25	>1.3	⁷⁷ Sr(9.0 s)	146.94(86.1), 160.10(9.2), 144.82(6.8)
641.2 4	0.10 5	¹⁸⁵ Au(4.25 m)	310.6(13), 243.1(6.6), 77.7(6)
641.22 21	0.55 7	¹⁶¹ Yb(4.2 m)	78.20(34), 599.88(25.9), 631.45(13.9)
641.285 9	47	¹⁴² La(91.1 m)	2397.8(13.3), 2542.7(10.00), 894.9(8.34)
641.285 9	0.0022	¹⁴² Pr(19.12 h)	
641.3 2	†0.9 3	¹⁵² Tb(17.5 h)	344.281(†1500), 586.294(†223), 271.135(†203)
641.3 4	0.062 11	¹⁹⁹ Pb(90 m)	366.90(44.2), 353.39(9.5), 1135.04(7.8)
641.380 25	10.0 5	¹⁴⁷ Pr(13.4 m)	77.9921(15), 314.675(13.2), 577.95(8.5)
641.4 10		⁷⁷ Ga(13.2 s)	469.4(†100), 458.6(†48), 2187.3
641.4 5	0.384 20	¹⁴² Pm(40.5 s)	1575.85(2.0), 2384.3(0.067), 2845.9(0.047)
641.46 16	0.22 3	¹⁵⁷ Sm(482 s)	197.870(56.00), 196.461(16.8), 394.351(11.93)
• 641.47 5	†7.1×10 ⁻⁴ 3	²⁴¹ Am(432.2 y)	59.537(†60), 26.345(†1000×10 ⁹), 33.195(†6000×10 ⁸)
641.5 4	†9 3	¹³¹ Nd(27 s)	87.8(†100), 174.42(†34), 164.09(†25)
641.5	0.400 18	¹⁴¹ Ba(18.27 m)	190.328(46.0), 304.194(25.4), 276.948(23.4)
641.5	†13.0	¹⁴⁴ Gd(4.5 m)	333.3(†100), 2432.6(†94.8), 629.5(†32.4)
641.5 2	10 1	¹⁵¹ Er(23.5 s)	638.3(36), 667.2(17), 256.4(15.9)
641.5 3	0.083 10	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
641.5 2	†55.8 6	²⁰³ At(7.4 m)	639.4(†100), 738.1(†38.4), 656.4(†26.6)
• 641.59 5	0.38 4	¹⁸⁸ Ir(41.5 h)	155.032(29.7), 2214.62(18.7), 632.99(18)
641.6 2	†4.0 3	¹⁹² Bi(37 s)	853.8(†100.0), 501.8(†80), 504.3(†39)
641.68 5	25.9 6	¹¹⁰ In(4.9 h)	657.7622(98.3), 884.685(92.9), 937.493(68.4)
641.70 20	0.059 4	¹¹¹ Pd(23.4 m)	580.00(0.8), 70.44(0.78), 1459.0(0.56)
641.77 11	0.071 16	²²⁷ Fr(2.47 m)	90.035(39), 585.804(29.5), 64.267(14.5)
641.8 5	†6.6 8	¹⁰³ Mo(67.5 s)	83.4(†100), 423.91(†69), 45.8(†57)
641.8 2	†0.95 23	¹⁶⁰ Ho(5.02 h)	728.18(†100), 879.383(†65.9), 962.317(†59.1)
641.8 2	0.45 11	¹⁶⁰ Ho(25.6 m)	728.18(46.9), 879.383(26.6), 962.317(25.6)
641.8 3	†1.19 24	¹⁸⁹ Hg(7.6 m)	320.99(†100), 78.21(†63), 565.42(†48)
641.81 11	1.0 4	¹⁵⁷ Pm(10.56 s)	160.61(35), 188.052(13.5), 571.27(5.39)
641.82 18	†0.65 11	¹⁸⁸ Au(8.84 m)	265.63(†100), 340.04(†23.9), 605.5(†16.3)
641.910 7	1.40 12	¹⁸⁴ Ta(8.7 h)	414.03(72), 252.848(43), 920.932(32.0)
• 641.910 7	1.94 3	¹⁸⁴ Re(38.0 d)	903.279(37.9), 792.071(37.5), 111.208(17.1)
• 641.910 7	0.344 12	¹⁸⁴ Re(169 d)	252.848(10.7), 216.548(9.43), 920.932(8.14)
642 1	4.1 6	¹⁶⁴ Ta(14.2 s)	211.05(74), 376.8(22), 605.0(14)
642.0 5	0.35	¹⁸⁶ Ta(10.5 m)	197.93(50), 214.87(42.3), 510.82(37.5)
642.0 10	0.21 4	²⁰¹ Bi(108 m)	629.1(24.0), 936.2(11.3), 1014.1(10.7)
642.0 6	>0.11	²⁰⁹ Rn(28.5 m)	408.32(50.3), 745.78(22.8), 337.45(14.5)
642	>0.034	²⁴⁵ Pu(10.5 h)	327.428(25.4), 560.13(5.4), 308.222(4.9)
• 642.1	0.047 3	¹²⁵ Sb(2.7582 y)	427.875(30), 600.600(17.86), 635.954(11.31)
642.11 12	0.238 25	¹⁶⁷ Lu(51.5 m)	29.66(14.4), 239.22(8.6), 213.19(3.6)
642.2 4	>0.039	¹³² I(2.295 h)	667.718(99), 772.60(75.6), 954.55(17.6)
642.2 6	0.19 6	¹⁵¹ Dy(17.9 m)	386.10(19.4), 49.46(18.0), 546.31(14.3)
642.2 3	†8 3	¹⁵⁵ Nd(8.9 s)	180.574(†100), 418.99(†75), 955.08(†50)
642.2 3	0.11	¹⁸¹ Au(11.4 s)	198.60(4.4), 2022.4(4.2), 79.40(4.2)
642.21 5	14.4 10	⁸⁰ Zn(0.545 s)	712.53(45.1), 715.40(33.8), 964.93(15.6)
642.30 9	23 4	¹³¹ Sb(23.03 m)	943.4(47), 933.1(26.1), 1123.6(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: $E_{\gamma}(I_{\gamma})$
642.3 3	0.16 6	¹⁷⁷ W(135 m)	115.65(50), 426.98(13.2), 1036.4(10.3)
642.3 4	0.028	²³³ Th(22.3 m)	86.477(2.7), 29.374(2.5), 459.222(1.4)
642.33 9	0.88 11	¹³³ Te(55.4 m)	912.671(55.28), 647.51(19.4), 863.955(15.6)
642.35 9	37.0 20	²³⁶ Pa(9.1 m)	687.59(9.9), 1762.7(6.0), 1807.8(2.24)
642.35 9	0.9	²³⁶ Np(22.5 h)	687.59(0.250), 538.11(0.0110), 104.234
• 642.35 9		²³⁶ Np(1.54×10^5 y)	160.308(32), 104.234(7.2), 45.242(0.13)
• 642.35 9	0.000013 1	²⁴⁰ Pu(6563 y)	45.242(0.0450), 104.234(0.00708), 160.308(0.000402)
642.40 30	1.6 4	¹⁰⁵ In(5.07 m)	131.37(41), 260.21(15.7), 604.11(9.2)
• 642.40 2	0.0046 14	¹⁵⁴ Eu(8.593 y)	123.071(40.79), 1274.436(35.19), 723.304(20.22)
642.40 2	0.68 14	¹⁵⁴ Tb(9.4 h)	123.071(30), 247.925(22.1), 540.18(20)
642.40 2	4.1 3	¹⁵⁴ Tb(22.7 h)	247.925(79), 346.643(69), 1419.81(46)
642.50 25	0.44 9	¹⁵⁷ Tm(3.63 m)	455.00(9.3), 385.5(8.8), 348.40(8.4)
642.5 2	†39 5	¹⁷¹ Ho(53 s)	903.3(†100), 198.6(†88), 279.2(†60)
642.56 20	0.058 12	¹¹⁸ In(4.45 m)	1229.68(96), 1050.69(81.0), 683.08(54.3)
642.59 21	0.48 16	¹²² In(10.3 s)	1140.55(98), 1001.58(50.7), 1190.58(20.5)
642.60 14	0.077 8	¹⁴¹ Cs(24.94 s)	48.53(7.90), 561.63(4.7), 1194.02(3.95)
642.60 20	0.15 3	¹⁹⁵ Tl(1.16 h)	563.52(10.5), 884.47(10.0), 1363.88(8.4)
• 642.65 8	0.056 9	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
642.7 2	†0.45 12	¹⁵⁸ Ho(11.3 m)	218.21(†100.0), 98.91(†70), 945.7(†37)
642.7 2	†25 2	¹⁷⁴ Er(3.3 m)	100.4(†100), 708.4(†93), 766.9(†92)
642.7 2		¹⁹¹ Tl(5.22 m)	452.6(†100), 470.1(†98), 391.6(†96)
642.7 8	0.8 2	²⁰⁰ Bi(36.4 m)	1026.5(100), 462.34(98), 419.70(91)
642.71 39	†7.5 15	¹⁶⁴ Tm(2.0 m)	91.40(†1500), 1154.66(†366), 768.91(†279)
• 642.719 5	0.217 4	¹³¹ I(8.02070 d)	364.489(81.7), 636.989(7.17), 284.305(6.14)
642.77 5	1.07 5	¹⁴³ Ba(14.33 s)	211.475(25), 798.79(15.6), 980.45(11.55)
642.79 4	1.24 6	¹⁰¹ Mo(14.61 m)	191.92(19), 590.91(16.4), 1012.47(12.8)
642.79 8	0.84 10	¹⁹⁴ Pb(12.0 m)	581.82(18.8), 1519.45(16.4), 203.82(16.2)
642.8 6	0.094 9	¹⁰⁵ Cd(55.5 m)	961.84(4.69), 346.870(4.20), 1302.459(3.98)
642.8 4	0.46 21	¹⁵⁴ Ho(11.76 m)	334.6(84), 412.4(15.0), 873.4(12.5)
642.8	0.29	¹⁸⁵ Ir(14.4 h)	254.4(13.3), 1828.8(10), 60.0(5.7)
642.8 5	0.15 3	¹⁸⁷ Au(8.4 m)	1331.81(7.0), 1408.23(3.06), 914.73(3.02)
642.85 8	0.10	¹⁷⁶ Ta(8.09 h)	1159.28(25), 88.34(12), 1224.93(6)
• 642.877 9	7.59×10^{-5} 18	¹⁶⁹ Yb(32.026 d)	63.12077(44.2), 197.95788(35.8), 177.21402(22.16)
642.9 5	0.46 12	⁹³ Ru(10.8 s)	1396.2(39), 1111.2(26.2), 2039.1(9.2)
642.90 20	0.069 14	¹⁵⁹ Tm(9.13 m)	38.35(5.8), 84.8(5.8), 271.30(5.1)
642.9 10	0.023 12	¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
643	>0.019	⁹⁰ Nb(14.60 h)	1129.224(92.7), 2318.968(82.03), 141.178(66.8)
643.0 5	0.16 4	¹²⁵ Sn(9.52 m)	332.10(97.2), 1404.0(0.70), 589.6(0.20)
643.0	†0.5	¹³¹ Sn(56.0 s)	1226.03(†100), 450.03(†90), 798.50(†86)
643.0 4	1.49 10	¹⁴⁴ La(40.8 s)	397.440(94.3), 541.20(39.2), 844.8(22.3)
643.0 3	0.082 22	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
• 643.04 3	0.226 11	¹⁷² Lu(6.70 d)	1093.657(62.5), 900.724(29.8), 181.528(20.6)
643.1 5	0.30 8	¹⁰³ Cd(7.3 m)	1461.81(12), 1448.70(5.55), 1079.90(5.44)
643.1 5	0.37 8	¹²⁶ Ba(100 m)	233.6(19.6), 257.6(7.6), 241.0(6.0)
643.11 13	0.074 9	¹⁵¹ Nd(12.44 m)	116.80(43.4), 255.68(16.4), 1180.89(14.8)
643.18 23	0.092 22	⁹³ Kr(1.286 s)	253.42(41.2), 323.89(24.1), 266.83(20.6)
643.2 3	0.97 5	⁶⁰ Cu(23.7 m)	1332.501(88), 1791.6(45.4), 826.06(21.7)
643.2 1	3.5 3	¹⁶⁶ Lu(1.41 m)	228.12(15), 102.38(13), 285.07(11.0)
643.2 4	5.3 4	¹⁷⁹ Yb(8.0 m)	592.1(75), 612.3(35.4), 381.4(9.6)
643.2 6	†6.4 10	²⁰⁶ Rn(5.67 m)	497.7(†100), 324.5(†96), 386.6(†61)
643.2 2	0.027 8	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
• 643.2 3	0.013 5	²⁴⁹ Cf(351 y)	388.16(66), 333.37(14.6), 252.80(2.50)
643.26 13	1.91 7	¹⁷² Ta(36.8 m)	214.02(46), 95.23(17.5), 1109.27(12.4)
643.4 2	1.24 23	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)

• $t_{1/2} > 1$ 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: $E_{\gamma}(I_{\gamma})$
643.4 2	$\dagger 15 2$	$^{227}\text{Rn}(22.5 \text{ s})$	162.14($\dagger 100$), 739.2($\dagger 65$), 686.2($\dagger 62$)
643.43 12	0.42 6	$^{100}\text{Y}(735 \text{ ms})$	212.531(73), 118.59(15.4), 665.98(7.7)
643.5	6.3 5	$^{40}\text{Cl}(1.35 \text{ m})$	1460.830(79), 2839.8(30.4), 2621.5(15.4)
• 643.5 8	$\dagger 0.0046$	$^{101}\text{Rh}(4.34 \text{ d})$	306.85($\dagger 115$), 545.06($\dagger 6.1$), 127.23($\dagger 0.85$)
643.50 5	0.64 4	$^{109}\text{Ru}(34.5 \text{ s})$	206.29(22.0), 225.98(19.6), 1929.05(13.7)
643.5 5	0.050 21	$^{140}\text{Cs}(63.7 \text{ s})$	602.345(71.1), 908.25(11.6), 1200.25(6.39)
643.5 20	0.19 4	$^{208}\text{Rn}(24.35 \text{ m})$	426.78(7.07), 251.05(5.02), 350.026(3.34)
• 643.5 5	>0.019	$^{232}\text{Pa}(1.31 \text{ d})$	969.315(41.6), 894.351(19.8), 150.059(10.8)
• 643.5 5	0.00024	$^{236}\text{Pu}(2.858 \text{ y})$	47.574(0.066), 108.96(0.012), 166.0(0.00066)
643.6 15	0.0019 9	$^{81}\text{Rb}(30.5 \text{ m})$	49.56(0.78), 643.6(0.115), 1194.9(0.112)
643.6 1	0.115 5	$^{81}\text{Rb}(30.5 \text{ m})$	49.56(0.78), 1194.9(0.112), 549.02(0.106)
643.6 3	$\dagger 3.2 7$	$^{103}\text{Nb}(1.5 \text{ s})$	102.64($\dagger 100$), 641.1($\dagger 55$), 538.5($\dagger 34.0$)
643.6	1.9	$^{111}\text{Sb}(75 \text{ s})$	154.48(71), 489.1(42), 1032.6(10.0)
643.6	0.39	$^{145}\text{Ba}(4.31 \text{ s})$	96.6(17), 91.9(7), 65.9(5)
643.6 3	0.45 7	$^{181}\text{Au}(11.4 \text{ s})$	198.60(4.4), 2022.4(4.2), 79.40(4.2)
643.62 30	0.231 12	$^{79}\text{Rb}(22.9 \text{ m})$	688.1(23), 182.77(19.2), 143.41(13.9)
643.65 5	14.7 9	$^{128}\text{La}(5.0 \text{ m})$	284.00(87), 479.24(54), 600.5(10.5)
643.7 3	3.0	$^{113}\text{Pd}(93 \text{ s})$	95.74(3.3), 739.63(2.4), 222.06(1.2)
643.7 3	$\dagger 1.06 11$	$^{120}\text{Cs}(64 \text{ s})$	322.4($\dagger 100$), 473.5($\dagger 30$), 553.4($\dagger 19.1$)
643.7	$\dagger 71 5$	$^{202}\text{Po}(44.7 \text{ m})$	688.6($\dagger 1000$), 316.0($\dagger 286$), 165.7($\dagger 174$)
643.73 8	1.67 15	$^{116}\text{Ag}(2.68 \text{ m})$	513.39(76), 2478.5(12), 699.58(11)
643.75 9	1.55 8	$^{143}\text{La}(14.2 \text{ m})$	620.3(2.34), 621.4(1.52), 798.14(1.18)
643.79 16	0.57 14	$^{181}\text{Re}(19.9 \text{ h})$	365.57(56), 360.70(20), 639.30(6.4)
643.8 1	0.21 4	$^{119}\text{I}(19.1 \text{ m})$	257.52(87), 635.86(2.69), 320.53(2.17)
643.8 3	0.071 10	$^{163}\text{Yb}(11.05 \text{ m})$	860.28(10.1), 63.62(6.5), 123.21(1.98)
643.8 2	0.457 20	$^{210}\text{At}(8.1 \text{ h})$	1181.39(99.3), 245.31(79), 1483.39(46.5)
643.8 1	$\dagger 100$	$^{210}\text{Fr}(3.18 \text{ m})$	817.6($\dagger 60$), 203.1($\dagger 35$), 901.3($\dagger 30$)
643.9 3	0.0118 9	$^{73}\text{Se}(39.8 \text{ m})$	67.03(2.59), 253.70(2.356), 84.0(2.03)
643.9 8	0.032 4	$^{107}\text{Rh}(21.7 \text{ m})$	302.77(66), 392.47(8.8), 312.21(4.8)
643.9 4	0.47 10	$^{136}\text{Nd}(50.65 \text{ m})$	108.90(32), 40.2(18.9), 574.8(10.4)
• 643.90 20	0.0157 14	$^{148}\text{Eu}(54.5 \text{ d})$	550.284(98.5), 629.987(71.9), 611.293(20.5)
643.90 10	0.0227 11	$^{166}\text{Tm}(7.70 \text{ h})$	778.817(18.9), 2052.36(17.2), 184.410(16.1)
643.9 3	7.8 11	$^{180}\text{Ir}(1.5 \text{ m})$	276.4(56), 132.2(38.1), 699.0(13.4)
644.0 1	1.01 8	$^{96}\text{Rb}(0.199 \text{ s})$	815.0(78.00), 692.0(8.0), 813.2(7.0)
644.0 1	1.2	$^{97}\text{Rb}(169.9 \text{ ms})$	815.0(100), 692.0(16.5), 414.3(15.0)
644.0 6	0.11 3	$^{99}\text{Rh}(4.7 \text{ h})$	340.71(70), 617.8(12.0), 1261.2(11)
644.0 5	0.74 14	$^{105}\text{Tc}(7.6 \text{ m})$	143.26(16), 107.945(14.1), 321.50(11.1)
644.01 4	84	$^{119}\text{Te}(16.03 \text{ h})$	699.85(10.1), 1749.65(3.95), 1413.19(1.09)
644.07 9	0.266 15	$^{143}\text{Ba}(14.33 \text{ s})$	211.475(25), 798.79(15.6), 980.45(11.55)
644.1 2	$\dagger 1.69 29$	$^{192}\text{Tl}(9.6 \text{ m})$	422.8($\dagger 100$), 634.8($\dagger 75.9$), 786.3($\dagger 31.7$)
644.16 10	4.57 12	$^{96}\text{Rh}(9.90 \text{ m})$	832.57(100), 685.49(95.7), 631.71(74.5)
644.18 6	0.0705 23	$^{96}\text{Y}(5.34 \text{ s})$	1750.42(2.350), 2225.93(0.322), 475.33(0.188)
644.18 6	10	$^{96}\text{Y}(9.6 \text{ s})$	1750.42(89), 915.0(60), 617.1(56)
644.19 6	0.23 3	$^{153}\text{Dy}(6.4 \text{ h})$	80.723(11.10), 213.754(10.90), 99.659(10.51)
644.2 2	2.3 3	$^{123}\text{Cs}(5.94 \text{ m})$	97.3(23), 596.7(10.1), 83.3(4.1)
644.2 2	0.60 5	$^{141}\text{Xe}(1.73 \text{ s})$	909.23(24.0), 118.705(16.1), 105.937(9.8)
644.2 5		$^{197}\text{Ir}(5.8 \text{ m})$	469.72($\dagger 100$), 430.56($\dagger 61$), 815.92($\dagger 45$)
• 644.2 5	$\dagger 0.0031 12$	$^{227}\text{Th}(18.72 \text{ d})$	235.971($\dagger 813$), 50.13($\dagger 528$), 256.25($\dagger 463$)
644.21 30	0.026 5	$^{165}\text{Yb}(9.9 \text{ m})$	80.11(49), 68.86(9.1), 1090.28(4.4)
• 644.277 5	0.0121 21	$^{168}\text{Tm}(93.1 \text{ d})$	198.241(52.39), 815.990(48.99), 447.515(23.05)
644.29 6	0.63 5	$^{189}\text{Pt}(10.87 \text{ h})$	721.41(9.3), 94.33(7.6), 568.84(7.1)
644.38 6	0.17 6	$^{152}\text{Pm}(7.52 \text{ m})$	244.6989(78), 121.7824(45), 340.48(31.3)
• 644.38 6	0.0058 8	$^{152}\text{Eu}(13.542 \text{ y})$	121.7824(28.4), 1408.011(20.87), 964.131(14.34)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
644.4 4	$\dagger 8$ 2	$^{134}\text{Pr}(11 \text{ m})$	293.5($\dagger 100$), 299.0($\dagger 100$), 1196.8($\dagger 100$)
644.4 4	$\dagger 8$ 2	$^{134}\text{Pr}(17 \text{ m})$	1964.1($\dagger 100$), 1904.3($\dagger 100$), 1579.9($\dagger 100$)
644.4 4	$\dagger 18$ 3	$^{163}\text{Lu}(238 \text{ s})$	163.08($\dagger 100$), 54.00($\dagger 88$), 396.34($\dagger 63$)
644.4 5	0.0077 7	$^{233}\text{Np}(36.2 \text{ m})$	312.17(0.7), 298.89(0.44), 546.9(0.280)
644.42 30	0.09 3	$^{137}\text{Nd}(38.5 \text{ m})$	75.5(17.0), 580.6(13), 306.60(10.0)
644.45 4	0.67 10	$^{202}\text{Bi}(1.72 \text{ h})$	960.67(99), 422.18(83.7), 657.49(60.6)
644.5 2	0.017 17	$^{117}\text{Cd}(2.49 \text{ h})$	273.349(28), 1303.27(18.4), 344.459(17.9)
• 644.55 7	11.1 5	$^{105}\text{Ag}(41.29 \text{ d})$	344.520(41), 280.41(30.2), 443.37(10.5)
644.55 7	$\dagger >3.1 \times 10^2$	$^{105}\text{Ag}(7.23 \text{ m})$	319.14($\dagger 63000$), 306.25($\dagger 12800$), 442.37($\dagger 5900$)
644.56 17	0.205 21	$^{81}\text{Sr}(22.3 \text{ m})$	153.54(33.8), 147.76(30.1), 443.34(17.5)
644.58 2	0.38 4	$^{147}\text{La}(4.015 \text{ s})$	117.718(12), 186.320(6.48), 438.30(5.04)
644.6 2	3.43 13	$^{97}\text{Rb}(169.9 \text{ ms})$	167.1(26), 585.2(21.0), 600.5(10.6)
644.6 3	10.6 11	$^{104}\text{Sn}(20.8 \text{ s})$	132.7(56), 912.6(42), 401.2(16.2)
644.61 8	3.1 4	$^{79}\text{Ge}(39.0 \text{ s})$	230.62(61), 542.27(32.6), 755(18)
• 644.61 5	0.139 7	$^{166}\text{Ho}(1.20 \times 10^3 \text{ y})$	184.410(72.6), 810.276(58.08), 711.683(55.32)
644.684 8	0.084 7	$^{199}\text{Pt}(30.80 \text{ m})$	542.993(15), 493.772(5.59), 317.056(4.95)
644.7 2	$\dagger 5$ 3 7	$^{131}\text{Ce}(10.3 \text{ m})$	169.42($\dagger 100$), 414.25($\dagger 68$), 119.18($\dagger 44$)
644.7 4	0.28 9	$^{161}\text{Tm}(33 \text{ m})$	45.54(5.00), 1648.1(9.50), 84.40(9.4)
644.74 4	1.97 5	$^{133}\text{Ce}(4.9 \text{ h})$	477.22(39), 510.36(20.7), 58.39(19.2)
644.78 9	0.27 3	$^{93}\text{Kr}(1.286 \text{ s})$	253.42(41.2), 323.89(24.1), 266.83(20.6)
644.78 10	0.042 3	$^{151}\text{Tb}(17.609 \text{ h})$	287.357(28.3), 251.863(26.3), 108.088(24.3)
644.8 10	2.2 3	$^{86}\text{Y}(14.74 \text{ h})$	1076.64(83), 627.72(32.6), 1153.01(30.5)
644.8 2	6.4 7	$^{113}\text{Te}(1.7 \text{ m})$	814.4(22), 1018.1(13.0), 1181.0(12.3)
644.8 5	0.6	$^{136}\text{Te}(17.5 \text{ s})$	2077.9(22), 333.99(19), 578.75(18)
644.80 7	$\dagger 63$ 4	$^{142}\text{Xe}(1.22 \text{ s})$	571.83($\dagger 100$), 657.05($\dagger 79$), 538.24($\dagger 77$)
644.8 2	1.7	$^{145}\text{La}(24.8 \text{ s})$	70.0(11), 355.8(3.8), 118.2(3.6)
644.82 6	0.0143 8	$^{62}\text{Zn}(9.186 \text{ h})$	596.56(26), 40.84(25.5), 548.35(15.3)
644.830 14	3.4 4	$^{98}\text{Nb}(2.86 \text{ s})$	787.374(13), 1023.73(6.1), 1432.22(3.4)
644.830 14	5.60 19	$^{98}\text{Nb}(51.3 \text{ m})$	787.374(93), 722.645(73.8), 1168.830(17.8)
644.83 16	$\dagger 13.5$ 10	$^{159}\text{Yb}(1.58 \text{ m})$	166.16($\dagger 500$), 177.12($\dagger 159$), 390.20($\dagger 113$)
• 644.86 6	0.118 9	$^{172}\text{Lu}(6.70 \text{ d})$	1093.657(62.5), 900.724(29.8), 181.528(20.6)
644.86 8	1.0	$^{176}\text{Ta}(8.09 \text{ h})$	1159.28(25), 88.34(12), 1224.93(6)
644.86 20	0.312 24	$^{205}\text{At}(26.2 \text{ m})$	719.30(31), 669.41(8.6), 628.88(5.6)
644.9	1.4	$^{133}\text{Pr}(6.5 \text{ m})$	134.3(14), 74.0(10), 315.6(10)
644.9 4	0.45 9	$^{161}\text{Yb}(4.2 \text{ m})$	78.20(34), 599.88(25.9), 631.45(13.9)
644.9 1	0.49 3	$^{228}\text{Fr}(39 \text{ s})$	473.7(10.2), 474.0(7.6), 410.40(6.3)
644.9 2	0.56 6	$^{235}\text{Th}(7.1 \text{ m})$	417.0(2), 727.2(0.87), 696.1(0.64)
645.0 6	0.13 7	$^{103}\text{Cd}(7.3 \text{ m})$	1461.81(12), 1448.70(5.55), 1079.90(5.44)
645.0 3	5.6 17	$^{180}\text{Ir}(1.5 \text{ m})$	276.4(56), 132.2(38.1), 699.0(13.4)
645.00 22	$\dagger 2.9$ 6	$^{183}\text{Hg}(9.4 \text{ s})$	60.5($\dagger 100$), 159.91($\dagger 21$), 172.70($\dagger 17$)
645.0 3	0.42 5	$^{201}\text{Au}(26 \text{ m})$	542.6(1.2), 517.0(0.83), 613.2(0.77)
645.05 4	0.312 23	$^{132}\text{La}(4.8 \text{ h})$	464.55(76), 567.14(15.7), 1909.91(9.0)
645.13 8	100	$^{129}\text{Sn}(2.23 \text{ m})$	80.5(6.6), 913.2(5.0), 66.4(5.0)
645.157 16	1.17 4	$^{194}\text{Ir}(19.15 \text{ h})$	328.455(13.1), 293.545(2.55), 938.70(0.599)
• 645.157 16	2.11 11	$^{194}\text{Au}(38.02 \text{ h})$	328.455(60), 293.545(10.2), 1468.91(6.3)
645.2 5	0.86 23	$^{191}\text{Hg}(50.8 \text{ m})$	252.5(57), 420.1(18.6), 578.6(17.6)
645.20 25	$\dagger 13$ 3	$^{194}\text{Tl}(33.0 \text{ m})$	428.0($\dagger 100$), 636.5($\dagger 23$), 1040.3($\dagger 5.6$)
• 645.25 9	0.062 3	$^{97}\text{Ru}(2.9 \text{ d})$	215.718(86), 324.48(10.79), 569.31(0.873)
645.28 2	0.50 10	$^{145}\text{Cs}(0.594 \text{ s})$	175.36(20), 198.93(10.9), 112.46(10.71)
645.3 1	0.20 3	$^{109}\text{Ru}(34.5 \text{ s})$	206.29(22.0), 225.98(19.6), 1929.05(13.7)
• 645.315 2	1.460 10	$^{149}\text{Gd}(9.28 \text{ d})$	149.735(48.2), 298.634(28.6), 346.651(23.9)
645.4 1	0.87 9	$^{134}\text{Te}(41.8 \text{ m})$	767.20(29.0), 210.465(22.3), 277.951(20.9)
645.40 5	$\dagger 52.7$ 23	$^{160}\text{Ho}(5.02 \text{ h})$	728.18($\dagger 100$), 879.383($\dagger 65.9$), 962.317($\dagger 59.1$)
645.40 5	24.7 11	$^{160}\text{Ho}(25.6 \text{ m})$	728.18(46.9), 879.383(26.6), 962.317(25.6)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
645.4 3	$\dagger 1.00$ 7	$^{187}\text{Pb}(15.2 \text{ s})$	299.5($\dagger 100$), 617.2($\dagger 2.67$), 493.6($\dagger 2.67$)
645.4 3		$^{201}\text{Au}(26 \text{ m})$	542.6(1.2), 517.0(0.83), 613.2(0.77)
645.41 12	0.152 17	$^{197}\text{Tl}(2.84 \text{ h})$	425.84(12.9), 152.22(7.2), 1411.34(4.5)
645.5	0.15	$^{147}\text{Ba}(0.893 \text{ s})$	167.4(11), 105.2(4.8), 196.1(4.8)
645.5 3	0.55 8	$^{181}\text{Au}(11.4 \text{ s})$	198.60(4.4), 2022.4(4.2), 79.40(4.2)
645.5 4	$\dagger 23$ 2	$^{183}\text{Pt}(43 \text{ s})$	629.3($\dagger 100$), 316.7($\dagger 53$), 328.8($\dagger 36$)
645.5 2	2.11 18	$^{188}\text{Tl}(71 \text{ s})$	412.7(88), 592.0(61), 504.2(23.3)
• 645.50 10	0.0052 9	$^{224}\text{Ra}(3.66 \text{ d})$	240.987(3.97), 292.70(0.0060), 422.04(0.0029)
645.50 10	$\dagger 6$ 1	$^{220}\text{At}(224 \text{ s})$	240.987($\dagger 100$), 292.70($\dagger 39$), 422.04($\dagger 23$)
• 645.58 7	0.352 14	$^{206}\text{Po}(8.8 \text{ d})$	1032.26(32.9), 511.36(24.1), 286.410(23.8)
645.6 5	0.10 6	$^{111}\text{Pd}(5.5 \text{ h})$	70.44(8.3), 391.25(5.4), 632.80(3.6)
645.6 1	0.39 4	$^{133}\text{Te}(12.5 \text{ m})$	312.072(62), 407.63(27.1), 1333.21(10.67)
645.6 1	0.035 6	$^{145}\text{Ce}(3.01 \text{ m})$	724.33(59), 62.54(13.33), 1148.03(9.15)
645.6 4	0.10 5	$^{185}\text{Au}(4.25 \text{ m})$	310.6(13), 243.1(6.6), 77.7(6)
645.7 3	0.66 4	$^{137}\text{Pm}(2.4 \text{ m})$	177.5(40.29), 108.6(35), 233.6(29.57)
645.7 3	0.95 9	$^{152}\text{Pm}(7.52 \text{ m})$	244.6989(78), 121.7824(45), 340.48(31.3)
645.7 3	0.36 3	$^{159}\text{Eu}(18.1 \text{ m})$	67.8(19), 78.6(9.1), 95.7(7.0)
645.71 16	0.135 14	$^{162}\text{Tm}(21.70 \text{ m})$	102.00(17.5), 798.68(8.4), 227.52(7)
645.775 15	0.107 14	$^{168}\text{Ho}(2.99 \text{ m})$	741.356(36.6), 821.164(34.5), 815.990(18.6)
• 645.775 15	1.425 10	$^{168}\text{Tm}(93.1 \text{ d})$	198.241(52.39), 815.990(48.99), 447.515(23.05)
• 645.80 20	0.048 5	$^{83}\text{Sr}(32.41 \text{ h})$	762.65(30), 381.53(14.1), 418.37(4.41)
• 645.80 20	0.0134 7	$^{170}\text{Lu}(2.00 \text{ d})$	84.2551(4.256), 1280.25(3.450), 2041.88(1.434)
645.8 4	1.3 3	$^{185}\text{Au}(4.25 \text{ m})$	310.6(13), 243.1(6.6), 77.7(6)
• 645.855 2	7.38 5	$^{124}\text{Sb}(60.20 \text{ d})$	602.730(97.8), 1690.980(47.3), 722.786(10.76)
645.855 2	25	$^{124}\text{Sb}(93 \text{ s})$	602.730(25), 498.3(25), 1101.0(0.50)
• 645.855 2	0.94 3	$^{124}\text{I}(4.18 \text{ d})$	602.730(60), 1690.980(10.41), 722.786(9.98)
645.896 4		$^{235}\text{Pa}(24.5 \text{ m})$	652.053, 659.3, 637.717
• 645.896 4	1.52×10^{-5} 3	$^{239}\text{Pu}(24110 \text{ y})$	51.624(0.007100), 38.661(0.000500), 129.297(0.00631)
645.9 10	9.2 11	$^{86}\text{Y}(14.74 \text{ h})$	1076.64(83), 627.72(32.6), 1153.01(30.5)
645.9 5	$\dagger 4.6$	$^{154}\text{Nd}(25.9 \text{ s})$	151.703($\dagger 800$), 799.55($\dagger 600$), 180.693($\dagger 510$)
645.925 10	0.15 3	$^{75}\text{Br}(96.7 \text{ m})$	286.572(88), 141.3147(6.6), 427.883(4.4)
• 646.0 4		$^{105}\text{Ag}(41.29 \text{ d})$	344.520(41), 280.41(30.2), 644.55(11.1)
646.0 5	0.09 4	$^{109}\text{Ru}(34.5 \text{ s})$	206.29(22.0), 225.98(19.6), 1929.05(13.7)
646.0 3	0.20 4	$^{123}\text{Cd}(1.82 \text{ s})$	1165.86(25.7), 1027.45(22.6), 2102.81(12.5)
• 646.0 2	1.0	$^{126}\text{Sb}(12.46 \text{ d})$	695.03(100), 666.331(100), 414.81(83.3)
646.0 20	0.019 4	$^{145}\text{Gd}(23.0 \text{ m})$	1757.9(34.2), 1880.6(32.6), 1041.8(9.9)
646.02 5	2.74 17	$^{106}\text{Rh}(131 \text{ m})$	511.842(85), 1045.83(30.4), 717.24(28.9)
• 646.02 5	1.46 10	$^{106}\text{Ag}(8.28 \text{ d})$	511.842(88), 1045.83(29.6), 717.24(28.9)
• 646.03 5	0.065 3	$^{205}\text{Bi}(15.31 \text{ d})$	1764.36(1.368), 703.44(31), 987.62(0.585)
646.1 7	0.59 4	$^{99}\text{Pd}(21.4 \text{ m})$	136.00(73), 263.60(15.2), 673.38(6.9)
646.1 3	6.2 6	$^{127}\text{In}(1.09 \text{ s})$	1597.7(49), 805.1(5.6), 1048.6(5.3)
646.1 3	>0.06	$^{146}\text{La}(6.27 \text{ s})$	258.47(64), 924.58(7.45), 702.28(6.43)
646.11 15	0.81 11	$^{125}\text{Cd}(0.57 \text{ s})$	1027.53(25.8), 1173.16(25.1), 736.65(12.6)
• 646.116 9	78.0 8	$^{185}\text{Os}(93.6 \text{ d})$	874.813(6.29), 880.523(5.17), 717.424(3.94)
• 646.14 15	0.031 9	$^{188}\text{Ir}(41.5 \text{ h})$	155.032(29.7), 2214.62(18.7), 632.99(18)
646.17	$\dagger 100$ 4	$^{37}\text{P}(2.31 \text{ s})$	1582.9($\dagger 74.4$), 2254.1($\dagger 8.2$), 751.32($\dagger 7.2$)
646.17 8	0.0023	$^{239}\text{U}(23.45 \text{ m})$	74.664(48), 43.533(4.14), 662.24(0.18)
646.184 11	0.026 6	$^{200}\text{Au}(48.4 \text{ m})$	367.943(19), 1225.479(10.7), 1262.950(3.12)
646.20 10	0.66 9	$^{118}\text{Ag}(3.76 \text{ s})$	487.77(60), 677.13(11.9), 2788.7(11.8)
646.20 10	0.127 16	$^{118}\text{Ag}(2.0 \text{ s})$	487.77(57), 677.13(53), 1058.39(14.8)
646.2 7	0.14 10	$^{142}\text{La}(91.1 \text{ m})$	641.285(47), 2397.8(13.3), 2542.7(10.00)
646.2 7	0.151 18	$^{167}\text{Lu}(51.5 \text{ m})$	29.66(14.4), 239.22(8.6), 213.19(3.6)
646.2 2	1.24 13	$^{185}\text{Ir}(14.4 \text{ h})$	254.4(13.3), 1828.8(10), 60.0(5.7)
646.2 3	0.068 13	$^{226}\text{Fr}(48 \text{ s})$	253.73(22.3), 186.05(16.3), 253.9(2.5)

• $t_{1/2} > 1 \text{ d}$

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

$E_{\gamma}(\Delta E)$	$I_{\gamma}(\Delta I)$	Decay Parent	Associated γ -rays: $E_{\gamma}(I_{\gamma})$
• 646.22 3	6.28 3	¹⁵⁶ Eu(15.19 d)	811.79(9.70), 88.9667(8.4), 1230.68(7.98)
646.25 14	1.18 14	¹⁰⁵ Tc(7.6 m)	143.26(16), 107.945(14.1), 321.50(11.1)
646.27 24	2.2 4	⁵⁴ V(49.8 s)	834.848(97.1), 989.01(80.1), 2259.35(45.6)
646.3 2	†10.0 9	¹⁶⁰ Ho(5.02 h)	728.18(†100), 879.383(†65.9), 962.317(†59.1)
646.3 2	4.7 4	¹⁶⁰ Ho(25.6 m)	728.18(46.9), 879.383(26.6), 962.317(25.6)
646.5	†0.6	¹³¹ Pr(1.53 m)	266.13(†100), 72.82(†64), 387.56(†38)
646.50 7	0.622 11	¹³⁹ Xe(39.68 s)	218.59(56), 296.53(21.7), 174.97(11.3)
646.5 7	0.33 3	¹⁹⁹ Bi(27 m)	560.1(22.0), 424.85(22), 841.7(11)
646.5 1	0.113 10	²³⁴ Pa(6.70 h)	131.30(18), 946.00(13.4), 883.24(9.6)
646.51 6	0.069 10	¹⁵³ Dy(6.4 h)	80.723(11.10), 213.754(10.90), 99.659(10.51)
646.6 3	0.79 22	¹¹³ Te(1.7 m)	814.4(22), 1018.1(13.0), 1181.0(12.3)
646.60 5	0.0107 13	¹²⁷ Cs(6.25 h)	411.95(62.8), 124.70(11.37), 462.31(5.07)
646.6 3	100	¹⁴⁸ Tm(0.7 s)	877.4(72), 1002.9(55), 257.5(52)
646.60 20	0.15	¹⁸⁶ Ta(10.5 m)	197.93(50), 214.87(42.3), 510.82(37.5)
646.6 1	0.72 11	²³⁶ Th(37.5 m)	110.8(4.2), 196.0(0.69), 340.1(0.67)
646.61	0.09 3	⁴⁴ K(22.13 m)	1157.031(58), 2150.76(22.7), 2518.95(9.69)
646.66 7	1.05 10	¹⁴¹ Cs(24.94 s)	48.53(7.90), 561.63(4.7), 1194.02(3.95)
646.7 3	0.0009 5	⁷³ Se(39.8 m)	67.03(2.59), 253.70(2.356), 84.0(2.03)
646.75 4	0.008	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
646.75	0.015	¹⁶⁶ Tm(7.70 h)	778.817(18.9), 2052.36(17.2), 184.410(16.1)
• 646.8 1	3.8×10 ⁻⁶ 19	¹¹³ Sn(115.09 d)	391.690(64), 255.06(1.82), 638.03(0.00095)
646.8 3	0.40 10	¹²¹ Cs(155 s)	153.9(15.2), 239.6(7.7), 427.1(3.63)
646.8 3	0.31 8	¹²¹ Cs(122 s)	179.4(30.2), 196.0(24.1), 459.7(12.0)
• 646.8 9	0.077 8	¹⁴⁷ Gd(38.06 h)	229.32(63), 396.00(34.3), 929.01(20.2)
• 646.8 3	0.025 9	¹⁵³ Tb(2.34 d)	212.038(31.0), 170.504(6.8), 109.758(6.4)
646.82 32	0.12 4	¹³⁷ Nd(38.5 m)	75.5(17.0), 580.6(13), 306.60(10.0)
646.88 35	0.018 4	¹³⁷ Pr(1.28 h)	836.7(1.8), 433.9(1.28), 514.0(1.08)
• 646.9 5	0.010 5	¹⁴⁸ Eu(54.5 d)	550.284(98.5), 629.987(71.9), 611.293(20.5)
646.9 3	0.0007 4	¹⁵² Eu(9.274 h)	344.281(2.44), 1314.67(0.956), 970.38(0.604)
646.94 7	†13 3	¹⁶⁴ Tm(2.0 m)	91.40(†1500), 1154.66(†366), 768.91(†279)
646.94 7	0.173 19	¹⁶⁴ Tm(5.1 m)	208.08(14.6), 314.97(10), 240.49(7.5)
647.02	0.15	²⁰³ Bi(11.76 h)	820.3(30), 825.2(14.6), 896.9(13)
647.03 9	0.046 5	¹³¹ La(59 m)	108.081(25.0), 417.783(18.0), 365.162(16.9)
647.1 8	0.050 12	¹²⁷ Ba(12.7 m)	180.8(12), 114.8(9.3), 66.06(2.12)
647.1 2	†16	¹³⁹ I(2.29 s)	527.7(†100), 571.2(†98), 536.6(†67)
647.1	0.066 10	¹⁴¹ Pm(20.90 m)	1223.26(4.74), 886.22(2.44), 193.68(1.61)
647.2 5	0.016 10	¹³⁸ Xe(14.08 m)	258.411(31.5), 434.562(20.3), 1768.26(16.7)
647.2	92 7	¹⁵² Ho(49.5 s)	613.8(88.4), 683.3(88), 492.9(72.5)
647.2 1	17 6	¹⁵² Ho(49.5 s)	647.2(92), 613.8(88.4), 683.3(88)
647.2 5	1.5 4	¹⁶⁴ Tb(3.0 m)	168.838(25.4), 754.80(23.3), 215.07(21)
647.2 1	1.8 4	²⁰⁷ Rn(9.25 m)	344.53(46), 747.15(14.2), 402.68(11.9)
647.23 17	0.0008 4	¹⁸⁷ W(23.72 h)	685.774(27.3), 479.531(21.8), 72.001(11.14)
• 647.272 17	0.288 21	¹⁶⁹ Lu(34.06 h)	960.622(23.4), 191.2137(20.6), 1449.74(9.92)
647.3	0.0056 15	⁹⁶ Tc(51.5 m)	778.224(1.9), 1200.231(1.08), 480.705(0.311)
647.3 1	0.024	¹⁰⁹ Pd(13.7012 h)	88.04(1.171), 311.4(0.032), 781.4(0.0112)
647.3 4	0.089 11	¹³⁵ Te(19.0 s)	603.5(37.0), 266.8(10.36), 870.3(7.73)
647.3 1	20.5 18	¹⁴¹ Gd(24.5 s)	351.1(89), 223.9(64), 574.9(51)
647.3 5	4.7 4	¹⁶⁴ Tb(3.0 m)	168.838(25.4), 754.80(23.3), 215.07(21)
647.3		¹⁶⁵ Dy(1.257 m)	515.467(1.53), 361.68(0.534), 153.803(0.242)
647.3 2	2.57 6	¹⁷⁷ W(135 m)	115.65(50), 426.98(13.2), 1036.4(10.3)
647.3 4	†1.70 17	¹⁸² Ir(15 m)	273.23(†100), 126.79(†77), 236.3(†21.0)
647.3 4		¹⁹² Au(4.94 h)	316.50791(58.0), 295.95827(22.3), 2236.89(5.6)
647.3 2	†99 3	¹⁹⁶ Ir(1.40 h)	393.346(†105.2), 521.175(†104), 447.1(†102.1)
647.4 4	0.117 23	⁶⁹ Cu(2.85 m)	1007.5(23.4), 834.4(13.1), 531.2(6.0)

• $t_{1/2} > 1$ d