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**SPECIFIC GAMMA-RAY DOSE CONSTANTS FOR NUCLIDES
IMPORTANT TO DOSIMETRY AND RADIOLOGICAL ASSESSMENT**

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28

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PREFACE TO THE REVISED EDITION

The specific dose equivalent constants were recalculated when an error in the computer program was discovered. The error, omission of the third term in the polynomial representation of the flux-to-dose equivalent factor between 0.5 and 5 MeV, resulted in the dose factor being too high by 2% at 0.5 MeV, 0% at 1 MeV, and increasing to nearly 9% at 5 MeV. This is to be compared to the correct polynomial which gives results within 3% of the recommended standard values. The effect on the specific dose constant was much smaller, generally much less than 2%. The greatest error noted was for ^{49}Ca which was too high by 4.5%.

Although errors of this magnitude are of little practical significance, the results have been corrected for this edition since a reprinting was necessary anyway.

Some other changes were made also. These included correcting a typographical error in the ^{137}Cs value and inserting a space where data were too crowded together.

It may be noted that in calculating the lead shielding thickness, buildup was not included. The only justification for this is that these thicknesses were meant to be rough indication of the shielding problem and the buildup in lead at these energies is quite small.

Revised March 1982

1 1

2 2

3

ABSTRACT

Tables of specific gamma-ray dose constants (the unshielded gamma-ray dose equivalent rate at 1 m from a point source) have been computed for approximately 500 nuclides important to dosimetry and radiological assessment. The half life, the mean attenuation coefficient, and thickness for a lead shield providing 95% dose equivalent attenuation are also listed.

SPECIFIC GAMMA-RAY DOSE CONSTANTS FOR NUCLIDES IMPORTANT TO DOSIMETRY AND RADIOLOGICAL ASSESSMENT

The unshielded gamma-ray dose-equivalent rate at 1 meter from a point source, i.e., the specific gamma-ray dose constant, is a useful quantity in radiation protection applications. Recently, an extensive compilation of the nuclear data required to compute this constant has become available¹ for approximately 500 nuclides important to dosimetry and radiological assessment applications, and it has been used to compute a table of the specific gamma-ray dose constant. In addition, the half-life, mean attenuation coefficient, and thickness for 95% attenuation with a lead shield have been computed.

The data were computed on a different basis from earlier tabulations, e.g., Ref. 2. The dose equivalent rate is given in SI units as mSv/h for a unit source of 1 MBq. To convert to the previous common normalization, one may note that 1 mCi is equal to 37 MBq and 1 Sv is equal to 100 rem. That is, to convert data in units of (mSv/h)/MBq to (mrem/h)/ μ Ci, multiply by 3.7.

A second difference is that the conversion of gamma-ray flux density was taken to be:

$$\ln D(E) = A + B(\ln E) + C(\ln E)^2 + F(\ln E)^3 \quad (\text{rem/h})(\text{cm}^2\text{-s}) \quad (1)$$

where the energy is in units of MeV, and the constants are given in Table 1 taken from Ref. 3.

The specific gamma-ray dose constant, Γ , was summed over n according to:

$$\Gamma = (1/4\pi R^2) \sum S_i D(E_i) \quad (\text{rem/h per Bq}) \quad (2)$$

where $R = 100$ cm,

n = number of gamma-rays emitted by the nuclide,

S_i = emission probability of each gamma ray,

E_i = energy of the gamma-ray (MeV),

$D(E_i)$ = dose rate per unit flux density from Eq. 1.

Only gamma-rays of energy greater than 0.01 MeV were included.

The mean attenuation coefficient was determined by first computing the thickness of lead required for 95% attenuation, i.e.,

$$0.05 \Gamma = \sum \Gamma_i \exp(-\mu(E_i) t) \quad (3)$$

where $\Gamma_i = S_i D(E_i)/(4\pi R^2)$

$\mu(E_i)$ = linear attenuation coefficient from Ref. 4 for lead,

t = thickness required (cm),

The value of t was determined by an iterative procedure, i.e., Newton's method. The value of the mean attenuation coefficient was determined by solving the following equation for μ :

$$0.05 = \exp(-\mu t). \quad (4)$$

The results, presented in Table 2, were computed using computer-readable data from Ref. 1 available as DLC-80/DRALIST from the Radiation Shielding Information Center. The computations were performed using a computer program, SPEC-GAM, programmed by the first author for the ORNL Engineering Physics Information Centers (EPIC) Data General Eclipse S/130 computer in FORTRAN.

ACKNOWLEDGEMENT

The authors are grateful to J. B. Zipperer, of the EPIC staff, for assistance in implementing the program on the Eclipse, and for his suggestions in regard to programming Newton's method.

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3. "Neutron and Gamma-ray Flux-to-Dose-Rate Factors," ANSI/ANS-6.1.1-1977, American Nuclear Society, La Grange Park, IL 60525, \$12.
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TABLE I

Gamma-Ray-Flux-to-Dose-Rate Conversion Factors
Polynomial Coefficients in Analytic Form

$$\ln D(E) = A + Bx + Cx^2 + Fx^3$$

$D(E) = (\text{rem/h})(\text{cm}^2\text{-s})$, $E = \text{Photon energy in MeV}$ and $x = \ln E$

Photon Energy (MeV)	A	B	C	F
0.01 to 0.03	-20.477	-1.7454		
0.03 to 0.5	-13.626	-0.57117	-1.0954	-0.24897
0.5 to 5.0	-13.133	0.72008	-0.033603	
5.0 to 15.0	-12.791	0.28309	0.10873	

TABLE 2

Specific Gamma-ray Dose Constants

Units: E – keV, Γ – (mSv/h)/MBq, T – cm, μ – cm⁻¹

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
7Be	53.4d	477.6	0.1042	9.292–6	1.594	1.879							
11C	20.5m	511.0	1.9950	1.908–4	1.768	1.695	42K	12.4h	312.7	0.0032	3.846–5	4.962	0.604
									1525.0	0.1790			
13N	10.0m	511.0	1.9960	1.909–4	1.768	1.695			1446.0	0.0014			
16N	7.1s	1755.0	0.0013	3.984–4	6.051	0.495	43K	22.6h	184.0	0.0027	1.803–4	1.937	1.546
		2741.0	0.0076						220.6	0.0411			
		6129.0	0.6900						372.8	0.8727			
		7115.0	0.0500						396.9	0.1143			
		6334.0	0.0016						404.3	0.0011			
15O	2.0m	511.0	1.9980	1.911–4	1.768	1.695			593.4	0.1103			
18F	1.8h	511.0	1.9350	1.851–4	1.768	1.695			617.5	0.8051			
22Na	2.6y	1274.0	0.9994	3.590–4	3.517	0.852			800.8	0.0015			
		511.0	1.7980						990.2	0.0033			
24Na	15.0h	1368.0	1.0000	5.120–4	5.692	0.526			1015.0	0.0016			
		2754.0	0.9986				45Ca	162.7d	12.4	0.0000	8.07–12	0.004	823.3
		3824.0	0.0006				47Ca	4.5d	489.2	0.0674	1.577–4	4.368	0.686
27Mg	9.5m	170.7	0.0084	1.448–4	3.447	0.869			530.4	0.0010			
		843.8	0.7180						767.0	0.0019			
		1014.0	0.2800						807.9	0.0689			
28Mg	20.9h	30.6	0.6600	2.371–4	3.926	0.763			1297.0	0.7490			
		400.7	0.3660						1542.0	0.0003			
		941.4	0.3830				49Ca	8.7m	856.1	0.0013	3.459–4	6.344	0.472
		1342.0	0.5260						1144.0	0.0011			
		1373.0	0.0470						1409.0	0.0063			
		1589.0	0.0420						2229.0	0.0019			
		1620.0	0.0030						2372.0	0.0049			
		717.6	0.0013						3084.0	0.9210			
26Al	7.2+5y	1130.0	0.0250	3.995–4	4.597	0.652			4072.0	0.0700			
		1809.0	0.9976						4738.0	0.0021			
		2938.0	0.0024						947.0	0.0018			
		511.0	1.6360				44Sc	3.9h	1157.0	0.9988	3.573–4	3.272	0.915
28Al	2.2m	1779.0	1.0000	2.358–4	5.467	0.548			1500.0	0.0091			
31Si	2.6h	1266.0	0.0007	1.306–7	4.431	0.676			2656.0	0.0011			
38Cl	37.2m	1642.0	0.3250	1.912–4	5.687	0.527			2375.0	0.0000			
		2167.0	0.4400						511.0	1.8870			
		3809.0	0.0002				46Sc	83.8d	889.2	0.9998	3.154–4	3.808	0.787
41Ar	1.8h	1294.0	0.9916	1.877–4	4.492	0.667			1120.0	0.9999			
		1677.0	0.0005						2010.0	0.0000			
40K	1.28+9y	1461.0	0.1067	2.197–5	4.843	0.619	46mSc	18.7s	142.5	0.6270	1.809–5	0.123	24.378
							47Sc	3.4d	159.4	0.6800	2.170–5	0.162	18.513
							48Sc	1.8d	175.4	0.0747	5.112–4	4.113	0.728
									983.5	1.0000			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		1140.0	0.0013						269.5	0.3650			
		1175.0	0.0228						480.4	0.3650			
		1238.0	0.6697						749.9	0.4950			
		1335.0	0.0012						811.9	0.8600			
		1360.0	0.0429						1562.0	0.1400			
		1443.0	0.0017										
		1771.0	0.1551				57Ni	1.5d	127.2	0.1293	2.887-4	4.399	0.681
		1811.0	0.0065						1046.0	0.0012			
		1964.0	0.0071						1378.0	0.7790			
		2015.0	0.0303						1757.0	0.0709			
		2035.0	0.0778						1919.0	0.1472			
		2113.0	0.0038						2804.0	0.0013			
		2213.0	0.0039						1193.0	0.0050			
		2276.0	0.0012						511.0	0.8016			
		2599.0	0.1689				65Ni	2.5h	366.3	0.0461	8.009-5	4.571	0.655
		3010.0	0.0106						507.8	0.0029			
		3202.0	0.0318						609.3	0.0014			
		3253.0	0.0779						1116.0	0.1483			
		3273.0	0.0185						1482.0	0.2350			
		3451.0	0.0093						1623.0	0.0047			
		3548.0	0.0019						1725.0	0.0039			
		1453.0	0.0071						814.8	0.0017			
		511.0	0.3950										
57Co	270.9d	14.4	0.0954	4.087-5	0.075	39.809	61Cu	3.4h	67.4	0.0387	1.517-4	2.001	1.497
		122.1	0.8551						283.0	0.1230			
		136.5	0.1060						373.0	0.0212			
		692.0	0.0016						529.2	0.0041			
		536.0	0.0003						588.6	0.0118			
									656.0	0.1049			
58Co	70.8d	810.8	0.9943	1.652-4	2.973	1.008			816.7	0.0036			
		863.9	0.0074						841.2	0.0024			
		1675.0	0.0054						908.6	0.0119			
		511.0	0.2986						1100.0	0.0028			
									1185.0	0.0363			
58mCo	9.1h	24.9	0.0004	2.637-8	0.006	528.9			1198.0	0.0082			
									511.0	1.2290			
60Co	5.3y	1173.0	1.0000	3.697-4	4.412	0.679	62Cu	9.7m	875.7	0.0015	1.881-4	1.784	1.679
		1333.0	1.0000						1173.0	0.0034			
		693.8	0.0002						1966.0	0.0009			
									511.0	1.9560			
60mCo	10.5m	58.6	0.0202	9.044-7	3.578	0.837	64Cu	12.7h	1346.0	0.0049	3.514-5	1.856	1.614
		1333.0	0.0024						511.0	0.3574			
		947.4	0.0001										
61Co	1.6h	67.4	0.8500	2.286-5	1.756	1.706	67Cu	61.9d	91.3	0.0700	2.363-5	0.230	
		283.0	0.0012						93.3	0.1610			
		625.6	0.0012						184.6	0.4870			
		841.2	0.0059						208.9	0.0012			
		908.6	0.0298						300.2	0.0080			
		215.6	0.0000						393.5	0.0022			
56Ni	6.1d	158.4	0.9879	2.936-4	2.988	1.003							

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
62Zn	9.3h	40.8	0.2695	8.990-5	1.882	1.592			3792.0	0.0104			
		243.4	0.0267						4086.0	0.0116			
		247.0	0.0201						4296.0	0.0356			
		260.5	0.0143						4462.0	0.0073			
		304.9	0.0031						4807.0	0.0151			
		349.6	0.0048						1349.0	0.0105			
		394.1	0.0236						511.0	1.1050			
		507.6	0.1568										
		548.4	0.1622				67Ga	3.3d	91.3	0.0286	3.004-5	0.628	4.769
		596.7	0.2750						93.3	0.3570			
		637.4	0.0027						184.6	0.1971			
		921.2	0.0020						208.9	0.0224			
		511.0	0.1520						300.2	0.1599			
									393.5	0.0448			
65Zn	244.4d	1116.0	0.5075	8.924-5	4.057	0.738			887.7	0.0014			
		557.7	0.0001						629.4	0.0012			
		511.0	0.0283										
69Zn	55.6m	413.9	0.0000	1.168-9	1.268	2.362	68Ga	1.1h	1077.0	0.0329	1.763-4	1.863	1.608
									1883.0	0.0014			
									1014.0	0.0024			
69mZn	13.8h	438.6	0.9489	7.983-5	1.391	2.153			511.0	1.7780			
66Ga	9.4h	448.9	0.0011	3.422-4	4.842	0.619	72Ga	14.1h	11.0	0.0003	3.895-4	4.642	0.645
		686.3	0.0026						112.5	0.0014			
		833.6	0.0619						289.5	0.0020			
		856.7	0.0012						336.6	0.0011			
		907.0	0.0012						381.2	0.0028			
		1039.0	0.3880						428.4	0.0018			
		1190.0	0.0014						587.4	0.0012			
		1233.0	0.0054						600.8	0.0559			
		1333.0	0.0127						629.9	0.2439			
		1356.0	0.0038						735.6	0.0036			
		1357.0	0.0013						786.4	0.0317			
		1357.0	0.0019						810.2	0.0201			
		1419.0	0.0065						834.0	0.9565			
		1459.0	0.0010						861.1	0.0091			
		1508.0	0.0059						894.2	0.0985			
		1899.0	0.0044						924.1	0.0014			
		1919.0	0.0219						939.4	0.0026			
		2174.0	0.0012						970.5	0.0110			
		2190.0	0.0582						999.9	0.0080			
		2214.0	0.0014						1051.0	0.0692			
		2393.0	0.0026						1215.0	0.0080			
		2423.0	0.0199						1231.0	0.0144			
		2752.0	0.2371						1260.0	0.0115			
		2781.0	0.0013						1277.0	0.0156			
		2934.0	0.0022						1464.0	0.0356			
		3229.0	0.0152						1568.0	0.0020			
		3257.0	0.0010						1572.0	0.0083			
		3381.0	0.0145						1597.0	0.0424			
		3423.0	0.0084						1681.0	0.0087			
		3433.0	0.0029						1711.0	0.0038			
		3767.0	0.0014						1838.0	0.0020			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		1861.0	0.0523						714.3	0.0707			
		1878.0	0.0023						743.7	0.0018			
		1920.0	0.0016						745.8	0.0096			
		1991.0	0.0011						749.9	0.0087			
		2029.0	0.0012						766.7	0.0078			
		2109.0	0.0103						781.3	0.0100			
		2202.0	0.2611						784.8	0.0130			
		2214.0	0.0019						794.3	0.0027			
		2491.0	0.0748						810.4	0.0224			
		2508.0	0.1282						813.4	0.0013			
		2515.0	0.0025						823.1	0.0059			
		2622.0	0.0013						843.2	0.0021			
		2844.0	0.0041						875.2	0.0077			
		1275.0	0.0155						896.5	0.0012			
68Ge	288d	10.3	0.0546	1.634-5	0.002	1345.			901.0	0.0012			
71Ge	11.8d	10.3	0.0552	1.653-5	0.002	1345.			907.0	0.0094			
77Ge	11.3h	10.5	0.0057	1.929-4	2.748	1.090			913.8	0.0036			
		10.5	0.0111						923.1	0.0068			
		11.7	0.0026						925.5	0.0071			
		156.4	0.0079						928.8	0.0103			
		159.1	0.0023						939.4	0.0028			
		177.3	0.0018						996.6	0.0010			
		194.8	0.0175						1062.0	0.0015			
		209.0	0.0093						1081.0	0.0024			
		211.0	0.3049						1085.0	0.0598			
		215.5	0.2830						1115.0	0.0010			
		219.1	0.0029						1125.0	0.0012			
		254.7	0.0021						1152.0	0.0019			
		264.4	0.5330						1193.0	0.0254			
		268.1	0.0059						1215.0	0.0013			
		337.6	0.0023						1242.0	0.0039			
		338.7	0.0066						1264.0	0.0084			
		367.4	0.1386						1280.0	0.0017			
		416.3	0.2159						1309.0	0.0048			
		419.7	0.0122						1313.0	0.0035			
		439.4	0.0020						1320.0	0.0030			
		461.4	0.0125						1368.0	0.0331			
		475.4	0.0098						1453.0	0.0012			
		520.0	0.0029						1476.0	0.0024			
		558.0	0.1588						1479.0	0.0013			
		582.5	0.0077						1496.0	0.0049			
		614.4	0.0050						1539.0	0.0014			
		624.8	0.0018						1574.0	0.0065			
		631.8	0.0689						1710.0	0.0030			
		634.4	0.0206						1720.0	0.0039			
		673.1	0.0053						1727.0	0.0015			
		673.1	0.0013						1846.0	0.0017			
		698.5	0.0023						2000.0	0.0055			
		705.2	0.0011						2077.0	0.0023			
		712.4	0.0082						2090.0	0.0024			
									2126.0	0.0020			
									2342.0	0.0047			
									1101.0	0.0291			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ			
72As	1.1d	11.0	0.0080	3.118-4	2.708	1.106	77As	1.6d			1.691-6	1.182	2.534			
		600.8	0.0031						2096.0	0.0066						
		629.9	0.0786						2111.0	0.0039						
		786.4	0.0047						1152.0	0.0065						
		834.0	0.7970													
		894.2	0.0077													
		1051.0	0.0099						161.9	0.0013						
		1215.0	0.0021						239.0	0.0157						
		1390.0	0.0024						249.8	0.0042						
		1464.0	0.0110						520.7	0.0061						
		1476.0	0.0051						245.5	0.0010						
		1568.0	0.0013													
		1681.0	0.0012				73Se	7.1h	10.5	0.0841		2.950-4	1.350	2.218		
		1711.0	0.0024						10.5	0.1639						
		1991.0	0.0034						11.7	0.0379						
		2106.0	0.0063						67.0	0.7730						
		2109.0	0.0027						361.1	0.9650						
		2202.0	0.0047						509.5	0.0106						
		2248.0	0.0031						764.4	0.0014						
		2508.0	0.0032						865.4	0.0047						
		2622.0	0.0039						901.2	0.0014						
		2940.0	0.0029						1111.0	0.0018						
		3804.0	0.0010						1423.0	0.0014						
		1929.0	0.0185						894.4	0.0042						
		511.0	1.7610						511.0	1.3170						
73As	80.3d	11.0	0.1326	3.784-5	0.005	662.1	75Se	119.8d	10.5	0.1611	2.323-4	0.330	9.079			
		53.4	0.1030						10.5	0.3140						
		13.3	0.0009						11.7	0.0727						
									66.0	0.0102						
74As	17.8d	11.0	0.0222	1.456-4	2.031	1.475			96.7	0.0341						
		595.9	0.5985						121.1	0.1674						
		608.4	0.0055						136.0	0.5920						
		1204.0	0.0029						198.6	0.0145						
		1194.0	0.0009						264.6	0.5980						
		511.0	0.5923						279.5	0.2524						
		634.8	0.1543						303.9	0.0132						
		685.4	0.0003				400.7	0.1142								
		332.7	0.0010													
76As	1.1d	559.1	0.4470	7.342-5	2.894	1.035	77Br	2.4d	11.2	0.1543				1.919-4	0.972	3.083
		563.2	0.0117						11.2	0.3003						
		571.3	0.0014						12.5	0.0718						
		657.0	0.0608						87.9	0.0140						
		665.3	0.0039						138.9	0.0013						
		740.1	0.0012						161.9	0.0110						
		771.8	0.0012						180.7	0.0028						
		867.6	0.0013						200.4	0.0121						
		1130.0	0.0014						239.0	0.2310						
		1213.0	0.0163						249.8	0.0298						
		1216.0	0.0384						270.8	0.0032						
		1229.0	0.0139				281.7	0.0229								
		1439.0	0.0033				297.2	0.0416								
		1454.0	0.0013				303.8	0.0118								
		1788.0	0.0033													

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		385.0	0.0084										
		439.5	0.0156				83Br	2.4h	529.6	0.0130	1.382-6	1.859	1.612
		484.6	0.0100						537.4	0.0010			
		517.9	0.0016										
		520.7	0.2241				84Br	31.8m	230.2	0.0031	2.344-4	5.207	0.575
		565.9	0.0043						354.7	0.0031			
		567.9	0.0086						382.0	0.0057			
		574.6	0.0119						604.8	0.0177			
		578.9	0.0296						736.5	0.0131			
		585.5	0.0157						802.2	0.0608			
		755.3	0.0167						881.5	0.4220			
		817.8	0.0208						947.5	0.0036			
		1005.0	0.0092						987.3	0.0078			
		441.4	0.0081						1006.0	0.0046			
		511.0	0.0146						1016.0	0.0625			
									1083.0	0.0014			
80Br	17.4m	11.2	0.0094	2.153-5	1.842	1.626			1119.0	0.0014			
		11.2	0.0182						1185.0	0.0011			
		12.5	0.0044						1213.0	0.0262			
		665.8	0.0105						1464.0	0.0198			
		957.5	0.0007						1535.0	0.0010			
		511.0	0.0440						1578.0	0.0066			
		616.2	0.0660						1608.0	0.0040			
		639.4	0.0026						1741.0	0.0165			
		703.8	0.0019						1819.0	0.0024			
		1256.0	0.0007						1877.0	0.0114			
									1897.0	0.1494			
80mBr	4.4h	11.9	0.2289	1.900-4	0.004	698.2			2030.0	0.0211			
		11.9	0.4444						2094.0	0.0022			
		13.3	0.1097						2201.0	0.0118			
		37.0	0.3900						2484.0	0.0675			
		48.9	0.0034						2594.0	0.0014			
									2623.0	0.0030			
82Br	1.5d	92.2	0.0072	4.358-4	3.310	0.905			2759.0	0.0049			
		137.4	0.0014						2824.0	0.0114			
		221.4	0.0226						2989.0	0.0018			
		273.5	0.0080						3045.0	0.0253			
		554.3	0.7056						3202.0	0.0021			
		606.3	0.0117						3235.0	0.0207			
		619.1	0.4307						3366.0	0.0291			
		698.3	0.2816						3927.0	0.0688			
		776.5	0.8331						4085.0	0.0028			
		827.8	0.2416						1123.0	0.0067			
		952.1	0.0037										
		1008.0	0.0127										
		1044.0	0.2733										
		1081.0	0.0062										
		1318.0	0.2691										
		1426.0	0.0011										
		1475.0	0.1658										
		1650.0	0.0074										
		1780.0	0.0011										
		743.6	0.0076										
							85Br	2.9m	794.8	0.0010	1.057-5	3.590	0.834
									802.4	0.0256			
									861.8	0.0023			
									865.2	0.0018			
									913.3	0.0013			
									919.1	0.0065			
									924.6	0.0163			
									1038.0	0.0010			
									1727.0	0.0038			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		1833.0	0.0015						15.0	0.0002			
		789.3	0.0108						402.6	0.4950			
79Kr	1.5d	11.9	0.1491	1.628-4	0.950	3.154			673.9	0.0191			
		11.9	0.2894						814.2	0.0017			
		13.3	0.0715						836.4	0.0075			
		44.2	0.0021						845.4	0.0728			
		136.0	0.0100						946.6	0.0014			
		180.2	0.0010						1175.0	0.0112			
		208.5	0.0078						1338.0	0.0065			
		217.0	0.0240						1382.0	0.0029			
		261.3	0.1270						1390.0	0.0012			
		299.5	0.0157						1531.0	0.0036			
		306.3	0.0260						1578.0	0.0013			
		344.7	0.0024						1611.0	0.0010			
		389.0	0.0152						1741.0	0.0205			
		397.6	0.0950						1843.0	0.0014			
		523.0	0.0025						2012.0	0.0290			
		525.3	0.0043						2408.0	0.0021			
		606.1	0.0810						2555.0	0.0931			
		832.0	0.0126						2558.0	0.0391			
		934.8	0.0013						2811.0	0.0032			
		1026.0	0.0016						3309.0	0.0045			
		1115.0	0.0037						1620.0	0.0065			
		1332.0	0.0044										
		788.6	0.0055										
		511.0	0.1421										
81Kr	2.1+5y	11.9	0.1486	1.172-4	0.004	795.2	88Kr	2.8h	13.3	0.0237	2.726-4	5.380	0.557
		11.9	0.2885						13.4	0.0459			
		13.3	0.0713						15.0	0.0120			
		276.0	0.0360						27.5	0.0206			
83mKr	1.8h	12.6	0.0457	3.209-5	0.004	801.4			122.3	0.0020			
		12.7	0.0886						166.0	0.0310			
		14.1	0.0226						196.3	0.2599			
		32.2	0.0005						240.7	0.0025			
85Kr	10.7y	514.0	0.0043	4.170-7	1.782	1.681			311.7	0.0011			
85mKr	4.5h	12.6	0.0112	4.328-5	0.331	9.045			334.7	0.0015			
		12.7	0.0216						362.2	0.0225			
		14.1	0.0055						390.5	0.0064			
		304.9	0.1399						421.7	0.0013			
		13.3	0.0061						471.8	0.0073			
		13.4	0.0118						677.3	0.0024			
		15.0	0.0031						788.3	0.0053			
		129.8	0.0030						790.3	0.0012			
		151.2	0.7528						834.8	0.1298			
		581.3	0.0002						850.3	0.0017			
87Kr	1.3h	13.3	0.0003	1.153-4	4.756	0.630			862.3	0.0067			
		13.4	0.0007						944.9	0.0029			
									985.8	0.0131			
									990.1	0.0014			
									1040.0	0.0048			
									1050.0	0.0014			
									1141.0	0.0128			
									1179.0	0.0100			
									1185.0	0.0069			
									1210.0	0.0014			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		1213.0	0.0014						674.1	0.0023			
		1245.0	0.0036						696.2	0.0178			
		1251.0	0.0112						707.0	0.0050			
		1325.0	0.0016						710.0	0.0078			
		1352.0	0.0016						729.6	0.0030			
		1370.0	0.0148						738.4	0.0420			
		1407.0	0.0022						747.4	0.0011			
		1465.0	0.0011						762.9	0.0040			
		1518.0	0.0215						762.9	0.0092			
		1530.0	0.1093						776.5	0.0112			
		1604.0	0.0046						826.7	0.0076			
		1686.0	0.0066						835.5	0.0110			
		1893.0	0.0014						857.4	0.0029			
		1909.0	0.0010						867.1	0.0592			
		2030.0	0.0453						870.4	0.0016			
		2035.0	0.0374						904.3	0.0718			
		2186.0	0.0029						930.9	0.0062			
		2196.0	0.1318						944.2	0.0016			
		2232.0	0.0339						953.2	0.0011			
		2352.0	0.0073						960.4	0.0032			
		2392.0	0.3460						974.4	0.0098			
		2409.0	0.0010						997.4	0.0066			
		2548.0	0.0062						1011.0	0.0011			
		2771.0	0.0015						1044.0	0.0041			
		1000.0	0.0189						1076.0	0.0024			
									1088.0	0.0036			
89Kr	3.2m	13.3	0.0012	2.589-4	4.796	0.625			1103.0	0.0090			
		13.4	0.0023						1108.0	0.0292			
		15.0	0.0006						1117.0	0.0166			
		196.2	0.0022						1132.0	0.0016			
		197.5	0.0182						1163.0	0.0021			
		205.0	0.0012						1172.0	0.0098			
		220.9	0.2000						1182.0	0.0017			
		264.1	0.0066						1186.0	0.0018			
		338.2	0.0034						1229.0	0.0014			
		345.0	0.0118						1236.0	0.0059			
		356.1	0.0414						1274.0	0.0136			
		364.9	0.0090						1303.0	0.0010			
		369.3	0.0138						1324.0	0.0306			
		402.2	0.0032						1335.0	0.0013			
		411.4	0.0256						1341.0	0.0019			
		438.1	0.0096						1368.0	0.0015			
		466.1	0.0080						1372.0	0.0013			
		490.8	0.0032						1413.0	0.0026			
		497.5	0.0664						1422.0	0.0022			
		498.6	0.0114						1461.0	0.0012			
		557.3	0.0016						1464.0	0.0018			
		577.0	0.0564						1469.0	0.0019			
		585.8	0.1660						1473.0	0.0688			
		626.2	0.0060						1501.0	0.0132			
		629.8	0.0034						1506.0	0.0011			
		665.7	0.0011						1530.0	0.0332			
		671.4	0.0011						1534.0	0.0512			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		1555.0	0.0015						3827.0	0.0014			
		1574.0	0.0019						3843.0	0.0011			
		1634.0	0.0082						3902.0	0.0013			
		1644.0	0.0034						3923.0	0.0041			
		1667.0	0.0013						3965.0	0.0021			
		1677.0	0.0014						3977.0	0.0027			
		1684.0	0.0013						3996.0	0.0014			
		1692.0	0.0026						4048.0	0.0012			
		1694.0	0.0438						4341.0	0.0010			
		1721.0	0.0022						4489.0	0.0013			
		1778.0	0.0076						2181.0	0.0712			
		1788.0	0.0011										
		1811.0	0.0014				90Kr	32.3s	13.3	0.0166	2.061-4	4.084	0.733
		1837.0	0.0012						13.4	0.0321			
		1840.0	0.0035						15.0	0.0084			
		1868.0	0.0020						106.1	0.0038			
		1880.0	0.0016						120.9	0.0272			
		1903.0	0.0104						121.8	0.3211			
		1939.0	0.0064						227.8	0.0012			
		1967.0	0.0013						234.4	0.0250			
		1999.0	0.0012						242.2	0.0959			
		2012.0	0.0156						249.3	0.0128			
		2021.0	0.0024						309.1	0.0013			
		2047.0	0.0026						356.0	0.0010			
		2101.0	0.0094						386.5	0.0012			
		2160.0	0.0053						419.1	0.0031			
		2196.0	0.0013						429.9	0.0014			
		2280.0	0.0020						433.5	0.0125			
		2377.0	0.0080						470.3	0.0023			
		2401.0	0.0072						476.1	0.0013			
		2598.0	0.0011						492.6	0.0116			
		2645.0	0.0042						498.6	0.0015			
		2751.0	0.0012						539.5	0.2947			
		2782.0	0.0076						554.4	0.0485			
		2794.0	0.0068						565.2	0.0020			
		2820.0	0.0013						569.2	0.0058			
		2853.0	0.0024						614.4	0.0020			
		2866.0	0.0174						619.1	0.0104			
		2879.0	0.0032						626.5	0.0027			
		3018.0	0.0025						661.2	0.0032			
		3029.0	0.0027						677.7	0.0037			
		3107.0	0.0019						690.7	0.0038			
		3140.0	0.0104						705.5	0.0012			
		3172.0	0.0010						731.3	0.0142			
		3220.0	0.0043						925.5	0.0021			
		3362.0	0.0104						941.9	0.0128			
		3371.0	0.0062						967.3	0.0021			
		3400.0	0.0014						980.3	0.0018			
		3533.0	0.0134						1039.0	0.0040			
		3584.0	0.0026						1104.0	0.0033			
		3718.0	0.0084						1119.0	0.3730			
		3733.0	0.0014						1166.0	0.0079			
		3781.0	0.0013						1240.0	0.0034			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		1310.0	0.0026						698.3	0.0015			
		1341.0	0.0015						776.5	0.1350			
		1387.0	0.0019						1395.0	0.0051			
		1424.0	0.0281						1634.0	0.0033			
		1466.0	0.0024						511.0	1.9100			
		1538.0	0.0925										
		1552.0	0.0210				83Rb	86.2d	12.6	0.1639	2.072-4	1.366	2.194
		1620.0	0.0015						12.7	0.3177			
		1658.0	0.0127						14.1	0.0809			
		1780.0	0.0642						520.4	0.4590			
		1885.0	0.0022						529.6	0.3029			
		1900.0	0.0018						552.6	0.1639			
		1981.0	0.0016						790.1	0.0067			
		2006.0	0.0011						799.4	0.0024			
		2127.0	0.0132						591.9	0.0014			
		2149.0	0.0026										
		2191.0	0.0011				84Rb	32.9d	12.6	0.1136	2.317-4	2.549	1.175
		2417.0	0.0018						12.7	0.2201			
		2433.0	0.0015						14.1	0.0561			
		2469.0	0.0045						881.5	0.6768			
		2727.0	0.0084						1016.0	0.0032			
		2855.0	0.0031						1897.0	0.0093			
		2866.0	0.0018						511.0	0.5434			
		3344.0	0.0011										
		3855.0	0.0012				86Rb	18.7d	1077.0	0.0878	1.458-5	4.010	0.747
		1519.0	0.0181										
81Rb	4.6h	12.6	0.1579	2.253-4	1.217	2.461	88Rb	17.8m	898.0	0.1404	8.594-5	5.240	0.572
		12.7	0.3061						1366.0	0.0010			
		14.1	0.0780						1382.0	0.0074			
		180.2	0.0012						1780.0	0.0022			
		190.3	0.6570						1836.0	0.2140			
		243.8	0.0020						2111.0	0.0012			
		357.4	0.0056						2119.0	0.0042			
		388.8	0.0028						2578.0	0.0018			
		446.1	0.1895						2678.0	0.0196			
		456.7	0.0231						2734.0	0.0011			
		476.7	0.0039						3009.0	0.0024			
		510.5	0.0046						3219.0	0.0021			
		537.6	0.0155						3486.0	0.0013			
		549.0	0.0033						4743.0	0.0014			
		568.9	0.0039						1475.0	0.0033			
		729.1	0.0022										
		803.7	0.0066				89Rb	15.4m	272.4	0.0142	2.934-4	4.742	0.632
		834.7	0.0063						289.8	0.0054			
		977.2	0.0038						657.7	0.0998			
		1041.0	0.0039						766.8	0.0016			
		626.6	0.0103						947.7	0.0922			
		511.0	0.6620						1025.0	0.0023			
									1032.0	0.5800			
									1220.0	0.0022			
82Rb	1.2m	12.6	0.0075	2.076-4	1.907	1.571			1228.0	0.0012			
		12.7	0.0146						1248.0	0.4234			
		14.1	0.0037						1473.0	0.0035

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		1838 0	0 0085						15 0	0 0866			
		1877 0	0 0046						514 0	0 9927			
		1892 0	0 0065						868 5	0 0001			
		1903 0	0 0014										
		1942 0	0 0063				85mSr	1 1h	14 1	0 0044	6 004-5	0 334	8 972
		2128 0	0 0537						14 2	0 0085			
		2139 0	0 0012						15 8	0 0023			
		2201 0	0 0049						231 7	0 8472			
		2208 0	0 0017						238 7	0 0032			
		2245 0	0 0030						13 3	0 0226			
		2257 0	0 0068						13 4	0 0437			
		2298 0	0 0038						15 0	0 0115			
		2311 0	0 0030						151 2	0 1212			
		2335 0	0 0021										
		2443 0	0 0027				87mSr	2 8h	14 1	0 0292	8 010-5	1 043	2 872
		2497 0	0 0074						14 2	0 0563			
		2538 0	0 0018						15 8	0 0151			
		2544 0	0 0057						388 4	0 8225			
		2592 0	0 0066						13 3	0 0005			
		2618 0	0 0063						13 4	0 0010			
		2724 0	0 0051						15 0	0 0003			
		2741 0	0 0015										
		2753 0	0 1184				89Sr	50 6d	909 1	0 0002	2 205-8	3 493	0 858
		2834 0	0 0190										
		2900 0	0 0011				91Sr	9 5h	261 2	0 0044	1 116-4	3 465	0 865
		2912 0	0 0013						272 7	0 0025			
		3032 0	0 0045						274 7	0 0100			
		3039 0	0 0027						379 9	0 0014			
		3149 0	0 0255						620 1	0 0172			
		3198 0	0 0015						631 3	0 0054			
		3215 0	0 0014						652 3	0 0289			
		3317 0	0 1473						652 9	0 0780			
		3371 0	0 0041						653 0	0 0045			
		3383 0	0 0043						749 8	0 2298			
		3503 0	0 0243						761 4	0 0056			
		3573 0	0 0158						820 8	0 0016			
		3621 0	0 0060						879 7	0 0018			
		3627 0	0 0093						925 8	0 0374			
		3972 0	0 0037						1024 0	0 3250			
		4116 0	0 0036						1055 0	0 0022			
		4193 0	0 0088						1141 0	0 0012			
		4210 0	0 0093						1281 0	0 0091			
		4257 0	0 0076						1413 0	0 0095			
		4454 0	0 0121						1474 0	0 0016			
		4726 0	0 0011						1651 0	0 0028			
		2072 0	0 0083						1724 0	0 0016			
									776 3	0 0119			
82Sr	25 0d	13 3	0 1676	1 065-4	0 004	842 8							
		13 4	0 3243										
		15 0	0 0851										
85Sr	64 8d	13 3	0 1707	2 038-4	1 330	2 252							
		13 4	0 3301										
							92Sr	2 7h	241 5	0 0297	1 940-4	4 604	0 651
									430 6	0 0333			
									491 3	0 0026			
									650 7	0 0037			
									953 3	0 0360			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		1142.0	0.0288						875.7	0.2419			
		1384.0	0.9000						888.1	0.2184			
		664.6	0.0017						901.0	0.0069			
93Sr	7.3m	14.9	0.0277	3.642-4	3.833	0.782			910.2	0.0081			
		15.0	0.0534						922.7	0.0033			
		16.7	0.0147						927.7	0.0063			
		166.6	0.0062						930.9	0.0040			
		168.7	0.1821						952.6	0.0011			
		260.1	0.0732						991.6	0.0012			
		285.7	0.0027						1032.0	0.0010			
		332.0	0.0035						1035.0	0.0020			
		346.5	0.0324						1041.0	0.0316			
		377.4	0.0147						1055.0	0.0034			
		406.7	0.0042						1064.0	0.0037			
		424.7	0.0026						1078.0	0.0024			
		428.0	0.0015						1094.0	0.0174			
		432.7	0.0147						1105.0	0.0015			
		440.8	0.0019						1123.0	0.0397			
		446.2	0.0233						1137.0	0.0019			
		482.0	0.0112						1181.0	0.0024			
		483.7	0.0165						1196.0	0.0097			
		486.7	0.0012						1215.0	0.0247			
		518.5	0.0013						1239.0	0.0012			
		541.9	0.0072						1243.0	0.0079			
		545.8	0.0039						1266.0	0.0110			
		559.9	0.0020						1269.0	0.0706			
		572.0	0.0021						1278.0	0.0086			
		586.5	0.0044						1309.0	0.0040			
		590.3	0.6720						1321.0	0.0258			
		593.8	0.0110						1333.0	0.0047			
		596.1	0.0132						1335.0	0.0067			
		610.9	0.0107						1379.0	0.0035			
		631.0	0.0019						1387.0	0.0343			
		633.5	0.0011						1434.0	0.0089			
		650.6	0.0019						1439.0	0.0050			
		658.6	0.0042						1466.0	0.0010			
		663.6	0.0163						1469.0	0.0052			
		687.8	0.0066						1483.0	0.0010			
		690.1	0.0100						1492.0	0.0054			
		692.0	0.0022						1520.0	0.0032			
		710.4	0.2150						1539.0	0.0010			
		716.8	0.0029						1552.0	0.0101			
		718.3	0.0148						1610.0	0.0019			
		771.2	0.0115						1634.0	0.0143			
		776.1	0.0026						1648.0	0.0088			
		782.8	0.0022						1669.0	0.0016			
		788.7	0.0076						1685.0	0.0071			
		791.1	0.0026						1694.0	0.0255			
		795.3	0.0023						1699.0	0.0329			
		834.9	0.0165						1707.0	0.0110			
		837.8	0.0012						1765.0	0.0106			
		858.5	0.0072						1775.0	0.0016			
									1811.0	0.0139			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		1816.0	0.0023						702.2	0.0025			
		1894.0	0.0012						703.3	0.1543			
		1908.0	0.0017						709.9	0.0262			
		1929.0	0.0116						719.2	0.0022			
		1945.0	0.0055						740.8	0.0136			
		2011.0	0.0012						767.6	0.0239			
		2055.0	0.0013						768.2	0.0032			
		2064.0	0.0062						777.4	0.2244			
		2105.0	0.0031						783.6	0.0026			
		2129.0	0.0010						826.0	0.0330			
		2179.0	0.0029						833.7	0.0148			
		2230.0	0.0153						835.7	0.0437			
		2296.0	0.0073						883.0	0.0025			
		2365.0	0.0156						887.4	0.0044			
		2416.0	0.0011						955.3	0.0104			
		2544.0	0.0299						971.4	0.0027			
		2574.0	0.0013						1018.0	0.0018			
		2689.0	0.0210						1024.0	0.0380			
		2828.0	0.0017						1077.0	0.8250			
		2986.0	0.0019						1093.0	0.0069			
		3007.0	0.0012						1102.0	0.0020			
		1802.0	0.0230						1133.0	0.0030			
									1153.0	0.3052			
86Y	14.7h	14.1	0.1171	6.256-4	3.825	0.783			1163.0	0.0118			
		14.2	0.2261						1253.0	0.0153			
		15.8	0.0607						1270.0	0.0065			
		132.3	0.0017						1284.0	0.0029			
		182.3	0.0011						1295.0	0.0029			
		187.9	0.0126						1296.0	0.0054			
		190.8	0.0102						1349.0	0.0294			
		209.8	0.0040						1405.0	0.0018			
		235.4	0.0040						1415.0	0.0033			
		237.9	0.0013						1508.0	0.0035			
		252.0	0.0037						1533.0	0.0022			
		264.5	0.0054						1536.0	0.0012			
		307.0	0.0347						1564.0	0.0018			
		331.1	0.0083						1696.0	0.0064			
		370.3	0.0082						1712.0	0.0017			
		380.4	0.0045						1724.0	0.0055			
		382.9	0.0363						1791.0	0.0100			
		426.0	0.0031						1802.0	0.0165			
		439.5	0.0020						1854.0	0.1716			
		443.1	0.1691						1921.0	0.2079			
		444.2	0.0064						2017.0	0.0013			
		469.2	0.0030						2088.0	0.0025			
		515.2	0.0489						2292.0	0.0012			
		580.6	0.0479						2482.0	0.0012			
		608.3	0.0201						2568.0	0.0225			
		618.2	0.0021						2610.0	0.0124			
		627.7	0.3259						2642.0	0.0017			
		644.8	0.0223						2795.0	0.0021			
		645.9	0.0916						2866.0	0.0038			
		689.3	0.0017						3070.0	0.0012			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		3334.0	0.0012						1918.0	0.0140			
		1366.0	0.0103						2185.0	0.0016			
		511.0	0.6637						2191.0	0.0017			
									1413.0	0.0033			
87Y	3.3d	14.1	0.1751	1.861-4	1.205	2.486	86Zr	16.5h	14.9	0.3310	2.383-4	0.266	11.245
		14.2	0.3380						15.0	0.6377			
		15.8	0.0908						16.7	0.1753			
		484.7	0.9394						29.1	0.2160			
		511.0	0.0032						135.6	0.0047			
88Y	106.6d	14.1	0.1744	4.788-4	4.525	0.662			242.8	0.9580			
		14.2	0.3367						612.0	0.0570			
		15.8	0.0905						620.6	0.0027			
		898.0	0.9342						169.4	0.0045			
		1836.0	0.9938				88Zr	83.4d	14.9	0.1820	1.710-4	0.842	3.559
		2734.0	0.0060						15.0	0.3508			
		1188.0	0.0010						16.7	0.0964			
		511.0	0.0043						392.9	0.9732			
90mY	3.2h	14.9	0.0205	1.316-4	1.354	2.213	89Zr	3.3d	14.9	0.1398	2.655-4	2.867	1.045
		15.0	0.0395						15.0	0.2694			
		16.7	0.0109						16.7	0.0741			
		202.5	0.9663						909.1	0.9904			
		479.5	0.9099						1713.0	0.0076			
		682.0	0.0032						1745.0	0.0013			
91Y	58.5d	1205.0	0.0030	5.397-7	4.297	0.697			1642.0	0.0017			
									511.0	0.4588			
91mY	49.7m	14.9	0.0086	1.017-4	1.961	1.527	95Zr	64.0d	724.2	0.4366	1.254-4	2.828	1.059
		15.0	0.0165						756.7	0.5534			
		16.7	0.0045										
		557.6	0.9508				97Zr	16.9h	202.2	0.0010	2.905-5	3.732	0.803
92Y	3.5h	448.5	0.0234	3.963-5	3.821	0.784			218.7	0.0023			
		492.6	0.0049						254.1	0.0125			
		561.1	0.0241						272.3	0.0025			
		844.3	0.0125						330.4	0.0011			
		912.6	0.0063						355.4	0.0227			
		934.5	0.1390						400.4	0.0032			
		1132.0	0.0024						507.6	0.0529			
		1405.0	0.0478						513.5	0.0051			
		1847.0	0.0036						602.5	0.0139			
		1647.0	0.0015						690.6	0.0025			
93Y	10.1h	15.7	0.0003	1.388-5	4.295	0.698			699.2	0.0012			
		15.8	0.0006						703.8	0.0093			
		17.7	0.0002						795.7	0.0012			
		266.9	0.0685						804.5	0.0065			
		680.2	0.0061						829.8	0.0022			
		947.1	0.0195						854.9	0.0033			
		1203.0	0.0010						971.4	0.0029			
		1425.0	0.0024						1021.0	0.0121			
		1450.0	0.0034						1119.0	0.0011			
									1148.0	0.0265			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		1276 0	0 0097										
		1363 0	0 0135				92mNb	10 1d	15 7	0 1834	2 413-4	3 067	0 977
		1750 0	0 0135						15 8	0 3527			
		1852 0	0 0035						17 7	0 0992			
		344 1	0 0021						912 6	0 0168			
									934 5	0 9915			
									1847 0	0 0085			
90Nb	14 6h	15 7	0 1386	6 513-4	4 763	0 629							
		15 8	0 2665				93mNb	14 6y	16 5	0 0323	1 421-5	0 002	1 292
		17 7	0 0749						16 6	0 0620			
		132 6	0 0414						18 6	0 0178			
		141 1	0 6900				94Nb	2 0+4y	17 4	0 0004	2 642-4	3 048	0 983
		329 1	0 0011						17 5	0 0007			
		371 3	0 0190						19 6	0 0002			
		518 2	0 0049						702 6	1 0000			
		561 5	0 0013						871 1	1 0000			
		827 7	0 0090										
		890 6	0 0173				94mNb	6 3m	16 5	0 1231	5 481-5	0 003	1 180
		1052 0	0 0023						16 6	0 2363			
		1129 0	0 9200						18 6	0 0679			
		1270 0	0 0121						40 9	0 0008			
		1470 0	0 0042						871 1	0 0047			
		1575 0	0 0047						758 5	0 0000			
		1612 0	0 0221				95Nb	35 1d	17 4	0 0003	1 295-4	2 930	1 023
		1658 0	0 0031						17 5	0 0005			
		1843 0	0 0065						19 6	0 0002			
		1913 0	0 0123						765 8	0 9981			
		1985 0	0 0063						389 2	0 0003			
		2056 0	0 0011				95mNb	3 6d	16 5	0 1183	6 390-5	0 177	16 959
		2186 0	0 1803						16 6	0 2271			
		2222 0	0 0063						18 6	0 0653			
		2319 0	0 8197						235 7	0 2504			
		1273 0	0 0016						204 1	0 0013			
		511 0	1 0620						629 1	0 0000			
91Nb	1 0+4y	15 7	0 1833	8 831-5	0 002	1 330							
		15 8	0 3524				96Nb	23 3h	17 4	0 0003	4 109-4	3 237	0 925
		17 7	0 0991						17 5	0 0005			
		511 0	0 0033						19 6	0 0001			
91mNb	61 0d	16 5	0 1414	7 159-5	0 810	3 699			219 1	0 0378			
		16 6	0 2714						241 4	0 0387			
		18 6	0 0780						349 9	0 0073			
		104 5	0 0058						350 3	0 0111			
		15 7	0 0063						352 5	0 0082			
		15 8	0 0120						369 7	0 0012			
		17 7	0 0034						371 8	0 0281			
		1205 0	0 0350						434 7	0 0053			
92Nb	3 6+7y	15 7	0 1832	3 402-4	2 734	1 096			460 0	0 2817			
		15 8	0 3524						477 7	0 0012			
		17 7	0 0991						480 7	0 0629			
		561 1	0 9970						568 9	0 5566			
		934 5	0 9992						591 2	0 0097			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		593 3	0 0031						680 1	0 0026			
		719 6	0 0726										
		721 5	0 0077				101Mo	14.6m	18.2	0.0166	2.376-4	4.066	0.737
		778 2	0 9680						18 4	0 0318			
		810 2	0 0987						20 6	0 0095			
		812 5	0 0339						80 9	0 0540			
		847 7	0 0165						104 7	0 0016			
		849 9	0 2071						105 9	0 0024			
		1091.0	0 4937						115 8	0 0017			
		1127 0	0 0053						187 4	0 0048			
		1200 0	0 2004						191 9	0 1920			
		1441 0	0 0040						195 9	0 0292			
		1498 0	0 0300						212 0	0 0052			
		589 2	0 0053						221 8	0 0010			
									317 8	0 0024			
97Nb	1.2h	17 4	0.0004	1.168-4	2.491	1.203			327 7	0 0022			
		17 5	0 0007						333 5	0 0079			
		19 6	0 0002						352 9	0 0014			
		480 9	0 0015						367 9	0 0011			
		657 9	0 9809						370 0	0 0016			
		1024 0	0 0108						371 6	0 0016			
		1269 0	0 0016						377 9	0 0017			
		1516 0	0 0012						379 3	0 0023			
		798 3	0 0049						381 2	0 0031			
									398 7	0 0092			
97mNb	60 0s	16.5	0.0037	1.259-4	2 818	1.063			408 5	0 0163			
		16 6	0 0072						421 4	0 0042			
		18 6	0 0021						432 9	0 0011			
		743 4	0 9796						448 5	0 0070			
									469 0	0 0012			
91Mo	15.5m	16.5	0.0117	1.870-4	1.804	1.661			497 0	0 0014			
		16 6	0 0225						499 6	0 0136			
		18 6	0 0065						505 1	0 0134			
		1582 0	0 0023						505 9	0 1210			
		1637 0	0 0033						510 1	0 0100			
		2632 0	0 0012						512 2	0 0179			
		2233 0	0 0030						514 1	0 0083			
		511 0	1 8760						515 8	0 0052			
									523 8	0 0018			
93Mo	3500 0y	16 5	0 1811	7 963-5	0 002	1292			533 5	0 0041			
		16 6	0 3477						566 5	0 0075			
		18 6	0 0999						571 7	0 0019			
									590 1	0 0576			
99Mo	2.8d	18.2	0.0090	3.046-5	2.571	1 165			590 8	0 1670			
		18 4	0 0173						603 0	0 0010			
		20 6	0 0052						606 8	0 0022			
		40 6	0 0088						608 3	0 0109			
		140 5	0 0379						611 6	0 0015			
		181 1	0 0623						625 6	0 0011			
		366 4	0 0137						642 6	0 0127			
		739 6	0 1280						660 6	0 0023			
		778 0	0 0448						695 5	0 0595			
		822 9	0 0013						701 8	0 0034			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		712.9	0.0334						1383.0	0.0117			
		732.9	0.0027						1395.0	0.0062			
		739.5	0.0031						1414.0	0.0051			
		773.8	0.0034						1418.0	0.0089			
		775.8	0.0011						1430.0	0.0014			
		778.2	0.0098						1432.0	0.0037			
		790.0	0.0013						1441.0	0.0016			
		804.2	0.0102						1486.0	0.0011			
		815.2	0.0018						1514.0	0.0019			
		853.0	0.0024						1518.0	0.0022			
		859.1	0.0011						1520.0	0.0024			
		869.7	0.0035						1523.0	0.0030			
		871.1	0.0157						1527.0	0.0012			
		877.4	0.0315						1530.0	0.0028			
		883.3	0.0064						1533.0	0.0595			
		887.0	0.0024						1549.0	0.0015			
		888.7	0.0023						1590.0	0.0029			
		896.3	0.0022						1599.0	0.0179			
		903.4	0.0021						1662.0	0.0013			
		933.3	0.0077						1662.0	0.0056			
		934.2	0.0035						1674.0	0.0173			
		980.4	0.0027						1713.0	0.0021			
		987.9	0.0016						1755.0	0.0036			
		1007.0	0.0018						1760.0	0.0036			
		1011.0	0.0179						1760.0	0.0063			
		1011.0	0.0052						1768.0	0.0015			
		1012.0	0.1306						1840.0	0.0017			
		1019.0	0.0065						1840.0	0.0123			
		1020.0	0.0048						2028.0	0.0011			
		1050.0	0.0035						2032.0	0.0708			
		1064.0	0.0022						2038.0	0.0022			
		1066.0	0.0017						2041.0	0.0215			
		1161.0	0.0405						2089.0	0.0081			
		1169.0	0.0024						2113.0	0.0015			
		1184.0	0.0020						2115.0	0.0046			
		1187.0	0.0106						2223.0	0.0017			
		1200.0	0.0179						1110.0	0.0405			
		1210.0	0.0013										
		1249.0	0.0027				95Tc	20.0h	17.4	0.1908	2.089-4	2.540	1.180
		1251.0	0.0470						17.5	0.3655			
		1260.0	0.0016						19.6	0.1074			
		1286.0	0.0015						204.1	0.0031			
		1291.0	0.0012						604.0	0.0030			
		1293.0	0.0021						765.8	0.9382			
		1304.0	0.0284						785.9	0.0015			
		1314.0	0.0024						869.6	0.0032			
		1326.0	0.0017						947.7	0.0195			
		1337.0	0.0014						1074.0	0.0374			
		1339.0	0.0018						693.7	0.0015			
		1346.0	0.0088										
		1356.0	0.0171				95mTc	61d	18.2	0.0020	1.939-4	2.129	1.407
		1378.0	0.0025						18.4	0.0039			
		1380.0	0.0011						20.6	0.0012			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		38.9	0.0000						17.5	0.3612			
		17.4	0.1881						19.6	0.1061			
		17.5	0.3603										
		19.6	0.1058				97mTc	89d	18.2	0.1412	5.233-5	0.003	1060.
		204.1	0.6192						18.4	0.2701			
		253.0	0.0060						20.6	0.0810			
		582.1	0.2933						96.5	0.0032			
		616.5	0.0126										
		786.2	0.0848				98Tc	4.2+6y	19.1	0.0009	2.419-4	2.651	1.130
		820.6	0.0461						19.3	0.0016			
		835.1	0.2607						21.7	0.0005			
		1039.0	0.0272						652.4	0.9974			
		883.1	0.0013						745.4	0.9982			
		511.0	0.0103										
96Tc	4.3d	17.4	0.1882	4.894-4	3.015	0.994	99Tc	2.1+5y	89.4	0.0000	1.24-10	0.142	21.144
		17.5	0.3605				99mTc	6.0h	18.2	0.0210	3.317-5	0.108	27.731
		19.6	0.1059						18.4	0.0402			
		314.3	0.0243						20.6	0.0121			
		316.5	0.0140						140.5	0.8907			
		434.7	0.0075						142.6	0.0002			
		460.0	0.0043				101Tc	14.2m	19.1	0.0043	6.905-5	1.026	2.920
		535.8	0.0041						19.3	0.0081			
		568.9	0.0092						21.7	0.0025			
		591.2	0.0011						127.2	0.0282			
		719.6	0.0020						179.6	0.0058			
		721.5	0.0012						184.1	0.0162			
		778.2	0.9976						233.7	0.0027			
		810.2	0.0021						238.3	0.0031			
		812.5	0.8180						306.8	0.8830			
		849.9	0.9776						311.5	0.0014			
		1091.0	0.0110						393.3	0.0011			
		1127.0	0.1516						516.0	0.0011			
		1200.0	0.0037						531.5	0.0102			
		650.9	0.0089						545.1	0.0600			
96mTc	51.5m	18.2	0.0975	4.429-5	1.233	2.430			627.0	0.0041			
		18.4	0.1863						694.7	0.0115			
		20.6	0.0559						715.5	0.0069			
		34.4	0.0003						720.0	0.0019			
		17.4	0.0039						842.8	0.0023			
		17.5	0.0075						928.7	0.0013			
		19.6	0.0022						617.8	0.0048			
		480.7	0.0034				97Ru	2.9d	18.2	0.2003	1.194-4	0.290	10.317
		719.6	0.0030						18.4	0.3829			
		778.2	0.0187						20.6	0.1149			
		847.7	0.0012						108.8	0.0011			
		849.9	0.0028						215.7	0.8550			
		1200.0	0.0107						324.5	0.1086			
		1498.0	0.0012						460.6	0.0012			
		887.6	0.0056						569.3	0.0087			
97Tc	2.6+6y	17.4	0.1886	7.596-5	0.003	1176.			713.3	0.0031			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		646.0	0.0146										
		680.2	0.0218				109mAg	39.6s	22.0	0.0988	2.722-5	0.005	548.6
		703.1	0.0447						22.2	0.1870			
		717.3	0.2894						24.9	0.0603			
		748.4	0.2061						88.0	0.0372			
		793.2	0.0588										
		804.3	0.1237				110Ag	24.6s	21.0	0.0006	5.527-6	2.475	1.210
		808.4	0.0403						21.2	0.0011			
		824.7	0.1535						23.8	0.0004			
		847.6	0.0246						657.8	0.0449			
		848.2	0.0193						1046.0	0.0010			
		874.8	0.0033										
		949.5	0.0019				110mAg	249.9d	22.0	0.0020	4.452-4	3.422	0.875
		956.2	0.0047						22.2	0.0037			
		1020.0	0.0104						24.9	0.0012			
		1046.0	0.2955						98.9	0.0001			
		1050.0	0.0026						23.0	0.0006			
		1054.0	0.0096						23.2	0.0012			
		1122.0	0.0057						26.1	0.0004			
		1128.0	0.1175						365.4	0.0011			
		1137.0	0.0023						446.8	0.0364			
		1178.0	0.0019						620.4	0.0277			
		1199.0	0.1123						626.3	0.0023			
		1223.0	0.0702						657.8	0.9439			
		1349.0	0.0012						676.6	0.0014			
		1394.0	0.0149						677.6	0.1068			
		1528.0	0.1631						687.0	0.0647			
		1565.0	0.0048						706.7	0.1668			
		1572.0	0.0658						708.1	0.0028			
		1723.0	0.0140						744.3	0.0464			
		1839.0	0.0202						763.9	0.2228			
		1043.0	0.0063						818.0	0.0728			
									884.7	0.7258			
108Ag	2.4m	21.0	0.0043	4.376-6	1.938	1.546			937.5	0.3419			
		21.2	0.0081						997.2	0.0012			
		23.8	0.0026						1334.0	0.0013			
		433.9	0.0051						1384.0	0.2426			
		618.9	0.0027						1476.0	0.0400			
		913.5	0.0003						1505.0	0.1306			
		511.0	0.0044						1562.0	0.0118			
		633.0	0.0174										
							111Ag	7.5d	23.0	0.0002	5.328-6	0.871	3.441
									23.2	0.0005			
									26.1	0.0002			
									96.8	0.0012			
									245.4	0.0123			
									342.1	0.0668			
									654.7	0.0006			
108mAg	127y	22.0	0.0051	3.424-4	2.152	1.392							
		22.2	0.0097										
		24.9	0.0031										
		79.2	0.0709										
		30.4	0.0000										
		21.0	0.1822										
		21.2	0.3458										
		23.8	0.1098										
		433.9	0.8988				109Cd	464d	22.0	0.1861	4.983-5	0.004	683.6
		614.4	0.9039						22.2	0.3526			
		722.9	0.9050						24.9	0.1137			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
111mCd	48.7m	23.0	0.1170	8.463	5.0352	8.502			945.7	0.0153			
		23.2	0.2208						949.6	0.0022			
		26.1	0.0723						952.3	0.0014			
		150.8	0.3090						963.1	0.0061			
		245.4	0.9400						969.3	0.0045			
								1036.0	0.0024				
115Cd	2.2d	24.0	0.0100	4.028	5.1750	1.712			1052.0	0.0379			
		24.2	0.0189						1053.0	0.0073			
		27.3	0.0063						1117.0	0.0103			
		35.5	0.0045						1120.0	0.0024			
		231.4	0.0078						1125.0	0.0045			
		260.9	0.0206						1142.0	0.0167			
		492.3	0.0851						1144.0	0.0014			
		527.9	0.2915						1183.0	0.0013			
		296.9	0.0011						1229.0	0.0061			
								1232.0	0.0028				
115mCd	44.6d	484.5	0.0019	3.430	6.3848	0.779			1248.0	0.0120			
		933.8	0.0133						1260.0	0.0114			
		1291.0	0.0059						1273.0	0.0073			
		932.7	0.0010						1291.0	0.0067			
								1294.0	0.0045				
117Cd	2.5h	24.0	0.0155	1.735	4.4083	0.734			1303.0	0.0186			
		24.2	0.0292						1315.0	0.0059			
		27.3	0.0097						1338.0	0.0162			
		71.1	0.0039						1362.0	0.0024			
		89.7	0.0326						1404.0	0.0012			
		160.8	0.0025						1409.0	0.0128			
		220.9	0.0117						1422.0	0.0033			
		273.4	0.2790						1431.0	0.0098			
		279.8	0.0011						1434.0	0.0011			
		292.1	0.0064						1450.0	0.0061			
		344.5	0.1788						1476.0	0.0042			
		388.0	0.0031						1562.0	0.0142			
		397.2	0.0020						1577.0	0.1119			
		419.8	0.0018						1578.0	0.0014			
		434.2	0.0979						1652.0	0.0028			
		439.4	0.0011						1682.0	0.0070			
		463.0	0.0075						1707.0	0.0100			
		497.8	0.0011						1723.0	0.0201			
		527.0	0.0014						1739.0	0.0013			
		627.0	0.0011						1856.0	0.0025			
660.8	0.0011						1867.0	0.0011					
699.6	0.0024						2012.0	0.0011					
712.7	0.0056						959.7	0.0212					
716.4	0.0020												
728.6	0.0024												
748.1	0.0056												
831.8	0.0226												
840.2	0.0081												
850.7	0.0012												
861.3	0.0028												
862.6	0.0061												
880.7	0.0396												
							117mCd	3.4h	24.0	0.0023	2.909	4.4831	0.620
									24.2	0.0043			
									27.3	0.0014			
									97.7	0.0105			
									99.4	0.0010			
									168.6	0.0029			
									220.9	0.0024			
									273.4	0.0029			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob	Γ	T	μ
		292 1	0 0010				111In	2 8d	23 0	0 2363	1 356-4	0 290	10 321
		299 4	0 0045						23 2	0 4458			
		310 3	0 0050						26 1	0 1460			
		325 3	0 0013						171 3	0 9024			
		344 5	0 0026						245 4	0 9400			
		366 9	0 0333						150 8	0 0000			
		439 4	0 0018										
		460 9	0 0162				113mIn	1 7h	24 0	0 0683	6 567-5	1 048	2 858
		484 8	0 0102						24 2	0 1287			
		545 0	0 0016						27 3	0 0427			
		564 4	0 1467						391 7	0 6490			
		597 3	0 0013										
		617 5	0 0034				114In	1 2m	23 0	0 0019	6 168-6	2 207	1 358
		627 3	0 0024						23 2	0 0037			
		631 8	0 0280						26 1	0 0012			
		663 5	0 0068						575 8	0 0506			
		712 7	0 0100						558 4	0 0001			
		730 8	0 0010						1300 0	0 0020			
		748 1	0 0445										
		762 7	0 0173				114mIn	49 5d	24 0	0 0967	4 066-5	1 289	2 324
		788 2	0 0050						24 2	0 1821			
		827 6	0 0026						27 3	0 0605			
		860 4	0 0789						190 3	0 1595			
		880 7	0 0071						23 0	0 0091			
		886 0	0 0039						23 2	0 0173			
		929 3	0 0079						26 1	0 0056			
		931 4	0 0364						558 4	0 0448			
		957 2	0 0039						725 2	0 0449			
		1029 0	0 1166										
		1066 0	0 2306				115mIn	4 4h	24 0	0 0949	5 329-5	0 710	4 220
		1171 0	0 0065						24 2	0 1788			
		1196 0	0 0039						27 3	0 0594			
		1205 0	0 0013						336 3	0 4671			
		1209 0	0 0013						497 4	0 0005			
		1209 0	0 0018										
		1235 0	0 1100				116mIn	54 1m	25 0	0 0028	3 646-4	4 442	0 674
		1257 0	0 0018						25 3	0 0053			
		1339 0	0 0207						28 5	0 0018			
		1366 0	0 0165						138 3	0 0330			
		1433 0	0 1344						263 0	0 0014			
		1652 0	0 0047						303 8	0 0012			
		1670 0	0 0063						355 4	0 0085			
		1958 0	0 0016						417 0	0 2780			
		1997 0	0 2620						463 3	0 0085			
		2096 0	0 0744						689 0	0 0019			
		2323 0	0 0786						705 7	0 0019			
		2401 0	0 0076						779 5	0 0027			
		2417 0	0 0102						781 1	0 0011			
		2462 0	0 0021						818 7	0 1158			
		2476 0	0 0019						972 5	0 0046			
		2541 0	0 0015						1097 0	0 5535			
		865 4	0 0071						1293 0	0 8450			
									1508 0	0 0989			

Nuclide	Half-life	E	Prob	Γ	T	μ	Nuclide	Half-life	E	Prob	Γ	T	μ
		1752 0	0 0239						1089 0	0 0404			
		2112 0	0 1538						1151 0	0 0010			
		707 4	0 0134						1173 0	0 0019			
									1221 0	0 0022			
117In	43 8m	25 0	0 0296	1 347-4	1 779	1 684			1420 0	0 0046			
		25 3	0 0556						1806 0	0 0015			
		28 5	0 0187						2002 0	0 0206			
		158 6	0 8639						2275 0	0 0018			
		396 6	0 0014						833 2	0 0070			
		553 0	0 9930										
117mIn	1 9h	24 0	0 0526	3 060-5	0 534	5 608	126Sn	1 0+5y	21 6	0 0124	3 408-5	0 095	31 647
		24 2	0 0990						23 3	0 0640			
		27 3	0 0329						26 1	0 0833			
		315 3	0 1945						26 4	0 1561			
		25 0	0 0052						29 7	0 0534			
		25 3	0 0098						42 6	0 0050			
		28 5	0 0033						64 3	0 0958			
		158 6	0 1587						86 9	0 0892			
		918 6	0 0003						87 6	0 3700			
									22 7	0 0010			
113Sn	115 1d	24 0	0 2069	4 844-5	0 006	462 8	117Sb	2 8h	25 0	0 2350	8 214-5	0 210	14 263
		24 2	0 3896						25 3	0 4409			
		27 3	0 1294						28 5	0 1487			
		255 1	0 0193						158 6	0 8610			
		638 1	0 0000						861 3	0 0031			
117mSn	13 6d	25 0	0 1873	6 796-5	0 113	26 595			1005 0	0 0021			
		25 3	0 3514						1021 0	0 0010			
		28 5	0 1185						1021 0	0 0011			
		156 0	0 0211						1037 0	0 0026			
		158 6	0 8640						511 0	0 0340			
119mSn	293 0d	23 9	0 1610	2 789-5	0 006	517 0	122Sb	2 7d	25 0	0 0050	8 140-5	2 141	1 399
		25 0	0 0788						25 3	0 0094			
		25 3	0 1479						28 5	0 0032			
		28 5	0 0499						1140 0	0 0077			
		65 7	0 0002						27 2	0 0009			
									27 5	0 0016			
									31 0	0 0006			
123Sn	129 2d	1089 0	0 0060	1 061-6	4 025	0 744			563 9	0 7065			
		992 9	0 0004						692 8	0 0374			
125Sn	9 6d	331 9	0 0129	4 662-5	4 069	0 736			1257 0	0 0078			
		350 9	0 0022						1179 0	0 0002			
		469 7	0 0129										
		800 5	0 0095						124Sb	60 2d	27 2	0 0010	2 859-4
		822 6	0 0378								27 5	0 0019	4 195
		893 7	0 0023								31 0	0 0007	0 714
		915 5	0 0378								400 0	0 0013	
		934 7	0 0015								444 0	0 0021	
		1017 0	0 0026								525 5	0 0017	
		1067 0	0 0860								602 7	0 9787	
		1087 0	0 0095								632 4	0 0015	
											645 9	0 0726

Nuclide	Half-life	E	Prob	Γ	T	μ	Nuclide	Half-life	E	Prob	Γ	T	μ
		543 0	0 0264										
		584 2	0 0032						1084 0	0 0055			
		603 6	0 0425						1104 0	0 0023			
		637 8	0 0036						1125 0	0 0011			
		653 5	0 0025						1139 0	0 0018			
		666 9	0 0054						1162 0	0 0011			
		682 3	0 0054						1168 0	0 0027			
		685 2	0 3570						1208 0	0 0096			
		698 5	0 0339						1223 0	0 0018			
		722 2	0 0175						1237 0	0 0027			
		745 9	0 0011						1257 0	0 0037			
		783 8	0 1467						1261 0	0 0078			
		817 3	0 0027						1273 0	0 0027			
		820 1	0 0011						1281 0	0 0059			
		923 5	0 0046						1300 0	0 0027			
		1141 0	0 0036						1317 0	0 0037			
		1290 0	0 0035						1326 0	0 0055			
		736 7	0 0053						1419 0	0 0055			
									1436 0	0 0032			
129Sb	4 4h	27 2	0 0009	2 307	4 3 566	0 840			1480 0	0 0050			
		27 5	0 0018						1526 0	0 0046			
		31 0	0 0006						1540 0	0 0014			
		96 1	0 0018						1569 0	0 0073			
		116 2	0 0018						1599 0	0 0055			
		146 6	0 0023						1621 0	0 0027			
		180 8	0 0270						1655 0	0 0105			
		244 7	0 0055						1724 0	0 0027			
		268 6	0 0027						1736 0	0 0635			
		295 5	0 0110						1842 0	0 0023			
		313 5	0 0091						1870 0	0 0032			
		332 5	0 0023						2070 0	0 0059			
		359 4	0 0302						2113 0	0 0037			
		363 0	0 0046						1311 0	0 0098			
		405 0	0 0146										
		453 5	0 0082				121Te	16 8d	26 1	0 2144	1 444	4 1 778	1 685
		499 6	0 0023						26 4	0 4016			
		523 8	0 0169						29 7	0 1374			
		544 7	0 1906						37 1	0 0012			
		633 7	0 0293						65 6	0 0026			
		654 3	0 0320						470 5	0 0140			
		669 8	0 0087						507 6	0 1767			
		683 6	0 0073						573 1	0 8030			
		683 6	0 0544										
		737 1	0 0041				121mTe	154d	27 2	0 1011	6 703	5 0 518	5 781
		761 0	0 0402						27 5	0 1886			
		773 4	0 0293						31 0	0 0655			
		786 6	0 0201						212 2	0 8147			
		812 8	0 4570						81 8	0 0005			
		876 2	0 0274						26 1	0 0459			
		914 6	0 2130						26 4	0 0859			
		939 7	0 0078						29 7	0 0294			
		966 4	0 0818						37 1	0 0094			
		995 4	0 0014						1102 0	0 0254			
		1030 0	0 1339						953 6	0 0016			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
123Te	1.0+13y	26.1	0.1357	2.687-5	0.007	429.8	131Te	25.0m	28.3	0.0368	8.065-5	2.491	1.203
		26.4	0.2542						28.6	0.0685			
		29.7	0.0870						32.3	0.0240			
									149.7	0.6890			
									151.1	0.0017			
123mTe	119.7d	27.2	0.1405	5.261-5	0.125	24.041			342.9	0.0070			
		27.5	0.2620						384.1	0.0090			
		31.0	0.0910						452.3	0.1822			
		159.0	0.8410						492.7	0.0484			
		89.1	0.0009						544.9	0.0043			
									567.3	0.0010			
125mTe	58d	27.2	0.3232	6.168-5	0.008	368.9			602.0	0.0420			
		27.5	0.6030						605.5	0.0012			
		31.0	0.2093						654.3	0.0153			
		35.5	0.0649						696.2	0.0018			
		109.3	0.0028						727.0	0.0047			
		144.8	0.0000						842.0	0.0020			
									856.1	0.0013			
127Te	9.4h	360.3	0.0013	9.428-7	1.239	2.419			898.5	0.0014			
		417.9	0.0099						934.5	0.0087			
		172.7	0.0013						948.5	0.0226			
									951.4	0.0033			
127mTe	109d	27.2	0.1041	1.977-5	0.008	373.5			997.3	0.0334			
		27.5	0.1943						1008.0	0.0080			
		31.0	0.0674						1098.0	0.0017			
		88.3	0.0009						1147.0	0.0496			
		28.3	0.0030						1149.0	0.0011			
		28.6	0.0057						1277.0	0.0012			
		32.3	0.0020						1294.0	0.0048			
		57.6	0.0038						1427.0	0.0011			
		648.6	0.0001						1501.0	0.0012			
									696.0	0.0119			
129Te	1.2h	27.8	0.1626	1.833-5	1.452	2.063	131mTe	1.2d	27.2	0.0359	2.447-4	3.344	0.896
		209.0	0.0017						27.5	0.0669			
		250.6	0.0035						31.0	0.0232			
		278.4	0.0052						182.3	0.0085			
		281.3	0.0015						28.3	0.0283			
		459.6	0.0710						28.6	0.0527			
		487.4	0.0131						32.3	0.0185			
		802.1	0.0018						79.2	0.0013			
		1084.0	0.0045						81.1	0.0407			
		1112.0	0.0018						86.4	0.0015			
		656.9	0.0038						101.6	0.0017			
129mTe	33.6d	27.2	0.0788	1.994-5	1.496	2.003			102.1	0.0794			
		27.5	0.1470						134.9	0.0071			
		31.0	0.0510						149.7	0.0508			
		105.5	0.0015						159.7	0.0013			
		556.6	0.0013						182.3	0.0074			
		695.9	0.0327						183.1	0.0015			
		729.6	0.0076						188.1	0.0021			
		742.5	0.0031						189.8	0.0050			
									190.5	0.0012			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob	Γ	T	μ
		200 6	0 0755						1060 0	0 0155			
		214 0	0 0043						1125 0	0 1143			
		230 7	0 0019						1128 0	0 0097			
		240 9	0 0759						1149 0	0 0151			
		253 2	0 0065						1149 0	0 0038			
		255 4	0 0031						1151 0	0 0066			
		269 2	0 0011						1165 0	0 0014			
		278 6	0 0178						1207 0	0 0976			
		283 2	0 0039						1237 0	0 0066			
		309 5	0 0038						1315 0	0 0070			
		334 3	0 0957						1341 0	0 0010			
		335 4	0 0014						1395 0	0 0011			
		342 9	0 0039						1646 0	0 0124			
		351 3	0 0021						1888 0	0 0136			
		354 7	0 0023						2001 0	0 0202			
		365 0	0 0120						2168 0	0 0035			
		383 9	0 0020						2271 0	0 0038			
		417 4	0 0028						631 9	0 0355			
		432 4	0 0066										
		452 3	0 0155				132Te	3 3d	28 3	0 1831	7 549-5	0 296	10 115
		462 9	0 0182						28 6	0 3409			
		468 2	0 0031						32 3	0 1195			
		492 7	0 0023						49 7	0 1311			
		524 8	0 0014						111 8	0 0185			
		530 7	0 0010						116 3	0 0194			
		541 4	0 0011						228 2	0 8800			
		586 3	0 0198										
		602 0	0 0031				133Te	12 4m	28.3	0.0063	1.580-4	3.333	0 899
		609 4	0 0014						28 6	0 0117			
		665 1	0 0434						32 3	0 0041			
		685 9	0 0015						312 0	0 7080			
		695 6	0 0040						384 6	0 0028			
		702 5	0 0039						392 9	0 0057			
		713 1	0 0143						407 6	0 3009			
		744 2	0 0159						474 7	0 0120			
		773 7	0 3820						546 4	0 0057			
		774 1	0 0054						587 1	0 0050			
		782 5	0 0779						613 6	0 0028			
		793 7	0 1387						719 6	0 0665			
		822 8	0 0612						786 8	0 0559			
		844 9	0 0015						844 4	0 0326			
		852 2	0 0039						930 7	0 0446			
		852 2	0 2065						1001 0	0 0623			
		856 1	0 0062						1021 0	0 0269			
		865 1	0 0019						1062 0	0 0127			
		872 3	0 0010						1252 0	0 0113			
		910 0	0 0329						1308 0	0 0092			
		920 6	0 0120						1314 0	0 0078			
		923 4	0 0012						1333 0	0 0991			
		941 3	0 0078						1406 0	0 0057			
		987 8	0 0015						1474 0	0 0035			
		999 3	0 0017						1519 0	0 0050			
		1035 0	0 0010						1588 0	0 0028

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
122I	3.6m	27.2	0.0520	1.876-4	1.926	1.555			1919 0	0 0017			
		27 5	0 0970						2038 0	0 0033			
		31 0	0 0337						2079 0	0 0034			
		563 9	0 2100						2091 0	0 0055			
		683 5	0 0097						2099 0	0 0014			
		692 8	0 0149						2144 0	0 0011			
		793 2	0 0166						2232 0	0 0055			
		1075 0	0 0034						2283 0	0 0064			
		1257 0	0 0032						2747 0	0 0045			
		1500 0	0 0018						1175 0	0 0121			
		1747 0	0 0038						511 0	0 4654			
		1844 0	0 0016				125I	60 1d	27 2	0 3923	7 432-5	0 008	373 1
		2193 0	0 0036						27 5	0 7320			
		1862 0	0 0081						31 0	0 2541			
		511 0	1 5210						35 5	0 0649			
123I	13.1h	27.2	0.2463	7.475-5	0.154	19.422	126I	12.9d	27.2	0.1269	1.052-4	2.061	1.454
		27 5	0 4595						27 5	0 2368			
		31 0	0 1595						31 0	0 0822			
		159 0	0 8340						666 3	0 4020			
		346 4	0 0013						753 8	0 0506			
		440 0	0 0043						1420 0	0 0036			
		505 3	0 0032						1781 0	0 0001			
		529 0	0 0139						511 0	0 0215			
		538 5	0 0038						29 5	0 0011			
		494 4	0 0048						29 8	0 0021			
									33 6	0 0008			
									388 6	0 2908			
									491 2	0 0243			
									879 9	0 0064			
124I	4.2d	27.2	0.1650	2.033-4	3.093	0.969	128I	25.0m	27.2	0.0106	1.614-5	1.506	1.989
		27 5	0 3078						27 5	0 0198			
		31 0	0 1068						31 0	0 0069			
		541 2	0 0018						743 2	0 0013			
		554 0	0 0010						29 5	0 0004			
		602 7	0 5900						29 8	0 0007			
		645 9	0 0092						33 6	0 0003			
		695 0	0 0018						442 9	0 1425			
		713 8	0 0011						526 6	0 0137			
		722 8	0 0974						969 4	0 0034			
		968 2	0 0040						1051 0	0 0001			
		976 3	0 0010										
		1045 0	0 0041										
		1054 0	0 0012										
		1325 0	0 0140										
		1368 0	0 0028										
		1376 0	0 0162										
		1489 0	0 0018				129I	1 6+7y	29 5	0 1996	3 401-5	0 010	287 0
		1509 0	0 0292						29 8	0 3702			
		1560 0	0 0016						33 6	0 1316			
		1638 0	0 0019						39 6	0 0752			
		1676 0	0 0011										
		1691 0	0 1015										
		1720 0	0 0017										
		1851 0	0 0020				130I	12.4h	29.5	0.0042	3.768-4	2.525	1.186
									29 8	0 0078			
									33 6	0 0028			
									418 0	0 3415			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		457.7	0.0024						505.9	0.0503			
		510.3	0.0085						522.7	0.1609			
		536.1	0.9900						535.5	0.0052			
		539.1	0.0140						540.0	0.0011			
		553.9	0.0066						547.1	0.0125			
		586.0	0.0169						600.0	0.0014			
		603.5	0.0061						620.8	0.0039			
		668.5	0.9613						621.2	0.0158			
		686.0	0.0107						630.2	0.1372			
		739.5	0.8227						650.6	0.0267			
		800.2	0.0010						659.0	0.0039			
		808.3	0.0024						667.7	0.9870			
		877.3	0.0019						669.8	0.0494			
		967.0	0.0088						671.6	0.0523			
		1097.0	0.0055						727.0	0.0316			
		1122.0	0.0025						727.2	0.0217			
		1158.0	0.1131						728.5	0.0109			
		1223.0	0.0018						764.5	0.0039			
		1272.0	0.0075						772.6	0.7620			
		1404.0	0.0034						780.2	0.0123			
		809.9	0.0085						784.5	0.0042			
									809.8	0.0286			
131I	8.0d	29.5	0.0135	7.640-5	1.242	2.412			812.2	0.0563			
		29.8	0.0250						863.3	0.0058			
		33.6	0.0089						876.8	0.0108			
		80.2	0.0262						910.3	0.0092			
		177.2	0.0026						927.6	0.0041			
		284.3	0.0605						954.6	0.1806			
		325.8	0.0025						983.7	0.0056			
		364.5	0.8116						1035.0	0.0047			
		503.0	0.0036						1136.0	0.0296			
		637.0	0.0726						1143.0	0.0135			
		642.7	0.0022						1147.0	0.0028			
		722.9	0.0180						1173.0	0.0109			
		329.4	0.0023						1273.0	0.0018			
									1291.0	0.0114			
132I	2.3h	29.5	0.0017	3.841-4	3.081	0.972			1295.0	0.0197			
		29.8	0.0032						1298.0	0.0089			
		33.6	0.0011						1318.0	0.0012			
		147.2	0.0024						1372.0	0.0247			
		183.3	0.0014						1399.0	0.0711			
		254.8	0.0019						1443.0	0.0142			
		262.7	0.0144						1477.0	0.0014			
		284.8	0.0072						1757.0	0.0030			
		316.5	0.0014						1921.0	0.0118			
		363.5	0.0049						2002.0	0.0109			
		387.8	0.0030						2087.0	0.0024			
		416.8	0.0047						2173.0	0.0020			
		431.9	0.0048						2223.0	0.0012			
		446.0	0.0060						2391.0	0.0017			
		473.9	0.0018						1015.0	0.0320			
		478.5	0.0015										
		488.2	0.0041										
							133I	20.8h	29.5	0.0015	1.092-4	2.273	1.318

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		618 4	0 0001						2850 0	0 0018			
									1491 0	0 0131			
129mXe	8 9d	29 5	0 3612	6 165-5	0 013	235 8	138Xe	14.1m	10 9	0.0070	1.664-4	4 894	0.612
		29 8	0 6701						30 6	0 0103			
		33 6	0 2382						31 0	0 0190			
		39 6	0 0752						35 0	0 0068			
		196 6	0 0474						153 8	0 0595			
131mXe	11 8d	29 5	0 1548	2 533-5	0 011	263 7			242 6	0 0350			
		29 8	0 2872						258 3	0 3150			
		33 6	0 1021						282 5	0 0043			
		163 9	0 0196						335 3	0 0011			
									371 4	0 0050			
133Xe	5 2d	30 6	0 1364	2 783-5	0 075	39 877			396 4	0 0630			
		31 0	0 2526						401 4	0 0217			
		35 0	0 0906						434 5	0 2032			
		79 6	0 0022						500 2	0 0036			
		81 0	0 3648						530 1	0 0025			
		177 7	0 0007						537 8	0 0012			
									555 9	0 0012			
133mXe	2 2d	29 5	0 1601	3 034-5	0 152	19 750			568 5	0 0031			
		29 8	0 2970						588 8	0 0012			
		33 6	0 1056						654 1	0 0014			
		233 2	0 1030						865 8	0 0030			
									869 4	0 0062			
135Xe	9.1h	30.6	0.0145	5 118-5	0.596	5 026			896 9	0 0013			
		31 0	0 0268						912 5	0 0033			
		35 0	0 0096						917 1	0 0092			
		158 2	0 0029						936 4	0 0014			
		249 8	0 8990						941 3	0 0023			
		358 4	0 0022						1094 0	0 0041			
		408 0	0 0036						1099 0	0 0021			
		608 2	0 0290						1102 0	0 0011			
		684 3	0 0021						1114 0	0 0147			
									1142 0	0 0051			
135mXe	15.4m	29.5	0 0384	8.540-5	1 796	1 668			1145 0	0 0013			
		29 8	0 0713						1572 0	0 0026			
		33 6	0 0254						1615 0	0 0024			
		526 6	0 8100						1768 0	0 1673			
									1812 0	0 0018			
137Xe	3.8m	30.6	0 0009	3.340-5	2.393	1.252			1851 0	0 0142			
		31 0	0 0017						1925 0	0 0056			
		35 0	0 0006						2005 0	0 0536			
		298 0	0 0012						2016 0	0 1225			
		393 4	0 0014						2079 0	0 0144			
		455 5	0 3070						2252 0	0 0229			
		849 0	0 0061						2322 0	0 0062			
		982 2	0 0021						2475 0	0 0031			
		1119 0	0 0011						2498 0	0 0017			
		1273 0	0 0022						1119 0	0 0266			
		1577 0	0 0010										
		1613 0	0 0012						126Cs	1.6m	29 5	0.0410	2 141-4 1 895 1 581
		1783 0	0 0041								29 8	0 0760	

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		33.6	0.0270						1090.0	0.0027			
		364.6	0.0042						511.0	0.0072			
		388.6	0.3800						464.6	0.0189			
		434.0	0.0106						567.1	0.0024			
		491.2	0.0410						1032.0	0.0012			
		548.7	0.0061						663.1	0.0006			
		553.4	0.0027										
		736.5	0.0023				¹³⁴ Cs	2.1y	31.8	0.0021	2.687-4	2.738	1.094
		798.1	0.0047						32.2	0.0040			
		879.9	0.0119						36.4	0.0014			
		925.2	0.0448						475.4	0.0146			
		1033.0	0.0027						563.2	0.0838			
		1290.0	0.0034						569.3	0.1543			
		1608.0	0.0011						604.7	0.9760			
		1623.0	0.0022						795.8	0.8540			
		1675.0	0.0019						801.9	0.0873			
		1678.0	0.0072						1039.0	0.0100			
		1959.0	0.0019						1168.0	0.0180			
		2067.0	0.0030						1365.0	0.0304			
		2407.0	0.0013						276.9	0.0004			
		1850.0	0.0038				^{134m} Cs	2.9h	11.3	0.0094	1.904-5	0.039	75.989
		511.0	1.6410						30.6	0.0895			
¹²⁹ Cs	1.3d	29.5	0.2975	9.720-5	0.932	3.216			31.0	0.1657			
		29.8	0.5519						35.0	0.0595			
		33.6	0.1962						127.4	0.1290			
		39.6	0.0302						138.7	0.0001			
		93.3	0.0066										
		177.0	0.0027				¹³⁶ Cs	13.2d	31.8	0.0495	3.632-4	3.436	0.872
		266.8	0.0028						32.2	0.0912			
		270.3	0.0022						36.4	0.0332			
		278.6	0.0134						66.9	0.1246			
		282.1	0.0025						86.3	0.0628			
		318.2	0.0249						109.7	0.0041			
		371.9	0.3110						153.2	0.0746			
		411.5	0.2267						163.9	0.0461			
		549.0	0.0345						166.5	0.0063			
		588.5	0.0061						176.5	0.1356			
		906.4	0.0022						187.3	0.0060			
		636.5	0.0028						273.6	0.1266			
									319.9	0.0060			
¹³¹ Cs	9.7d	29.5	0.2109	3.363-5	0.010	310.3			340.6	0.4845			
		29.8	0.3913						507.2	0.0098			
		33.6	0.1391						818.5	0.9970			
									1048.0	0.7956			
¹³² Cs	6.5d	29.5	0.2110	1.549-4	2.312	1.296			1235.0	0.1974			
		29.8	0.3914						787.2	0.0033			
		33.6	0.1392										
		505.9	0.0080				¹³⁷ Cs	30.17y			1.017-4	from ^{137m} Ba	
		630.2	0.0101										
		667.7	0.9742										
		1136.0	0.0051										
		1318.0	0.0058										

See page 41 for energies.

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
¹³⁸ Cs	32.2m	31.8	0.0029	3.395-4	4.716	0.635			532.0	0.0021			
		32.2	0.0053						567.7	0.0013			
		36.4	0.0019						627.2	0.0154			
		112.6	0.0013						827.5	0.0011			
		138.1	0.0149						929.2	0.0023			
		192.0	0.0050						946.5	0.0010			
		193.9	0.0033						1190.0	0.0018			
		212.3	0.0017						1283.0	0.0720			
		227.8	0.0151						1306.0	0.0011			
		324.9	0.0029						1308.0	0.0037			
		363.9	0.0024						1322.0	0.0023			
		365.3	0.0019						1411.0	0.0015			
		409.0	0.0466						1421.0	0.0080			
		421.6	0.0043						1621.0	0.0042			
		462.8	0.3075						1681.0	0.0060			
		516.7	0.0043						1699.0	0.0018			
		546.9	0.1076						1877.0	0.0034			
		683.6	0.0011						1888.0	0.0022			
		766.1	0.0015						1904.0	0.0012			
		773.3	0.0023						1934.0	0.0024			
		782.1	0.0033						2021.0	0.0013			
		871.8	0.0511						2090.0	0.0014			
		880.8	0.0011						2111.0	0.0066			
		935.0	0.0018						2174.0	0.0020			
		1010.0	0.2983						2350.0	0.0056			
		1054.0	0.0016						2381.0	0.0019			
		1147.0	0.0124						2532.0	0.0042			
		1199.0	0.0017						2606.0	0.0024			
		1204.0	0.0040						2649.0	0.0017			
		1265.0	0.0014						2848.0	0.0010			
		1344.0	0.0114						3464.0	0.0011			
		1416.0	0.0037						3666.0	0.0014			
		1436.0	0.7630						1569.0	0.0387			
		1445.0	0.0097										
		1496.0	0.0018										
		1555.0	0.0037										
		1614.0	0.0014										
		1717.0	0.0011										
		1728.0	0.0011										
		1778.0	0.0014										
		2024.0	0.0012										
		2062.0	0.0011										
		2211.0	0.0021										
		2218.0	0.1518										
		2499.0	0.0017										
		2583.0	0.0024										
		2640.0	0.0763										
		2731.0	0.0012										
		3339.0	0.0015										
		3367.0	0.0023										
		1613.0	0.0162										
¹³⁹ Cs	9.4m	454.7	0.0013	4.218-5	5.022	0.596							
¹³¹ Ba	11.8d	30.6	0.2766	1.244-4	1.338	2.239							
		31.0	0.5121										
		35.0	0.1838										
		78.8	0.0073										
		92.3	0.0064										
		123.8	0.2897										
		133.6	0.0216										
		157.1	0.0019										
		216.1	0.1975										
		239.6	0.0240										
		246.9	0.0064										
		249.4	0.0282										
		294.5	0.0017										
		351.2	0.0010										
		373.2	0.1399										
		404.0	0.0131										
		461.3	0.0010										
		480.4	0.0032										
		486.5	0.0207										

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		496.3	0.4680						162.6	0.0673			
		572.7	0.0016						304.8	0.0451			
		585.0	0.0122						423.7	0.0325			
		620.1	0.0136						437.6	0.0199			
		674.4	0.0013						467.6	0.0015			
		696.5	0.0015						537.3	0.2550			
		831.6	0.0023						118.8	0.0007			
		923.8	0.0073										
		1048.0	0.0117				141Ba	18.3m	33.0	0.0195	1.559-4	3.049	0.982
		501.9	0.0058						33.4	0.0360			
									37.8	0.0132			
133Ba	10.5y	30.6	0.3425	1.231-4	0.715	4.188			112.9	0.0099			
		31.0	0.6342						163.0	0.0047			
		35.0	0.2276						180.5	0.0052			
		53.1	0.0214						190.2	0.4860			
		79.6	0.0255						277.0	0.2459			
		81.0	0.3297						304.2	0.2658			
		160.6	0.0060						343.7	0.1502			
		223.1	0.0044						349.3	0.0030			
		276.4	0.0690						364.4	0.0061			
		302.8	0.1779						381.3	0.0012			
		356.0	0.6050						389.8	0.0140			
		383.8	0.0867						457.6	0.0505			
									462.1	0.0505			
133mBa	1.6d	12.3	0.0135	3.372-5	0.341	8.792			467.3	0.0578			
		31.8	0.1509						522.2	0.0046			
		32.2	0.2784						524.2	0.0043			
		36.4	0.1013						527.4	0.0040			
		276.1	0.1800						561.9	0.0010			
									572.1	0.0027			
135mBa	1.2d	31.8	0.1535	2.974-5	0.316	9.494			572.1	0.0027			
		32.2	0.2832						599.3	0.0025			
		36.4	0.1030						608.9	0.0026			
		268.2	0.1600						625.2	0.0345			
									636.0	0.0030			
137mBa	2.6m	31.8	0.0207	1.075-4	2.447	1.224			641.4	0.0038			
		32.2	0.0382						647.9	0.0593			
		36.4	0.0139						670.0	0.0019			
		661.7	0.8998						674.2	0.0011			
									675.7	0.0023			
139Ba	1.4h	33.0	0.0093	7.714-6	1.062	2.820			685.7	0.0014			
		33.4	0.0172						687.8	0.0011			
		37.8	0.0063						698.5	0.0030			
		165.8	0.1736						700.0	0.0022			
		1420.0	0.0028						704.8	0.0032			
		1271.0	0.0011						739.1	0.0452			
									753.9	0.0010			
140Ba	12.8d	13.8	0.0117	4.413-5	1.583	1.892			762.2	0.0015			
		30.0	0.1403						778.2	0.0011			
		33.0	0.0053						805.4	0.0010			
		33.4	0.0098						826.3	0.0035			
		37.8	0.0036						831.7	0.0160			
		132.8	0.0021						832.6	0.0017			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
¹⁴⁰ La	1.7d	34.3	0.0047	3.424-4	4.532	0.661		1074.0	0.0011				
		34.7	0.0087					1089.0	0.0026				
		39.3	0.0032					1113.0	0.0011				
		109.4	0.0019					1117.0	0.0011				
		131.1	0.0055					1131.0	0.0052				
		173.6	0.0012					1144.0	0.0016				
		242.0	0.0043					1160.0	0.0194				
		266.6	0.0049					1174.0	0.0016				
		328.8	0.2053					1191.0	0.0042				
		432.5	0.0294					1231.0	0.0032				
		487.0	0.4555					1233.0	0.0205				
		751.8	0.0440					1242.0	0.0021				
		815.9	0.2349					1265.0	0.0011				
		867.8	0.0563					1270.0	0.0011				
		919.6	0.0288					1288.0	0.0011				
		925.2	0.0708					1323.0	0.0037				
		950.9	0.0053					1332.0	0.0011				
		1597.0	0.9549					1355.0	0.0011				
		2349.0	0.0085					1363.0	0.0236				
		2522.0	0.0346					1374.0	0.0021				
¹⁴¹ La	3.9h	1354.0	0.0262	6.088-6	4.731	0.633		1389.0	0.0047				
		1693.0	0.0012					1395.0	0.0021				
		1674.0	0.0031					1402.0	0.0016				
								1446.0	0.0016				
¹⁴² La	1.6h	34.3	0.0006	3.586-4	5.354	0.560		1455.0	0.0011				
		34.7	0.0012					1494.0	0.0016				
		39.3	0.0004					1516.0	0.0047				
		106.1	0.0016					1535.0	0.0026				
		174.1	0.0011					1540.0	0.0052				
		367.3	0.0011					1546.0	0.0331				
		393.7	0.0011					1618.0	0.0032				
		420.8	0.0026					1651.0	0.0021				
		433.3	0.0042					1688.0	0.0026				
		514.7	0.0016					1723.0	0.0168				
		532.0	0.0016					1752.0	0.0011				
		578.1	0.0136					1768.0	0.0021				
		619.5	0.0016					1771.0	0.0021				
		641.2	0.5250					1794.0	0.0011				
		861.6	0.0199					1806.0	0.0016				
		878.2	0.0021					1817.0	0.0011				
		894.9	0.0940					1885.0	0.0058				
		946.5	0.0011					1901.0	0.0871				
		962.2	0.0042					1923.0	0.0026				
		991.2	0.0011					1934.0	0.0016				
		1007.0	0.0026					1948.0	0.0052				
		1011.0	0.0436					1961.0	0.0016				
		1039.0	0.0011					2004.0	0.0105				
		1044.0	0.0305					2026.0	0.0136				
		1062.0	0.0016					2039.0	0.0110				
		1070.0	0.0016					2050.0	0.0052				
								2055.0	0.0294				
								2077.0	0.0073				

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		2086.0	0.0042						40.7	0.0336			
		2100.0	0.0105						145.4	0.4840			
		2126.0	0.0037										
		2139.0	0.0058				¹⁴³ Ce	1.4d	35.5	0.1768	6.886-5	1.418	2.113
		2180.0	0.0058						36.0	0.3239			
		2187.0	0.0583						40.7	0.1217			
		2290.0	0.0037						57.4	0.1176			
		2358.0	0.0084						169.0	0.0029			
		2364.0	0.0047						216.0	0.0021			
		2398.0	0.1627						231.6	0.0202			
		2420.0	0.0021						293.3	0.4200			
		2459.0	0.0042						338.0	0.0029			
		2513.0	0.0016						350.6	0.0336			
		2532.0	0.0011						433.0	0.0013			
		2539.0	0.0079						439.0	0.0012			
		2543.0	0.1123						490.4	0.0197			
		2663.0	0.0079						587.3	0.0024			
		2667.0	0.0189						664.6	0.0525			
		2673.0	0.0021						722.0	0.0512			
		2782.0	0.0032						880.4	0.0092			
		2801.0	0.0063						1103.0	0.0037			
		2818.0	0.0084						610.6	0.0089			
		2829.0	0.0026										
		2970.0	0.0079				¹⁴⁴ Ce	284.3d	33.6	0.0028	6.302-6	0.084	35.806
		2972.0	0.0331						35.5	0.0243			
		2992.0	0.0011						36.0	0.0445			
		3000.0	0.0052						40.7	0.0167			
		3007.0	0.0021						40.9	0.0039			
		3013.0	0.0073						80.1	0.0160			
		3022.0	0.0011						133.5	0.1080			
		3034.0	0.0058						67.3	0.0013			
		3047.0	0.0042										
		3076.0	0.0016				¹⁴² Pr	19.1h	1576.0	0.0370	8.050-6	5.069	0.591
		3155.0	0.0021						508.8	0.0002			
		3181.0	0.0032										
		3237.0	0.0032				¹⁴³ Pr	13.6d	742.0	0.00001	5.2+-12	2.824	1.061
		3242.0	0.0021										
		3273.0	0.0016				¹⁴⁴ Pr	17.3m	696.5	0.0148	4.545-6	4.825	0.621
		3315.0	0.0136						1489.0	0.0030			
		3402.0	0.0032						2186.0	0.0077			
		3459.0	0.0037						1059.0	0.0002			
		3612.0	0.0089										
		3633.0	0.0115				^{144m} Pr	7.2m	35.5	0.0868	9.933-6	0.016	184.2
		3719.0	0.0032						36.0	0.1589			
		3850.0	0.0026						40.7	0.0597			
									59.0	0.0008			
¹³⁹ Ce	137.7d	33.0	0.2248	5.554-5	0.134	22.320							
		33.4	0.4140										
		37.8	0.1521				¹⁴⁷ Nd	11.0d	38.2	0.1296	3.751-5	1.337	2.241
		165.8	0.8035						38.7	0.2356			
									43.8	0.0906			
									91.1	0.2800			
¹⁴¹ Ce	32.5d	35.5	0.0488	1.979-5	0.115	26.056			120.5	0.0040			
		36.0	0.0894						196.6	0.0020			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
147Pm	2.6y	121.3	0.00007	2.3+-10	0.082	36.526							
148Pm	5.4d	39.5	0.0005	8.885-5	4.046	0.740			64.9	0.0197			
		40.1	0.0009						65.8	0.0117			
		45.4	0.0003						69.7	0.0048			
		550.3	0.2200						76.2	0.0021			
		592.8	0.0035						98.0	0.0037			
		611.3	0.0102						100.0	0.0256			
		874.2	0.0024						101.9	0.0131			
		896.4	0.0098						104.8	0.0355			
		914.8	0.1145						139.3	0.0051			
		1465.0	0.2220						143.2	0.0022			
		1294.0	0.0030						147.5	0.0015			
									156.2	0.0015			
148mPm	41.3d	38.2	0.0073	3.544-4	2.477	1.209			162.9	0.0089			
		38.7	0.0132						163.6	0.0163			
		43.8	0.0051						167.8	0.0879			
		75.7	0.0093						168.4	0.0092			
		61.5	0.0000						176.5	0.0087			
		39.5	0.0167						177.2	0.0387			
		40.1	0.0303						186.6	0.0017			
		45.4	0.0117						202.0	0.0094			
		98.5	0.0247						204.2	0.0013			
		189.6	0.0110						209.0	0.0179			
		288.1	0.1256						227.2	0.0034			
		311.6	0.0392						232.4	0.0105			
		362.1	0.0018						236.6	0.0016			
		414.1	0.1866						236.7	0.0020			
		432.8	0.0535						237.0	0.0053			
		460.6	0.0042						240.1	0.0389			
		501.3	0.0675						254.3	0.0016			
		550.3	0.9487						258.1	0.0060			
		553.2	0.0040						275.2	0.0717			
		572.0	0.0021						280.1	0.0023			
		599.7	0.1254						290.8	0.0088			
		611.3	0.0548						306.7	0.0024			
		630.0	0.8900						323.9	0.0121			
		725.7	0.3284						325.8	0.0011			
		915.3	0.1717						329.8	0.0021			
		1014.0	0.2028						340.1	0.2290			
		714.8	0.0019						344.9	0.0218			
									349.8	0.0014			
149Pm	2.2d	39.5	0.0006	2.314-6	1.205	2.485			353.3	0.0011			
		40.1	0.0012						379.9	0.0097			
		45.4	0.0005						407.0	0.0019			
		285.9	0.0310						440.9	0.0153			
		859.4	0.0010						445.7	0.0408			
		598.3	0.0030						451.4	0.0030			
									490.3	0.0013			
151Pm	1.2d	25.7	0.0094	7.080-5	1.522	1.969			516.3	0.0020			
		39.5	0.0807						565.0	0.0036			
		40.1	0.1462						575.0	0.0012			
		45.4	0.0567						636.2	0.0147			
		62.9	0.0022						654.3	0.0025			
									668.7	0.0036			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		669.2	0.0029						963.4	0.0011			
		671.3	0.0093						964.0	0.1444			
		704.2	0.0035						1005.0	0.0066			
		709.3	0.0015						1085.0	0.0025			
		712.0	0.0011						1086.0	0.0996			
		717.8	0.0412						1112.0	0.1330			
		736.1	0.0049						1213.0	0.0138			
		752.8	0.0133						1250.0	0.0018			
		769.1	0.0011						1293.0	0.0010			
		772.8	0.0096						1408.0	0.2075			
		785.1	0.0023						1458.0	0.0049			
		807.9	0.0053						1528.0	0.0026			
		817.7	0.0017						685.8	0.0087			
		848.7	0.0030						42.3	0.0022			
		877.7	0.0010						43.0	0.0039			
		948.7	0.0036						48.7	0.0016			
		428.8	0.0436						344.3	0.2649			
151Sm	90y	21.5	0.0003	2.442-8	0.004	776.6			367.7	0.0086			
153Sm	1.9d	40.9	0.1726	2.440-5	0.043	69.799			411.1	0.0221			
		41.5	0.3122						503.4	0.0015			
		47.0	0.1222						586.3	0.0045			
		69.7	0.0517						678.6	0.0047			
		75.4	0.0019						764.8	0.0017			
		83.4	0.0020						778.9	0.1274			
		89.5	0.0016						1090.0	0.0168			
		97.4	0.0072						1109.0	0.0017			
		103.2	0.2830						1299.0	0.0160			
		422.7	0.0028						631.4	0.0071			
152Eu	13.6y	39.5	0.2083	2.009-4	3.604	0.831	152mEu	9.3h	39.5	0.0788	5.742-5	3.290	0.911
		40.1	0.3773						40.1	0.1428			
		45.4	0.1464						45.4	0.0554			
		121.8	0.2843						121.8	0.0745			
		244.7	0.0749						562.9	0.0023			
		295.9	0.0043						841.5	0.1508			
		329.3	0.0012						961.1	0.0021			
		415.9	0.0010						963.4	0.1241			
		444.0	0.0281						1389.0	0.0088			
		444.0	0.0030						794.2	0.0041			
		488.7	0.0041						344.3	0.0249			
		564.0	0.0048						970.4	0.0062			
		566.4	0.0013						1315.0	0.0098			
		656.4	0.0014						676.7	0.0032			
		674.6	0.0015				154Eu	8.8y	42.3	0.0726	2.039-4	3.734	0.802
		688.6	0.0084						43.0	0.1309			
		719.3	0.0027						48.7	0.0517			
		810.4	0.0031						123.1	0.4046			
		841.5	0.0016						188.3	0.0023			
		867.3	0.0416						247.9	0.0660			
		919.3	0.0040						401.3	0.0021			
		926.2	0.0026						444.5	0.0050			
									478.3	0.0022

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		49.1	0.1934						237.1	0.0030			
		55.7	0.0789						277.4	0.0058			
		80.6	0.1270						295.9	0.2890			
		94.6	0.0016						308.3	0.6440			
		119.0	0.0016						372.0	0.0026			
		121.2	0.0024						670.7	0.0025			
		184.4	0.7260						676.1	0.0029			
		190.7	0.0022						784.1	0.0024			
		214.8	0.0043						796.6	0.0064			
		215.9	0.0257						907.7	0.0063			
		231.3	0.0021						535.2	0.0109			
		259.7	0.0105										
		280.4	0.2962				170Tm	128.6d	51.3	0.0127	1.673-6	0.103	29.074
		300.7	0.0372						52.4	0.0225			
		339.8	0.0017						59.4	0.0093			
		365.8	0.0242						84.2	0.0326			
		410.9	0.1111										
		451.5	0.0292				171Tm	1.9y	51.3	0.0029	2.597-7	0.050	60.086
		464.8	0.0120						52.4	0.0052			
		496.7	0.0022						59.4	0.0021			
		529.8	0.0951						66.7	0.0016			
		571.0	0.0547										
		594.4	0.0056				169Yb	32.0d	20.7	0.0021	8.837-5	0.225	13.301
		611.5	0.0142						49.8	0.5278			
		644.5	0.0015						50.7	0.9341			
		670.5	0.0535						57.5	0.3830			
		691.2	0.0136						63.1	0.4375			
		711.7	0.5409						93.6	0.0266			
		712.4	0.0022						109.8	0.1736			
		736.7	0.0037						118.2	0.0188			
		752.3	0.1205						130.5	0.1106			
		778.8	0.0303						177.2	0.2144			
		810.3	0.5714						198.0	0.3492			
		830.6	0.0966						240.3	0.0012			
		875.6	0.0072						261.1	0.0177			
		950.9	0.0269						307.7	0.1081			
		1120.0	0.0024						344.1	0.0018			
		1147.0	0.0020										
		1241.0	0.0083				175Yb	4.2d	53.0	0.0109	8.233-6	0.999	2.998
		1282.0	0.0018						54.1	0.0191			
		1401.0	0.0050						61.3	0.0079			
		1427.0	0.0048						113.8	0.0189			
		416.6	0.0063						137.7	0.0010			
									144.9	0.0034			
169Er	9.4d	110.5	0.00003	3.406-10	0.065	46.160			282.5	0.0302			
									396.3	0.0650			
171Er	7.5h	49.8	0.1309	8.008-5	0.757	3.960			251.5	0.0009			
		50.7	0.2316										
		57.5	0.0950				177Lu	6.7d	54.6	0.0163	7.636-6	0.274	10.935
		111.6	0.2050						55.8	0.0285			
		116.7	0.0230						63.2	0.0120			
		124.0	0.0910						71.7	0.0016			
		210.6	0.0064						113.0	0.0638			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		208 4	0 1100						426 3	0 0041			
		249 7	0 0021						466 0	0 0233			
		321 3	0 0022						157 9	0 0020			
		136 7	0 0005										
177mLu	160 1d	53 0	0 0514	2 112-4	0 752	3 983	181Hf	42 4d	56 3	0 0861	1 061-4	1 441	2 078
		54 1	0 0903						57 5	0 1503			
		61 3	0 0376						65 2	0 0634			
		115 8	0 0068						133 0	0 4167			
		121 6	0 0586						136 3	0 0523			
		147 2	0 0359						136 9	0 0076			
		171 9	0 0490						345 8	0 1715			
		195 6	0 0086						476 0	0 0042			
		218 1	0 0299						482 0	0 8285			
		268 8	0 0338						615 5	0 0014			
		319 0	0 1028						522 6	0 0003			
		367 4	0 0297				182Ta	114 7d	31 7	0 0080	2 084-4	3 987	0 751
		413 6	0 1638						42 7	0 0025			
		54 6	0 3337						58 0	0 1041			
		55 1	0 0120						59 3	0 1810			
		55 8	0 5845						65 7	0 0280			
		63 2	0 2452						67 2	0 0770			
		71 7	0 0089						67 7	0 4235			
		105 3	0 1201						84 7	0 0274			
		113 0	0 2150						100 1	0 1407			
		117 0	0 0024						113 7	0 0190			
		128 5	0 1525						116 4	0 0044			
		136 7	0 0137						152 4	0 0717			
		145 6	0 0090						156 4	0 0272			
		153 3	0 1802						179 4	0 0319			
		159 9	0 0060						198 4	0 0151			
		174 4	0 1261						222 1	0 0756			
		177 0	0 0347						229 3	0 0364			
		204 1	0 1429						264 1	0 0364			
		208 4	0 6125						928 0	0 0062			
		214 4	0 0661						959 7	0 0035			
		228 4	0 3723						1002 0	0 0209			
		233 9	0 0565						1044 0	0 0024			
		249 7	0 0613						1113 0	0 0044			
		281 8	0 1405						1121 0	0 3500			
		283 4	0 0052						1157 0	0 0063			
		291 4	0 0101						1158 0	0 0035			
		292 5	0 0080						1189 0	0 1631			
		296 5	0 0541						1221 0	0 2705			
		299 0	0 0172						1224 0	0 0021			
		305 5	0 0174						1231 0	0 1151			
		313 7	0 0138						1257 0	0 0149			
		321 3	0 0139						1274 0	0 0065			
		327 7	0 1753						1289 0	0 0135			
		341 6	0 0179						1343 0	0 0025			
		378 5	0 2786						1374 0	0 0022			
		385 0	0 0294						943 0	0 0040			
		418 5	0 2006										

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
181W	120.9d	56.3	0.1869	1.389-5	0.058	52.038			148.8	0.0171			
		57.5	0.3263						149.4	0.0088			
		65.2	0.1375						150.3	0.0049			
		147.7	0.0014						151.1	0.0043			
185W	75.1d	125.4	0.0002	5.465-9	0.089	33.602			152.4	0.0833			
									153.9	0.0024			
187W	23.8h	59.7	0.0760	8.853-5	2.213	1.353			156.4	0.0741			
		61.1	0.1317						160.1	0.0023			
		69.3	0.0563						169.2	0.1167			
		72.1	0.1191						172.9	0.0348			
		134.2	0.0946						178.4	0.0220			
		206.3	0.0015						179.4	0.0293			
		246.2	0.0013						187.3	0.0031			
		479.5	0.2335						188.5	0.0013			
		511.8	0.0069						189.6	0.0038			
		551.5	0.0544						191.4	0.0769			
		589.1	0.0013						198.4	0.0408			
		618.4	0.0671						203.3	0.0045			
		625.5	0.0116						206.0	0.0049			
		685.8	0.2917						208.2	0.0060			
		745.2	0.0032						209.4	0.0047			
		772.9	0.0440						214.3	0.0107			
		864.5	0.0036						215.7	0.0075			
		879.4	0.0015						217.5	0.0318			
		276.2	0.0042						221.6	0.0620			
188W	69.4d	63.6	0.0011	3.615-7	0.562	5.327			222.1	0.0833			
		227.1	0.0022						226.2	0.0325			
		290.7	0.0040						229.3	0.2500			
		165.2	0.0002						247.4	0.0489			
182Re	2.7d	31.7	0.0043	3.076-4	3.512	0.853			256.4	0.1004			
		39.1	0.0030						264.1	0.0376			
		42.7	0.0028						266.3	0.0902			
		58.0	0.4990						281.4	0.0579			
		59.3	0.8678						286.6	0.0752			
		60.6	0.0011						295.7	0.0019			
		65.7	0.0265						300.0	0.0122			
		67.2	0.3690						300.5	0.0165			
		67.7	0.2201						313.9	0.0060			
		84.7	0.0267						323.4	0.0190			
		100.1	0.1453						339.1	0.0560			
		107.2	0.0137						342.0	0.0103			
		108.6	0.0077						345.4	0.0047			
		110.4	0.0010						351.1	0.1032			
		111.1	0.0020						357.1	0.0051			
		113.7	0.0438						928.0	0.0036			
		116.4	0.0049						943.0	0.0022			
		130.8	0.0727						959.7	0.0019			
		131.3	0.0016						1002.0	0.0242			
		133.8	0.0246						1044.0	0.0028			
		145.4	0.0064						1076.0	0.1019			
		147.6	0.0088						1088.0	0.0019			
									1113.0	0.0457			
									1121.0	0.2137			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		1157.0	0.0038						1002.0	0.0022			
		1158.0	0.0085						1044.0	0.0018			
		1181.0	0.0054						1121.0	0.3190			
		1189.0	0.0876						1157.0	0.0070			
		1221.0	0.1652						1181.0	0.0022			
		1224.0	0.0019						1189.0	0.1515			
		1231.0	0.1440						1221.0	0.2466			
		1257.0	0.0103						1231.0	0.0131			
		1274.0	0.0092						1257.0	0.0140			
		1289.0	0.0074						1274.0	0.0054			
		1292.0	0.0023						1289.0	0.0121			
		1294.0	0.0158						1294.0	0.0018			
		1331.0	0.0035						1374.0	0.0019			
		1343.0	0.0269						1771.0	0.0029			
		1374.0	0.0029						1819.0	0.0011			
		1387.0	0.0026						1871.0	0.0029			
		1410.0	0.0028						1957.0	0.0046			
		1427.0	0.0945						2016.0	0.0078			
		1439.0	0.0016						2047.0	0.0012			
		1074.0	0.0040						2057.0	0.0083			
									2208.0	0.0010			
182mRe	12.7h	31.7	0.0073	1.990-4	3.936	0.761			1790.0	0.0089			
		42.7	0.0023						511.0	0.0379			
		58.0	0.3004										
		59.3	0.5225				183Re	70d	46.5	0.0798	4.257-5	0.176	17.021
		65.7	0.0025						52.6	0.0222			
		67.2	0.2222						58.0	0.3424			
		67.7	0.3924						59.3	0.5954			
		84.7	0.0265						67.2	0.2532			
		100.1	0.1435						82.9	0.0025			
		113.7	0.0041						84.7	0.0088			
		116.4	0.0035						99.1	0.0269			
		152.4	0.0670						107.9	0.0218			
		156.4	0.0041						109.7	0.0290			
		179.4	0.0024						144.1	0.0012			
		198.4	0.0018						160.5	0.0059			
		222.1	0.0067						161.3	0.0036			
		229.3	0.0214						162.3	0.2336			
		264.1	0.0026						192.6	0.0026			
		470.3	0.0198						205.1	0.0011			
		536.0	0.0021						208.8	0.0298			
		555.0	0.0011						209.9	0.0026			
		598.6	0.0040						244.3	0.0041			
		649.7	0.0035						245.2	0.0026			
		734.5	0.0038						246.1	0.0132			
		787.1	0.0026						291.7	0.0317			
		800.0	0.0015						313.0	0.0042			
		810.2	0.0038						354.0	0.0054			
		836.0	0.0048						254.0	0.0019			
		894.9	0.0210										
		900.8	0.0035				184Re	38.0d	58.0	0.2548	1.572-4	3.112	0.963
		928.0	0.0051						59.3	0.4431			
		959.7	0.0038						67.2	0.1884

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		73.6	0.0265						605.1	0.3780			
		96.8	0.0010						615.4	0.0044			
		107.0	0.0064						628.4	0.0071			
		138.9	0.0432						630.9	0.0279			
		180.0	0.0018						631.0	0.0080			
		181.8	0.0020						656.0	0.0110			
		219.1	0.0028						690.0	0.0027			
		251.6	0.0022						726.2	0.0359			
		280.4	0.0126						740.2	0.0018			
		288.8	0.0014						768.6	0.0210			
		298.8	0.0019						821.8	0.0031			
		321.6	0.0129						828.0	0.0054			
		361.8	0.0030						829.0	0.0328			
		387.5	0.0128						839.1	0.0108			
		420.3	0.0017						916.8	0.0012			
		460.5	0.0400						1036.0	0.0229			
		484.3	0.0017						1134.0	0.0041			
		557.4	0.0132						1147.0	0.0013			
		559.3	0.0049						1200.0	0.0042			
		400.7	0.0067						1324.0	0.0046			
									1387.0	0.0015			
									1397.0	0.0014			
									823.7	0.0079			
190Ir	11.8d	61.5	0.2471	2.666-4	1.895	1.581							
		63.0	0.4267										
		71.4	0.1833										
		186.7	0.4968				190mIr	1.2h	26.3	0.0000	6.12-11	0.007	456.9
		190.5	0.0013										
		196.9	0.0324				190mIr	3.2h	63.3	0.0031	1.499-5	0.073	40.962
		198.1	0.0184						64.9	0.0053			
		199.3	0.0022						73.6	0.0023			
		207.9	0.0032						148.7	0.0001			
		207.9	0.0112						61.5	0.2051			
		223.8	0.0354						63.0	0.3542			
		235.5	0.0040						71.4	0.1521			
		248.2	0.0011										
		282.9	0.0045				192Ir	74.0d	61.5	0.0113	1.597-4	1.284	2.334
		288.2	0.0156						63.0	0.0195			
		294.7	0.0616						71.4	0.0084			
		361.1	0.1233						201.3	0.0047			
		371.2	0.2160						205.8	0.0329			
		380.0	0.0192						283.3	0.0026			
		397.4	0.0620						374.5	0.0073			
		407.2	0.0432						484.6	0.0316			
		407.2	0.2268						489.1	0.0040			
		420.6	0.0156						423.1	0.0008			
		431.6	0.0259						65.1	0.0264			
		447.8	0.0242						66.8	0.0452			
		477.8	0.0173						75.7	0.0197			
		485.2	0.0069						136.3	0.0018			
		490.8	0.0074						296.0	0.2901			
		502.6	0.0119						308.5	0.2968			
		518.5	0.3218						316.5	0.8285			
		558.0	0.2851						416.5	0.0066			
		569.3	0.2700						468.1	0.4805

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
	203.0	0.0034						1563.0	0.0033				
	290.8	0.0011						1592.0	0.0109				
	293.5	0.1116						1594.0	0.0064				
	300.7	0.0092						1596.0	0.0185				
	318.1	0.0033						1602.0	0.0026				
	328.5	0.6380						1618.0	0.0022				
	364.9	0.0154						1622.0	0.0020				
	449.4	0.0017						1633.0	0.0025				
	482.9	0.0119						1671.0	0.0018				
	528.8	0.0172						1676.0	0.0014				
	530.2	0.0056						1690.0	0.0018				
	589.2	0.0026						1715.0	0.0071				
	593.3	0.0035						1735.0	0.0030				
	594.3	0.0017						1785.0	0.0041				
	607.5	0.0032						1797.0	0.0061				
	621.3	0.0080						1803.0	0.0019				
	622.0	0.0147						1806.0	0.0019				
	645.2	0.0231						1829.0	0.0025				
	668.3	0.0012						1835.0	0.0042				
	703.5	0.0045						1886.0	0.0185				
	736.2	0.0013						1887.0	0.0160				
	810.6	0.0020						1911.0	0.0013				
	843.9	0.0013						1924.0	0.0210				
	855.8	0.0011						1959.0	0.0017				
	890.0	0.0017						1970.0	0.0046				
	925.3	0.0031						2044.0	0.0383				
	938.7	0.0119						2114.0	0.0028				
	948.3	0.0237						2215.0	0.0018				
	1000.0	0.0022						2312.0	0.0018				
	1039.0	0.0033						1020.0	0.0233				
	1049.0	0.0090						511.0	0.0332				
	1104.0	0.0216											
	1120.0	0.0013					195Au	183d	30.9	0.0075	2.362-5	0.083	36.236
	1151.0	0.0146							65.1	0.2895			
	1157.0	0.0045							66.8	0.4966			
	1175.0	0.0210							75.7	0.2162			
	1184.0	0.0066							98.9	0.1086			
	1219.0	0.0119							129.8	0.0081			
	1292.0	0.0011							206.1	0.0002			
	1294.0	0.0018											
	1302.0	0.0028					195mAu	30.6s	61.5	0.0016	4.132-5	0.485	6.174
	1308.0	0.0016							67.0	0.0668			
	1340.0	0.0031							68.8	0.1142			
	1342.0	0.0125							78.0	0.0500			
	1422.0	0.0034							200.4	0.0156			
	1431.0	0.0015							261.7	0.6820			
	1442.0	0.0019							196.7	0.0007			
	1450.0	0.0034											
	1463.0	0.0077					196Au	6.2d	65.1	0.2199	9.922-5	0.919	3.261
	1469.0	0.0676							66.8	0.3773			
	1487.0	0.0014							75.7	0.1642			
	1492.0	0.0019							333.0	0.2307			
	1500.0	0.0040							355.7	0.8772			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ					
202Tl	12.2d	68.9	0.2284	9.437–5	1.319	2.272			910.0	0.0297								
		70.8	0.3884						1060.0	0.1187								
		80.3	0.1708						1110.0	0.0693								
		439.6	0.9150						1210.0	0.1682								
		520.1	0.0091						1310.0	0.2078								
		959.7	0.0012						1410.0	0.0495								
									1490.0	0.0198								
204Tl	3.8y	68.9	0.0042	3.014–7	0.100	30.056		1540.0	0.0198									
		70.8	0.0072					1590.0	0.0198									
		80.3	0.0032					1650.0	0.0198									
								2010.0	0.0693									
								2090.0	0.0495									
								2280.0	0.0297									
								2360.0	0.0792									
208Tl	3.1m	10.6	0.0289	4.497–4	5.397	0.555		2430.0	0.0891									
		72.8	0.0203															
		75.0	0.0343															
		84.9	0.0152															
		211.4	0.0017															
		233.4	0.0031															
		252.6	0.0080															
		277.4	0.0679															
		510.8	0.2156															
		583.1	0.8423															
		722.0	0.0020															
		763.1	0.0164															
		860.4	0.1245															
		927.6	0.0012															
		982.7	0.0020															
		1094.0	0.0037															
		2615.0	0.9980															
		840.4	0.0036															
		209Tl	2.2m				10.6	0.0872				3.482–4	4.248	0.705				
72.8	0.0588																	
75.0	0.0993																	
84.9	0.0441																	
117.2	0.7700																	
465.1	0.9658																	
1567.0	0.9969																	
210Tl	1.3m	10.6	0.1260	4.575–4	4.057	0.738												
		72.8	0.0255															
		75.0	0.0431															
		84.9	0.0191															
		97.0	0.0396															
		298.0	0.7917															
		356.0	0.0396															
		382.0	0.0297															
		480.0	0.0198															
		670.0	0.0198															
		799.7	0.9896															
		860.0	0.0693															
203Pb	2.2d	10.3	0.3920	1.828–4	0.343	8.724												
		70.8	0.2663															
		72.9	0.4513															
		82.6	0.1995															
		279.2	0.7680															
		401.3	0.0330															
		680.5	0.0067															
204mPb	1.1h	10.6	0.0492	3.649–4	3.167	0.946												
		72.8	0.0258															
		75.0	0.0436															
		84.9	0.0194															
		289.3	0.0017															
		374.7	0.9411															
		622.2	0.0022															
		899.2	0.9916															
		911.7	0.9113															
		779.7	0.0006															
205Pb	1.5+7y	10.3	0.2268	6.789–5	0.002	1345.												
210Pb	22.3y	10.8	0.2432	6.801–5	0.003	1098.												
		46.5	0.0405															
211Pb	36.1m	10.8	0.0028	9.822–6	2.474	1.211												
		74.8	0.0012															
		77.1	0.0021															
		87.3	0.0009															
		404.8	0.0294															
		427.1	0.0132															
		704.6	0.0037															
212Pb	10.6h	10.8	0.1549	7.389–5	0.270	11.112												
		74.8	0.1069															

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		89 8	0 0003						1238 0	0 0594			
		727 2	0 1183						1281 0	0 0148			
		785 5	0 0197						1304 0	0 0012			
		893 4	0 0065						1378 0	0 0411			
		952 1	0 0031						1385 0	0 0078			
		1079 0	0 0095						1401 0	0 0139			
		1513 0	0 0056						1408 0	0 0249			
		1621 0	0 0275						1509 0	0 0222			
		1679 0	0 0012						1538 0	0 0041			
		1806 0	0 0020						1543 0	0 0036			
		1074 0	0 0003						1583 0	0 0072			
									1595 0	0 0027			
213Bi	45 6m	323 8	0 0013	3 140-5	1 430	2 094			1599 0	0 0034			
		11 1	0 0183						1661 0	0 0115			
		76 9	0 0125						1684 0	0 0024			
		79 3	0 0210						1730 0	0 0297			
		89 8	0 0094						1764 0	0 1584			
		292 9	0 0074						1838 0	0 0038			
		440 4	0 2797						1847 0	0 0209			
		659 8	0 0015						1873 0	0 0023			
		807 4	0 0044						1896 0	0 0018			
		1100 0	0 0048						2119 0	0 0117			
									2204 0	0 0498			
									2293 0	0 0033			
									2448 0	0 0156			
									1158 0	0 0351			
214Bi	19 9m	11 1	0 0052	2 251-4	4 451	0 673							
		76 9	0 0036										
		79 3	0 0060										
		89 8	0 0027										
		273 7	0 0018										
		387 0	0 0037										
		389 1	0 0041										
		405 7	0 0017										
		426 5	0 0011										
		454 8	0 0032										
		469 7	0 0013										
		474 4	0 0012										
		609 3	0 4628										
		665 4	0 0157										
		703 1	0 0047										
		719 9	0 0040										
		752 8	0 0013										
		768 4	0 0504										
		786 1	0 0032										
		806 2	0 0123										
		821 2	0 0015										
		904 3	0 0011										
		934 1	0 0321										
		964 1	0 0038										
		1052 0	0 0032										
		1070 0	0 0029										
		1120 0	0 1515										
		1134 0	0 0026										
		1155 0	0 0170										
		1208 0	0 0046										
209Po	102 0y	10 6	0 0004	9 809-7	2 326	1 288							
		72 8	0 0004										
		75 0	0 0006										
		84 9	0 0003										
		260 5	0 0026										
		266 1	0 0009										
		10 8	0 0009										
		74 8	0 0006										
		77 1	0 0010										
		87 3	0 0004										
		896 4	0 0025										
210Po	138 4d	803 1	0 0000	1 422-9	3 097	0 967							
211Po	0 5s	569 7	0 0054	1 321-6	2 953	1 015							
		897 8	0 0052										
		328 2	0 0000										
213Po	4 2-6s	779 0	0 0000	5 136-9	2 990	1 002							
214Po	1 6-4s	797 3	0 0001	1 396-8	3 073	0 975							
215Po	1 8-3s	438 7	0 0003	2 861-8	1 392	2 152							
216Po	0 1s	804 9	0 0000	2 421-9	3 104	0 965							

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
211At	7.2h	685.2	0.0000	6.120-5	0.049	61.112	222Ra	38.0s	11.7	0.0011	2.115-6	0.766	3.912
		11.1	0.1973						81.1	0.0005			
		76.9	0.1270						83.8	0.0008			
		79.3	0.2128						94.9	0.0003			
		89.8	0.0955						324.2	0.0277			
		687.0	0.0025						499.1	0.0001			
217At	0.032s	594.5	0.0004	4.292-8	2.174	1.378	223Ra	11.4d	11.7	0.2474	8.789-5	0.278	10.794
218Rn	0.035s	609.3	0.0012	1.356-7	2.241	1.337			80.2	0.0020			
219Rn	4.0s	11.1	0.0104	1.419-5	0.843	3.555			81.1	0.1487			
		76.9	0.0053						83.8	0.2470			
		79.3	0.0088						94.9	0.1120			
		89.8	0.0039						98.2	0.0045			
		130.6	0.0012						122.3	0.0119			
		271.2	0.1060						144.2	0.0324			
		401.8	0.0650						154.2	0.0558			
		388.5	0.0020						158.6	0.0068			
220Rn	55.6s	549.7	0.0010	9.607-8	1.953	1.534			179.5	0.0014			
222Rn	3.8d	512.0	0.0008	7.280-8	1.772	1.690			269.5	0.1360			
221Fr	4.8m	11.4	0.0227	1.193-5	0.260	11.522			288.2	0.0015			
		78.9	0.0077						323.9	0.0388			
		81.5	0.0129						328.4	0.0020			
		92.3	0.0058						338.3	0.0273			
		99.5	0.0016						342.9	0.0022			
		217.6	0.1250						349.8	0.0034			
		412.0	0.0010						371.7	0.0047			
		211.0	0.0033						445.0	0.0118			
223Fr	21.8m	12.3	0.3368	8.930-5	0.044	67.594			292.1	0.0135			
		20.3	0.0076				224Ra	3.6d	11.7	0.0040	2.967-6	0.369	8.124
		49.9	0.0076						81.1	0.0013			
		50.1	0.3170						83.8	0.0021			
		68.7	0.0038						94.9	0.0009			
		79.8	0.0761						241.0	0.0395			
		85.4	0.0147						465.0	0.0002			
		88.5	0.0242				225Ra	14.8d	12.7	0.1576	4.164-5	0.010	304.4
		100.0	0.0111						40.0	0.3100			
		100.4	0.0095				226Ra	1600y	11.7	0.0080	3.274-6	0.160	18.693
		134.6	0.0051						81.1	0.0018			
		173.4	0.0013						83.8	0.0030			
		184.8	0.0029						94.9	0.0014			
		205.0	0.0108						186.2	0.0328			
		234.9	0.0282						309.7	0.0001			
		289.5	0.0023				225Ac	10.0d	12.0	0.2129	5.172-5	0.006	472.6
		319.4	0.0051						62.9	0.0055			
		369.4	0.0010						73.8	0.0032			
		775.3	0.0039						82.9	0.0015			
		482.0	0.0123						83.2	0.0102			
									86.1	0.0168			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		87.4	0.0029						570.7	0.0018			
		94.9	0.0016						572.1	0.0016			
		97.5	0.0077						583.2	0.0014			
		99.6	0.0065						623.8	0.0011			
		99.8	0.0170						701.5	0.0019			
		108.4	0.0028						707.1	0.0015			
		111.5	0.0032						727.0	0.0078			
		123.8	0.0019						755.2	0.0105			
		138.2	0.0020						772.2	0.0155			
		145.0	0.0013						782.0	0.0053			
		150.1	0.0071						794.7	0.0463			
		154.0	0.0019						830.5	0.0059			
		157.2	0.0031						835.5	0.0175			
		188.0	0.0046						840.0	0.0094			
		195.7	0.0014						904.5	0.0083			
		253.5	0.0010						911.1	0.2770			
		452.4	0.0011						944.1	0.0010			
		165.2	0.0093						948.0	0.0012			
									958.5	0.0030			
227Ac	21.8y	115.4	0.0010	2.364-6	0.004	690.1			964.6	0.0521			
		13.0	0.0115						969.1	0.1662			
		17.4	0.0004						987.8	0.0018			
									1033.0	0.0022			
228Ac	6.1h	13.0	0.3911	2.278-4	3.039	0.986			1065.0	0.0014			
		57.8	0.0050						1096.0	0.0013			
		90.0	0.0213						1110.0	0.0033			
		93.3	0.0349						1154.0	0.0015			
		99.4	0.0130						1246.0	0.0054			
		105.0	0.0161						1288.0	0.0011			
		129.1	0.0277						1459.0	0.0100			
		146.1	0.0021						1496.0	0.0100			
		154.2	0.0094						1502.0	0.0055			
		191.2	0.0012						1557.0	0.0019			
		199.7	0.0033						1580.0	0.0069			
		204.4	0.0016						1588.0	0.0355			
		209.3	0.0443						1625.0	0.0030			
		210.0	0.0022						1630.0	0.0186			
		270.2	0.0360						1638.0	0.0053			
		279.0	0.0022						1666.0	0.0020			
		321.7	0.0024						1887.0	0.0011			
		327.6	0.0321						947.8	0.0412			
		332.4	0.0044										
		338.3	0.1136										
		341.1	0.0042										
		409.5	0.0213										
		440.3	0.0014										
		463.0	0.0443										
		478.2	0.0023										
		503.6	0.0021										
		509.6	0.0047										
		523.0	0.0012										
		546.3	0.0021										
		562.3	0.0094										
							226Th	30.9m	12.3	0.0755	1.818-5	0.022	138.9
									85.4	0.0028			
									88.5	0.0046			
									100.0	0.0021			
									111.1	0.0329			
									131.0	0.0028			
									190.3	0.0011			
									206.2	0.0019			
									242.1	0.0087			
									556.1	0.0000			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		88.0	0.0030										
		92.3	0.0023						918.5	0.0814			
		94.7	0.0080						952.0	0.2878			
		95.9	0.0038						953.0	0.0016			
		108.0	0.0018						956.3	0.0157			
		162.5	0.0017						959.3	0.0049			
		162.5	0.0015						1010.0	0.0107			
		169.2	0.0034						1026.0	0.0144			
		170.7	0.0013						1075.0	0.0074			
		190.5	0.0013						537.2	0.0092			
		195.1	0.0016						13.6	0.0382			
		359.9	0.0012						314.8	0.0011			
		441.0	0.0023						297.6	0.0017			
		447.7	0.0015										
		459.2	0.0140				231Pa	3.3+4y	12.7	0.4321	1.011-4	0.023	131.7
		490.8	0.0017						18.9	0.0035			
		499.0	0.0021						27.4	0.0930			
		595.2	0.0016						38.2	0.0015			
		669.8	0.0068						46.4	0.0021			
		764.4	0.0012						87.7	0.0062			
		890.1	0.0014						90.9	0.0102			
		484.7	0.0188						102.0	0.0047			
									255.8	0.0010			
234Th	24.1d	13.3	0.0957	2.038-5	0.020	148.5			260.2	0.0017			
		63.3	0.0381						283.7	0.0160			
		92.4	0.0273						300.1	0.0230			
		92.8	0.0269						302.7	0.0230			
		112.8	0.0024						330.1	0.0130			
		76.8	0.0013						340.8	0.0017			
									357.2	0.0017			
230Pa	17.4d	13.0	0.5974	2.386-4	2.266	1.322			165.5	0.0145			
		53.2	0.0024										
		90.0	0.1877				233Pa	27.0d	13.6	0.4892	1.335-4	0.426	7.024
		93.3	0.3068						75.3	0.0126			
		105.0	0.1419						86.6	0.0189			
		120.9	0.0034						94.7	0.1084			
		316.8	0.0016						98.4	0.1757			
		380.2	0.0030						103.9	0.0074			
		397.8	0.0185						111.0	0.0818			
		400.0	0.0062						271.5	0.0030			
		440.8	0.0011						300.1	0.0664			
		443.8	0.0543						312.0	0.3860			
		454.9	0.0619						340.5	0.0452			
		463.6	0.0081						375.5	0.0062			
		508.0	0.0022						398.6	0.0127			
		508.2	0.0353						415.8	0.0162			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
	98.4	0.2544						506.8	0.0163				
	99.9	0.0490						513.7	0.0133				
	103.4	0.0012						520.2	0.0061				
	111.0	0.1185						521.0	0.0092				
	125.4	0.0102						528.0	0.0061				
	131.2	0.2040						533.2	0.0020				
	134.4	0.0021						537.1	0.0016				
	137.7	0.0015						557.0	0.0027				
	140.3	0.0092						565.9	0.0143				
	144.0	0.0036						568.7	0.0306				
	150.2	0.0020						569.5	0.1091				
	152.7	0.0683						574.0	0.0204				
	159.1	0.0071						585.8	0.0015				
	170.7	0.0051						596.6	0.0051				
	174.6	0.0020						602.8	0.0092				
	186.0	0.0204						611.5	0.0082				
	193.6	0.0061						616.2	0.0020				
	199.7	0.0049						623.6	0.0082				
	201.0	0.0112						627.5	0.0082				
	203.0	0.0122						630.6	0.0041				
	219.8	0.0020						634.5	0.0031				
	226.4	0.0602						639.7	0.0020				
	227.2	0.0561						643.2	0.0020				
	245.2	0.0092						646.0	0.0031				
	248.9	0.0286						653.7	0.0092				
	267.1	0.0017						655.0	0.0061				
	272.1	0.0102						658.0	0.0092				
	275.5	0.0027						660.6	0.0031				
	286.1	0.0014						664.8	0.0133				
	289.6	0.0011						666.7	0.0163				
	293.7	0.0398						669.9	0.0143				
	309.6	0.0010						683.3	0.0024				
	312.5	0.0031						687.0	0.0029				
	316.3	0.0012						692.7	0.0153				
	320.7	0.0012						699.0	0.0469				
	328.0	0.0031						706.1	0.0316				
	330.6	0.0061						711.2	0.0020				
	351.9	0.0061						713.8	0.0016				
	369.8	0.0296						733.0	0.0877				
	372.4	0.0133						738.0	0.0102				
	409.8	0.0041						742.8	0.0245				
	416.3	0.0010						746.5	0.0013				
	426.8	0.0061						755.6	0.0143				
	446.5	0.0012						760.0	0.0016				
	458.8	0.0153						766.4	0.0031				
	461.8	0.0016						768.7	0.0057				
	467.5	0.0041						777.9	0.0020				
	472.1	0.0024						780.7	0.0112				
	473.5	0.0018						783.1	0.0051				
	478.7	0.0031						786.3	0.0143				
	480.4	0.0041						793.6	0.0153				
	482.5	0.0031						796.3	0.0388				
	498.9	0.0010						804.3	0.0041				

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		805.6	0.0337						1516.0	0.0041			
		812.5	0.0051						1549.0	0.0010			
		819.6	0.0265						1580.0	0.0017			
		826.3	0.0408						1585.0	0.0026			
		831.6	0.0561						1594.0	0.0061			
		841.9	0.0014						1628.0	0.0015			
		844.0	0.0051						1638.0	0.0041			
		851.7	0.0012						1656.0	0.0015			
		872.9	0.0012						1668.0	0.0122			
		876.4	0.0408						1686.0	0.0051			
		880.5	0.0102						1695.0	0.0122			
		880.5	0.1224						1700.0	0.0015			
		883.2	0.1224						1738.0	0.0010			
		899.0	0.0418						1742.0	0.0010			
		904.4	0.0051						1756.0	0.0026			
		920.0	0.0041						1772.0	0.0010			
		925.0	0.0296						1797.0	0.0031			
		926.0	0.1122						1890.0	0.0019			
		926.7	0.0918						1897.0	0.0015			
		946.0	0.1224						1905.0	0.0029			
		949.0	0.0816						1926.0	0.0051			
		960.0	0.0010						955.6	0.0101			
		966.0	0.0061										
		978.8	0.0143				234mPa	1.2m	13.3	0.0006	2.776-6	3.062	0.978
		980.5	0.0306						73.9	0.0001			
		980.5	0.0204						13.6	0.0044			
		984.0	0.0194						94.7	0.0012			
		1023.0	0.0061						98.4	0.0019			
		1028.0	0.0082						111.0	0.0009			
		1045.0	0.0051						766.4	0.0021			
		1075.0	0.0026						1001.0	0.0059			
		1083.0	0.0076						926.2	0.0037			
		1108.0	0.0031										
		1122.0	0.0051				230U	20.8d	13.0	0.1223	2.463-5	0.004	683.5
		1126.0	0.0082						72.2	0.0060			
		1153.0	0.0031						154.2	0.0013			
		1171.0	0.0024						230.4	0.0012			
		1208.0	0.0031						169.9	0.0008			
		1217.0	0.0038										
		1229.0	0.0031				231U	4.2d	13.3	0.9894	2.120-4	0.010	293.4
		1241.0	0.0051						25.6	0.1200			
		1251.0	0.0031						58.6	0.0044			
		1277.0	0.0020						84.2	0.0700			
		1293.0	0.0061						92.3	0.1730			
		1353.0	0.0173						95.9	0.2818			
		1358.0	0.0012						108.0	0.1305			
		1394.0	0.0306						217.9	0.0080			
		1400.0	0.0023						236.0	0.0018			
		1427.0	0.0020						178.4	0.0022			
		1446.0	0.0041										
		1453.0	0.0102				232U	72y	13.0	0.1202	2.403-5	0.004	716.7
		1460.0	0.0031						57.8	0.0020			
		1494.0	0.0020						142.0	0.0007			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
233U	1.59+5y	13.0	0.0392	7.866-6	0.004	705.0			662.2	0.0018			
		114.5	0.0018						748.1	0.0010			
									819.2	0.0014			
									844.1	0.0016			
									611.2	0.0092			
234U	2.44+5y	13.0	0.1050	2.097-5	0.004	720.7	240U	14.1h	13.9	0.4309	7.686-5	0.003	921.3
		53.2	0.0012						44.1	0.0165			
		121.4	0.0004										
235U	7.04+8y	13.0	0.3091	9.159-5	0.132	22.675	235Np	1.1y	13.6	0.3766	6.979-5	0.004	840.5
		72.7	0.0011						94.7	0.0051			
		90.0	0.0273						98.4	0.0083			
		93.3	0.0446						111.0	0.0039			
		105.0	0.0206										
		109.1	0.0150										
		120.0	0.0015				236Np	1.15+5y	13.6	1.3100	2.833-4	0.019	161.6
		140.8	0.0022						45.2	0.0015			
		143.8	0.1050						94.7	0.2070			
		163.3	0.0470						98.4	0.3355			
		182.7	0.0040						104.2	0.0747			
		183.7	0.5400						111.0	0.1562			
		194.9	0.0059						160.3	0.2760			
		202.1	0.0100						14.3	0.0884			
		205.3	0.0470						99.6	0.0008			
		221.4	0.0010						100.0	0.0052			
		190.3	0.0092						103.8	0.0013			
									117.0	0.0006			
236U	2.34+7y	13.0	0.0998	1.992-5	0.004	722.4			160.0	0.0142			
		68.2	0.0011						44.6	0.0001			
237U	6.7d	13.8	0.0010	1.589-4	0.055	54.239	236mNp	22.5h	13.6	0.2559	6.389-5	0.043	69.991
		13.9	0.7114						94.7	0.1126			
		26.3	0.0228						98.4	0.1824			
		33.2	0.0011						111.0	0.0849			
		51.0	0.0021						642.3	0.0138			
		59.5	0.3402						687.5	0.0037			
		64.8	0.0118						304.5	0.0003			
		97.1	0.1629						14.3	0.0363			
		101.1	0.2632						44.6	0.0001			
		114.0	0.1231										
		164.6	0.0186				237Np	2.1+6y	13.3	0.5919	1.251-4	0.006	512.0
		208.0	0.2202						29.4	0.1399			
		267.5	0.0072						46.5	0.0014			
		332.4	0.0122						57.1	0.0042			
		370.9	0.0011						86.5	0.1260			
		262.9	0.0025						88.0	0.0016			
									92.3	0.0158			
238U	4.47+9y	13.0	0.0883	1.763-5	0.004	722.5			94.7	0.0083			
		66.4	0.0010						95.9	0.0258			
									108.0	0.0119			
239U	23.4m	13.9	0.1326	3.629-5	0.124	24.144			117.7	0.0017			
		43.5	0.0427						143.2	0.0042			
		74.7	0.4800						151.4	0.0025			
		117.7	0.0014						195.1	0.0021			

1

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		938.0	0.0129						280.3	0.0137			
		942.4	0.0011						308.1	0.0522			
		961.6	0.0014						327.3	0.2700			
		1445.0	0.0036						341.0	0.0011			
		1488.0	0.0021						348.7	0.0103			
		1497.0	0.0131						376.6	0.0342			
		1540.0	0.0079						387.9	0.0031			
		1633.0	0.0014						395.9	0.0011			
		1020.0	0.0126						411.7	0.0052			
									428.5	0.0056			
236Pu	2.9y	13.6	0.1304	2.405-5	0.003	863.6			445.3	0.0032			
		60.9	0.0008						491.5	0.0288			
									514.6	0.0018			
237Pu	45.3d	13.9	0.5254	1.039-4	0.014	212.7			525.1	0.0029			
		26.3	0.0024						560.0	0.0576			
		59.5	0.0328						591.6	0.0018			
		97.1	0.1278						598.8	0.0013			
		101.1	0.2064						624.4	0.0023			
		114.0	0.0966						630.0	0.0288			
		33.2	0.0008						657.2	0.0014			
									660.2	0.0090			
238Pu	87.8y	13.6	0.1158	2.135-5	0.003	864.8			669.3	0.0036			
		55.3	0.0005						708.0	0.0029			
									730.4	0.0020			
239Pu	2.41+4y	13.6	0.0441	8.145-6	0.003	860.3			738.0	0.0023			
		112.9	0.0005						740.2	0.0014			
									743.7	0.0016			
240Pu	6569y	13.6	0.1101	2.030-5	0.003	864.4			762.7	0.0076			
		54.3	0.0005						766.6	0.0038			
									776.7	0.0022			
242Pu	3.76+5y	13.6	0.0913	1.684-5	0.003	864.4			786.5	0.0040			
		56.4	0.0004						796.4	0.0027			
									799.9	0.0167			
243Pu	5.0h	14.6	0.1188	2.509-5	0.084	35.548			817.0	0.0090			
		41.8	0.0076						833.1	0.0056			
		67.0	0.0023						840.6	0.0137			
		84.0	0.2300						859.5	0.0054			
		102.1	0.0009						868.8	0.0013			
		106.5	0.0015						874.2	0.0014			
		109.3	0.0016						887.1	0.0076			
		120.0	0.0007						910.5	0.0148			
		356.4	0.0013						938.4	0.0108			
		381.7	0.0055						941.0	0.0027			
		137.2	0.0018						957.6	0.0104			
									975.0	0.0027			
244Pu	8.3+7y	13.6	0.0793	1.462-5	0.003	865.1			977.2	0.0041			
		44.0	0.0003						987.6	0.0140			
									996.0	0.0022			
245Pu	10.6h	14.6	0.1750	1.045-4	2.092	1.432			1005.0	0.0029			
		28.0	0.0072						1007.0	0.0043			
		102.1	0.0753						1013.0	0.0011			
		106.5	0.1208						1018.0	0.0110			
		120.0	0.0571						1023.0	0.0058			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		762.0	0.0235						104.6	0.0363			
246Pu	10.9d	27.6	0.0423	2.727-5	0.278	10.771			109.3	0.0578			
		43.8	0.3000						123.0	0.0275			
		66.6	0.0031						241.2	0.0034			
		75.6	0.0022						252.8	0.0610			
		179.9	0.1164						295.8	0.0022			
		216.5	0.0014						95.9	0.0010			
		223.7	0.2820				246Am	25.0m	15.0	0.3906	2.148-4	3.331	0.899
		255.5	0.0028						99.2	0.0017			
		202.9	0.0030						104.6	0.0088			
241Am	432.2y	13.9	0.4270	8.479-5	0.011	260.7			109.3	0.0141			
		26.3	0.0240						123.0	0.0067			
		33.2	0.0011						237.2	0.0014			
		59.5	0.3590						238.6	0.0015			
		69.2	0.0018						244.0	0.0068			
242Am	16.0h	14.3	0.1266	5.476-5	0.004	720.7			261.7	0.0016			
		99.6	0.0366						270.1	0.0103			
		103.8	0.0589						287.8	0.0013			
		117.0	0.0277						401.7	0.0027			
		44.5	0.0001						493.5	0.0011			
		15.0	0.1965						602.5	0.0023			
		42.2	0.0004						649.5	0.0037			
242mAm	152y	14.6	0.2993	4.950-5	0.003	1132.			684.3	0.0059			
		48.6	0.0000						698.3	0.0012			
		13.9	0.0038						717.2	0.0025			
		49.4	0.0020						724.8	0.0021			
		108.3	0.0016						734.4	0.0117			
243Am	7380.0y	13.9	0.3905	8.456-5	0.042	71.213			745.1	0.0024			
		43.5	0.0554						752.1	0.0082			
		74.7	0.6600						759.6	0.0064			
		86.7	0.0034						781.3	0.0017			
		117.7	0.0055						798.8	0.2490			
		142.2	0.0013						833.6	0.0179			
		48.4	0.0016						986.0	0.0096			
244Am	10.1h	15.0	1.1690	3.166-4	2.108	1.421			1036.0	0.1275			
		99.4	0.0483						1062.0	0.1721			
		104.6	0.0226						1079.0	0.2789			
		109.3	0.0361						1081.0	0.0025			
		123.0	0.0171						1085.0	0.0153			
		154.0	0.1800						1124.0	0.0026			
		206.0	0.0026						1207.0	0.0015			
		540.0	0.0038						1250.0	0.0015			
		746.0	0.6700						1275.0	0.0027			
		900.0	0.2800						1349.0	0.0012			
		42.9	0.0009						1479.0	0.0023			
245Am	2.0h	15.0	0.1100	2.341-5	0.169	17.710			1529.0	0.0022			
									1551.0	0.0027			
									1591.0	0.0052			
									1604.0	0.0010			
									1619.0	0.0012			
									1638.0	0.0016			
									1662.0	0.0023			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		1738.0	0.0011						126.0	0.0006			
		914.7	0.0296						368.8	0.0035			
									560.4	0.0084			
242Cm	163.2d	14.3	0.1154	1.949-5	0.003	1054.			621.9	0.0018			
		59.3	0.0004						634.3	0.0150			
									652.8	0.0014			
243Cm	28.5y	14.3	0.6081	1.286-4	0.129	23.268			389.9	0.0024			
		44.7	0.0012										
		57.3	0.0014				250Bk	3.2h	15.7	0.3118	1.834-4	3.474	0.862
		67.8	0.0014						98.2	0.0012			
		99.6	0.1429						109.9	0.0026			
		103.8	0.2297						115.1	0.0041			
		106.1	0.0026						129.0	0.0020			
		117.0	0.1080						890.0	0.0164			
		209.7	0.0329						929.3	0.0137			
		228.2	0.1058						989.0	0.4510			
		254.4	0.0011						1029.0	0.0439			
		277.6	0.1397						1032.0	0.3510			
		285.4	0.0073						42.2	0.0004			
		167.0	0.0033										
244Cm	18.1y	14.3	0.1031	1.741-5	0.003	1054.	248Cf	333.5d	15.0	0.0791	1.229-5	0.002	1271.
		56.9	0.0003						42.9	0.0002			
245Cm	8500.0y	14.3	0.6361	1.220-4	0.021	140.0	249Cf	350.6y	15.0	0.3026	1.119-4	0.866	3.459
		42.0	0.0012						54.7	0.0021			
		99.6	0.1361						92.3	0.0030			
		103.8	0.2188						104.6	0.0219			
		117.0	0.1029						109.3	0.0350			
		133.0	0.0627						123.0	0.0166			
		174.0	0.0640						241.2	0.0022			
									252.8	0.0273			
246Cm	4750.0y	14.3	0.0918	1.551-5	0.003	1054.			266.7	0.0075			
		44.5	0.0003						295.8	0.0014			
247Cm	1.6+7y	14.3	0.0593	7.217-5	1.120	2.675			333.4	0.1551			
		99.6	0.0120						388.0	0.6600			
		103.8	0.0193						283.7	0.0043			
		117.0	0.0091				250Cf	13.1y	15.0	0.0780	1.212-5	0.002	1269.
		275.1	0.0052						76.6	0.0003			
		278.0	0.0340										
		287.4	0.0200				251Cf	900.0y	15.0	0.5962	1.162-4	0.068	43.960
		333.0	0.0034						61.5	0.0056			
		346.0	0.0130						68.0	0.0020			
		402.6	0.7200						73.0	0.0030			
		116.1	0.0011						83.0	0.0010			
									104.6	0.1548			
248Cm	3.4+5y	14.3	0.0727	1.227-5	0.003	1054.			109.3	0.2469			
		56.2	0.0003						123.0	0.1173			
249Cm	1.1h	15.3	0.0038	3.982-6	2.025	1.479			135.0	0.0010			
		107.2	0.0008						144.0	0.0010			
		112.1	0.0012						154.0	0.0020			
									176.6	0.1770			
									214.0	0.0020

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