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**Specific Gamma-Ray Dose
Constants for Nuclides
Important to Dosimetry and
Radiological Assessment**

Laurie M. Unger
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Wetlands of the Mississippi River Delta: A Comparison of Two Coastal Ecosystems

¹ See, e.g., *United States v. Ladd*, 100 F.2d 100, 103 (5th Cir. 1938), *cert. denied*, 300 U.S. 632 (1938).

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Engineering Physics Division

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

Laurie M. Unger* and D. K. Trubey

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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

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)/μCi, 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 I 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.
4. J. H. Hubbell, "Photon Cross Sections, Attenuation Coefficients, and Energy Absorption Coefficients From 10 keV to 100 GeV," NSRDS-NBS 29, National Bureau of Standards (1969).

TABLE I

Gamma-Ray-Flux-to-Dose-Rate Conversion Factors

Polynomial Coefficients in Analytic Form

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

$D(E) \approx (\text{rem}/\text{h})(\text{cm}^2\text{-s})$, $E = \text{Photon energy in MeV}$ 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	42K	12.4h	312.7	0.0032	3.846-5	4.962	0.604
11C	20.5m	511.0	1.9950	1.908-4	1.768	1.695			1525.0	0.1790			
13N	10.0m	511.0	1.9960	1.909-4	1.768	1.695	43K	22.6h	184.0	0.0027	1.803-4	1.937	1.546
16N	7.1s	1755.0	0.0013	3.984-4	6.051	0.495			220.6	0.0411			
		2741.0	0.0076						372.8	0.8727			
		6129.0	0.6900						396.9	0.1143			
		7115.0	0.0500						404.3	0.0011			
		6334.0	0.0016						593.4	0.1103			
									617.5	0.8051			
15O	2.0m	511.0	1.9980	1.911-4	1.768	1.695			800.8	0.0015			
18F	1.8h	511.0	1.9350	1.851-4	1.768	1.695			990.2	0.0033			
22Na	2.6y	1274.0	0.9994	3.590-4	3.517	0.852			1015.0	0.0016			
		511.0	1.7980						1022.0	0.0188			
24Na	15.0h	1368.0	1.0000	5.120-4	5.692	0.526	45Ca	162.7d	12.4	0.0000	8.07-12	0.004	823.3
		2754.0	0.9986				47Ca	4.5d	489.2	0.0674	1.577-4	4.368	0.686
		3824.0	0.0006						530.4	0.0010			
27Mg	9.5m	170.7	0.0084	1.448-4	3.447	0.869			767.0	0.0019			
		843.8	0.7180						807.9	0.0689			
		1014.0	0.2800						1297.0	0.7490			
28Mg	20.9h	30.6	0.6600	2.371-4	3.926	0.763	49Ca	8.7m	856.1	0.0013	3.459-4	6.344	0.472
		400.7	0.3660						1144.0	0.0011			
		941.4	0.3830						1409.0	0.0063			
		1342.0	0.5260						2229.0	0.0019			
		1373.0	0.0470						2372.0	0.0049			
		1589.0	0.0420						3084.0	0.9210			
		1620.0	0.0030						4072.0	0.0700			
		717.6	0.0013						4738.0	0.0021			
									947.0	0.0018			
26Al	7.2+5y	1130.0	0.0250	3.995-4	4.597	0.652	44Sc	3.9h	1157.0	0.9988	3.573-4	3.272	0.915
		1809.0	0.9976						1500.0	0.0091			
		2938.0	0.0024						2656.0	0.0011			
		511.0	1.6360						2375.0	0.0000			
28Al	2.2m	1779.0	1.0000	2.358-4	5.467	0.548			511.0	1.8870			
31Si	2.6h	1266.0	0.0007	1.306-7	4.431	0.676	46Sc	83.8d	889.2	0.9998	3.154-4	3.808	0.787
38Cl	37.2m	1642.0	0.3250	1.912-4	5.687	0.527			1120.0	0.9999			
		2167.0	0.4400						2010.0	0.0000			
		3809.0	0.0002				46mSc	18.7s	142.5	0.6270	1.809-5	0.123	24.378
41Ar	1.8h	1294.0	0.9916	1.877-4	4.492	0.667	47Sc	3.4d	159.4	0.6800	2.170-5	0.162	18.513
		1677.0	0.0005				48Sc	1.8d	175.4	0.0747	5.112-4	4.113	0.728
40K	1.28+9y	1461.0	0.1067	2.197-5	4.843	0.619			983.5	1.0000			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		1038.0	0.9750						884.5	0.0037			
		1213.0	0.0238						511.0	0.5880			
		1312.0	1.0000										
49Sc	57.4m	1739.0	0.0006	1.393-7	5.391	0.556	52mMn	21.4m	377.7	0.0168	3.866-4	3.767	0.795
44Ti	47.3y	67.8	0.9192	3.909-5	0.104	28.726			1434.0	0.9822			
		78.4	0.9762						1727.0	0.0022			
		147.0	0.0010						1644.0	0.0017			
45Ti	3.1h	720.3	0.0015	1.629-4	1.775	1.687	54Mn	312.7d	834.8	0.9998	1.381-4	3.216	0.932
		1201.0	0.0020				56Mn	2.6h	846.8	0.9887	2.478-4	4.523	0.662
		511.0	1.6970						1811.0	0.2719			
51Ti	5.8m	320.1	0.9290	7.128-5	1.420	2.110			2113.0	0.1434			
		608.6	0.0118						2523.0	0.0099			
		928.6	0.0687						2658.0	0.0065			
48V	16.0d	803.2	0.0015	4.577-4	3.893	0.770			2960.0	0.0031			
		928.3	0.0077						3370.0	0.0017			
		944.1	0.0776						1351.0	0.0016			
		983.5	1.0000				57Mn	1.5m	14.4	0.1063	3.027-5	1.766	1.697
		1312.0	0.9750						122.1	0.1035			
		1437.0	0.0012						136.5	0.0143			
		2240.0	0.0241						230.3	0.0016			
		2361.0	0.0003						339.6	0.0013			
		511.0	1.0020						352.3	0.0155			
52V	3.7m	1334.0	0.0059	2.048-4	4.786	0.626			366.7	0.0029			
		1434.0	1.0000						569.9	0.0038			
		1531.0	0.0012						692.0	0.0409			
		1006.0	0.0012						706.4	0.0018			
49Cr	42.1m	62.3	0.1639	2.002-4	1.696	1.766			870.7	0.0019			
		90.6	0.5320						992.7	0.0011			
		152.9	0.3032						1260.0	0.0024			
		1451.0	0.0012						1613.0	0.0054			
		511.0	1.8380						1725.0	0.0012			
51Cr	27.7d	320.1	0.0983	6.320-6	0.782	3.833	52Fe	8.3h	168.7	0.9660	1.397-4	1.611	1.859
52Mn	5.6d	346.0	0.0098	5.409-4	3.878	0.773			511.0	1.1200			
		399.6	0.0018				59Fe	44.6d	142.7	0.0103	1.787-4	4.249	0.705
		502.0	0.0021						192.3	0.0311			
		600.2	0.0039						334.8	0.0026			
		647.4	0.0040						1099.0	0.5650			
		744.2	0.9000						1292.0	0.4320			
		848.1	0.0332						1228.0	0.0009			
		935.5	0.9450				56Co	78.8d	733.6	0.0019	5.145-4	4.645	0.645
		1246.0	0.0421						787.8	0.0031			
		1248.0	0.0038						846.8	0.9996			
		1334.0	0.0507						977.4	0.0143			
		1434.0	1.0000						996.9	0.0014			
									1038.0	0.1403			

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												
	3010.0	0.0106					65Ni	2.5h	366.3	0.0461	8.009-5	4.571	0.655	
	3202.0	0.0318							507.8	0.0029				
	3253.0	0.0779							609.3	0.0014				
	3273.0	0.0185							1116.0	0.1483				
	3451.0	0.0093							1482.0	0.2350				
	3548.0	0.0019							1623.0	0.0047				
	1453.0	0.0071							1725.0	0.0039				
	511.0	0.3950							814.8	0.0017				
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				
58Co	70.8d	810.8	0.9943	1.652-4	2.973	1.008			656.0	0.1049				
		863.9	0.0074						816.7	0.0036				
		1675.0	0.0054						841.2	0.0024				
		511.0	0.2986						908.6	0.0119				
58mCo	9.1h	24.9	0.0004	2.637-8	0.006	528.9			1100.0	0.0028				
60Co	5.3y	1173.0	1.0000	3.697-4	4.412	0.679			1185.0	0.0363				
		1333.0	1.0000						1198.0	0.0082				
		693.8	0.0002						511.0	1.2290				
60mCo	10.5m	58.6	0.0202	9.044-7	3.578	0.837	62Cu	9.7m	875.7	0.0015	1.881-4	1.784	1.679	
		1333.0	0.0024						1173.0	0.0034				
		947.4	0.0001						1966.0	0.0009				
61Co	1.6h	67.4	0.8500	2.286-5	1.756	1.706			511.0	1.9560				
		283.0	0.0012				64Cu	12.7h	1346.0	0.0049	3.514-5	1.856	1.614	
		625.6	0.0012						511.0	0.3574				
		841.2	0.0059						67Cu	61.9d	91.3	0.0700	2.363-5	0.230
		908.6	0.0298							93.3	0.1610			
		215.6	0.0000							184.6	0.4870			
56Ni	6.1d	158.4	0.9879	2.936-4	2.988	1.003				208.9	0.0012			
										300.2	0.0080			
										393.5	0.0022			

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
69mZn	13.8h	438.6	0.9489	7.983–5	1.391	2.153			1883.0	0.0014			
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				
								901.0	0.0012				
68Ge	288d	10.3	0.0546	1.634-5	0.002	1345.		907.0	0.0094				
71Ge	11.8d	10.3	0.0552	1.653-5	0.002	1345.		913.8	0.0036				
77Ge	11.3h	10.5	0.0057	1.929-4	2.748	1.090		923.1	0.0068				
		10.5	0.0111					925.5	0.0071				
		11.7	0.0026					928.8	0.0103				
		156.4	0.0079					939.4	0.0028				
		159.1	0.0023					996.6	0.0010				
		177.3	0.0018					1062.0	0.0015				
		194.8	0.0175					1081.0	0.0024				
		209.0	0.0093					1085.0	0.0598				
		211.0	0.3049					1115.0	0.0010				
		215.5	0.2830					1125.0	0.0012				
		219.1	0.0029					1152.0	0.0019				
		254.7	0.0021					1193.0	0.0254				
		264.4	0.5330					1215.0	0.0013				
		268.1	0.0059					1242.0	0.0039				
		337.6	0.0023					1264.0	0.0084				
		338.7	0.0066					1280.0	0.0017				
		367.4	0.1386					1309.0	0.0048				
		416.3	0.2159					1313.0	0.0035				
		419.7	0.0122					1320.0	0.0030				
		439.4	0.0020					1368.0	0.0331				
		461.4	0.0125					1453.0	0.0012				
		475.4	0.0098					1476.0	0.0024				
		520.0	0.0029					1479.0	0.0013				
		558.0	0.1588					1496.0	0.0049				
		582.5	0.0077					1539.0	0.0014				
		614.4	0.0050					1574.0	0.0065				
		624.8	0.0018					1710.0	0.0030				
		631.8	0.0689					1720.0	0.0039				
		634.4	0.0206					1727.0	0.0015				
		673.1	0.0053					1846.0	0.0017				
		673.1	0.0013					2000.0	0.0055				
		698.5	0.0023					2077.0	0.0023				
		705.2	0.0011					2090.0	0.0024				
		712.4	0.0082					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	
	385.0	0.0084						83Br	2.4h	529.6	0.0130	1.382-6	1.859	1.612
	439.5	0.0156							537.4	0.0010				
	484.6	0.0100						84Br	31.8m	230.2	0.0031	2.344-4	5.207	0.575
	517.9	0.0016							354.7	0.0031				
	520.7	0.2241							382.0	0.0057				
	565.9	0.0043							604.8	0.0177				
	567.9	0.0086							736.5	0.0131				
	574.6	0.0119							802.2	0.0608				
	578.9	0.0296							881.5	0.4220				
	585.5	0.0157							947.5	0.0036				
	755.3	0.0167							987.3	0.0078				
	817.8	0.0208							1006.0	0.0046				
	1005.0	0.0092							1016.0	0.0625				
	441.4	0.0081							1083.0	0.0014				
	511.0	0.0146												
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				85Br	2.9m	794.8	0.0010	1.057-5	3.590	0.834	
		1044.0	0.2733						802.4	0.0256				
		1081.0	0.0062						861.8	0.0023				
		1318.0	0.2691						865.2	0.0018				
		1426.0	0.0011						913.3	0.0013				
		1475.0	0.1658						919.1	0.0065				
		1650.0	0.0074						924.6	0.0163				
		1780.0	0.0011						1038.0	0.0010				
		743.6	0.0076						1727.0	0.0038				

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
79Kr	1.5d	1833.0	0.0015					15.0	0.0002				
		789.3	0.0108					402.6	0.4950				
		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				88Kr	2.8h	13.3	0.0237	2.726-4	5.380	0.557
		788.6	0.0055						13.4	0.0459			
		511.0	0.1421						15.0	0.0120			
									27.5	0.0206			
81Kr	2.1+5y	11.9	0.1486	1.172-4	0.004	795.2			122.3	0.0020			
		11.9	0.2885						166.0	0.0310			
		13.3	0.0713						196.3	0.2599			
		276.0	0.0360						240.7	0.0025			
83mKr	1.8h	12.6	0.0457	3.209-5	0.004	801.4			311.7	0.0011			
		12.7	0.0886						334.7	0.0015			
		14.1	0.0226						362.2	0.0225			
		32.2	0.0005						390.5	0.0064			
85Kr	10.7y	514.0	0.0043	4.170-7	1.782	1.681			421.7	0.0013			
									471.8	0.0073			
85mKr	4.5h	12.6	0.0112	4.328-5	0.331	9.045			677.3	0.0024			
		12.7	0.0216						788.3	0.0053			
		14.1	0.0055						790.3	0.0012			
		304.9	0.1399						834.8	0.1298			
		13.3	0.0061						850.3	0.0017			
		13.4	0.0118						862.3	0.0067			
		15.0	0.0031						944.9	0.0029			
		129.8	0.0030						985.8	0.0131			
		151.2	0.7528						990.1	0.0014			
		581.3	0.0002						1040.0	0.0048			
87Kr	1.3h	13.3	0.0003	1.153-4	4.756	0.630			1050.0	0.0014			
		13.4	0.0007						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							88Rb	17.8m	898.0	0.1404	8.594-5	5.240	0.572
81Rb	4.6h	12.6	0.1579	2.253-4	1.217	2.461									
		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				89Rb	15.4m	272.4	0.0142	2.934-4	4.742	0.632		
		803.7	0.0066						289.8	0.0054					
		834.7	0.0063						657.7	0.0998					
		977.2	0.0038						766.8	0.0016					
		1041.0	0.0039						947.7	0.0922					
		626.6	0.0103						1025.0	0.0023					
		511.0	0.6620						1032.0	0.5800					
82Rb	1.2m	12.6	0.0075	2.076-4	1.907	1.571			1220.0	0.0022					
		12.7	0.0146						1228.0	0.0012					
		14.1	0.0037						1248.0	0.4234					
									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				92Sr	2.7h	241.5	0.0297	1.940~4	4.604	0.651
		15.0	0.0851						430.6	0.0333			
85Sr	64.8d	13.3	0.1707	2.038~4	1.330	2.252			491.3	0.0026			
		13.4	0.3301						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				
								910.2	0.0081				
93Sr	7.3m	14.9	0.0277	3.642-4	3.833	0.782		922.7	0.0033				
		15.0	0.0534					927.7	0.0063				
		16.7	0.0147					930.9	0.0040				
		166.6	0.0062					952.6	0.0011				
		168.7	0.1821					991.6	0.0012				
		260.1	0.0732					1032.0	0.0010				
		285.7	0.0027					1035.0	0.0020				
		332.0	0.0035					1041.0	0.0316				
		346.5	0.0324					1055.0	0.0034				
		377.4	0.0147					1064.0	0.0037				
		406.7	0.0042					1078.0	0.0024				
		424.7	0.0026					1094.0	0.0174				
		428.0	0.0015					1105.0	0.0015				
		432.7	0.0147					1123.0	0.0397				
		440.8	0.0019					1137.0	0.0019				
		446.2	0.0233					1181.0	0.0024				
		482.0	0.0112					1196.0	0.0097				
		483.7	0.0165					1215.0	0.0247				
		486.7	0.0012					1239.0	0.0012				
		518.5	0.0013					1243.0	0.0079				
		541.9	0.0072					1266.0	0.0110				
		545.8	0.0039					1269.0	0.0706				
		559.9	0.0020					1278.0	0.0086				
		572.0	0.0021					1309.0	0.0040				
		586.5	0.0044					1321.0	0.0258				
		590.3	0.6720					1333.0	0.0047				
		593.8	0.0110					1335.0	0.0067				
		596.1	0.0132					1379.0	0.0035				
		610.9	0.0107					1387.0	0.0343				
		631.0	0.0019					1434.0	0.0089				
		633.5	0.0011					1439.0	0.0050				
		650.6	0.0019					1466.0	0.0010				
		658.6	0.0042					1469.0	0.0052				
		663.6	0.0163					1483.0	0.0010				
		687.8	0.0066					1492.0	0.0054				
		690.1	0.0100					1520.0	0.0032				
		692.0	0.0022					1539.0	0.0010				
		710.4	0.2150					1552.0	0.0101				
		716.8	0.0029					1610.0	0.0019				
		718.3	0.0148					1634.0	0.0143				
		771.2	0.0115					1648.0	0.0088				
		776.1	0.0026					1669.0	0.0016				
		782.8	0.0022					1685.0	0.0071				
		788.7	0.0076					1694.0	0.0255				
		791.1	0.0026					1699.0	0.0329				
		795.3	0.0023					1707.0	0.0110				
		834.9	0.0165					1765.0	0.0106				
		837.8	0.0012					1775.0	0.0016				
		858.5	0.0072					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			
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				97Zr	16.9h	202.2	0.0010	2.905–5	3.732	0.803
		557.6	0.9508						218.7	0.0023			
92Y	3.5h	448.5	0.0234	3.963–5	3.821	0.784			254.1	0.0125			
		492.6	0.0049						272.3	0.0025			
		561.1	0.0241						330.4	0.0011			
		844.3	0.0125						355.4	0.0227			
		912.6	0.0063						400.4	0.0032			
		934.5	0.1390						507.6	0.0529			
		1132.0	0.0024						513.5	0.0051			
		1405.0	0.0478						602.5	0.0139			
		1847.0	0.0036						690.6	0.0025			
		1647.0	0.0015						699.2	0.0012			
93Y	10.1h	15.7	0.0003	1.388–5	4.295	0.698			703.8	0.0093			
		15.8	0.0006						795.7	0.0012			
		17.7	0.0002						804.5	0.0065			
		266.9	0.0685						829.8	0.0022			
		680.2	0.0061						854.9	0.0033			
		947.1	0.0195						971.4	0.0029			
		1203.0	0.0010						1021.0	0.0121			
		1425.0	0.0024						1119.0	0.0011			
		1450.0	0.0034						1148.0	0.0265			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ	
	1276.0	0.0097						92mNb	10.1d	15.7	0.1834	2.413–4	3.067	0.977
	1363.0	0.0135							15.8	0.3527				
	1750.0	0.0135							17.7	0.0992				
	1852.0	0.0035							912.6	0.0168				
	344.1	0.0021							934.5	0.9915				
90Nb	14.6h	15.7	0.1386	6.513–4	4.763	0.629			1847.0	0.0085				
	15.8	0.2665						93mNb	14.6y	16.5	0.0323	1.421–5	0.002	1292.
	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	1180.
	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												
	1273.0	0.0016						96Nb	23.3h	17.4	0.0003	4.109–4	3.237	0.925
	511.0	1.0620							17.5	0.0005				
91Nb	1.0+4y	15.7	0.1833	8.831–5	0.002	1330.			19.6	0.0001				
	15.8	0.3524							219.1	0.0378				
	17.7	0.0991							241.4	0.0387				
	511.0	0.0033							349.9	0.0073				
91mNb	61.0d	16.5	0.1414	7.159–5	0.810	3.699				350.3	0.0111			
	16.6	0.2714								352.5	0.0082			
	18.6	0.0780								369.7	0.0012			
	104.5	0.0058								371.8	0.0281			
	15.7	0.0063												
	15.8	0.0120						92Nb	3.6+7y	15.7	0.1832	3.402–4	2.734	1.096
	17.7	0.0034							15.8	0.3524				
	1205.0	0.0350							17.7	0.0991				
									561.1	0.9970				
									934.5	0.9992				
									434.7	0.0053				
									460.0	0.2817				
									477.7	0.0012				
									480.7	0.0629				
									568.9	0.5566				
									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						101Mo	14.6m	18.2	0.0166	2.376-4	4.066	0.737
	721.5	0.0077							18.4	0.0318				
	778.2	0.9680							20.6	0.0095				
	810.2	0.0987							80.9	0.0540				
	812.5	0.0339							104.7	0.0016				
	847.7	0.0165							105.9	0.0024				
	849.9	0.2071							115.8	0.0017				
	1091.0	0.4937							187.4	0.0048				
	1127.0	0.0053							191.9	0.1920				
	1200.0	0.2004							195.9	0.0292				
	1441.0	0.0040							212.0	0.0052				
	1498.0	0.0300							221.8	0.0010				
	589.2	0.0053							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				
97mNb	60.0s	16.5	0.0037	1.259-4	2.818	1.063			398.7	0.0092				
		16.6	0.0072						408.5	0.0163				
		18.6	0.0021						421.4	0.0042				
		743.4	0.9796						432.9	0.0011				
91Mo	15.5m	16.5	0.0117	1.870-4	1.804	1.661			448.5	0.0070				
		16.6	0.0225						469.0	0.0012				
		18.6	0.0065						497.0	0.0014				
		1582.0	0.0023						499.6	0.0136				
		1637.0	0.0033						505.1	0.0134				
		2632.0	0.0012						505.9	0.1210				
		2233.0	0.0030						510.1	0.0100				
		511.0	1.8760						512.2	0.0179				
93Mo	3500.0y	16.5	0.1811	7.963-5	0.002	1292.			514.1	0.0083				
		16.6	0.3477						515.8	0.0052				
		18.6	0.0999						523.8	0.0018				
99Mo	2.8d	18.2	0.0090	3.046-5	2.571	1.165			533.5	0.0041				
		18.4	0.0173						566.5	0.0075				
		20.6	0.0052						571.7	0.0019				
		40.6	0.0088						590.1	0.0576				
		140.5	0.0379						590.8	0.1670				
		181.1	0.0623						603.0	0.0010				
		366.4	0.0137						606.8	0.0022				
		739.6	0.1280						608.3	0.0109				
		778.0	0.0448						611.6	0.0015				
		822.9	0.0013						625.6	0.0011				
									642.6	0.0127				
									660.6	0.0023				
									695.5	0.0595				
									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											
	204.1	0.6192					97mTc	89d	18.2	0.1412	5.233-5	0.003	1060.
	253.0	0.0060							18.4	0.2701			
	582.1	0.2933							20.6	0.0810			
	616.5	0.0126							96.5	0.0032			
	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											
							99Tc	2.1+5y	89.4	0.0000	1.24-10	0.142	21.144
96Tc	4.3d	17.4	0.1882	4.894-4	3.015	0.994							
		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
103Ru	39.4d	20.1	0.0025	8.964-5	1.737	1.724	103mRh	56.1m	20.1	0.0220	6.912-6	0.003	864.0
		20.2	0.0048						20.2	0.0418			
		22.7	0.0015						22.7	0.0130			
		53.3	0.0037						39.7	0.0007			
		295.0	0.0025										
		443.8	0.0032				105Rh	1.5d	21.0	0.0010	1.588-5	0.759	3.949
		497.1	0.8890						21.2	0.0019			
		557.0	0.0083						23.8	0.0006			
		610.3	0.0560						280.1	0.0017			
		486.9	0.0012						306.1	0.0513			
									318.9	0.1920			
105Ru	4.4h	20.1	0.0017	1.393-4	2.493	1.202			294.9	0.0006			
		20.2	0.0031										
		22.7	0.0010				105mRh	45s	20.1	0.1183	4.251-5	0.030	98.565
		85.9	0.0032						20.2	0.2249			
		149.2	0.0167						22.7	0.0700			
		163.6	0.0014						129.6	0.2040			
		183.6	0.0010										
		225.0	0.0015				106Rh	29.9s	511.8	0.2060	3.695-5	2.383	1.257
		262.9	0.0720						616.2	0.0070			
		316.5	0.1170						621.8	0.0981			
		326.1	0.0118						873.6	0.0042			
		330.9	0.0079						1050.0	0.0173			
		350.0	0.0030						1128.0	0.0040			
		350.2	0.0110						1562.0	0.0016			
		393.4	0.0420						1357.0	0.0058			
		407.5	0.0018										
		413.5	0.0248				103Pd	17.0d	20.1	0.1984	6.219-5	0.003	871.6
		469.4	0.1750						20.2	0.3772			
		470.0	0.0130						22.7	0.1174			
		489.6	0.0059						359.6	0.0003			
		499.2	0.0240										
		500.4	0.0030				109Pd	13.5h	508.6	0.0014	1.290-7	1.756	1.706
		513.7	0.0036										
		539.2	0.0013				106mAg	8.5d	21.0	0.1996	5.214-4	3.160	0.948
		575.0	0.0013						21.2	0.3788			
		575.3	0.0107						23.8	0.1203			
		632.3	0.0023						195.1	0.0031			
		638.6	0.0028						221.7	0.0658			
		652.6	0.0035						228.6	0.0210			
		656.0	0.0020						328.5	0.0114			
		656.1	0.0240						374.5	0.0026			
		676.4	0.1670						391.0	0.0368			
		724.5	0.4900						406.2	0.1342			
		822.1	0.0019						418.6	0.0033			
		845.9	0.0073						429.7	0.1316			
		875.8	0.0340						451.0	0.2824			
		907.7	0.0059						474.1	0.0093			
		969.4	0.0234						511.8	0.8770			
		1017.0	0.0034						586.0	0.0044			
		1321.0	0.0023						601.2	0.0161			
		707.4	0.0128						616.2	0.2157			

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	0.352	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			
115Cd	2.2d	24.0	0.0100	4.028-5	1.750	1.712			1036.0	0.0024			
		24.2	0.0189						1052.0	0.0379			
		27.3	0.0063						1053.0	0.0073			
		35.5	0.0045						1117.0	0.0103			
		231.4	0.0078						1120.0	0.0024			
		260.9	0.0206						1125.0	0.0045			
		492.3	0.0851						1142.0	0.0167			
		527.9	0.2915						1144.0	0.0014			
		296.9	0.0011						1183.0	0.0013			
									1229.0	0.0061			
115mCd	44.6d	484.5	0.0019	3.430-6	3.848	0.779			1232.0	0.0028			
		933.8	0.0133						1248.0	0.0120			
		1291.0	0.0059						1260.0	0.0114			
		932.7	0.0010						1273.0	0.0073			
									1291.0	0.0067			
117Cd	2.5h	24.0	0.0155	1.735-4	4.083	0.734			1294.0	0.0045			
		24.2	0.0292						1303.0	0.1836			
		27.3	0.0097						1315.0	0.0059			
		71.1	0.0039						1338.0	0.0162			
		89.7	0.0326						1362.0	0.0024			
		160.8	0.0025						1404.0	0.0012			
		220.9	0.0117						1409.0	0.0128			
		273.4	0.2790						1422.0	0.0033			
		279.8	0.0011						1431.0	0.0098			
		292.1	0.0064						1434.0	0.0011			
		344.5	0.1788						1450.0	0.0061			
		388.0	0.0031						1476.0	0.0042			
		397.2	0.0020						1562.0	0.0142			
		419.8	0.0018						1577.0	0.1119			
		434.2	0.0979						1578.0	0.0014			
		439.4	0.0011						1652.0	0.0028			
		463.0	0.0075						1682.0	0.0070			
		497.8	0.0011						1707.0	0.0100			
		527.0	0.0014						1723.0	0.0201			
		627.0	0.0011						1739.0	0.0013			
		660.8	0.0011						1856.0	0.0025			
		699.6	0.0024						1867.0	0.0011			
		712.7	0.0056						2012.0	0.0011			
		716.4	0.0020						959.7	0.0212			
117mCd	3.4h	728.6	0.0024						24.0	0.0023	2.909-4	4.831	0.620
		748.1	0.0056						24.2	0.0043			
		831.8	0.0226						27.3	0.0014			
		840.2	0.0081						97.7	0.0105			
		850.7	0.0012						99.4	0.0010			
		861.3	0.0028						168.6	0.0029			
		862.6	0.0061						220.9	0.0024			
		880.7	0.0396						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										
							126Sn	1.0+5y	21.6	0.0124	3.408-5	0.095	31.647
117mIn	1.9h	24.0	0.0526	3.060-5	0.534	5.608			23.3	0.0640			
		24.2	0.0990						26.1	0.0833			
		27.3	0.0329						26.4	0.1561			
		315.3	0.1945						29.7	0.0534			
		25.0	0.0052						42.6	0.0050			
		25.3	0.0098						64.3	0.0958			
		28.5	0.0033						86.9	0.0892			
		158.6	0.1587						87.6	0.3700			
		918.6	0.0003						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			
									1005.0	0.0021			
117mSn	13.6d	25.0	0.1873	6.796-5	0.113	26.595			1021.0	0.0010			
		25.3	0.3514						1021.0	0.0011			
		28.5	0.1185						1037.0	0.0026			
		156.0	0.0211						511.0	0.0340			
		158.6	0.8640										
							122Sb	2.7d	25.0	0.0050	8.140-5	2.141	1.399
119mSn	293.0d	23.9	0.1610	2.789-5	0.006	517.0			25.3	0.0094			
		25.0	0.0788						28.5	0.0032			
		25.3	0.1479						1140.0	0.0077			
		28.5	0.0499						27.2	0.0009			
		65.7	0.0002						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			
									1257.0	0.0078			
125Sn	9.6d	331.9	0.0129	4.662-5	4.069	0.736			1179.0	0.0002			
		350.9	0.0022										
		469.7	0.0129				124Sb	60.2d	27.2	0.0010	2.859-4	4.195	0.714
		800.5	0.0095						27.5	0.0019			
		822.6	0.0378						31.0	0.0007			
		893.7	0.0023						400.0	0.0013			
		915.5	0.0378						444.0	0.0021			
		934.7	0.0015						525.5	0.0017			
		1017.0	0.0026						602.7	0.9787			
		1067.0	0.0860						632.4	0.0015			
		1087.0	0.0095						645.9	0.0726			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
	709.3	0.0142						555.2	0.0169				
	713.8	0.0238						573.8	0.0667				
	722.8	0.1110						593.0	0.0747				
	735.7	0.0013						620.2	0.0090				
	790.7	0.0074						639.7	0.0090				
	968.2	0.0192						656.3	0.0219				
	1045.0	0.0186						666.3	0.9962				
	1325.0	0.0150						675.0	0.0369				
	1355.0	0.0100						695.0	0.9962				
	1368.0	0.0251						697.0	0.2889				
	1376.0	0.0044						720.5	0.5379				
	1437.0	0.0114						856.8	0.1763				
	1445.0	0.0022						954.0	0.0119				
	1489.0	0.0063						959.6	0.0050				
	1526.0	0.0040						989.3	0.0677				
	1580.0	0.0020						1035.0	0.0100				
	1691.0	0.4903						1061.0	0.0020				
	2091.0	0.0573						1064.0	0.0090				
	1208.0	0.0134						1213.0	0.0239				
								1476.0	0.0028				
125Sb	2.8y	27.2	0.1279	1.025-4	1.696	1.767	126mSb	19.0m	17.7	0.0000	2.814-4	2.366	1.266
		27.5	0.2386						27.2	0.0039			
		31.0	0.0828						27.5	0.0072			
		35.5	0.0417						31.0	0.0025			
		116.9	0.0026						414.7	0.8567			
		172.6	0.0018						620.0	0.0154			
		176.3	0.0689						666.3	0.8567			
		204.1	0.0032						695.0	0.8567			
		208.1	0.0024						928.2	0.0128			
		227.9	0.0013						1035.0	0.0180			
		321.0	0.0042						1061.0	0.0051			
		380.4	0.0150						1476.0	0.0034			
		408.0	0.0018										
		427.9	0.2933				127Sb	3.9d	27.2	0.0106	1.196-4	2.386	1.256
		443.5	0.0030						27.5	0.0197			
		463.4	0.1035						31.0	0.0068			
		600.6	0.1777						61.1	0.0142			
		606.6	0.0502						154.3	0.0011			
		635.9	0.1132						252.4	0.0839			
		671.4	0.0181						280.4	0.0054			
		159.0	0.0007						290.8	0.0182			
126Sb	12.4d	27.2	0.0044	4.841-4	2.556	1.172			293.3	0.0029			
		27.5	0.0081						310.0	0.0020			
		31.0	0.0028						391.8	0.0093			
		149.3	0.0040						405.0	0.0011			
		208.6	0.0050						411.6	0.0343			
		223.8	0.0140						440.7	0.0025			
		278.6	0.0239						444.9	0.0421			
		296.5	0.0448						451.0	0.0018			
		297.1	0.0050						456.0	0.0011			
		414.7	0.8328						473.0	0.2503			
		415.3	0.0100						502.8	0.0061			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ	
		543.0	0.0264						1084.0	0.0055				
		584.2	0.0032						1104.0	0.0023				
		603.6	0.0425						1125.0	0.0011				
		637.8	0.0036						1139.0	0.0018				
		653.5	0.0025						1162.0	0.0011				
		666.9	0.0054						1168.0	0.0027				
		682.3	0.0054						1208.0	0.0096				
		685.2	0.3570						1223.0	0.0018				
		698.5	0.0339						1237.0	0.0027				
		722.2	0.0175						1257.0	0.0037				
		745.9	0.0011						1261.0	0.0078				
		783.8	0.1467						1273.0	0.0027				
		817.3	0.0027						1281.0	0.0059				
		820.1	0.0011						1300.0	0.0027				
		923.5	0.0046						1317.0	0.0037				
		1141.0	0.0036						1326.0	0.0055				
		1290.0	0.0035						1419.0	0.0055				
		736.7	0.0053						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			
123mTe	119.7d	27.2	0.1405	5.261-5	0.125	24.041			149.7	0.6890			
		27.5	0.2620						151.1	0.0017			
		31.0	0.0910						342.9	0.0070			
		159.0	0.8410						384.1	0.0090			
		89.1	0.0009						452.3	0.1822			
125mTe	58d	27.2	0.3232	6.168-5	0.008	368.9			492.7	0.0484			
		27.5	0.6030						544.9	0.0043			
		31.0	0.2093						567.3	0.0010			
		35.5	0.0649						602.0	0.0420			
		109.3	0.0028						605.5	0.0012			
		144.8	0.0000						654.3	0.0153			
127Te	9.4h	360.3	0.0013	9.428-7	1.239	2.419			696.2	0.0018			
		417.9	0.0099						727.0	0.0047			
		172.7	0.0013						842.0	0.0020			
127mTe	109d	27.2	0.1041	1.977-5	0.008	373.5			856.1	0.0013			
		27.5	0.1943						898.5	0.0014			
		31.0	0.0674						934.5	0.0087			
		88.3	0.0009						948.5	0.0226			
		28.3	0.0030						951.4	0.0033			
		28.6	0.0057						997.3	0.0334			
		32.3	0.0020						1008.0	0.0080			
		57.6	0.0038						1098.0	0.0017			
		648.6	0.0001						1147.0	0.0496			
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	
	1718.0	0.0340						779.7	0.0339					
	1825.0	0.0057						795.7	0.0131					
	1882.0	0.0142						800.5	0.0191					
	2137.0	0.0028						863.9	0.1949					
	2228.0	0.0028						882.8	0.0566					
	2541.0	0.0007						897.7	0.0043					
								912.6	0.8700					
133mTe	55.4m	27.2	0.0146	3.680-4	3.516	0.852		914.7	0.1653					
	27.5	0.0272						934.4	0.0131					
	31.0	0.0094						978.2	0.0948					
	334.1	0.0543						980.4	0.0235					
	28.3	0.0357						982.9	0.0113					
	28.6	0.0665						1007.0	0.0104					
	32.3	0.0233						1030.0	0.0131					
	74.1	0.0131						1349.0	0.0252					
	81.5	0.0070						1459.0	0.0218					
	88.0	0.0209						1516.0	0.0096					
	94.9	0.0870						1532.0	0.0087					
	164.3	0.0235						1683.0	0.0574					
	168.9	0.1148						1704.0	0.0096					
	177.1	0.0148						1886.0	0.0113					
	178.2	0.0087						2005.0	0.0331					
	184.4	0.0035						2028.0	0.0209					
	193.2	0.0061						2049.0	0.0104					
	198.2	0.0052												
	213.4	0.0287					134Te	41.8m	28.3	0.0877	1.727-4	2.194	1.366	
	220.9	0.0043							28.6	0.1632				
	224.0	0.0035							32.3	0.0572				
	244.3	0.0061							76.8	0.0028				
	251.5	0.0052							79.4	0.2100				
	257.6	0.0087							101.4	0.0033				
	261.6	0.1566							131.0	0.0018				
	285.7	0.0087							180.9	0.1800				
	344.5	0.0226							183.0	0.0060				
	347.2	0.0113							201.2	0.0870				
	355.6	0.0148							210.5	0.2190				
	362.8	0.0096							259.8	0.0048				
	376.8	0.0052							277.9	0.2130				
	397.0	0.0148							435.1	0.1860				
	429.0	0.0122							461.0	0.1080				
	435.4	0.0104							464.6	0.0510				
	444.9	0.0226							566.0	0.1890				
	462.1	0.0200							636.3	0.0171				
	471.8	0.0200							645.4	0.0090				
	478.6	0.0157							665.8	0.0120				
	519.6	0.0043							713.0	0.0420				
	534.9	0.0174							742.6	0.1470				
	574.0	0.0235							767.2	0.3000				
	622.0	0.0139							844.1	0.0120				
	647.4	0.2932							896.0	0.0045				
	702.8	0.0374							925.5	0.0165				
	731.7	0.0148							1027.0	0.0045				
	733.9	0.0287							110.1	0.0012				

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				
									812.2	0.0563				
131I	8.0d	29.5	0.0135	7.640-5	1.242	2.412			863.3	0.0058				
		29.8	0.0250						876.8	0.0108				
		33.6	0.0089						910.3	0.0092				
		80.2	0.0262						927.6	0.0041				
		177.2	0.0026						954.6	0.1806				
		284.3	0.0605						983.7	0.0056				
		325.8	0.0025						1035.0	0.0047				
		364.5	0.8116						1136.0	0.0296				
		503.0	0.0036						1143.0	0.0135				
		637.0	0.0726						1147.0	0.0028				
		642.7	0.0022						1173.0	0.0109				
		722.9	0.0180						1273.0	0.0018				
		329.4	0.0023						1291.0	0.0114				
									1295.0	0.0197				
132I	2.3h	29.5	0.0017	3.841-4	3.081	0.972			1298.0	0.0089				
		29.8	0.0032						1318.0	0.0012				
		33.6	0.0011						1372.0	0.0247				
		147.2	0.0024						1399.0	0.0711				
		183.3	0.0014						1443.0	0.0142				
		254.8	0.0019						1477.0	0.0014				
		262.7	0.0144						1757.0	0.0030				
		284.8	0.0072						1921.0	0.0118				
		316.5	0.0014						2002.0	0.0109				
		363.5	0.0049						2087.0	0.0024				
		387.8	0.0030						2173.0	0.0020				
		416.8	0.0047						2223.0	0.0012				
		431.9	0.0048						2391.0	0.0017				
		446.0	0.0060						1015.0	0.0320				
		473.9	0.0018											
		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
	29.8	0.0028						730.7	0.0191				
	33.6	0.0010						739.2	0.0076				
	262.7	0.0036						766.7	0.0410				
	267.2	0.0012						816.4	0.0052				
	345.4	0.0010						847.0	0.9541				
	361.1	0.0011						857.3	0.0696				
	418.0	0.0015						864.0	0.0019				
	422.9	0.0031						884.1	0.6526				
	510.5	0.0181						922.6	0.0014				
	529.9	0.8632						947.9	0.0404				
	618.0	0.0054						966.9	0.0035				
	680.2	0.0064						974.7	0.0468				
	706.6	0.0149						1040.0	0.0191				
	768.4	0.0046						1073.0	0.1527				
	820.5	0.0015						1100.0	0.0069				
	856.3	0.0123						1103.0	0.0073				
	875.3	0.0447						1136.0	0.0973				
	909.7	0.0021						1159.0	0.0035				
	1052.0	0.0055						1164.0	0.0013				
	1060.0	0.0014						1190.0	0.0035				
	1236.0	0.0149						1239.0	0.0021				
	1298.0	0.0233						1269.0	0.0056				
	1350.0	0.0015						1322.0	0.0010				
	535.2	0.0061						1336.0	0.0014				
								1353.0	0.0045				
134I	52.6m	29.5	0.0043	4.240-4	3.545	0.845		1414.0	0.0022				
		29.8	0.0080					1428.0	0.0017				
		33.6	0.0029					1431.0	0.0017				
		135.4	0.0376					1455.0	0.0229				
		139.0	0.0069					1470.0	0.0077				
		152.0	0.0011					1505.0	0.0011				
		162.5	0.0026					1542.0	0.0051				
		188.5	0.0070					1614.0	0.0436				
		217.0	0.0025					1629.0	0.0026				
		235.5	0.0198					1644.0	0.0040				
		278.8	0.0013					1655.0	0.0023				
		319.8	0.0052					1741.0	0.0267				
		351.1	0.0050					1807.0	0.0573				
		405.4	0.0735					1926.0	0.0018				
		411.0	0.0061					2021.0	0.0017				
		433.4	0.0419					2160.0	0.0021				
		458.9	0.0130					2312.0	0.0024				
		465.5	0.0036					2467.0	0.0015				
		488.9	0.0141					1787.0	0.0134				
		514.4	0.0234										
		540.8	0.0782				135I	6.6h	29.5	0.0007	2.317-4	4.511	0.664
		565.5	0.0088						29.8	0.0013			
		570.7	0.0021						33.6	0.0005			
		595.4	0.1135						220.5	0.0175			
		621.8	0.1059						229.7	0.0023			
		628.0	0.0237						264.3	0.0018			
		677.3	0.0849						288.5	0.0309			
		706.7	0.0083						290.3	0.0030			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
	361.9	0.0019						682.7	0.0019				
	403.0	0.0023						812.6	0.0090				
	414.8	0.0030						865.5	0.0067				
	417.6	0.0352						976.5	0.0278				
	429.9	0.0030						994.2	0.0168				
	433.7	0.0055						1057.0	0.0030				
	451.6	0.0031						1101.0	0.0050				
	546.6	0.0712						1179.0	0.0023				
	576.0	0.0013						1223.0	0.0016				
	649.9	0.0045						1247.0	0.0236				
	690.1	0.0013						1313.0	0.6940				
	707.9	0.0066						1321.0	0.2582				
	785.5	0.0015						1400.0	0.0011				
	797.7	0.0017						1536.0	0.0135				
	836.8	0.0667						1556.0	0.0049				
	961.5	0.0015						1583.0	0.0026				
	972.0	0.0089						1625.0	0.0024				
	972.6	0.0120						1635.0	0.0039				
	995.1	0.0015						1640.0	0.0019				
	1039.0	0.0792						1666.0	0.0018				
	1102.0	0.0160						1686.0	0.0032				
	1124.0	0.0360						1689.0	0.0027				
	1132.0	0.2252						1709.0	0.0072				
	1160.0	0.0010						1738.0	0.0017				
	1169.0	0.0087						1820.0	0.0022				
	1241.0	0.0090						1962.0	0.0237				
	1260.0	0.2861						1968.0	0.0017				
	1368.0	0.0061						1980.0	0.0014				
	1448.0	0.0031						2039.0	0.0017				
	1458.0	0.0864						2228.0	0.0011				
	1503.0	0.0107						2290.0	0.1083				
	1566.0	0.0129						2383.0	0.0022				
	1678.0	0.0953						2415.0	0.0708				
	1707.0	0.0409						2428.0	0.0019				
	1791.0	0.0770						2480.0	0.0014				
	1831.0	0.0058						2548.0	0.0013				
	1927.0	0.0029						2602.0	0.0012				
	2046.0	0.0087						2634.0	0.0701				
	2255.0	0.0061						2828.0	0.0010				
	2409.0	0.0095						2869.0	0.0410				
	1073.0	0.0149						2956.0	0.0075				
								2979.0	0.0032				
1361	1.4m	219.3	0.0085	3.370~4	5.164	0.580		3141.0	0.0072				
		240.5	0.0024					3195.0	0.0017				
		270.2	0.0022					3212.0	0.0053				
		309.1	0.0035					3349.0	0.0020				
		344.7	0.0250					3626.0	0.0017				
		362.5	0.0013					3635.0	0.0012				
		381.4	0.0086					3674.0	0.0017				
		396.0	0.0044					4064.0	0.0017				
		431.4	0.0021					4269.0	0.0037				
		434.2	0.0083					4474.0	0.0014				
		597.8	0.0037					4739.0	0.0011				

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ	
		4889.0	0.0015						1242.0	0.0011				
		4929.0	0.0012						1242.0	0.0044				
		5608.0	0.0015						1310.0	0.0013				
		5800.0	0.0013						1391.0	0.0012				
		6104.0	0.0014						1535.0	0.0030				
		4129.0	0.0242						1604.0	0.0017				
									1626.0	0.0058				
122Xe	20.1h	28.3	0.2218	4.867-5	0.413	7.257			1657.0	0.0013				
		28.6	0.4131						1687.0	0.0060				
		32.3	0.1448						1716.0	0.0019				
		61.8	0.0044						1732.0	0.0014				
		72.6	0.0023						1807.0	0.0122				
		90.7	0.0072						1822.0	0.0012				
		116.3	0.0012						1884.0	0.0062				
		148.8	0.0368						1934.0	0.0022				
		163.3	0.0017						1974.0	0.0013				
		174.7	0.0018						2003.0	0.0018				
		175.7	0.0039						2038.0	0.0024				
		187.1	0.0074						2072.0	0.0016				
		201.6	0.0016						2101.0	0.0015				
		253.7	0.0014						1447.0	0.0270				
		288.4	0.0055						511.0	0.4452				
		350.2	0.0920											
		355.2	0.0021					125Xe	16.8h	28.3	0.2892	9.619-5	0.629	4.766
		416.9	0.0207						28.6	0.5386				
		79.4	0.0027						32.3	0.1887				
123Xe	2.1h	28.3	0.2100	1.407-4	2.611	1.147			55.0	0.0595				
		28.6	0.3911						74.9	0.0012				
		32.3	0.1370						113.6	0.0048				
		138.1	0.0024						188.4	0.5510				
		148.9	0.4800						243.4	0.2893				
		178.1	0.1464						372.1	0.0025				
		330.2	0.0840						453.8	0.0424				
		474.2	0.0010						635.8	0.0010				
		680.5	0.0020						635.8	0.0012				
		691.5	0.0011						846.5	0.0104				
		718.5	0.0017						901.5	0.0054				
		728.3	0.0012						937.3	0.0012				
		782.9	0.0044						992.5	0.0010				
		870.7	0.0028						1007.0	0.0014				
		899.6	0.0240						1138.0	0.0029				
		934.9	0.0031						1181.0	0.0063				
		964.0	0.0053						904.8	0.0040				
		979.4	0.0028						511.0	0.0143				
		1011.0	0.0043					127Xe	36.4d	28.3	0.2503	9.331-5	0.398	7.526
		1014.0	0.0012						28.6	0.4661				
		1049.0	0.0013						32.3	0.1633				
		1061.0	0.0077						57.6	0.0131				
		1064.0	0.0065						145.2	0.0424				
		1093.0	0.0274						172.1	0.2470				
		1113.0	0.0154						202.8	0.6810				
		1161.0	0.0010						375.0	0.1740				

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		
138Cs	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												
139Cs	9.4m	454.7	0.0013	4.218–5	5.022	0.596			131Ba	11.8d	30.6	0.2766	1.244–4	1.338	2.239

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
	867.9	0.0016						77.6	0.0961				
	876.3	0.0360						122.9	0.0093				
	880.6	0.0021						154.2	0.0052				
	908.8	0.0013						162.0	0.0011				
	929.5	0.0073						176.8	0.0148				
	943.3	0.0077						216.3	0.0020				
	981.6	0.0082						222.6	0.0027				
	996.6	0.0013						231.5	0.1015				
	1012.0	0.0011						242.7	0.0016				
	1035.0	0.0031						255.1	0.1780				
	1040.0	0.0010						269.3	0.0068				
	1046.0	0.0036						283.9	0.0018				
	1094.0	0.0023						286.2	0.0093				
	1161.0	0.0025						309.0	0.0226				
	1161.0	0.0097						334.8	0.0125				
	1198.0	0.0486						337.1	0.0025				
	1225.0	0.0043						346.7	0.0014				
	1236.0	0.0015						363.8	0.0392				
	1264.0	0.0087						379.1	0.0046				
	1274.0	0.0054						417.8	0.0034				
	1278.0	0.0069						425.0	0.0498				
	1309.0	0.0025						432.3	0.0098				
	1311.0	0.0063						434.4	0.0030				
	1324.0	0.0100						448.1	0.0021				
	1345.0	0.0023						457.3	0.0039				
	1358.0	0.0017						473.4	0.0030				
	1377.0	0.0074						488.3	0.0011				
	1406.0	0.0029						513.3	0.0023				
	1437.0	0.0087						537.5	0.0011				
	1459.0	0.0071						558.3	0.0030				
	1502.0	0.0033						590.7	0.0025				
	1551.0	0.0033						599.8	0.0160				
	1569.0	0.0027						604.2	0.0032				
	1654.0	0.0079						769.4	0.0061				
	1682.0	0.0141						786.4	0.0025				
	1713.0	0.0018						792.2	0.0021				
	1736.0	0.0019						823.4	0.0041				
	1741.0	0.0033						840.2	0.0303				
	1796.0	0.0051						894.9	0.1104				
	1913.0	0.0014						948.8	0.0890				
	1990.0	0.0019						1001.0	0.0783				
	2027.0	0.0040						1033.0	0.0048				
	2137.0	0.0012						1078.0	0.0926				
	2165.0	0.0017						1094.0	0.0221				
	2279.0	0.0010						1123.0	0.0030				
	2469.0	0.0019						1127.0	0.0153				
	1252.0	0.0173						1148.0	0.0039				
142Ba	10.7m	33.0	0.0555	1.536-4	3.564	0.841		1202.0	0.0534				
		33.4	0.1021					1204.0	0.1371				
		37.8	0.0375					1283.0	0.0016				
		69.4	0.0036					1380.0	0.0340				
		76.8	0.0089					685.1	0.0016				

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
140La	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			
		2547.0	0.0010						1389.0	0.0047			
		1208.0	0.0042						1395.0	0.0021			
									1402.0	0.0016			
141La	3.9h	1354.0	0.0262	6.088-6	4.731	0.633			1446.0	0.0016			
		1693.0	0.0012						1455.0	0.0011			
		1674.0	0.0031						1494.0	0.0016			
									1516.0	0.0047			
142La	1.6h	34.3	0.0006	3.586-4	5.354	0.560			1535.0	0.0026			
		34.7	0.0012						1540.0	0.0052			
		39.3	0.0004						1546.0	0.0331			
		106.1	0.0016						1618.0	0.0032			
		174.1	0.0011						1651.0	0.0021			
		367.3	0.0011						1688.0	0.0026			
		393.7	0.0011						1723.0	0.0168			
		420.8	0.0026						1752.0	0.0011			
		433.3	0.0042						1756.0	0.0331			
		514.7	0.0016						1768.0	0.0021			
		532.0	0.0016						1771.0	0.0021			
		578.1	0.0136						1794.0	0.0011			
		619.5	0.0016						1806.0	0.0016			
		641.2	0.5250						1817.0	0.0011			
		861.6	0.0199						1885.0	0.0058			
		878.2	0.0021						1901.0	0.0871			
		894.9	0.0940						1923.0	0.0026			
		946.5	0.0011						1934.0	0.0016			
		962.2	0.0042						1948.0	0.0052			
		991.2	0.0011						1961.0	0.0016			
		1007.0	0.0026						2004.0	0.0105			
		1011.0	0.0436						2026.0	0.0136			
		1039.0	0.0011						2039.0	0.0110			
		1044.0	0.0305						2050.0	0.0052			
		1062.0	0.0016						2055.0	0.0294			
		1070.0	0.0016						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					143Ce	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					144Ce	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					142Pr	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					143Pr	13.6d	742.0	0.00001	1.52+-12	2.824	1.061
	3242.0	0.0021											
	3273.0	0.0016					144Pr	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					144mPr	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			
139Ce	137.7d	33.0	0.2248	5.554-5	0.134	22.320							
		33.4	0.4140				147Nd	11.0d	38.2	0.1296	3.751-5	1.337	2.241
		37.8	0.1521						38.7	0.2356			
		165.8	0.8035						43.8	0.0906			
									91.1	0.2800			
141Ce	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	23+ ⁻¹⁰	0.082	36.526			64.9	0.0197			
148Pm	5.4d	39.5	0.0005	8.885-5	4.046	0.740			65.8	0.0117			
		40.1	0.0009						69.7	0.0048			
		45.4	0.0003						76.2	0.0021			
		550.3	0.2200						98.0	0.0037			
		592.8	0.0035						100.0	0.0256			
		611.3	0.0102						101.9	0.0131			
		874.2	0.0024						104.8	0.0355			
		896.4	0.0098						139.3	0.0051			
		914.8	0.1145						143.2	0.0022			
		1465.0	0.2220						147.5	0.0015			
		1294.0	0.0030						156.2	0.0015			
									162.9	0.0089			
148mPm	41.3d	38.2	0.0073	3.544-4	2.477	1.209			163.6	0.0163			
		38.7	0.0132						167.8	0.0879			
		43.8	0.0051						168.4	0.0092			
		75.7	0.0093						176.5	0.0087			
		61.5	0.0000						177.2	0.0387			
		39.5	0.0167						186.6	0.0017			
		40.1	0.0303						202.0	0.0094			
		45.4	0.0117						204.2	0.0013			
		98.5	0.0247						209.0	0.0179			
		189.6	0.0110						227.2	0.0034			
		288.1	0.1256						232.4	0.0105			
		311.6	0.0392						236.6	0.0016			
		362.1	0.0018						236.7	0.0020			
		414.1	0.1866						237.0	0.0053			
		432.8	0.0535						240.1	0.0389			
		460.6	0.0042						254.3	0.0016			
		501.3	0.0675						258.1	0.0060			
		550.3	0.9487						275.2	0.0717			
		553.2	0.0040						280.1	0.0023			
		572.0	0.0021						290.8	0.0088			
		599.7	0.1254						306.7	0.0024			
		611.3	0.0548						323.9	0.0121			
		630.0	0.8900						325.8	0.0011			
		725.7	0.3284						329.8	0.0021			
		915.3	0.1717						340.1	0.2290			
		1014.0	0.2028						344.9	0.0218			
		714.8	0.0019						349.8	0.0014			
									353.3	0.0011			
149Pm	2.2d	39.5	0.0006	2.314-6	1.205	2.485			379.9	0.0097			
		40.1	0.0012						407.0	0.0019			
		45.4	0.0005						440.9	0.0153			
		285.9	0.0310						445.7	0.0408			
		859.4	0.0010						451.4	0.0030			
		598.3	0.0030						490.3	0.0013			
									516.3	0.0020			
151Pm	1.2d	25.7	0.0094	7.080-5	1.522	1.969			565.0	0.0036			
		39.5	0.0807						575.0	0.0012			
		40.1	0.1462						636.2	0.0147			
		45.4	0.0567						654.3	0.0025			
		62.9	0.0022						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				
									367.7	0.0086				
151Sm	90y	21.5	0.0003	2.442-8	0.004	776.6			411.1	0.0221				
153Sm	1.9d	40.9	0.1726	2.440-5	0.043	69.799			503.4	0.0015				
		41.5	0.3122						586.3	0.0045				
		47.0	0.1222						678.6	0.0047				
		69.7	0.0517						764.8	0.0017				
		75.4	0.0019						778.9	0.1274				
		83.4	0.0020						1090.0	0.0168				
		89.5	0.0016						1109.0	0.0017				
		97.4	0.0072						1299.0	0.0160				
		103.2	0.2830						631.4	0.0071				
		422.7	0.0028					152mEu	9.3h	39.5	0.0788	5.742-5	3.290	0.911
152Eu	13.6y	39.5	0.2083	2.009-4	3.604	0.831			40.1	0.1428				
		40.1	0.3773						45.4	0.0554				
		45.4	0.1464						121.8	0.0745				
		121.8	0.2843						562.9	0.0023				
		244.7	0.0749						841.5	0.1508				
		295.9	0.0043						961.1	0.0021				
		329.3	0.0012						963.4	0.1241				
		415.9	0.0010						1389.0	0.0088				
		444.0	0.0281						794.2	0.0041				
		444.0	0.0030						344.3	0.0249				
		488.7	0.0041						970.4	0.0062				
		564.0	0.0048						1315.0	0.0098				
		566.4	0.0013						676.7	0.0032				
		656.4	0.0014				154Eu	8.8y	42.3	0.0726	2.039-4	3.734	0.802	
		674.6	0.0015						43.0	0.1309				
		688.6	0.0084						48.7	0.0517				
		719.3	0.0027						123.1	0.4046				
		810.4	0.0031						188.3	0.0023				
		841.5	0.0016						247.9	0.0660				
		867.3	0.0416						401.3	0.0021				
		919.3	0.0040						444.5	0.0050				
		926.2	0.0026						478.3	0.0022				

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ	
	557.6	0.0026						811.8	0.1040					
	582.0	0.0084						820.4	0.0016					
	591.8	0.0483						841.1	0.0023					
	625.2	0.0031						858.4	0.0013					
	676.6	0.0014						866.0	0.0016					
	692.4	0.0169						867.0	0.0140					
	715.8	0.0017						944.4	0.0139					
	723.3	0.1970						947.5	0.0031					
	756.9	0.0433						960.5	0.0162					
	815.6	0.0047						961.0	0.0016					
	845.4	0.0055						969.8	0.0039					
	850.6	0.0023						1012.0	0.0034					
	873.2	0.1150						1027.0	0.0012					
	892.7	0.0046						1040.0	0.0053					
	904.0	0.0082						1065.0	0.0524					
	996.3	0.1029						1076.0	0.0037					
	1005.0	0.1789						1079.0	0.0489					
	1047.0	0.0014						1130.0	0.0014					
	1118.0	0.0010						1141.0	0.0030					
	1128.0	0.0027						1153.0	0.0718					
	1141.0	0.0022						1154.0	0.0530					
	1242.0	0.0013						1156.0	0.0014					
	1246.0	0.0090						1169.0	0.0029					
	1274.0	0.3549						1231.0	0.0894					
	1494.0	0.0065						1242.0	0.0676					
	1593.0	0.0103						1277.0	0.0321					
	1597.0	0.0185						1366.0	0.0176					
	710.5	0.0159						1682.0	0.0030					
								1857.0	0.0025					
155Eu	5.0y	26.5	0.0032	1.804-5	0.105	28.563		1877.0	0.0173					
		42.3	0.0647					1938.0	0.0214					
		43.0	0.1166					1946.0	0.0019					
		45.3	0.0129					1966.0	0.0420					
		48.7	0.0460					2027.0	0.0354					
		60.0	0.0111					2033.0	0.0013					
		86.1	0.0015					2098.0	0.0427					
		86.5	0.3090					2116.0	0.0013					
		105.3	0.2067					2181.0	0.0243					
		69.3	0.0018					2187.0	0.0395					
								2205.0	0.0100					
156Eu	15.2d	42.3	0.0383	1.978-4	4.622	0.648		2270.0	0.0112					
		43.0	0.0691					1103.0	0.0159					
		48.7	0.0273											
		89.0	0.0905				153Gd	241.6d	40.9	0.3579	4.659-5	0.038	79.273	
		199.2	0.0079						41.5	0.6472				
		434.4	0.0022						47.0	0.2533				
		472.7	0.0015						69.7	0.0257				
		490.3	0.0018						83.4	0.0022				
		599.5	0.0231						97.4	0.3130				
		646.3	0.0709						103.2	0.2222				
		709.9	0.0092						95.8	0.0022				
		723.5	0.0602											
		797.7	0.0011				159Gd	18.6h	43.7	0.0430	1.059-5	0.827	3.622	

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
		44.5	0.0773						622.5	0.0088			
		50.4	0.0307						697.4	0.0254			
		58.0	0.0176						807.5	0.4210			
		226.0	0.0016						882.3	0.1322			
		348.2	0.0017						888.2	0.3806			
		363.6	0.0840						1068.0	0.0055			
		364.0	0.0021						1288.0	0.0015			
									1611.0	0.0014			
162Gd	9.7m	38.8	0.0647	8.341–5	1.313	2.282			1453.0	0.0114			
		43.7	0.0016										
		44.5	0.0029				157Dy	8.1h	43.7	0.2354	8.357–5	0.739	4.053
		50.4	0.0012						44.5	0.4227			
		402.8	0.4620						50.4	0.1678			
		441.6	0.5313						60.8	0.0045			
157Tb	150y	42.3	0.0265	2.426–6	0.026	114.4			83.0	0.0058			
		43.0	0.0478						182.2	0.0165			
		48.7	0.0189						265.3	0.0018			
		54.5	0.0001						326.2	0.9380			
									594.2	0.0047			
160Tb	72.3d	45.2	0.0603	1.787–4	3.594	0.834	165Dy	2.3h	46.7	0.0259	6.177–6	1.646	1.820
		46.0	0.1079						47.5	0.0461			
		52.1	0.0432						53.9	0.0186			
		86.8	0.1330						94.7	0.0358			
		197.0	0.0490						279.8	0.0050			
		215.7	0.0371						361.7	0.0084			
		298.6	0.2707						545.8	0.0016			
		309.6	0.0082						565.7	0.0013			
		337.3	0.0033						633.4	0.0057			
		392.5	0.0128						715.3	0.0053			
		682.3	0.0055						641.4	0.0067			
		765.3	0.0193										
		872.0	0.0018				166Dy	3.4d	28.2	0.0101	1.550–5	0.129	23.196
		879.4	0.2850						46.7	0.1358			
		962.3	0.0902						47.5	0.2420			
		966.1	0.2422						53.9	0.0978			
		1003.0	0.0097						54.2	0.0070			
		1103.0	0.0052						82.5	0.1290			
		1115.0	0.0150						371.7	0.0049			
		1178.0	0.1444						426.0	0.0054			
		1200.0	0.0236						333.9	0.0007			
		1272.0	0.0703										
		1312.0	0.0285				166Ho	1.1d	48.2	0.0286	6.258–6	3.403	0.880
		651.4	0.0051						49.1	0.0508			
									55.7	0.0207			
162Tb	7.8m	45.2	0.0507	1.923–4	2.944	1.018			80.6	0.0620			
		46.0	0.0908						1379.0	0.0093			
		52.1	0.0364						1582.0	0.0018			
		80.7	0.0850						1662.0	0.0012			
		185.0	0.0265						1182.0	0.0008			
		185.3	0.1419										
		260.1	0.7873				166mHo	1200.0y	48.2	0.1089	2.863–4	2.627	1.140
		543.2	0.0011						49.1	0.1934			

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			
169Er	9.4d	110.5	0.00003	406-10	0.065	46.160			144.9	0.0034			
171Er	7.5h	49.8	0.1309	8.008-5	0.757	3.960			282.5	0.0302			
		50.7	0.2316						396.3	0.0650			
		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						579.9	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			
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			
									222.1	0.0833			
188W	69.4d	63.6	0.0011	3.615-7	0.562	5.327			226.2	0.0325			
		227.1	0.0022						229.3	0.2500			
		290.7	0.0040						247.4	0.0489			
		165.2	0.0002						256.4	0.1004			
182Re	2.7d	31.7	0.0043	3.076-4	3.512	0.853			264.1	0.0376			
		39.1	0.0030						276.3	0.0902			
		42.7	0.0028						281.4	0.0579			
		58.0	0.4990						286.6	0.0752			
		59.3	0.8678						295.7	0.0019			
		60.6	0.0011						300.0	0.0122			
		65.7	0.0265						300.5	0.0165			
		67.2	0.3690						313.9	0.0060			
		67.7	0.2201						323.4	0.0190			
		84.7	0.0267						339.1	0.0560			
		100.1	0.1453						342.0	0.0103			
		107.2	0.0137						345.4	0.0047			
		108.6	0.0077						351.1	0.1032			
		110.4	0.0010						357.1	0.0051			
		111.1	0.0020						928.0	0.0036			
		113.7	0.0438						943.0	0.0022			
		116.4	0.0049						959.7	0.0019			
		130.8	0.0727						1002.0	0.0242			
		131.3	0.0016						1044.0	0.0028			
		133.8	0.0246						1076.0	0.1019			
		145.4	0.0064						1088.0	0.0019			
		147.6	0.0088						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
	111.2	0.1714						71.4	0.0086				
	252.8	0.0302						137.2	0.0952				
	539.2	0.0033						702.2	0.0006				
	641.9	0.0194											
	769.8	0.0067					188Re	17.0h	61.5	0.0136	1.093-5	2.261	1.325
	792.1	0.3746							63.0	0.0235			
	894.8	0.1559							71.4	0.0101			
	903.3	0.3788							155.0	0.1497			
	1023.0	0.0052							478.0	0.0105			
	1275.0	0.0012							633.1	0.0126			
	1386.0	0.0010							635.0	0.0015			
	787.3	0.0029							672.5	0.0011			
									829.5	0.0041			
184mRe	169.0d	59.7	0.1407	7.671-5	2.473	1.211			931.3	0.0056			
		61.1	0.2438						1134.0	0.0072			
		69.3	0.1042										
		104.7	0.1328				185Os	93.6d	59.7	0.2099	1.310-4	2.457	1.219
		87.3	0.0001						61.1	0.3638			
		55.3	0.0236						69.3	0.1555			
		58.0	0.0851						71.3	0.0025			
		59.3	0.1480						125.4	0.0035			
		63.7	0.0038						162.9	0.0056			
		67.2	0.0629						234.2	0.0041			
		87.5	0.0024						592.1	0.0131			
		91.3	0.0026						646.1	0.8020			
		111.2	0.0592						717.4	0.0408			
		124.1	0.0015						874.8	0.0654			
		161.3	0.0664						880.3	0.0495			
		215.3	0.0284						910.0	0.0006			
		216.5	0.0963										
		226.8	0.0151				190mOs	9.9m	61.5	0.0570	2.995-4	1.777	1.686
		252.8	0.1091						63.0	0.0984			
		318.0	0.0588						71.4	0.0423			
		384.2	0.0320						186.7	0.7020			
		536.7	0.0337						361.1	0.9488			
		641.9	0.0035						502.6	0.9778			
		769.8	0.0024						616.1	0.9862			
		792.1	0.0377						38.9	0.0010			
		857.2	0.0017										
		894.8	0.0281				191Os	15.4d	63.3	0.1601	1.837-5	0.086	34.767
		903.3	0.0382						64.9	0.2756			
		920.9	0.0831						73.6	0.1190			
		1023.0	0.0018						129.4	0.2590			
		1110.0	0.0060						73.2	0.0004			
		1174.0	0.0124										
		647.4	0.0027				191mOs	13.0h	61.5	0.0199	1.449-6	0.073	40.828
									63.0	0.0345			
186Re	3.8d	58.0	0.0160	4.909-6	0.105	28.583			71.4	0.0148			
		59.3	0.0278						74.4	0.0006			
		67.2	0.0118										
		122.3	0.0070				193Os	1.2d	63.3	0.0357	1.412-5	1.221	2.454
		61.5	0.0116						64.9	0.0614			
		63.0	0.0200						73.0	0.0348			

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				
190Ir	11.8d	61.5	0.2471	2.666-4	1.895	1.581		1397.0	0.0014				
		63.0	0.4267					823.7	0.0079				
		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				190mIr	3.2h	63.3	0.0031	1.499-5	0.073	40.962
		196.9	0.0324						64.9	0.0053			
		198.1	0.0184						73.6	0.0023			
		199.3	0.0022						148.7	0.0001			
		207.9	0.0032						61.5	0.2051			
		207.9	0.0112						63.0	0.3542			
		223.8	0.0354						71.4	0.1521			
		235.5	0.0040										
		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
		588.6	0.0457						219.6	0.0082			
		604.4	0.0820						221.7	0.0012			
		612.5	0.0534						223.7	0.0011			
		884.5	0.0030						267.9	0.0078			
		871.7	0.0010						268.7	0.0165			
									351.2	0.0346			
193mIr	11.9d	63.3	0.0014	1.017-7	0.080	37.618			359.9	0.0600			
		64.9	0.0024						409.4	0.0800			
		73.6	0.0010						456.5	0.0336			
		80.3	0.0000						538.9	0.1368			
									541.6	0.0037			
194Ir	19.1h	65.1	0.0023	1.672-5	2.400	1.248			576.5	0.0012			
		66.8	0.0039						587.9	0.0014			
		75.7	0.0017						624.1	0.0141			
		293.5	0.0255						404.2	0.0079			
		300.7	0.0035										
		328.5	0.1310				193mPt	4.3d	12.6	0.0074	4.649-6	0.074	40.629
		589.2	0.0014						65.1	0.0431			
		622.0	0.0034						66.8	0.0739			
		645.2	0.0117						75.7	0.0322			
		938.7	0.0060						135.5	0.0011			
		1151.0	0.0060										
		1184.0	0.0030				195mPt	4.0d	30.9	0.0227	2.029-5	0.082	36.632
		1469.0	0.0019						65.1	0.2235			
		1093.0	0.0088						66.8	0.3834			
									75.7	0.1669			
194mIr	171.0d	65.1	0.0481	4.355-4	1.886	1.589			98.9	0.1134			
		66.8	0.0826						129.8	0.0281			
		75.7	0.0359						174.4	0.0021			
		111.7	0.0890										
		189.1	0.0160				197Pt	18.3h	67.0	0.0093	5.647-6	0.170	17.673
		324.0	0.0200						68.8	0.0160			
		328.5	0.9290						77.4	0.1700			
		338.8	0.5500						78.0	0.0070			
		390.8	0.3510						191.4	0.0349			
		482.9	0.9700						268.7	0.0027			
		562.4	0.3470										
		562.4	0.3520				197mPt	1.6h	52.9	0.0107	1.931-5	0.654	4.581
		600.5	0.6200						65.1	0.1353			
		687.8	0.5900						66.8	0.2321			
		1012.0	0.0360						75.7	0.1010			
		356.8	0.0019						346.5	0.1141			
									67.0	0.0023			
191Pt	2.7d	63.3	0.3792	6.569-5	1.203	2.491			68.8	0.0040			
		64.9	0.6526						78.0	0.0017			
		73.6	0.2817						130.4	0.0011			
		82.4	0.0502						279.0	0.0235			
		96.5	0.0338						194.6	0.0004			
		129.4	0.0298										
		172.2	0.0334				194Au	1.6d	65.1	0.2278	1.776-4	3.969	0.755
		179.0	0.0102						66.8	0.3907			
		187.7	0.0042						75.7	0.1701			
		209.0	0.0014						164.0	0.0013			

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
	1091.0	0.0015						252.0	0.0038				
	543.0	0.0017						289.4	0.0052				
	68.9	0.0005						309.2	0.0026				
	70.8	0.0009						367.9	0.8730				
	80.3	0.0004						387.4	0.0016				
	426.1	0.0666						476.8	0.0032				
198Au	2.7d	68.9	0.0081	7.881-5	1.293	2.317		579.3	0.1379				
		70.8	0.0137					591.7	0.0029				
		80.3	0.0060					612.1	0.0024				
		411.8	0.9551					628.8	0.0100				
		675.9	0.0106					661.4	0.0228				
		1088.0	0.0023					688.9	0.0011				
199Au	3.1d	49.8	0.0033	1.866-5	0.186	16.121		701.6	0.0129				
		68.9	0.0484					711.7	0.0027				
		70.8	0.0824					783.7	0.0057				
		80.3	0.0362					787.1	0.0103				
		158.4	0.3680					828.3	0.1083				
		208.2	0.0835					886.2	0.0202				
197Hg	2.7d	67.0	0.2069	1.874-5	0.100	29.898		898.6	0.0062				
		68.8	0.3536					1147.0	0.0012				
		77.4	0.1850					1167.0	0.0010				
		78.0	0.1547					1181.0	0.0011				
		191.4	0.0050					1202.0	0.0011				
		268.7	0.0004					1206.0	0.2994				
197mHg	23.8h	68.9	0.0977	2.059-5	0.206	14.537		1225.0	0.0336				
		70.8	0.1661					1254.0	0.0093				
		80.3	0.0731					1263.0	0.0079				
		133.9	0.3404					1274.0	0.0332				
		165.0	0.0027					1291.0	0.0060				
		67.0	0.0191					1350.0	0.0015				
		68.8	0.0326					1363.0	0.0341				
		78.0	0.0143					1367.0	0.0087				
		130.4	0.0023					1408.0	0.0145				
		279.0	0.0498					1478.0	0.0015				
		194.6	0.0010					1515.0	0.0402				
203Hg	46.6d	10.3	0.0722	6.841-5	0.499	6.007		1571.0	0.0027				
		70.8	0.0475					1604.0	0.0117				
		72.9	0.0804					1718.0	0.0033				
		82.6	0.0356					1759.0	0.0018				
		279.2	0.7730					1906.0	0.0011				
200Tl	1.1d	68.9	0.2362	2.249-4	3.380	0.886	201Tl	3.0d	30.6	0.0022	2.372-5	0.114	26.211
		70.8	0.4018					32.2	0.0022				
		80.3	0.1767					68.9	0.2736				
		116.5	0.0011					70.8	0.4652				
		140.9	0.0017					80.3	0.2046				
		151.9	0.0015					135.3	0.0265				
		164.5	0.0021					165.9	0.0016				
								167.4	0.1000				

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			
207Tl	4.8m	897.8	0.0024	3.523-7	3.442	0.870			2010.0	0.0693			
		459.1	0.0000						2090.0	0.0495			
208Tl	3.1m	10.6	0.0289	4.497-4	5.397	0.555			2280.0	0.0297			
		72.8	0.0203						2360.0	0.0792			
		75.0	0.0343						2430.0	0.0891			
		84.9	0.0152										
		211.4	0.0017						203Pb	2.2d	10.3	0.3920	1.828-4
		233.4	0.0031								70.8	0.2663	
		252.6	0.0080								72.9	0.4513	
		277.4	0.0679								82.6	0.1995	
		510.8	0.2156								279.2	0.7680	
		583.1	0.8423								401.3	0.0330	
		722.0	0.0020								680.5	0.0067	
		763.1	0.0164						204mPb	1.1h	10.6	0.0492	3.649-4
		860.4	0.1245								72.8	0.0258	
		927.6	0.0012								75.0	0.0436	
		982.7	0.0020								84.9	0.0194	
		1094.0	0.0037								289.3	0.0017	
		2615.0	0.9980								374.7	0.9411	
		840.4	0.0036								622.2	0.0022	
											899.2	0.9916	
											911.7	0.9113	
209Tl	2.2m	10.6	0.0872	3.482-4	4.248	0.705					779.7	0.0006	
		72.8	0.0588										
		75.0	0.0993						205Pb	1.5+7y	10.3	0.2268	6.789-5
		84.9	0.0441								0.002	1345.	
		117.2	0.7700						210Pb	22.3y	10.8	0.2432	6.801-5
		465.1	0.9658								0.003	1098.	
		1567.0	0.9969								46.5	0.0405	
									211Pb	36.1m	10.8	0.0028	9.822-6
											2.474	1.211	
210Tl	1.3m	10.6	0.1260	4.575-4	4.057	0.738					74.8	0.0012	
		72.8	0.0255								77.1	0.0021	
		75.0	0.0431								87.3	0.0009	
		84.9	0.0191								404.8	0.0294	
		97.0	0.0396								427.1	0.0132	
		298.0	0.7917								704.6	0.0037	
		356.0	0.0396								766.5	0.0054	
		382.0	0.0297								832.0	0.0286	
		480.0	0.0198								517.6	0.0047	
		670.0	0.0198										
		799.7	0.9896						212Pb	10.6h	10.8	0.1549	7.389-5
		860.0	0.0693								0.270	11.112	
											74.8	0.1069	

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ
	77.1	0.1800						1019.0	0.0759				
	87.3	0.0803						1098.0	0.1350				
	115.2	0.0060						1142.0	0.0011				
	238.6	0.4465						1195.0	0.0028				
	300.1	0.0341						1203.0	0.0010				
	176.7	0.0005						1332.0	0.0028				
214Pb	26.8m	10.8	0.1350	8.741-5	0.744	4.029		1405.0	0.0143				
		53.2	0.0110					1496.0	0.0018				
		74.8	0.0621					1560.0	0.0038				
		77.1	0.1046					1565.0	0.0030				
		87.3	0.0467					1595.0	0.0501				
		242.0	0.0749					1719.0	0.3184				
		258.8	0.0055					1844.0	0.0057				
		274.5	0.0033					1879.0	0.0201				
		295.2	0.1925					1904.0	0.0035				
		351.9	0.3721					2600.0	0.0013				
		462.1	0.0017					928.7	0.0124				
		480.4	0.0034				207Bi	33.4y	10.6	0.3590	3.590-4	2.952	1.015
		487.1	0.0044						72.8	0.2178			
		533.7	0.0019						75.0	0.3679			
		580.2	0.0037						84.9	0.1634			
		785.9	0.0110						569.7	0.9772			
		839.0	0.0059						897.8	0.0015			
		280.7	0.0033						1064.0	0.7485			
206Bi	6.2d	10.6	0.4894	6.797-4	3.167	0.946		1442.0	0.0015				
		72.8	0.3205					1770.0	0.0684				
		75.0	0.5415					328.2	0.0000				
		84.9	0.2405				208Bi	3.7+5y	10.6	0.3101	4.014-4	5.613	0.534
		184.0	0.1582						72.8	0.1232			
		234.3	0.0024						75.0	0.2080			
		262.7	0.0302						84.9	0.0924			
		313.7	0.0036						2615.0	0.9980			
		343.5	0.2344										
		386.2	0.0052				211Bi	2.1m	10.3	0.0105	1.274-5	0.828	3.617
		398.0	0.1074						70.8	0.0075			
		452.8	0.0016						72.9	0.0127			
		497.1	0.1531						82.6	0.0056			
		516.2	0.4074						351.1	0.1295			
		537.5	0.3046										
		576.4	0.0011				212Bi	1.0h	10.3	0.0769	5.252-5	2.872	1.043
		582.0	0.0048						39.9	0.0102			
		620.5	0.0576						70.8	0.0003			
		632.3	0.0447						72.9	0.0006			
		657.2	0.0191						82.6	0.0002			
		739.2	0.0016						288.1	0.0032			
		755.0	0.0053						328.0	0.0013			
		784.6	0.0054						452.8	0.0035			
		803.1	0.9889						379.5	0.0009			
		841.3	0.0019						11.1	0.0004			
		881.0	0.6616						76.9	0.0004			
		895.1	0.1565						79.3	0.0006			

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
227Th	18.7d	12.3	0.4180	1.145–4	0.203	14.730	230Th	7.7+4y	68.2	0.0010			
		20.3	0.0020						68.9	0.0011			
		29.9	0.0010						75.2	0.0052			
		43.7	0.0023						85.4	0.1647			
		49.9	0.0020						86.3	0.0038			
		50.1	0.0840						86.4	0.0306			
		62.2	0.0024						88.5	0.2714			
		79.8	0.0200						100.0	0.1243			
		85.4	0.0141						107.2	0.0084			
		88.5	0.0232						124.5	0.0122			
		94.0	0.0140						124.7	0.0061			
		100.0	0.0106						132.0	0.0033			
		113.1	0.0017						137.0	0.0163			
		113.1	0.0054						142.9	0.0043			
		117.2	0.0018						148.3	0.0139			
		141.2	0.0014						154.4	0.0066			
		204.3	0.0023						156.5	0.0112			
		205.0	0.0017						172.9	0.0022			
		206.0	0.0026						179.8	0.0051			
		210.6	0.0126						184.0	0.0023			
		234.9	0.0046						193.6	0.0459			
		236.0	0.1150						211.0	0.0326			
		250.1	0.0049						218.1	0.0014			
		252.5	0.0011						130.8	0.0007			
		254.7	0.0091				231Th	1.1d	12.3	0.0843	1.861–5	0.004	815.2
		256.2	0.0630						67.7	0.0037			
		262.9	0.0010						168.1	0.0007			
		273.0	0.0049										
		281.3	0.0017										
228Th	1.9y	286.1	0.0160				232Th	1.4+10y	13.3	0.7077	1.473–4	0.004	679.1
		296.6	0.0042						17.2	0.0019			
		299.8	0.0184						25.6	0.1465			
		300.3	0.0028						58.6	0.0048			
		304.4	0.0135						72.8	0.0025			
		312.6	0.0043						81.2	0.0088			
		314.8	0.0042						82.1	0.0040			
		329.7	0.0290						84.2	0.0644			
		334.2	0.0115						90.0	0.0093			
		342.4	0.0034						92.3	0.0035			
		350.5	0.0012						95.9	0.0057			
		185.0	0.0173						99.3	0.0012			
									102.3	0.0041			
229Th	7340.0y	12.3	0.0956	2.142–5	0.004	731.9	233Th	22.3m	108.0	0.0026			
		84.4	0.0121						163.1	0.0015			
		131.6	0.0012						114.3	0.0057			
		216.0	0.0024										
		172.5	0.0011										

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ	
		88.0	0.0030						918.5	0.0814				
		92.3	0.0023						952.0	0.2878				
		94.7	0.0080						953.0	0.0016				
		95.9	0.0038						956.3	0.0157				
		108.0	0.0018						959.3	0.0049				
		162.5	0.0017						1010.0	0.0107				
		162.5	0.0015						1026.0	0.0144				
		169.2	0.0034						1075.0	0.0074				
		170.7	0.0013						537.2	0.0092				
		190.5	0.0013						13.6	0.0382				
		195.1	0.0016						314.8	0.0011				
		359.9	0.0012						297.6	0.0017				
		441.0	0.0023											
		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			
		518.5	0.0195							120.5	0.0021			
		556.0	0.0020											
		571.1	0.0107					234Pa	6.7h	13.6	1.1360	5.348-4	2.705	1.107
		581.8	0.0013							43.5	0.0012			
		619.7	0.0016							63.0	0.0326			
		728.2	0.0187							69.9	0.0023			
		781.4	0.0147							79.7	0.0012			
		898.6	0.0576							94.7	0.1570			

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			
234U	2.44+5y	13.0	0.1050	2.097-5	0.004	720.7			819.2	0.0014			
		53.2	0.0012						844.1	0.0016			
		121.4	0.0004				240U	14.1h	13.9	0.4309	7.686-5	0.003	921.3
235U	7.04+8y	13.0	0.3091	9.159-5	0.132	22.675			44.1	0.0165			
		72.7	0.0011				235Np	1.1y	13.6	0.3766	6.979-5	0.004	840.5
		90.0	0.0273						94.7	0.0051			
		93.3	0.0446						98.4	0.0083			
		105.0	0.0206						111.0	0.0039			
		109.1	0.0150				236Np	1.15+5y	13.6	1.3100	2.833-4	0.019	161.6
		120.0	0.0015						45.2	0.0015			
		140.8	0.0022						94.7	0.2070			
		143.8	0.1050						98.4	0.3355			
		163.3	0.0470						104.2	0.0747			
		182.7	0.0040						111.0	0.1562			
		183.7	0.5400						160.3	0.2760			
		194.9	0.0059						14.3	0.0884			
		202.1	0.0100						99.6	0.0008			
		205.3	0.0470						100.0	0.0052			
		221.4	0.0010						103.8	0.0013			
		190.3	0.0092						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				237Np	2.1+6y	13.3	0.5919	1.251-4	0.006	512.0
		164.6	0.0186						29.4	0.1399			
		208.0	0.2202						46.5	0.0014			
		267.5	0.0072						57.1	0.0042			
		332.4	0.0122						86.5	0.1260			
		370.9	0.0011						88.0	0.0016			
		262.9	0.0025						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			
239U	23.4m	13.9	0.1326	3.629-5	0.124	24.144			108.0	0.0119			
		43.5	0.0427						117.7	0.0017			
		74.7	0.4800						143.2	0.0042			
		117.7	0.0014						151.4	0.0025			
									195.1	0.0021			

Nuclide	Half-life	E	Prob.	Γ	T	μ	Nuclide	Half-life	E	Prob.	Γ	T	μ	
		212.4	0.0016						280.2	0.0037				
		163.6	0.0105						295.0	0.0065				
									307.0	0.0139				
238Np	2.1d	14.3	0.3739	1.497-4	3.104	0.965			448.2	0.1669				
		44.1	0.0010						462.2	0.0139				
		99.6	0.0011						467.4	0.0204				
		101.9	0.0021						507.2	0.0185				
		103.8	0.0018						566.4	0.2688				
		117.0	0.0008						601.1	0.2039				
		561.2	0.0010						606.1	0.0158				
		882.6	0.0076						847.0	0.0464				
		918.7	0.0051						867.4	0.0834				
		924.0	0.0248						884.9	0.0371				
		936.6	0.0033						888.8	0.0111				
		941.4	0.0045						896.5	0.1298				
		962.8	0.0061						916.0	0.0139				
		984.4	0.2380						959.1	0.0232				
		1026.0	0.0821						973.9	0.2132				
		1028.0	0.1737						987.8	0.0464				
		503.9	0.0054						1074.0	0.0093				
									1089.0	0.0046				
239Np	2.4d	14.3	0.6179	1.386-4	0.154	19.449			1131.0	0.0065				
		49.4	0.0010						1163.0	0.0065				
		57.3	0.0015						1168.0	0.0464				
		61.5	0.0096						1180.0	0.0065				
		99.6	0.1471						1223.0	0.0046				
		103.8	0.2365						422.7	0.0020				
		106.1	0.2270											
		117.0	0.1113					240mNp	7.4m	20.0	0.0000	1.140-4	2.010	1.490
		181.7	0.0011						14.3	0.3374				
		209.7	0.0324						66.5	0.0027				
		226.4	0.0034						98.9	0.0017				
		228.2	0.1072						99.6	0.0013				
		254.4	0.0010						103.8	0.0021				
		277.6	0.1410						117.0	0.0010				
		285.4	0.0078						189.5	0.0025				
		315.9	0.0159						251.5	0.0096				
		334.3	0.0203						263.4	0.0117				
		151.5	0.0039						303.0	0.0112				
									507.2	0.0079				
240Np	65m	14.3	1.0940	3.820-4	2.233	1.342			554.6	0.2237				
		42.8	0.0011						597.4	0.1249				
		98.9	0.0510						606.1	0.0074				
		99.6	0.0852						758.6	0.0119				
		103.8	0.1370						789.6	0.0021				
		117.0	0.0644						813.4	0.0021				
		134.6	0.0037						817.9	0.0124				
		147.2	0.0139						841.1	0.0017				
		152.2	0.0834						857.5	0.0047				
		175.0	0.0603						900.5	0.0013				
		182.6	0.0093						910.1	0.0017				
		192.7	0.0677						916.0	0.0104				
		270.8	0.0834						928.6	0.0017				

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			
237Pu	45.3d	13.9	0.5254	1.039–4	0.014	212.7			514.6	0.0018			
		26.3	0.0024						525.1	0.0029			
		59.5	0.0328						560.0	0.0576			
		97.1	0.1278						591.6	0.0018			
		101.1	0.2064						598.8	0.0013			
		114.0	0.0966						624.4	0.0023			
		33.2	0.0008						630.0	0.0288			
238Pu	87.8y	13.6	0.1158	2.135–5	0.003	864.8			657.2	0.0014			
		55.3	0.0005						660.2	0.0090			
239Pu	2.41+4y	13.6	0.0441	8.145–6	0.003	860.3			669.3	0.0036			
		112.9	0.0005						708.0	0.0029			
240Pu	6569y	13.6	0.1101	2.030–5	0.003	864.4			730.4	0.0020			
		54.3	0.0005						738.0	0.0023			
242Pu	3.76+5y	13.6	0.0913	1.684–5	0.003	864.4			740.2	0.0014			
		56.4	0.0004						743.7	0.0016			
243Pu	5.0h	14.6	0.1188	2.509–5	0.084	35.548			762.7	0.0076			
		41.8	0.0076						766.6	0.0038			
		67.0	0.0023						776.7	0.0022			
		84.0	0.2300						786.5	0.0040			
		102.1	0.0009						796.4	0.0027			
		106.5	0.0015						799.9	0.0167			
		109.3	0.0016						817.0	0.0090			
		120.0	0.0007						833.1	0.0056			
		356.4	0.0013						840.6	0.0137			
		381.7	0.0055						859.5	0.0054			
		137.2	0.0018						868.8	0.0013			
244Pu	8.3+7y	13.6	0.0793	1.462–5	0.003	865.1			874.2	0.0014			
		44.0	0.0003						887.1	0.0076			
245Pu	10.6h	14.6	0.1750	1.045–4	2.092	1.432			910.5	0.0148			
		28.0	0.0072						938.4	0.0108			
		102.1	0.0753						941.0	0.0027			
		106.5	0.1208						957.6	0.0104			
		120.0	0.0571						975.0	0.0027			
									977.2	0.0041			
									987.6	0.0140			
									996.0	0.0022			
									1005.0	0.0029			
									1007.0	0.0043			
									1013.0	0.0011			
									1018.0	0.0110			
									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			
									109.3	0.0141			
241Am	432.2y	13.9	0.4270	8.479-5	0.011	260.7			123.0	0.0067			
		26.3	0.0240						237.2	0.0014			
		33.2	0.0011						238.6	0.0015			
		59.5	0.3590						244.0	0.0068			
		69.2	0.0018						261.7	0.0016			
									270.1	0.0103			
242Am	16.0h	14.3	0.1266	5.476-5	0.004	720.7			287.8	0.0013			
		99.6	0.0366						401.7	0.0027			
		103.8	0.0589						493.5	0.0011			
		117.0	0.0277						602.5	0.0023			
		44.5	0.0001						649.5	0.0037			
		15.0	0.1965						684.3	0.0059			
		42.2	0.0004						698.3	0.0012			
									717.2	0.0025			
242mAm	152y	14.6	0.2993	4.950-5	0.003	1132.			724.8	0.0021			
		48.6	0.0000						734.4	0.0117			
		13.9	0.0038						745.1	0.0024			
		49.4	0.0020						752.1	0.0082			
		108.3	0.0016						759.6	0.0064			
									781.3	0.0017			
243Am	7380.0y	13.9	0.3905	8.456-5	0.042	71.213			798.8	0.2490			
		43.5	0.0554						833.6	0.0179			
		74.7	0.6600						986.0	0.0096			
		86.7	0.0034						1036.0	0.1275			
		117.7	0.0055						1062.0	0.1721			
		142.2	0.0013						1079.0	0.2789			
		48.4	0.0016						1081.0	0.0025			
									1085.0	0.0153			
244Am	10.1h	15.0	1.1690	3.166-4	2.108	1.421			1124.0	0.0026			
		99.4	0.0483						1207.0	0.0015			
		104.6	0.0226						1250.0	0.0015			
		109.3	0.0361						1275.0	0.0027			
		123.0	0.0171						1349.0	0.0012			
		154.0	0.1800						1479.0	0.0023			
		206.0	0.0026						1529.0	0.0022			
		540.0	0.0038						1551.0	0.0027			
		746.0	0.6700						1591.0	0.0052			
		900.0	0.2800						1604.0	0.0010			
		42.9	0.0009						1619.0	0.0012			
									1638.0	0.0016			
245Am	2.0h	15.0	0.1100	2.341-5	0.169	17.710			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				250Cf	13.1y	15.0	0.0780	1.212–5	0.002	1269.
		117.0	0.0091						76.6	0.0003			
		275.1	0.0052										
		278.0	0.0340				251Cf	900.0y	15.0	0.5962	1.162–4	0.068	43.960
		287.4	0.0200						61.5	0.0056			
		333.0	0.0034						68.0	0.0020			
		346.0	0.0130						73.0	0.0030			
		402.6	0.7200						83.0	0.0010			
		116.1	0.0011						104.6	0.1548			
									109.3	0.2469			
248Cm	3.4+5y	14.3	0.0727	1.227–5	0.003	1054.			123.0	0.1173			
		56.2	0.0003						135.0	0.0010			
249Cm	1.1h	15.3	0.0038	3.982–6	2.025	1.479			144.0	0.0010			
		107.2	0.0008						154.0	0.0020			
		112.1	0.0012						176.6	0.1770			
									214.0	0.0020			

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