

1 Half-life, Q-value and Decay mode

$T_{1/2}$:	26	(3)	min
Q_{β^-}	:	1516	(3)	keV
Q_{EC}	:	164	(9)	keV
β^-	:	99.964	(1)	%
EC	:	0.036	(1)	%

2 Electron Capture Transitions

	Energy keV	Probability $\times 100$	Nature	$\log ft$	P_K	P_L	P_{M+}
$\epsilon_{0,0}$	164 (9)	0.036 (1)	allowed	6.37	0.24 (5)	0.53 (4)	0.168 (12)

3 β^- Transitions

	Energy keV	Probability $\times 100$	Nature	$\log ft$
$\beta_{0,11}^-$	410 (3)	0.35 (9)	(1st forbidden non-unique)	6.8
$\beta_{0,10}^-$	432 (3)	0.56 (13)	(allowed)	6.67
$\beta_{0,7}^-$	496 (3)	0.08 (2)	(allowed)	7.7
$\beta_{0,6}^-$	531.1 (30)	1.36 (16)	allowed	6.58
$\beta_{0,1}^-$	1473 (3)	31 (9)	allowed	6.74
$\beta_{0,0}^-$	1516 (3)	67 (9)	allowed	6.45

4 Electron Emissions

		Energy keV	Electrons per 100 disint.	Energy keV
e_{AL}	(Pu)	6.19 - 22.99	0.0124 (11)	
e_{AK}	(Pu)		0.000253 (45)	
	KLL	75.263 - 85.357	}	
	KLX	92.607 - 103.729	}	
	KXY	109.93 - 121.78	}	
e_{AL}	(Cm)	6.19 - 14.46	10.6 (23)	
e_{AK}	(Cm)		0.00125 (27)	
	KLL	78.858 - 89.973	}	
	KLX	97.226 - 109.267	}	
	KXY	115.57 - 128.23	}	
$ec_{1,0} L$	(Cm)	18.439 - 23.995	23 (7)	
$ec_{1,0} M+$	(Cm)	36.628 - 42.965	9 (3)	
$ec_{6,0} T$	(Cm)	856.66 - 984.91	1.0 (1)	
$\beta_{0,11}^-$	max:	410 (3)	0.35 (9)	avg: 116.9 (7)

		Energy keV		Electrons per 100 disint.	Energy keV
$\beta_{0,10}^-$	max:	432	(3)	0.56 (13)	avg: 123.7 (7)
$\beta_{0,7}^-$	max:	496	(3)	0.08 (2)	avg: 144.0 (7)
$\beta_{0,6}^-$	max:	531.1	(30)	1.36 (16)	avg: 155.7 (7)
$\beta_{0,1}^-$	max:	1473	(3)	31 (9)	avg: 495.8 (9)
$\beta_{0,0}^-$	max:	1516	(3)	67 (9)	avg: 512.3 (9)

5 Photon Emissions

5.1 X-Ray Emissions

		Energy keV		Photons per 100 disint.	
XL	(Cm)	12.633 — 23.527		12.3 (27)	
XK α_2	(Cm)	104.59		0.013 (4)	} K α
XK α_1	(Cm)	109.271		0.020 (6)	}
XK β_3	(Cm)	122.304	}		
XK β_1	(Cm)	123.403	}	0.0076 (21)	K β'_1
XK β_5''	(Cm)	124.124	}		
XK β_2	(Cm)	126.889	}		
XK β_4	(Cm)	127.352	}	0.0027 (8)	K β'_2
XKO $_{2,3}$	(Cm)	127.97	}		

5.2 Gamma Transitions and Emissions

	Energy keV	P $_{\gamma+ce}$ × 100	Multipolarity	α_T	P $_{\gamma}$ × 100
$\gamma_{1,0}$ (Cm)	42.965 (10)	32 (9)	E2	1050 (15)	0.030 (9)
$\gamma_{6,1}$ (Cm)	941.95 (3)	0.36 (12)	E2	0.01547 (22)	0.35 (12)
$\gamma_{7,1}$ (Cm)	977.80 (4)	0.08 (2)	E0(+M1+E2)		
$\gamma_{6,0}$ (Cm)	984.91 (2)	1.0 (1)	E0		
$\gamma_{10,1}$ (Cm)	1041.22 (3)	0.19 (6)	(M1+E2)		0.19 (6)
$\gamma_{11,1}$ (Cm)	1062.95 (3)	0.30 (9)	anomalous E1	0.11 (3)	0.27 (8)
$\gamma_{10,0}$ (Cm)	1084.181 (14)	0.37 (12)	anomalous (E2)	0.041 (11)	0.36 (12)
$\gamma_{11,0}$ (Cm)	1105.91 (2)	0.05 (2)	anomalous (E1)	0.17 (4)	0.04 (2)

6 References

- K.STREET JR., A.GHIORSO, G.T.SEABORG, Phys. Rev. 79 (1950) 530
(Half-life)
- A.GHIORSO, S.G.THOMPSON, G.R.CHOPPIN, B.G.HARVEY, Phys. Rev. 94 (1954) 1081
(Half-life)
- P.R.FIELDS JR., J.E.GINDLER, A.L.HARKNESS, M.H.STUDIER, J.R.HUIZENGA, A.M.FRIEDMAN, Phys. Rev. 100 (1955) 172
(Electron Capture/Beta minus ratio)

- S.E.VANDENBOSCH, P.DAY, Nucl. Phys. 30 (1962) 177
(Spin and Parity)
- R.VANDENBOSCH, P.R.FIELDS, S.E.VANDENBOSCH, D.METTA, J. Inorg. Nucl. Chem. 26 (1964) 219
(Am243(n,gamma)Am244 cross-section ratio, Spin)
- V.YA.GABESKIRIYA, A.P.CHETVERIKOV, V.V.GRYZINA, V.V.TIKHOMIROV, Sov. At. Energy 41 (1976) 1008
(Branching fraction (EC))
- F.P.LARKINS, At. Data Nucl. Data Tables 20 (1977) 311
(Auger electron energies)
- R.W.HOFF, T.VON EGIDY, R.W.LOUGHEED, D.H.WHITE.H.G.BORNER, K.SCHRECKENBACH, G.BARREAU, D.D.WARNER, Phys. Rev. C29 (1984) 618
(Gamma-ray emission probabilities, Multipolarities)
- T.VON EGIDY, R.W.HOFF, R.W.LOUGHEED, D.H.WHITE, H.G.BORNER, K.SCHRECKENBACH, D.D.WARNER, G.BARREAU, Phys. Rev. C29 (1984) 1243
(Spin and Parity, Nuclear level energy of Am244m)
- E.SCHÖNFELD, H.JANSSEN, Nucl. Instrum. Methods Phys. Res. A369 (1996) 527
(K and LX-rays, Auger electrons)
- E.SCHÖNFELD, G.RODLOFF, Report PTB-6.11-98-1, Braunschweig (1998)
(Auger electrons)
- E.SCHÖNFELD, G.RODLOFF, Report PTB-6.11-1999-1, Braunschweig (1999)
(KX-rays)
- S.RAMAN, C.W.NESTOR JR., A.ICHIHARA, M.B.TRZHASKOVSKAYA, Phys. Rev. C66 (2002) 044312
(Theoretical ICC)
- I.M.BAND, M.B.TRZHASKOVSKAYA, C.W.NESTOR JR., P.O.TIKKANEN, S.RAMAN, At. Data Nucl. Data Tables 81 (2002) 1
(Theoretical ICC)
- Y.A.AKOVALI, Nucl. Data Sheets 99 (2003) 197
(Nuclear levels)
- G.AUDI, A.H.WAPSTRA, C.THIBAUT, Nucl. Phys. A729 (2003) 337
(Q)
- T.KIBÉDI, T.W.BURROWS, M.B.TRZHASKOVSKAYA, P.M.DAVIDSON, C.W.NESTOR JR., Nucl. Instrum. Methods Phys. Res. A589 (2008) 202
(Theoretical ICC)