

1 Half-life, Q-value and Decay mode

$T_{1/2}$:	32670	(260)	y
Q_α	:	5149.9	(8)	keV
α	:	100		%

2 α Emissions

	Energy keV	Probability $\times 100$
$\alpha_{0,25}$	4415.6 (9)	0.0021 (5)
$\alpha_{0,24}$	4507.6 (8)	0.0036 (3)
$\alpha_{0,23}$	4533.0 (8)	0.00076 (20)
$\alpha_{0,22}$	4568.1 (9)	0.008 (4)
$\alpha_{0,21}$	4599.6 (8)	0.015 (7)
$\alpha_{0,20}$	4630.3 (8)	0.078 (21)
$\alpha_{0,19}$	4633.0 (8)	0.0504 (11)
$\alpha_{0,18}$	4642.5 (8)	0.080 (6)
$\alpha_{0,17}$	4680.1 (8)	1.8 (3)
$\alpha_{0,16}$	4712.3 (8)	1.20 (22)
$\alpha_{0,15}$	4736.3 (8)	8.4 (4)
$\alpha_{0,14}$	4761.2 (8)	0.0032 (9)
$\alpha_{0,12}$	4794.1 (8)	0.040 (15)
$\alpha_{0,11}$	4853.5 (8)	1.40 (15)
$\alpha_{0,8}$	4903.4 (22)	0.002 (1)
$\alpha_{0,7}$	4936.0 (8)	2.9 (3)
$\alpha_{0,6}$	4952.6 (8)	22.5 (5)
$\alpha_{0,5}$	4977.6 (8)	0.4 (1)
$\alpha_{0,4}$	4987.8 (8)	1.6 (2)
$\alpha_{0,3}$	5015.1 (8)	25.3 (5)
$\alpha_{0,2}$	5031.2 (8)	20 (2)
$\alpha_{0,1}$	5033.8 (8)	2.8 (3)
$\alpha_{0,0}$	5060.7 (8)	11.7 (5)

3 Electron Emissions

		Energy keV	Electrons per 100 disint.
e _{AL}	(Ac)	5.87 - 19.69	52.6 (15)
e _{AK}	(Ac)		0.078 (11)
	KLL	66.769 - 74.715	}
	KLX	81.775 - 90.882	}
	KXY	96.76 - 106.75	}

4 Photon Emissions

4.1 X-Ray Emissions

		Energy keV		Photons per 100 disint.	
XL	(Ac)	10.8701 — 18.9228		44.3 (13)	
XK α_2	(Ac)	87.768		0.715 (23)	} K α
XK α_1	(Ac)	90.885		1.16 (4)	}
XK β_3	(Ac)	102.101	}		
XK β_1	(Ac)	102.841	}	0.410 (15)	K β'_1
XK β''_5	(Ac)	103.462	}		
XK β_2	(Ac)	105.679	}		
XK β_4	(Ac)	106.098	}	0.136 (6)	K β'_2
XKO $_{2,3}$	(Ac)	106.563	}		}

4.2 Gamma Transitions and Emissions

	Energy keV	P $_{\gamma+ce}$ $\times 100$	Multipolarity	α_T	P $_{\gamma}$ $\times 100$
$\gamma_{3,2}$ (Ac)	16.370 (14)	2.12 (9)	E1	8.58 (12)	0.221 (9)
$\gamma_{3,1}$ (Ac)	18.980 (14)	42 (4)	M1	113.2 (16)	0.37 (3)
$\gamma_{11,9}$ (Ac)	23.46 (6)	1.16 (15)	M1	241 (4)	0.0048 (6)
$\gamma_{16,15}$ (Ac)	24.46 (4)	1.05 (21)	M1	214 (4)	0.0049 (10)
$\gamma_{6,5}$ (Ac)	25.390 (22)	18.3 (14)	M1	191 (3)	0.095 (7)
$\gamma_{1,0}$ (Ac)	27.37 (1)	59 (7)	E1	4.5 (6)	10.8 (4)
$\gamma_{2,0}$ (Ac)	29.98 (1)	26 (3)	M1+E2	270 (30)	0.097 (4)
$\gamma_{6,4}$ (Ac)	35.800 (22)	0.045 (3)	E1	1.746 (25)	0.0163 (10)
$\gamma_{5,3}$ (Ac)	38.200 (14)	13 (3)	M1+E2	89 (19)	0.144 (6)
$\gamma_{4,2}$ (Ac)	44.160 (14)	2.11 (16)	M1	37.4 (6)	0.055 (4)
$\gamma_{3,0}$ (Ac)	46.35 (1)	0.357 (19)	E1	0.879 (13)	0.19 (1)
$\gamma_{20,17}$ (Ac)	50.73 (5)	0.057 (21)	M1	24.9 (4)	0.0022 (8)
$\gamma_{7,4}$ (Ac)	52.720 (22)	1.77 (10)	M1	22.2 (4)	0.076 (4)
$\gamma_{5,2}$ (Ac)	54.570 (14)	0.110 (6)	E1	0.569 (8)	0.070 (4)
$\gamma_{15,13}$ (Ac)	56.90 (3)	0.18 (4)	M1+E2	37 (6)	0.0047 (7)
$\gamma_{5,1}$ (Ac)	57.180 (14)	4.6 (5)	E2	148.1 (21)	0.031 (3)
$\gamma_{17,15}$ (Ac)	57.190 (22)	0.7 (3)	E2	148.0 (21)	0.0046 (21)
$\gamma_{9,7}$ (Ac)	60.46 (4)	0.0076 (10)	E1	0.433 (7)	0.0053 (7)
$\gamma_{6,3}$ (Ac)	63.590 (22)	3.99 (16)	E2	88.8 (13)	0.0446 (17)
$\gamma_{-1,1}$ (Ac)	70.49 (5)	0.0051 (8)			0.0051 (8)
$\gamma_{10,7}$ (Ac)	71.85 (5)	0.019 (7)	M1	8.98 (13)	0.0019 (7)
$\gamma_{12,10}$ (Ac)	72.58 (7)	0.029 (7)	M1	8.71 (13)	0.0030 (7)
$\gamma_{4,0}$ (Ac)	74.14 (1)	0.97 (4)	E2	42.6 (6)	0.0223 (9)
$\gamma_{9,6}$ (Ac)	77.38 (4)	0.50 (4)	M1	7.23 (11)	0.061 (4)
$\gamma_{7,2}$ (Ac)	96.880 (22)	1.10 (4)	E2	12.02 (17)	0.084 (3)
$\gamma_{11,6}$ (Ac)	100.84 (5)	0.248 (10)	E2	9.97 (15)	0.0226 (9)
$\gamma_{9,5}$ (Ac)	102.77 (3)	0.20 (4)	E2	9.12 (13)	0.019 (4)

	Energy keV	$P_{\gamma+ce}$ $\times 100$	Multipolarity	α_T	P_γ $\times 100$
$\gamma_{10,4}(\text{Ac})$	124.57 (4)	0.0217 (20)	E2	4.04 (6)	0.0043 (4)
$\gamma_{12,7}(\text{Ac})$	144.43 (6)	0.037 (3)	E2	2.18 (3)	0.0115 (9)
$\gamma_{13,4}(\text{Ac})$	199.00 (3)	0.0030 (12)			0.0030 (12)
$\gamma_{14,4}(\text{Ac})$	230.59 (5)	0.0017 (8)			0.0017 (8)
$\gamma_{-1,2}(\text{Ac})$	242.18 (8)	0.0099 (10)			0.0099 (10)
$\gamma_{13,2}(\text{Ac})$	243.16 (3)	0.065 (11)	M1+E2	0.80 (17)	0.036 (5)
$\gamma_{15,5}(\text{Ac})$	245.490 (14)	0.042 (3)	M2	5.24 (8)	0.0067 (5)
$\gamma_{13,1}(\text{Ac})$	245.77 (3)	0.013 (4)	E1	0.0570 (8)	0.012 (4)
$\gamma_{15,4}(\text{Ac})$	255.900 (14)	0.134 (3)	E2	0.264 (4)	0.1059 (22)
$\gamma_{14,3}(\text{Ac})$	258.38 (5)	0.0015 (4)			0.0015 (4)
$\gamma_{17,7}(\text{Ac})$	260.37 (3)	0.282 (21)	M1+E2	0.55 (11)	0.182 (4)
$\gamma_{13,0}(\text{Ac})$	273.14 (3)	0.101 (7)	M1+E2	0.74 (11)	0.0579 (12)
$\gamma_{17,6}(\text{Ac})$	277.29 (3)	0.10 (6)	E1+M2	0.5 (9)	0.0680 (15)
$\gamma_{15,3}(\text{Ac})$	283.690 (14)	1.72 (3)	E1	0.0410 (6)	1.65 (3)
$\gamma_{-1,3}(\text{Ac})$	286.58 (10)	0.0104 (5)			0.0104 (5)
$\gamma_{15,2}(\text{Ac})$	300.060 (14)	4.25 (10)	M1+E2	0.764 (17)	2.41 (5)
$\gamma_{15,1}(\text{Ac})$	302.670 (14)	2.4 (3)	E1	0.0355 (5)	2.3 (3)
$\gamma_{17,5}(\text{Ac})$	302.680 (22)	0.22 (10)	E1	0.0355 (5)	0.21 (10)
$\gamma_{-1,4}(\text{Ac})$	310.0 (1)	0.00092 (20)			0.00092 (20)
$\gamma_{17,4}(\text{Ac})$	313.090 (22)	0.129 (9)	M1+E2	0.31 (9)	0.0987 (20)
$\gamma_{16,1}(\text{Ac})$	327.13 (4)	0.0372 (11)	E1	0.0298 (5)	0.0361 (11)
$\gamma_{15,0}(\text{Ac})$	330.04 (1)	2.09 (5)	M1+E2	0.541 (19)	1.36 (3)
$\gamma_{17,3}(\text{Ac})$	340.880 (22)	0.196 (7)	E1+M2	0.11 (3)	0.177 (4)
$\gamma_{18,4}(\text{Ac})$	351.45 (3)	0.0029 (12)	E1	0.0255 (4)	0.0028 (12)
$\gamma_{16,0}(\text{Ac})$	354.50 (4)	0.1094 (23)	M1+E2	0.1375 (20)	0.0962 (20)
$\gamma_{17,2}(\text{Ac})$	357.250 (22)	0.240 (18)	M1+E2	0.43 (10)	0.168 (4)
$\gamma_{17,1}(\text{Ac})$	359.860 (22)	0.0085 (3)			0.0085 (3)
$\gamma_{20,4}(\text{Ac})$	363.82 (4)	0.0080 (3)			0.0080 (3)
$\gamma_{-1,5}(\text{Ac})$	374.95 (10)	0.0045 (3)			0.0045 (3)
$\gamma_{18,3}(\text{Ac})$	379.24 (3)	0.066 (6)	M1+E2	0.32 (11)	0.0498 (11)
$\gamma_{21,5}(\text{Ac})$	384.69 (6)	0.00365 (22)			0.00365 (22)
$\gamma_{17,0}(\text{Ac})$	387.23 (2)	0.00032 (11)	E2	0.0773 (11)	0.0003 (1)
$\gamma_{20,3}(\text{Ac})$	391.61 (4)	0.00687 (22)	E1	0.0202 (3)	0.00673 (22)
$\gamma_{18,2}(\text{Ac})$	395.61 (3)	0.00230 (22)	E1	0.0198 (3)	0.00226 (22)
$\gamma_{18,1}(\text{Ac})$	398.22 (3)	0.0095 (3)			0.0095 (3)
$\gamma_{19,1}(\text{Ac})$	407.820 (22)	0.0475 (11)	M1	0.334 (5)	0.0356 (8)
$\gamma_{20,1}(\text{Ac})$	410.59 (4)	0.00183 (22)	E1	0.0183 (3)	0.00180 (22)
$\gamma_{22,4}(\text{Ac})$	427.14 (7)	0.0007 (4)			0.0007 (4)
$\gamma_{19,0}(\text{Ac})$	435.19 (2)	0.00294 (17)			0.00294 (17)
$\gamma_{20,0}(\text{Ac})$	437.96 (4)	0.0045 (3)			0.0045 (3)
$\gamma_{-1,6}(\text{Ac})$	438.72 (10)	0.0013 (4)			0.0013 (4)
$\gamma_{24,4}(\text{Ac})$	488.66 (10)	0.00165 (17)			0.00165 (17)
$\gamma_{23,3}(\text{Ac})$	490.65 (10)	0.0004 (1)			0.0004 (1)
$\gamma_{22,0}(\text{Ac})$	501.28 (7)	0.00076 (18)			0.00076 (18)
$\gamma_{23,1}(\text{Ac})$	509.63 (10)	0.00036 (17)			0.00036 (17)
$\gamma_{24,3}(\text{Ac})$	516.45 (10)	0.00137 (15)			0.00137 (15)
$\gamma_{24,1}(\text{Ac})$	535.43 (10)	0.00061 (12)			0.00061 (12)
$\gamma_{25,6}(\text{Ac})$	546.5 (3)	0.00083 (13)			0.00083 (13)

	Energy keV	$P_{\gamma+ce}$ $\times 100$	Multipolarity	α_T	P_γ $\times 100$
$\gamma_{25,5}(Ac)$	571.9 (3)	0.00048 (20)			0.00048 (20)
$\gamma_{25,4}(Ac)$	582.3 (3)	0.00031 (17)			0.00031 (17)
$\gamma_{25,3}(Ac)$	610.1 (3)	0.0005 (4)			0.0005 (4)

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