1 Half-life, Q-value and Decay mode

$T_{1/2}$	:	6.15	(3)	h
Q_α	:	4814	(50)	keV
Q_{β^-}	:	2123.8	(27)	keV
β^-	:	100		%
α	:	5.5	(22)	$\times 10^{-8}$ %

2 β^- Transitions

	Energy keV	Probability × 100	Nature	log ft
$\beta^-_{0,60}$	0.7 (27)	0.0047 (11)	Allowed	3.3
$\beta^-_{0,59}$	86.8 (27)	0.0069 (11)	Allowed	7.38
$\beta^-_{0,58}$	94.0 (27)	0.026 (4)	Allowed	6.91
$\beta^-_{0,57}$	101.0 (27)	0.061 (6)	Allowed or 1st forbidden	6.64
$\beta^-_{0,56}$	110.2 (27)	0.0032 (10)	Allowed	8.03
$\beta^-_{0,55}$	113.7 (27)	0.238 (15)	Allowed	6.2
$\beta^-_{0,54}$	136.3 (27)	0.07 (4)	Allowed	7
$\beta^-_{0,53}$	158.8 (27)	0.0132 (14)	Allowed	7.91
$\beta^-_{0,52}$	165.1 (27)	0.0038 (8)	Allowed	8.5
$\beta^-_{0,51}$	178.9 (27)	0.307 (22)	Allowed	6.7
$\beta^-_{0,50}$	186.6 (27)	0.053 (6)	Allowed	7.52
$\beta^-_{0,49}$	195.2 (27)	0.061 (8)	Allowed	7.52
$\beta^-_{0,48}$	217.2 (27)	0.025 (5)	Allowed	8.05
$\beta^-_{0,47}$	223.9 (27)	0.069 (8)	Allowed	7.65
$\beta^-_{0,46}$	230.8 (27)	0.109 (8)	Allowed	7.5
$\beta^-_{0,45}$	326.2 (27)	0.051 (8)	Allowed	8.3
$\beta^-_{0,44}$	327.9 (27)	0.035 (6)	Allowed	8.48
$\beta^-_{0,43}$	363.6 (27)	0.139 (12)	Allowed	8.02
$\beta^-_{0,42}$	365.6 (27)	0.060 (8)	Allowed	8.39
$\beta^-_{0,41}$	379.9 (27)	0.378 (16)	Allowed	7.65
$\beta^-_{0,40}$	388.4 (27)	0.149 (11)	Allowed	8.08
$\beta^-_{0,39}$	399.5 (27)	1.93 (8)	Allowed	7.01
$\beta^-_{0,38}$	435.4 (27)	2.50 (16)	Allowed	7.02
$\beta^-_{0,37}$	440.0 (27)	0.20 (3)	1st forbidden	8.13
$\beta^-_{0,36}$	441.0 (27)	1.21 (4)	Allowed	7.35
$\beta^-_{0,35}$	477.8 (27)	4.12 (20)	Allowed	6.94
$\beta^-_{0,34}$	480.7 (27)	0.82 (3)	1st forbidden	7.64
$\beta^-_{0,33}$	485.5 (27)	1.23 (6)	Allowed	7.48
$\beta^-_{0,32}$	506.0 (27)	0.071 (10)	Allowed	8.78
$\beta^-_{0,31}$	535.5 (27)	8.8 (23)	1st forbidden	6.77
$\beta^-_{0,30}$	584.6 (27)	0.030 (6)	Allowed	9.36
$\beta^-_{0,27}$	691.8 (27)	1.6 (5)	Allowed	7.88
$\beta^-_{0,26}$	707.7 (27)	0.060 (8)	Allowed or 1st forbidden	9.34
$\beta^-_{0,25}$	779.7 (27)	0.208 (18)	1st forbidden	8.94
$\beta^-_{0,24}$	826.4 (27)	1.46 (11)	1st forbidden unique	8.18
$\beta^-_{0,23}$	897.2 (27)	0.67 (8)	1st forbidden	8.65
$\beta^-_{0,22}$	948.4 (27)	0.166 (19)	Allowed	9.34

	Energy keV	Probability × 100	Nature	log ft
$\beta^-_{0,20}$	955.4 (27)	3.39 (13)	1st forbidden	8.04
$\beta^-_{0,19}$	970.3 (27)	6 (3)	Allowed	7.8
$\beta^-_{0,18}$	1000.8 (27)	6.67 (18)	1st forbidden	7.81
$\beta^-_{0,16}$	1063.9 (27)	0.099 (11)	1st forbidden	9.74
$\beta^-_{0,15}$	1101.3 (27)	3.0 (4)	Allowed	8.31
$\beta^-_{0,14}$	1107.4 (27)	0.39 (6)	Allowed or 1st forbidden	9.2
$\beta^-_{0,13}$	1144.3 (27)	0.238 (20)	Allowed	9.47
$\beta^-_{0,12}$	1154.8 (27)	31 (4)	Allowed	7.37
$\beta^-_{0,11}$	1155.4 (27)	0.18 (3)	1st forbidden	9.6
$\beta^-_{0,10}$	1179.6 (27)	0.087 (16)	Allowed or 1st forbidden	9.95
$\beta^-_{0,8}$	1249.3 (27)	0.17 (10)	Allowed	9.7
$\beta^-_{0,5}$	1727.7 (27)	12.4 (5)	1st forbidden	8.4
$\beta^-_{0,4}$	1745.6 (27)	0.147 (21)	2nd forbidden unique	12.29
$\beta^-_{0,3}$	1795.8 (27)	0.72 (23)	1st forbidden unique	10.65
$\beta^-_{0,2}$	1937.0 (27)	0.6 (5)	Allowed	10
$\beta^-_{0,1}$	2066.0 (27)	6 (4)	Allowed	9

3 Electron Emissions

		Energy keV	Electrons per 100 disint.	Energy keV
e_{AL}	(Th)	5.8 - 20.3	39.9 (21)	
e_{AK}	(Th)		0.27 (8)	
	KLL	68.406 - 76.745	}	
	KLX	83.857 - 93.345	}	
	KXY	99.29 - 109.64	}	
$ec_{35,29\ K}$	(Th)	4.830 (13)	0.05 (5)	
$ec_{28,27\ M}$	(Th)	13.233 - 15.083	0.038 (8)	
$ec_{2,1\ K}$	(Th)	19.414 (6)	0.660 (21)	
$ec_{38,35\ L}$	(Th)	21.97 - 26.10	0.32 (11)	
$ec_{31,28\ K}$	(Th)	28.291 (17)	0.168 (24)	
$ec_{20,15\ K}$	(Th)	36.198 (8)	0.0264 (10)	
$ec_{31,29\ L}$	(Th)	36.389 - 40.600	5.2 (35)	
$ec_{38,35\ M}$	(Th)	37.26 - 39.11	0.076 (25)	
$ec_{1,0\ L}$	(Th)	37.287 - 41.500	52.7 (21)	
$ec_{38,35\ N}$	(Th)	41.11 - 42.10	0.020 (7)	
$ec_{18,12\ K}$	(Th)	44.333 (8)	0.1037 (35)	
$ec_{31,29\ M}$	(Th)	51.679 - 53.529	1.4 (11)	
$ec_{1,0\ M}$	(Th)	52.577 - 54.427	14.4 (6)	
$ec_{31,29\ N}$	(Th)	55.530 - 56.526	0.40 (26)	
$ec_{1,0\ N}$	(Th)	56.430 - 57.424	3.87 (15)	
$ec_{19,12\ K}$	(Th)	74.849 (11)	4.3 (22)	
$ec_{29,27\ L}$	(Th)	79.023 - 83.200	3.65 (13)	
$ec_{18,15\ L}$	(Th)	79.952 - 84.100	0.259 (14)	
$ec_{4,2\ K}$	(Th)	81.706 (11)	0.0227 (14)	

		Energy keV	Electrons per 100 disint.	Energy keV
$ec_{20,12}$ K	(Th)	89.757 (7)	0.0225 (18)	
$ec_{35,29}$ L	(Th)	94.01 - 98.20	0.033 (15)	
$ec_{29,27}$ M	(Th)	94.313 - 96.163	0.881 (31)	
$ec_{24,15}$ K	(Th)	94.388 (9)	0.83 (6)	
$ec_{18,15}$ M	(Th)	95.242 - 97.092	0.0701 (38)	
$ec_{29,27}$ N	(Th)	98.16 - 99.16	0.234 (8)	
$ec_{18,15}$ N	(Th)	99.090 - 100.089	0.0191 (10)	
$ec_{5,2}$ K	(Th)	99.605 (6)	0.267 (10)	
$ec_{2,1}$ L	(Th)	108.592 - 112.800	6.35 (20)	
$ec_{28,23}$ K	(Th)	114.179 (12)	0.086 (9)	
$ec_{31,28}$ L	(Th)	117.469 - 121.600	0.0321 (46)	
$ec_{2,1}$ M	(Th)	123.882 - 125.732	1.74 (5)	
$ec_{2,1}$ N	(Th)	127.730 - 128.729	0.468 (15)	
$ec_{18,12}$ L	(Th)	133.511 - 137.700	0.0218 (7)	
$ec_{27,21}$ K	(Th)	147.821 (19)	0.0294 (20)	
$ec_{3,1}$ K	(Th)	160.594 (6)	0.1335 (43)	
$ec_{19,8}$ K	(Th)	169.344 (21)	0.10 (8)	
$ec_{4,2}$ L	(Th)	170.884 - 175.100	0.0589 (37)	
$ec_{28,20}$ K	(Th)	172.369 (11)	0.036 (38)	
$ec_{24,15}$ L	(Th)	183.566 - 187.700	0.286 (21)	
$ec_{4,2}$ M	(Th)	186.174 - 188.024	0.0161 (10)	
$ec_{5,2}$ L	(Th)	188.783 - 193.000	0.0529 (19)	
$ec_{24,15}$ M	(Th)	198.856 - 200.706	0.074 (5)	
$ec_{24,15}$ N	(Th)	202.710 - 203.703	0.0202 (14)	
$ec_{28,23}$ L	(Th)	203.357 - 207.500	0.0166 (17)	
$ec_{5,2}$ M	(Th)	204.073 - 205.923	0.01274 (46)	
$ec_{19,7}$ K	(Th)	211.994 (14)	0.0147 (9)	
$ec_{3,0}$ K	(Th)	218.353 (4)	0.0745 (30)	
$ec_{5,1}$ K	(Th)	228.669 (6)	0.261 (10)	
$ec_{27,17}$ K	(Th)	231.31 (1)	0.029 (8)	
$ec_{51,31}$ K	(Th)	246.910 (18)	0.011 (11)	
$ec_{3,1}$ L	(Th)	249.772 - 253.900	0.0254 (8)	
$ec_{19,8}$ L	(Th)	258.522 - 262.700	0.024 (7)	
$ec_{28,20}$ L	(Th)	261.547 - 265.700	0.0108 (45)	
$ec_{27,15}$ K	(Th)	299.802 (8)	0.32 (26)	
$ec_{19,7}$ L	(Th)	301.172 - 305.300	0.0125 (8)	
$ec_{3,0}$ L	(Th)	307.531 - 311.700	0.0138 (5)	
$ec_{5,1}$ L	(Th)	317.847 - 322.000	0.0483 (18)	
$ec_{27,17}$ L	(Th)	320.49 - 324.70	0.0183 (12)	
$ec_{29,17}$ K	(Th)	330.81 (1)	0.0303 (24)	
$ec_{5,1}$ M	(Th)	333.137 - 334.987	0.01156 (44)	
$ec_{27,12}$ K	(Th)	353.361 (8)	0.139 (8)	
$ec_{27,15}$ L	(Th)	388.98 - 393.20	0.077 (32)	
$ec_{29,15}$ K	(Th)	399.297 (8)	0.0444 (35)	
$ec_{27,15}$ M	(Th)	404.27 - 406.12	0.018 (8)	
$ec_{27,12}$ L	(Th)	442.539 - 446.700	0.0665 (37)	
$ec_{29,12}$ K	(Th)	452.856 (8)	0.062 (45)	
$ec_{27,12}$ M	(Th)	457.829 - 459.679	0.0174 (10)	

		Energy keV		Electrons per 100 disint.		Energy keV
$ec_{39,19}$ K	(Th)	461.166	(12)	0.022 (6)		
$ec_{11,5}$ K	(Th)	462.641	(21)	0.011 (8)		
$ec_{29,15}$ L	(Th)	488.475	- 492.600	0.0100 (8)		
$ec_{29,12}$ L	(Th)	542.034	- 546.200	0.013 (7)		
$ec_{39,15}$ K	(Th)	592.106	(8)	0.0124 (10)		
$ec_{39,12}$ K	(Th)	645.665	(8)	0.0580 (24)		
$ec_{20,5}$ K	(Th)	662.647	(7)	0.0283 (20)		
$ec_{18,3}$ K	(Th)	685.298	(7)	0.057 (5)		
$ec_{15,2}$ K	(Th)	726.054	(7)	0.0178 (8)		
$ec_{20,3}$ K	(Th)	730.722	(6)	0.01008 (44)		
$ec_{39,12}$ L	(Th)	734.843	- 739.000	0.01067 (44)		
$ec_{18,3}$ L	(Th)	774.476	- 778.600	0.0147 (9)		
$ec_{12,1}$ K	(Th)	801.559	(6)	0.236 (8)		
$ec_{15,1}$ K	(Th)	855.118	(7)	0.0426 (17)		
$ec_{12,0}$ K	(Th)	859.318	(5)	0.1282 (45)		
$ec_{12,1}$ L	(Th)	890.737	- 894.900	0.0579 (19)		
$ec_{12,1}$ M	(Th)	906.027	- 907.877	0.01438 (49)		
$ec_{12,0}$ L	(Th)	948.496	- 952.700	0.0304 (11)		
$ec_{35,1}$ K	(Th)	1478.545	(13)	0.017 (7)		
$\beta^-_{0,60}$	max:	0.7	(27)	0.0047 (11)	avg:	0.18 (68)
$\beta^-_{0,59}$	max:	86.8	(27)	0.0069 (11)	avg:	22.4 (8)
$\beta^-_{0,58}$	max:	94.0	(27)	0.026 (4)	avg:	24.3 (7)
$\beta^-_{0,57}$	max:	101.0	(27)	0.061 (6)	avg:	26.2 (7)
$\beta^-_{0,56}$	max:	110.2	(27)	0.0032 (10)	avg:	28.7 (7)
$\beta^-_{0,55}$	max:	113.7	(27)	0.238 (15)	avg:	29.7 (8)
$\beta^-_{0,54}$	max:	136.3	(27)	0.07 (4)	avg:	35.9 (8)
$\beta^-_{0,53}$	max:	158.8	(27)	0.0132 (14)	avg:	42.2 (8)
$\beta^-_{0,52}$	max:	165.1	(27)	0.0038 (8)	avg:	43.9 (8)
$\beta^-_{0,51}$	max:	178.9	(27)	0.307 (22)	avg:	47.8 (8)
$\beta^-_{0,50}$	max:	186.6	(27)	0.053 (6)	avg:	50.0 (8)
$\beta^-_{0,49}$	max:	195.2	(27)	0.061 (8)	avg:	52.5 (8)
$\beta^-_{0,48}$	max:	217.2	(27)	0.025 (5)	avg:	58.8 (8)
$\beta^-_{0,47}$	max:	223.9	(27)	0.069 (8)	avg:	60.8 (8)
$\beta^-_{0,46}$	max:	230.8	(27)	0.109 (8)	avg:	62.8 (8)
$\beta^-_{0,45}$	max:	326.2	(27)	0.051 (8)	avg:	91.4 (8)
$\beta^-_{0,44}$	max:	327.9	(27)	0.035 (6)	avg:	91.9 (8)
$\beta^-_{0,43}$	max:	363.6	(27)	0.139 (12)	avg:	103.0 (9)
$\beta^-_{0,42}$	max:	365.6	(27)	0.060 (8)	avg:	103.6 (9)
$\beta_{0,41}$	max:	379.9	(27)	0.378 (16)	avg:	108.1 (9)
$\beta^-_{0,40}$	max:	388.4	(27)	0.149 (11)	avg:	110.7 (9)
$\beta^-_{0,39}$	max:	399.5	(27)	1.93 (8)	avg:	114.3 (9)
$\beta^-_{0,38}$	max:	435.4	(27)	2.50 (16)	avg:	125.7 (9)
$\beta^-_{0,37}$	max:	440.0	(27)	0.20 (3)	avg:	127.2 (9)
$\beta^-_{0,36}$	max:	441.0	(27)	1.21 (4)	avg:	127.5 (9)
$\beta^-_{0,35}$	max:	477.8	(27)	4.12 (20)	avg:	139.5 (9)
$\beta^-_{0,34}$	max:	480.7	(27)	0.82 (3)	avg:	140.4 (9)
$\beta^-_{0,33}$	max:	485.5	(27)	1.23 (6)	avg:	142.0 (9)

		Energy keV		Electrons per 100 disint.		Energy keV
$\beta^-_{0,32}$	max:	506.0	(27)	0.071 (10)	avg:	148.7 (9)
$\beta^-_{0,31}$	max:	535.5	(27)	8.8 (23)	avg:	158.5 (9)
$\beta^-_{0,30}$	max:	584.6	(27)	0.030 (6)	avg:	175.0 (9)
$\beta^-_{0,27}$	max:	691.8	(27)	1.6 (5)	avg:	211.8 (10)
$\beta^-_{0,26}$	max:	707.7	(27)	0.060 (8)	avg:	217.3 (10)
$\beta^-_{0,25}$	max:	779.7	(27)	0.208 (18)	avg:	242.7 (10)
$\beta^-_{0,24}$	max:	826.4	(27)	1.46 (11)	avg:	259.4 (10)
$\beta^-_{0,23}$	max:	897.2	(27)	0.67 (8)	avg:	285.1 (10)
$\beta^-_{0,22}$	max:	948.4	(27)	0.166 (19)	avg:	303.9 (10)
$\beta^-_{0,20}$	max:	955.4	(27)	3.39 (13)	avg:	306.4 (10)
$\beta^-_{0,19}$	max:	970.3	(27)	6 (3)	avg:	311.9 (10)
$\beta^-_{0,18}$	max:	1000.8	(27)	6.67 (18)	avg:	323.2 (10)
$\beta^-_{0,16}$	max:	1063.9	(27)	0.099 (11)	avg:	346.7 (11)
$\beta^-_{0,15}$	max:	1101.3	(27)	3.0 (4)	avg:	360.8 (11)
$\beta^-_{0,14}$	max:	1107.4	(27)	0.39 (6)	avg:	363.1 (11)
$\beta^-_{0,13}$	max:	1144.3	(27)	0.238 (20)	avg:	377.1 (11)
$\beta^-_{0,12}$	max:	1154.8	(27)	31 (4)	avg:	381.1 (11)
$\beta^-_{0,11}$	max:	1155.4	(27)	0.18 (3)	avg:	381.4 (11)
$\beta^-_{0,10}$	max:	1179.6	(27)	0.087 (16)	avg:	390.6 (11)
$\beta^-_{0,8}$	max:	1249.3	(27)	0.17 (10)	avg:	417.2 (11)
$\beta^-_{0,5}$	max:	1727.7	(27)	12.4 (5)	avg:	605.7 (11)
$\beta^-_{0,4}$	max:	1745.6	(27)	0.147 (21)	avg:	587.3 (11)
$\beta^-_{0,3}$	max:	1795.8	(27)	0.72 (23)	avg:	605.4 (11)
$\beta^-_{0,2}$	max:	1937.0	(27)	0.6 (5)	avg:	690.2 (11)
$\beta^-_{0,1}$	max:	2066.0	(27)	6 (4)	avg:	742.8 (11)

4 Photon Emissions

4.1 X-Ray Emissions

		Energy keV		Photons per 100 disint.	
XL	(Th)	11.1177 — 19.5043		37 (4)	
XKα_2	(Th)	89.954		2.5 (7)	} Kα
XKα_1	(Th)	93.351		4.1 (11)	}
XKβ_3	(Th)	104.819	}		
XKβ_1	(Th)	105.604	}	1.5 (4)	Kβ'_1
XKβ''_5	(Th)	106.239	}		
XKβ_2	(Th)	108.509	}		
XKβ_4	(Th)	108.955	}	0.49 (13)	Kβ'_2
XKO$_{2,3}$	(Th)	109.442	}		

4.2 Gamma Transitions and Emissions

	Energy keV	$P_{\gamma+ce}$ × 100	Multipolarity	α_T	P_γ × 100
$\gamma_{28,27}$(Th)	18.415 (12)	0.142 (30)	E1	6.46 (10)	0.019 (4)
$\gamma_{38,35}$(Th)	42.46 (5)	0.43 (14)	M1	46.3 (7)	0.009 (3)
$\gamma_{31,29}$(Th)	56.88 (5)	8 (8)	E1+[M2]	360 (220)	0.020 (5)
$\gamma_{1,0}$(Th)	57.752 (13)	72.5 (28)	E2	153.2 (22)	0.470 (17)
$\gamma_{20,17}$(Th)	77.34 (3)	0.027 (6)	E1	0.232 (4)	0.027 (6)
$\gamma_{29,27}$(Th)	99.505 (12)	6.10 (21)	M1	3.84 (6)	1.26 (4)
$\gamma_{18,15}$(Th)	100.41 (3)	0.114 (6)	E1+M2	3.10 (5)	0.114 (6)
$\gamma_{35,29}$(Th)	114.56 (7)	0.102 (46)	M1+E2	9 (4)	0.0102 (22)
$\gamma_{2,1}$(Th)	129.065 (3)	11.85 (36)	E2	3.74 (6)	2.50 (7)
$\gamma_{23,17}$(Th)	135.507 (22)	0.024 (6)	E1	0.238 (4)	0.024 (6)
$\gamma_{31,28}$(Th)	137.936 (22)	0.239 (34)	M1	7.52 (11)	0.028 (4)
$\gamma_{6,4}$(Th)	140.999 (20)	0.055 (11)	E1	0.217 (3)	0.045 (9)
$\gamma_{20,15}$(Th)	145.842 (20)	0.169 (6)	E1	0.200 (3)	0.169 (6)
$\gamma_{18,12}$(Th)	153.967 (11)	0.754 (23)	E1	0.1757 (25)	0.754 (23)
$\gamma_{25,22}$(Th)	168.53 (12)	0.0127 (31)	M1+E2	2.7 (15)	0.0111 (27)
$\gamma_{49,43}$(Th)	168.53 (12)	0.0093 (46)	M1+E2	2.7 (15)	0.0025 (7)
$\gamma_{19,13}$(Th)	173.96 (3)	0.036 (5)	M1+E2	2.5 (14)	0.036 (5)
$\gamma_{19,12}$(Th)	184.547 (19)	5.5 (29)	E0+M1	100 (40)	0.054 (19)
$\gamma_{4,2}$(Th)	191.351 (17)	0.236 (14)	E2	0.776 (11)	0.133 (8)
$\gamma_{20,12}$(Th)	199.402 (15)	0.299 (23)	E1	0.0950 (14)	0.299 (23)
$\gamma_{24,15}$(Th)	204.029 (11)	0.114 (8)	M2	10.65 (15)	0.114 (8)
$\gamma_{5,2}$(Th)	209.248 (7)	4.31 (14)	E1	0.0848 (12)	3.97 (13)
$\gamma_{19,9}$(Th)	214.89 (10)	0.047 (8)	E2	0.514 (8)	0.031 (5)
$\gamma_{28,23}$(Th)	223.793 (21)	0.058 (6)	M1+E2	1.85 (4)	0.058 (6)
$\gamma_{22,10}$(Th)	231.42 (10)	0.026 (4)	E2	0.392 (6)	0.026 (4)
$\gamma_{27,21}$(Th)	257.482 (21)	0.0286 (19)	M1	1.285 (18)	0.0286 (19)
$\gamma_{27,20}$(Th)	263.58 (10)	0.0451 (31)	E1	0.0498 (7)	0.043 (3)
$\gamma_{3,1}$(Th)	270.245 (7)	3.72 (10)	E1	0.0470 (7)	3.55 (10)
$\gamma_{19,8}$(Th)	278.80 (15)	0.33 (9)	M1+E2	0.6 (4)	0.204 (28)
$\gamma_{27,19}$(Th)	278.80 (15)	0.038 (6)	E2	0.212 (3)	0.031 (5)
$\gamma_{28,20}$(Th)	282.02 (4)	0.14 (6)	M1+E2	0.6 (4)	0.09 (3)
$\gamma_{19,7}$(Th)	321.646 (8)	0.232 (14)	E2	0.1369 (20)	0.232 (14)
$\gamma_{42,27}$(Th)	326.04 (20)	0.035 (6)	E2	0.1315 (19)	0.035 (6)
$\gamma_{3,0}$(Th)	328.004 (7)	3.13 (11)	E1	0.0305 (5)	3.04 (11)
$\gamma_{6,2}$(Th)	332.371 (6)	0.38 (6)	E1	0.0297 (5)	0.37 (6)
$\gamma_{5,1}$(Th)	338.320 (5)	11.72 (41)	E1	0.0285 (4)	11.4 (4)
$\gamma_{27,17}$(Th)	340.969 (21)	0.405 (20)	E2+M1	0.133 (21)	0.405 (20)
$\gamma_{51,31}$(Th)	356.7 (3)	0.032 (15)	E1+M2	0.8 (8)	0.0178 (21)
$\gamma_{55,33}$(Th)	372.59 (3)	0.0070 (17)	E2	0.0902 (13)	0.0070 (17)
$\gamma_{29,19}$(Th)	377.99 (10)	0.033 (6)	M1+E2	0.27 (18)	0.026 (3)
$\gamma_{57,33}$(Th)	384.47 (9)	0.0070 (17)	E2	0.0828 (12)	0.0070 (17)
$\gamma_{49,30}$(Th)	389.32 (13)	0.0108 (17)	M1+E2	0.25 (17)	0.0108 (17)
$\gamma_{50,30}$(Th)	397.95 (10)	0.029 (3)			0.029 (3)
$\gamma_{41,25}$(Th)	399.83 (14)	0.0316 (41)	E1	0.0200 (3)	0.031 (4)
$\gamma_{27,15}$(Th)	409.460 (13)	2.02 (6)	E2+M1	0.21 (15)	2.02 (6)
$\gamma_{30,18}$(Th)	415.96 (14)	0.0138 (23)	E1	0.0184 (3)	0.0138 (23)
$\gamma_{35,23}$(Th)	419.38 (7)	0.0224 (31)	E1	0.0181 (3)	0.022 (3)

	Energy keV	$P_{\gamma+ce}$ × 100	Multipolarity	α_T	P_γ × 100
$\gamma_{29,17}$(Th)	440.450 (24)	0.166 (13)	M1	0.295 (5)	0.128 (10)
$\gamma_{11,6}$(Th)	449.11 (6)	0.053 (6)	E2	0.0554 (8)	0.050 (6)
$\gamma_{27,13}$(Th)	452.50 (6)	0.0199 (19)	E2	0.0544 (8)	0.0199 (19)
$\gamma_{37,23}$(Th)	457.18 (15)	0.0186 (39)	M1+E2	0.16 (11)	0.016 (3)
$\gamma_{27,12}$(Th)	463.002 (6)	4.45 (24)	E2	0.0514 (8)	4.45 (24)
$\gamma_{33,20}$(Th)	470.21 (20)	0.0142 (30)	E1	0.01428 (20)	0.014 (3)
$\gamma_{26,10}$(Th)	471.77 (15)	0.0357 (42)	E2	0.0491 (7)	0.034 (4)
$\gamma_{34,20}$(Th)	474.79 (10)	0.026 (5)	M1+E2	0.14 (10)	0.023 (4)
$\gamma_{8,5}$(Th)	478.40 (5)	0.227 (19)	E1	0.01379 (20)	0.224 (19)
$\gamma_{48,26}$(Th)	490.33 (15)	0.0116 (25)	E2	0.0447 (7)	0.0116 (25)
$\gamma_{35,19}$(Th)	492.29 (8)	0.0282 (41)	M1+E2	0.13 (9)	0.025 (3)
$\gamma_{39,23}$(Th)	497.64 (10)	0.0062 (19)	M2	0.581 (9)	0.0062 (19)
$\gamma_{7,3}$(Th)	503.819 (23)	0.173 (19)	E1	0.01243 (18)	0.171 (19)
$\gamma_{29,15}$(Th)	508.955 (13)	0.568 (45)	E2+M1	0.1130 (16)	0.51 (4)
$\gamma_{33,18}$(Th)	515.12 (7)	0.051 (6)	E1	0.01189 (17)	0.051 (6)
$\gamma_{34,18}$(Th)	520.16 (3)	0.070 (7)	M1+E2	0.11 (8)	0.070 (7)
$\gamma_{35,18}$(Th)	523.129 (22)	0.129 (10)	E1	0.01153 (17)	0.129 (10)
$\gamma_{16,6}$(Th)	540.67 (5)	0.0297 (38)	M1+E2	0.10 (7)	0.027 (3)
$\gamma_{8,3}$(Th)	546.445 (21)	0.201 (16)	E1	0.01058 (15)	0.199 (16)
$\gamma_{39,22}$(Th)	548.73 (11)	0.0264 (47)	M1+E2	0.10 (7)	0.024 (4)
$\gamma_{35,17}$(Th)	555.07 (16)	0.048 (6)	M1+E2		0.048 (6)
$\gamma_{29,12}$(Th)	562.496 (7)	0.97 (7)	E2+M1	0.09 (6)	0.89 (4)
$\gamma_{39,19}$(Th)	570.88 (4)	0.22 (6)	M1	0.1472 (21)	0.19 (5)
$\gamma_{11,5}$(Th)	572.10 (5)	0.170 (22)	M1+E2	0.09 (6)	0.156 (18)
$\gamma_{13,5}$(Th)	583.391 (10)	0.120 (11)	E1	0.00932 (13)	0.120 (11)
$\gamma_{9,3}$(Th)	610.65 (10)	0.024 (5)	E1	0.00853 (12)	0.024 (5)
$\gamma_{10,3}$(Th)	616.21 (3)	0.085 (7)	E1	0.00838 (12)	0.084 (7)
$\gamma_{14,5}$(Th)	620.32 (7)	0.084 (7)			0.084 (7)
$\gamma_{35,15}$(Th)	623.48 (22)	0.0128 (33)	M1+E2	0.07 (5)	0.012 (3)
$\gamma_{34,14}$(Th)	626.80 (22)	0.015 (3)			0.015 (3)
$\gamma_{35,14}$(Th)	629.41 (5)	0.047 (5)	E2	0.0254 (4)	0.047 (5)
$\gamma_{11,3}$(Th)	640.32 (4)	0.058 (6)	E2	0.0245 (4)	0.057 (6)
$\gamma_{20,6}$(Th)	649.02 (12)	0.043 (11)	E2	0.0238 (4)	0.0332 (36)
$\gamma_{32,12}$(Th)	649.02 (12)	0.0086 (9)			0.0086 (9)
$\gamma_{13,3}$(Th)	651.53 (3)	0.094 (10)	E1	0.00754 (11)	0.094 (10)
$\gamma_{36,15}$(Th)	660.1 (3)	0.00572 (38)	M1+E2	0.06 (4)	0.0054 (3)
$\gamma_{16,5}$(Th)	663.88 (8)	0.029 (6)	M1+E2	0.06 (4)	0.029 (6)
$\gamma_{46,23}$(Th)	666.45 (5)	0.0068 (7)	E1	0.00722 (11)	0.0068 (7)
$\gamma_{35,13}$(Th)	666.45 (5)	0.061 (7)	M1+E2	0.06 (4)	0.058 (6)
$\gamma_{38,14}$(Th)	671.95 (8)	0.027 (8)			0.027 (8)
$\gamma_{34,12}$(Th)	674.63 (4)	0.105 (10)	M1+E2	0.06 (4)	0.105 (10)
$\gamma_{35,12}$(Th)	677.08 (10)	0.065 (6)	M1+E2	0.06 (4)	0.065 (6)
$\gamma_{14,3}$(Th)	688.12 (4)	0.070 (7)			0.070 (7)
$\gamma_{34,10}$(Th)	698.99 (10)	0.038 (6)	E2	0.0203 (3)	0.038 (6)
$\gamma_{39,15}$(Th)	701.742 (15)	0.181 (15)	M1	0.0850 (12)	0.181 (15)
$\gamma_{23,6}$(Th)	707.42 (5)	0.162 (18)	E2	0.0198 (3)	0.162 (18)
$\gamma_{51,23}$(Th)	718.30 (3)	0.0191 (40)	E1	0.00628 (9)	0.019 (4)
$\gamma_{18,5}$(Th)	726.88 (10)	0.68 (8)	E2	0.0187 (3)	0.68 (8)

	Energy keV	$P_{\gamma+ce}$ × 100	Multipolarity	α_T	P_γ × 100
$\gamma_{43,15}$(Th)	737.74 (5)	0.039 (5)	M1+E2	0.05 (3)	0.039 (5)
$\gamma_{39,12}$(Th)	755.313 (9)	1.102 (43)	M1	0.070 (1)	1.03 (4)
$\gamma_{20,5}$(Th)	772.291 (7)	1.52 (6)	M1+E2	0.0244 (14)	1.52 (6)
$\gamma_{7,1}$(Th)	774.07 (10)	0.0630 (41)	E2	0.01649 (23)	0.062 (4)
$\gamma_{51,20}$(Th)	776.51 (3)	0.020 (6)			0.020 (6)
$\gamma_{12,2}$(Th)	782.140 (6)	0.508 (41)	E2	0.01615 (23)	0.50 (4)
$\gamma_{51,19}$(Th)	791.43 (9)	0.0149 (42)	M1	0.0618 (9)	0.014 (4)
$\gamma_{43,12}$(Th)	791.43 (9)	0.0104 (31)	M1+E2	0.039 (23)	0.010 (3)
$\gamma_{13,2}$(Th)	792.69 (10)	0.082 (5)	E2	0.01572 (22)	0.081 (5)
$\gamma_{18,3}$(Th)	794.942 (14)	4.31 (14)	E2+M1	0.0179 (14)	4.31 (14)
$\gamma_{38,8}$(Th)	813.88 (10)	0.0073 (17)	M1+E2	0.036 (22)	0.0073 (17)
$\gamma_{8,1}$(Th)	816.82 (10)	0.0321 (42)	M1+E2	0.036 (21)	0.031 (4)
$\gamma_{25,6}$(Th)	824.931 (25)	0.054 (6)	E2	0.01452 (21)	0.053 (6)
$\gamma_{23,5}$(Th)	830.481 (8)	0.61 (6)	E2+M1	0.0150 (3)	0.61 (6)
$\gamma_{15,2}$(Th)	835.704 (8)	1.70 (7)	E2	0.01415 (20)	1.70 (7)
$\gamma_{20,3}$(Th)	840.372 (9)	0.984 (41)	E2	0.0140 (2)	0.97 (4)
$\gamma_{51,17}$(Th)	853.96 (8)	0.0128 (21)	M1+E2	0.032 (19)	0.0124 (20)
$\gamma_{46,15}$(Th)	870.47 (7)	0.046 (5)	M1	0.0481 (7)	0.046 (5)
$\gamma_{16,2}$(Th)	873.10 (15)	0.032 (7)	E1	0.00440 (7)	0.032 (7)
$\gamma_{8,0}$(Th)	874.45 (8)	0.051 (11)	E2	0.01294 (19)	0.050 (11)
$\gamma_{47,15}$(Th)	877.38 (7)	0.0144 (31)	M1+E2	0.030 (18)	0.014 (3)
$\gamma_{9,1}$(Th)	880.76 (10)	0.0066 (19)	E2	0.01276 (18)	0.0065 (19)
$\gamma_{55,18}$(Th)	887.26 (10)	0.029 (3)	M1+E2	0.029 (17)	0.029 (3)
$\gamma_{24,5}$(Th)	901.38 (3)	0.0172 (40)	E2	0.01220 (17)	0.017 (4)
$\gamma_{17,2}$(Th)	904.20 (5)	0.78 (4)	E2	0.01212 (17)	0.78 (4)
$\gamma_{12,1}$(Th)	911.196 (6)	26.5 (8)	E2	0.01194 (17)	26.2 (8)
$\gamma_{55,17}$(Th)	919.03 (12)	0.028 (3)			0.028 (3)
$\gamma_{13,1}$(Th)	921.87 (12)	0.0158 (24)	M1+E2	0.027 (15)	0.0154 (23)
$\gamma_{28,6}$(Th)	930.99 (7)	0.0026 (24)	M1+E2	0.026 (15)	0.0025 (23)
$\gamma_{47,12}$(Th)	930.99 (7)	0.004 (1)			0.004 (1)
$\gamma_{58,17}$(Th)	939.89 (15)	0.009 (3)			0.009 (3)
$\gamma_{10,0}$(Th)	944.19 (3)	0.102 (10)	E1+M2	0.025 (14)	0.10 (1)
$\gamma_{25,5}$(Th)	947.976 (24)	0.111 (10)	M1+E2	0.025 (14)	0.111 (10)
$\gamma_{14,1}$(Th)	958.59 (4)	0.29 (5)			0.29 (5)
$\gamma_{15,1}$(Th)	964.786 (8)	4.99 (17)	E2+M1	0.01119 (23)	4.99 (17)
$\gamma_{12,0}$(Th)	968.960 (9)	16.1 (5)	E2	0.01061 (15)	15.9 (5)
$\gamma_{51,12}$(Th)	975.98 (5)	0.052 (6)	M1	0.0356 (5)	0.052 (6)
$\gamma_{13,0}$(Th)	979.49 (10)	0.0283 (30)	E2	0.01039 (15)	0.028 (3)
$\gamma_{21,2}$(Th)	987.87 (10)	0.14 (6)	M1+E2	0.022 (13)	0.14 (6)
$\gamma_{22,2}$(Th)	988.65 (20)	0.081 (14)	E2	0.01021 (15)	0.081 (14)
$\gamma_{51,10}$(Th)	1000.68 (10)	0.0054 (3)			0.0054 (3)
$\gamma_{58,14}$(Th)	1013.55 (13)	0.0097 (16)			0.0097 (16)
$\gamma_{14,0}$(Th)	1016.44 (10)	0.0194 (31)	M1+E2	0.021 (12)	0.019 (3)
$\gamma_{54,12}$(Th)	1017.94 (20)	0.032 (32)	E2+M3	0.07 (7)	0.03 (3)
$\gamma_{26,5}$(Th)	1019.88 (10)	0.022 (5)			0.022 (5)
$\gamma_{17,1}$(Th)	1033.244 (23)	0.204 (12)	E2	0.00938 (14)	0.204 (12)
$\gamma_{23,2}$(Th)	1039.83 (7)	0.056 (18)			0.056 (18)
$\gamma_{55,12}$(Th)	1040.94 (15)	0.047 (10)	E2+M3	0.07 (6)	0.047 (10)

	Energy keV	$P_{\gamma+ce}$ × 100	Multipolarity	α_T	P_γ × 100
$\gamma_{57,12}$(Th)	1053.11 (20)	0.0143 (41)	M1+E2	0.019 (10)	0.014 (4)
$\gamma_{28,5}$(Th)	1054.13 (20)	0.019 (6)	M1+E2	0.019 (10)	0.019 (6)
$\gamma_{50,8}$(Th)	1062.57 (15)	0.011 (4)			0.011 (4)
$\gamma_{18,1}$(Th)	1065.168 (15)	0.135 (8)			0.135 (8)
$\gamma_{48,7}$(Th)	1074.73 (15)	0.011 (4)			0.011 (4)
$\gamma_{26,3}$(Th)	1088.20 (15)	0.0062 (14)			0.0062 (14)
$\gamma_{19,1}$(Th)	1095.671 (23)	0.126 (10)	M1+E2	0.017 (9)	0.126 (10)
$\gamma_{27,3}$(Th)	1103.43 (10)	0.0102 (11)	E3	0.0195 (3)	0.0102 (11)
$\gamma_{20,1}$(Th)	1110.604 (9)	0.285 (22)	E1	0.00288 (4)	0.284 (22)
$\gamma_{24,2}$(Th)	1110.604 (9)	0.0273 (21)	E1	0.00288 (4)	0.0272 (21)
$\gamma_{22,1}$(Th)	1117.65 (10)	0.061 (7)			0.061 (7)
$\gamma_{29,5}$(Th)	1135.26 (15)	0.0102 (17)			0.0102 (17)
$\gamma_{30,5}$(Th)	1142.87 (15)	0.0108 (22)			0.0108 (22)
$\gamma_{57,8}$(Th)	1148.17 (14)	0.0062 (14)	M1+E2	0.015 (8)	0.0062 (14)
$\gamma_{19,0}$(Th)	1153.27 (4)	0.148 (13)	E1+M2	0.03 (3)	0.148 (13)
$\gamma_{25,2}$(Th)	1157.16 (15)	0.0073 (14)	E1+M2	0.03 (3)	0.0073 (14)
$\gamma_{37,6}$(Th)	1164.55 (7)	0.067 (7)	M1+E2	0.015 (8)	0.067 (7)
$\gamma_{22,0}$(Th)	1175.33 (10)	0.0257 (42)	E1+M2	0.027 (24)	0.025 (4)
$\gamma_{57,7}$(Th)	1190.83 (20)	0.0065 (17)	M1+E2	0.014 (7)	0.0065 (17)
$\gamma_{40,6}$(Th)	1217.03 (10)	0.022 (4)			0.022 (4)
$\gamma_{26,2}$(Th)	1229.42 (15)	0.0078 (25)			0.0078 (25)
$\gamma_{27,2}$(Th)	1245.15 (6)	0.110 (8)	M1+E2	0.013 (6)	0.110 (8)
$\gamma_{34,5}$(Th)	1247.10 (5)	0.524 (24)	M1	0.0187 (3)	0.524 (24)
$\gamma_{35,5}$(Th)	1250.06 (5)	0.065 (6)			0.065 (6)
$\gamma_{44,6}$(Th)	1276.72 (10)	0.015 (3)			0.015 (3)
$\gamma_{25,1}$(Th)	1286.29 (20)	0.052 (11)	E1+M2		0.052 (11)
$\gamma_{37,5}$(Th)	1287.77 (8)	0.109 (25)	M1+E2	0.012 (6)	0.109 (25)
$\gamma_{33,3}$(Th)	1309.76 (20)	0.020 (7)	E1+M2	0.020 (18)	0.020 (7)
$\gamma_{34,3}$(Th)	1315.33 (10)	0.0152 (30)	M1+E2	0.011 (6)	0.015 (3)
$\gamma_{29,2}$(Th)	1344.62 (15)	0.0094 (20)	M1+E2	0.011 (5)	0.0094 (20)
$\gamma_{41,5}$(Th)	1347.50 (15)	0.0163 (41)	E1+M2	0.019 (17)	0.016 (4)
$\gamma_{40,4}$(Th)	1357.81 (15)	0.021 (5)			0.021 (5)
$\gamma_{41,4}$(Th)	1365.71 (12)	0.0144 (31)	E2+M3	0.03 (3)	0.014 (3)
$\gamma_{27,1}$(Th)	1374.24 (7)	0.0196 (14)	E2+M3	0.03 (3)	0.0196 (14)
$\gamma_{45,5}$(Th)	1401.52 (10)	0.0132 (31)	E1+M2	0.017 (15)	0.013 (3)
$\gamma_{41,3}$(Th)	1415.55 (14)	0.022 (5)	E3	0.01141 (16)	0.022 (5)
$\gamma_{32,2}$(Th)	1430.99 (10)	0.037 (8)			0.037 (8)
$\gamma_{28,0}$(Th)	1451.43 (15)	0.0111 (22)	M1+E2	0.009 (4)	0.0111 (22)
$\gamma_{35,2}$(Th)	1459.131 (22)	0.89 (6)	E2	0.00498 (7)	0.87 (5)
$\gamma_{45,3}$(Th)	1469.74 (15)	0.021 (5)	E1+M2	0.015 (14)	0.021 (5)
$\gamma_{36,2}$(Th)	1495.904 (16)	0.924 (30)	E2	0.00477 (7)	0.92 (3)
$\gamma_{38,2}$(Th)	1501.59 (5)	0.513 (17)			0.513 (17)
$\gamma_{39,2}$(Th)	1537.89 (10)	0.049 (6)	E2+M3	0.023 (19)	0.049 (6)
$\gamma_{40,2}$(Th)	1548.65 (6)	0.040 (5)			0.040 (5)
$\gamma_{41,2}$(Th)	1557.13 (7)	0.173 (9)	E2+M1	0.0070 (6)	0.173 (9)
$\gamma_{32,1}$(Th)	1560.02 (7)	0.021 (5)			0.021 (5)
$\gamma_{42,2}$(Th)	1571.55 (20)	0.0059 (17)			0.0059 (17)
$\gamma_{43,2}$(Th)	1573.389 (24)	0.0341 (40)	E2	0.00438 (7)	0.034 (4)

	Energy keV	$P_{\gamma+ce}$ × 100	Multipolarity	α_T	P_γ × 100
$\gamma_{33,1}$(Th)	1580.531 (25)	0.624 (40)	M1+E2	0.007 (3)	0.62 (4)
$\gamma_{35,1}$(Th)	1588.200 (25)	3.06 (12)	E2	0.007 (3)	3.06 (12)
$\gamma_{54,4}$(Th)	1609.44 (15)	0.0081 (17)	E2	0.00422 (6)	0.0081 (17)
$\gamma_{36,1}$(Th)	1625.09 (4)	0.270 (23)	E2+M3	0.020 (17)	0.270 (23)
$\gamma_{38,1}$(Th)	1630.618 (20)	1.52 (6)	M1+E2	0.007 (3)	1.52 (6)
$\gamma_{33,0}$(Th)	1638.272 (23)	0.462 (30)	E2	0.00410 (6)	0.46 (3)
$\gamma_{39,1}$(Th)	1666.514 (13)	0.173 (9)	M1	0.00895 (13)	0.173 (9)
$\gamma_{40,1}$(Th)	1677.66 (6)	0.057 (6)			0.057 (6)
$\gamma_{41,1}$(Th)	1686.22 (11)	0.094 (7)	E2	0.00391 (6)	0.094 (7)
$\gamma_{42,1}$(Th)	1700.62 (20)	0.0105 (25)			0.0105 (25)
$\gamma_{43,1}$(Th)	1702.40 (8)	0.055 (7)	E2+M3	0.018 (15)	0.055 (7)
$\gamma_{46,2}$(Th)	1706.17 (7)	0.0089 (12)	M1+E2	0.0078 (12)	0.0089 (12)
$\gamma_{47,2}$(Th)	1713.49 (20)	0.0057 (11)	E2+M3	0.018 (14)	0.0057 (11)
$\gamma_{39,0}$(Th)	1724.19 (5)	0.030 (4)	E1+M2		0.030 (4)
$\gamma_{44,1}$(Th)	1738.46 (5)	0.018 (4)			0.018 (4)
$\gamma_{45,1}$(Th)	1740.5 (3)	0.011 (4)			0.011 (4)
$\gamma_{49,2}$(Th)	1742.1 (3)	0.0084 (25)	M1+E2		0.0084 (25)
$\gamma_{50,2}$(Th)	1750.58 (20)	0.0084 (9)			0.0084 (9)
$\gamma_{51,2}$(Th)	1758.11 (5)	0.0361 (40)	E2+M1	0.00371 (6)	0.036 (4)
$\gamma_{52,2}$(Th)	1772.2 (3)	0.0019 (5)	E2+M3	0.016 (13)	0.0019 (5)
$\gamma_{60,3}$(Th)	1795.13 (6)	0.0022 (8)			0.0022 (8)
$\gamma_{45,0}$(Th)	1797.5 (5)	0.0022 (8)	E1+M2	0.009 (8)	0.0022 (8)
$\gamma_{54,2}$(Th)	1800.9 (2)	0.0046 (8)			0.0046 (8)
$\gamma_{55,2}$(Th)	1823.22 (10)	0.046 (5)			0.046 (5)
$\gamma_{56,2}$(Th)	1826.8 (3)	0.0022 (8)			0.0022 (8)
$\gamma_{46,1}$(Th)	1835.29 (10)	0.0381 (40)	E2+M1	0.00382 (10)	0.038 (4)
$\gamma_{47,1}$(Th)	1842.15 (8)	0.037 (6)	M1+E2	0.0055 (4)	0.037 (6)
$\gamma_{59,2}$(Th)	1850.17 (20)	0.0046 (8)			0.0046 (8)
$\gamma_{49,1}$(Th)	1870.82 (9)	0.0257 (24)	M1+E2	0.0051 (18)	0.0257 (24)
$\gamma_{50,1}$(Th)	1879.6 (3)	0.0013 (5)			0.0013 (5)
$\gamma_{51,1}$(Th)	1887.13 (5)	0.094 (7)	E2+M1	0.0050 (17)	0.094 (7)
$\gamma_{47,0}$(Th)	1900.16 (20)	0.0030 (6)	E1+M2	0.008 (7)	0.0030 (6)
$\gamma_{53,1}$(Th)	1907.14 (11)	0.0124 (13)			0.0124 (13)
$\gamma_{54,1}$(Th)	1929.78 (20)	0.0208 (14)	E2+M3	0.013 (10)	0.0208 (14)
$\gamma_{60,2}$(Th)	1936.3 (3)	0.0022 (6)			0.0022 (6)
$\gamma_{55,1}$(Th)	1952.37 (10)	0.062 (5)	E2+M3	0.013 (10)	0.062 (5)
$\gamma_{56,1}$(Th)	1955.9 (5)	0.0008 (3)			0.0008 (3)
$\gamma_{52,0}$(Th)	1958.4 (3)	0.0016 (5)	E1+M2		0.0016 (5)
$\gamma_{57,1}$(Th)	1965.22 (12)	0.0223 (22)	M1+E2	0.0046 (15)	0.0223 (22)
$\gamma_{58,1}$(Th)	1972.0 (3)	0.0038 (8)			0.0038 (8)
$\gamma_{59,1}$(Th)	1979.3 (3)	0.0019 (5)			0.0019 (5)
$\gamma_{58,0}$(Th)	2029.4 (5)	0.0019 (5)	E1+M2	0.007 (6)	0.0019 (5)

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