

$^{103}\text{Cd}$   $\varepsilon$  decay (7.3 min)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	D. De Frenne	NDS 110, 2081 (2009)	1-Mar-2009

Parent:  $^{103}\text{Cd}$ :  $E=0.0$ ;  $J^\pi=(5/2)^+$ ;  $T_{1/2}=7.3$  min  $I$ ;  $Q(\varepsilon)=4142$   $I0$ ;  $\% \varepsilon + \% \beta^+$  decay=100.0

[1978Lh01](#), [1980Lh01](#): mass-separated activity from  $\text{Mo}(^{14}\text{N}, \text{ypxn})$ .

Measured:  $E\gamma$ ,  $I\gamma$ ,  $\beta\gamma$ , (K x ray) $\gamma$ ,  $\gamma\gamma$ -coin,  $E\beta$ . Deduced:  $Q(\varepsilon)$ ,  $^{103}\text{Ag}$  levels,  $(\varepsilon+\beta^+)$  branches,  $\log ft$ ,  $J^\pi$ .

[1980Ka05](#): mass-separated source via  $\text{Sn}(p, 3\text{pxn})\text{Cd}$  spallation. Measured:  $E\gamma$ ,  $I\gamma$ ,  $T_{1/2}$ , ce,  $\gamma\gamma(t)$ . Deduced:  $^{103}\text{Ag}$  levels,  $J^\pi$ .

[1980Ka05](#):  $^{104}\text{Pd}(p, 2n\gamma)$ ,  $E=19$  MeV. Measured:  $\gamma(\theta)$ . Deduced:  $\alpha$ .

[1988Bo28](#): mass-separated source via  $\text{Mo}(\text{HI}, \text{ypxn})$ . Measured:  $Q(\varepsilon)$ .

 $^{103}\text{Ag}$  Levels

Level scheme taken from [1978Lh01](#). Level energies obtained using least-squares procedure of measured  $\gamma$  energies.

E(level)	$J^\pi$	$T_{1/2}$	Comments
0.0	$7/2^+$	65.7 min 7	$T_{1/2}$ : from <a href="#">1975Di09</a> . Deduced from ce decay curves. Others: <a href="#">1966Ja12</a> , <a href="#">1962Pa05</a> , <a href="#">1960Pr14</a> , <a href="#">1955Jo25</a> .
27.54 4	$(9/2)^+$		E(level): consistent with $(1449\gamma)(27\gamma)$ coin relation, $I(\gamma+\text{ce})(27\gamma, \text{M1})$ for level intensity balance, and $\gamma$ -ray pairs of $\Delta E=27$ keV including a g.s. transition.
134.45 5	$1/2^-$	5.7 s 3	$T_{1/2}$ : taken from <a href="#">1962Wh02</a> $^{103}\text{Ag}$ IT decay.
521.41 7	$(3/2)^-$		
590.58 17	$11/2^+$		
590.79 7	$(5/2)^-$		
1079.91 6	$(5/2, 7/2)^+$		
1083.53 16	$1/2^-, 3/2^-, 5/2^-$		
1099.28 7	$(5/2, 7/2, 9/2)^+$		
1210.83 17			
1257.9 4			
1311.68 7	$(7/2)^+$		$J^\pi$ : consistent with $\gamma$ -decay to $11/2^+$ state and $\log ft=6.0$ .
1422.07 11	$(3/2)^+$		
1461.80 7	$(5/2)^+$		
1476.23 7	$(5/2, 7/2)^+$		
1552.09 12	$+$		
1556.96 11	$+$		
1705.14 9	$3/2^+$		
1776.00 9	$(5/2, 7/2)^+$		
1822.01 11			
1828.6 3			
1856.69 16			
1880.01 9	$(3/2, 5/2, 7/2)^+$		
1901.17 13	$+$		
1906.97 21			
1957.97 9	$(3/2, 5/2, 7/2)^+$		
1968.54 9	$(3/2, 5/2, 7/2)^+$		
2012.07 9	$(3/2, 5/2, 7/2)^+$		
2020.53 11			
2022.58 13	$(3/2, 5/2, 7/2)^+$		E(level): the levels at 2022.58 and 2020.52 keV are considered by <a href="#">1980Ka05</a> as one level at 2021.8 keV.
2088.99 15	$(3/2, 5/2, 7/2)^+$		
2125.05 20	$(3/2, 5/2, 7/2)^+$		
2133.05 20	$(3/2, 5/2, 7/2)^+$		
2167.65 24	$(3/2, 5/2, 7/2)^+$		
2199.37 11	$(3/2)^+$		
2206.6 4			E(level): not confirmed by <a href="#">1980Ka05</a> .

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$^{103}\text{Cd}$   $\varepsilon$  decay (7.3 min) (continued) $^{103}\text{Ag}$  Levels (continued)

E(level)	$J^{\pi\dagger}$	Comments
2245.15 16	(3/2,5/2,7/2) <sup>+</sup>	
2273.81 16	(3/2,5/2,7/2) <sup>+</sup>	
2287.8 3		
2356.10 16	(3/2,5/2,7/2) <sup>+</sup>	
2401.12 11	(3/2,5/2,7/2) <sup>+</sup>	
2439.42 12	(3/2,5/2,7/2) <sup>+</sup>	
2440.43 19	(3/2 <sup>+</sup> )	
2485.15 17	(3/2,5/2,7/2) <sup>+</sup>	
2521.09 9	(3/2,5/2,7/2) <sup>+</sup>	
2586.97 25		
2597.73 14	(3/2,5/2,7/2) <sup>+</sup>	
2658.1 3	(3/2,5/2,7/2) <sup>+</sup>	
2662.09 20	(3/2,5/2,7/2) <sup>+</sup>	
2707.86 15	(3/2,5/2,7/2) <sup>+</sup>	
2708.69 21	(3/2,5/2,7/2) <sup>+</sup>	1980Ka05 propose an almost completely different decay pattern for this level; We adopted the decay pattern of 1978Lh01.
2726.7? 8		
2778.1 4		
2796.1 3	(3/2,5/2,7/2) <sup>+</sup>	
2821.9 3	(3/2,5/2,7/2) <sup>+</sup>	
2855.60 22	(3/2,5/2,7/2) <sup>+</sup>	
2888.84 11	(3/2,5/2,7/2) <sup>+</sup>	
2980.62 16	(3/2,5/2,7/2) <sup>+</sup>	
3005.53 19	(3/2,5/2,7/2) <sup>+</sup>	
3188.8 3	(3/2,5/2,7/2) <sup>+</sup>	

† From Adopted Levels.

 $\varepsilon, \beta^+$  radiations

From exp E( $\beta^+$ ) deduced Q( $\varepsilon$ )=4250 150 (1972IsZR), 4200 100 (1970BeYT), 4190 160  $\beta$ -singles and 4310 220  $\beta\gamma$ -coin (1978Lh01). Others: 1960Pr14, 1969Ha03.

E(decay)	E(level)	$I\beta^+ \ddagger$	$I\varepsilon \ddagger$	Log ft	$I(\varepsilon + \beta^+) \ddagger\ddagger$	Comments
(953 10)	3188.8		0.56 12	5.19 11	0.56 12	$\varepsilon K = 0.8606$ ; $\varepsilon L = 0.11171$ 24; $\varepsilon M += 0.02773$ 7
(1136 10)	3005.53		0.57 10	5.34 9	0.57 10	$\varepsilon K = 0.8614$ ; $\varepsilon L = 0.11101$ 18; $\varepsilon M += 0.02752$ 5
(1161 10)	2980.62		1.10 17	5.07 8	1.10 17	$\varepsilon K = 0.8615$ ; $\varepsilon L = 0.11093$ 18; $\varepsilon M += 0.02750$ 5
(1253 10)	2888.84		2.0 4	4.88 10	2.0 4	$\varepsilon K = 0.8611$ ; $\varepsilon L = 0.11058$ 25; $\varepsilon M += 0.02740$ 7
(1286 10)	2855.60	0.0008 10	0.49 9	5.51 9	0.49 9	av $E\beta = 133$ 22; $\varepsilon K = 0.8607$ 12; $\varepsilon L = 0.1104$ 3; $\varepsilon M += 0.02736$ 8
(1320 10)	2821.9	0.0022 24	0.90 19	5.27 10	0.90 19	av $E\beta = 148$ 22; $\varepsilon K = 0.8600$ 16; $\varepsilon L = 0.1102$ 4; $\varepsilon M += 0.02731$ 9
(1346 10)	2796.1	0.0016 15	0.46 8	5.58 9	0.46 8	av $E\beta = 159$ 22; $\varepsilon K = 0.8593$ 20; $\varepsilon L = 0.1101$ 4; $\varepsilon M += 0.02727$ 10
(1364 10)	2778.1	0.0008 8	0.20 5	5.95 12	0.20 5	av $E\beta = 167$ 22; $\varepsilon K = 0.8586$ 23; $\varepsilon L = 0.1100$ 5; $\varepsilon M += 0.02724$ 11
(1415 10)	2726.7?	0.0010 8	0.14 4	6.14 13	0.14 4	av $E\beta = 189$ 22; $\varepsilon K = 0.856$ 4; $\varepsilon L = 0.1095$ 6; $\varepsilon M += 0.02713$ 14
(1433 10)	2708.69	0.015 10	1.78 24	5.04 7	1.79 24	av $E\beta = 197$ 22; $\varepsilon K = 0.855$ 4; $\varepsilon L = 0.1093$ 6; $\varepsilon M += 0.02708$ 15
(1434 10)	2707.86	0.016 11	1.9 3	5.02 8	1.9 3	av $E\beta = 197$ 22; $\varepsilon K = 0.855$ 4; $\varepsilon L = 0.1093$ 6;

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$^{103}\text{Cd}$   $\epsilon$  decay (7.3 min) (continued) $\epsilon, \beta^+$  radiations (continued)

E(decay)	E(level)	$I\beta^+$ ‡	$I\epsilon$ ‡	Log $ft$	$I(\epsilon + \beta^+)$ †‡	Comments
(1480 10)	2662.09	0.010 6	0.83 18	5.4 1	0.84 18	$\epsilon M+= 0.02708$ 15 av $E\beta= 217$ 22; $\epsilon K= 0.852$ 5; $\epsilon L= 0.1088$ 7; $\epsilon M+= 0.02695$ 18
(1484 10)	2658.1	0.007 5	0.56 15	5.57 12	0.57 15	av $E\beta= 219$ 22; $\epsilon K= 0.852$ 5; $\epsilon L= 0.1088$ 8; $\epsilon M+= 0.02693$ 19
(1544 10)	2597.73	0.021 10	1.04 16	5.34 8	1.06 16	av $E\beta= 245$ 22; $\epsilon K= 0.846$ 7; $\epsilon L= 0.1079$ 9; $\epsilon M+= 0.02671$ 23
(1555 10)	2586.97	0.005 3	0.24 6	5.98 11	0.25 6	av $E\beta= 250$ 22; $\epsilon K= 0.844$ 7; $\epsilon L= 0.1077$ 10; $\epsilon M+= 0.02666$ 24
(1621 10)	2521.09	0.07 3	2.1 3	5.07 7	2.2 3	av $E\beta= 278$ 22; $\epsilon K= 0.835$ 9; $\epsilon L= 0.1064$ 12; $\epsilon M+= 0.0263$ 3
(1657 10)	2485.15	0.038 14	0.92 15	5.45 8	0.96 15	av $E\beta= 294$ 22; $\epsilon K= 0.829$ 10; $\epsilon L= 0.1056$ 14; $\epsilon M+= 0.0261$ 4
(1702 10)	2440.43	0.020 7	0.39 7	5.85 8	0.41 7	av $E\beta= 313$ 22; $\epsilon K= 0.821$ 12; $\epsilon L= 0.1044$ 15; $\epsilon M+= 0.0258$ 4
(1703 10)	2439.42	0.17 7	3.3 9	4.92 12	3.5 9	av $E\beta= 314$ 22; $\epsilon K= 0.820$ 12; $\epsilon L= 0.1044$ 15; $\epsilon M+= 0.0258$ 4
(1741 10)	2401.12	0.27 9	4.2 7	4.84 8	4.5 7	av $E\beta= 330$ 22; $\epsilon K= 0.812$ 13; $\epsilon L= 0.1033$ 17; $\epsilon M+= 0.0256$ 4
(1786 10)	2356.10	0.042 13	0.54 9	5.75 8	0.58 9	av $E\beta= 350$ 22; $\epsilon K= 0.801$ 14; $\epsilon L= 0.1018$ 19; $\epsilon M+= 0.0252$ 5
(1854 10)	2287.8	0.039 14	0.37 10	5.95 12	0.41 11	av $E\beta= 380$ 22; $\epsilon K= 0.782$ 16; $\epsilon L= 0.0993$ 21; $\epsilon M+= 0.0246$ 6
(1868 10)	2273.81	0.12 4	1.11 19	5.48 9	1.23 21	av $E\beta= 386$ 22; $\epsilon K= 0.777$ 17; $\epsilon L= 0.0987$ 22; $\epsilon M+= 0.0244$ 6
(1897 10)	2245.15	0.12 3	0.99 15	5.54 7	1.11 16	av $E\beta= 398$ 22; $\epsilon K= 0.768$ 17; $\epsilon L= 0.0975$ 23; $\epsilon M+= 0.0241$ 6
(1935 10)	2206.6	0.020 9	0.14 6	6.41 17	0.16 6	av $E\beta= 415$ 22; $\epsilon K= 0.755$ 18; $\epsilon L= 0.0958$ 24; $\epsilon M+= 0.0237$ 6
(1943 10)	2199.37	0.56 14	3.8 7	4.97 8	4.4 7	av $E\beta= 418$ 22; $\epsilon K= 0.753$ 19; $\epsilon L= 0.0955$ 24; $\epsilon M+= 0.0236$ 6
(1974 10)	2167.65	0.10 3	0.64 15	5.77 11	0.74 17	av $E\beta= 432$ 22; $\epsilon K= 0.741$ 19; $\epsilon L= 0.0940$ 25; $\epsilon M+= 0.0233$ 6
(2009 10)	2133.05	0.31 7	1.7 3	5.36 8	2.0 3	av $E\beta= 448$ 22; $\epsilon K= 0.728$ 20; $\epsilon L= 0.092$ 3; $\epsilon M+= 0.0228$ 7
(2017 10)	2125.05	0.091 22	0.48 9	5.91 9	0.57 10	av $E\beta= 451$ 22; $\epsilon K= 0.725$ 20; $\epsilon L= 0.092$ 3; $\epsilon M+= 0.0227$ 7
(2053 10)	2088.99	0.56 13	2.6 5	5.19 8	3.2 5	av $E\beta= 467$ 22; $\epsilon K= 0.711$ 21; $\epsilon L= 0.090$ 3; $\epsilon M+= 0.0223$ 7
(2119 10)	2022.58	0.14 4	0.55 12	5.9 1	0.69 15	av $E\beta= 496$ 23; $\epsilon K= 0.684$ 22; $\epsilon L= 0.087$ 3; $\epsilon M+= 0.0214$ 7
(2121 10)	2020.53	0.069 25	0.26 9	6.22 15	0.33 11	av $E\beta= 497$ 23; $\epsilon K= 0.683$ 22; $\epsilon L= 0.086$ 3; $\epsilon M+= 0.0214$ 7
(2130 10)	2012.07	0.40 8	1.45 21	5.48 7	1.85 25	av $E\beta= 501$ 23; $\epsilon K= 0.679$ 22; $\epsilon L= 0.086$ 3; $\epsilon M+= 0.0213$ 7
(2173 10)	1968.54	0.33 9	1.07 24	5.63 10	1.4 3	av $E\beta= 520$ 23; $\epsilon K= 0.660$ 23; $\epsilon L= 0.084$ 3; $\epsilon M+= 0.0207$ 7
(2184 10)	1957.97	0.63 13	2.0 4	5.37 8	2.6 4	av $E\beta= 525$ 23; $\epsilon K= 0.655$ 23; $\epsilon L= 0.083$ 3; $\epsilon M+= 0.0205$ 8
(2235 10)	1906.97	0.07 3	0.21 8	6.37 16	0.28 10	av $E\beta= 548$ 23; $\epsilon K= 0.633$ 23; $\epsilon L= 0.080$ 3; $\epsilon M+= 0.0198$ 8
(2241 10)	1901.17	0.08 3	0.21 8	6.36 17	0.29 9	av $E\beta= 550$ 23; $\epsilon K= 0.630$ 23; $\epsilon L= 0.080$ 3; $\epsilon M+= 0.0197$ 8
(2262 10)	1880.01	0.90 17	2.3 4	5.33 8	3.2 5	av $E\beta= 560$ 23; $\epsilon K= 0.620$ 23; $\epsilon L= 0.078$ 3; $\epsilon M+= 0.0194$ 8
(2285 10)	1856.69	0.04 4	0.11 8	6.7 4	0.15 11	av $E\beta= 570$ 23; $\epsilon K= 0.610$ 23; $\epsilon L= 0.077$ 3; $\epsilon M+= 0.0191$ 8

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$^{103}\text{Cd}$   $\varepsilon$  decay (7.3 min) (continued) $\varepsilon, \beta^+$  radiations (continued)

E(decay)	E(level)	$I\beta^+$ ‡	$I\varepsilon$ ‡	Log <i>ft</i>	$I(\varepsilon + \beta^+)$ †‡	Comments
(2313 10)	1828.6	0.06 4	0.13 7	6.59 24	0.19 10	av $E\beta^-$ = 582 23; $\varepsilon K$ = 0.597 23; $\varepsilon L$ = 0.075 3; $\varepsilon M+$ = 0.0187 8
(2320 10)	1822.01	0.23 7	0.51 14	6.01 12	0.74 19	av $E\beta^-$ = 585 23; $\varepsilon K$ = 0.594 23; $\varepsilon L$ = 0.075 3; $\varepsilon M+$ = 0.0186 8
(2366 10)	1776.00	0.35 8	0.68 15	5.9 1	1.03 22	av $E\beta^-$ = 606 23; $\varepsilon K$ = 0.572 23; $\varepsilon L$ = 0.072 3; $\varepsilon M+$ = 0.0179 8
(2437 10)	1705.14	1.7 4	2.7 6	5.32 9	4.4 8	av $E\beta^-$ = 638 23; $\varepsilon K$ = 0.540 23; $\varepsilon L$ = 0.068 3; $\varepsilon M+$ = 0.0169 8
(2585 10)	1556.96	0.46 11	0.56 13	6.06 11	1.02 23	av $E\beta^-$ = 704 23; $\varepsilon K$ = 0.474 22; $\varepsilon L$ = 0.060 3; $\varepsilon M+$ = 0.0148 7
(2590 10)	1552.09	0.37 10	0.44 12	6.16 12	0.81 21	av $E\beta^-$ = 706 23; $\varepsilon K$ = 0.472 22; $\varepsilon L$ = 0.060 3; $\varepsilon M+$ = 0.0147 7
(2666 10)	1476.23	1.9 5	1.9 5	5.55 11	3.8 9	av $E\beta^-$ = 741 23; $\varepsilon K$ = 0.440 21; $\varepsilon L$ = 0.055 3; $\varepsilon M+$ = 0.0137 7
(2680 10)	1461.80	4.1 6	4.1 6	5.22 7	8.2 11	av $E\beta^-$ = 747 23; $\varepsilon K$ = 0.434 21; $\varepsilon L$ = 0.055 3; $\varepsilon M+$ = 0.0135 7
(2720 10)	1422.07	0.53 11	0.49 10	6.16 10	1.02 20	av $E\beta^-$ = 765 23; $\varepsilon K$ = 0.418 21; $\varepsilon L$ = 0.053 3; $\varepsilon M+$ = 0.0130 7
(2830 10)	1311.68	0.9 3	0.70 22	6.04 14	1.6 5	av $E\beta^-$ = 815 23; $\varepsilon K$ = 0.376 19; $\varepsilon L$ = 0.0473 24; $\varepsilon M+$ = 0.0117 6
(2884 10)	1257.9	0.12 5	0.08 3	6.99 16	0.20 7	av $E\beta^-$ = 840 23; $\varepsilon K$ = 0.357 18; $\varepsilon L$ = 0.0449 23; $\varepsilon M+$ = 0.0111 6
(2931 10)	1210.83	0.29 6	0.19 4	6.64 9	0.48 9	av $E\beta^-$ = 861 23; $\varepsilon K$ = 0.340 18; $\varepsilon L$ = 0.0429 22; $\varepsilon M+$ = 0.0106 6
(3043 10)	1099.28	0.40 17	0.22 9	6.61 18	0.62 25	av $E\beta^-$ = 912 23; $\varepsilon K$ = 0.305 16; $\varepsilon L$ = 0.0384 20; $\varepsilon M+$ = 0.0095 5
(3058 10)	1083.53	0.27 6	0.15 4	6.79 10	0.42 9	av $E\beta^-$ = 920 23; $\varepsilon K$ = 0.300 16; $\varepsilon L$ = 0.0378 20; $\varepsilon M+$ = 0.0093 5
(3062 10)	1079.91	1.9 4	1.00 18	5.95 9	2.9 5	av $E\beta^-$ = 921 23; $\varepsilon K$ = 0.299 16; $\varepsilon L$ = 0.0377 20; $\varepsilon M+$ = 0.0093 5
(3551 10)	590.79	1.65 24	0.45 7	6.43 7	2.1 3	av $E\beta^-$ = 1147 24; $\varepsilon K$ = 0.186 9; $\varepsilon L$ = 0.0234 12; $\varepsilon M+$ = 0.0058 3
(4008 10)	134.45	2.9 8	0.49 13	8.0 <sup>1u</sup>	3.4 9	av $E\beta^-$ = 1360 24; $\varepsilon K$ = 0.124 6; $\varepsilon L$ = 0.0155 7; $\varepsilon M+$ = 0.00383 17
3109 11	0.0	10.5 20	1.5 3	6.03 9	12.0 23	av $E\beta^-$ = 1423 24; $\varepsilon K$ = 0.110 5; $\varepsilon L$ = 0.0138 6; $\varepsilon M+$ = 0.00342 15

$I(\varepsilon + \beta^+)$ : deduced from  $I\gamma/\gamma_{\pm}$ , level scheme, intensity balance and  $\varepsilon/\beta^+$  theory.  
E(decay): from [1988Bo28](#).

† Calculated by evaluator from  $I(\gamma+ce)$ -imbalance at each level.

‡ Absolute intensity per 100 decays.

<sup>103</sup>Cd ε decay (7.3 min) (continued)

γ(<sup>103</sup>Ag)

I<sub>γ</sub>-normalization: normalization to absolute I<sub>γ</sub> is based on (ε+β<sup>+</sup>)=12.0 23 to g.s. assuming no feeding to 27-keV level.

α(K)exp: taken from 1980Ka05. Calculated via I<sub>γ</sub> and conversion electron data of the same authors.

E <sub>γ</sub> <sup>†</sup>	I <sub>γ</sub> <sup>†@</sup>	E <sub>i</sub> (level)	J <sub>i</sub> <sup>π</sup>	E <sub>f</sub>	J <sub>f</sub> <sup>π</sup>	Mult. <sup>‡</sup>	α <sup>#</sup>	Comments
27.56 4	11.0 21	27.54	(9/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	M1	17.5 3	α(K)= 15.50; α(L)= 1.953; α(M)= 0.370 Mult.: I(γ+ce) balance about 27-keV level favors pure M1 character.
69.37 6	0.67 11	590.79	(5/2) <sup>-</sup>	521.41	(3/2) <sup>-</sup>	[M1]	1.21 6	α(K)= 1.039; α(L)= 0.1297; α(M)=0.02457; α(N+..)=0.00494
134.44 5	30.1 10	134.45	1/2 <sup>-</sup>	0.0	7/2 <sup>+</sup>	E3	3.7	K/L=1.9 1 (1980Ka05) α(K)= 2.274; α(L)= 1.150; α(M)= 0.2306; α(N+..)= 0.0416 I <sub>γ</sub> : from 1980Ka05.
187.5 7	2.0 1	2088.99	(3/2,5/2,7/2) <sup>+</sup>	1901.17	+	M1	0.074 13	α(K)exp=0.079 14 (1980Ka05) E <sub>γ</sub> ,I <sub>γ</sub> : from 1980Ka05.
242.0& 7	0.6 2	2199.37	(3/2) <sup>+</sup>	1957.97	(3/2,5/2,7/2) <sup>+</sup>	M1,E2	0.050 13	E <sub>γ</sub> : observed only by 1980Ka05. α(K)exp=0.047 8 (1980Ka05) E <sub>γ</sub> ,I <sub>γ</sub> : from 1980Ka05.
243.1 4	12.6 4	1705.14	3/2 <sup>+</sup>	1461.80	(5/2) <sup>+</sup>			
264.4 6	1.1 3	1822.01		1556.96	+			
296.7 6	0.8 3	2199.37	(3/2) <sup>+</sup>	1901.17	+			
318.0 8	0.2 1	2199.37	(3/2) <sup>+</sup>	1880.01	(3/2,5/2,7/2) <sup>+</sup>			
370.8 6	0.6 2	2199.37	(3/2) <sup>+</sup>	1828.6				
377.0 7	1.3 6	1476.23	(5/2,7/2) <sup>+</sup>	1099.28	(5/2,7/2,9/2) <sup>+</sup>			
381.7& 2	1.1 3	1461.80	(5/2) <sup>+</sup>	1079.91	(5/2,7/2) <sup>+</sup>	M1,E2	0.0108 9	E <sub>γ</sub> : observed only by 1980Ka05. α(K)=0.01002; α(L)=0.00119; α(M)=0.00023 α(K)exp=0.0115 17(1980Ka05) I <sub>γ</sub> : from 1980Ka05.
386.97 7	30.8 10	521.41	(3/2) <sup>-</sup>	134.45	1/2 <sup>-</sup>			
387.2& 8	0.8	2287.8		1901.17	+			E <sub>γ</sub> : observed only by 1978Lh01.
442.2& 8	1.4 7	2401.12	(3/2,5/2,7/2) <sup>+</sup>	1957.97	(3/2,5/2,7/2) <sup>+</sup>	M1,E2		E <sub>γ</sub> : observed only by 1978Lh01. α(K)exp=0.0074 11 (1980Ka05) I <sub>γ</sub> : from 1980Ka05. Mult.: from α(K)exp. If J <sup>π</sup> 's of 590 and 134 keV levels are correct M1 is excluded.
456.34 7	25.0 8	590.79	(5/2) <sup>-</sup>	134.45	1/2 <sup>-</sup>			
463.7 6	1.3 4	2020.53		1556.96	+			
477.12 20	2.0 3	1556.96	+	1079.91	(5/2,7/2) <sup>+</sup>			
493.1& 2	0.9 2	1083.53	1/2 <sup>-</sup> ,3/2 <sup>-</sup> ,5/2 <sup>-</sup>	590.79	(5/2) <sup>-</sup>			E <sub>γ</sub> : observed only by 1980Ka05.
494.3 4	4.4 20	2199.37	(3/2) <sup>+</sup>	1705.14	3/2 <sup>+</sup>			
496.2 4	1.5 5	1957.97	(3/2,5/2,7/2) <sup>+</sup>	1461.80	(5/2) <sup>+</sup>			
520.3 8	0.2 1	2401.12	(3/2,5/2,7/2) <sup>+</sup>	1880.01	(3/2,5/2,7/2) <sup>+</sup>			
<sup>x</sup> 526.69 32	1.0 2							
<sup>x</sup> 530.86 21	4.4 7							
532.1 4	4.8 3	2088.99	(3/2,5/2,7/2) <sup>+</sup>	1556.96	+	M1,E2		α(K)exp=0.0064 10 (1980Ka05) I <sub>γ</sub> : from 1980Ka05.

<sup>103</sup>Cd ε decay (7.3 min) (continued)γ(<sup>103</sup>Ag) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>†@</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>‡</sup></u>	<u>Comments</u>
544.4 4	3.0 8	2401.12	(3/2,5/2,7/2) <sup>+</sup>	1856.69			
546.4 4	3.0 8	1968.54	(3/2,5/2,7/2) <sup>+</sup>	1422.07	(3/2) <sup>+</sup>		
552.60 10	3.0 2	2521.09	(3/2,5/2,7/2) <sup>+</sup>	1968.54	(3/2,5/2,7/2) <sup>+</sup>	M1,E2	α(K)exp=0.0044 10 (1980Ka05) I <sub>γ</sub> : from 1980Ka05.
562.2 4	1.3 4	1083.53	1/2 <sup>-</sup> ,3/2 <sup>-</sup> ,5/2 <sup>-</sup>	521.41	(3/2) <sup>-</sup>		
<sup>x</sup> 562.9 4	6.7 30						
563.0 4	7 3	590.58	11/2 <sup>+</sup>	27.54	(9/2) <sup>+</sup>		
575.2& 7	1.1 3	2133.05	(3/2,5/2,7/2) <sup>+</sup>	1556.96	<sup>+</sup>		E <sub>γ</sub> : observed only by 1980Ka05.
598.8 7	1.0 4	2020.53		1422.07	(3/2) <sup>+</sup>		
620.09 16	3.0 3	1210.83		590.79	(5/2) <sup>-</sup>		
625.2 4	9.0 18	1705.14	3/2 <sup>+</sup>	1079.91	(5/2,7/2) <sup>+</sup>	M1,E2	α(K)exp=0.0043 12 (1980Ka05) I <sub>γ</sub> : from 1980Ka05.
<sup>x</sup> 626.21 9	14.9 5						
627.0 4	10.9 20	2088.99	(3/2,5/2,7/2) <sup>+</sup>	1461.80	(5/2) <sup>+</sup>	M1,E2	α(K)exp=0.0056 12 (1980Ka05) E <sub>γ</sub> ,I <sub>γ</sub> : from 1980Ka05.
640.8& 7	1.8 4	2662.09	(3/2,5/2,7/2) <sup>+</sup>	2020.53			E <sub>γ</sub> : observed only by 1980Ka05.
643.1 5	2.6 7	2199.37	(3/2) <sup>+</sup>	1556.96	<sup>+</sup>		
645.0& 6	1.1 6	2888.84	(3/2,5/2,7/2) <sup>+</sup>	2245.15	(3/2,5/2,7/2) <sup>+</sup>		
648.0 10	1.4 5	2199.37	(3/2) <sup>+</sup>	1552.09	<sup>+</sup>		
656.66& 35	1.6 4	2133.05	(3/2,5/2,7/2) <sup>+</sup>	1476.23	(5/2,7/2) <sup>+</sup>		
663.4 4	2.6 2	2439.42	(3/2,5/2,7/2) <sup>+</sup>	1776.00	(5/2,7/2) <sup>+</sup>	M1,E2	α(K)exp=0.005 15 (1980Ka05) I <sub>γ</sub> : from 1980Ka05.
666.8 4	2.0 6	2088.99	(3/2,5/2,7/2) <sup>+</sup>	1422.07	(3/2) <sup>+</sup>		
667.2 5	1.2 5	1257.9		590.79	(5/2) <sup>-</sup>		
677.0 4	2.7 2	1776.00	(5/2,7/2) <sup>+</sup>	1099.28	(5/2,7/2,9/2) <sup>+</sup>	M1,E2	α(K)exp=0.004 1 (1980Ka05) I <sub>γ</sub> : from 1980Ka05.
<sup>x</sup> 681.6 5	1.1 3						
688.7 6	1.1 4	1210.83		521.41	(3/2) <sup>-</sup>		
696.3 6	0.8 4	1776.00	(5/2,7/2) <sup>+</sup>	1079.91	(5/2,7/2) <sup>+</sup>		
703.9& 7	0.9 2	2662.09	(3/2,5/2,7/2) <sup>+</sup>	1957.97	(3/2,5/2,7/2) <sup>+</sup>		E <sub>γ</sub> : observed only by 1980Ka05.
721.1 4	6.1 3	1311.68	(7/2) <sup>+</sup>	590.58	11/2 <sup>+</sup>	M1,E2	α(K)exp=0.0025 5 (1980Ka05) I <sub>γ</sub> : from 1980Ka05. Mult.: from α(K)exp. If J <sup>π</sup> 's of 1311 and 590 keV levels are correct M1 is excluded.
722.0 6	1.5 6	2273.81	(3/2,5/2,7/2) <sup>+</sup>	1552.09	<sup>+</sup>		
723.1 4	10.2 10	2199.37	(3/2) <sup>+</sup>	1476.23	(5/2,7/2) <sup>+</sup>	M1,E2	α(K)exp=0.0024 5 (1980Ka05) I <sub>γ</sub> : from 1980Ka05.
734.4& 4	1.7 8	2439.42	(3/2,5/2,7/2) <sup>+</sup>	1705.14	3/2 <sup>+</sup>		E <sub>γ</sub> : observed only by 1978Lh01.
736.4 4	0.5 2	1257.9		521.41	(3/2) <sup>-</sup>		
737.5 4	0.9 3	2199.37	(3/2) <sup>+</sup>	1461.80	(5/2) <sup>+</sup>		
739.1& 2	<1.0	1822.01		1083.53	1/2 <sup>-</sup> ,3/2 <sup>-</sup> ,5/2 <sup>-</sup>		Only observed by 1980Ka05.
739.91 32	1.8 2	2708.69	(3/2,5/2,7/2) <sup>+</sup>	1968.54	(3/2,5/2,7/2) <sup>+</sup>		

<sup>103</sup>Cd ε decay (7.3 min) (continued)

γ(<sup>103</sup>Ag) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>†@</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>‡</sup></u>	<u>Comments</u>
749.83 21	2.6 3	2707.86	(3/2,5/2,7/2) <sup>+</sup>	1957.97	(3/2,5/2,7/2) <sup>+</sup>		
782.0 4	1.0 3	2662.09	(3/2,5/2,7/2) <sup>+</sup>	1880.01	(3/2,5/2,7/2) <sup>+</sup>		
<sup>x</sup> 789.71 21	1.2 3						
799.67 & 27	2.8 4	2888.84	(3/2,5/2,7/2) <sup>+</sup>	2088.99	(3/2,5/2,7/2) <sup>+</sup>		E <sub>γ</sub> : observed only by 1978Lh01.
807.65 20	1.0 4	1906.97		1099.28	(5/2,7/2,9/2) <sup>+</sup>	M1,E2	α(K)exp=0.0010 4 (1980Ka05) I <sub>γ</sub> : from 1980Ka05.
815.73 17	3.0 2	2521.09	(3/2,5/2,7/2) <sup>+</sup>	1705.14	3/2 <sup>+</sup>	M1,E2	α(K)exp=0.0011 4 (1980Ka05) I <sub>γ</sub> : from 1980Ka05.
825.5 & 7	1.2 3	2726.7?		1901.17	<sup>+</sup>		E <sub>γ</sub> : only proposed by 1980Ka05.
<sup>x</sup> 835.09 31	1.9 3						
835.3 & 7	1.8 4	2658.1	(3/2,5/2,7/2) <sup>+</sup>	1822.01			E <sub>γ</sub> : observed only by 1980Ka05.
840.3 4	2.8 11	2662.09	(3/2,5/2,7/2) <sup>+</sup>	1822.01			
852.8 & 7	1.2 3	2821.9	(3/2,5/2,7/2) <sup>+</sup>	1968.54	(3/2,5/2,7/2) <sup>+</sup>		E <sub>γ</sub> : observed only by 1980Ka05.
855.4 & 7	1.4 3	2980.62	(3/2,5/2,7/2) <sup>+</sup>	2125.05	(3/2,5/2,7/2) <sup>+</sup>		E <sub>γ</sub> : observed only by 1980Ka05.
859.12 22	2.0 4	1957.97	(3/2,5/2,7/2) <sup>+</sup>	1099.28	(5/2,7/2,9/2) <sup>+</sup>		
866.0 4	2.8 9	2888.84	(3/2,5/2,7/2) <sup>+</sup>	2022.58	(3/2,5/2,7/2) <sup>+</sup>		
868.6 4	1.7 5	2888.84	(3/2,5/2,7/2) <sup>+</sup>	2020.53			
871.0 4	1.2 3	1461.80	(5/2) <sup>+</sup>	590.79	(5/2) <sup>-</sup>		
878.27 26	2.5 4	1957.97	(3/2,5/2,7/2) <sup>+</sup>	1079.91	(5/2,7/2) <sup>+</sup>		
880.5 & 7	0.9 2	3005.53	(3/2,5/2,7/2) <sup>+</sup>	2125.05	(3/2,5/2,7/2) <sup>+</sup>		E <sub>γ</sub> : observed only by 1980Ka05.
881.9 4	2.6 10	2658.1	(3/2,5/2,7/2) <sup>+</sup>	1776.00	(5/2,7/2) <sup>+</sup>		
882.1 & 7	0.8 2	2586.97		1705.14	3/2 <sup>+</sup>		E <sub>γ</sub> : observed only by 1980Ka05.
882.3 4	3.0 11	2439.42	(3/2,5/2,7/2) <sup>+</sup>	1556.96	<sup>+</sup>		
<sup>x</sup> 883.1 5	0.8 2						
887.5 3	2.0 4	2439.42	(3/2,5/2,7/2) <sup>+</sup>	1552.09	<sup>+</sup>		
<sup>x</sup> 906.4 9	1.1 5						
912.7 & 7	0.6 4	2012.07	(3/2,5/2,7/2) <sup>+</sup>	1099.28	(5/2,7/2,9/2) <sup>+</sup>		E <sub>γ</sub> : observed only by 1978Lh01.
920.1 & 7	0.9 2	2821.9	(3/2,5/2,7/2) <sup>+</sup>	1901.17	<sup>+</sup>		E <sub>γ</sub> : observed only by 1980Ka05.
920.46 31	1.8 3	2888.84	(3/2,5/2,7/2) <sup>+</sup>	1968.54	(3/2,5/2,7/2) <sup>+</sup>		
924.7 7	1.0 5	2401.12	(3/2,5/2,7/2) <sup>+</sup>	1476.23	(5/2,7/2) <sup>+</sup>		
931.5 15	4.2 4	2707.86	(3/2,5/2,7/2) <sup>+</sup>	1776.00	(5/2,7/2) <sup>+</sup>		
939.3 5	2.0 4	2401.12	(3/2,5/2,7/2) <sup>+</sup>	1461.80	(5/2) <sup>+</sup>		
940.4 & 5	3.0 6	1461.80	(5/2) <sup>+</sup>	521.41	(3/2) <sup>-</sup>		
949.09 17	4.5 3	1083.53	1/2 <sup>-</sup> ,3/2 <sup>-</sup> ,5/2 <sup>-</sup>	134.45	1/2 <sup>-</sup>	M1,E2	α(K)exp=0.00082 20 (1980Ka05) I <sub>γ</sub> : from 1980Ka05.
961.6 6	2.5 9	2273.81	(3/2,5/2,7/2) <sup>+</sup>	1311.68	(7/2) <sup>+</sup>		
963.1 4	14.2 57	2439.42	(3/2,5/2,7/2) <sup>+</sup>	1476.23	(5/2,7/2) <sup>+</sup>		
981.8 & 7	2.4 5	2888.84	(3/2,5/2,7/2) <sup>+</sup>	1906.97			E <sub>γ</sub> : observed only by 1980Ka05.
987.6 & 7	<0.5	2199.37	(3/2) <sup>+</sup>	1210.83			E <sub>γ</sub> : observed only by 1980Ka05.
987.9 6	1.8 5	2888.84	(3/2,5/2,7/2) <sup>+</sup>	1901.17	<sup>+</sup>		

<sup>103</sup>Cd ε decay (7.3 min) (continued)

γ(<sup>103</sup>Ag) (continued)

$E_\gamma^\dagger$	$I_\gamma^\ddagger@$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult. <sup>‡</sup>	Comments
1005.6 4	2.2 3	2088.99	(3/2,5/2,7/2) <sup>+</sup>	1083.53	1/2 <sup>-</sup> , 3/2 <sup>-</sup> , 5/2 <sup>-</sup>		
1009.4 5	2.3 3	2088.99	(3/2,5/2,7/2) <sup>+</sup>	1079.91	(5/2,7/2) <sup>+</sup>		
1023.7 6	1.0 4	2485.15	(3/2,5/2,7/2) <sup>+</sup>	1461.80	(5/2) <sup>+</sup>		
1034.87 22	2.1 4	2586.97		1552.09	<sup>+</sup>		
1045.40 18	2.1 4	2597.73	(3/2,5/2,7/2) <sup>+</sup>	1552.09	<sup>+</sup>		
1052.51 19	9.8 5	1079.91	(5/2,7/2) <sup>+</sup>	27.54	(9/2) <sup>+</sup>	M1,E2	$\alpha(K)\text{exp}=0.00065$ 10 (1980Ka05) $I_\gamma$ : from 1980Ka05.
1061.5& 7	0.6 2	2888.84	(3/2,5/2,7/2) <sup>+</sup>	1828.6			$E_\gamma$ : observed only by 1980Ka05.
1068.4 11	1.8 9	2167.65	(3/2,5/2,7/2) <sup>+</sup>	1099.28	(5/2,7/2,9/2) <sup>+</sup>		$E_\gamma$ : observed only by 1978Lh01.
1071.76 18	4.4 2	1099.28	(5/2,7/2,9/2) <sup>+</sup>	27.54	(9/2) <sup>+</sup>	M1,E2	$\alpha(K)\text{exp}=0.00083$ 15 (1980Ka05) $I_\gamma$ : from 1980Ka05.
1078.6& 7	1.3 3	2855.60	(3/2,5/2,7/2) <sup>+</sup>	1776.00	(5/2,7/2) <sup>+</sup>		$E_\gamma$ : observed only by 1980Ka05.
1079.90 7	46.5 12	1079.91	(5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>		
1087.2 10	2.0 7	2167.65	(3/2,5/2,7/2) <sup>+</sup>	1079.91	(5/2,7/2) <sup>+</sup>		
1089.4 4	5.8 12	2401.12	(3/2,5/2,7/2) <sup>+</sup>	1311.68	(7/2) <sup>+</sup>		
1099.32 7	14.3 5	1099.28	(5/2,7/2,9/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>		
1099.6& 7	4.0 8	3005.53	(3/2,5/2,7/2) <sup>+</sup>	1906.97			$E_\gamma$ : observed only by 1980Ka05.
1114.51 19	4.5 5	1705.14	3/2 <sup>+</sup>	590.58	11/2 <sup>+</sup>		
1124.1& 7	1.3 3	2980.62	(3/2,5/2,7/2) <sup>+</sup>	1856.69			$E_\gamma$ : observed only by 1980Ka05.
1158.0 8	1.0 5	2980.62	(3/2,5/2,7/2) <sup>+</sup>	1822.01			
1184.1 3	3.3 5	1705.14	3/2 <sup>+</sup>	521.41	(3/2) <sup>-</sup>		
1208.2 6	1.9 7	2287.8		1079.91	(5/2,7/2) <sup>+</sup>		
1246.6 4	1.6 9	2707.86	(3/2,5/2,7/2) <sup>+</sup>	1461.80	(5/2) <sup>+</sup>		
1284.1 11	2.0 11	1311.68	(7/2) <sup>+</sup>	27.54	(9/2) <sup>+</sup>		
1287.61 10	14.7 7	1422.07	(3/2) <sup>+</sup>	134.45	1/2 <sup>-</sup>	E1	$\alpha(K)\text{exp}=0.00021$ 4 (1980Ka05) $I_\gamma$ : from 1980Ka05.
1301.7 5	3.2 14	2401.12	(3/2,5/2,7/2) <sup>+</sup>	1099.28	(5/2,7/2,9/2) <sup>+</sup>		
1307.2 5	0.9 5	1828.6		521.41	(3/2) <sup>-</sup>		
1311.66 7	15.6 6	1311.68	(7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	M1,E2	$\alpha(K)\text{exp}=0.00055$ 8 (1980Ka05) $I_\gamma$ : from 1980Ka05.
1359.0 5	2.1 7	2439.42	(3/2,5/2,7/2) <sup>+</sup>	1079.91	(5/2,7/2) <sup>+</sup>		
1360.2 4	2.5 9	2821.9	(3/2,5/2,7/2) <sup>+</sup>	1461.80	(5/2) <sup>+</sup>		
1377.1 5	1.2 3	1968.54	(3/2,5/2,7/2) <sup>+</sup>	590.79	(5/2) <sup>-</sup>		
1412.83 17	2.9 4	2888.84	(3/2,5/2,7/2) <sup>+</sup>	1476.23	(5/2,7/2) <sup>+</sup>		
1420.8& 14	0.7 5	2012.07	(3/2,5/2,7/2) <sup>+</sup>	590.79	(5/2) <sup>-</sup>		$E_\gamma$ : observed only by 1978Lh01.
1428.7 4	3.2 3	2980.62	(3/2,5/2,7/2) <sup>+</sup>	1552.09	<sup>+</sup>		
1434.0 4	2.5 3	1461.80	(5/2) <sup>+</sup>	27.54	(9/2) <sup>+</sup>		
1441.24 15	4.3 4	2521.09	(3/2,5/2,7/2) <sup>+</sup>	1079.91	(5/2,7/2) <sup>+</sup>		
1447.1 5	6.0 12	1968.54	(3/2,5/2,7/2) <sup>+</sup>	521.41	(3/2) <sup>-</sup>		
1447.6& 7	0.20 4	3005.53	(3/2,5/2,7/2) <sup>+</sup>	1556.96	<sup>+</sup>		$E_\gamma$ : observed only by 1980Ka05.
1448.7 1	47.4 18	1476.23	(5/2,7/2) <sup>+</sup>	27.54	(9/2) <sup>+</sup>		

∞



<sup>103</sup>Cd ε decay (7.3 min) (continued)

γ(<sup>103</sup>Ag) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>†@</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>‡</sup></u>	<u>Comments</u>
1461.81 7	100	1461.80	(5/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	M1,E2	α(K)exp=0.00032 3 (1980Ka05) I <sub>γ</sub> : from 1980Ka05.
1476.27 11	16.8 6	1476.23	(5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	M1,E2	α(K)exp=0.00029 4 (1980Ka05) I <sub>γ</sub> : from 1980Ka05.
1499.15 26	2.2 3	2020.53		521.41	(3/2) <sup>-</sup>		
1500.4& 7	0.7 2	2597.73	(3/2,5/2,7/2) <sup>+</sup>	1099.28	(5/2,7/2,9/2) <sup>+</sup>		E <sub>γ</sub> : observed only by 1980Ka05.
1518.0 5	1.4 3	2597.73	(3/2,5/2,7/2) <sup>+</sup>	1079.91	(5/2,7/2) <sup>+</sup>		
1529.29 17	4.9 5	3005.53	(3/2,5/2,7/2) <sup>+</sup>	1476.23	(5/2,7/2) <sup>+</sup>		
1552.00 15	21.1 8	1552.09	<sup>+</sup>	0.0	7/2 <sup>+</sup>	M1,E2	α(K)exp=0.00031 8 (1980Ka05) I <sub>γ</sub> : from 1980Ka05.
1556.94 14	19.5 7	1556.96	<sup>+</sup>	0.0	7/2 <sup>+</sup>	M1,E2	α(K)exp=0.0032 8 (1980Ka05) I <sub>γ</sub> : from 1980Ka05.
1567.5 5	3.0 11	2088.99	(3/2,5/2,7/2) <sup>+</sup>	521.41	(3/2) <sup>-</sup>		
1570.6 5	11.2 34	1705.14	3/2 <sup>+</sup>	134.45	1/2 <sup>-</sup>	E1	α(K)exp<0.0015 (1980Ka05) I <sub>γ</sub> : from 1980Ka05.
1573.7& 5		2658.1	(3/2,5/2,7/2) <sup>+</sup>	1083.53	1/2 <sup>-</sup> ,3/2 <sup>-</sup> ,5/2 <sup>-</sup>		
1627.9& 5	1.2 3	2707.86	(3/2,5/2,7/2) <sup>+</sup>	1079.91	(5/2,7/2) <sup>+</sup>		E <sub>γ</sub> : observed only by 1978Lh01.
1636.4 8	1.9 7	3188.8	(3/2,5/2,7/2) <sup>+</sup>	1552.09	<sup>+</sup>		
<sup>x</sup> 1637.65& 35	1.7 3						
<sup>x</sup> 1646.4 4	1.2 3						
1668.84 25	1.9 3	2980.62	(3/2,5/2,7/2) <sup>+</sup>	1311.68	(7/2) <sup>+</sup>		
1677.8 6	1.3 4	2199.37	(3/2) <sup>+</sup>	521.41	(3/2) <sup>-</sup>		
1685.22 39	1.4 4	2206.6		521.41	(3/2) <sup>-</sup>		
<sup>x</sup> 1693.22 19	5.2 5						
1694.2 4	1.3 6	1828.6		134.45	1/2 <sup>-</sup>		
1704.98 13	4.3 4	1705.14	3/2 <sup>+</sup>	0.0	7/2 <sup>+</sup>		
<sup>x</sup> 1718.65 15	3.6 3						
1748.45 10	12.4 7	1776.00	(5/2,7/2) <sup>+</sup>	27.54	(9/2) <sup>+</sup>		
1756.35 34	1.4 3	2855.60	(3/2,5/2,7/2) <sup>+</sup>	1099.28	(5/2,7/2,9/2) <sup>+</sup>		
1766.64 13	5.4 4	1901.17	<sup>+</sup>	134.45	1/2 <sup>-</sup>		
1775.79 21	2.3 3	1776.00	(5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>		
1776.1& 7	1.6 4	2855.60	(3/2,5/2,7/2) <sup>+</sup>	1079.91	(5/2,7/2) <sup>+</sup>		E <sub>γ</sub> : observed only by 1980Ka05.
1808.74 21	2.9 3	2888.84	(3/2,5/2,7/2) <sup>+</sup>	1079.91	(5/2,7/2) <sup>+</sup>		
1822.02 11	9.0 5	1822.01		0.0	7/2 <sup>+</sup>		
1834.18 11	8.3 5	1968.54	(3/2,5/2,7/2) <sup>+</sup>	134.45	1/2 <sup>-</sup>		
1856.67 17	4.3 4	1856.69		0.0	7/2 <sup>+</sup>		
1879.96 9	28.4 9	1880.01	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>		
1880&		1906.97		27.54	(9/2) <sup>+</sup>		
1907.5 8	1.4 6	1906.97		0.0	7/2 <sup>+</sup>		
1919.00 18	3.5 4	2440.43	(3/2 <sup>+</sup> )	521.41	(3/2) <sup>-</sup>		
1930.23 11	16.3 7	1957.97	(3/2,5/2,7/2) <sup>+</sup>	27.54	(9/2) <sup>+</sup>		
1954&	2	2088.99	(3/2,5/2,7/2) <sup>+</sup>	134.45	1/2 <sup>-</sup>		E <sub>γ</sub> : observed only by 1978Lh01.

<sup>103</sup>Cd ε decay (7.3 min) (continued)

γ(<sup>103</sup>Ag) (continued)

$E_\gamma$ †	$I_\gamma$ †@	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Comments
<sup>x</sup> 1955.9 5	1.7 2					
1958.5 5	2.5 2	1957.97	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	
1984.67 14	4.9 4	2012.07	(3/2,5/2,7/2) <sup>+</sup>	27.54	(9/2) <sup>+</sup>	
1999.0 7	1.5 5	2521.09	(3/2,5/2,7/2) <sup>+</sup>	521.41	(3/2) <sup>-</sup>	
2011.95 11	10.9 5	2012.07	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	
2022.53 13	8.7 5	2022.58	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	
2064.63 35	3.0 4	2199.37	(3/2) <sup>+</sup>	134.45	1/2 <sup>-</sup>	
2067.9 7	0.9 3	2658.1	(3/2,5/2,7/2) <sup>+</sup>	590.79	(5/2) <sup>-</sup>	
2097.34 23	2.7 4	2125.05	(3/2,5/2,7/2) <sup>+</sup>	27.54	(9/2) <sup>+</sup>	
2117.6 6	1.0 3	2708.69	(3/2,5/2,7/2) <sup>+</sup>	590.79	(5/2) <sup>-</sup>	
2125.5 4	2.2 3	2125.05	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	
2133.03 20	16.7 9	2133.05	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	
2137&		2658.1	(3/2,5/2,7/2) <sup>+</sup>	521.41	(3/2) <sup>-</sup>	E <sub>γ</sub> : observed only by 1978Lh01.
2167.66 25	2.5 3	2167.65	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	
2199.45 14	12.5 6	2199.37	(3/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	
2245.12 16	9.5 5	2245.15	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	
2257.1 6	1.0 3	2778.1		521.41	(3/2) <sup>-</sup>	
2273.80 17	6.5 4	2273.81	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	
2287.72 36	1.6 3	2287.8		0.0	7/2 <sup>+</sup>	
2298.1 10	0.5 2	2888.84	(3/2,5/2,7/2) <sup>+</sup>	590.79	(5/2) <sup>-</sup>	
2300.1 4	3.3 7	2821.9	(3/2,5/2,7/2) <sup>+</sup>	521.41	(3/2) <sup>-</sup>	
2305.8& 8	1.3 2	2440.43	(3/2 <sup>+</sup> )	134.45	1/2 <sup>-</sup>	E <sub>γ</sub> : observed only by 1978Lh01.
2328.78 22	2.0 3	2356.10	(3/2,5/2,7/2) <sup>+</sup>	27.54	(9/2) <sup>+</sup>	
2355.81 23	3.0 3	2356.10	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	
<sup>x</sup> 2365.7 8	1.7 3					
2368.0 6	2.2 7	2888.84	(3/2,5/2,7/2) <sup>+</sup>	521.41	(3/2) <sup>-</sup>	
2373.67 17	13.0 5	2401.12	(3/2,5/2,7/2) <sup>+</sup>	27.54	(9/2) <sup>+</sup>	
2386.66 19	5.5 4	2521.09	(3/2,5/2,7/2) <sup>+</sup>	134.45	1/2 <sup>-</sup>	
2401.06 17	10.2 5	2401.12	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	
2411.72 28	1.8 3	2439.42	(3/2,5/2,7/2) <sup>+</sup>	27.54	(9/2) <sup>+</sup>	
2412.1& 7	1.7 4	2440.43	(3/2 <sup>+</sup> )	27.54	(9/2) <sup>+</sup>	E <sub>γ</sub> : observed only by 1980Ka05.
2439.58 21	4.5 3	2439.42	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	
2439.8& 7	4.6 10	2440.43	(3/2 <sup>+</sup> )	0.0	7/2 <sup>+</sup>	E <sub>γ</sub> : observed only by 1980Ka05.
2457.72 35	1.6 3	2485.15	(3/2,5/2,7/2) <sup>+</sup>	27.54	(9/2) <sup>+</sup>	
2485.04 19	5.6 4	2485.15	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	
2520.91 34	1.5 3	2521.09	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	
2570.44 23	3.8 3	2597.73	(3/2,5/2,7/2) <sup>+</sup>	27.54	(9/2) <sup>+</sup>	
2597.80 35	1.8 3	2597.73	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	
2630.0& 6	0.6 2	2658.1	(3/2,5/2,7/2) <sup>+</sup>	27.54	(9/2) <sup>+</sup>	E <sub>γ</sub> : observed only by 1978Lh01.
2658.1 5	1.4 3	2658.1	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	
2661.99 26	3.4 3	2662.09	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	
2681.35 28	12.5 5	2708.69	(3/2,5/2,7/2) <sup>+</sup>	27.54	(9/2) <sup>+</sup>	

<sup>103</sup>Cd ε decay (7.3 min) (continued)

γ(<sup>103</sup>Ag) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡@</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡@</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>
2688.8 11	1.9 4	2821.9	(3/2,5/2,7/2) <sup>+</sup>	134.45	1/2 <sup>-</sup>	<sup>x</sup> 2912.8 5	0.5 2				
2707.71 23	8.0 5	2707.86	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	2953.18 35	1.4 3	2980.62	(3/2,5/2,7/2) <sup>+</sup>	27.54	(9/2) <sup>+</sup>
2708 <sup>&amp;</sup>		2708.69	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	2980.57 32	1.9 3	2980.62	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>
2753.21 38	0.7 2	2888.84	(3/2,5/2,7/2) <sup>+</sup>	134.45	1/2 <sup>-</sup>	<sup>x</sup> 3043.4 4	1.0 3				
2768.65 35	3.3 4	2796.1	(3/2,5/2,7/2) <sup>+</sup>	27.54	(9/2) <sup>+</sup>	<sup>x</sup> 3056.6 4	1.0 3				
2777.7 5	0.7 2	2778.1		0.0	7/2 <sup>+</sup>	<sup>x</sup> 3066.0 4	1.0 3				
2795.8 6	0.6 2	2796.1	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>	3161.5 4	1.4 3	3188.8	(3/2,5/2,7/2) <sup>+</sup>	27.54	(9/2) <sup>+</sup>
<sup>x</sup> 2811.17 32	1.6 3					3188.5 4	1.5 3	3188.8	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>
<sup>x</sup> 2829.52 26	6.2 5					<sup>x</sup> 3245.0 5	0.8 3				
2855.53 28	2.8 4	2855.60	(3/2,5/2,7/2) <sup>+</sup>	0.0	7/2 <sup>+</sup>						

<sup>†</sup> Taken from 1978Lh01, as 1980Ka05 does not give uncertainties on γ energies.

<sup>‡</sup> M1 was assumed for the calculation of α, unless noted otherwise when conversion data indicated that other multiplicities were possible.

# Only α's ≥ 1% are given.

@ For absolute intensity per 100 decays, multiply by 0.108 15.

& Placement of transition in the level scheme is uncertain.

<sup>x</sup> γ ray not placed in level scheme.

$^{103}\text{Cd}$   $\epsilon$  decay (7.3 min)

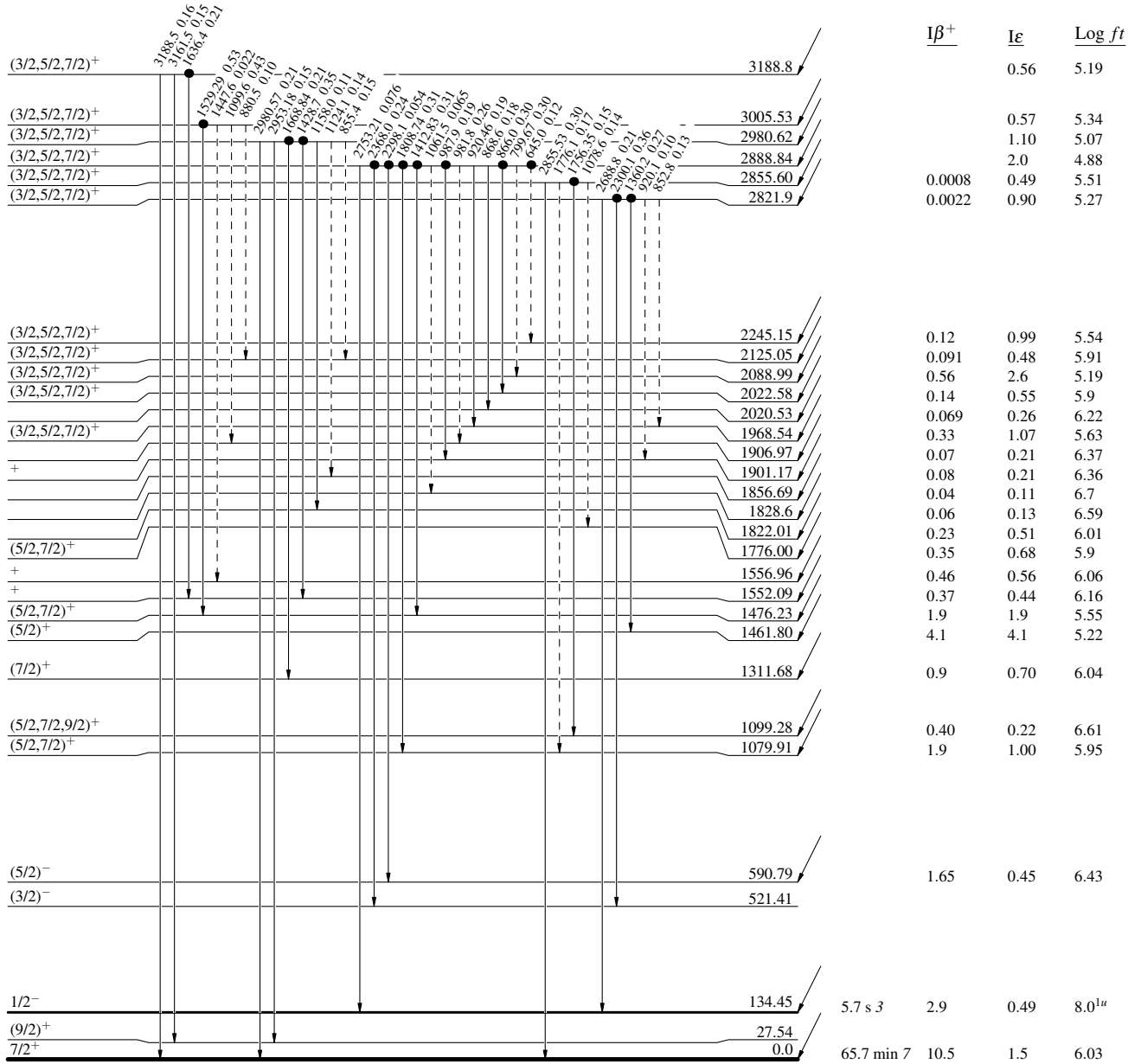
Legend

- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- - -  $\gamma$  Decay (Uncertain)
- Coincidence

Decay Scheme

Intensities:  $I_\gamma$  per 100 parent decays

$^{103}_{48}\text{Cd}_{55}$   $(5/2)^+$  0.0 7.3 min  $Q_\epsilon=4142.10$   
 $\% \epsilon + \% \beta^+ = 100$



$^{103}_{47}\text{Ag}_{56}$

$^{103}\text{Cd } \epsilon \text{ decay (7.3 min)}$

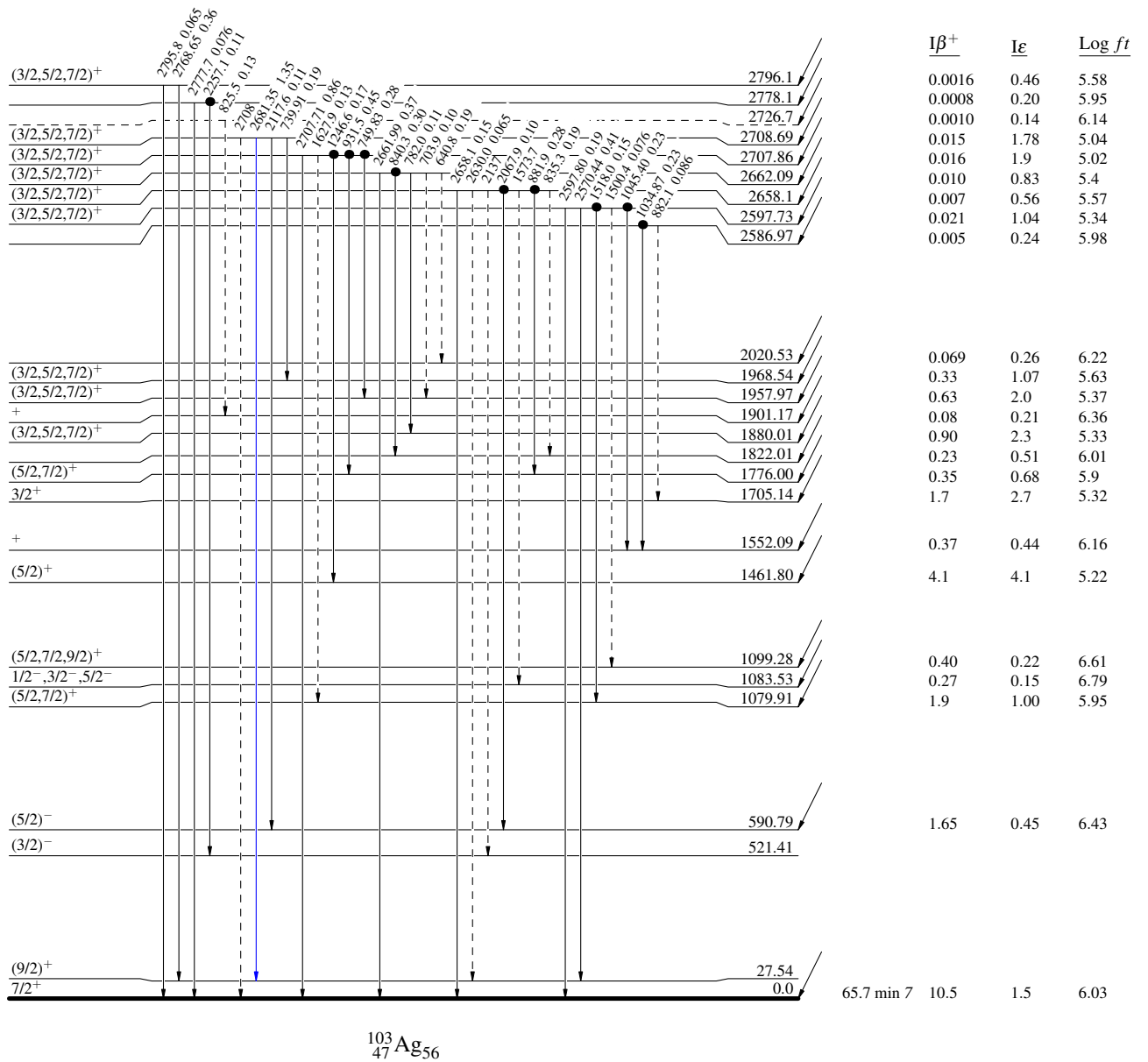
Legend

- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- - - -  $\gamma$  Decay (Uncertain)
- Coincidence

Decay Scheme (continued)

Intensities:  $I_\gamma$  per 100 parent decays

$^{103}_{48}\text{Cd}_{55}$   $(5/2)^+$  0.0 7.3 min  $I$   
 $Q_\epsilon = 4142.10$   
 $\% \epsilon + \% \beta^+ = 100$



<sup>103</sup>Cd ε decay (7.3 min)

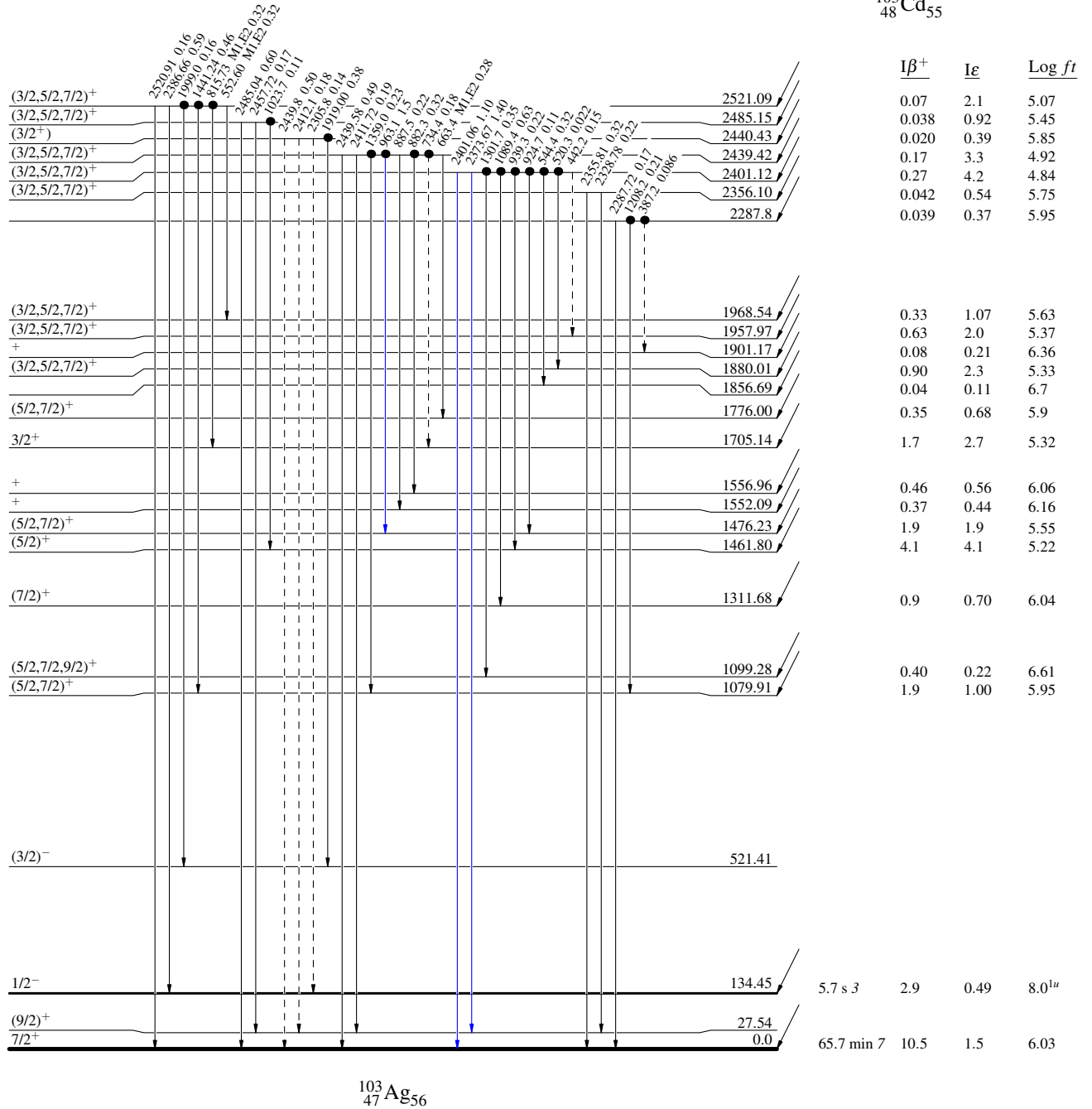
Legend

- I<sub>γ</sub> < 2% × I<sub>γ</sub><sup>max</sup>
- I<sub>γ</sub> < 10% × I<sub>γ</sub><sup>max</sup>
- I<sub>γ</sub> > 10% × I<sub>γ</sub><sup>max</sup>
- - - - γ Decay (Uncertain)
- Coincidence

Decay Scheme (continued)

Intensities: I<sub>γ</sub> per 100 parent decays

(5/2)<sup>+</sup> 0.0 7.3 min I  
 Q<sub>ε</sub>=4142.10  
<sup>103</sup>Cd<sub>55</sub>



<sup>103</sup>Ag<sub>56</sub>

$^{103}\text{Cd}$   $\epsilon$  decay (7.3 min)

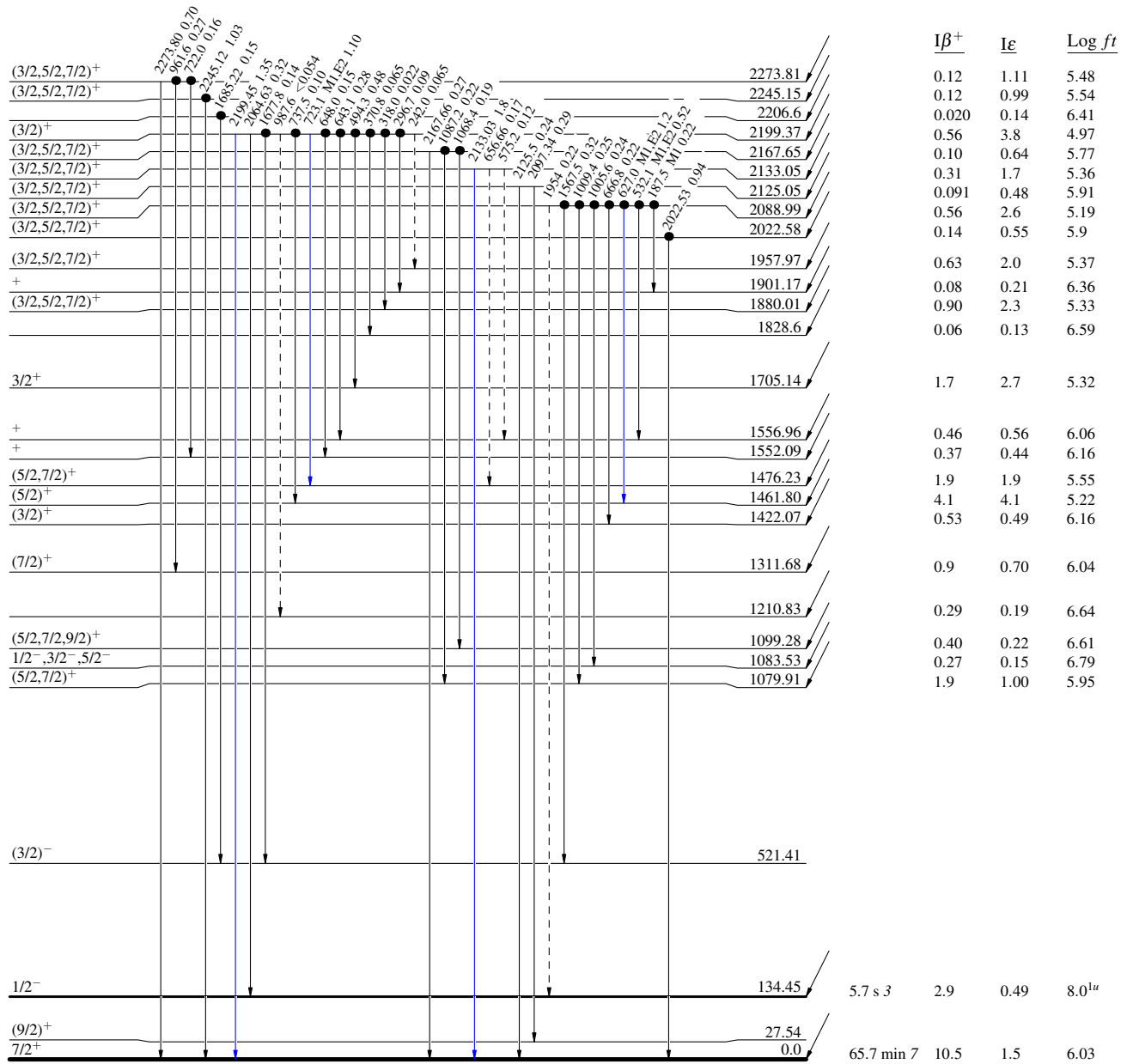
Legend

- ▶  $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
- ▶  $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
- ▶  $I_\gamma > 10\% \times I_\gamma^{\text{max}}$
- - - -  $\gamma$  Decay (Uncertain)
- Coincidence

Decay Scheme (continued)

Intensities:  $I_\gamma$  per 100 parent decays

$^{103}_{48}\text{Cd}_{55}$   $(5/2)^+$  0.0 7.3 min  $I$   
 $Q_\epsilon = 4142.10$   
 $\% \epsilon + \% \beta^+ = 100$



$^{103}_{47}\text{Ag}_{56}$

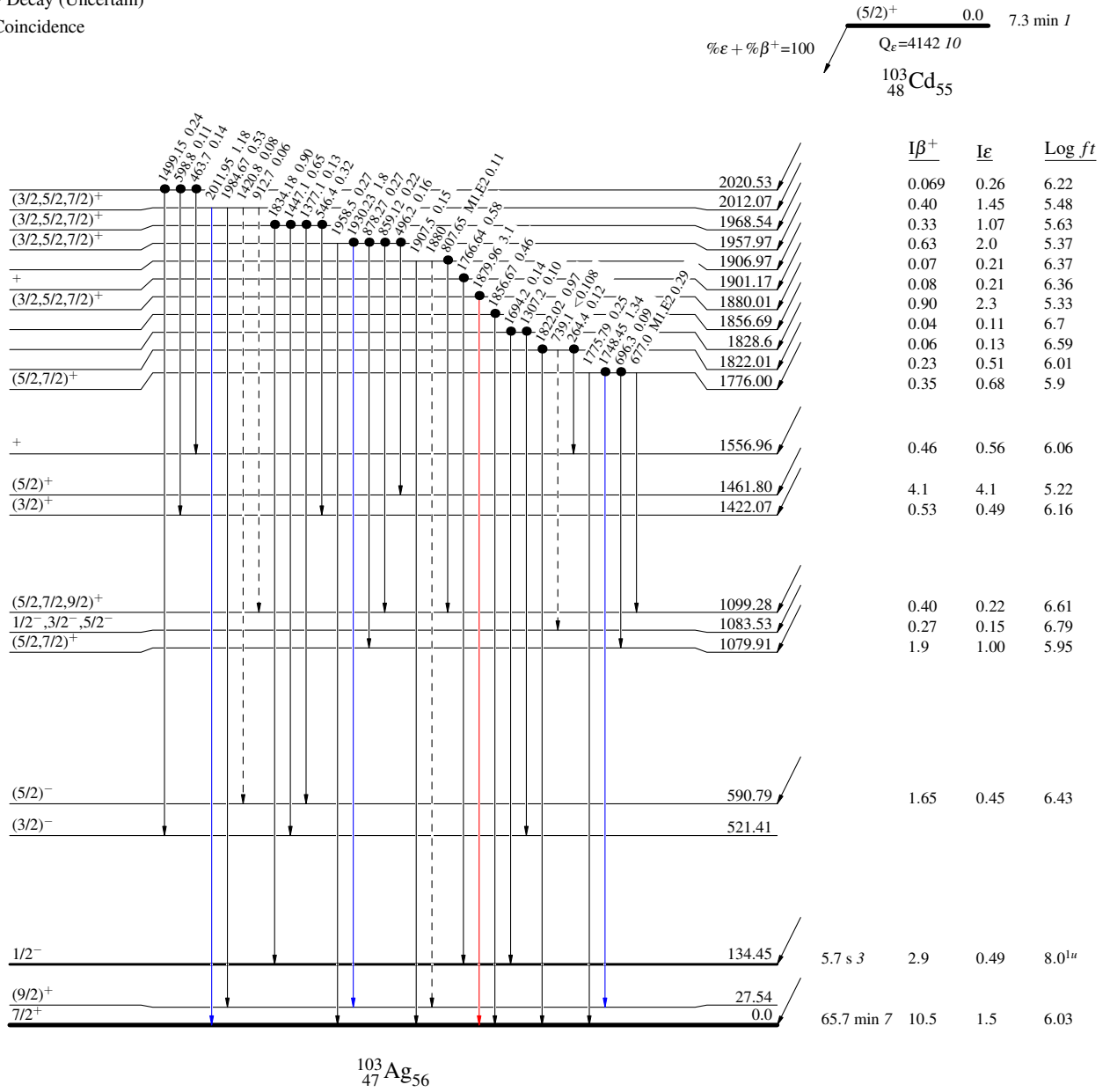
$^{103}\text{Cd } \epsilon \text{ decay (7.3 min)}$

Legend

- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- - - - -→  $\gamma$  Decay (Uncertain)
- Coincidence

Decay Scheme (continued)

Intensities:  $I_\gamma$  per 100 parent decays





$^{103}\text{Cd}$   $\epsilon$  decay (7.3 min)

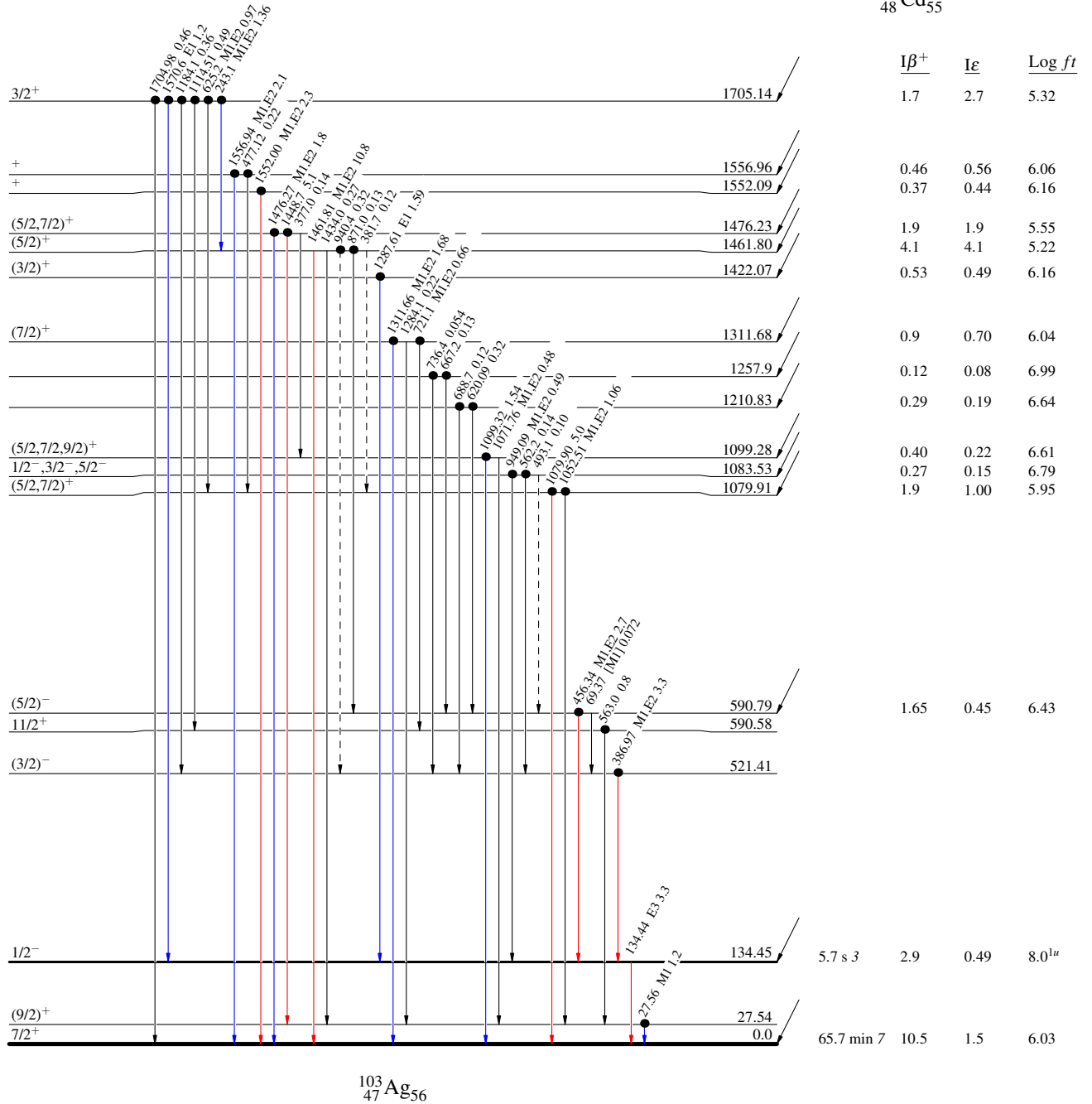
Legend

- $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
- $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
- $I_\gamma > 10\% \times I_\gamma^{\text{max}}$
- - - -  $\gamma$  Decay (Uncertain)
- Coincidence

Decay Scheme (continued)

Intensities:  $I_\gamma$  per 100 parent decays

$^{103}_{48}\text{Cd}_{55}$   $(5/2)^+$  0.0 7.3 min  $I$   
 $Q_\epsilon = 4142.10$   
 $\% \epsilon + \% \beta^+ = 100$



$^{103}_{47}\text{Ag}_{56}$