

$^{121}\text{Ag} \beta^-$  decay **1982Fo10,1982A129**

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Full Evaluation	S. Ohya	NDS 111, 1619 (2010)	20-Jan-2009

Parent:  $^{121}\text{Ag}$ :  $E=0.0$ ;  $J^\pi=(7/2^+)$ ;  $T_{1/2}=0.78$  s 2;  $Q(\beta^-)=6670$  85;  $\% \beta^-$  decay=100.0

**1982Fo10**:  $^{235}\text{U}(n,F)$ , isotope separator,  $\gamma$ , ce,  $\gamma\gamma$ ,  $\beta\gamma(t)$ .

**1982A129**:  $^{235}\text{U}(n,F)$ , isotope separator,  $E(\beta)$  from  $\beta\gamma$ .

 $^{121}\text{Cd}$  Levels

E(level) <sup>†</sup>	$J^\pi$ <sup>‡</sup>	$T_{1/2}$	Comments
0.0	(3/2 <sup>+</sup> )	13.5 s 3	
7.52 11	(1/2 <sup>+</sup> )		
214.90 15	(11/2 <sup>-</sup> )	8.3 s 8	E(level): deduced from $\gamma$ -cascade relations at 744.75-, 1510.45-, 1812.03-keV levels; E=70 170 was deduced from observed $Q(\beta^-)$ value ( <b>1982Fo10</b> ).
314.50 6	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	19 ns 2	$T_{1/2}$ : from $\beta\gamma(t)$ in $^{121}\text{Ag} \beta^-$ decay.
329.95 14	(9/2 <sup>-</sup> ,11/2 <sup>-</sup> )	<2 ns	$T_{1/2}$ : from $\beta\gamma(t)$ in $^{121}\text{Ag} \beta^-$ decay.
353.48 6	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )		
369.35 7	(5/2 <sup>+</sup> )		
500.60 7	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )		
508.42 14	(7/2 <sup>-</sup> ,9/2)	<2 ns	$T_{1/2}$ : from $\beta\gamma(t)$ in $^{121}\text{Ag} \beta^-$ decay.
602.55 10			
725.44 9			
744.75 10			
880.12 15	(7/2 <sup>-</sup> ,9/2)		
936.47 10			
989.48 13			
1071.13 9	(5/2 <sup>+</sup> )		
1095.86 22			
1118.09 12			
1170.70 7	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )		
1191.60 22			
1208.04 14			
1233.85 17			
1241.12 24			
1243.58 21			
1249.32 17			
1341.13 24	(7/2 <sup>-</sup> ,9/2)		
1371.03 15			
1400.7 3			
1510.45 6	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )		
1516.34 13			
1617.59 22			
1685.56 9	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )		
1812.03 12	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )		
1823.6 6			
1841.3 5			
1908.26 22			
1925.5 3			
1988.78 22			
2100.9 4			
2134.02 21			
2162.7 3			
2165.66 14	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )		
2327.9 3			
2405.2 3			
2416.3 8			

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$^{121}\text{Ag}\beta^-$  decay **1982Fo10,1982Al29** (continued) $^{121}\text{Cd}$  Levels (continued)

E(level) <sup>†</sup>	J <sup>π</sup> <sup>‡</sup>	E(level) <sup>†</sup>	J <sup>π</sup> <sup>‡</sup>	E(level) <sup>†</sup>
2443.8 5		2797.95 19	(5/2 <sup>+</sup> , 7/2 <sup>+</sup> , 9/2 <sup>+</sup> )	2946.8 5
2518.32 15	(5/2 <sup>+</sup> , 7/2 <sup>+</sup> )	2825.25 22	(5/2 <sup>+</sup> , 7/2 <sup>+</sup> )	3015.2 5
2676.2 3		2872.67 23	(5/2 <sup>+</sup> , 7/2 <sup>+</sup> , 9/2 <sup>+</sup> )	3048.2 5
2717.5 5		2881.3 3	(5/2 <sup>+</sup> , 7/2 <sup>+</sup> )	

<sup>†</sup> E(levels) are based on a least-squares fit to E( $\gamma$ 's).

<sup>‡</sup> From Adopted Levels.

 $\beta^-$  radiations

E(decay)	E(level)	$I\beta^-$ <sup>†</sup>	Log <i>ft</i>	Comments
(3.62×10 <sup>3</sup> 9)	3048.2	0.26 7	6.14 13	av E $\beta$ =1542 41
(3.65×10 <sup>3</sup> 9)	3015.2	0.16 7	6.37 20	av E $\beta$ =1557 41
(3.72×10 <sup>3</sup> 9)	2946.8	0.19 7	6.33 17	av E $\beta$ =1590 41
(3.79×10 <sup>3</sup> 9)	2881.3	1.75 11	5.39 6	av E $\beta$ =1621 41
(3.80×10 <sup>3</sup> 9)	2872.67	0.96 7	5.66 6	av E $\beta$ =1625 41
(3.84×10 <sup>3</sup> 9)	2825.25	1.12 11	5.62 6	av E $\beta$ =1647 41
(3.87×10 <sup>3</sup> 9)	2797.95	1.41 12	5.53 6	av E $\beta$ =1660 41
(3.95×10 <sup>3</sup> 9)	2717.5	0.11 4	6.68 17	av E $\beta$ =1698 41
(3.99×10 <sup>3</sup> 9)	2676.2	0.40 7	6.13 9	av E $\beta$ =1718 41
(4.15×10 <sup>3</sup> 9)	2518.32	2.78 14	5.37 5	av E $\beta$ =1793 41
				E( $\beta$ )=3850 240 (sum of E( $\beta$ ) spectra in coin with 2518 $\gamma$ , 2204 $\gamma$ ) (1982Al29).
(4.23×10 <sup>3</sup> 9)	2443.8	0.16 7	6.64 20	av E $\beta$ =1828 41
(4.25×10 <sup>3</sup> 9)	2416.3	0.48 16	6.17 15	av E $\beta$ =1841 41
(4.26×10 <sup>3</sup> 9)	2405.2	0.32 7	6.36 11	av E $\beta$ =1846 41
(4.34×10 <sup>3</sup> 9)	2327.9	0.19 7	6.62 17	av E $\beta$ =1883 41
(4.50×10 <sup>3</sup> 9)	2165.66	1.06 15	5.94 8	av E $\beta$ =1960 41
(4.51×10 <sup>3</sup> 9)	2162.7	0.32 7	6.46 11	av E $\beta$ =1961 41
(4.54×10 <sup>3</sup> 9)	2134.02	0.67 10	6.15 8	av E $\beta$ =1975 41
(4.57×10 <sup>3</sup> 9)	2100.9	0.42 7	6.37 9	av E $\beta$ =1991 41
(4.68×10 <sup>3</sup> 9)	1988.78	0.55 7	6.30 7	av E $\beta$ =2044 41
(4.74×10 <sup>3</sup> 9)	1925.5	0.29 7	6.60 11	av E $\beta$ =2074 41
(4.76×10 <sup>3</sup> 9)	1908.26	0.58 7	6.31 7	av E $\beta$ =2082 41
(4.83×10 <sup>3</sup> 9)	1841.3	0.22 10	6.76 20	av E $\beta$ =2114 41
(4.85×10 <sup>3</sup> 9)	1823.6	0.32 13	6.60 18	av E $\beta$ =2123 41
(4.86×10 <sup>3</sup> 9)	1812.03	2.69 18	5.68 5	av E $\beta$ =2128 41
(4.98×10 <sup>3</sup> 9)	1685.56	3.36 19	5.63 5	av E $\beta$ =2188 41
(5.05×10 <sup>3</sup> 9)	1617.59	0.22 7	6.84 15	av E $\beta$ =2221 41
(5.15×10 <sup>3</sup> 9)	1516.34	0.51 7	6.51 7	av E $\beta$ =2269 41
(5.16×10 <sup>3</sup> 9)	1510.45	19.6 7	4.93 4	av E $\beta$ =2272 41
				E( $\beta$ )=4920 190 from $\beta\gamma$ (1982Al29).
(5.27×10 <sup>3</sup> 9)	1400.7	0.29 7	6.80 11	av E $\beta$ =2324 41
(5.33×10 <sup>3</sup> 9)	1341.13	0.54 8	6.55 8	av E $\beta$ =2352 41
(5.42×10 <sup>3</sup> 9)	1249.32	1.06 7	6.29 5	av E $\beta$ =2396 41
(5.43×10 <sup>3</sup> 9)	1243.58	0.26 7	6.91 13	av E $\beta$ =2398 41
(5.43×10 <sup>3</sup> 9)	1241.12	0.54 7	6.59 7	av E $\beta$ =2400 41
(5.44×10 <sup>3</sup> 9)	1233.85	0.96 7	6.34 5	av E $\beta$ =2403 41
(5.46×10 <sup>3</sup> 9)	1208.04	0.96 20	6.35 10	av E $\beta$ =2415 41
(5.48×10 <sup>3</sup> 9)	1191.60	0.45 10	6.69 11	av E $\beta$ =2423 41
(5.50×10 <sup>3</sup> 9)	1170.70	9.2 4	5.38 4	av E $\beta$ =2433 41
				E( $\beta$ )=5200 240 (weighted average of E( $\beta$ 's) in coin with 801 $\gamma$ , 817 $\gamma$ , 856 $\gamma$ )

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$^{121}\text{Ag}$   $\beta^-$  decay [1982Fo10,1982A129](#) (continued) $\beta^-$  radiations (continued)

E(decay)	E(level)	$I\beta^-^\dagger$	Log $ft$	Comments
				(1982A129).
(5.55×10 <sup>3</sup> eV)	1118.09	0.64 7	6.56 6	av $E\beta=2458$ 41
(5.57×10 <sup>3</sup> eV)	1095.86	0.51 7	6.67 7	av $E\beta=2469$ 41
(5.60×10 <sup>3</sup> eV)	1071.13	2.59 18	5.97 5	av $E\beta=2481$ 41
(5.68×10 <sup>3</sup> eV)	989.48	1.34 14	6.28 6	av $E\beta=2519$ 41
(5.73×10 <sup>3</sup> eV)	936.47	0.45 25	6.77 25	av $E\beta=2545$ 41
(5.79×10 <sup>3</sup> eV)	880.12	1.89 21	6.17 6	av $E\beta=2571$ 41
(5.93×10 <sup>3</sup> eV)	744.75	3.94 23	5.90 4	av $E\beta=2636$ 41
				$E(\beta)=5540$ 650 (coin with 430 $\gamma$ ) (1982A129).
(5.94×10 <sup>3</sup> eV)	725.44	2.4 4	6.12 8	av $E\beta=2645$ 41
(6.07×10 <sup>3</sup> eV)	602.55	0.67 15	6.71 11	av $E\beta=2704$ 41
(6.16×10 <sup>3</sup> eV)	508.42	3.3 4	6.05 6	av $E\beta=2748$ 41
(6.17×10 <sup>3</sup> eV)	500.60	5.8 7	5.81 6	av $E\beta=2752$ 41
(6.30×10 <sup>3</sup> eV)	369.35	3.3 4	6.09 6	av $E\beta=2815$ 41
(6.32×10 <sup>3</sup> eV)	353.48	2.7 11	6.18 18	av $E\beta=2822$ 41
(6.36×10 <sup>3</sup> eV)	314.50	15.1 11	5.45 5	av $E\beta=2841$ 41

$^\dagger$  Absolute intensity per 100 decays.

γ(<sup>121</sup>Cd)

I<sub>γ</sub> normalization: from I(γ+ce to g.s. +7.52 level + 214.89 level)=100, assuming no β<sup>-</sup> to g.s. and 7.52 level (2nd forbidden) or 214.89 level (1U β<sup>-</sup>) (1982Fo10).

<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>α<sup>@</sup></u>	<u>I<sub>(γ+ce)</sub><sup>#</sup></u>	<u>Comments</u>
7.52 11		7.52	(1/2 <sup>+</sup> )	0.0	(3/2 <sup>+</sup> )	[M1,E2]		15.7 6	α: α=127 6 for M1, 9.90×10 <sup>4</sup> 8 for E2. E <sub>γ</sub> : deduced from the level scheme. I <sub>(γ+ce)</sub> : from an intensity balance at the 7.52 level.
<sup>x</sup> 17.62 10	1.0 4								
<sup>x</sup> 68.44 10	0.25 8								
115.02 10	17.1 11	329.95	(9/2 <sup>-</sup> ,11/2 <sup>-</sup> )	214.90	(11/2 <sup>-</sup> )	M1	0.313		α(K)=0.271 4; α(L)=0.0339 5; α(M)=0.00651 10; α(N+..)=0.001226 18 α(N)=0.001160 17; α(O)=6.62×10 <sup>-5</sup> 10 α(K)exp=0.23 3.
147.10 10	0.70 8	500.60	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	353.48	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )				
178.47 10	10.4 8	508.42	(7/2 <sup>-</sup> ,9/2)	329.95	(9/2 <sup>-</sup> ,11/2 <sup>-</sup> )	D			α(K)exp<0.10.
<sup>x</sup> 204.4 6	0.11 3								
293.47 10	7.3 4	508.42	(7/2 <sup>-</sup> ,9/2)	214.90	(11/2 <sup>-</sup> )	[E2]	0.0349		α(K)=0.0296 5; α(L)=0.00435 7; α(M)=0.000844 12; α(N+..)=0.0001529 22 α(N)=0.0001465 21; α(O)=6.41×10 <sup>-6</sup> 9 α(K)=0.0236 4; α(L)=0.00341 5; α(M)=0.000661 10; α(N+..)=0.0001200 17 α(N)=0.0001149 17; α(O)=5.16×10 <sup>-6</sup> 8 M1,E2 from α(K)exp=0.018 4. Decay scheme requires ΔJ=2.
314.55 10	100 3	314.50	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	0.0	(3/2 <sup>+</sup> )	(E2)	0.0278		
<sup>x</sup> 320.37 20	0.93 10								
345.64 10	1.6 2	1516.34		1170.70	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )				
353.43 10	62 3	353.48	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	0.0	(3/2 <sup>+</sup> )	M1,E2	0.0174 18		α(K)=0.0150 14; α(L)=0.0020 4; α(M)=0.00038 7; α(N+..)=7.0×10 <sup>-5</sup> 11 α(N)=6.7×10 <sup>-5</sup> 11; α(O)=3.45×10 <sup>-6</sup> 16 Mult.: from α(K)exp=0.016 4; α: for δ=1.0, uncertainty chosen to overlap M1, E2 theory values. α(K)=0.01511 22; α(L)=0.00211 3; α(M)=0.000408 6; α(N+..)=7.46×10 <sup>-5</sup> 11 α(N)=7.12×10 <sup>-5</sup> 10; α(O)=3.35×10 <sup>-6</sup> 5
361.88 10	12.1 5	369.35	(5/2 <sup>+</sup> )	7.52	(1/2 <sup>+</sup> )	[E2]	0.01771		
<sup>x</sup> 365.66 22	0.51 10								
369.33& 10	17.4& 6	369.35	(5/2 <sup>+</sup> )	0.0	(3/2 <sup>+</sup> )	[M1,E2]	0.0153 13		α(K)=0.0132 10; α(L)=0.00172 25; α(M)=0.00033 5; α(N+..)=6.2×10 <sup>-5</sup> 9 α(N)=5.9×10 <sup>-5</sup> 8; α(O)=3.05×10 <sup>-6</sup> 11
369.33& 10	1.5& 1	1249.32		880.12	(7/2 <sup>-</sup> ,9/2)				
371.82& 10	10.3& 5	725.44		353.48	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )				

γ(<sup>121</sup>Cd) (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>
371.82 & 10	0.5 &	880.12	(7/2 <sup>-</sup> ,9/2)	508.42	(7/2 <sup>-</sup> ,9/2)	900.1 3	0.9 2	1400.7		500.60	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )
415.00 20	2.0 2	744.75		329.95	(9/2 <sup>-</sup> ,11/2 <sup>-</sup> )	943.5 5	1.0 4	1823.6		880.12	(7/2 <sup>-</sup> ,9/2)
430.32 10	12.7 5	744.75		314.50	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	1002.10 20	2.0 2	1510.45	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	508.42	(7/2 <sup>-</sup> ,9/2)
435.85 10	6.1 4	936.47		500.60	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	1011.10 20	1.3 2	1341.13	(7/2 <sup>-</sup> ,9/2)	329.95	(9/2 <sup>-</sup> ,11/2 <sup>-</sup> )
439.08 15	2.3 3	1510.45	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	1071.13	(5/2 <sup>+</sup> )	1063.50 15	3.4 3	1071.13	(5/2 <sup>+</sup> )	7.52	(1/2 <sup>+</sup> )
440.85 15	2.7 3	1812.03	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	1371.03		1086.1 4	0.42 10	1812.03	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	725.44	
443.9 4	0.63 15	1170.70	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	725.44		<sup>x</sup> 1092.7 5	0.7 2				
<sup>x</sup> 451.50 20	1.0 2					1096.5 5	0.7 3	1841.3		744.75	
<sup>x</sup> 493.0 3	0.3 1					<sup>x</sup> 1107.0 3	0.64 10				
500.61 10	29 2	500.60	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	0.0	(3/2 <sup>+</sup> )	1126.7 5	0.39 10	1341.13	(7/2 <sup>-</sup> ,9/2)	214.90	(11/2 <sup>-</sup> )
550.10 10	5.8 4	880.12	(7/2 <sup>-</sup> ,9/2)	329.95	(9/2 <sup>-</sup> ,11/2 <sup>-</sup> )	<sup>x</sup> 1137.6 7	1.5 5				
582.88 20	2.9 4	936.47		353.48	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	1157.07 10	11.1 5	1510.45	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	353.48	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )
<sup>x</sup> 592.9 7	1.0 3					1170.94 15	7.1 6	1170.70	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	0.0	(3/2 <sup>+</sup> )
602.57 10	5.4 4	602.55		0.0	(3/2 <sup>+</sup> )	1195.93 10	21.0 10	1510.45	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	314.50	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )
605.51 10	3.3 2	1208.04		602.55		1208.3 7	1.5 5	2416.3		1208.04	
620.31 20	2.2 3	989.48		369.35	(5/2 <sup>+</sup> )	1263.4 3	1.1 2	1988.78		725.44	
635.90 15	2.0 3	989.48		353.48	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	<sup>x</sup> 1266.8 4	2.0 3				
665.8 3	2.1 3	880.12	(7/2 <sup>-</sup> ,9/2)	214.90	(11/2 <sup>-</sup> )	<sup>x</sup> 1301.30 20	1.3 2				
691.0 2	1.4 3	1191.60		500.60	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	1332.14 10	5.0 4	1685.56	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	353.48	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )
701.4 3	1.6 2	1071.13	(5/2 <sup>+</sup> )	369.35	(5/2 <sup>+</sup> )	1371.07 10	4.2 3	1685.56	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	314.50	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )
<sup>x</sup> 715.00 20	2.0 2					1424.9 3	0.9 2	1925.5		500.60	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )
717.64 10	5.4 3	1071.13	(5/2 <sup>+</sup> )	353.48	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	1443.1 3	2.1 2	1812.03	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	369.35	(5/2 <sup>+</sup> )
725.50 20	6.3 6	725.44		0.0	(3/2 <sup>+</sup> )	1510.47 10	18.5 15	1510.45	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	0.0	(3/2 <sup>+</sup> )
726.51 20	1.6 2	1095.86		369.35	(5/2 <sup>+</sup> )	<sup>x</sup> 1532.2 4	2.1 3				
732.70 20	1.7 2	1241.12		508.42	(7/2 <sup>-</sup> ,9/2)	<sup>x</sup> 1534.2 4	0.43 10				
740.40 20	1.8 2	1249.32		508.42	(7/2 <sup>-</sup> ,9/2)	1538.90 20	1.8 2	1908.26		369.35	(5/2 <sup>+</sup> )
744.16 20	0.8 2	744.75		0.0	(3/2 <sup>+</sup> )	<sup>x</sup> 1548.7 3	2.0 2				
748.8 3	0.8 3	1685.56	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	936.47		<sup>x</sup> 1561.4 3	0.60 10				
765.5 5	0.4 2	1510.45	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	744.75		<sup>x</sup> 1669.4 4	0.9 2				
784.93 15	5.8 6	1510.45	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	725.44		<sup>x</sup> 1674.5 4	0.46 10				
801.35 10	5.0 3	1170.70	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	369.35	(5/2 <sup>+</sup> )	1684.5 4	0.50 10	1685.56	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	0.0	(3/2 <sup>+</sup> )
803.58 10	2.0 2	1118.09		314.50	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	<sup>x</sup> 1710.5 3	0.60 10				
<sup>x</sup> 806.6 5	1.0 3					<sup>x</sup> 1717.1 3	0.49 10				
<sup>x</sup> 813.2 4	1.5 3					<sup>x</sup> 1725.9 3	0.60 10				
817.24 10	12.5 6	1170.70	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	353.48	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	<sup>x</sup> 1746.3 5	0.26 8				
837.6 7	1.2 3	1208.04		369.35	(5/2 <sup>+</sup> )	1770.9 3	1.3 2	2100.9		329.95	(9/2 <sup>-</sup> ,11/2 <sup>-</sup> )
856.06 15	5.0 4	1170.70	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	314.50	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	<sup>x</sup> 1804.7 3	1.0 2				
862.45 15	2.7 2	1371.03		508.42	(7/2 <sup>-</sup> ,9/2)	1809.2 3	1.0 2	2162.7		353.48	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )
864.50 15	3.0 2	1233.85		369.35	(5/2 <sup>+</sup> )	1812.13 & 15	3.2 & 4	1812.03	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	0.0	(3/2 <sup>+</sup> )
<sup>x</sup> 880.3 3	0.9 2					1812.13 & 15	2.0 & 4	2165.66	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	353.48	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )
890.10 20	0.8 2	1243.58		353.48	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	1819.50 20	2.1 3	2134.02		314.50	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )
892.15 20	0.7 2	1617.59		725.44		1827.3 3	0.6 2	2327.9		500.60	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )

<sup>121</sup>Ag β<sup>-</sup> decay **1982Fo10,1982A129** (continued)

γ(<sup>121</sup>Cd) (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>
<sup>x</sup> 1844.90 20	1.4 2					2483.8 3	1.4 2	2797.95	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> ,9/2 <sup>+</sup> )	314.50	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )
1861.30 20	3.0 3	2797.95	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> ,9/2 <sup>+</sup> )	936.47		2518.3 3	2.3 2	2518.32	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	0.0	(3/2 <sup>+</sup> )
1889.2 4	0.8 2	2825.25	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	936.47		<sup>x</sup> 2526.0 4	0.42 10				
1936.19 20	3.0 2	2872.67	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> ,9/2 <sup>+</sup> )	936.47		2577.4 5	0.6 2	2946.8		369.35	(5/2 <sup>+</sup> )
<sup>x</sup> 1943.9 4	0.88 10					<sup>x</sup> 2585.2 3	0.72 10				
<sup>x</sup> 1957.8 3	1.6 2					<sup>x</sup> 2620.0 4	0.6 2				
1988.7 3	0.63 8	1988.78		0.0	(3/2 <sup>+</sup> )	<sup>x</sup> 2628.0 5	0.4 2				
2017.9 3	1.4 2	2518.32	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	500.60	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	<sup>x</sup> 2637.0 4	0.5 2				
2080.3 3	2.1 2	2825.25	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	744.75		2645.8 5	0.5 2	3015.2		369.35	(5/2 <sup>+</sup> )
2090.7 3	1.0 2	2405.2		314.50	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	<sup>x</sup> 2663.8 4	0.40 8				
2129.3 5	0.5 2	2443.8		314.50	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	2676.4 6	0.26 8	2676.2		0.0	(3/2 <sup>+</sup> )
<sup>x</sup> 2134.8 6	0.31 10					<sup>x</sup> 2685.8 5	0.5 2				
2156.5 5	0.48 15	2881.3	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	725.44		2733.7 5	0.8 2	3048.2		314.50	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )
2165.8 3	1.3 2	2165.66	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	0.0	(3/2 <sup>+</sup> )	2825.1 4	0.6 2	2825.25	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	0.0	(3/2 <sup>+</sup> )
2203.70 20	5.0 3	2518.32	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	314.50	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	<sup>x</sup> 2835.1 5	0.30 10				
2216.9 5	0.35 10	2717.5		500.60	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	<sup>x</sup> 2868.5 4	1.3 2				
2322.6 3	1.0 2	2676.2		353.48	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	2881.0 3	5.0 3	2881.3	(5/2 <sup>+</sup> ,7/2 <sup>+</sup> )	0.0	(3/2 <sup>+</sup> )
<sup>x</sup> 2394.0 4	0.21 5					<sup>x</sup> 2898.9 6	0.19 5				
<sup>x</sup> 2434.9 4	0.8 2					<sup>x</sup> 3128.4 6	0.21 5				
<sup>x</sup> 2464.3 4	0.42 8										

<sup>†</sup> From [1982Fo10](#).

<sup>‡</sup> From α(K)exp.

# For absolute intensity per 100 decays, multiply by 0.321 7.

@ Total theoretical internal conversion coefficients, calculated using the BrIcc code ([2008Ki07](#)) with Frozen orbital approximation based on γ-ray energies, assigned multiplicities, and mixing ratios, unless otherwise specified.

& Multiply placed with intensity suitably divided.

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

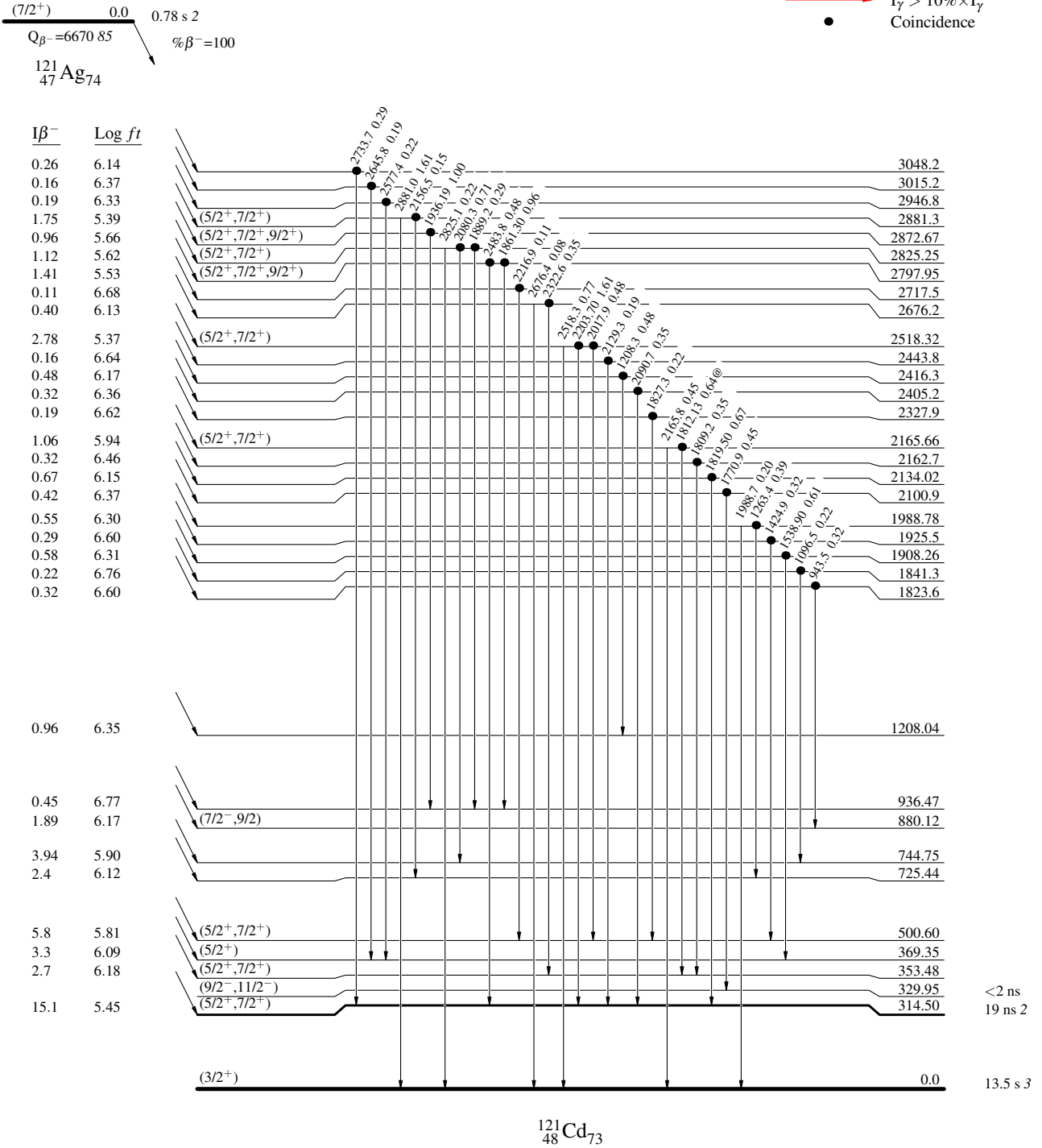
$^{121}\text{Ag} \beta^- \text{ decay } 1982\text{Fo10}, 1982\text{Al29}$

Decay Scheme

Intensities:  $I_{(\gamma+ce)}$  per 100 parent decays  
@ Multiply placed: intensity suitably divided

Legend

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



< 2 ns  
19 ns 2

13.5 s 3

$^{121}_{48}\text{Cd}_{73}$

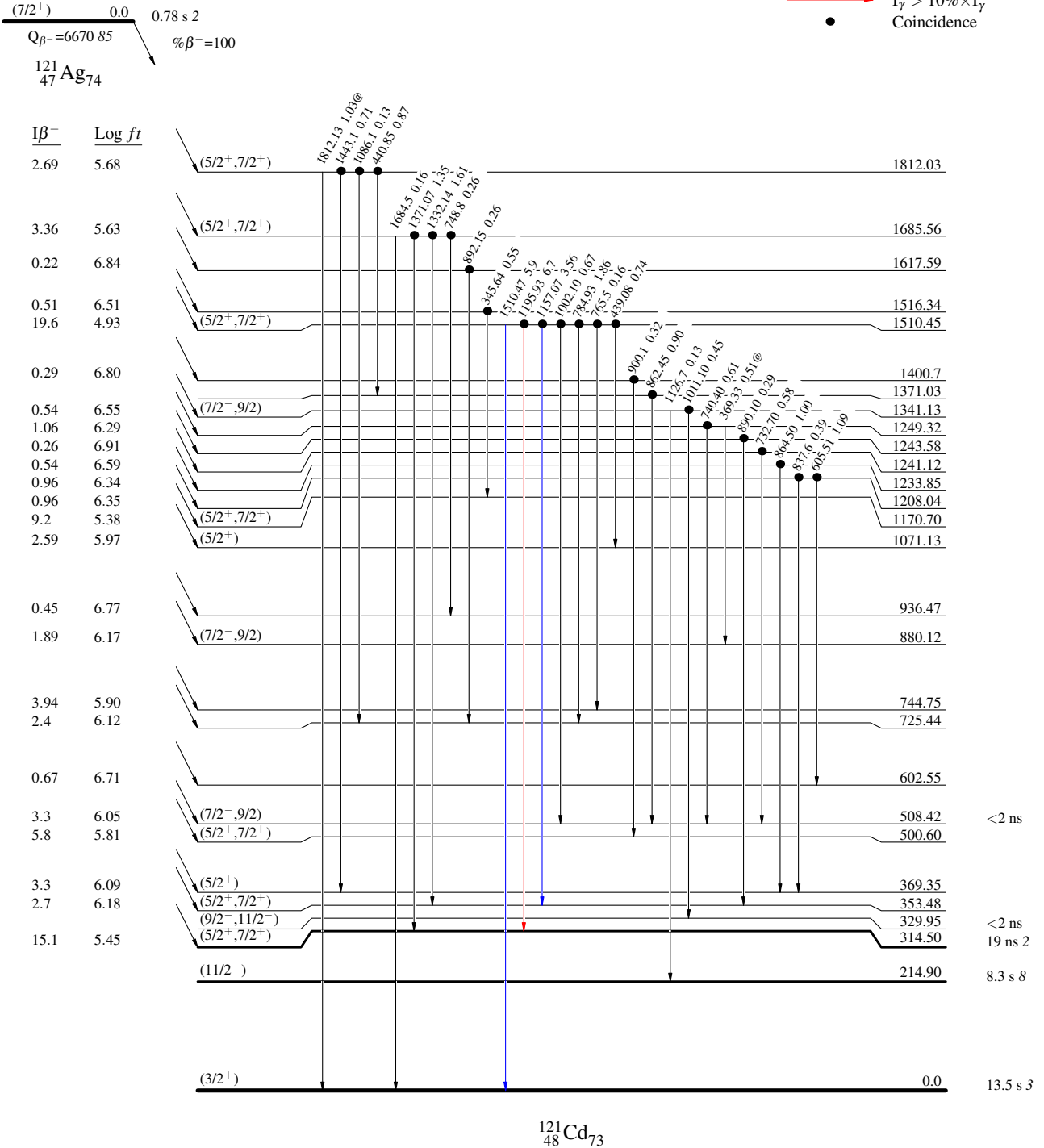
<sup>121</sup>Ag β<sup>-</sup> decay 1982Fo10,1982Al29

Decay Scheme (continued)

Intensities: I<sub>(γ+ce)</sub> per 100 parent decays  
@ Multiply placed: intensity suitably divided

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>
- Coincidence





$^{121}\text{Ag} \beta^-$  decay 1982Fo10,1982Al29

Decay Scheme (continued)

Intensities:  $I_{(\gamma+ce)}$  per 100 parent decays  
 @ Multiply placed: intensity suitably divided

Legend

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

