

^{107}In ε decay (32.4 min) 1973Ny03

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 109, 1383 (2008)	1-Mar-2008

Parent: ^{107}In : E=0.0; $J^\pi=9/2^+$; $T_{1/2}=32.4$ min 3; $Q(\varepsilon)=3425$ 10; $\% \varepsilon + \% \beta^+$ decay=100.0

Others: 1963Ba41, 1970Di13, 1971Ri05, 1972Dr09.

Source: $^{106}\text{Cd}(d,n)$ E=6-10 MeV; no chem or mass separation.

 ^{107}Cd Levels

E(level) [†]	J^π	$T_{1/2}$	Comments
0.0	$5/2^+$	6.50 h 2	
204.96 3	$7/2^+$	0.71 ns 4	$T_{1/2}$: from ($>1940\beta^+$)(205 γ)(t) 1973Ro30, scin. E(level): low-lying $7/2^+$ states in ^{105}Cd , ^{109}Cd occur, respectively, at 131, 203 keV.
320.92 4	$5/2^+$	≤ 42 ps	$T_{1/2}$: from ($1750 \leq E\beta^+ \leq 1930$)(321 γ)(t) 1973Ro30, scin.
365.29 5	$3/2^+$		
505.50 5	$7/2^+$		Branching: $I_\gamma(300\gamma)/I_\gamma(505\gamma)=1.35$ 20 (1973Ny03), 1.1 4 (1972Dr09).
702.34 11	$(3/2)^+$		Branching: $I_\gamma(381\gamma)/I_\gamma(702\gamma)=0.15$ 4 (1973Ny03).
809.03 5	$9/2^+$		Branching: $I_\gamma(303\gamma)/I_\gamma(604\gamma)/I_\gamma(809\gamma)=19$ 2/41 3/100 (1973Ny03), 18 2/48 4/100 (1972Dr09).
840.20 10	$(3/2)^+$		Branching: $I_\gamma(840\gamma)/I_\gamma(519\gamma)=0.70$ 12 (1973Ny03).
845.54 8	$11/2^-$		E(level): $11/2^-$ isomerism in ^{109}Cd , ^{111}Cd occurs at 462,396 keV, respectively.
919.43 12	$(5/2)^+$		Branching: $I_\gamma(414\gamma)/I_\gamma(554\gamma)/I_\gamma(919\gamma)=100/94$ 23/41 13 (1973Ny03).
921.63 11	$(9/2)^+$		J^π : possibly $9/2^+$ band member based on $5/2^+$ g.s. (1976Do01). Consistent with E2 and M1 γ -decays to $5/2^+$ and $7/2^+$ states, respectively.
932.99 7	$11/2^+$		Branching: $I_\gamma(416\gamma)/I_\gamma(922\gamma)/I_\gamma(716\gamma)=100/72$ 10/ ≈ 20 (1973Ny03).
998.71 9	$(5/2)^+$		Branching: $I_\gamma(678\gamma)/I_\gamma(794\gamma)/I_\gamma(999\gamma)=15$ 2/14 2/100 (1973Ny03).
1158.6 3	$(5/2)$		J^π : tentative L=(3) (d,p); excit. Branching: $I_\gamma(1158\gamma)/I_\gamma(954\gamma)=0.26$ 7 (1973Ny03).
1268.32 6	$7/2^+$		
1319.65 19			
1377.37 6	$(7/2)^+$		Branching: $I_\gamma(456\gamma)/I_\gamma(1377\gamma)=0.37$ 4 (1973Ny03), 0.60 13 (1972Dr09), 0.54 6 (1971Ri05).
1420.54 8	$(11/2^+)$		Branching: $I_\gamma(499\gamma)/I_\gamma(611\gamma)/I_\gamma(915\gamma)=20$ 3/50 5/100 (1973Ny03), 10 3/54 10/100 (1972Dr09).
1530.47 21			
1653.5 4			
1712.8 5			
1776.37 9	$7/2^+$		
1876.75 22			
1908.84 20			
1922.18 12	$7/2^+$		
2006.31 12	$7/2^+$		
2064.39 14	$7/2^+, 9/2^+$		
2183.4 3			
2284.78 13	$7/2^+, 9/2^+$		
2304.36 13	$7/2^+, 9/2^+$		
2366.10 22			
2405.7 4			
2504.45 25			
2547.9 3			
2584.1 3			
2637.9 3			
2652.6 3	$7/2^+, 9/2^+$		
2700.8 3			

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^{107}In ε decay (32.4 min) $^{1973}\text{Ny03}$ (continued) ^{107}Cd Levels (continued)

E(level) [†]	J ^π	E(level) [†]	J ^π
2764.23 13	7/2 ⁺ ,9/2 ⁺ ,11/2 ⁺	2875.49 20	7/2 ⁺ ,9/2 ⁺
2811.8 3	7/2 ⁺ ,9/2 ⁺ ,11/2 ⁺	2922.2 4	7/2 ⁺ ,9/2 ⁺ ,11/2 ⁺
2818.7 5		2986.1 5	7/2 ⁺ ,9/2 ⁺
		3001.8 3	7/2 ⁺ ,9/2 ⁺ ,11/2 ⁺

[†] Level energy from least-squares adjustment.

 ε, β^+ radiations

Q(ε)=3480 150 from 2250 β to 205 level (1963Ba41) $\beta\gamma$ -coin.

E(decay)	E(level)	I β^+ [‡]	I ε^{\ddagger}	Log ft	I($\varepsilon+\beta^+$) [‡]	Comments
(423 10)	3001.8		0.45	5.4	0.45	$\varepsilon\text{K}= 0.853\ 6; \varepsilon\text{L}= 0.117\ 5; \varepsilon\text{M}+= 0.0296\ 14$
(439 10)	2986.1		0.54	5.3	0.54	$\varepsilon\text{K}= 0.853\ 6; \varepsilon\text{L}= 0.117\ 5; \varepsilon\text{M}+= 0.0295\ 13$
(503 10)	2922.2		0.5	5.4	0.5	$\varepsilon\text{K}= 0.855\ 4; \varepsilon\text{L}= 0.116\ 3; \varepsilon\text{M}+= 0.0292\ 9$
(550 10)	2875.49		1.6 2	5.0	1.6 2	$\varepsilon\text{K}= 0.856\ 4; \varepsilon\text{L}= 0.115\ 3; \varepsilon\text{M}+= 0.0290\ 8$
(606 10)	2818.7		0.17	6.1	0.17	$\varepsilon\text{K}= 0.856\ 3; \varepsilon\text{L}= 0.1147\ 21; \varepsilon\text{M}+= 0.0288\ 6$
(613 10)	2811.8		0.5	5.6	0.5	$\varepsilon\text{K}= 0.857\ 3; \varepsilon\text{L}= 0.1147\ 20; \varepsilon\text{M}+= 0.0288\ 6$
(661 10)	2764.23		3.0 3	4.9	3.0 3	$\varepsilon\text{K}= 0.8571\ 22; \varepsilon\text{L}= 0.1142\ 17; \varepsilon\text{M}+= 0.0287\ 5$
(724 10)	2700.8		0.34	5.9	0.34	$\varepsilon\text{K}= 0.8577\ 18; \varepsilon\text{L}= 0.1137\ 14; \varepsilon\text{M}+= 0.0285\ 4$
(772 10)	2652.6		0.7	5.6	0.7	$\varepsilon\text{K}= 0.8582\ 16; \varepsilon\text{L}= 0.1134\ 12; \varepsilon\text{M}+= 0.0284\ 4$
(787 10)	2637.9		0.4	5.9	0.4	$\varepsilon\text{K}= 0.8583\ 15; \varepsilon\text{L}= 0.1133\ 12; \varepsilon\text{M}+= 0.0284\ 4$
(841 10)	2584.1		0.45	5.9	0.45	$\varepsilon\text{K}= 0.8587\ 13; \varepsilon\text{L}= 0.1130\ 10; \varepsilon\text{M}+= 0.0283\ 3$
(877 10)	2547.9		0.25	6.2	0.25	$\varepsilon\text{K}= 0.8589\ 12; \varepsilon\text{L}= 0.1128\ 10; \varepsilon\text{M}+= 0.0283\ 3$
(921 10)	2504.45		0.5	5.9	0.5	$\varepsilon\text{K}= 0.8592\ 11; \varepsilon\text{L}= 0.1126\ 9; \varepsilon\text{M}+= 0.02821\ 24$
(1019 10)	2405.7		0.3	6.2	0.3	$\varepsilon\text{K}= 0.8598\ 9; \varepsilon\text{L}= 0.1122\ 7; \varepsilon\text{M}+= 0.02809\ 20$
(1059 10)	2366.10		0.7	5.9	0.7	$\varepsilon\text{K}= 0.8599; \varepsilon\text{L}= 0.1120\ 7; \varepsilon\text{M}+= 0.02804\ 18$
(1121 10)	2304.36		3.6 4	5.2	3.6 4	$\varepsilon\text{K}= 0.8601\ 12; \varepsilon\text{L}= 0.1118\ 7; \varepsilon\text{M}+= 0.02798\ 18$
(1140 10)	2284.78		3.0 3	5.3	3.0 3	$\varepsilon\text{K}= 0.8601\ 17; \varepsilon\text{L}= 0.1117\ 7; \varepsilon\text{M}+= 0.02796\ 19$
(1242 10)	2183.4		0.9	5.9	0.9	av $\text{E}\beta= 130\ 70; \varepsilon\text{K}= 0.859\ 5; \varepsilon\text{L}= 0.1113\ 11; \varepsilon\text{M}+= 0.0278\ 3$
(1361 10)	2064.39		3.6 4	5.4	3.6 4	av $\text{E}\beta= 190\ 70; \varepsilon\text{K}= 0.856\ 12; \varepsilon\text{L}= 0.1105\ 19; \varepsilon\text{M}+= 0.0276\ 5$
(1419 10)	2006.31		3.4 3	5.5	3.4 3	av $\text{E}\beta= 210\ 70; \varepsilon\text{K}= 0.853\ 16; \varepsilon\text{L}= 0.1100\ 23; \varepsilon\text{M}+= 0.0275\ 6$
(1503 10)	1922.18		3.2 3	5.6	3.2 3	av $\text{E}\beta= 250\ 70; \varepsilon\text{K}= 0.845\ 22; \varepsilon\text{L}= 0.109\ 3; \varepsilon\text{M}+= 0.0272\ 8$
(1516 10)	1908.84		0.5	6.4	0.5	av $\text{E}\beta= 250\ 70; \varepsilon\text{K}= 0.844\ 23; \varepsilon\text{L}= 0.109\ 4; \varepsilon\text{M}+= 0.0271\ 9$
(1548 10)	1876.75		0.8	6.2	0.8	av $\text{E}\beta= 270\ 70; \varepsilon\text{K}= 0.84\ 3; \varepsilon\text{L}= 0.108\ 4; \varepsilon\text{M}+= 0.0270\ 9$
(1649 10)	1776.37		3.5 4	5.6	3.5 4	av $\text{E}\beta= 310\ 70; \varepsilon\text{K}= 0.82\ 4; \varepsilon\text{L}= 0.106\ 5; \varepsilon\text{M}+= 0.0265\ 12$
(1712 10)	1712.8		0.4	6.6	0.4	av $\text{E}\beta= 340\ 70; \varepsilon\text{K}= 0.81\ 4; \varepsilon\text{L}= 0.104\ 6; \varepsilon\text{M}+= 0.0260\ 14$
(1772 [#] 10)	1653.5		0.3	>6.8	0.3	
(1895 10)	1530.47		0.5	6.6	0.5	av $\text{E}\beta= 420\ 70; \varepsilon\text{K}= 0.76\ 6; \varepsilon\text{L}= 0.097\ 7; \varepsilon\text{M}+= 0.0243\ 18$
(2004 10)	1420.54		0.5	6.7	0.5	av $\text{E}\beta= 470\ 70; \varepsilon\text{K}= 0.72\ 6; \varepsilon\text{L}= 0.092\ 8; \varepsilon\text{M}+= 0.0231\ 20$
(2048 10)	1377.37	0.6 1	2.8 3	5.9	3.4 3	av $\text{E}\beta= 490\ 70; \varepsilon\text{K}= 0.71\ 7; \varepsilon\text{L}= 0.090\ 8; \varepsilon\text{M}+= 0.0225$

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^{107}In ε decay (32.4 min) **1973Ny03** (continued) ε, β^+ radiations (continued)

<u>E(decay)</u>	<u>E(level)</u>	<u>$I\beta^+$</u> ‡	<u>$I\varepsilon$</u> ‡	<u>Log ft</u>	<u>$I(\varepsilon + \beta^+)$</u> ‡		<u>Comments</u>
						21	
(2105 [#] 10)	1319.65		<0.3	>7	<0.3		
(2157 10)	1268.32	2.0 2	6.5 6	5.5	8.5 6	av $E\beta=$ 530 70; $\varepsilon K=$ 0.0211 22	0.66 7; $\varepsilon L=$ 0.084 9; $\varepsilon M+=$
(2492 10)	932.99	0.7 1	1.1 1	6.4	1.80 14	av $E\beta=$ 680 70; $\varepsilon K=$ 0.0163 22	0.51 7; $\varepsilon L=$ 0.065 9; $\varepsilon M+=$
(2503 10)	921.63	1.1 2	1.5 2	6.3	2.6 3	av $E\beta=$ 690 70; $\varepsilon K=$ 0.0162 22	0.51 7; $\varepsilon L=$ 0.065 9; $\varepsilon M+=$
(2579 10)	845.54	0.4	0.4	6.9	0.8	av $E\beta=$ 720 70; $\varepsilon K=$ 0.0151 21	0.48 7; $\varepsilon L=$ 0.061 9; $\varepsilon M+=$
(2616 10)	809.03	1.3 2	1.4 2	6.4	2.7 3	av $E\beta=$ 740 70; $\varepsilon K=$ 0.0146 21	0.46 7; $\varepsilon L=$ 0.059 9; $\varepsilon M+=$
(2920 10)	505.50	2.0 4	1.3 2	6.5	3.3 5	av $E\beta=$ 880 70; $\varepsilon K=$ 0.0110 17	0.35 6; $\varepsilon L=$ 0.044 7; $\varepsilon M+=$
(3220 [†] 10)	204.96	26 3	11 1	5.65	37 3	av $E\beta=$ 1020 70; $\varepsilon K=$ 0.0083 13	0.26 4; $\varepsilon L=$ 0.033 6; $\varepsilon M+=$

† $E\beta+=2250$ 150 (1963Ba41) scin. Others: 1949Ma20, 1955Ca52.

‡ For absolute intensity per 100 decays, multiply by 1.05.

Existence of this branch is questionable.

γ(¹⁰⁷Cd)

I_γ normalization: from Σ I(γ+ce)=100% to g.s..

γγ-coin: **1973Ny03** (see drawings). Others: **1963Ba41**, **1971Ri05**, **1972Dr09**.

Except as noted, E_γ, I_γ are from **1973Ny03** semi γ singles.

E _γ	I _γ [@]	E _i (level)	J _i ^π	E _f	J _f ^π	Mult.	δ	α ^{&}	Comments
(36.5 [†] 1)	0.13 1	845.54	11/2 ⁻	809.03	9/2 ⁺	E1		2.8	α(K)= 2.386; α(L)= 0.334; α(M)= 0.0631 I _γ : from branching ratio: I _γ (36γ)/I _γ (640γ)=0.11 1 (1974Ha41) via (α,2nγ).
204.95 3	100	204.96	7/2 ⁺	0.0	5/2 ⁺	M1+E2	+0.25 1	0.0682 2	α(K)=0.05893 19; α(L)=0.00748 5; α(M)=0.00144; α(N+...)=0.00030 Mult.: from α(K)exp=0.074 15 via (α,2nγ) associated with K/L=7.9 5. δ: +0.25 1 from anisotropy ratio A ₂ (205γ)/A ₂ (640γ)=0.31 3 (1974Be17). Other:<0.48 from K/L=7.9 5 (1973Ny03). K/L=7.9 5 (1973Ny03). Others: 9.2 2 (1971Ri05), 8.6 7 (1973Jo06).
300.45 15	0.34 5	505.50	7/2 ⁺	204.96	7/2 ⁺	M1(+E2)		0.024	Mult.: from α(K)exp=0.021 4 via (p,nγ).
303.53 7	1.34 9	809.03	9/2 ⁺	505.50	7/2 ⁺	M1(+E2)		0.023	Mult.: from α(K)exp=0.017 3 via (p,nγ) and 303γ(θ) A ₂ =-0.30 6 via (α,2nγ).
320.94 4	21.6 7	320.92	5/2 ⁺	0.0	5/2 ⁺	M1(+E2)		0.020	Mult.: from α(K)exp=0.020 2 via (p,nγ), 0.018 3 via (α,2nγ).
349.3 7	0.35 10	1268.32	7/2 ⁺	919.43	(5/2) ⁺				
365.29 5	8.1 3	365.29	3/2 ⁺	0.0	5/2 ⁺	M1(+E2)		0.015	Mult.: from α(K)exp=0.0144 12 via (p,nγ) and 365γ(θ) A ₂ =-0.08 7 via (α,2nγ).
381.5 3	0.14 4	702.34	(3/2) ⁺	320.92	5/2 ⁺	M1(+E2)		0.013	Mult.: from α(K)exp=0.011 3 via (p,nγ).
396.2 7	0.11 4	2304.36	7/2 ⁺ ,9/2 ⁺	1908.84					
413.7 4	1.7 2	919.43	(5/2) ⁺	505.50	7/2 ⁺	M1(+E2)		0.011	Mult.: from α(K)exp=0.0094 12 via (p,nγ).
416.42 15	3.6 3	921.63	(9/2) ⁺	505.50	7/2 ⁺	M1(+E2)		0.011	Mult.: from α(K)exp=0.0081 12 via (p,nγ) and 416γ(θ) A ₂ =-0.36 6 via (α,2nγ).
456.1 2	1.15 10	1377.37	(7/2) ⁺	921.63	(9/2) ⁺	M1,E2		0.0084	Mult.: from α(K)exp=0.0081 10 via (p,nγ).
459.3 4	0.38 4	1268.32	7/2 ⁺	809.03	9/2 ⁺				
475.0 4	0.19 4	840.20	(3/2) ⁺	365.29	3/2 ⁺				
488.3 6	0.17 4	809.03	9/2 ⁺	320.92	5/2 ⁺				
499.3 5	0.48 6	1420.54	(11/2) ⁺	921.63	(9/2) ⁺				
505.51 7	25.2 8	505.50	7/2 ⁺	0.0	5/2 ⁺	M1+E2	-0.28 8	0.00659 1	α(K)=0.00568; α(L)=0.00068 Mult.: from α(K)exp=0.0052 7 via (p,nγ) and 505γ(θ) A ₂ =-0.49 9 via (α,2nγ). δ: -0.28 8 from 505γ(θ) via (¹⁶ O,3nγ).
519.28 15	0.54 6	840.20	(3/2) ⁺	320.92	5/2 ⁺	M1,E2		0.0062	Mult.: from α(K)exp=0.0061 10 via (p,nγ).
554.16 15	1.6 3	919.43	(5/2) ⁺	365.29	3/2 ⁺	M1,E2		0.0053	Mult.: from α(K)exp=0.0045 10 via (p,nγ).
598.3 5	0.51 8	919.43	(5/2) ⁺	320.92	5/2 ⁺				
600.9 5	0.58 10	921.63	(9/2) ⁺	320.92	5/2 ⁺				

¹⁰⁷In ε decay (32.4 min) ¹⁹⁷³Ny03 (continued)

γ(¹⁰⁷Cd) (continued)

<u>E_γ</u>	<u>I_γ[@]</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.</u>	<u>δ</u>	<u>α^{&}</u>	<u>Comments</u>
604.03 8	2.83 15	809.03	9/2 ⁺	204.96	7/2 ⁺	M1+E2	-2.3 3	0.00405 2	α(K)=0.00346; α(L)=0.00043 Mult.: from α(K) _{exp} =0.0032 6 and 604γ(θ) A ₂ =-0.58 4 via (α,2nγ). δ: -2.3 3 from 604γ(θ) via (¹⁶ O,3nγ).
611.38 10	1.20 10	1420.54	(11/2 ⁺)	809.03	9/2 ⁺				
617.30 15	0.58 6	1319.65		702.34	(3/2) ⁺				
640.58 10	1.20 5	845.54	11/2 ⁻	204.96	7/2 ⁺	M2		0.011	α(K)=0.00933; α(L)=0.00117 Mult.: from α(K) _{exp} =0.0112 12 via (p,nγ) and 640γ(θ) A ₂ =0.25 5 via (α,2nγ).
^x 669.8 2	0.16 3								
677.7 2	0.38 5	998.71	(5/2) ⁺	320.92	5/2 ⁺				
686.6 3	0.20 3	2064.39	7/2 ⁺ ,9/2 ⁺	1377.37	(7/2) ⁺				
702.32 12	0.94 7	702.34	(3/2) ⁺	0.0	5/2 ⁺	M1,E2		0.0030	Mult.: from α(K) _{exp} =0.0024 3 via (p,nγ).
^x 708.7 6	0.42 5								
716.4 3	0.7 3	921.63	(9/2) ⁺	204.96	7/2 ⁺				
^x 723.5 7	0.43 8								
728.03 6	7.0 3	932.99	11/2 ⁺	204.96	7/2 ⁺	E2		0.0024	α(K)=0.00210; α(L)=0.00026 Mult.: consistent with α(K) _{exp} =0.0025 3 (p,nγ), 0.0023 4 (α,2nγ); supported by 728γ(θ) A ₂ =0.35 6 via (α,2nγ).
762.86 15	1.56 13	1268.32	7/2 ⁺	505.50	7/2 ⁺				
777.0 5	0.16 3	1776.37	7/2 ⁺	998.71	(5/2) ⁺				
793.6 2	0.37 5	998.71	(5/2) ⁺	204.96	7/2 ⁺				
809.02 8	6.9 3	809.03	9/2 ⁺	0.0	5/2 ⁺	E2		0.0019	α(K)=0.00162; α(L)=0.00020 Mult.: consistent with α(K) _{exp} =0.0017 3 (p,nγ), 0.0014 3 (α,2nγ); supported by 809γ(θ) A ₂ =0.30 6 via (α,2nγ).
840.16 15	0.38 5	840.20	(3/2) ⁺	0.0	5/2 ⁺				
(845.5 [†] 4)	0.028 7	845.54	11/2 ⁻	0.0	5/2 ⁺	[E3]		0.004	α(K)=0.00321; α(L)=0.00043 I _γ : from branching ratio: I _γ (845γ)/I _γ (640γ)=0.023 7 (1974Ha41) via (α,2nγ).
^x 848.5 3	0.23 4								
871.67 10	1.17 7	1377.37	(7/2) ⁺	505.50	7/2 ⁺				
903.3 4	1.00 12	1268.32	7/2 ⁺	365.29	3/2 ⁺				
906.4 7	0.4 1	2064.39	7/2 ⁺ ,9/2 ⁺	1158.6	(5/2)				
915.10 12	2.38 13	1420.54	(11/2 ⁺)	505.50	7/2 ⁺				
919.6 8	0.7 2	919.43	(5/2) ⁺	0.0	5/2 ⁺				
921.8 4	2.6 3	921.63	(9/2) ⁺	0.0	5/2 ⁺	(E2)		0.0014	α(K)=0.00119; α(L)=0.00014 Mult.: from doublet 922γ(θ) A ₂ =0.35 5 via (α,2nγ).
947.31 12	1.81 12	1268.32	7/2 ⁺	320.92	5/2 ⁺				
953.9 3	0.74 7	1158.6	(5/2)	204.96	7/2 ⁺				
957.2 8	0.16 3	1876.75		919.43	(5/2) ⁺				
967.5 3	0.34 4	1776.37	7/2 ⁺	809.03	9/2 ⁺				
998.75 ^a 12	2.19 ^a 17	998.71	(5/2) ⁺	0.0	5/2 ⁺	M1,E2		0.0013	Mult.: from α(K) _{exp} =0.00097 21 via (p,nγ).

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¹⁰⁷In ε decay (32.4 min) **1973Ny03** (continued)

γ(¹⁰⁷Cd) (continued)

<u>E_γ</u>	<u>I_γ[@]</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Comments</u>
998.75 ^a 12	0.40 ^a 17	2875.49	7/2 ⁺ ,9/2 ⁺	1876.75		I _γ : from doublet=2.59 12 and I _γ from placement from 2875 (1973Ny03). I _γ : from γγ.
1002.9 5	0.56 6	1922.18	7/2 ⁺	919.43	(5/2) ⁺	
1011.7 7	0.15 5	1377.37	(7/2) ⁺	365.29	3/2 ⁺	
^x 1021.8 7	0.29 5					
1036.08 15	0.41 7	2304.36	7/2 ⁺ ,9/2 ⁺	1268.32	7/2 ⁺	
1056.59 12	1.57 8	1377.37	(7/2) ⁺	320.92	5/2 ⁺	
1063.37 15	2.63 20	1268.32	7/2 ⁺	204.96	7/2 ⁺	
1067.5 6	1.0 2	1876.75		809.03	9/2 ⁺	
1081.9 4	0.35 5	1922.18	7/2 ⁺	840.20	(3/2) ⁺	
1086.4 6	0.18 4	2006.31	7/2 ⁺	919.43	(5/2) ⁺	
1113.4 5	0.22 5	1922.18	7/2 ⁺	809.03	9/2 ⁺	
^x 1139.9 5	0.45 7					
1144.9 3	1.7 2	2064.39	7/2 ⁺ ,9/2 ⁺	919.43	(5/2) ⁺	
1158.0 7	0.19 5	1158.6	(5/2)	0.0	5/2 ⁺	
^x 1160.8 7	0.25 6					
1172.3 3	0.33 6	1377.37	(7/2) ⁺	204.96	7/2 ⁺	
1197.2 2	0.50 10	2006.31	7/2 ⁺	809.03	9/2 ⁺	
^x 1205.2 8	0.25 6					
1208.0 10	0.12 5	1712.8		505.50	7/2 ⁺	
^x 1211.5 10	0.21 6					
1236.3 4	0.55 15	2504.45		1268.32	7/2 ⁺	
^x 1244.8 3	0.26 5					
1268.33 8	11.5 4	1268.32	7/2 ⁺	0.0	5/2 ⁺	
1325.5 2	1.06 8	1530.47		204.96	7/2 ⁺	
1343.54 15	2.95 17	2764.23	7/2 ⁺ ,9/2 ⁺ ,11/2 ⁺	1420.54	(11/2) ⁺	
^x 1366.0 10	0.4 2					
1377.33 10	3.15 15	1377.37	(7/2) ⁺	0.0	5/2 ⁺	
1403.8 4	0.50 8	1908.84		505.50	7/2 ⁺	
1411.06 12	2.44 15	1776.37	7/2 ⁺	365.29	3/2 ⁺	
1455.53 15	1.54 15	1776.37	7/2 ⁺	320.92	5/2 ⁺	
1501.0 3	2.17 12	2006.31	7/2 ⁺	505.50	7/2 ⁺	
1508.1 7	0.4 2	1712.8		204.96	7/2 ⁺	
^x 1550.5 10	0.29 7					
1556.4 5	1.02 10	1876.75		320.92	5/2 ⁺	
1571.3 2	3.0 2	1776.37	7/2 ⁺	204.96	7/2 ⁺	
1588.6 6	0.22 6	1908.84		320.92	5/2 ⁺	
^x 1591.4 6	0.25 6					
1601.3 3	1.23 15	1922.18	7/2 ⁺	320.92	5/2 ⁺	
1606.8 7	0.25 5	2875.49	7/2 ⁺ ,9/2 ⁺	1268.32	7/2 ⁺	
1640.8 5	0.25 6	2006.31	7/2 ⁺	365.29	3/2 ⁺	
1653.5 4	0.68 6	1653.5		0.0	5/2 ⁺	
1663.6 3	0.58 6	2366.10		702.34	(3/2) ⁺	

γ(¹⁰⁷Cd) (continued)

E _γ	I _γ [@]	E _i (level)	J _i ^π	E _f	J _f ^π	E _γ	I _γ [@]	E _i (level)	J _i ^π	E _f	J _f ^π
1685.0 4	0.40 5	2006.31	7/2 ⁺	320.92	5/2 ⁺	2259.1 5	0.25 4	2764.23	7/2 ⁺ ,9/2 ⁺ ,11/2 ⁺	505.50	7/2 ⁺
1704.3 6	0.16 4	1908.84		204.96	7/2 ⁺	2263.4 8	0.22 5	2584.1		320.92	5/2 ⁺
1712.4 6	0.35 9	1712.8		0.0	5/2 ⁺	2284.78 15	2.4 2	2284.78	7/2 ⁺ ,9/2 ⁺	0.0	5/2 ⁺
1716.8 6	0.66 6	1922.18	7/2 ⁺	204.96	7/2 ⁺	2304.0 4	2.6 3	2304.36	7/2 ⁺ ,9/2 ⁺	0.0	5/2 ⁺
1732.9 9	0.28 7	2652.6	7/2 ⁺ ,9/2 ⁺	919.43	(5/2) ⁺	2331.2 4	0.83 6	2652.6	7/2 ⁺ ,9/2 ⁺	320.92	5/2 ⁺
1743.4 3	0.95 6	2064.39	7/2 ⁺ ,9/2 ⁺	320.92	5/2 ⁺	2342.8 5	0.20 3	2547.9		204.96	7/2 ⁺
1767.8 3	0.55 8	2700.8		932.99	11/2 ⁺	^x 2371.7 5	0.18 4				
1779.0 3	2.92 15	2284.78	7/2 ⁺ ,9/2 ⁺	505.50	7/2 ⁺	2405.1 4	0.42 4	2405.7		0.0	5/2 ⁺
1798.0 [‡] 4	0.20 7	2304.36	7/2 ⁺ ,9/2 ⁺	505.50	7/2 ⁺	2433.1 4	0.33 3	2637.9		204.96	7/2 ⁺
1801.5 [‡] 3	0.30 10	2006.31	7/2 ⁺	204.96	7/2 ⁺	^x 2461.7 4	0.17 2				
1831.2 3	1.53 8	2764.23	7/2 ⁺ ,9/2 ⁺ ,11/2 ⁺	932.99	11/2 ⁺	^x 2469.2 4	0.22 3				
1843.0 6	0.26 4	2764.23	7/2 ⁺ ,9/2 ⁺ ,11/2 ⁺	921.63	(9/2) ⁺	^x 2482.8 5	0.22 5				
1859.4 3	0.75 5	2064.39	7/2 ⁺ ,9/2 ⁺	204.96	7/2 ⁺	^x 2496.0 4	0.32 4	3001.8	7/2 ⁺ ,9/2 ⁺ ,11/2 ⁺	505.50	7/2 ⁺
1878.8 3	1.12 7	2811.8	7/2 ⁺ ,9/2 ⁺ ,11/2 ⁺	932.99	11/2 ⁺	^x 2506.9 4	0.37 3				
1899.4 6	0.25 4	2818.7		919.43	(5/2) ⁺	2548.6 6	0.15 2	2547.9		0.0	5/2 ⁺
1908.4 3	0.32 4	1908.84		0.0	5/2 ⁺	2554.2 6	0.24 3	2875.49	7/2 ⁺ ,9/2 ⁺	320.92	5/2 ⁺
1922.15 15	3.8 2	1922.18	7/2 ⁺	0.0	5/2 ⁺	2583.8 4	0.44 3	2584.1		0.0	5/2 ⁺
1935.8 5	0.25 4	2637.9		702.34	(3/2) ⁺	2637.4 5	0.20 5	2637.9		0.0	5/2 ⁺
1955.5 3	1.35 10	2764.23	7/2 ⁺ ,9/2 ⁺ ,11/2 ⁺	809.03	9/2 ⁺	2653.1 4	0.44 3	2652.6	7/2 ⁺ ,9/2 ⁺	0.0	5/2 ⁺
1964.0 3	0.96 6	2284.78	7/2 ⁺ ,9/2 ⁺	320.92	5/2 ⁺	2666.2 8	0.93 10	2986.1	7/2 ⁺ ,9/2 ⁺	320.92	5/2 ⁺
1978.3 6	1.01 6	2183.4		204.96	7/2 ⁺	2670.2 8	0.64 10	2875.49	7/2 ⁺ ,9/2 ⁺	204.96	7/2 ⁺
1983.8 4	2.53 17	2304.36	7/2 ⁺ ,9/2 ⁺	320.92	5/2 ⁺	2681.0 4	0.58 5	3001.8	7/2 ⁺ ,9/2 ⁺ ,11/2 ⁺	320.92	5/2 ⁺
2006.5 3	3.35 15	2006.31	7/2 ⁺	0.0	5/2 ⁺	2700.9 5	0.17 2	2700.8		0.0	5/2 ⁺
2045.3 3	0.88 6	2366.10		320.92	5/2 ⁺	2717.2 4	1.04 7	2922.2	7/2 ⁺ ,9/2 ⁺ ,11/2 ⁺	204.96	7/2 ⁺
2064.8 3	3.61 15	2064.39	7/2 ⁺ ,9/2 ⁺	0.0	5/2 ⁺	^x 2783.0 5	0.24 3				
2078.8 5	0.31 6	2584.1		505.50	7/2 ⁺	2797.0 10	0.06 2	3001.8	7/2 ⁺ ,9/2 ⁺ ,11/2 ⁺	204.96	7/2 ⁺
2099.6 4	1.82 15	2304.36	7/2 ⁺ ,9/2 ⁺	204.96	7/2 ⁺	2818.6 6	0.12 2	2818.7		0.0	5/2 ⁺
^x 2169.0 6	0.25 7					^x 2865.7 5	0.27 4				
2183.4 ^a 3	0.88 ^{a#} 10	2183.4		0.0	5/2 ⁺	2875.5 3	1.78 10	2875.49	7/2 ⁺ ,9/2 ⁺	0.0	5/2 ⁺
2183.4 ^a 3	0.50 ^a 15	2504.45		320.92	5/2 ⁺	2985.7 5	0.21 4	2986.1	7/2 ⁺ ,9/2 ⁺	0.0	5/2 ⁺
2201.7 5	0.23 7	2405.7		204.96	7/2 ⁺	^x 3005.0 10	0.10 4				
2226.6 5	0.19 4	2547.9		320.92	5/2 ⁺						

† From (α,2nγ) (1974Ha41).

‡ From 1972Dr09.

I_γ for doublet=1.38 10 (1973Ny03), 1.6 4 (1972Dr09).

@ For absolute intensity per 100 decays, multiply by 0.472 3.

& 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.

^{107}In ε decay (32.4 min) $^{1973}\text{Ny03}$ (continued)

$\gamma(^{107}\text{Cd})$ (continued)

^a Multiply placed with intensity suitably divided.

^x γ ray not placed in level scheme.

^{107}In ϵ decay (32.4 min) 1973Ny03

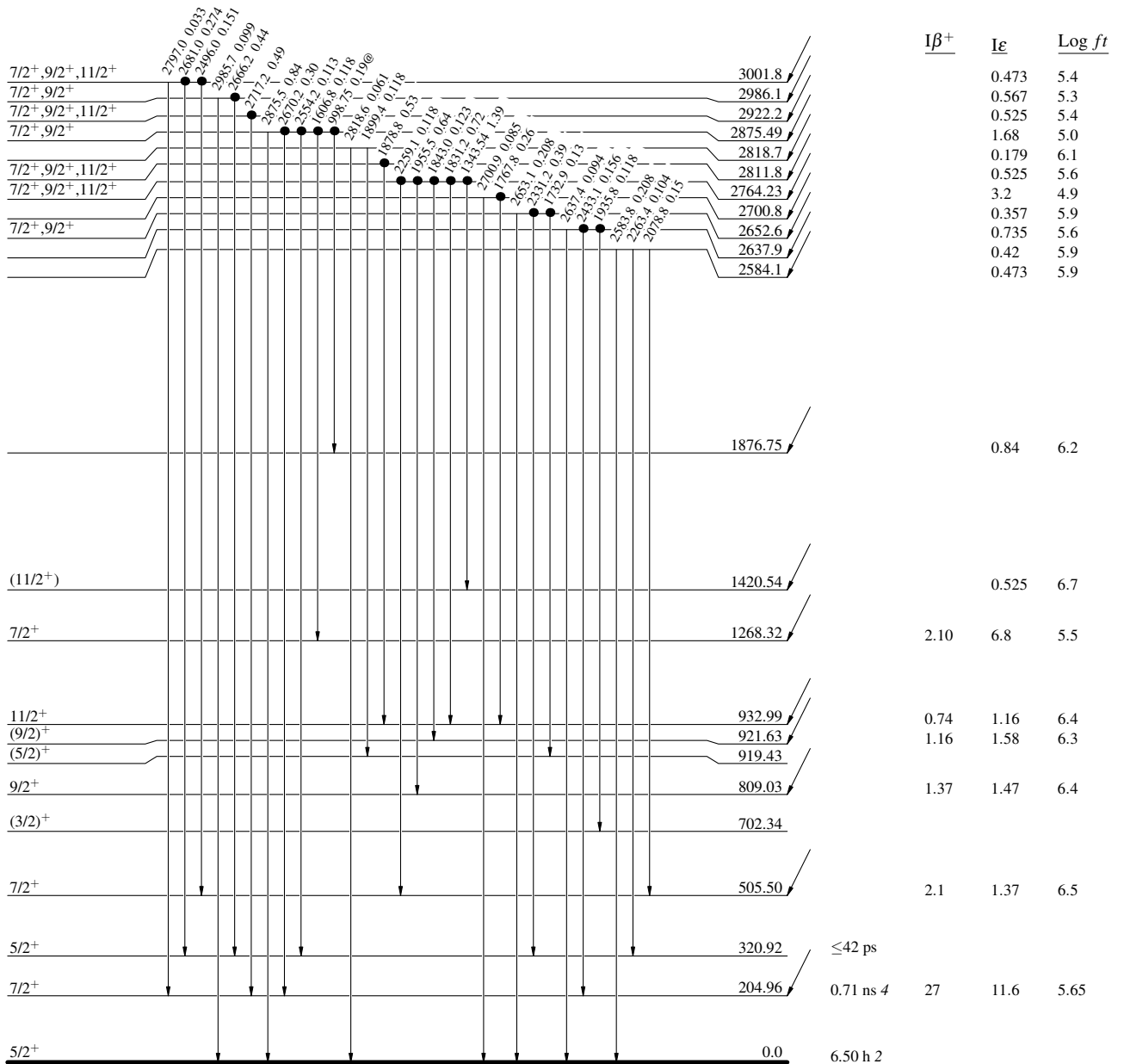
Decay Scheme

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

$^{107}_{49}\text{In}_{58}$ 9/2⁺ 0.0 32.4 min 3
 $Q_{\epsilon} = 3425.10$
 $\% \epsilon + \% \beta^{+} = 100$



$^{107}_{48}\text{Cd}_{59}$

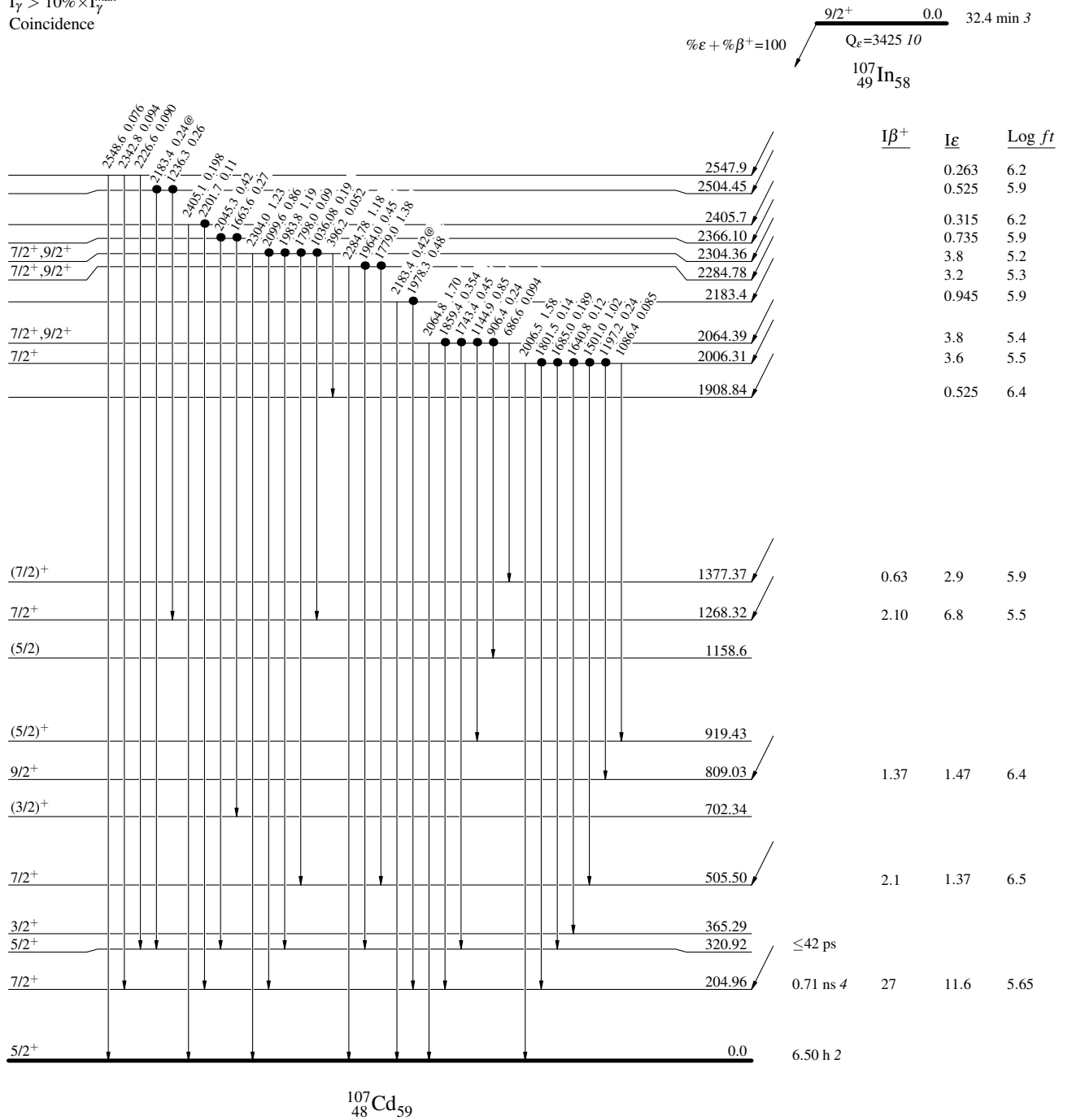
¹⁰⁷In ε decay (32.4 min) 1973Ny03

Decay Scheme (continued)

Legend

- I_γ < 2% × I_γ^{max}
- I_γ < 10% × I_γ^{max}
- I_γ > 10% × I_γ^{max}
- Coincidence

Intensities: I(γ+ce) per 100 parent decays
 @ Multiplied: intensity suitably divided



¹⁰⁷In ε decay (32.4 min) 1973Ny03

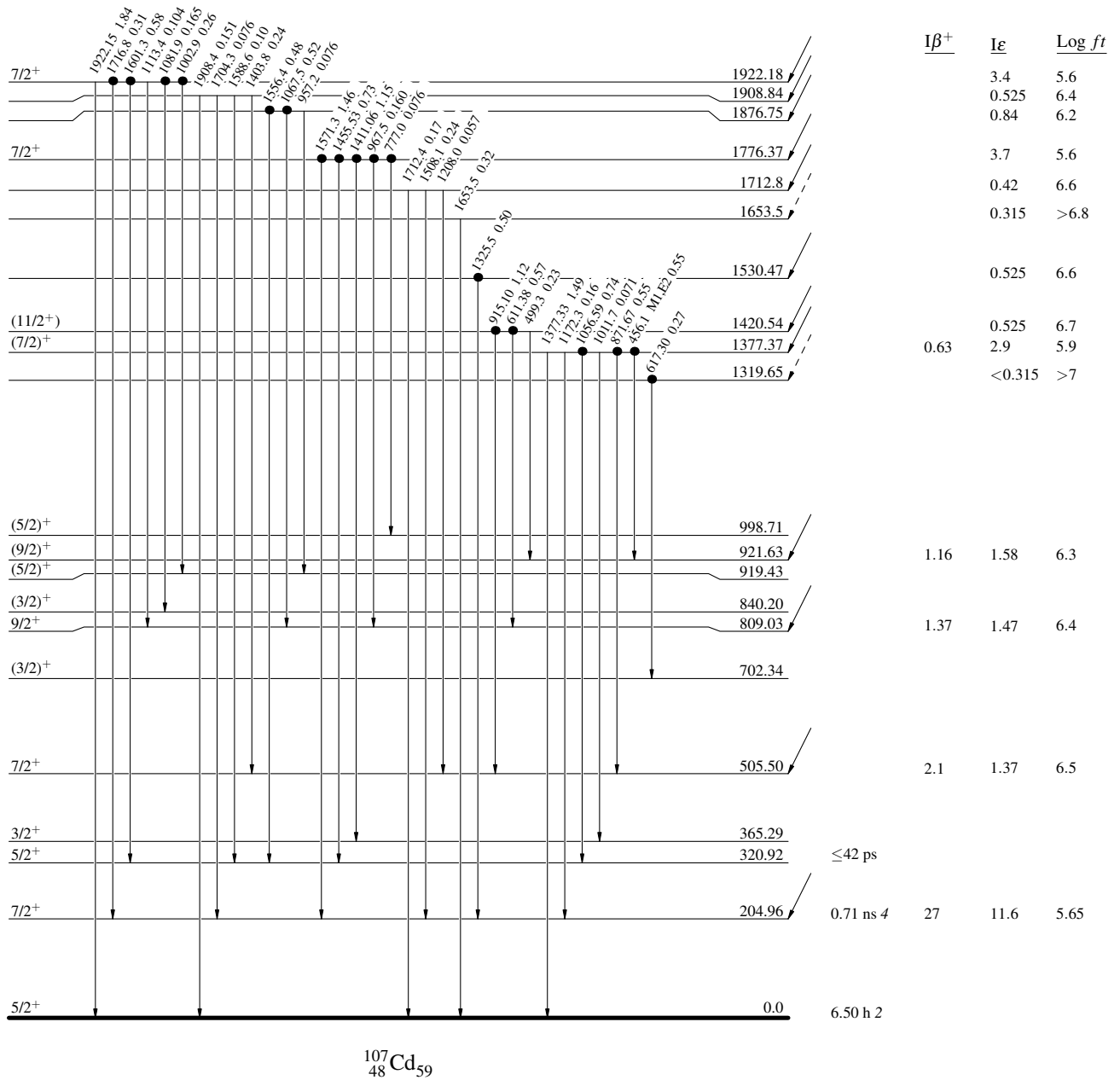
Decay Scheme (continued)

Intensities: I_(γ+ce) per 100 parent decays
 @ Multiplied placed: intensity suitably divided

Legend

- I_γ < 2% × I_γ^{max}
- I_γ < 10% × I_γ^{max}
- I_γ > 10% × I_γ^{max}
- Coincidence

9/2⁺ 0.0 32.4 min 3
 Q_ε=3425 10
¹⁰⁷In₅₈
 %ε + %β⁺=100



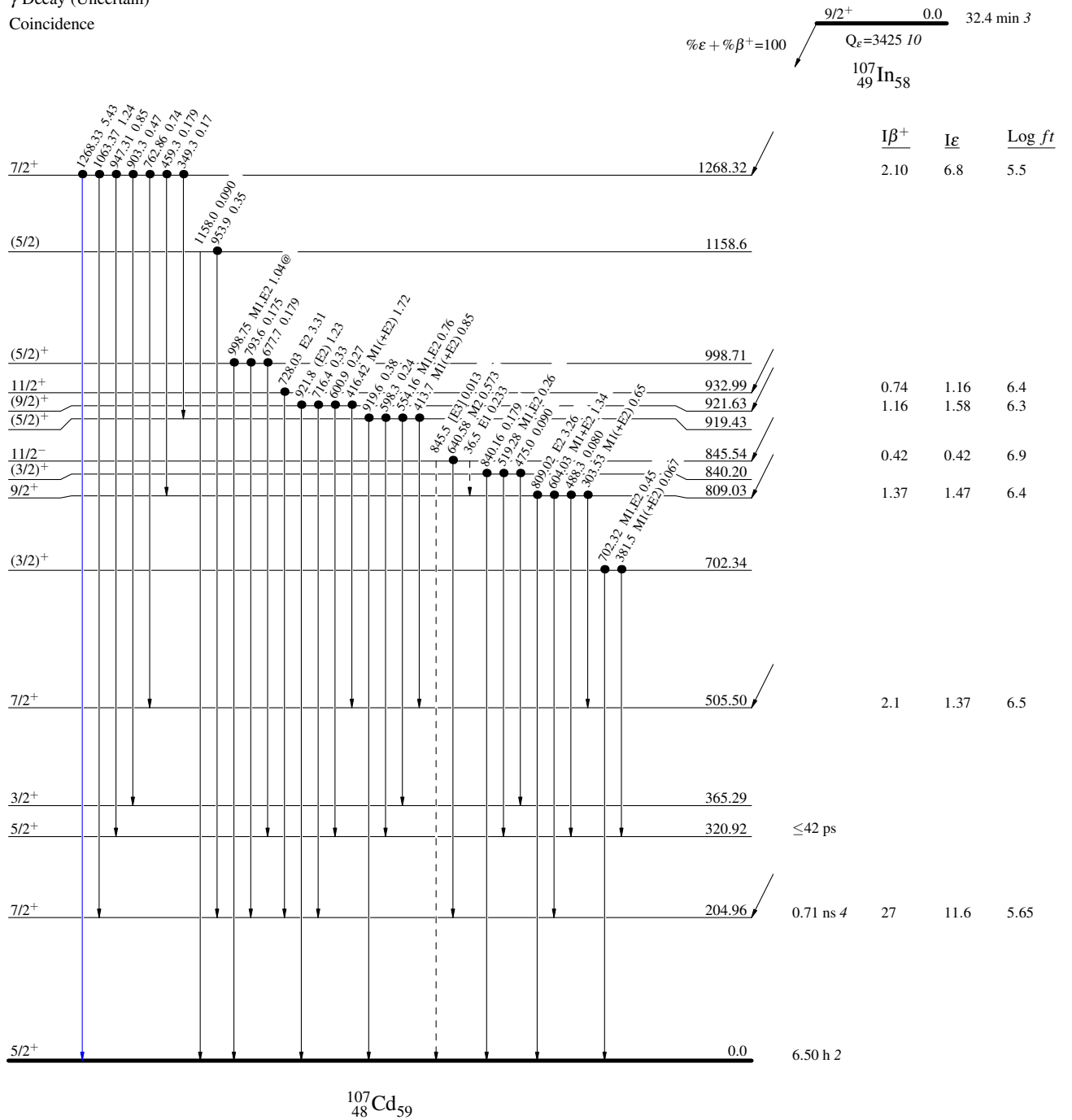
¹⁰⁷In ε decay (32.4 min) 1973Ny03

Decay Scheme (continued)

Legend

- I_γ < 2% × I_γ^{max}
- I_γ < 10% × I_γ^{max}
- I_γ > 10% × I_γ^{max}
- - - γ Decay (Uncertain)
- Coincidence

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



¹⁰⁷Cd₅₉

^{107}In ϵ decay (32.4 min) 1973Ny03

Decay Scheme (continued)

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

