

Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	T. Tamura	NDS 108,455 (2007)	30-Sep-2006

Q(β^-)=2.96×10³ 5; S(n)=7610 3; S(p)=13499 13; Q(α)=-7648 4 [2012Wa38](#)
 Note: Current evaluation has used the following Q record 2850 707740 9013.36e+ 315-7.69e+ 321 [2003Au03](#).

¹²²Cd Levels

Cross Reference (XREF) Flags

A	¹²² Ag β^- decay (0.529 s)	D	Coulomb excitation
B	¹²² Ag β^- decay: mixed source	E	¹²³ Ag β^- n decay
C	²³⁸ U(⁷ Li,X γ)	F	¹²⁴ Sn(¹⁸ O, ²⁰ Ne)

E(level) [†]	J π	T _{1/2}	XREF	Comments
0.0	0 ⁺	5.24 s 3	ABCDEF	% β^- =100 T _{1/2} : from β^- -multiscaler counting, $\Delta T_{1/2}$: statistical uncertainty only (1981Ru07). Others: 3.13 s 12 (1974Gr29), 5.78 s 9 (1973Sc19).
569.45 8	2 ⁺	10 ps 5	ABCD F	B(E2) \uparrow =0.37 12 BE2 \uparrow from Coulomb excitation (2005BeZS); other: BE2 \uparrow =0.58 27 deduced from τ =15 ps 7 (1995Za01). J π : (1135 γ)(569 γ)(θ) and (1422 γ)(569 γ)(θ) clearly indicate 0-2-0 spin sequences, RUL assigns mult.(569 γ)=E2. T _{1/2} : from centroid-shift analysis of $\beta\gamma$ (t) coincidence (1995Za01); other: 14 ps 5 from B(E2) in Coulomb excitation (2005BeZS).
915			F	
1329.15 12	(4 ⁺)		ABC F	J π : γ to 2 ⁺ ; no γ to 0 ⁺ ; log ft \approx 5.9 from (3 ⁺).
1367.8 3	(2 ⁺)		AB F	J π : γ 's to 0 ⁺ and 2 ⁺ ; log ft \approx 5.7 from (3 ⁺).
1704.7 4	0 ⁽⁺⁾		B F	J π : from (1135 γ)(569 γ)(θ).
1909.1 4	(3 ⁻)		B F	J π : systematics of 3 ⁻ in even Cd isotopes, ¹⁰⁶ Cd- ¹²⁰ Cd.
1979.34 16	(3,4 ⁺)		ABC F	J π : γ to (4 ⁺); log ft \approx 5.5 from (3 ⁺).
1991.9 4	0 ⁽⁺⁾		B	J π : from (1422 γ)(569 γ)(θ).
2178.02 25	(6 ⁺)		BC F	J π : γ to (4 ⁺); no γ 's to 0 ⁺ and 2 ⁺ ; systematics of yrast states in ¹¹⁴ Cd- ¹²⁰ Cd (1989DuZW).
2197.11 23			B	
2315.7 4			B	
2444.8 4			B	
2502.6 3			B	
2536.1 4			B	
2577.0 4			B	
2644.5 3			B	
2668.5 4			B	
2800.4 4			B	
2823.4 4	(8 ⁺)		BC F	J π : systematics of yrast states in ¹¹⁴ Cd- ¹²⁰ Cd (1989DuZW).
3062.0 4	(8 ⁺)		B F	J π : γ to (6 ⁺).
3170.2 4			B	

[†] From a least-squares fit to the E γ 's (evaluator).

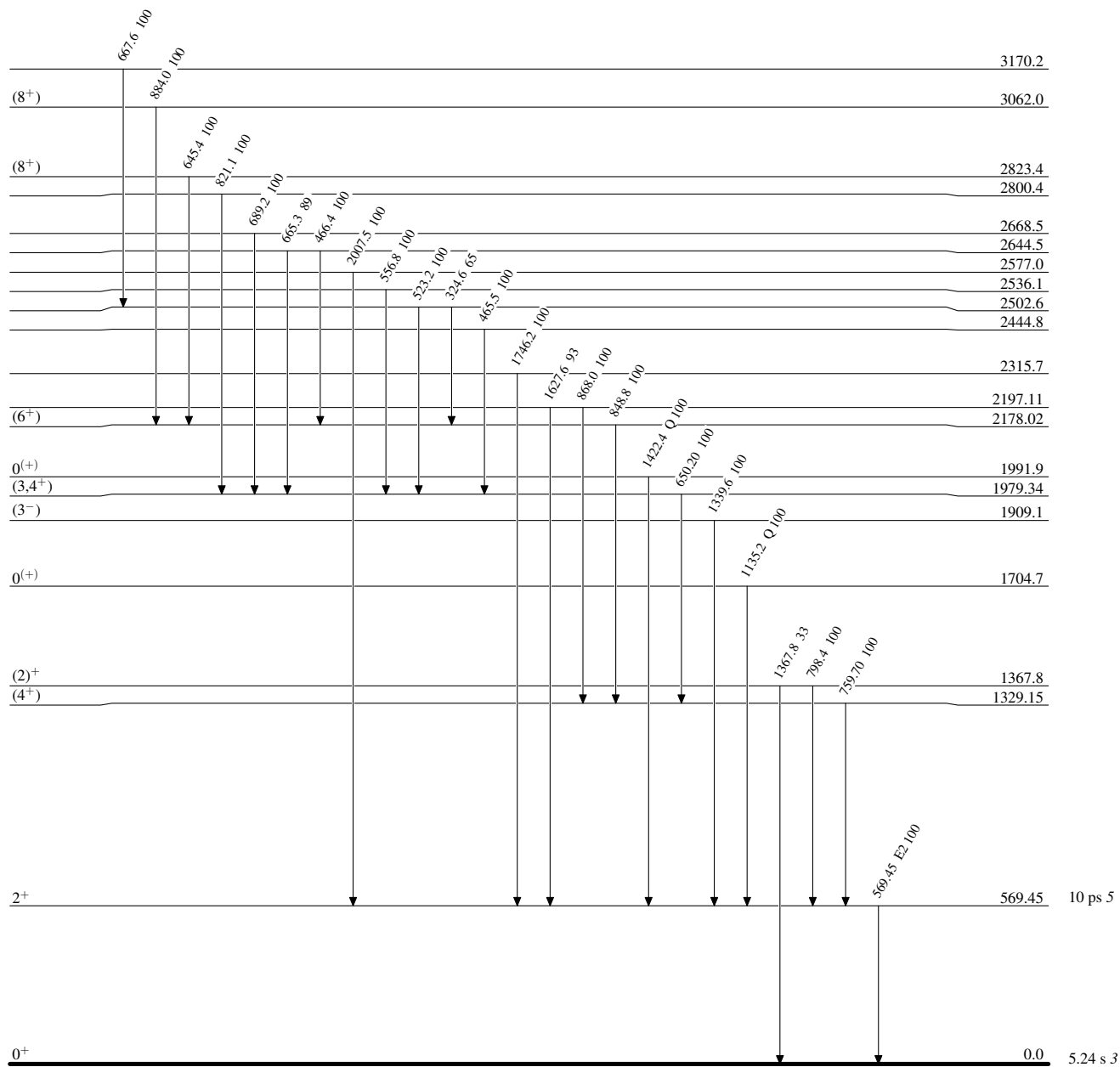
Adopted Levels, Gammas (continued)

$\gamma(^{122}\text{Cd})$							
$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult.	Comments
569.45	2 ⁺	569.45 8	100	0.0	0 ⁺	E2	B(E2)(W.u.)=26 14 Mult.: $\gamma\gamma(\theta)$ and RUL; Coulomb excitation.
1329.15	(4 ⁺)	759.70 8	100	569.45	2 ⁺		
1367.8	(2 ⁺)	798.4 3	100 38	569.45	2 ⁺		
		1367.8 5	33 15	0.0	0 ⁺		
1704.7	0 ⁽⁺⁾	1135.2 3	100	569.45	2 ⁺	Q	
1909.1	(3 ⁻)	1339.6 3	100	569.45	2 ⁺		
1979.34	(3,4 ⁺)	650.20 12	100	1329.15	(4 ⁺)		
1991.9	0 ⁽⁺⁾	1422.4 3	100	569.45	2 ⁺	Q	
2178.02	(6 ⁺)	848.8 3	100	1329.15	(4 ⁺)		
2197.11		868.0 3	100 3	1329.15	(4 ⁺)		
		1627.6 3	93 3	569.45	2 ⁺		
2315.7		1746.2 3	100	569.45	2 ⁺		
2444.8		465.5 3	100	1979.34	(3,4 ⁺)		
2502.6		324.6 3	65 2	2178.02	(6 ⁺)		
		523.2 3	100 3	1979.34	(3,4 ⁺)		
2536.1		556.8 3	100	1979.34	(3,4 ⁺)		
2577.0		2007.5 3	100	569.45	2 ⁺		
2644.5		466.4 3	100 3	2178.02	(6 ⁺)		
		665.3 3	89 3	1979.34	(3,4 ⁺)		
2668.5		689.2 3	100	1979.34	(3,4 ⁺)		
2800.4		821.1 3	100	1979.34	(3,4 ⁺)		
2823.4	(8 ⁺)	645.4 3	100	2178.02	(6 ⁺)		
3062.0	(8 ⁺)	884.0 3	100	2178.02	(6 ⁺)		
3170.2		667.6 3	100	2502.6			

[†] From ^{122}Ag β^- decay (0.529 s), ^{122}Ag β^- decay: mixed source.

Adopted Levels, GammasLevel Scheme

Intensities: Relative photon branching from each level

 $^{122}_{48}\text{Cd}_{74}$