

$^{106}\text{Cd}(\alpha,2p\text{n}\gamma)$ **1986Ki11**

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

$E(\alpha)=35, 50$ MeV.

Thin enriched target (90%).

Measured: γ , I_γ , $\gamma(\theta)$, $\gamma\gamma(t)$, γp , ce , Ge , $Si(Li)$, $Si(Au)$ mini orange s.

 ^{107}In Levels

E(level) [†]	J^π	E(level) [†]	J^π	E(level) [†]	J^π
0	9/2 ⁺	2416.79 19	(17/2,19/2,21/2)	3742.5 4	(17/2 to 23/2)
678.34 6	1/2 ⁻	2431.66 24	(17/2,19/2) ⁺	3852.3 3	
1001.48 7	11/2 ⁺	2794.44 14	(21/2) ⁺	4038.64 17	(25/2)
1414.92 7	13/2 ⁺	3282.41 12	19/2 ⁻	4650.15 20	(27/2)
1853.35 9	17/2 ⁺	3314.68 15	(19/2,21/2) ⁺	5182.5 4	(29/2)
2003.55 12	19/2 ⁺	3441.54 13	21/2		
2319.49 16	(17/2,19/2,21/2) ⁺	3645.56 16	(23/2)		

[†] Level energy from least-squares adjustment.

 $\gamma(^{107}\text{In})$

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [†]	Comments
97.3 1	1.2 2	2416.79	(17/2,19/2,21/2)	2319.49	(17/2,19/2,21/2) ⁺		
150.26 10	58 5	2003.55	19/2 ⁺	1853.35	17/2 ⁺		
159.10 8	7.7 5	3441.54	21/2	3282.41	19/2 ⁻		
204.05 10	12.7 10	3645.56	(23/2)	3441.54	21/2		
315.93 10	6.9 6	2319.49	(17/2,19/2,21/2) ⁺	2003.55	19/2 ⁺	E2,M1	$\alpha(K)\text{exp}=0.026$ 5
393.08 6	13.5 7	4038.64	(25/2)	3645.56	(23/2)	M1,E2	$\alpha(K)\text{exp}=0.018$ 4
413.43 6	34.1 10	1414.92	13/2 ⁺	1001.48	11/2 ⁺	E2,M1	$\alpha(K)\text{exp}=0.015$ 4
428.1 2	4.8 6	2431.66	(17/2,19/2) ⁺	2003.55	19/2 ⁺	M1,E2	$\alpha(K)\text{exp}=0.012$ 3
438.43 6	100	1853.35	17/2 ⁺	1414.92	13/2 ⁺	E2	$\alpha(K)\text{exp}=0.019$ 4
520.3 2	5.4 5	3314.68	(19/2,21/2) ⁺	2794.44	(21/2) ⁺	E2,M1	$\alpha(K)\text{exp}=0.007$ 3
532.4 3	3.4 6	5182.5	(29/2)	4650.15	(27/2)		
611.5 1	6.6 8	4650.15	(27/2)	4038.64	(25/2)		$\alpha(K)\text{exp}=0.008$ 2
678.34 6		678.34	1/2 ⁻	0	9/2 ⁺	M4	$\alpha(K)\text{exp}=0.00495$ $\alpha(K)\text{exp}$: $\alpha(K)\text{exp}$ =theoretical value used for normalization.
790.88 7	17.7 8	2794.44	(21/2) ⁺	2003.55	19/2 ⁺	E2,M1	$\alpha(K)\text{exp}=0.0025$ 7
851.0 2	2.3 6	3645.56	(23/2)	2794.44	(21/2) ⁺		
948.1 3	4.8 6	3742.5	(17/2 to 23/2)	2794.44	(21/2) ⁺		
1001.46 8	39.5 2	1001.48	11/2 ⁺	0	9/2 ⁺	E2	$\alpha(K)\text{exp}=0.0014$ 4
1311.1 1	6.5 8	3314.68	(19/2,21/2) ⁺	2003.55	19/2 ⁺		
1414.92 8	83.5 8	1414.92	13/2 ⁺	0	9/2 ⁺	E2	$\alpha(K)\text{exp}=0.00059$ 16
1429.0 1	9.8 8	3282.41	19/2 ⁻	1853.35	17/2 ⁺	E1	$\alpha(K)\text{exp}<0.00031$
1438.06 10	9.2 8	3441.54	21/2	2003.55	19/2 ⁺		
1532.8 2	5.8 8	3852.3		2319.49	(17/2,19/2,21/2) ⁺		

[†] From $\alpha(K)\text{exp}$, derived from I_γ and $\text{Ice}(K)$, normalized to 678 γ taken as M4.

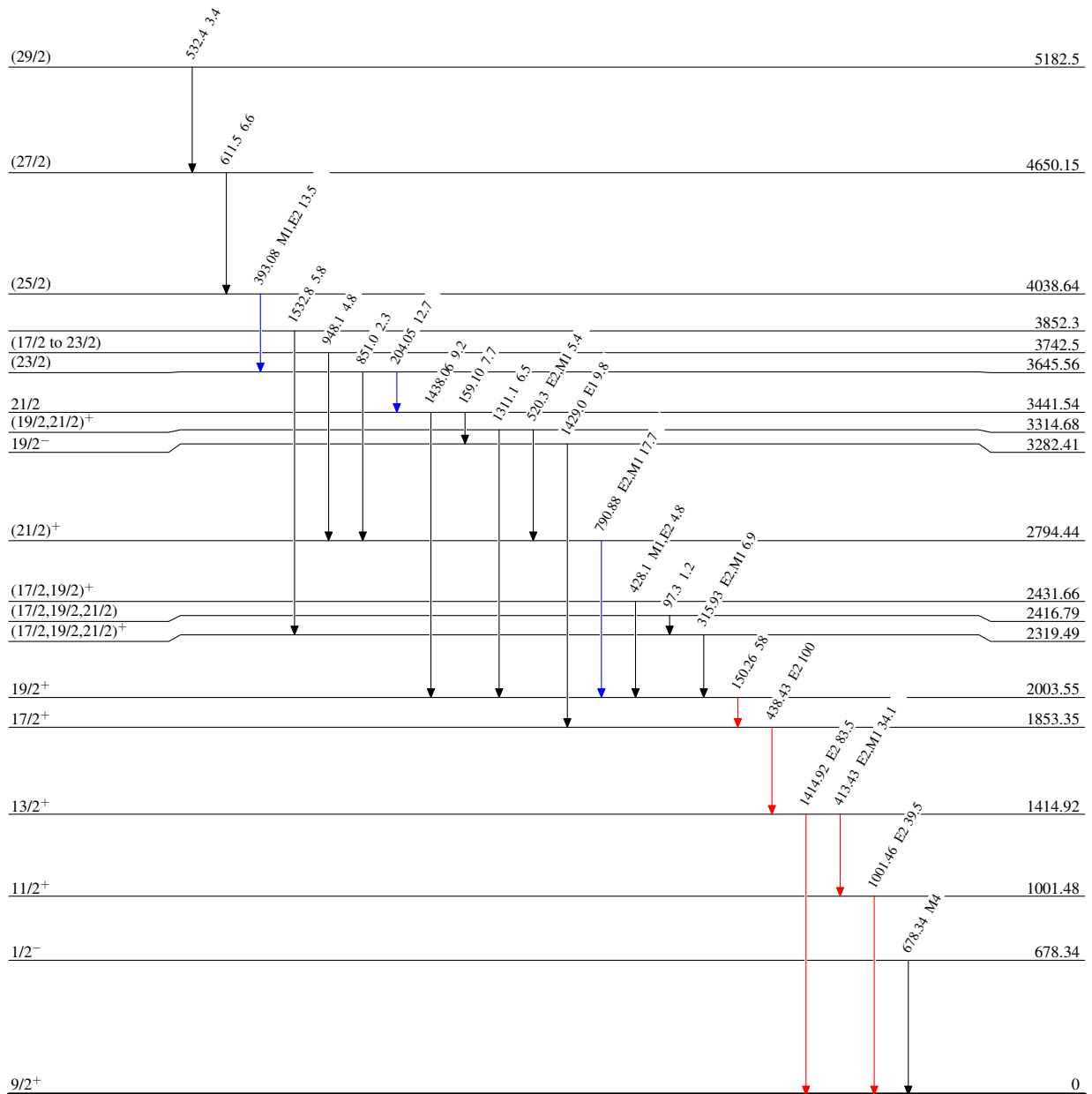
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Level Scheme

Intensities: Type not specified

Legend

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

 $^{107}_{49}\text{In}_{58}$