

Adopted Levels, Gammas

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	K. Kitao, Y. Tendow and A. Hashizume		NDS 96,241 (2002)	1-Dec-2001

$Q(\beta^-)=1.77\times 10^3$ 4; $S(n)=8.05\times 10^3$ 4; $S(p)=12601$ 16; $Q(\alpha)=-6550$ 8 [2012Wa38](#)

Note: Current evaluation has used the following Q record 1760 448138 8312705 92-6437 59 [1995Au04](#).

 ^{120}Cd LevelsCross Reference (XREF) Flags

A	^{120}Ag β^- decay (0.32 s)	D	$^{124}\text{Sn}(^3\text{He}, ^7\text{Be})$
B	^{120}Ag β^- decay (1.23 s)	E	$^{173}\text{Yb}(^{24}\text{Mg}, \text{F}), ^{208}\text{Pb}(^{18}\text{O}, \text{F}),$
C	$^{124}\text{Sn}(\text{d}, ^6\text{Li})$		

E(level) [‡]	J ^π @	T _{1/2} [#]	XREF	Comments
0.0 [†]	0 ⁺	50.80 s 21	A CDE	$\% \beta^- = 100$ T _{1/2} : from 1973Sc19 . Other: 50.9 s 5 (1974Gr29).
505.94 [†] 17	2 ⁺	18.0 ps 21	ABCDE	
975? 25			C	
1203.7 ^{†b} 3	(4 ⁺) ^a	3.5 ps 28	ABC E	
1323	(7 ⁻) ^a		CdE	XREF: d(1300). E(level): from (d, ^6Li).
1323.07 ^b 17	(2 ⁺)		B d	XREF: d(1300).
1388.9 ^b 11	(0 ⁺)&	<13 ps	B	
1744.9 11	(0 ⁺)&	<13 ps	B	
1899.9 19	(3 ⁻) ^a		BC	XREF: C(1920).
2033.7 [†] 4	(6 ⁺)		A C E	
2093.9 13			B	
2129.6 4			A E	
2449.8 11			B	
2524.7 8			E	
2886.2 [†] 10	(8 ⁺)		E	
2921.4 10			E	
3129.8 [†] 11	(10 ⁺)		E	
3329.0 11			B	
3423.9 16			B	
3500.9 8			B	
3536.0 8			B	
3549.9 8			B	
3559.0 11			B	
3746.1 [†] 15	(12 ⁺)		E	
3880.1 10			B	
4579.9 [†] 18	(14 ⁺)		E	
5522.7 [†] 21	(16 ⁺)		E	

[†] Band(A): yrast band.

[‡] From a least-squares fit to the adopted E(γ 's) by the evaluators, unless otherwise noted. Uncertainty of 1 keV is assumed for E(γ), if not given by authors.

[#] From $\beta\gamma\gamma(t)$ in ^{120}Ag β^- decay, except that of g.s.

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) ^{120}Cd Levels (continued)

@ γ -cascades to g.s. and from an expected band structure, unless otherwise noted.

& Suggested by 1984ApZZ, based on $\gamma\gamma(\theta)$, and systematics of phonon state.

^a From systematics on (d,⁶Li) in even Cd isotopes.

^b Member of two phonon triplet.

 $\gamma(^{120}\text{Cd})$

$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ	E_f	J_f^π	$E_i(\text{level})$	J_i^π	$E_\gamma^\dagger$	I_γ	E_f	J_f^π
505.94	2 ⁺	505.9 2	100	0.0	0 ⁺	3329.0		2823.0	100	505.94	2 ⁺
1203.7	(4 ⁺)	697.8 2	100	505.94	2 ⁺	3423.9		1330.0		2093.9	
1323.07	(2 ⁺)	817.1 2		505.94	2 ⁺			1524.0		1899.9	(3 ⁻)
		1323.1 2		0.0	0 ⁺	3500.9		1407.0		2093.9	
1388.9	(0 ⁺)	883.0	100	505.94	2 ⁺			2297.0		1203.7	(4 ⁺)
1744.9	(0 ⁺)	1239.0	100	505.94	2 ⁺			2995.0		505.94	2 ⁺
2033.7	(6 ⁺)	830.0 2	100	1203.7	(4 ⁺)	3536.0		3030.0		505.94	2 ⁺
2129.6		925.8 2	100	1203.7	(4 ⁺)			3536.0		0.0	0 ⁺
2449.8		1246.0	100	1203.7	(4 ⁺)	3549.9		2346.0		1203.7	(4 ⁺)
2524.7		395 [‡]	71	2129.6				3044.0		505.94	2 ⁺
		491 [‡]	100 2I	2033.7	(6 ⁺)	3559.0		3053.0	100	505.94	2 ⁺
2886.2	(8 ⁺)	852.5 [‡]	100	2033.7	(6 ⁺)	3746.1	(12 ⁺)	616.3 [‡]		3129.8	(10 ⁺)
2921.4		887.7 [‡]		2033.7	(6 ⁺)	3880.1		3880.0	100	0.0	0 ⁺
3129.8	(10 ⁺)	208.3 [‡]		2921.4		4579.9	(14 ⁺)	833.8 [‡]		3746.1	(12 ⁺)
		243.5 [‡]		2886.2	(8 ⁺)	5522.7	(16 ⁺)	942.8 [‡]		4579.9	(14 ⁺)

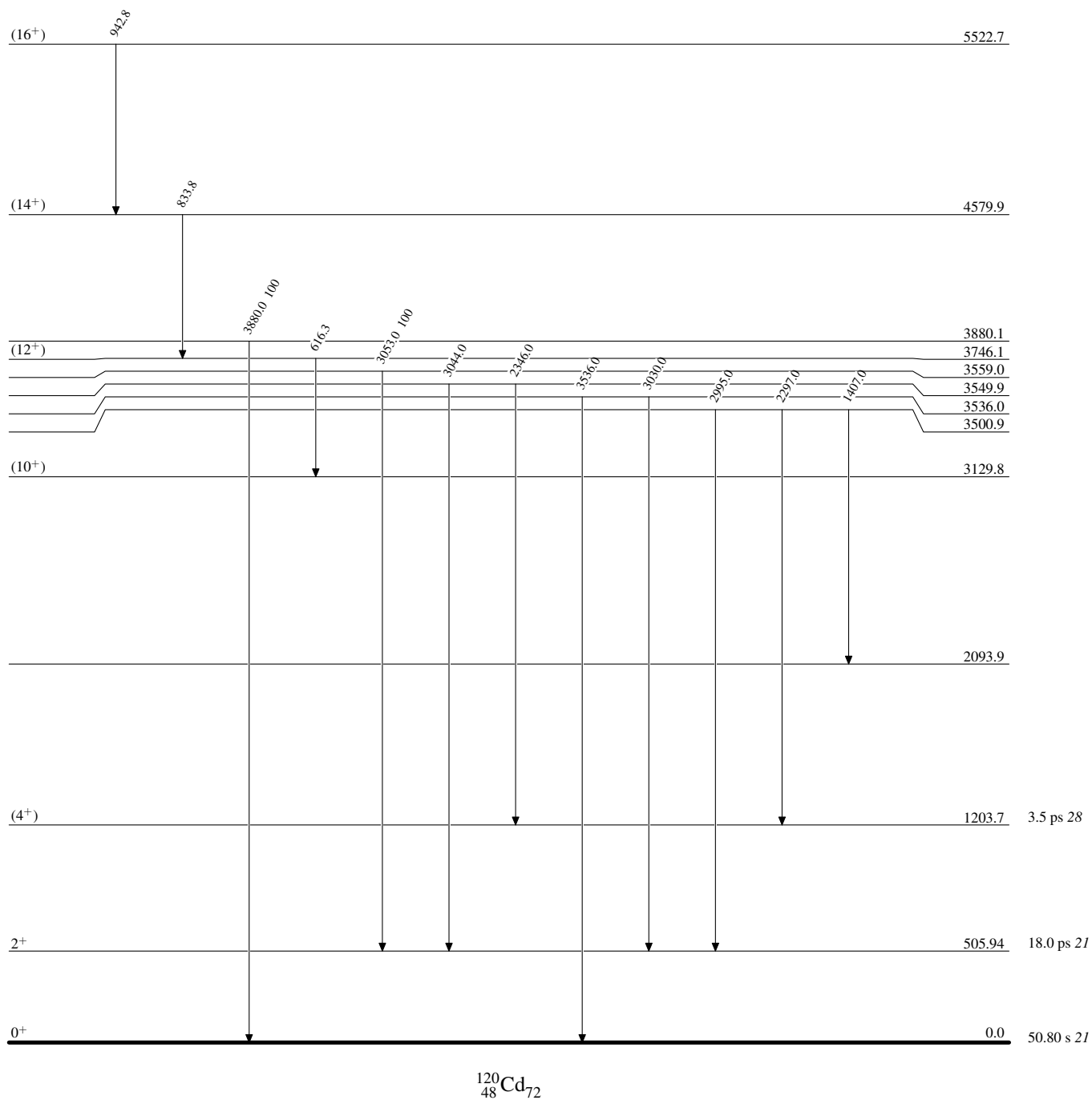
[†] From ^{120}Ag β^- decay (1.23 s), unless otherwise noted.

[‡] From ^{173}Yb (²⁴Mg,F), ^{208}Pb (¹⁸O,F), ^{232}Th (¹⁸O,F).

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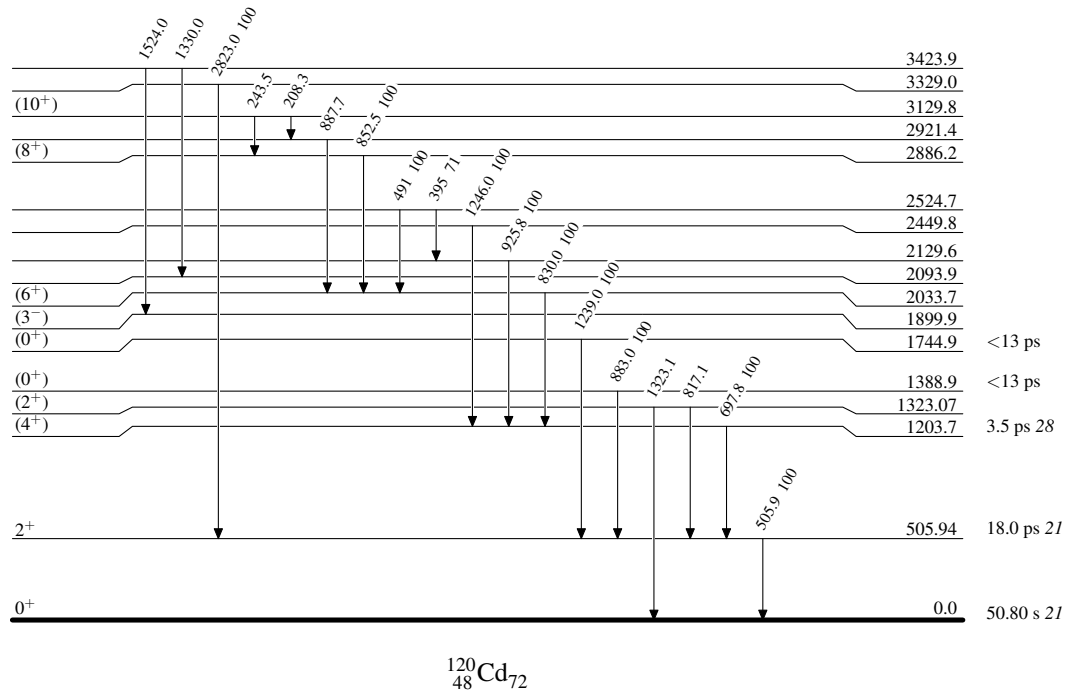
Level Scheme

Intensities: Relative photon branching from each level

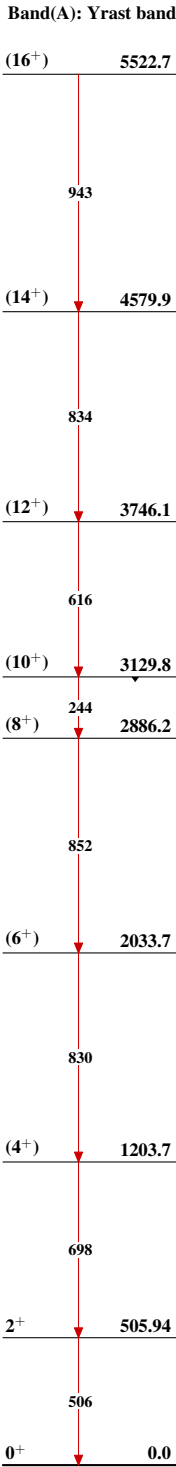


Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level



Adopted Levels, Gammas



$^{120}_{48}\text{Cd}_{72}$