^{112}Cd(d,2nγ) 1973FrYM,1972BrYL,1976Io02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. Lalkovski, F. G. Kondev	NDS 124, 157 (2015)	1-Aug-2014

1973FrYM, 1972BrYL: Beam: pulsed, E(d) not given; Measured: γ, γ(t), ce; Deduced: ^{112}In level scheme, J^π;
1976Io02: Facility: NIPNE U-120 cyclotron; Beam: E(d)=12 MeV, pulsed; Target: polycrystalline metallic target enriched in ^{112}Cd; Detectors: two Na(I); Deduced: ^{112}In level scheme, Q from DPAD analysis, CONF.; Also, from the same collaboration: 1993Io02.

^{112}In Levels

Wrongly placed γ-rays in 1973FrYM. Level scheme corrected by the evaluators to account for the adopted decay patterns.

E(level)†	Jπ‡	$T_{1/2}$‡	Comments
0.0	1^+	14.88 min *15*	
155.5 *10*	4^+	20.67 min *8*	
161.9 *10*	$(5)^+$		
206.6 *10*	$(2)^+$		
349.6 *15*	$(7)^+$	0.69 μs *5*	$T_{1/2}$: 2.1 μs 2 from 188γ(t) in 1972BrYL and 1.48 μs from 187γ(t) in 1973FrYM differ significantly from the adopted value. Q: 1.03 *3* from TDPAD in 1993Io02.
456.2 *15*	$(3)^+$		
591.8 *18*	$(4)^+$		
612.5 *18*	$(8)^-$	2.81 μs *3*	$T_{1/2}$: 1.6 μs 2 from 263γ(t) in 1972BrYL and 1.25 μs from 263γ(t) in 1973FrYM differ significantly from the adopted value. Q: 0.093 *6* from DPAD analysis in 1976Io02. configuration: $(\pi g_{9/2})^{-1}\otimes(\nu h_{11/2})^n$ (1976Io02).
623.1 *18*	(7^+)		
674.9 *18*	(6^+)		
820.8 *20*	(5^+)		
1006.3 *23*	(4^+)		
1285.4 *25*	$(2,3,4)^-$		

† From a least-squares fit to Eγ.
‡ From the Adopted Levels.

$\gamma(^{112}In)$

Eγ†	Iγ†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.‡	Comments
(6.30 *5*)		161.9	$(5)^+$	155.5	4^+		Eγ: From the adopted gammas.
(51.87 *3*)		674.9	(6^+)	623.1	(7^+)		Eγ: From the adopted gammas.
135.6	15 *2*	591.8	$(4)^+$	456.2	$(3)^+$		
145.9	19 *2*	820.8	(5^+)	674.9	(6^+)		
155.5		155.5	4^+	0.0	1^+		
185.5	9.2 *9*	1006.3	(4^+)	820.8	(5^+)		
187.7	100	349.6	$(7)^+$	161.9	$(5)^+$	E2	Mult.: α(K)exp(187.7γ)/α(K)exp(155.5γ)=0.166 *21* (1973FrYM).
206.6	75 *4*	206.6	$(2)^+$	0.0	1^+		
249.6	34 *4*	456.2	$(3)^+$	206.6	$(2)^+$		
262.9	55 *6*	612.5	$(8)^-$	349.6	$(7)^+$	M2	Mult.: α(K)exp(262.9γ)/α(K)exp(155.5γ)=0.158 *12* (1973FrYM).
273.5	7.5 *8*	623.1	(7^+)	349.6	$(7)^+$		
279.1	2.5 *3*	1285.4	$(2,3,4)^-$	1006.3	(4^+)		

Continued on next page (footnotes at end of table)

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$\gamma(^{112}In)$ (continued)

† From 1973FrYM.
‡ From 1973FrYM, based on α(K)exp measurements.

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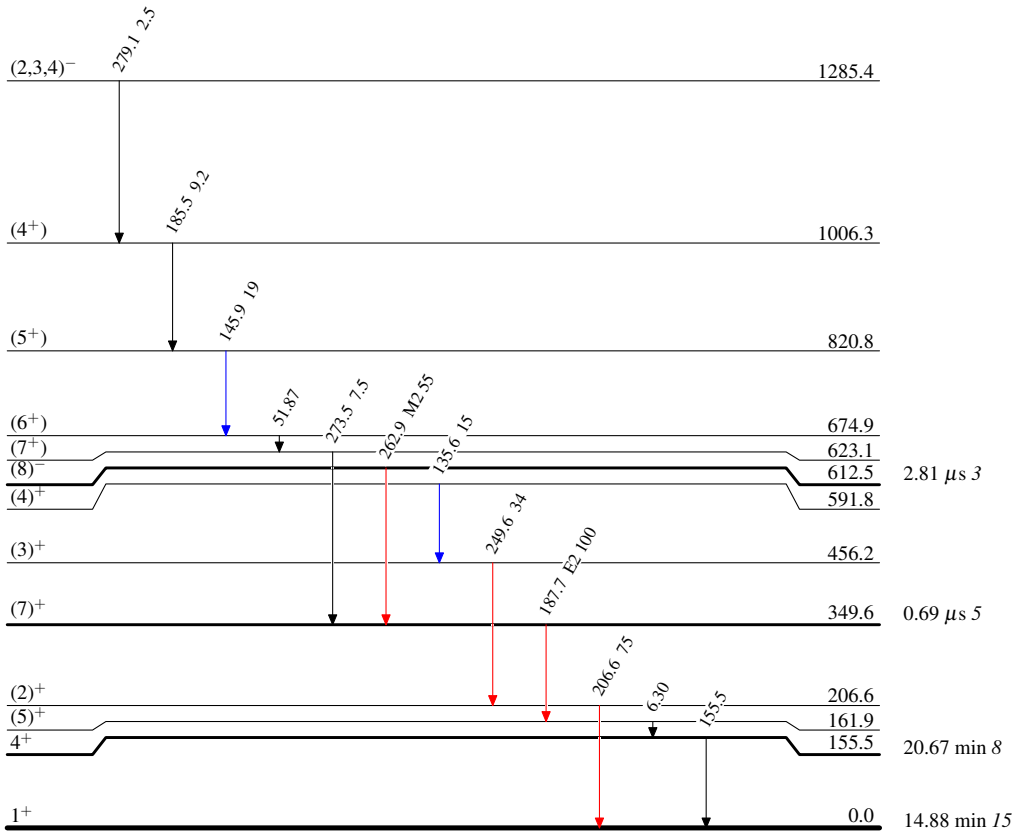
Level Scheme

Intensities: Type not specified

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)



$^{112}_{49}In_{63}$