^{109}In IT decay (210.0 ms) 1994ByZZ,1965Al15

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. Kumar(a), J. Chen(b) and F. G. Kondev	NDS 137, 1 (2016)	31-May-2016

Parent: ^{109}In: E=2101.87 *11*; $J^{\pi}=19/2^+$; $T_{1/2}$=210.0 ms *9*; %IT decay=100.0

1994ByZZ: Mo(^{14}N,X), E=119 MeV, Measured: Eγ, Iγ, $T_{1/2}$.

1965Al15:^{103}Rh(^{12}C,α2n),E=40-80 MeV; ^{107}Ag(α,2n), E=28 MeV; Measured: Eγ, Iγ; decay scheme similar to 1994ByZZ.

Others: 1966We01, 1963Po10, 1965De15.

The decay scheme is from 1994ByZZ.

^{109}In Levels

E(level)†	J^{π}‡	$T_{1/2}$‡
0	$9/2^+$	4.159 h *10*
1026.39 *8*	$11/2^+$	
1428.35 *8*	$13/2^+$	
2101.87 *11*	$19/2^+$	210.0 ms *9*

† From a least-squares fit to Eγ.

‡ From Adopted Levels.

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γ(^{109}In)

E_γ[†]	I_γ[#&]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	δ[†]	α[@]	$I_{(\gamma+ce)}$[&]	Comments
[x]170[‡]	12									
[x]210[‡]	12									
401.97 *6*	18.3 *9*	1428.35	13/2$^+$	1026.39	11/2$^+$	M1+E2	0.07 *+5−4*	0.01244	18.5 *9*	α(K)=0.01082 *16*; α(L)=0.001317 *19*; α(M)=0.000255 *4* α(N)=4.68×10^{-5} *7*; α(O)=3.50×10^{-6} *5* I$_\gamma$: others: 20 5 (1965Al15) and 21 (1994ByZZ).
673.52 *8*	97.6 *3*	2101.87	19/2$^+$	1428.35	13/2$^+$	M3		0.0251	100	α(K)=0.0214 *3*; α(L)=0.00298 *5*; α(M)=0.000586 *9* α(N)=0.0001071 *15*; α(O)=7.70×10^{-6} *11* E$_\gamma$: Other: 673.5 1 from 1994ByZZ.
1026.4 *1*	18.5 *9*	1026.39	11/2$^+$	0	9/2$^+$	M1+E2	0.41 *13*	0.00133 *3*	18.5 *9*	α(K)=0.001160 *23*; α(L)=0.000138 *3*; α(M)=2.66×10^{-5} *5* α(N)=4.88×10^{-6} *9*; α(O)=3.67×10^{-7} *8* I$_\gamma$: other: 20 5 (1965Al15) and 25 (1994ByZZ). Additional information 1.
1428.32 *10*	81.5 *9*	1428.35	13/2$^+$	0	9/2$^+$	E2		6.30×10^{-4}	81.5 *9*	α(K)=0.000500 *7*; α(L)=5.92×10^{-5} *9*; α(M)=1.143×10^{-5} *16* α(N)=2.09×10^{-6} *3*; α(O)=1.557×10^{-7} *22*; α(IPF)=5.74×10^{-5} *8* I$_\gamma$: other: 77 15 (1965Al15) and 75 (1994ByZZ).

[†] From Adopted gammas.
[‡] From 1965Al15.
[#] From I(γ+ce) and α.
[@] Additional information 2.
[&] Absolute intensity per 100 decays.
[x] γ ray not placed in level scheme.

$^{109}_{49}In_{60}$-2

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Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 decays through this branch

%IT=100.0