^{48}Ca(α,nγ) 1972Ar37

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Wang Jimin and Huang Xiaolong	NDS 144,1 (2017)	1-Mar-2016

E=14 MeV; measured Eγ, $\gamma(\theta)$, polarization and $\gamma\gamma$ coincidence with Ge(Li).

Others: 1985PaZW (measured DSA, Eγ, Iγ, and $\gamma\gamma$ coin); no data given. 1972LaZU (measured σ(En,Eγ), $\gamma\gamma$ coin). 1971LaZT (measured p$\gamma(\theta)$, σ(En,Eγ)).

^{51}Ti Levels

E(level)†	J$^\pi$‡	Comments
0	3/2$^-$	
1437.2 *10*	7/2$^-$	
1567.4 *10*	5/2$^-$	
2344.3 *10*	(11/2)	J$^\pi$: (11/2) from $\gamma(\theta)$.
2753.9 *13*	(15/2$^-$)	J$^\pi$: (15/2) from $\gamma(\theta)$; (15/2$^-$) from shell-model calculations.
3643.8 *16*	(13/2,17/2)	J$^\pi$: (13/2,17/2) from $\gamma(\theta)$.

† From Eγ's and level scheme, using least-squares fit to data.

‡ From Adopted Levels, except as noted.

$\gamma(^{51}$Ti)

E$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.	Comments
409.6 *5*	2753.9	(15/2$^-$)	2344.3	(11/2)		δ(O/Q)=0.09 *4*.
889.9 *10*	3643.8	(13/2,17/2)	2753.9	(15/2$^-$)	D+Q	δ: −5.1 *+17−44* if J(3643)=13/2; 2.9 *+11−8* if J(3643)=17/2.
907.1 *5*	2344.3	(11/2)	1437.2	7/2$^-$	E2	A$_2$=0.232 *35*; A$_4$=−0.010 *7* Mult.: from $\gamma(\theta)$ and pol $\gamma(\theta)$. δ(M3,E2)=0.07 *+11−9*. POL=+0.34 *24* (1972Ar37).
1437.2 *10*	1437.2	7/2$^-$	0	3/2$^-$		A$_2$=0.248 *26*; A$_4$=−0.073 δ(O/Q)=0.04 *11*.
1567.4 *10*	1567.4	5/2$^-$	0	3/2$^-$		

Legend

● Coincidence

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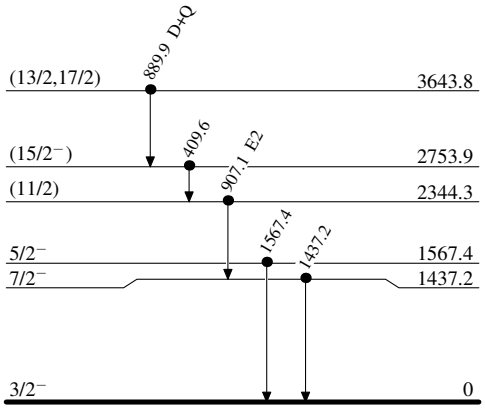
Level Scheme



$^{51}_{22}Ti_{29}$