^{42}Ca(t,α) 1968Sa09

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja, E. A. Mccutchan	NDS 133, 1 (2016)	30-Sep-2015

1968Sa09: E(t)=12.8 MeV. Measured $\sigma(\theta)$ with θ=12.5° to 87.5° using multi-angle spectrograph and Ilford K1 emulsions (FWHM≈30 keV); DWBA analysis.

Other: 1978En02 quote values which are renormalized to S=4.5 for the ground state.

^{41}K Levels

E(level)	L[†]	S[‡]	Comments
0	2	2.5	dσ/dΩ=1.2 mb/sr *1* (at 20°).
982 *10*	0	0.71	
1301 *10*	3	0.39	
1594 *10*	0+2	0.2,0.3	S: approximate values for a doublet.
1703 *10*	(2)	0.11	
2447 *10*	(0,2)		
2674 *10*	(0)	0.34	
2755 *10*			
3233 *10*			
3491 *10*	(2)	0.38	
4075 *10*			

[†] From comparison to DWBA predictions and empirical systematics.

[‡] From DWBA analysis using dσ/dω_{exp}=NS$\sigma_{DWBA}(\theta)$ and taking N=45. Normalization is determined by requiring that the ^{48}Ca(t,α)^{47}K 359 keV transition contains the full shell-model $d_{3/2}$ strength of 4.0. It is assumed that l=0 transitions are $2s_{1/2}$, l=2 transitions are $1d_{3/2}$ and l=3 transitions are $1f_{7/2}$ in character.