

${}^{43}\text{Ca}(\alpha, p\gamma)$  1973Dr03

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	S. -c. Wu	NDS 91, 1 (2000)	15-Jul-2000

E=6.5, 7.5 MeV.

All data from 1973Dr03, except as noted.

Ge(Li) plus NaI Compton-suppression spectrometer at  $\theta=0^\circ$  to  $130^\circ$ ; measured DSA.

 ${}^{46}\text{Sc}$  Levels

E(level) <sup>†</sup>	J <sup>π</sup> <sup>†</sup>	T <sub>1/2</sub> <sup>‡</sup>	Comments
0.0	4 <sup>+</sup>		
142.5	1 <sup>-</sup>	18.75 s	T <sub>1/2</sub> : from Adopted Levels.
227.8	3 <sup>+</sup>		
289.5	2 <sup>-</sup>	>3.5 ps	
584.8	3 <sup>-</sup>	4 ps 2	
627.5	4 <sup>-</sup>	>3.5 ps	
974	7 <sup>+</sup>		Reported by 1977DrZY as yrast 7 <sup>+</sup> level from ${}^{43}\text{Ca}(\alpha, p\gamma)$ ; details including $\gamma$ decay modes not given.
1124.4	4 <sup>-</sup>	1.1 ps 2	

<sup>†</sup> From Adopted Levels.

<sup>‡</sup> From analysis of DSA, except as noted.

 $\gamma({}^{46}\text{Sc})$ 

E <sub>i</sub> (level)	J <sub>i</sub> <sup>π</sup>	E <sub>γ</sub> <sup>†</sup>	I <sub>γ</sub>	E <sub>f</sub>	J <sub>f</sub> <sup>π</sup>
289.5	2 <sup>-</sup>	147.0	100	142.5	1 <sup>-</sup>
584.8	3 <sup>-</sup>	295.3	65	289.5	2 <sup>-</sup>
		357.0	0.5	227.8	3 <sup>+</sup>
		442.3	1.5	142.5	1 <sup>-</sup>
		584.8	33	0.0	4 <sup>+</sup>
627.5	4 <sup>-</sup>	399.7	9	227.8	3 <sup>+</sup>
		627.5	91	0.0	4 <sup>+</sup>
1124.4	4 <sup>-</sup>	496.9	6	627.5	4 <sup>-</sup>
		539.6	80	584.8	3 <sup>-</sup>
		834.9	14	289.5	2 <sup>-</sup>

<sup>†</sup> Derived from level energies (evaluator).

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## Level Scheme

Intensities: % photon branching from each level

