

$^{46}\text{Ca}(\alpha, d)$ 1972Ri06

Type	Author	History Citation	Literature Cutoff Date
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1972Ri06: E=25 MeV α beam was produced from the Argonne tandem accelerator. Target was 100 $\mu\text{g}/\text{cm}^2$ Ca on a 30 $\mu\text{g}/\text{cm}^2$ carbon backing. Reaction products were momentum-analyzed with an Enge split-pole spectrograph (FWHM=25 keV). Measured $\sigma(\theta(\text{c.m.})=10^\circ$ to 60°). Deduced levels, J, π , L-transfers from DWBA analysis.

 ^{48}Sc Levels

Spins are given for states of the configuration= $((\pi 1f_{7/2})^{+1}(\nu 1f_{7/2})^{-1})$ multiplet based on earlier work. In zeroth order even-spin states of the multiplet should not be excited. Suppression is evident. Distribution of strength among odd J states also follows expectations. See 1972Ri06 for detailed discussion.

E(level)	J^π [†]	L [†]	$[\text{d}\sigma/\text{d}\Omega_{\text{exp}}]/[\text{d}\sigma/\text{d}\Omega_{\text{theory}}]$ [‡]	E(level)	J^π [†]	L [†]	$[\text{d}\sigma/\text{d}\Omega_{\text{exp}}]/[\text{d}\sigma/\text{d}\Omega_{\text{theory}}]$ [‡]
0.0	6+#			2521 15	1+#		0.51
131@	5+#		0.83	2978 15	(5 ⁺)	4	
252	4+#			3061 15	(1 ⁺)		
622@	3+#		0.80	3151 15	(3 ⁺)		
1096@	7+#		1.00	3206 15		4	
1143	2+#			3289 15	(5 ⁺)		
2196 15	(5 ⁺)	4		3689 15	(6 ⁺)		
2281 15	(2 ⁺)			4178 15	(3 ⁺)		

[†] From DWBA analysis, except as noted.

[‡] Normalized to 1 for 7⁺ state.

From Adopted Levels.

@ Reference point for excitation energies taken from 1970Oh01.