

⁴⁴Ca(³He,d),(pol ³He,d) 1985Ha08,1966Sc17

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	T. W. Burrows	NDS 109, 171 (2008)	30-Oct-2007

1966Sc17, 1966Sc08: E=10 MeV. Measured $\sigma(\theta=7.5^\circ-50^\circ)$; mag spect, emulsions. DWBA.

1972Vo18: E=24 MeV. Measured $\sigma(\theta=8^\circ-30^\circ, 2^\circ \text{ steps})$; Q3D mag spect, position-sensitive solid-state detectors. FWHM \approx 5 keV. DWBA.

1985Ha08: E=33.1 MeV. Measured $\sigma(\theta)$ and analyzing power. Polarization=50%–60%. DWBA.

All data are from 1966Sc17, except As noted. Others: see 1992Bu01 and 1983Bu21.

⁴⁵Sc Levels

E(level)	J ^π †	L#	C ² S‡	E(level)	L#	C ² S‡	E(level)
0	7/2 ⁻ @	3&	0.71 ^a	3989 15			5219 15
15 3	3/2 ⁺	2&	(0.53) ^a	4034 15			5254 15
378 15	3/2 ⁻ ^b	1	0.14	4129 15			5309 15
714 10				4179 15			5374 15
944 15	1/2 ⁺ ^c	0 ^d	0.27	4249 15			5419 15
1067 15	3/2 ⁻ ^b	1	0.14	4309 15			5444 15
1410 15				4360 15			5504 15
1553 15	(3/2) ⁻ ^b	1	0.07	4424 15			5574 15
1889 15				4464 15			5604 15
2304 15				4505 15	1	0.04,0.09	5684 20
2349 15		(1)	(0.03,0.07)	4549 15			5774 20
2750 15	7/2 ⁻	3 ^d	0.14	4619 15			5810 20
2980 15		1	0.06,0.14	4664 15			5834 20
3022 15		1	0.10,0.23	4713 15			5931 20
3104 15				4739 15			5964 20
3119 15				4774 15			5971 20
3150 10				4801 15			6004 20
3189 15				4826 15			6031 20
3354 15				4869 15			6136 20
3407 15		1	0.02,0.05	4917 15			6179 20
3484 15		1	0.05,0.12	4959 15			6202 20
3609 15				5009 15			6244 20
3724 15		1	0.05,0.12	5049 15			6319 20
3779 15				5084 15			6434 20
3881 15	(1/2 ⁻)	(1)	(0.12)	5125 15			
3926 15		1	0.10,0.23	5169 15			

† Assumed for the calculation of C²S, except As noted.

‡ From DWBA fits. First value is for J=L+1/2; second, for J=L-1/2.

From characteristic L=1 $\sigma(\theta)$, except As noted.

@ From comparison of analyzing power to DWBA (1985Ha08).

& $\sigma(\theta)$ agrees very well with DWBA calculation (1972Vo18).

^a C²S(g.s.)=0.59 6 (1985Ha08) and C²S(15)=1.9 (1972Vo18).

^b From the Adopted Levels.

^c s1/2 hole state.

^d From comparison to DWBA.