

⁴³Ca(d,p) 1967Bj02

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen, Balraj Singh and John A. Cameron		NDS 112, 2357 (2011)	31-Jul-2011

1967Bj02: E=8.532 MeV deuteron beam produced from the Aldermaston tandem. Enriched ⁴³Ca target (>99%). Proton momentum-analyzed with a multi-angle spectrograph, FWHM=15 keV. Measured $\sigma(E_p, \theta)$. Deduced levels, J^π , L, spectroscopic factors.

1955Sc82: E=4.15 MeV deuteron beam produced from the Yale cyclotron. Target of CaI evaporated on Au or Ta backing. Proton detected in argon filled proportional counters. Measured $\sigma(E_p)$. Deduced levels.

Others: 1956Br08 (E=6.0 MeV), 1967Ha41.

Target ⁴³Ca $J^\pi=7/2^-$.

⁴⁴Ca Levels

E(level) [†]	J^π [@]	L^a	$[(2J_f+1)/(2J_i+1)]S^{&a}$	E(level) [†]	L^a	$[(2J_f+1)/(2J_i+1)]S^{&a}$
0	0 ⁺	3	0.36	4662	10	1 0.28
1158 [‡]	4	2 ⁺	1+3	4696	10	
1885 [‡]	4	0 ⁺	3	4826	10	
2287 [‡]	5	4 ⁺	1+3	4914	10	1 0.12
2660 [‡]	5	2 ⁺	3(+1)	4992	10	1 0.05
3048 [‡]	5	4 ⁺	3	5016	10	1 0.25
3299 [‡]	6	2 ⁺	3	5143	10	1 0.12
3306 [‡]	6	3 ⁻		5172	10	
3360 [‡]	6			5243	10	1 0.54
3585 [#]	6			5296	10	1 0.27
3660 [#]	6			5351	10	1 0.28
3677 [‡]	6			5385	10	1 0.07
3729	10			5405?	10	(1) 0.01
3792	10			5468	10	1 0.33
3880	10			5558	10	1 0.40
3934?	10	(1)	0.04	5666	10	
4026	10			5743	10	1 0.75
4104	10	3	0.09	5776	10	
4207	10	1	0.02	5832	10	
4410	10	0	0.01	5873?	10	(1) 0.16
4491?	10	(1)	0.04	5975	10	
4569	10			6050	10	1 0.08
4598	10			6156	10	1 0.46
4616	10					

[†] From 1967Bj02, unless otherwise noted.

[‡] Weighted average from 1967Bj02 and 1956Br08.

[#] From 1956Br08 only.

[@] From Adopted Levels.

[&] J_f =spin of final state, J_i =target spin=7/2⁻. Uncertainty is estimated to be 25%. 1978En02 gives (2J_f+1)S values.

^a Extracted from the comparison of $\sigma(\theta)$ distributions with the DWBA predictions.