

$^{42}\text{Ca}(\text{d},\text{d}')$  1968Ha31

Type	Author	History	Citation	Literature Cutoff Date
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**1968Ha31:** E=7.50 MeV deuteron beam was produced from the ONR electrostatic generator. Target of 90.9% enriched  $^{42}\text{Ca}$  on a carbon backing. Scattered particles were momentum analyzed with the MIT multi-range spectrograph and detected in nuclear emulsions. Measured  $\sigma(E_d, \theta)$ . Deduced levels,  $J^\pi$ , L from the optical model analysis and distorted-wave (DW) analysis.

**1968Be36:** (d,d) E=7.0, 7.2 MeV. Measured  $\sigma(\theta)$ .

**1970Br27:** (d,d) E=12 MeV. Measured  $\sigma(\theta)$ . Deduced optical-model parameters.

**1970Fi01:** (d,d) E=11.8 MeV. Measured  $\sigma(\theta)$ . Deduced optical-model parameters.

 $^{42}\text{Ca}$  Levels

All data are from **1968Ha31**.

E(level)	L	$d\sigma/d\Omega$ (max) (mb/sr)	Comments
0	0		
1524 4	2	1.30	$\beta_2=0.23$
1835 5	(0)	0.31	
2423 6		0.20	
2749 6		0.10	
3445 8	(3)	0.25	$\beta_3=0.17$