

$^{44}\text{Ca}(\text{d},\text{d}')$ 1968Ha31

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh		NDS 190,1 (2023)	20-Jun-2023

1968Ha31: (d,d') E=7.5 MeV deuteron beam was produced from the ONR electrostatic generator. Target was 98.6% enriched ^{44}Ca with a thickness of $13 \mu\text{g}/\text{cm}^2$ on thin carbon foil plus formval foils. Reaction products were momentum-analyzed in the MIT multi-angle spectrograph (FWHM=7-9 keV). Measured $\sigma(E_d, \theta)$. Deduced levels, J^π , L-transfers from DWBA analysis.

Others (elastic scattering for optical-model parameters):

1966Ma70: (d,d) E=9-12 MeV. Measured $\sigma(\theta)$.

1968Be36: (d,d) E=7.00 and 7.20 MeV from MIT cyclotron. Measured $\sigma(\theta)$.

1970Fi01: (d,d) E=11.8 MeV from Heidelberg cyclotron. Measured $\sigma(\theta)$.

1970Br27: (d,d) E=12 MeV at Nuclear Physics Laboratory, University of Bradford. Measured $\sigma(\theta)$.

1980Ha14: (pol d,d) E=56 MeV.

1982En06: (d,d) E=2,3,4,4.5 MeV.

All data from **1968Ha31**, unless otherwise noted.

 ^{44}Ca Levels

E(level)	J^π [†]	L	$d\sigma/d\Omega(\text{max})$ (mb/sr)
0	0 ⁺		
1157 4	2 ⁺	2	1.72
1884 5	0 ⁺		0.15
2285 6	4 ⁺		0.10
2658 6	2 ⁺		0.12
3309 8	3 ⁻	3	0.21

[†] From the Adopted Levels.