

$^{110}\text{Cd}(\text{d,t})$  1975Ch07

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	S. Kumar(a), J. Chen(b) and F. G. Kondev		NDS 137, 1 (2016)	31-May-2016

Target  $^{110}\text{Cd}$   $J^\pi(\text{g.s.})=0^+$ .

1975Ch07: E(d)=16 MeV beam was produced from the University of Pittsburgh three stage Van de Graaff accelerator. Target was a 95% isotopically pure self-supporting foil of  $553 \mu\text{g}/\text{cm}^2$  thick. Tritons were momentum analyzed by an Enge split-pole spectrograph (FWHM=23 keV) and recorded in photographic emulsion plates. Deduced levels,  $J^\pi$ , L, spectroscopic factors from DWBA analysis.

Other: 1964Ro17.

All data are from 1975Ch07.

 $^{109}\text{Cd}$  Levels

E(level)	$J^\pi$ <sup>†</sup>	L	$\text{C}^2\text{S}^\ddagger$	Comments
0	$5/2^+$	2	2.08	
59 5	$1/2^+$	0	0.39	
202 5	$7/2^+$	4	3.50	
345 5	$3/2^+$	2	0.66	$J^\pi$ : $5/2^+$ in Adopted Levels.
425 5	$5/2^+$	2	0.24	
462 5	$11/2^-$	5	1.14	
620 5	$7/2^+$	4	1.11	
672 5	$3/2^+$	2	0.06	
717 5	$5/2^+, 3/2^+$	2	0.22, 0.29	
818 5	$5/2^+, 3/2^+$	2	0.04, 0.06	
890 5	$5/2^+, 3/2^+$	(2)	0.81, 1.08	L: 1975Ch07 state in text that L=0+2 (70% L=2, 30% L=0) provides best fit to the angular distribution of the 890-keV peak. However, in authors' table of results only L=2 is given.
927 5	$5/2^+$	2	1.30	
1105 5	$5/2^+, 3/2^+$	2	0.07, 0.09	
1170 5	$5/2^+, 3/2^+$	2	0.44, 0.58	
1315 5	$5/2^+, 3/2^+$	2	0.11, 0.14	
1414 5	$1/2^+$	0	0.04	

<sup>†</sup> Values shown here are for the purpose of extracting corresponding spectroscopic factors.

<sup>‡</sup> Spectroscopic factor is deduced based on:  $(\text{d}\sigma/\text{d}\Omega)(\text{exp})/(\text{d}\sigma/\text{d}\Omega)(\text{DWBA})=3.33\times\text{C}^2\text{S}$ . 1975Ch07 assign 15% maximum uncertainty in the absolute cross sections.