

$^{110}\text{Cd}(d, ^3\text{He})$ 1976Va25

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

1976Va25: E=50 MeV deuteron beam was produced from the AVF cyclotron of the KVI. Targets were isotopically enriched metallic ^{110}Cd (500 and 100 $\mu\text{g}/\text{cm}^2$) evaporated onto thin carbon backings. Reaction products were detected with ΔE -E solid state counter telescopes (FWHM=40-60 keV). Measured $\sigma(\theta)$. Deduced levels, J^π , L spectroscopic factors from DWBA analysis.

 ^{109}Ag Levels

ΔE : 1976Va25 do not give uncertainty. Evaluators estimates 10 keV.

E(level)	J^π ^a	L&	C ² S [@]	E(level)	J^π ^a	L&	C ² S [@]	E(level)	J^π ^a	L&	C ² S [@]
0 <i>10</i>	1/2 ⁻	1	1.3	700 <i>10</i>	3/2 ⁻	1	0.6	1210 <i>10</i>	(9/2 ⁺)	(4)	0.5
130 <i>10</i>	9/2 ⁺	4	5.6	740 <i>10</i>	5/2 ⁺	2	0.2	1310 <i>10</i>	3/2 ⁻	1	0.7
320 <i>10</i>	3/2 ⁻	1	0.8	870 [‡] <i>10</i>	(5/2 ⁻)	(3)	0.7	1510 <i>10</i>	3/2 ⁻	1	0.4
420 [†] <i>10</i>	(9/2 ⁺)	(4)	0.5	890 <i>10</i>	(9/2 ⁺)	(4)	0.7	1860 <i>10</i>	(9/2 ⁺)	(4)	1.2

[†] Possible multiplet.

[‡] Not well resolved from other states.

[#] 1976Va25 do not give uncertainty. Evaluators estimates 10 keV.

[@] From 1976Va25, calculated using finite-range DWBA with normalization factor N=2.95 and proton parameters radius=1.20 fm, diffuseness=0.625 fm, and spin-orbit-coupling strength=25. Authors estimate $\approx 20\%$ uncertainty.

[&] From DWBA fits to measured $\sigma(\theta)$ (1976Va25).

^a Assignment used to obtain C²S in 1976Va25.