^{102}Ru(d,^{6}Li) 1984Va14

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen, Balraj Singh	NDS 164, 1 (2020)	15-Feb-2020

1984Va14 (also 1983VaZH) E=45 MeV deuteron beam was produced from the KVI AVF cyclotron. Target was about 100-200 μg/cm^2 enriched (>92%) Ru metal on a mylar backing. Reaction products were momentum-analyzed with the QMG/2 spectrograph (FWHM=80 keV) and detected with the focal-plane detector system. Measured $\sigma(\theta)$, 6° to 26°. Deduced levels, spectroscopic strengths, L-transfers from DWBA analysis. Absolute σ accurate to 15%. DWBA and IBA model calculations. See also 1983Va11 for data on first three states and coupled-channel calculations.

Additional information 1.

^{98}Mo Levels

E(level)	L[†]	S$_\alpha$[‡]	Comments
0	0	0.086	
740	0	0.030	
790	2[#]	0.034	
1460[@]	2(+4)	0.009	S$_\alpha$: for L=2.
1770	2	0.011	
2020	3[#]	0.030	
2210	2	0.006	
2330	6	0.020	
2620	0	0.015	
2740[@]	(2+0)	0.007,0.006	

[†] From comparison with DWBA calculations, treating the transferred nucleon as a cluster with intrinsic spin=0 (1984Va14).

[‡] Spectroscopic strength S$_\alpha$=(2L+1)×(dσ/dΩ)(exp)/(dσ/dΩ)(DWBA) (1984Va14).

[#] Experimental and theoretical $\sigma(\theta)$ do not agree well, probably due to two-step process as discussed by 1983Va11.

[@] Unresolved doublet (1984Va14).