^{97}Mo(t,p) 2009Ra16

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 145, 25 (2017)	1-Jul-2017

Other: 1981Fl06.

Based on XUNDL. Compiled by K. Abusaleem (University of Jordan) and B. Singh (McMaster), November 11, 2009.

E(t)=12 MeV, produced at the Tandem Van de Graaff accelerator, Aldermasten. Measured $\sigma(\theta)$ for θ(lab)=5°−87.5° in steps of 7.5°. FWHM ≈ 14 keV.

Detection system: Multichannel magnetic spectrograph.

Additional information 1.

Target: enriched to 96.18% in ^{97}Mo.

The differential cross section of the reaction was determined from the ^{Nat}Mo(t,p) and ^{96}Mo(t,t) reactions.

Theoretical model: DWBA analysis via DWUCK4 code. Optical-model potential parameters used are listed in 2009Ra16.

$J^{\pi}(^{97}\text{Mo g.s.})=5/2^{+}$.

Reaction Q value=7465 keV *10*.

Cross sections have been stated as measured but no numerical values are listed.

^{99}Mo Levels

E(level)[†]	L[‡]	Comments
0	2	Additional information 2.
98	0	
238	4	
354	0	
526	2	
554	4	
617	2	
633	2	
683	2	
699	0	
756	0	
789	0	
884	2	
904	2	
946	0	
1028	2	
1047	0	
1168	0	
1196	2	
1236	2	
1278	3	
1352	2	
1397	0	
1433	2	
1462	2	
1518	4	
1546	0	
1572	4	
1615	1	
1645	4	
1670		
1698		
1722	2	
1764		
1806	2	
1827	2	
1844		

Continued on next page (footnotes at end of table)

^{97}Mo(t,p) 2009Ra16 (continued)

^{99}Mo Levels (continued)

E(level)†	L‡	E(level)†	L‡	E(level)†	L‡	E(level)†	L‡
1888	2	1927	2	1965	2	2024	1
1907	3	1944	2	2002		2054	1

† Additional information 3.
‡ From comparison of measured $\sigma(\theta)$ with DWBA calculations.