

$^{96}\text{Mo}({}^3\text{He},\alpha)$ 1975Sc14

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, G. Mukherjee, A. A. Sonzogni		NDS 111, 2555 (2010)	30-Jun-2009

$E({}^3\text{He})=18$ MeV. Measured $\sigma(\theta=25^\circ-85^\circ)$; Si telescopes. FWHM=40 keV. DWBA.

 ^{95}Mo Levels

E(level)	J^π [†]	L [‡]	C^2S	Comments
0.0	$5/2^+$ [#]	(2) [@]	2.58	
202 10	$(5/2^+)$ ^{&}	(2) [@]	0.10	J^π : discrepant with adopted $J^\pi=3/2^+$.
756 5	$7/2^+$	4^a	0.45	
816 10	$(3/2^+)$ ^{&}	(2) [@]	0.14	
949 5	$7/2^+$	4^a	0.22	J^π : discrepant with adopted $J^\pi=9/2^+$.
1059 5	$(5/2^+)$	(2) [@]	0.11	
1584? 10				
1659 10	$(9/2^+)$	4^a	0.19	
1886? 10				
1927 10	$11/2^-$ ^{&}	5^a	0.39	
2312 10	$(1/2^-)$ ^{&}	(1)	0.37	
2415 10	$9/2^+$ ^{&}	4^a	1.30	
2515 10	$9/2^+$ ^{&}	4^a	0.92	
3310 10		(4) ^b	0.36	
3410 10		(4) ^b	0.81	
3510 10		(4) ^b	0.25	

[†] Most likely value based on shell-model arguments, except as noted.

[‡] From DWBA analysis of $\sigma(\theta)$, except as noted.

[#] From the Adopted Levels.

[@] Primarily based on the (d,t) data of [1970Di06](#).

[&] From [1970Di06](#).

^a Distinction between L=4 and L=5 is also based on the ratio of experimental ([1964Hj02](#) and [1970Di06](#) for (d,t)) and theoretical cross sections of $({}^3\text{He},\alpha)$ and (d,t) reactions leading to same final states.

^b L=4 assigned since the strongly excited 1927keV state should exhaust most of the 1h11/2 strength.