

$^{96}\text{Mo}(^3\text{He,d}),(\text{d,n})$ **1975Ch23,1971Ri12**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 111, 525 (2010)	19-Nov-2009

 ^{97}Tc Levels

1975Ch23: E(^3He)=18 MeV; measured $\sigma(\text{ED},\theta)$ $\theta=10^\circ$ to 90° ; $\Delta\text{E-E}$ Si counter telescopes, FWHM=45 keV; DWBA(DWUCK) analysis, N=4.42.

1973Me10: E(^3He)=35.4 MeV; measured $\sigma(\text{ED},\theta)$, $\theta=9^\circ$ to 40° ; s; DWBA(DWUCK) analysis.

1972Sh28: E(^3He)=30.2 MeV; measured $\sigma(\text{ED},\theta)$, $\theta=8^\circ$ to 70° ; $\Delta\text{E-E}$ Si detector telescopes; DWBA(DWUCK) analysis, N=4.42.

For IAS see also **1972As07**.

1971Ri12: E(d)=12 MeV; measured $\sigma(\theta)$ at $15^\circ-70^\circ$; tof method with resolution=1.9 ns; analysis with DWBA, N=1.48.

E(level) [†]	J $\pi^{\ddagger}$	L [†]	C ² S [†]	Comments
0.0	9/2 ⁺	4	0.63	
96	1/2 ⁻	1	0.43	
216	7/2 ⁺	(4)	(0.046)	
326	5/2 ⁺	2	0.016	
576	3/2 ⁻	1	0.095	
655	5/2 ⁻	3	0.036	
783	5/2 ⁺	2	0.077	
852	(3/2 ⁺ , 5/2 ⁺)	(2)		C ² S: 0.014 if J=3/2, 0.007 if J=5/2.
947	3/2 ⁻	1	0.014	
1053	3/2 ⁻	1	0.014	E(level),L: 1973Me10 observes L=3 level at 1046 /5 keV, no level at 1053 keV; 1972Sh28 observes L=(2) level at 1.01 MeV.
1316	9/2 ⁺	4	0.068	
1374	3/2 ⁺ , 5/2 ⁺	2		E(level),L: 1973Me10 observes L=4 level at 1360 /5 keV, no level at 1374 keV. C ² S: 0.028 if J=3/2, 0.014 if J=5/2.
1537	1/2 ⁺	0	0.014	
1599	3/2 ⁺ , 5/2 ⁺	2		C ² S: 0.049 if J=3/2, 0.024 if J=5/2.
1649	3/2 ⁺ , 5/2 ⁺	2		C ² S: 0.053 if J=3/2, 0.027 if J=5/2.
1712	1/2 ⁺	0	0.035	
1847	1/2 ⁺	0	0.080	
1940 ^a	1/2 ⁻ , 3/2 ⁻	1 ^a		C ² S: S=0.066 if J=3/2.
1951	3/2 ⁺ , 5/2 ⁺	2		C ² S: 0.13 if J=3/2, 0.066 if J=5/2.
2013	3/2 ⁺ , 5/2 ⁺	2		C ² S: 0.033 if J=3/2, 0.017 if J=5/2.
2111	3/2 ⁺ , 5/2 ⁺	2		C ² S: 0.022 if J=3/2, 0.011 of J=5/2.
2151	1/2 ⁺	0	0.016	
2260 ^a	3/2 ⁺ , 5/2 ⁺	2 ^a		C ² S: S=0.025 if J=5/2.
2264	1/2 ⁺	0	0.071	
2307	3/2 ⁺ , 5/2 ⁺	2		C ² S: 0.043 if J=3/2, 0.023 if J=5/2.
2480 ^a		^a		
2653	1/2 ⁺	0	0.11	
2713	3/2 ⁺ , 5/2 ⁺	2		C ² S: 0.043 if J=3/2, 0.023 if J=5/2.
2783	3/2 ⁺ , 5/2 ⁺	2		C ² S: 0.029 if J=3/2, 0.015 if J=5/2.
2878	3/2 ⁺ , 5/2 ⁺	2		C ² S: 0.051 if J=3/2, 0.025 if J=5/2.
2908	3/2 ⁺ , 5/2 ⁺	2		C ² S: 0.043 if J=3/2, 0.022 if J=5/2.
3018	3/2 ⁺ , 5/2 ⁺	2		C ² S: 0.037 if J=3/2, 0.019 if J=5/2.
3060	3/2 ⁺ , 5/2 ⁺	2		C ² S: 0.058 if J=3/2, 0.029 if J=5/2.
3145	1/2 ⁺	0	0.087	
3214	1/2 ⁺	0	0.035	
3372 [#]	(3/2 ⁺ , 5/2 ⁺)	(2) [#]		
3486 [#]	(3/2 ⁺ , 5/2 ⁺)	(2) [#]		

Continued on next page (footnotes at end of table)

$^{96}\text{Mo}(\text{}^3\text{He,d}),(\text{d,n})$ [1975Ch23,1971Ri12](#) (continued) ^{97}Tc Levels (continued)

E(level) [†]	J^{π} [‡]	L [†]	C ² S [†]	Comments
3600 @ 20	3/2 ⁺ , 5/2 ⁺	2 @		C ² S: S=0.053 if J=3/2 ⁺ ; S=0.027 if J=5/2 ⁺ .
3720 @ 20	3/2 ⁺ , 5/2 ⁺	2 @		C ² S: S=0.050 if J=3/2 ⁺ ; S=0.027 if J=5/2 ⁺ .
4060 @ 20				
4330 @ 20				
4580 @ 20				
4780 @ 20				
4990 @ 20				
11050 @ 20	5/2 ⁺	2 @	0.38 &	E(level): isobaric analog state to ^{97}Mo g.s..
11810 @ 20		4+2 @		
12550 @ 20	11/2 ⁻	5 @	0.21 &	E(level): isobaric analog state to ^{97}Mo 1436.90-keV level.

[†] From [1975Ch23](#), unless otherwise noted.

[‡] From Adopted Levels.

From [1973Me10](#).

@ From [1972Sh28](#).

& Spectroscopic factor, S, from [1972Sh28](#) (resonance method). For reanalysis of data, see [1974Bu18](#).

^a From $^{96}\text{Mo}(\text{d,n})$ ([1971Ri12](#)).