

$^{92}\text{Mo}(^3\text{He,d}), (^3\text{He,dp})$ 1972Sh28,1980Ga01

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 112,1163 (2011)	15-Dec-2010

Others: 1972As02, 1972As07, 1971Ko16, 1970Mc19, 1969Pi05, 1968Ba56, 1968Oh01.

1969Pi05: E=18 MeV, ΔE -E particle identification system, 97.6% ^{92}Mo target; $\theta=25^\circ-80^\circ$ (5° steps), FWHM=80 keV; DWBA analysis of $\sigma(\theta)$. See also 1968Ba56.

1971Ko16: E=35 MeV, ΔE -E telescopes, FWHM $\approx$ 80 keV; DWBA analysis of $\sigma(\theta)$.

1972As02: E=20 MeV, particle identification, d spectra and p-d coin spectra, 97.6% ^{92}Mo target, $\theta=34^\circ-130^\circ$ (8° steps).

1972As07: E=30.2 MeV, $\theta=9^\circ-70^\circ$, ΔE -E Si telescope; DWBA analysis of $\sigma(\theta)$.

1972Sh28: E=30.2 MeV, ΔE -E Si telescopes, FWHM=60 keV; $\theta=8^\circ-70^\circ$ ($2^\circ-5^\circ$ steps), particle identification: DWBA analysis of $\sigma(\theta)$.

1980Ga01: E=28.5 MeV and FWHM=40 keV, $\theta=20^\circ, 35^\circ$ for $(^3\text{He,d})$; E=30 MeV, FWHM=50 keV, $\theta(\text{lab})=82^\circ-166^\circ$ for p spectrum from $(^3\text{He,dp})$; p-deuteron angular correlation, DWBA analysis.

 ^{93}Tc Levels

E(level) [†]	J ^{πc}	L ^b	S ^b	Comments
0	9/2 ⁺	4	0.58	
394 4	1/2 ⁻	1	0.32	
660 [‡] 20				
1193 10	1/2 ⁻ , 3/2 ⁻	1	0.036, 0.01 5	
1497 8	1/2 ⁻ , 3/2 ⁻	1	0.13, 0.053	
1784 8	1/2 ⁻ , 3/2 ⁻	1	0.13, 0.054	
2127 10	5/2 ⁻	3	0.054	
2557 10	3/2 ⁺ , 5/2 ⁺	2	0.043, 0.02 2	
3146 13	3/2 ⁺ , 5/2 ⁺	(2)	0.043, 0.02 1	
3347 10	3/2 ⁺ , 5/2 ⁺	2	0.87, 0.44	
3897 12	1/2 ⁺ , 5/2 ⁺	0+2	0.024+0.040	E(level): probable doublet, as suggested by 1972Sh28 on the basis of their DWBA fits. S=0.080 if J=3/2.
4102 13	1/2 ⁺	0 ^d	0.23 ^d	
4374 [#] 18				
4437 ^a 17				
4650 [@] 20				
4762 15	3/2 ⁺ , 5/2 ⁺	2	0.11, 0.060	
4900 15	3/2 ⁺ , 5/2 ⁺	2	0.076, 0.040	
5013 ^a 17	3/2 ⁺ , 5/2 ⁺	2	0.055, 0.030	
5170 [#] 12	3/2 ⁺ , 5/2 ⁺	2	0.13, 0.065	L, S: 1971Ko16 report L=1 with S=0.23 (if J=1/2) or S=0.083 (if J=3/2).
5305 [#] 12	3/2 ⁺ , 5/2 ⁺	2	0.090, 0.048	
5492 [#] 18	3/2 ⁺ , 5/2 ⁺	(2) ^d	0.051, 0.028 ^d	
5648 [#] 18	3/2 ⁺ , 5/2 ⁺	2 ^d	0.035, 0.019 ^d	
5830 [@] 20				
5980 [#] 18	1/2 ⁺	0	0.1	
6232 [#] 18				
7160 [@] 50				
7650 [@] 50				
8100 [@] 50				
8410 ^{&} 16	5/2 ⁺	2	0.72	Analog of ^{93}Mo (g.s.).
9360 25		0		E(level): from 1980Ga01.
9780 ^{&} 16	7/2 ⁺	4	0.28	Analog of ^{93}Mo (1363 level).
9906 ^{&} 16	3/2 ⁺	2	0.55	S: Assuming [S(9906 level): S(9948 level)] is the same in this reaction as in

Continued on next page (footnotes at end of table)

$^{92}\text{Mo}(^3\text{He,d}), (^3\text{He,dp})$ [1972Sh28,1980Ga01](#) (continued) ^{93}Tc Levels (continued)

E(level) [†]	J ^π ^c	L ^b	S ^b	Comments
				(p,d). Analog of ^{93}Mo (1493 level).
9948 ^{& 16}	7/2 ⁺	4	0.15	S: Assuming [S(9906 level): S(9948 level)] is the same in this reaction as in (p,d). Analog of ^{93}Mo (1520 level).
10110 ^{& 16}	3/2 ⁺ , 5/2 ⁺	2	0.32, 0.16	Analog of ^{93}Mo (1695 level).
10728 ^{& 16}	11/2 ⁻		0.33	L: assumed by 1972Sh28 in their analysis, based on J ^π (^{93}Mo , 2304 level)=11/2 ⁻ . J ^π =11/2 ⁻ is consistent with correlation data of 1980Ga01 . Analog of ^{93}Mo (2304 level).
11600 ^{@ 50}				Probable analog of ^{93}Mo (3160 level).

[†] Weighted average of [1972Sh28](#), [1971Ko16](#), [1968Ba56](#) (except as noted).

[‡] Only from [1969Pi05](#); weak state, not confirmed in other studies.

[#] Weighted average of [1972Sh28](#) and [1971Ko16](#).

[@] Only from [1972As02](#).

[&] Weighted average of [1972Sh28](#) and [1980Ga01](#).

^a Weighted average of [1972Sh28](#) and [1968Ba56](#).

^b From DWBA analysis of $\sigma(\theta)$ ([1972Sh28](#)).

^c Assumed in order to deduce S.

^d From [1971Ko16](#).