

⁹⁴Mo(p,d) 1977Bi02

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

Others: 1972Ko11, 1973Ko04, 1973Is09, 1973Mo03.

1977Bi02: E=38.6 MeV, >94% ⁹⁴Mo target, FWHM≈50 keV, ΔE-E Si telescopes; measured deuteron spectra and σ(θ); DWBA analysis, normalization factor=2.54.

1973Mo03: E=40 MeV, 93.9% ⁹⁴Mo target, θ(lab)=6°–50°, ΔE-E telescopes, FWHM≈100 keV, ΔE=20 keV for low energy levels and 40 keV for high energy levels; measured σ(θ); DWBA analysis.

1973Ko04: E=38.6 MeV, FWHM≈50 keV, semi ΔE-E telescopes, θ(C.M.)≈10°–35°; DWBA analysis of σ(θ) for IAS. See also 1972Ko11.

⁹³Mo Levels

1977Bi02 and 1973Ko04 quote one set of energies from their (p,d) and (d,t) studies.

E(level) [†]	Jπ [‡]	L [@]	C ² S [@]	Comments
0	5/2 ⁺	2	1.28	
947 7	1/2 ⁺	0	0.05	
1364 10	7/2 ⁺	(4)	0.30	
1490 12	3/2 ⁺ , 9/2 ⁺	2+4	0.2+0.5	
2305 12	11/2 ⁻	5	0.22	
2413 12	9/2 ⁺	4	2.99	
2523 12	1/2 ⁻ , 9/2 ⁺	1+4	0.39+1.97	
2619 15	3/2 ⁻	1	0.08	
2695 15	3/2 ⁻ , 9/2 ⁺	1+4	0.03+0.10	
2857 15	3/2 ⁻	1	0.08	
2959 15	3/2 ⁻	1	0.28	
3064 15	3/2 ⁻	1	0.32	
3211 15	3/2 ⁻	1	0.78	
3303 17	3/2 ⁻ , 9/2 ⁺	1+4	0.19+0.24	
3380 20	5/2 ⁺	2	0.08	
3434 17	5/2 ⁺	2	0.20	
3510 20	9/2 ⁺	4	0.30	
3590 20	3/2 ⁻ , 9/2 ⁺	1+4	0.14+1.06	
3650 20	9/2 ⁺	4	0.38	
3720 20	3/2 ⁻	1	0.07	
3790 20	3/2 ⁻	1	0.07	
3980 20	3/2 ⁻	1	0.16	
4070 20	3/2 ⁻ , 5/2 ⁻	1+3	0.03+0.28	
4170				
4240 20	3/2 ⁻	1	0.08	
4370 20	3/2 ⁻	1	0.11	
4450 25	3/2 ⁻	1	0.33	
4520 25	3/2 ⁻	1	0.35	
4630 30	3/2 ⁻ , 5/2 ⁻	1+(3,4)	0.10+0.15	
4710 30	3/2 ⁻ , 5/2 ⁻	1+3	0.05+0.42	
4780 30	3/2 ⁻ , 9/2 ⁺	1+4	0.02+0.12	
5000 30	3/2 ⁻ , 5/2 ⁻	1+3	0.09+0.14	
5070 30	3/2 ⁻ , 9/2 ⁺	1+4	0.20+0.32	
5150 30	3/2 ⁻	1	0.05	
10890 [#] 30	9/2 ⁺	4 [#]	0.20 [#]	Analog of ⁹³ Nb(g.s.).
10940 [#] 30	1/2 ⁻	1 [#]	0.11 [#]	Analog of ⁹³ Nb(31 level).
11590 [#] 20	3/2 ⁻	1 [#]	0.10 [#]	Analog of ⁹³ Nb(687 level).

Continued on next page (footnotes at end of table)

$^{94}\text{Mo}(\text{p,d})$ 1977Bi02 (continued) ^{93}Mo Levels (continued)

<u>E(level)[†]</u>	<u>J^π[‡]</u>	<u>L[@]</u>	<u>C²S[@]</u>	Comments
12220 [#] 30	3/2 ⁻	1 [#]	0.16 [#]	Analog of ^{93}Nb (1290 level).
12300 [#] 30	5/2 ⁻	3 [#]	0.25 [#]	Possible analog of ^{93}Nb (1315, 1364 or 1395 level).

[†] From 1977Bi02.

[‡] Assumed for the calculation of C²S.

[#] IAS, from 1973Ko04. C²S deduced from authors' $2T \times C^2S$ assuming $T=11/2$.

[@] From DWBA analysis of $\sigma(\theta)$ (1977Bi02).