

$^{97}\text{Mo}(\text{p},\text{n})$ IAR [1966Mo06](#),[1971Ki06](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen, Balraj Singh		NDS 164, 1 (2020)	15-Feb-2020

[1966Mo06](#): E=4-9 MeV proton beams were produced from the tandem Van de Graaff accelerator at Florida State University. Target was metal oxide layers of enriched ^{97}Mo on a carbon backing. Neutrons were detected in a Hanson-Mckibben BF_3 counter. Measured $\sigma(E_p)$. Deduced resonances. 12 proton groups analyzed.

[1971Ki06](#): E=3.5-4.4 MeV proton beams were produced from the 6-MV Van de Graaff accelerator. Measured neutrons with the time-of-flight spectroscopy. Deduced resonance energies, widths. 2 proton groups analyzed, corresponding to IAR of g.s. and first 2^+ state of ^{98}Mo .

Others:

[1975Gr01](#): E=16,18,20 MeV. g.s. analog.

[1974Po11](#): E=16-26 MeV. Measured $\sigma(\theta)$.

Data are from [1966Mo06](#), unless otherwise noted.

 ^{98}Tc Levels

E(level) [†]	J π [‡]	Comments
9656	(0 ⁺)	E(p)(c.m.)=3480 (1966Mo06), 3505 <i>10</i> (1971Ki06). IAR of 0 ⁺ , g.s. in ^{98}Mo . $\Gamma=25$ keV 3 (1971Ki06).
10416	(0 ⁺)	E(p)(c.m.)=4240. IAR of 0 ⁺ , 735 in ^{98}Mo .
10476	(2 ⁺)	E(p)(c.m.)=4300 (1966Mo06), 4330 <i>10</i> (1971Ki06). IAR of 2 ⁺ , 787 in ^{98}Mo . $\Gamma=34$ keV 2 (1971Ki06).
11106	(2 ⁺)	E(p)(c.m.)=4930. IAR of 2 ⁺ , 1432 in ^{98}Mo .
11433	(2 ⁺)	E(p)(c.m.)=5257. IAR of 2 ⁺ , 1759 in ^{98}Mo .
11896		E(p)(c.m.)=5720. IAR of 2 ⁺ , 2207 and/or 4 ⁺ , 2224 in ^{98}Mo .
11996		E(p)(c.m.)=5820. IAR of 2 ⁺ , 2333 and/or (6 ⁺), 2344 in ^{98}Mo .
12216		E(p)(c.m.)=6040.
12326		E(p)(c.m.)=6150.
12433		E(p)(c.m.)=6257.
12616		E(p)(c.m.)=6440.
12656		E(p)(c.m.)=6480.

[†] E(level)=E(p)(c.m.)+S(p), with S(p)=6176 3 ([2017Wa10](#)). E(p)(c.m.) data are from [1966Mo06](#). Uncertainty is estimated as ≈ 10 keV.

[‡] From IAR levels in ^{98}Mo (see ^{98}Mo Adopted Levels).