

$^{92}\text{Mo}(\text{p},\text{p}')$, (pol p,p) IAR 1969EI08

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

Includes $^{92}\text{Mo}(\text{p},\text{p}'\gamma)$. See also $^{92}\text{Mo}(\text{p},\text{p})$ IAR fine structure data set.

Others: [1966Mo06](#), [1968Li10](#) (11.8 MeV IAR), [1969CIZZ](#) (E(p)=5890 IAR), [1969Ej01](#), [1969Li11](#), [1971Ri11](#) (E(p)=5322 IAR), [1974Bi02](#) (E(p)=5295 IAR), [1974Cu04](#) g.s. IAS), [1976Br02](#).

[1976Br02](#): E=4.3 MeV to 4.4 MeV and E=5.05 MeV to 5.5 MeV, 98.5% ^{92}Mo target, energy resolution 400 eV for d-wave resonance and energy resolution 470 eV for s-wave resonance, semiconductor detectors, $\theta(\text{lab})=90^\circ, 125^\circ, 141^\circ, 165^\circ$; measured excitation functions; deduced parameters for analogs of ^{93}Mo g.s. and 943 level from observed IAR fine structure.

[1969Ej01](#): (p,p' γ), E $\approx$ 5.79-5.98 MeV and 6.50-6.65 MeV, 40 keV thick 97.6% ^{92}Mo target, Ge(Li) detectors; measured I_γ across and off resonance for E(p)=5874 and 6540 IAR.

[1969EI08](#): (pol p,p), E(pol p)=4.1-8.75 MeV; measured analyzing power across 12 resonances; deduced J^π , Γ , Γ_p .

[1969Li11](#): (p,p' γ), E(p)=5.5-8.2 MeV; measured 1509 γ yield curves across, and 1509 $\gamma(\theta)$ on and off the E(p)=5872, 6058, 6550 IAR, also 242 $\gamma(\theta)$ at E(p)=6843, 7096, 7600 and 1340 $\gamma(\theta)$ at E(p)=7096 IAR.

[1968Li10](#): (p,p' γ), E(p) $\approx$ 7960; measured 242 $\gamma(\theta)$, 1342 $\gamma(\theta)$; deduced partial Γ_p to 0, 1509, 2524, 2848 and 3094 levels of ^{92}Mo .

[1966Mo06](#): (p,p), E(p)=5.2-8.7 MeV; , measured excitation functions across 10 resonances; deduced L, Γ , Γ_p .

 ^{93}Tc Levels

Γ_p data are from [1969EI08](#), except as noted.

E(level) [†]	J π [#]	T _{1/2} [@]	L [‡]	Comments
8396.7 20	5/2 ⁺	15 eV 2	2	$\Gamma_p=0.75$ eV EP(LAB)=4357 2. S,L,T _{1/2} : from 1976Br02 . Other E(p): 4355 (1969EI08). Other T _{1/2} : 30 eV (1969EI08). T _{1/2} : from 1976Br02 . Γ_p : from 1976Br02 . Other Γ_p : 1.5 eV (1969EI08). Analog of ^{93}Mo (g.s.).
9331 3	1/2 ⁺	36 eV 4	0	$\Gamma_p=12.0$ eV EP(LAB)=5302 3. S,T _{1/2} : from 1976Br02 . Other E(p): 5310 (1966Mo06), 5295.4 (1974Bi02), 5322 (1971Ri11). Other T _{1/2} : 41 eV (1966Mo06), 37.8 eV (1971Ri11), 48 eV 5 (1974Bi02). Γ_p from 1976Br02 . Others: 12 eV (1966Mo06), 11.0 eV (1971Ri11), 10 eV (1974Bi02). Analog of ^{93}Mo (943 level).
9898	3/2 ⁺	22 eV 2	2	$\Gamma_p=5$ eV EP(LAB)=5875. S: others: 5890 (1966Mo06), 5890 (1969CIZZ), 5872 (1969Li11), 5874 (1969Ej01 , no target thickness correction). T _{1/2} : from 1969Li11 . Others: 27 eV (1966Mo06), 25 eV (1969CIZZ), 27 eV (1969EI08). Other Γ_p : 3 eV (1966Mo06), 4 eV (1969CIZZ). Analog of ^{93}Mo (1492 level).
10091	5/2 ⁺	17 eV 3		$\Gamma_p=1.5$ eV EP(LAB)=6070. S: other: 6058 (1969Li11). T _{1/2} : from 1969Li11 . Other: 30 eV (1969EI08). Analog of ^{93}Mo (1695 level).
10566	3/2 ⁺	14 eV 4		$\Gamma_p=1$ eV EP(LAB)=6550. S: other: 6550 (1969Li11). T _{1/2} : from 1969Li11 . Other: 30 eV (1969EI08). Analog of ^{93}Mo (2181 level).

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$^{92}\text{Mo}(\text{p},\text{p}')$, (pol p,p) IAR 1969El08 (continued) ^{93}Tc Levels (continued)

<u>E(level)[†]</u>	<u>J^π[#]</u>	<u>T_{1/2}[@]</u>	<u>L[‡]</u>	Comments
10833	1/2 ⁺	37 eV	0	$\Gamma_p=7$ eV EP(LAB)=6820. S: other: 6843 (1969Li11). T _{1/2} : from 1966Mo06. Γ_p from 1966Mo06. Analog of ^{93}Mo (2437 level).
11189	1/2 ⁺	49 eV	0	$\Gamma_p=16$ eV EP(LAB)=7180. S: other: 7096 (1969Li11). T _{1/2} , Γ_p : from 1966Mo06. Analog of ^{93}Mo (2743 level).
11288	(3/2 ⁺)	20 eV	2	$\Gamma_p=1$ eV EP(LAB)=7280. S: other: 7340 (1966Mo06). Other Γ_p : ≈ 3 eV (1966Mo06). Possible analog of ^{93}Mo (2881 level).
11575	3/2 ⁺	30 eV	2	$\Gamma_p=6.5$ eV EP(LAB)=7570. S: others: 7570 (1966Mo06), 7600 (1969Li11). Other Γ_p : 5 eV (1966Mo06). Possible analog of ^{93}Mo (3160 level).
11852	(5/2 ⁺)	40 eV		$\Gamma_p=1.5$ eV EP(LAB)=7850. S: other: 7960 (1968Li10). Possible analog of ^{93}Mo (3450 level).
12015	(3/2 ⁺)	20 eV	2	$\Gamma_p=5.5$ eV EP(LAB)=8015. J ^π : L=(0) for E(p)=7980 IAR in 1966Mo06 is inconsistent with this. Possible analog of ^{93}Mo (3596 level).
12149	(3/2 ⁺)	35 eV	(2)	$\Gamma_p=7.5$ eV EP(LAB)=8150. Possible analog of ^{93}Mo (3710 level).
12208	(5/2 ⁻)	25 eV		$\Gamma_p=1$ eV EP(LAB)=8210. J ^π : L=(2) for E(p)=8220 IAR in 1966Mo06 is inconsistent with this. Possible analog of ^{93}Mo (3790 level).
12436	(3/2 ⁻)	70 eV		$\Gamma_p=5$ eV EP(LAB)=8440. Possible analog of ^{93}Mo (3980 level).
12505?			(0)	EP(LAB)=8510. Reported by 1966Mo06 only; not adopted.
12584	(3/2 ⁺)	30 eV	(2)	$\Gamma_p=1.5$ eV EP(LAB)=8590. Possible analog of ^{93}Mo (4170 level).

[†] From E(p) at resonance and S(p)=4086.5 *10* (2003Au03,2009AuZZ).[‡] From $\sigma(E)$ (1966Mo06).[#] From analyzing power excitation functions (1969El08).[@] From 1969El08.