

$^{93}\text{Nb}(\text{p},\text{n}),(\text{p},\text{p}') \text{ IAR } 1968\text{Fi01},1972\text{Ke32}$

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	D. Abriola(a), A. A. Sonzogni		NDS 107, 2423 (2006)	1-Jan-2006

[1968Fi01](#): (p,n), E=4.6 MeV to 5.3 MeV. Measured neutron yield.

[1972Ke32](#): (p,p), (p,p'), (p,n), E=5.8 MeV to 7.6 MeV.

[1970Cu04](#): (p, α), E=4.7 MeV to 6.2 MeV. Measured angular distributions "on" and "off" resonances.

 ^{94}Mo Levels

E(level) [†]	J π [‡]	Comments
S(p)+4769	(6) ⁺	IAS: ^{94}Nb g.s.
S(p)+4812	3 ⁺	IAS: 40.9 keV.
S(p)+4830	(4) ⁺	IAS: 58.7 keV. From angular distribution in (p, α) 1970Cu04 conclude that the 4 ⁺ resonance is populated by d _{5/2} and s _{1/2} proton capture with $\Gamma(s_{1/2})/\Gamma(d_{5/2})=0.09$ 2.
S(p)+4848	(5,6,7) ⁺	IAS: 78.7 keV.
S(p)+4882	(5) ⁺	IAS: 113.4 keV.
S(p)+5083	(4,5) ⁺	IAS: 311.8 keV.
S(p)+5110	(3) ⁺	IAS: 334.1 keV. Angular distribution in (p, α) indicates pure d _{5/2} proton capture (1970Cu04).
S(p)+5738		
S(p)+5808		
S(p)+5847	(5) ⁺	IAS: 957.4 keV (1972Ke32); however, E(res)=5738 gives better energy agreement as IAS of 957.4 level. E(level): 5900 from (p,p').
S(p)+5966		
S(p)+5986	(2,3,4) ⁺	IAS: 1232 keV.
S(p)+6085	4 ⁺ ,5 ⁺	IAS: 1281 & 1321 keV. E(level): 6180 from (p,p').
S(p)+6292		IAS: 1499 & 1519 keV. E(level): 6380 from (p,p').
S(p)+6391		E(level): 6450 from (p,p').
S(p)+6441		
S(p)+6530		
S(p)+6619		E(level): 6700 from (p,p').
S(p)+6738		
S(p)+6856		

[†] E(res) in center-of-mass system. Resonances up to S(p)+5110 keV are from (p,n) of [1968Fi01](#); data for higher energies are from (p,n) reaction of [1972Ke32](#) and have been converted to center-of-mass system by the evaluator. If values from (p,p') differ from (p,n), the (p,p') energies are given under comments.

[‡] From analog states in ^{94}Nb .