^{148}Sm(p,p),(p,p′),(p,n) IAR   1967Jo04,1966Ba12

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen	NDS 185, 2 (2022)	23-Aug-2022

1967Jo04: E(p)=9.5-12.0 MeV beams from the Florida State University tandem Van de Graaff. Measured (p,p) excitation functions at θ=90°,125° and 165′, (p,n) excitation function at θ=90°. In (p,n) only the 9.9 6-MeV resonance was observed.

1966Ba12: E(p)=9.5-11.0 MeV beams from the Saclay tandem. Measured (p,p) excitation function at θ=124° and 164°, (p,p′) excitation function at θ=164°. In (p,p′) only the 10.48 MeV resonance was observed.

^{149}Eu Levels

E(level)[†]	J^π	$T_{1/2}$[#]	L[‡]	Comments
14287[@]	$(7/2^-)$	102 keV	3	Γ(p)≈10 keV. E(p)=9.96 MeV. J^π: L=3; IAR of $7/2^-$, g.s. in ^{149}Sm.
14635	$(3/2^-)$			E(p)=10.31 MeV. J^π: IAR of $3/2^-$, 350 in ^{149}Sm.
14804[@]	$(3/2^-)$	≈50 keV	1	Γ(p)≈7 keV. E(p)=10.48 keV. J^π: L=1; IAR of $3/2^-$, 528 in ^{149}Sm.
15002	$(1/2^-,3/2^-)$		(1)	E(p)=10.68 MeV. J^π: L=(1); IAR of $(3/2)^-$, 697 in ^{149}Sm. This state could also be the IAR of $(3/2^+,5/2^+)$, 710 in ^{149}Sm, although, parity is inconsistent with L-transfer.
15310	$(1/2^-,3/2^-)$		(1)	E(p)=10.99 MeV. J^π: L=(1); IAR of (<5/2), 1012 in ^{149}Sm.
15449	$(5/2^-)$		(3)	E(p)=11.13 MeV. J^π: L=(3); IAR of $5/2^-$, 1187 in ^{149}Sm. All other levels near this energy in ^{149}Sm are of positive parity.
15787				Parent: there are 3-5 levels in this energy range. But definite identification is not possible on the basis of the present data. E(p)=11.47 MeV.

† From 1967Jo04 with S(p)=4394 4 keV (2021Wa16).
‡ From 1967Jo04.
# From 1967Jo04. 1966Ba12 report higher values: Γ≈100 keV and Γ(p)≈30 keV for both resonances.
@ Reported by 1967Jo04 and 1966Ba12.