^{148}Sm(n,γ),(n,n):resonances   1993Ge07,2018MuZZ

History

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

2018MuZZ: compilation and evaluation of neutron resonances.

1993Ge07: measured neutron resonances, Γ_n, Γ_γ using multisectional scintillation detector, and IBR-30 pulse booster at neutron physics laboratory of JINR, Dubna.

Others:

1999Du16: E(n)=10-90, 550 keV. Measured cross sections.

2002Le26: E(n)≈0-30 eV; resonance parameters.

1993Wi12: E(n)=3-225 keV: measured s.

1976SmZP, 1970SmZZ: no details are available.

All data are from 2018MuZZ.

^{149}Sm Levels

S(n)(^{149}Sm)=5871.1 keV 9 (2021Wa16).

E(level)	J$^{\pi\dagger}$	L	Comments
S(n)-0.0110? 1	1/2$^+$	0	Fictitious resonance.
S(n)+0.0949 1	1/2$^+$	0	Γ_n=385 meV 35.
S(n)+0.1402 6	1/2$^+$	0	Γ_n=34 meV 4, Γ_γ=43 meV 9.
S(n)+0.1844 1	1/2$^+$	0	Γ_n=780 meV 70.
S(n)+0.2882 1	1/2$^+$	0	Γ_n=410 meV 40, Γ_γ=51 meV 10.
S(n)+0.4220 2	1/2$^+$	0	Γ_n=208 meV 20, Γ_γ=43 meV 7.
S(n)+0.5135 2	1/2$^+$	0	Γ_n=735 meV 70, Γ_γ=41 meV 10.
S(n)+0.5574 3	1/2$^+$	0	Γ_n=92 meV 15, Γ_γ=42 meV 10.
S(n)+0.6229 3	1/2$^+$	0	Γ_n=580 meV 50, Γ_γ=40 meV 10.
S(n)+0.8831 4	1/2$^+$	0	Γ_n=1.05 eV 15, Γ_γ=53 meV 20.
S(n)+0.9096 5	1/2$^+$	0	Γ_n=2.40 eV 30.
S(n)+1.010 1			
S(n)+1.157 1			
S(n)+1.180 1			
S(n)+1.385 2			
S(n)+1.478 2			
S(n)+1.699 2			
S(n)+1.960 2			
S(n)+2.053 2			
S(n)+2.415 4			
S(n)+2.955 6			

† Parity from L=0 (s-wave) resonance.