^{149}Sm(γ,γ):Mossbauer 2000Ki15,2001Ro39,1972Ei05

History

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

2001Ro39: coherent Nuclear resonance scattering of synchrotron radiation. Application of 'nuclear lighthouse effect (NLE)' which provides a direct mapping of the nuclear response time to an angular scale via resonant scattering from rotating samples. Sample of $^{149}Sm_2O_3$ rotating at 15 kHz. Measured time spectrum of the delayed radiation scattered from the Sm sample. Deduced energy of the transition.
2000Ki15: nuclear resonance scattering of synchrotron radiation.
1972Ei05, 1964Al19, 1962Jh04: measured Mossbauer spectrum.
2012Ts01: measured nuclear resonant inelastic spectra. Deduced a dip structure, and phonon excitations in ^{149}Sm.
2006Ts03: measured Mossbauer spectra in several compounds of ^{149}Sm.
Others: 1976Co14 (isomer shifts), 1962Al13.

^{149}Sm Levels

E(level)	J^{π} †	$T_{1/2}$ †
0.0	$7/2^-$	
22.496 *4*	$5/2^-$	7.33 ns *9*

† From the Adopted Levels.

γ(^{149}Sm)

E_γ	E_i(level)	J_i^π	E_f	J_f^π	Comments
22.496 *4*	22.496	$5/2^-$	0.0	$7/2^-$	E_γ: from 2001Ro39. Other: 22.496 *22* (2000Ki15).

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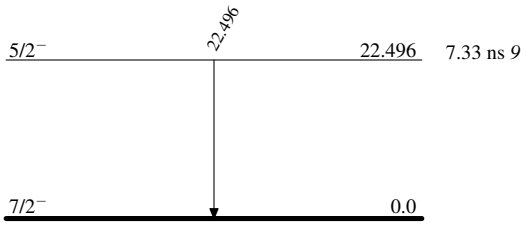
Level Scheme



$^{149}_{62}Sm_{87}$