^{147}Sm(n,γ) E=3.4 eV 1972Ge12

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 117, 1 (2014)	1-Oct-2013

Primary neutron capture gammas from the 3.4 eV resonance of ^{147}Sm were studied by 1972Ge12; 1970Bu19 measured average-resonance neutron capture spectra using the Argonne in-pile (n,γ) facility.
Others: 1968SpZZ, 1964Ka30, 1957Fe31.

^{148}Sm Levels

E(level)	Jπ†	Comments
0.0	0+	
550.5	2+	Jπ: 2+.
1453	2+	Jπ: 2+.
1648.6?		Jπ: 2,3,4.
1663.4	2+	Jπ: 2+.
1894.1	4+	Jπ: 4+.
1970.9	2+	Jπ: 2,3,4.
2110.7	4+	Jπ: 3+,4+.
2142.5	(2,3,4)	Jπ: 2,3,4.
2227.6	4+	Jπ: 3+,4+.
2326.8	4+	Jπ: 4+,(2+,3+).
2389.2	3+	Jπ: 3+,4+.
2524.2	4+	Jπ: 3+,4+.
8141.6‡ *4*	3−	

† Adopted values; Jπ assignments based on 3.4 eV and average resonance neutron capture data of 1970Bu19 are given in comments.
‡ Corresponds to neutron resonance with E(n)=3.4 eV.

γ(^{148}Sm)

Eγ†	Iγ#	Ei(level)	Jiπ	Ef	Jfπ	Eγ†	Iγ#	Ei(level)	Jiπ	Ef	Jfπ
5616.4 *9*	217 *33*	8141.6	3−	2524.2	4+	6170.7‡ *10*	145 *23*	8141.6	3−	1970.9	2+
5752.4 *9*	114 *21*	8141.6	3−	2389.2	3+	6247.5 *3*	1000 *80*	8141.6	3−	1894.1	4+
5814.8‡ *8*	145 *35*	8141.6	3−	2326.8	4+	6478.2 *6*	471 *56*	8141.6	3−	1663.4	2+
5914.0 *4*	263 *37*	8141.6	3−	2227.6	4+	6493.0‡@ *8*	16 *7*	8141.6	3−	1648.6?	
5999.1‡ *10*	107 *25*	8141.6	3−	2142.5	(2,3,4)	6688.0 *3*	78 *17*	8141.6	3−	1453	2+
6030.9 *4*	42 *19*	8141.6	3−	2110.7	4+	7591.1 *3*	363 *44*	8141.6	3−	550.5	2+

† From 1970Bu19, except where noted otherwise.
‡ Observed only by 1972Ge12, not observed by 1970Bu19.
# Relative intensity (1972Ge12).
@ Placement of transition in the level scheme is uncertain.

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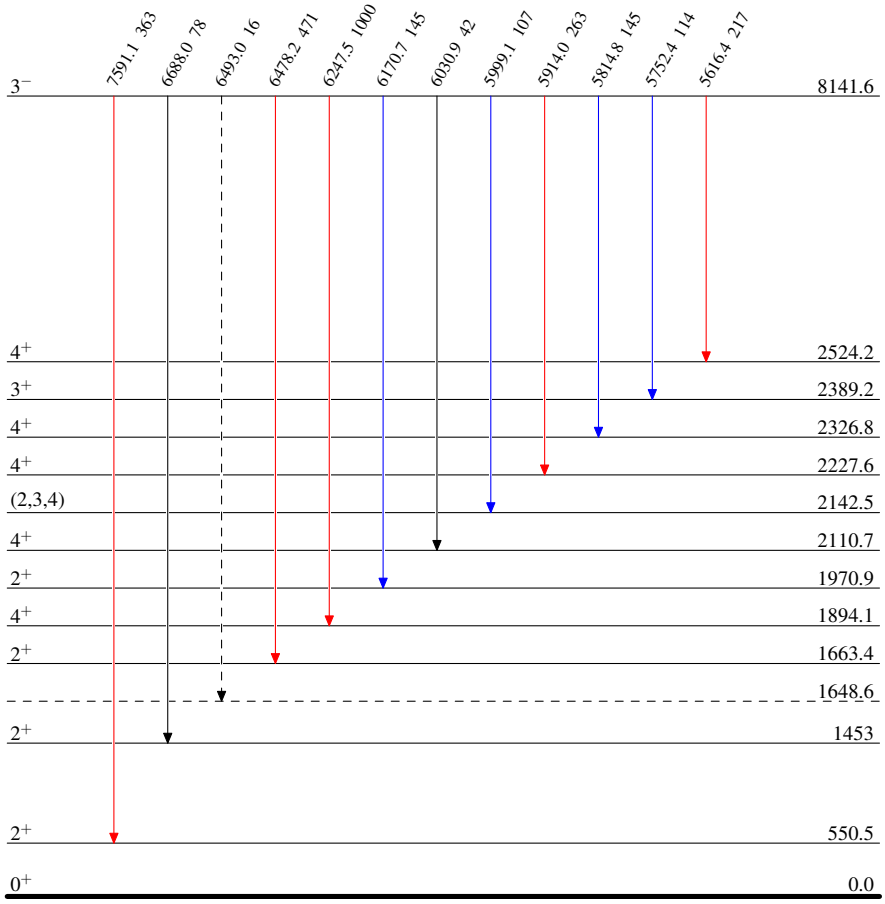
Level Scheme

Intensities: Relative I_γ

Legend

- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)



$^{148}_{62}Sm_{86}$