(HI,xnγ) 1999As05

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. W. Reich	NDS 113, 2537 (2012)	1-Mar-2012

Additional information 1.

Measured deep-inelastic reactions to investigate spin production as a function of target and projectile mass.

Reactions studied: ^{154}Sm+^{176}Yb, E(^{154}Sm)=949 MeV, two stacked targets 0.5 mg/cm^2 thick and enriched to 97.8% in ^{176}Yb; ^{154}Sm+^{208}Pb, E(^{154}Sm)=1 GeV, one target 1.0 mg/cm^2 thick and enriched to 99.9% in ^{208}Pb. Recoiling fragments detected using a specially segmented Si strip detector. γ radiation studied using the Gammasphere array having 55 high-purity Compton-suppressed Ge detectors. Measured particle-γγγ coincidences. Report Eγ, E(level), for a range of Yb and Sm nuclides, one of which is ^{156}Sm.

^{156}Sm Levels

E(level)†	Jπ‡
0#	0+
76.0#	2+
250.0#	4+
517.0#	6+
870.0?#	8+
1307.0?#	10+
1819.0?#	12+
2402.0?#	14+

† Computed from the Eγ values.
‡ From the adopted values.
# Band(A): Kπ=0+ g.s. band.

γ(^{156}Sm)

Eγ†	Ei(level)	J^π_i	Ef	J^π_f
76.0	76.0	2+	0	0+
174.0	250.0	4+	76.0	2+
267.0	517.0	6+	250.0	4+
353.0‡	870.0?	8+	517.0	6+
437.0‡	1307.0?	10+	870.0?	8+
512.0‡	1819.0?	12+	1307.0?	10+
583.0‡	2402.0?	14+	1819.0?	12+

† Note that all the Eγ values have a zero in the "tenths-of-a-keV" position.
‡ Placement of transition in the level scheme is uncertain.

Legend

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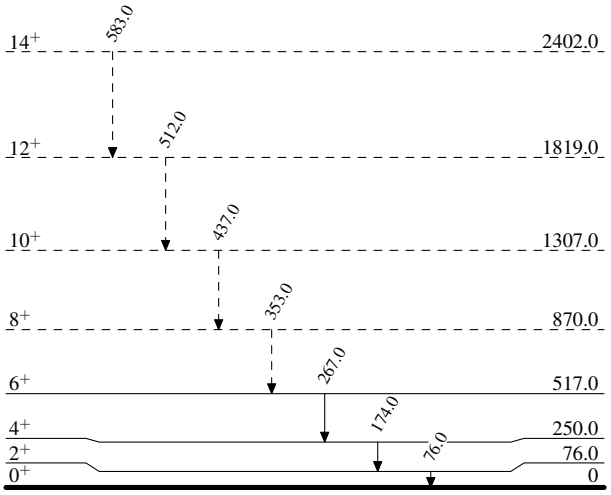
Level Scheme

γ Decay (Uncertain)



$^{156}_{62}Sm_{94}$

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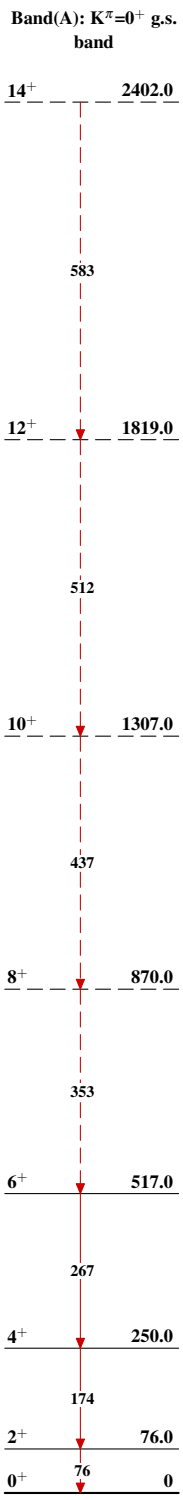

$^{156}_{62}Sm_{94}$