

<sup>149</sup>Sm(<sup>35</sup>Cl,5n $\gamma$ ) 2004So08

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 110, 265 (2009)	15-Nov-2008

E=180 MeV;enriched <sup>149</sup>Sm target with Pb backing;  $\gamma$  detector array (13 HPGe detectors with BGO anti-Compton shields, three LOAX detectors for low-energy  $\gamma$  rays), detectors At 90°, 72°, 35°; measured E $\gamma$ , I $\gamma$ ,  $\gamma\gamma$ (t), x- $\gamma$ (t), excit (E=164, 178, 180 MeV). reliable DCO ratios could not Be extracted due to poor statistics.

<sup>179</sup>Au Levels

E(level) <sup>†</sup>	J $\pi$ <sup>‡</sup>
0.0+y	(9/2 <sup>-</sup> ) <sup>#</sup>
21.5+y @ 15	(7/2 <sup>-</sup> ) <sup>#</sup>
242.0+y @ 10	(11/2 <sup>-</sup> ) <sup>#</sup>
387.0+y & 15	(13/2 <sup>+</sup> )
539.5+y & 18	(17/2 <sup>+</sup> )
801.0+y & 20	(21/2 <sup>+</sup> )
1154.5+y & 23	(25/2 <sup>+</sup> )
1588.5+y & 25	(29/2 <sup>+</sup> )
2095+y & 3	(33/2 <sup>+</sup> )

<sup>†</sup> From E $\gamma$ , assigning an uncertainty of 1 keV to all data.

<sup>‡</sup> Authors' values.

<sup>#</sup> From Adopted Levels.

@ Band(A):  $\pi=-$  band fragment.

& Band(B): ( $\pi$  i<sub>13/2</sub>),  $\alpha=+1/2$  band. 1/2[660] proton intruder band; assignment supported by observed alignment (5.5 $\hbar$ ). see 2004So20 for discussion of the systematic properties of 1/2[660] bands In odd-A Au nuclei.

$\gamma$ (<sup>179</sup>Au)

E $\gamma$ <sup>†</sup>	E <sub>i</sub> (level)	J $\pi$ <sub>i</sub>	E <sub>f</sub>	J $\pi$ <sub>f</sub>	Mult. <sup>‡</sup>	$\alpha$ <sup>#</sup>	Comments
145.0	387.0+y	(13/2 <sup>+</sup> )	242.0+y	(11/2 <sup>-</sup> )	(E1)	0.1619	transition is presumably a doublet feeding both the (11/2 <sup>-</sup> ) state shown here and the (13/2 <sup>-</sup> ) state in Adopted Levels, Gammas which the E2 242 $\gamma$ deexcites.
152.5	539.5+y	(17/2 <sup>+</sup> )	387.0+y	(13/2 <sup>+</sup> )	(E2)	0.985	Mult.: based on authors' estimate (unstated) of $\alpha$ (exp). Mult.: $\alpha$ (exp)=0.9, assuming Ti(261.5 $\gamma$ )=Ti(152.5 $\gamma$ ) In spectrum gated on 353.5 $\gamma$ and adopted mult(261.5 $\gamma$ )=(E2); rules out E1 and M2.
220.5	242.0+y	(11/2 <sup>-</sup> )	21.5+y	(7/2 <sup>-</sup> )			placement not adopted; it differs from that In Adopted Levels, Gammas where this $\gamma$ deexcites a (13/2 <sup>-</sup> ) level with almost identical energy.
242.0	242.0+y	(11/2 <sup>-</sup> )	0.0+y	(9/2 <sup>-</sup> )			
261.5	801.0+y	(21/2 <sup>+</sup> )	539.5+y	(17/2 <sup>+</sup> )			
353.5	1154.5+y	(25/2 <sup>+</sup> )	801.0+y	(21/2 <sup>+</sup> )			
434.0	1588.5+y	(29/2 <sup>+</sup> )	1154.5+y	(25/2 <sup>+</sup> )			
506.5	2095+y	(33/2 <sup>+</sup> )	1588.5+y	(29/2 <sup>+</sup> )			

<sup>†</sup> From 2004So08; uncertainties unstated by authors.

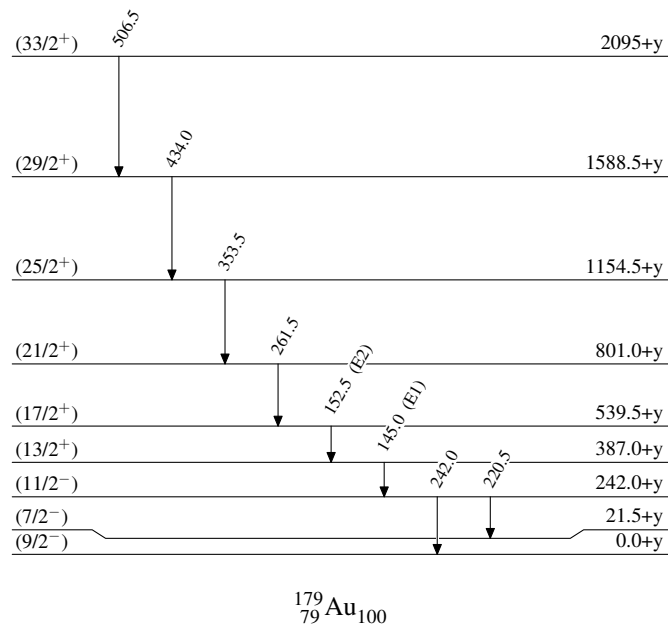
<sup>‡</sup> Authors do not report any I $\gamma$  data but claim that observed intensity balance At each level is consistent with multipolarities

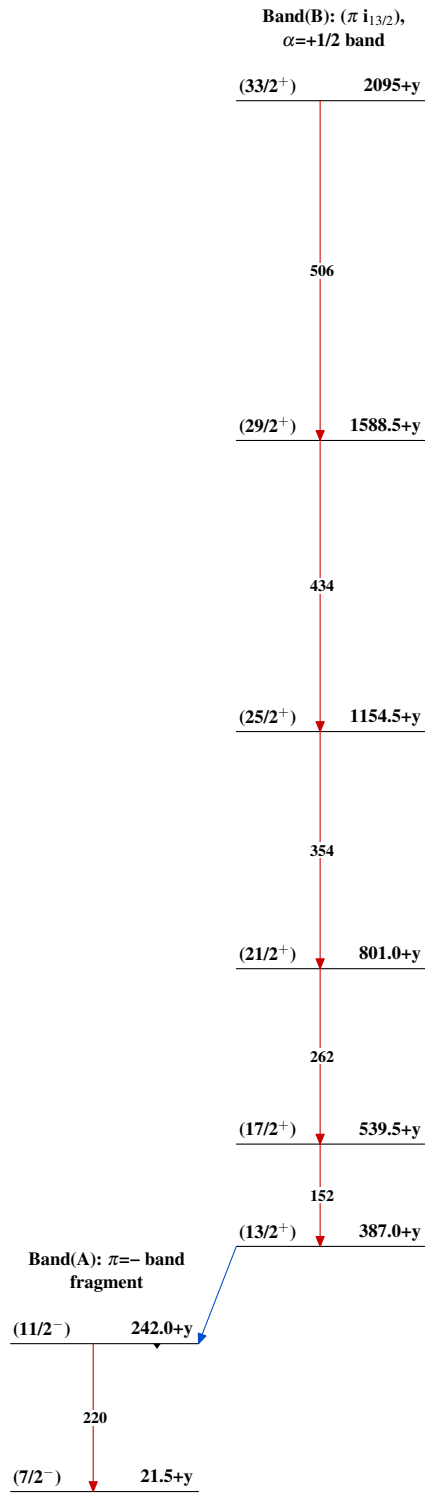
Continued on next page (footnotes at end of table)

$^{149}\text{Sm}(^{35}\text{Cl},5n\gamma)$  2004So08 (continued) $\gamma(^{179}\text{Au})$  (continued)

implied by their level scheme.

# Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on  $\gamma$ -ray energies, assigned multiplicities, and mixing ratios, unless otherwise specified.

 $^{149}\text{Sm}(^{35}\text{Cl},5n\gamma)$  2004So08Level Scheme

$^{149}\text{Sm}(^{35}\text{Cl},5n\gamma)$  2004So08 $^{179}_{79}\text{Au}_{100}$