

**Adopted Levels, Gammas**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong	NDS 108, 1093 (2007)	1-Jan-2006

Q( $\beta^-$ )=-5.88×10<sup>3</sup> 4; S(n)=8.51×10<sup>3</sup> 4; S(p)=1.4×10<sup>2</sup> 5; Q( $\alpha$ )=7198 4 [2012Wa38](#)

Note: Current evaluation has used the following Q record.

Q( $\beta^-$ )=-5894 62; S(n)=8518 61; S(p)=138 72; Q( $\alpha$ )=7198 50 [2003Au03](#)

<sup>196</sup>At Levels

Cross Reference (XREF) Flags

- A <sup>200</sup>Fr  $\alpha$  decay
- B <sup>165</sup>Ho(<sup>36</sup>Ar,5n)

E(level)	J <sup><math>\pi</math></sup>	T <sub>1/2</sub>	XREF	Comments
0.0	(3 <sup>+</sup> )	0.388 s 7	AB	% $\alpha$ ≈95.1; % $\epsilon$ +% $\beta^+$ ≈4.9 J <sup><math>\pi</math></sup> : From systematics of odd-odd nuclide. Configuration=( $\pi$ (1h <sub>9/2</sub> ) $\nu$ (3p <sub>3/2</sub> ))(2000Sm06). From partial T <sub>1/2</sub> for $\beta$ decay≈5.2 s from gross beta decay theory(1997Mo25). % $\alpha$ : Only alpha decay mode observed (1997Pu01). T <sub>1/2</sub> : from RDT (2000Sm06). Others: 0.253 S 9 (1997Pu01), 0.3 S 1 (1967Tr06), 0.39 S +27-12 (1996En01).
157.9 1	(5 <sup>+</sup> )	11 $\mu$ s 2	B	J <sup><math>\pi</math></sup> : E2 $\gamma$ to (3 <sup>+</sup> ) g.s. T <sub>1/2</sub> : from RDT (2000Sm06).

$\gamma$ (<sup>196</sup>At)

E <sub>i</sub> (level)	J <sub>i</sub> <sup><math>\pi</math></sup>	E <sub><math>\gamma</math></sub>	I <sub><math>\gamma</math></sub>	E <sub>f</sub>	J <sub>f</sub> <sup><math>\pi</math></sup>	Mult.	$\alpha^\dagger$	Comments
157.9	(5 <sup>+</sup> )	157.9 1	100	0.0	(3 <sup>+</sup> )	E2	1.21	$\alpha$ (K)exp=0.34 14(2000Sm06) $\alpha$ (K)=0.269 8; $\alpha$ (L)=0.694 21; $\alpha$ (M)=0.185 6; $\alpha$ (N+..)=0.0634 19 B(E2)(W.u.)=0.005 Mult.: from $\alpha$ (K).

† 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.

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**Adopted Levels, Gammas**Level Scheme

Intensities: Relative photon branching from each level

