

^{196}Au β^- decay (6.1669 d) [1962Li03,1962Wa16](#)

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

Parent: ^{196}Au : $E=0.0$; $J^\pi=2^-$; $T_{1/2}=6.1669$ d 6; $Q(\beta^-)=687$ 3; $\% \beta^-$ decay=7.0 3

^{196}Au - $T_{1/2}$: From [2001Li17](#).

Source prepared by $^{196}\text{Pt}(d,2n)$, enriched target, chem; and $^{197}\text{Au}(n,2n)$ with Au, Cd filters ([1962Li03,1962Wa16](#)).

 ^{196}Hg Levels

E(level)	J^π	$T_{1/2}$	Comments
0.0	0^+	stable	
426.10 20	2^+	13.6 ps 20	$T_{1/2}$: from delayed coin (1963De21).

 β^- radiations

E(decay)	E(level)	$I\beta^-^\dagger$	Log ft	Comments
259 4	426.10	6.85 25	6.999 23	av $E\beta=72.16$ 91 E(decay): determined from measurements of β^- spectrum in coincidence with 426 γ , scin (1962Li03).
(687 ‡ 3)	0.0	<0.3	>10.0 1u	av $E\beta=219.7$ 11 $I\beta^-$: not observed; estimated from β^- systematics in neighboring nuclei (log $ft>8.5$).

† Absolute intensity per 100 decays.

‡ Existence of this branch is questionable.

 $\gamma(^{196}\text{Hg})$

E_γ	$I_\gamma^\dagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	$\alpha^\ddagger$	Comments
426.10 8	100	426.10	2^+	0.0	0^+	E2	0.0402	$\alpha(K)=0.0277$ 4; $\alpha(L)=0.00942$ 14; $\alpha(M)=0.00234$ 4; $\alpha(N+..)=0.000690$ 10 E_γ : weighted av: 426.09 8 (1962Wa16), 426.13 15 (1961Be14). Mult.: supported by $\alpha(L+M)\text{exp}=0.009$ 3 (1952St40); E2 theory: $\alpha(L)=0.0095$, $\alpha(M)=0.0024$. Mult.: K/L=2.75 28 (1958An52), E2 theory: K/L=2.92.

† For absolute intensity per 100 decays, multiply by 0.066 3.

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

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Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays

Legend

