

$^{197}\text{Au}(\text{p},2\text{n}\gamma)$ 1986VeZU,1974Ya03,1965Sa11

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

1986VeZU, 1985VeZZ: E(p)=12 MeV. Measured E_γ , I_γ , Ice, $\gamma\gamma$ -coin. Magnetic lens, Si(Li).

1974Ya03: E(p)=14 MeV. Measured E_γ , I_γ , $\gamma\gamma$ -coin. Ge(Li).

1965Sa11: E(p)=12-14 MeV. Measured $\sigma(E,E(\text{ce}))$, α . Double focusing β^- spectrometer.

Others: 1990HeYY: measured Ice.

The level scheme and data are from 1986VeZU, except where noted.

 ^{196}Hg Levels

E(level) [†]	J ^π [‡]	T _{1/2}	Comments
0.0 [#]	0 ⁺	stable	
425.66 [#] 18	2 ⁺		
1036.19 21	1 ⁺ , 2 ⁺		
1060.84 [#] 22	4 ⁺		
1390.27 24	(2 ⁺ , 3, 4 ⁺)		
1450.9 5	0 ⁺		E(level): identified new level (1986VeZU), also seen in (p,t). Intruder proton configuration. X(I11)=0.059 11, 5 times larger than the vibrator value (0.017) (1985VeZZ).
1644.1 3	0 ⁺		E(level): identified new level (1986VeZU), also seen in (p,t). Intruder proton configuration. X(I11)=0.076 15, X(I12)=0.006 2 (1985VeZZ).
1695.3 3	(2 ⁺ , 3, 4 ⁺)		E(level): identified new level (1986VeZU).
1756.4 3	5 ⁻		
1774.4 3	2 ⁺ , 3, 4 ⁺		
1784.4 [#] 3	(6 ⁺)		
1814.6 3	(2 ⁺ , 3 ⁺)		
1840.4 6	7 ⁻	5.6 ns 6	T _{1/2} : from $\gamma\gamma$ (t) (1974Ca30).
1921.5 9	(2 ⁺ , 3 ⁺)		
1978.8 6	1, 2 ⁺		
1985.3 4	1 ⁺ , 2, 3, 4 ⁺		
1987.67 25	(2 ⁺ , 3, 4 ⁺)		
2012.1 3	(2 ⁺)		
2043.6 4	(2 ⁺ , 3, 4 ⁺)		
2261.8 [#] 4	(8 ⁺)		

[†] From least-squares fit to E_γ 's.

[‡] From Adopted Levels.

[#] Band(A): positive-parity g.s. band.

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

E_γ [†]	I_γ [@]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ [†]	I_γ [@]	$E_i(\text{level})$	J_i^π	E_f	J_f^π
84.0 5	100	1840.4	7 ⁻	1756.4	5 ⁻	635.2 2	100	1060.84	4 ⁺	425.66	2 ⁺
329.6 2	13	1390.27	(2 ⁺ , 3, 4 ⁺)	1060.84	4 ⁺	653.5 3	100	2043.6	(2 ⁺ , 3, 4 ⁺)	1390.27	(2 ⁺ , 3, 4 ⁺)
354.0 2	22	1390.27	(2 ⁺ , 3, 4 ⁺)	1036.19	1 ⁺ , 2 ⁺	659.1 2	100	1695.3	(2 ⁺ , 3, 4 ⁺)	1036.19	1 ⁺ , 2 ⁺
425.7 2	100	425.66	2 ⁺	0.0	0 ⁺	695.6 2	100	1756.4	5 ⁻	1060.84	4 ⁺
477.4 2	100	2261.8	(8 ⁺)	1784.4	(6 ⁺)	713.6 2	100	1774.4	2 ⁺ , 3, 4 ⁺	1060.84	4 ⁺
595.0 3	100	1985.3	1 ⁺ , 2, 3, 4 ⁺	1390.27	(2 ⁺ , 3, 4 ⁺)	723.6 2	100	1784.4	(6 ⁺)	1060.84	4 ⁺
607.9 3	23	1644.1	0 ⁺	1036.19	1 ⁺ , 2 ⁺	738.2 3	38	1774.4	2 ⁺ , 3, 4 ⁺	1036.19	1 ⁺ , 2 ⁺
610.5 2	100	1036.19	1 ⁺ , 2 ⁺	425.66	2 ⁺	753.8 2	71	1814.6	(2 ⁺ , 3 ⁺)	1060.84	4 ⁺
634.4 3	100	1695.3	(2 ⁺ , 3, 4 ⁺)	1060.84	4 ⁺	778.4 3	25	1814.6	(2 ⁺ , 3 ⁺)	1036.19	1 ⁺ , 2 ⁺

Continued on next page (footnotes at end of table)

$^{197}\text{Au}(\text{p},2\text{n}\gamma)$ **1986VeZU,1974Ya03,1965Sa11** (continued) $\gamma(^{196}\text{Hg})$ (continued)

E_γ [†]	I_γ [@]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [‡]	Comments
926.8 2	100	1987.67	(2 ⁺ ,3,4 ⁺)	1060.84	4 ⁺		
951.3 4	46	2012.1	(2) ⁺	1060.84	4 ⁺		
951.5 2	100	1987.67	(2 ⁺ ,3,4 ⁺)	1036.19	1 ⁺ ,2 ⁺		
964.6 4	100	1390.27	(2 ⁺ ,3,4 ⁺)	425.66	2 ⁺		
976.1 4	19	2012.1	(2) ⁺	1036.19	1 ⁺ ,2 ⁺		
982.4 4	40	2043.6	(2 ⁺ ,3,4 ⁺)	1060.84	4 ⁺		
1025.2 7	100	1450.9	0 ⁺	425.66	2 ⁺		
1036.2 6	23	1036.19	1 ⁺ ,2 ⁺	0.0	0 ⁺		
1218.3 7	100	1644.1	0 ⁺	425.66	2 ⁺		
1269.8 7	45	1695.3	(2 ⁺ ,3,4 ⁺)	425.66	2 ⁺		
1349.1 7	96	1774.4	2 ⁺ ,3,4 ⁺	425.66	2 ⁺		
1389.0 7	100	1814.6	(2 ⁺ ,3 ⁺)	425.66	2 ⁺		
1450.9 [#] 7		1450.9	0 ⁺	0.0	0 ⁺	E0	Mult.: from ce spectrum of 1985VeZZ , No corresponding photon peak.
1495.8 8	100	1921.5	(2 ⁺ ,3 ⁺)	425.66	2 ⁺		
1553.0 8	100	1978.8	1,2 ⁺	425.66	2 ⁺		
1559.7 8	88	1985.3	1 ⁺ ,2,3,4 ⁺	425.66	2 ⁺		
1586.7 8	98	2012.1	(2) ⁺	425.66	2 ⁺		
1644.1 [#] 7		1644.1	0 ⁺	0.0	0 ⁺	E0	Mult.: from ce spectrum of 1985VeZZ , No corresponding photon peak.
1979.0 8	33	1978.8	1,2 ⁺	0.0	0 ⁺		
2011.3 8	100	2012.1	(2) ⁺	0.0	0 ⁺		

[†] From **1986VeZU**, ΔE estimated by evaluators.[‡] From ce spectrum of **1985VeZZ**, no corresponding photon peak.[#] ΔE from **1985VeZZ**, identified from singles ce and γ -ray spectra.[@] Relative photon branching from each level (**1986VeZU**).

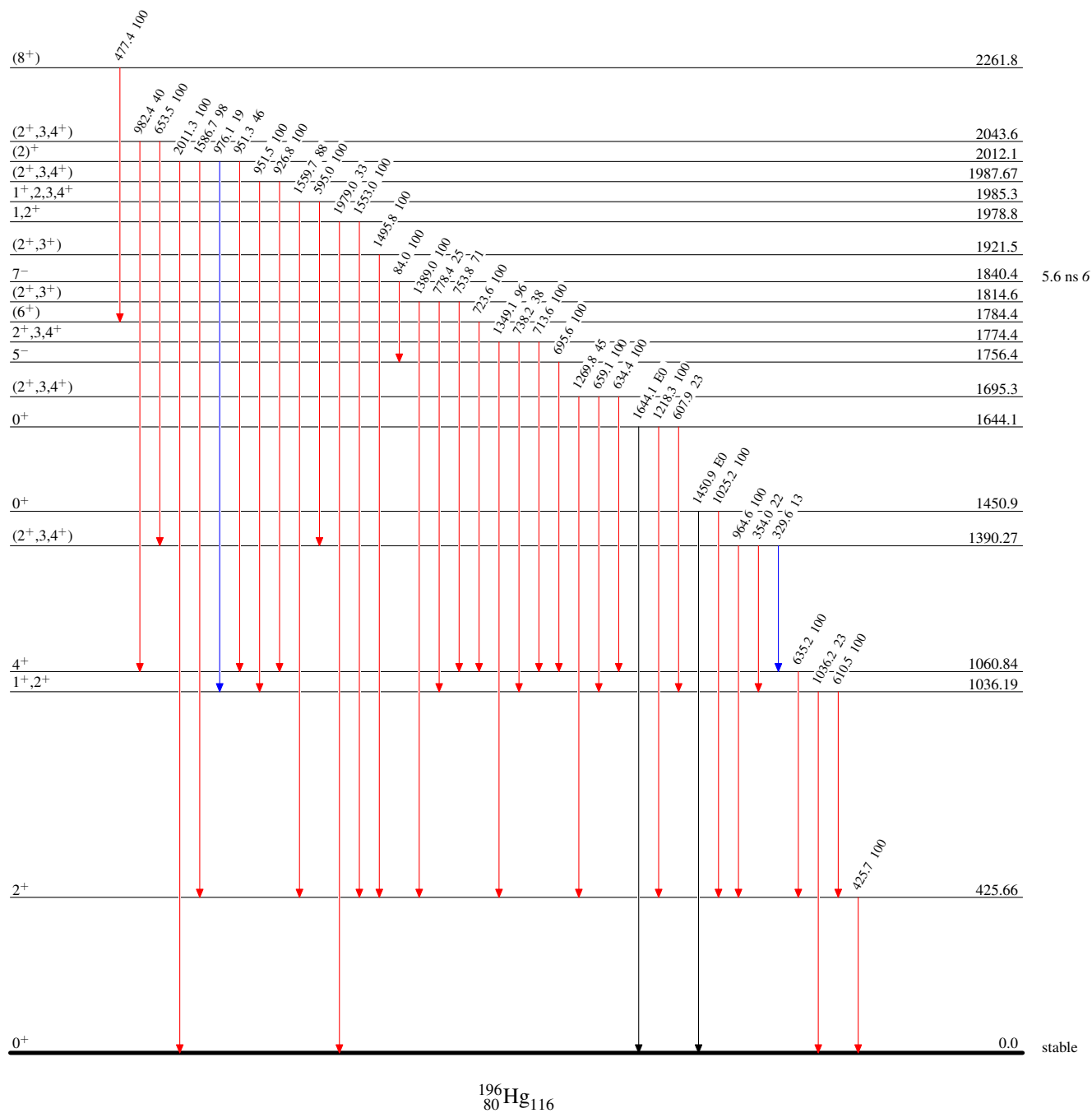
$^{197}\text{Au}(\text{p},2\text{n}\gamma)$ 1986VeZU,1974Ya03,1965Sa11

Level Scheme

Intensities: Relative I_γ

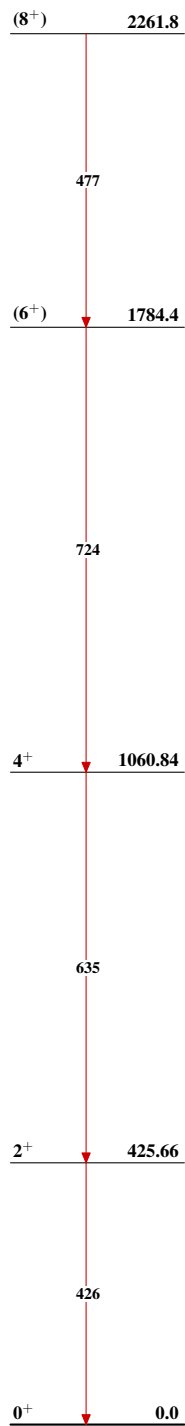
Legend

$\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\text{max}}$



$^{197}\text{Au}(\text{p},2\text{n}\gamma)$ 1986VeZU,1974Ya03,1965Sa11

Band(A): Positive-parity
g.s. band



$^{196}_{80}\text{Hg}_{116}$