^{196}Ir β^- decay (52 s) 1977Ha32,1968Ja06,1967Mo10

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

Parent: ^{196}Ir: E=0.0; J^π=(0$^-$); $T_{1/2}$=52 s *2*; Q(β^-)=3209 *38*; %β^- decay=100.0
1977Ha32: source in secular equilibrium with its ^{196}Os parent.
1968Ja06: source: ^{196}Pt(n,p); no chem; γ, ce; semi, coin, $\gamma\gamma(\theta)$.
1967Mo10, 1966Vo05: enriched target, no chem; γ, ce; cryst, semi, coin.
Others: 1954Bu02, 1954Bu83, 1965Bi04, 1967JaZZ.

^{196}Pt Levels

E(level)†	J^π‡	$T_{1/2}$‡	Comments
0.0	0$^+$	stable	
355.65 *19*	2$^+$		
689.20 *24*	2$^+$		
1135.61 *25*	0$^+$		J^π: supported by angular correlation; low intensity of 1135γ (1968Ja06).
1402.6 *3*	0$^+$		J^π: supported by log *ft*.
1824.1 *3*	0$^+$		J^π: supported by log *ft*.
1918.83 *25*	0$^+$		J^π: supported by log *ft*.

† From least-squares fit to Eγ's.
‡ From the Adopted Levels. Contributing arguments from this data set are given as comments.

β^- radiations

β feeding determined from a detailed intensity balance at each level,except as noted.

E(decay)	E(level)	Iβ^-†	Log *ft*	Comments
(1.29×10^3 *4*)	1918.83	1.1 *4*	6.09 *17*	av Eβ=445 *16*
(1.38×10^3 *4*)	1824.1	1.0 *4*	6.24 *18*	av Eβ=484 *16*
(1.81×10^3 *4*)	1402.6	1.3 *4*	6.56 *14*	av Eβ=658 *16*
2.1×10^3 *2*	1135.61	15 *3*	5.73 *10*	av Eβ=771 *17* E(decay): Eβ=2100, Iβ=15% from 1967Mo10; ΔE,ΔIβ estimated by evaluators.
(2.52×10^3 *4*)	689.20	<0.2	>9.2^{1u}	av Eβ=937 *16*
(2.85×10^3 *4*)	355.65	1.0 *7*	8.8^{1u} *3*	av Eβ=1079 *17*
3210 *40*	0.0	80 *4*	5.75 *4*	av Eβ=1265 *17* E(decay): weighted avg: 3190 *60* (1966Vo05, energy standard corrected by evaluators), 3250 *60* (1967Mo10,ΔE not given by 1967Mo10 but estimated by evaluators). Iβ^-: weighted av: 85 *6* (1967Mo10, ΔIβ assigned by evaluators), 77 *5* (1966Vo05).

† Absolute intensity per 100 decays.

$\gamma(^{196}Pt)$

Iγ normalization: Normalized to 80% 4 b- decay to g.s. (1966Vo05,1967Mo10,1968Ja06).

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^{196}Ir β^- decay (52 s) 1977Ha32,1968Ja06,1967Mo10 (continued)

$\gamma(^{196}Pt)$ (continued)

E_γ[†]	I_γ[†@]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[&]	Comments
332.9 *2*	21.4 *12*	689.20	2^+	355.65	2^+	E0+M1+E2	0.15 *8*	α(K)=0.12 *8*; α(L)=0.025 *6*; α(M)=0.0060 *12*; α(N+..)=0.0017 *4* α(L): From α(K)exp and K/L/MNO, E2 theory. Mult.: see ^{196}Au ε decay.
355.7 *2*	100	355.65	2^+	0.0	0^+	E2	0.0603	α(K)=0.0402 *6*; α(L)=0.01519 *22*; α(M)=0.00377 *6*; α(N+..)=0.001081 *16* Mult.: see ^{196}Au ε decay.
446.8 *2*	21.6 *8*	1135.61	0^+	689.20	2^+	E2	0.0328	α(K)=0.0235 *4*; α(L)=0.00703 *10*; α(M)=0.001721 *25*; α(N+..)=0.000496 *7* I_γ: From I(γ+ce)/(1+α) and required for intensity balance at 689 and 1136 level. Measured Iγ: 31.8 *12* (1977Ha32).
779.6 *2*	60.7 *23*	1135.61	0^+	355.65	2^+	E2	0.00908	α(K)=0.00720 *10*; α(L)=0.001445 *21*; α(M)=0.000342 *5*; α(N+..)=9.96×10^{-5} *14*
([x]1006)	<2							
1047.0 *2*	5.8 *6*	1402.6	0^+	355.65	2^+	(E2)	0.00500	α(K)=0.00406 *6*; α(L)=0.000720 *10*; α(M)=0.0001681 *24*; α(N+..)=4.92×10^{-5} *7*
(1135)	<1[‡]	1135.61	0^+	0.0	0^+	E0		
1228.6 *2*	1.9 *9*	1918.83	0^+	689.20	2^+	[E2]	0.00368	α(K)=0.00301 *5*; α(L)=0.000508 *8*; α(M)=0.0001179 *17*; α(N+..)=4.16×10^{-5} *6*
(1402)	<2.5[‡]	1402.6	0^+	0.0	0^+	E0		
1468.4 *2*	5.0 *14*	1824.1	0^+	355.65	2^+	[E2]	0.00268	α(K)=0.00217 *3*; α(L)=0.000351 *5*; α(M)=8.10×10^{-5} *12*; α(N+..)=8.03×10^{-5} *12*
1564.2 *2*	4.0 *8*	1918.83	0^+	355.65	2^+	[E2]	0.00242	α(K)=0.00193 *3*; α(L)=0.000309 *5*; α(M)=7.12×10^{-5} *10*; α(N+..)=0.0001084 *16*
(1824)	<1.5[‡]	1824.1	0^+	0.0	0^+	E0		

[†] From 1977Ha32.
[‡] Unobserved in spectrum, limit placed on Iγ.
[#] From adopted gammas.
[@] For absolute intensity per 100 decays, multiply by 0.18 *4*.
[&] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.
[x] γ ray not placed in level scheme.

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Decay Scheme

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