^{193}Au ε decay (3.9 s) 1955Br41

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 143, 1 (2017)	31-Mar-2017

Parent: ^{193}Au: E=290.20 *3*; J^π=11/2$^-$; $T_{1/2}$=3.9 s *3*; Q(ε)=1075 *9*; %ε+%β^+ decay≈0.03

^{193}Au-%ε+%β^+ decay: 0.03% from Ti(135.4γ M4 ^{193}Pt)/Ti(258.0γ M1 ^{193}Au)≈0.0003; deduced from Ice and theoretical α by 1955Br41.

Sources from decay of ^{193}Hg parent activity; measured γ, ce, γ(ce).

^{193}Pt Levels

E(level)†	J^π†	$T_{1/2}$†	Comments
0.0	1/2$^-$		
1.642 *2*	3/2$^-$		
14.276 *8*	5/2$^-$		
149.78 *4*	13/2$^+$	4.33 d *3*	$T_{1/2}$: other: 3.5 d *4* (1955Br41).

† From Adopted Levels.

ε,β^+ radiations

E(decay)	E(level)	Iε†	Log *ft*	I($\varepsilon+\beta^+$)†	Comments
(1215 *9*)	149.78	0.03	4.7	0.03	εK=0.8035; εL=0.1487; εM+=0.04780

† For absolute intensity per 100 decays, multiply by ≈0.0003.

γ(^{193}Pt)

E_γ	E_i(level)	J_i^π	E_f	J_f^π	Mult.†	δ	α‡	$I_{(\gamma+ce)}$#	Comments
(1.642†)	1.642	3/2$^-$	0.0	1/2$^-$	M1		3116	≈0.03	α: From BRICC. Others: 12000 (1991Ba63), 4010 (1978Ro21).
(12.634†)	14.276	5/2$^-$	1.642	3/2$^-$	M1+E2	0.015 *+3−4*	142 *8*	≈0.03	ce(L)/(γ+ce)=0.098 *29*; ce(M)/(γ+ce)=0.69 *4* ce(N)/(γ+ce)=0.171 *10*; ce(O)/(γ+ce)=0.0305 *18*; ce(P)/(γ+ce)=0.00197 *11* α(L)=14.0 *45*; α(M)=98.6 *25* α(N)=24.4 *6*; α(O)=4.35 *10*; α(P)=0.281 *4* δ: From Adopted Gammas.
135.4	149.78	13/2$^+$	14.276	5/2$^-$	M4		875	≈0.03	ce(K)/(γ+ce)=0.155 *3*; ce(L)/(γ+ce)=0.600 *8*; ce(M)/(γ+ce)=0.188 *4* ce(N)/(γ+ce)=0.0480 *10*; ce(O)/(γ+ce)=0.00766 *15*; ce(P)/(γ+ce)=0.000186 *4* α(K)=135.6 *19*; α(L)=526 *8*; α(M)=164.8 *23* α(N)=42.1 *6*; α(O)=6.71 *10*; α(P)=0.1630 *23* E_γ: from 1955Br41. Mult.: K:L1:L3:M=1:2:4:1 (1955Br41).

Continued on next page (footnotes at end of table)

^{193}Au ε decay (3.9 s) 1955Br41 (continued)

$\gamma(^{193}Pt)$ (continued)

† From Adopted Gammas.
‡ Additional information 1.
# For absolute intensity per 100 decays, multiply by ≈0.0003.

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Legend

- - - - - - ► γ Decay (Uncertain)

Decay Scheme