^{176}W ε decay 1963Va20

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	M. S. Basunia	NDS 107, 791 (2006)	15-Sep-2005

Parent: ^{176}W: E=0.0; $J^\pi=0^+$; $T_{1/2}$=2.5 h *1*; Q(ε)=7.2×10^2 *4*; %ε decay=100.0

Measured conversion electron energies and relative intensities (magnetic spectrograph), and photon energies (NaI scin). Decay scheme not normalized and log ft not given because %ε to g.s. is unknown.

^{176}Ta Levels

E(level)†	J^π#	$T_{1/2}$	Comments
0.0	$(1)^-$	8.09 h *5*	$T_{1/2}$: from Adopted Levels.
100.2‡ *10*	(0^+)	25 ns *3*	$T_{1/2}$: from 1968Ab05. Other: 1972LiZE.
133.8‡ *13*	(2^+)	2 ns *1*	$T_{1/2}$: from 1968Ab05. Transition-intensity balance indicates≈50% deexcitation of this level through (unobserved) transitions other than 33.6γ.
184.3 *13*	(1^+)		J^π: K=(1^+), possible Configuration=((π 5/2(402))-(ν 7/2(633))).
195.1‡ *13*	(1^+)		

† From a least squares fit to the γ-ray energies assuming ΔE=1 keV for all γ-ray energies by evaluator.
‡ K=(0^+), possible Configuration=((π 7/2(404))-(ν 7/2(633))).
# From Adopted Levels.

γ(^{176}Ta)

E_γ	I_γ†	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α‡	Comments
33.58	0.67	133.8	(2^+)	100.2	(0^+)	E2	555	α(L)= 417; α(M)= 104 Total Ice=370. I_γ: Iγ=430 and I(γ+ce)=800 deduced by authors are incorrect for an assumed E2 multipolarity. Mult.: from ce(L2):ce(L3):ce(M2):ce(M3) exp=118:160:33:41.
50.55	11	184.3	(1^+)	133.8	(2^+)	(M1)	5.57	α(L)= 4.31; α(M)= 0.974; α(N+..)= 0.291 Total Ice=60. Mult.: only ce(L1) was observed.
61.29	152	195.1	(1^+)	133.8	(2^+)	M1	3.16	α(L)= 2.45; α(M)= 0.553; α(N+..)= 0.164 Total Ice=480. Mult.: from ce(L1)/ce(L2) exp=9.2.
84.14	81	184.3	(1^+)	100.2	(0^+)	(M1)	7.39	α(K)= 6.14; α(L)= 0.970; α(M)= 0.220; α(N+..)= 0.0655 Total Ice=600. Mult.: from ce(K):ce(L1):ce(M1) exp=>200:70:19.
94.86	153	195.1	(1^+)	100.2	(0^+)	M1	5.23	α(K)= 4.34; α(L)= 0.685; α(M)= 0.155; α(N+..)= 0.0465 Total Ice=800. Mult.: from ce(K):ce(L1):ce(L2) exp=650:100:11.
100.20	1816	100.2	(0^+)	0.0	$(1)^-$	E1	0.369	α(K)= 0.302; α(L)= 0.0518; α(M)= 0.0117; α(N+..)= 0.00338 Total Ice=670. Mult.: from ce(K):ce(L1):ce(L2):ce(L3) exp=520:59:17:20.

† From Ice and theoretical α.
‡ 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.

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Decay Scheme

Intensities: Relative $I_{(\gamma+ce)}$