^{183}W IT decay (5.30 s) 1961Sc05,1961Ga06,1955Po26

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 134, 149 (2016)	15-Apr-2015

Parent: ^{183}W: E=309.491 *4*; $J^{\pi}=11/2^+$; $T_{1/2}$=5.30 s *8*; %IT decay=100.0

Other references: 1963Ka34, 1965BuZZ, 1972Jo05.

1961Ga06: source from ^{nat}TA(n,γ) followed by chemical separation; Xe proportional counter and NaI scin; measured Eγ, $\gamma\gamma$ coin, isomer $T_{1/2}$.

Total energy release for this decay scheme is 239.0 *24* cf. QxBR=309.492 *4*.

^{183}W Levels

E(level)†	J^{π}‡	$T_{1/2}$	Comments
0.0	$1/2^-$		
46.4838 *5*	$3/2^-$		
99.0791 *9*	$5/2^-$		
207.0101 *17*	$7/2^-$		
308.491 *4*	$11/2^+$	5.30 s *8*	%IT=100 $T_{1/2}$: unweighted average of 5.3 s *2* (1961Ga06), 5.1 s *2* (1961Sc05), 5.4 s *1* (1963Ka34), 5.14 s *2* (1965BuZZ), and 5.56 s *25* (1972Jo05). the weighted average of these data is 5.15 s *3*. an E=211 *4* γ deexciting this level was reported by 1961Sc05. This transition was not observed in the spectrum obtained by 1961Ga06,and the evaluator attributes it to the sum peaks (102.5γ+107.9γ), (107.9γ+99.1γ), and (160.5γ+46.5γ).

† From least-squares fit to Eγ.

‡ From Adopted Levels.

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$\gamma(^{183}W)$

E_γ ‡	I_γ #@	E_i(level)	J_i^π	E_f	J_f^π	Mult.‡	δ‡	α†	$I_{(\gamma+ce)}$ @	Comments
46.4838 *5*	6.13 *17*	46.4838	3/2$^-$	0.0	1/2$^-$	M1+E2	−0.084 *13*	8.4 *3*		α(L)=6.46 *22*; α(M)=1.49 *6* α(N)=0.357 *13*; α(O)=0.0572 *18*; α(P)=0.00370 *6* I(46γ)/I(Kα x ray, W)≈0.1 (1961Ga06).
52.5952 *9*	6.76 *21*	99.0791	5/2$^-$	46.4838	3/2$^-$	M1+E2	−0.127 *21*	6.2 *4*		α(L)=4.8 *3*; α(M)=1.11 *7* α(N)=0.267 *16*; α(O)=0.0422 *21*; α(P)=0.00256 *4*
99.0793 *17*	8.14 *21*	99.0791	5/2$^-$	0.0	1/2$^-$	E2		4.05		α(K)=0.893 *13*; α(L)=2.39 *4*; α(M)=0.605 *9* α(N)=0.1425 *20*; α(O)=0.0195 *3*; α(P)=7.25×10^{-5} *11*
101.481 *3*	2.40 *3*	308.491	11/2$^+$	207.0101	7/2$^-$	M2		40.6	100	ce(K)/(γ+ce)=0.680 *8*; ce(L)/(γ+ce)=0.225 *4*; ce(M)/(γ+ce)=0.0556 *11* ce(N)/(γ+ce)=0.0135 *3*; ce(O)/(γ+ce)=0.00214 *5*; ce(P)/(γ+ce)=0.000129 *3* α(K)=28.3 *4*; α(L)=9.35 *13*; α(M)=2.31 *4*; α(N)=0.562 *8*; α(O)=0.0890 *13*; α(P)=0.00535 *8* I_γ: from I(γ+ce) and α.
107.9310 *18*	18.9 *3*	207.0101	7/2$^-$	99.0791	5/2$^-$	M1+E2	−0.31 *5*	3.73		α(K)=2.95 *8*; α(L)=0.60 *4*; α(M)=0.140 *9* α(N)=0.0336 *19*; α(O)=0.00526 *25*; α(P)=0.000297 *9*
160.526 *3*	5.12 *9*	207.0101	7/2$^-$	46.4838	3/2$^-$	E2		0.659		α(K)=0.302 *5*; α(L)=0.271 *4*; α(M)=0.0678 *10* α(N)=0.01601 *23*; α(O)=0.00223 *4*; α(P)=2.30×10^{-5} *4*

† Additional information 1.
‡ From Adopted Gammas.
# Calculated by the evaluator from adopted branching ratios and intensity balance from the decay scheme.
@ Absolute intensity per 100 decays.

$^{183}_{74}W_{109}$-2

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