^{179}Hf IT decay (18.67 s) 1962Mo10

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 110, 265 (2009)	15-Nov-2008

Parent: ^{179}Hf: E=375.0352 *25*; $J^\pi=1/2^-$; $T_{1/2}$=18.67 s *4*; %IT decay=100.0

Others: 1946Fl01, 1951Bu50, 1951De24, 1951Ha84, 1951Ka46, 1959Ho91, 1962Al08, 1963Ka34, 1963Ve03, 1964Lo09, 1965BuZZ, 1966Ve07, 1967Ab08, 1967Yu01, 1968Ka23, 1970Jo16, 1972Jo05, 1972Bf03, 1972BeWN.

^{179}Hf Levels

E(level)†	J^π‡	$T_{1/2}$	Comments
0.0	$9/2^+$		
214.335 *3*	$7/2^-$	1.86 ns *5*	$T_{1/2}$: from 1965Ma08. Other values: 2.0 ns *2* (1966Ve07), 2.08 ns *20* (revision by 1966Ve07 of miscalculated datum of 1963Ve03), 1.55 ns *15* (1964Lo09). the weighted average of all data is 1.85 ns *6*.
375.031 *4*	$1/2^-$	18.67 s *4*	$T_{1/2}$: weighted average of 18.67 s *4* (1972Bf03 and 1972BeWN, metal target), 18.60 s *6* (1967Yu01), 18.77 s *7* (1970Jo16,1972Jo05). Others: 1972BeWN (18.92 s *7*, oxide target; a possible chemical effect on $T_{1/2}$ of 1.3% has not been confirmed), 1968Ka23, 1967Ab08, 1965BuZZ, 1963Ka34, 1962Al08, 1959Ho91 (18.6 s *2*), 1951De24, 1946Fl01.

† From Eγ.
‡ From Adopted Levels.

γ(^{179}Hf)

Iγ normalization: from decay scheme if Ti(214γ)=100%; contribution from 375γ to g.s. feeding is negligible.
1962Mo10: measured Eγ, Iγ. Detector: scin.

E_γ	I_γ‡	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α#	Comments
160.696† *2*	3.02 *19*	375.031	$1/2^-$	214.335	$7/2^-$	M3	34.1	α(K)=19.2 *3*; α(L)=11.15 *16*; α(M)=2.90 *4*; α(N+..)=0.799 *12* α(N)=0.696 *10*; α(O)=0.0983 *14*; α(P)=0.00422 *6* I_γ: from Ti(214γ)=Ti(160γ) required by intensity balance at 214 level. Mult.: M3 from α(K)exp=19.4 *12*, α(exp)=35 *2* (1959Ho91); α(K)exp=17.5 *20* (1966Ve07); α(K)exp=17 *2* (1968Ka23). E_γ: other: 1959Ho91.
214.335† *3*	100	214.335	$7/2^-$	0.0	$9/2^+$	E1	0.063 *4*	α(K)=0.0412 *6*; α(L)=0.00637 *9*; α(M)=0.001434 *20*; α(N+..)=0.000389 *6* α(N)=0.000337 *5*; α(O)=4.96×10^{-5} *7*; α(P)=2.77×10^{-6} *4* Mult.: anomalous E1 from α(K)exp and subshell ratios in (n,γ). α: experimental value from (n,γ). Other values: 0.055 *10* (1959Ho91), <0.16 (1966Ve07). α(theory)=0.0494. Other Eγ: 1959Ho91, 1951Bu50, 1951Ha84, 1951Ka46.
≈375	≈0.005	375.031	$1/2^-$	0.0	$9/2^+$	[M4]	3.57	α(K)≈2.32; α(L)≈0.943; α(M)≈0.240; α(N+..)≈0.0660

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^{179}Hf IT decay (18.67 s) 1962Mo10 (continued)

$\gamma(^{179}Hf)$ (continued)

E_γ	E_i(level)	Comments
		α(N)≈0.0575; α(O)≈0.00819; α(P)≈0.000372 Eγ and Iγ from 1962Mo10.

† From Adopted Gammas.

‡ For absolute intensity per 100 decays, multiply by 0.953 *1*.

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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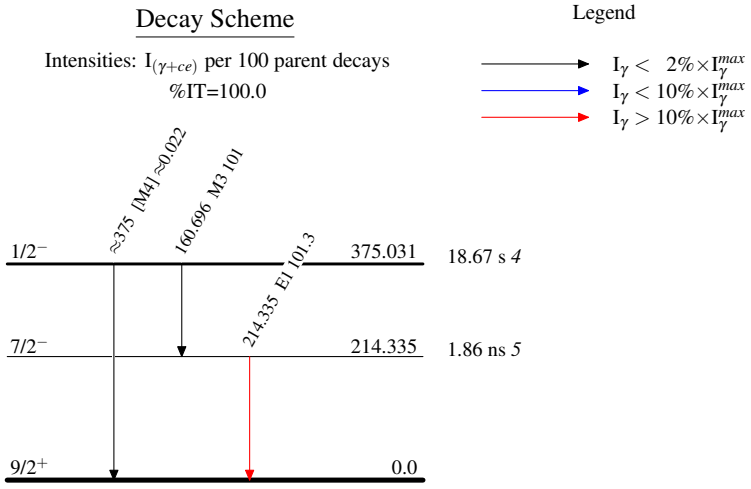
Decay Scheme

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

%IT=100.0



$^{179}_{72}Hf_{107}$