^{181}Ta IT decay (18.9 μs) 1957Dr13

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	S. -c. Wu	NDS 106, 367 (2005)	31-Aug-2005

Parent: ^{181}Ta: E=615; $T_{1/2}$=18.9 μs *5*; %IT decay=100.0

1957Dr13: ^{181}Ta excited state produced by electrons on Ta; NaI(Tl) detectors, Iγ, $T_{1/2}$ measured.

Intensity of K x rays =32 corrected for photoelectric absorption of isomeric γ rays (total intensity=57 before correction).

^{181}Ta Levels

E(level)	J^{π}[†]	$T_{1/2}$	Comments
0.0	$7/2^+$		
135	$9/2^+$		
482	$5/2^+$		
615	$1/2^+$	18.9 μs *5*	$T_{1/2}$: weighted average of 16 μs *3* (1953Br30), 20.5 μs *4* (1955Go30), 18.5 μs *25* (1956Ve03), 18.1 μs *10* (1957Dr13) measured by γγ(t); and 22 μs *3* (1967Co20) measured by (p,p′γ)(t); and 18.5 μs *10* (1972Ri14) measured by (n,n′γ)(t).

[†] From Adopted Levels.

γ(^{181}Ta)

E_γ	I_γ	E_i(level)	J_i^{π}	E_f	J_f^{π}	Mult.[†]	δ[†]	α[‡]	Comments
133	7	135	$9/2^+$	0.0	$7/2^+$	M1+E2	+0.396 *11*	1.75 *1*	I_γ: total intensity 57 from 1957Dr13, divided by the evaluator, according to the relative total intensity of 346 and 482 transitions.
133	50	615	$1/2^+$	482	$5/2^+$	E2		1.27	E_γ: from adopted gammas, rounded to the nearest keV.
346	16	482	$5/2^+$	135	$9/2^+$	E2		0.0544	
482	100	482	$5/2^+$	0.0	$7/2^+$	M1+E2	4.76 *4*	0.0295 *8*	
615		615	$1/2^+$	0.0	$7/2^+$	M3(+E4)		0.194	I_γ: weak intensity reported.

[†] From adopted gammas.

[‡] 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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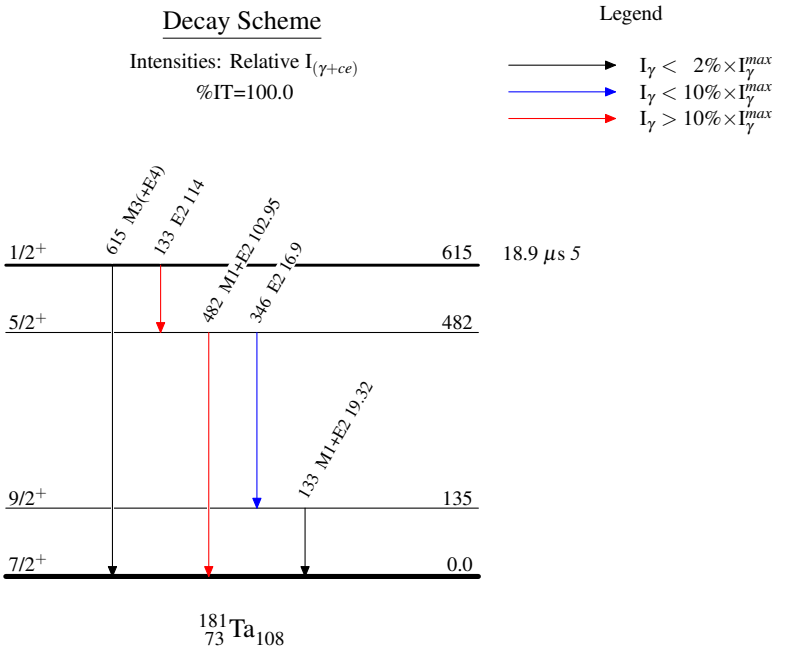
Decay Scheme

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

%IT=100.0



$^{181}_{73}Ta_{108}$