^{93}Tc IT decay (43.5 min) 1977Po13,1974An24,1974Ch12

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 112,1163 (2011)	15-Dec-2010

Parent: ^{93}Tc: E=391.83 *8*; J$^{\pi}$=1/2^{-}; $T_{1/2}$=43.5 min *10*; %IT decay=77.4 *6*

^{93}Tc-E: From Eγ; adopted value is 391.84 *8*.

^{93}Tc-%IT decay: Based on I(2645γ, ^{93}Mo)/I(392γ, ^{93}Tc)=0.246 *9* and Iβ(g.s., ^{93}Mo)<2.3% (from log $f^{1u}t$>8.5) (see ^{93}Tc ε decay (43.5 min)).

Others: 1976PoZS, 1968Ka25, 1966Al17, 1953Ea04.

1974Ch12:Ge(Li) and Si(Li) detectors; measured Eγ, α(K)exp.

^{93}Tc Levels

E(level)	J$^{\pi}$†	$T_{1/2}$†	Comments
0	9/2^{+}	2.85 h *5*	
391.83 *8*	1/2^{-}	43.5 min *10*	E(level): from Eγ.

† From Adopted Levels.

γ(^{93}Tc)

Iγ normalization: From I(γ+ce)(392)=100, assuming α=0.328 (M4 theory).

E$_{\gamma}$†	I$_{\gamma}$#	E$_i$(level)	J$_i^{\pi}$	E$_f$	J$_f^{\pi}$	Mult.‡	α@	Comments
391.83 *8*	100	391.83	1/2^{-}	0	9/2^{+}	M4	0.328	α(K)exp=0.24 *5* α(K)=0.273 *4*; α(L)=0.0453 *7*; α(M)=0.00848 *12*; α(N+..)=0.001394 *20* α(N)=0.001321 *19*; α(O)=7.30×10^{-5} *11* %Iγ=58.3 *9*. α(K)exp: weighted average of 0.20 *5* (1974Ch12) and 0.31 *7* (1953Ea04). K/(L+M)=5.8 *3* (1953Ea04).

† Weighted average from 1974Ch12, 1974An24, 1977Po13. Others: 390.0 *15* (1968Ka25), 391.5 *10* (1966Al17).

‡ From α(K)exp.

For absolute intensity per 100 decays, multiply by 0.583 *9*.

@ 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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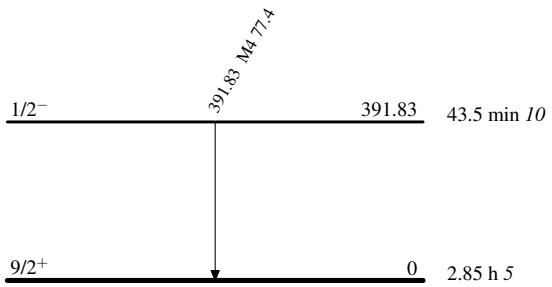
Decay Scheme

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

%IT=77.4 *6*



$^{93}_{43}Tc_{50}$