^{101}Rh IT decay (4.34 d)   1971Si16,1985Va15

	History		
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	ENSDF	1-Jul-2006

Parent: ^{101}Rh: E=157.32; J^π=9/2$^+$; $T_{1/2}$=4.34 d 1; %IT decay=7.20 25

^{101}Rh-%IT decay: from Iγ(157γ)/Iγ(307γ,^{101}Ru)= 0.00280 5 (1985Va15).

^{101}Rh Levels

E(level)	$J^{\pi\dagger}$	$T_{1/2}^{\dagger}$	Comments
0.0	1/2$^-$	3.3 y 3	
157.32	9/2$^+$	4.34 d 1	$T_{1/2}$: 4.34 d 1 (1966Ar05), 4.39 d 8 (1968Li08), 4.43 d 6 (1965Ev04). Others: 1948Li03, 1952Sc11, 1956Ka25.
			g-factor=+ 1.22 2 (1973Ka28); fits empirical g-factor syst of regional g9/2 proton states.

† From Adopted Levels.

γ(^{101}Rh)

Iγ normalization: from Iγ(157γ,M4) and α=29.7.

α(K)exp=ce(K)/Iγ normalized to α(K)(307γ,^{101}Ru)=0.01364 (M1+1% E2 theory).

E_γ	$I_\gamma^{\dagger\#}$	E_i(level)	J_i^π	E_f	J_f^π	Mult.‡	$\alpha^@$	Comments
157.41 4	0.280 5	157.32	9/2$^+$	0.0	1/2$^-$	M4	29.2	α(K)=21.1 3; α(L)=6.61 10; α(M)=1.332 19; α(N+..)=0.218 3
								α(N)=0.211 3; α(O)=0.00642 9
								B(M4)(W.u.)=2.25 11
								E_γ: from 1965Ev04, 1971Si16 ce s. Others: 157.26 3 (1966De06), 157.42 5 (1974HeYW), 157.41 4 (1985Va15).
								I_γ: from 1985Va15. Others: 0.29 2 (1971Si16) 0.31 8 (1974HeYW), 0.27 1 (1970Ph04).
								I(ce(K) 157γ)/I(ce(K) 307γ,^{101}Ru)=4.22 15 (1971Si16), 4.5 (1965Ev04).
								K/L= 3.17 5, L1/L3+L2= 1.16 4, L3/L2>2 (1971Si16).
								α(K)exp=19.9 16 (1971Si16). Other: 21.6 10 (1970Ph04).
								α(exp)= 30 2 (1970Ph04).

† Relative to Iγ(307γ,^{101}Ru)=100.

‡ Deduced from K/L, L-subshell ratios, and α(K)exp data.

$^\#$ For absolute intensity per 100 decays, multiply by 0.86 3.

$^@$ 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=7.20 25

9/2$^+$ 157.32   4.34 d 1

157.41 M4 7.3

1/2$^-$ 0.0   3.3 y 3

$^{101}_{45}$Rh$_{56}$