^{102}Rh IT decay 1991Bi01

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	D. De Frenne	NDS 110, 1745 (2009)	31-Dec-2008

Parent: ^{102}Rh: E=140.7; $J^{\pi}=6^{(+)}$; $T_{1/2}$=3.742 y *10*; %IT decay=0.233 *24*

Sources: from ^{102}Ru(p,n)^{102}Rh and ^{98}Mo(^{7}Li,3n)^{102}Rh measured: Eγ, Iγ, $\gamma\gamma$, Ice, K/L, x-rays deduced ^{102}Rh levels, J, π, mult.

Others: 1969Ko24, 1986Du04.

^{102}Rh Levels

E(level)†	J$^{\pi}$†	$T_{1/2}$†	Comments
0.0	$(1^-,2^-)$	207.3 d *17*	
41.94 *14*	$2^{(-)}$		
140.73 *9*	$6^{(+)}$	3.742 y *10*	%IT=0.233 *24* g=0.6733 *15* g: From nuclear orientation at low temperature (1989Hi12).

† From Adopted Levels.

$\gamma(^{102}Rh)$

E$_\gamma$	E$_i$(level)	J$_i^{\pi}$	E$_f$	J$_f^{\pi}$	Mult.	α‡	I$_{(\gamma+ce)}$†	Comments
41.9 *1*	41.94	$2^{(-)}$	0.0	$(1^-,2^-)$	M1	4.19	100	ce(K)/(γ+ce)=0.702 *21*; ce(L)/(γ+ce)=0.086 *3*; ce(M)/(γ+ce)=0.0160 *5* α(K)=3.64 *6*; α(L)=0.450 *7*; α(M)=0.0838 *14*; α(N)=0.01385 *22* α(K)exp=4.4 *5* (1991Bi01) E$_\gamma$: from 1986Du04. I$_{(\gamma+ce)}$: should be identical to I(γ+ce) of 98.8γ.
98.7 *2*	140.73	$6^{(+)}$	41.94	$2^{(-)}$	M4	332	100	ce(K)/(γ+ce)=0.606 *19*; ce(L)/(γ+ce)=0.313 *10*; ce(M)/(γ+ce)=0.0648 *20*; ce(N)/(γ+ce)=0.0132 *4* E$_\gamma$: from K- and L-conversion lines. I$_{(\gamma+ce)}$: due to very high α of 98.8γ only ce was observed; therefore, I(γ+ce)(98.8γ)≈Ice(98.8γ). Mult.: from K/L=2.1 *2*.
(140.7)	140.73	$6^{(+)}$	0.0	$(1^-,2^-)$				

† For absolute intensity per 100 decays, multiply by 0.00233 *24*.

‡ 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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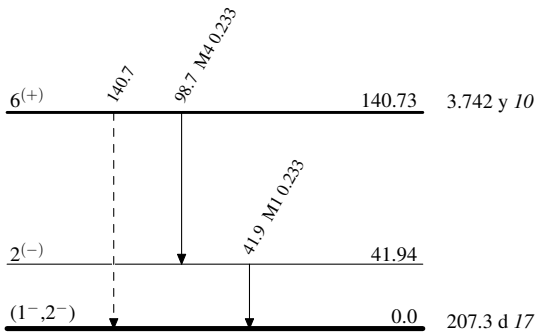
Legend

Decay Scheme

%IT=0.233 *24*

γ Decay (Uncertain)



$^{102}_{45}Rh_{57}$