

^{103}In IT decay 1997Sz04

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	D. De Frenne	NDS 110, 2081 (2009)	1-Mar-2009

Parent: ^{103}In : $E=631.7$; $J^\pi=(1/2^-)$; $T_{1/2}=34$ s 2; %IT decay=33.0

Source: $^{50}\text{Cr}(^{58}\text{Ni},3p2n)$ $E(^{58}\text{Ni})=5.9$ MeV/U mass separated source, enriched target.

 ^{103}In Levels

E(level)	J^π^\dagger	$T_{1/2}$	Comments
0.0	(9/2 ⁺)	65 s 7	
631.7	(1/2 ⁻)	34 s 2	$T_{1/2}$: 34 s 2 (1997Sz04) γ -decay curve. J^π : From systematics in heavier In isotopes.

[†] From Adopted Levels.

 $\gamma(^{103}\text{In})$

I γ normalization: %IT=33: value mentioned by 1997Sz04 from an unpublished thesis of Decroock of IKS Leuven (Belgium). This result was obtained by performing a time analysis of Cd K-X rays which resulted in a β branch for $^{103\text{m}}\text{In}$ of 67% leaving 33% for the IT. That experiment was not repeated afterwards.

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	α^\dagger	Comments
631.7 1	631.7	(1/2 ⁻)	0.0	(9/2 ⁺)	(M4)	0.0774 11	B(M4)(W.u.)=11.2 8 Mult.: suggested from comparable situation in $^{105,107,109,111}\text{In}$ and similar B(M4)(W.u.) values, e.g. 11.4 for ^{107}In and 10.0 for ^{109}In where M4 character of this transition is well established.

[†] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ -ray energies, assigned multiplicities, and mixing ratios, unless otherwise specified.

 ^{103}In IT decay 1997Sz04Decay Scheme

%IT=33.0

