

^{109}I α decay (92.8 μs) 2007Ma35

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	S. Lalkovski, J. Timar and Z. Elekes		NDS 161, 1 (2019)	1-Apr-2019

Parent: ^{109}I : $E=0$; $J^\pi=(1/2^+, 3/2^+)$; $T_{1/2}=92.8 \mu\text{s}$ 8; $Q(\alpha)=3918$ 21; $\% \alpha$ decay=0.014 4

^{109}I - $T_{1/2}$: from 2016Ku22.

^{109}I - $\% \alpha$ decay: $\% \alpha=0.014$ 4 (2007Ma35).

Facility: HRIBF at Oak Ridge; Beam: $E(^{54}\text{Fe}) = 207$ MeV; Target: $300 \mu\text{g}/\text{cm}^2$ ^{58}Ni enriched to 99%; Detectors: Recoil Mass Separator, degrader, microchannel plate detector, $67 \mu\text{m}$ thick DSSD, veto SiBox, veto 3.9 mm thick SiLi detector; Measured: $E\alpha$, $I\alpha$.

 ^{105}Sb Levels

E(level)	J^π	Comments
0	(5/2 ⁺)	J^π : from the Adopted Levels.

 α radiations

$E\alpha$	E(level)	$I\alpha^\ddagger$	HF^\dagger	Comments
3774 20	0	100	23 7	$E\alpha$: from 2007Ma35.

† $r_0(^{105}\text{Sb})=1.636$ 14 weighted average of $r_0(^{106}\text{Te})=1.70$ 6 and $r_0(^{104}\text{Sn})=1.632$ 14.

‡ For absolute intensity per 100 decays, multiply by 0.00014 4.