

^{213}At α decay [1970Bo13](#),[1988Hu08](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	J. Chen [#] and F. G. Kondev		NDS 126, 373 (2015)	30-Sep-2013

Parent: ^{213}At : E=0.0; $J^\pi=9/2^-$; $T_{1/2}=125$ ns 6; $Q(\alpha)=9254$ 5; % α decay=100.0

^{213}At - $J^\pi, T_{1/2}$: from Adopted Levels of ^{213}At .

^{213}At - $T_{1/2}$: [Additional information 1](#).

^{213}At - $Q(\alpha)$: from [2012Wa38](#).

[1970Bo13](#): ^{213}At activities were from the ^{225}Pa source produced by the $^{209}\text{Bi}+^{22}\text{Ne}$ reaction with $E_{\text{max}}=10.3$ MeV/nucleon ^{22}He beam from the Berkeley heavy-ion linear accelerator (HILAC). α particles were detected by a surface-barrier detector. Measured $E\alpha$, $I\alpha$, $\alpha(t)$. Deduced levels, parent $T_{1/2}$.

[1988Hu08](#): ^{213}At activities were from the ^{225}Pa source produced by the $^{230}\text{Th}(p,6n)$ reaction with E=55 MeV proton beam from the cyclone cyclotron at Jyvaskyla. Measured $E\alpha$, $I\alpha$.

Others: [1968Ha14](#), [1951Ke53](#), [2009Vi09](#).

 ^{209}Bi Levels

<u>E(level)</u>	<u>J^π</u>
0.0	$9/2^-$

 α radiations

<u>$E\alpha$</u>	<u>E(level)</u>	<u>$I\alpha^\ddagger$</u>	<u>HF[†]</u>	<u>Comments</u>
9079 5	0.0	100	0.99 5	$E\alpha$: weighted average of 9080 5 (1988Hu08), 9080 12 (1970Bo13), 9060 20 (1968Ha14). $I\alpha$: from 1970Bo13 .

[†] $r_0=1.5213$ 7, weighted average of $r_0(^{208}\text{Pb})=1.5212$ 4 and $r_0(^{210}\text{Po})=1.532$ 6 deduced from HF=1.0.

[‡] Absolute intensity per 100 decays.