

$^{214}\text{At}$   $\alpha$  decay (760 ns) [1982Ew01](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia		NDS 121, 561 (2014)	31-Mar-2014

Parent:  $^{214}\text{At}$ :  $E=232.6$ ;  $J^\pi=9^-$ ;  $T_{1/2}=760$  ns 15;  $Q(\alpha)=8987.4$ ;  $\% \alpha$  decay  $\leq 100.0$

$^{214}\text{At}$  was produced from  $^{218}\text{Fr}$   $\alpha$  decay. Measured  $E\alpha$  and  $I\alpha$ .

 $^{210}\text{Bi}$  Levels

<u>E(level)</u>	<u><math>J^\pi</math>†</u>
271.2 5	$9^-$
433.4 5	$7^-$
439.1 5	$5^-$
669.0 9	$10^-$

† From Adopted Levels.

 $\alpha$  radiations

<u><math>E\alpha</math>†</u>	<u>E(level)</u>	<u><math>I\alpha</math>‡@</u>	<u>HF#</u>	<u>Comments</u>
8390 6 (8616 8)	669.0 439.1	0.18 3	111	$E\alpha$ : calculated from $Q(\alpha)(^{214}\text{At})=8987.4$ , $E(\text{parent level})=232.6$ and $E(\text{daughter level})=439.1$ .
8620 5	433.4	$\leq 0.64$	$\geq 120$	$I\alpha$ : 0.64 5 was measured. This intensity probably includes an $\alpha$ decay to the $5^-$ state at 439.1 keV.
8782 5	271.2	99.18 6	1.95	$E\alpha$ : Other value: 8772 ( <a href="#">1999Sh03</a> ).

† Measurements of [1982Ew01](#). Other: [1999Sh03](#).

‡ From [1982Ew01](#).

# Using  $r_0(^{210}\text{Bi})=1.5443$ , average of  $r_0(^{208}\text{Pb})=1.5394$  6,  $r_0(^{210}\text{Pb})=1.5408$  9,  $r_0(^{210}\text{Po})=1.532$  6, and  $r_0(^{212}\text{Po})=1.5649$  8 ([1998Ak04](#)).

@ For absolute intensity per 100 decays, multiply by  $\leq 1.0$ .