

^{214}Ra α decay (2.46 s) [2006Ku26,2000He17](#)

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

Parent: ^{214}Ra : $E=0.0$; $J^\pi=0^+$; $T_{1/2}=2.46$ s 3; $Q(\alpha)=7273$ 3; $\% \alpha$ decay=99.941 4

[2006Ku26](#): ^{214}Ra isotope produced by $^{170}\text{Er}(^{48}\text{Ca},4n)$ reaction at $E=4.25$ and 4.30 MeV/nucleon. Evaporation residues were separated in-flight with the velocity filter ship, Measured E_γ , I_γ , $\gamma\gamma$, $E\alpha$, $I\alpha$, $\alpha\gamma$ coin, ce, lifetimes using a 16-strip PIPS detector and a Ge-Clover detector placed behind the PIPS.

[2000He17](#): Activity produced by $^{208}\text{Pb}(^{12}\text{C},6n)$, $E=88$ -100 MeV, and separated in-flight using a velocity filter.

 ^{210}Rn Levels

E(level)	$J^\pi^\dagger$	$T_{1/2}^\dagger$
0.0	0^+	2.4 h 1
642.8 9	2^+	

† From Adopted Levels.

 α radiations

$E\alpha$	E(level)	$I\alpha^\dagger\#$	HF ‡	Comments
6505 5	642.8	0.16 3	2.4	$E\alpha$: Other: 6505 keV 15 (2000He17). $I\alpha$: Other: 0.2 1 from $\alpha\gamma$ coin (2000He17).
7137 3	0.0	99.84 3	1.0	$E\alpha$: recommended by 1991Ry01 from the measured energies of 7136 5 (1967Va20) and 7139 5 (1974Ho27). The energy measured by 1974Ho27 has been adjusted for calibration, as recommended by 1991Ry01 . Other values: 7135 keV 4 (2006Ku26), 7137 keV 10 (2000He17). $I\alpha$: Other: 99.8 1 (2000He17).

† From [2006Ku26](#).

‡ $r_0(^{210}\text{Rn})=1.4552$ 21 was obtained by [1998Ak04](#) by requiring $\text{Hf}(7137\alpha)=1.0$.

$\#$ For absolute intensity per 100 decays, multiply by 0.99941 4.

 $\gamma(^{210}\text{Rn})$

E_γ	$I_\gamma^\dagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	Comments
642.8 9	0.2 1	642.8	2^+	0.0	0^+	E2	E_γ : Using the Limitation of Relative Statistical Weight method (LWM) (1985ZiZY) of discrepant data 643.7 2 (2006Ku06) and 641.9 2 (2000He17). I_γ : From 2000He17 .

† For absolute intensity per 100 decays, multiply by 0.99941 4.

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Decay Scheme

Intensities: I_γ per 100 parent decays

