

^{212}Ra α decay

<u>Type</u>	<u>Author</u>	<u>History Citation</u>	<u>Literature Cutoff Date</u>
Full Evaluation	M. J. Martin	NDS 108,1583 (2007)	1-Jun-2007

Parent: ^{212}Ra : $E=0$; $J^\pi=0^+$; $T_{1/2}=13.0$ s 2; $Q(\alpha)=7031.6$ 17; $\% \alpha$ decay ≈ 85.0

^{212}Ra - $\% \alpha$ decay: $I(\alpha) \approx 85\%$. Deduced from estimated β^- -strength function (1973Ta30) which gives $I(\varepsilon+\beta^+) \approx 15\%$.

 ^{208}Rn Levels

<u>E(level)</u>	<u>J^π</u>	<u>$T_{1/2}$</u>
0.0	0^+	24.35 min 14
635.1 2	2^+	

 α radiations

<u>E_α</u>	<u>E(level)</u>	<u>$I_\alpha^\ddagger$</u>	<u>HF†</u>	<u>Comments</u>
6269 5	635.1	≈ 0.05	≈ 6.0	$E_{\alpha,\alpha}$: from 2003He06.
6899.2 17	0.0	99.95	1.0	E_α : recommended value from 1991Ry01 based on data of 1967Va22, 1974Ho27 and 1982Bo04.

† Requirement of $Hf(6899.2 \alpha) = 1$ yields $r_0(^{208}\text{Rn})=1.466$ 8.

‡ For absolute intensity per 100 decays, multiply by ≈ 0.85 .

 $\gamma(^{208}\text{Rn})$

<u>E_γ</u>	<u>$I_\gamma^\dagger$</u>	<u>$E_i(\text{level})$</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.</u>	<u>Comments</u>
635.1 2	≈ 0.05	635.1	2^+	0.0	0^+	E2	E_γ, I_γ : E_γ from 2003He06. I_γ from I_α and $\alpha=0.0206$.

† For absolute intensity per 100 decays, multiply by ≈ 0.85 .

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Decay Scheme

Intensities: I_(γ +ce) per 100 parent decays

