

Adopted Levels

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev, S. Lalkovski		NDS 112,707 (2011)	1-Aug-2010

$Q(\beta^-) = -7.61 \times 10^3$ 8; $S(n) = 8.10 \times 10^3$ 6; $S(p) = 2.51 \times 10^3$ 7; $Q(\alpha) = 7.27 \times 10^3$ 5 [2012Wa38](#)

Note: Current evaluation has used the following Q record $-7.59\text{E}+3$ 8 8.10×10^3 6 2510 60 7270 50 [2003Au03](#).

 ^{207}Ra LevelsCross Reference (XREF) Flags

A ^{211}Th α decay

E(level)	J^π	$T_{1/2}$	XREF	Comments
0	$(3/2^-, 5/2^-)$	1.35 s $-13+22$	A	$\% \alpha \approx 86$; $\% \varepsilon + \% \beta^+ \approx 14$ $\% \varepsilon + \% \beta^+$: From adopted $T_{1/2}$ and $T_{1/2}(\beta)$ calculations of 1997Mo25. J^π: Tentative assignment from shell model and systematics. $T_{1/2}$: Weighted average of 1.3 s 2 (1967Va22), 1.8 s 5 (1968Lo15) and 1.1 s $-3+9$ (1995Uu01, 1995Le41). $E\alpha = 7131$ keV 5 (1967Va22). Others: 7128 keV 10 (1987He10), 7136 keV 12 (1995Uu01) and 7136 keV 15 (1995Le41). configuration: If $J^\pi = 3/2^-$, then configuration = $((\pi h_{9/2})_{0+}^{+6}(\nu p_{3/2})^{-1})$. If $J^\pi = 5/2^-$, then configuration = $((\pi h_{9/2})_{0+}^{+6}(\nu f_{5/2})^{-1})$. Assignment: from $(\alpha_1 - \alpha_2)$ correlations between ^{207}Ra ($E\alpha_1 = 7136$ keV 12 and $T_{1/2} = 1.1$ s $-3+9$) and the daughter nuclide ^{203}Rn ($E\alpha_2 = 6499$ keV 10 and $T_{1/2} \approx 50$ s) (1995Uu01, 1995Le41). $\% \alpha \leq 15$; $\% \text{IT} \geq 85$ $\% \alpha$: From 1987He10. $\% \text{IT}$ has not been measured directly. E(level): From $E\alpha = 7131$ keV 5 and 7320 keV 20 depopulating the g.s. and the $(13/2^+)$ isomer in ^{207}Ra, respectively (both values were corrected for recoil energy term), $E(^{203}\text{Rn } 13/2^+) = 362$ keV 5 (2005Ko20) and the assumption that the ^{207}Ra g.s. feeds the ^{203}Rn g.s. by α decay. J^π: Tentative assignment from shell model and systematics. $T_{1/2}$: Unweighted averages of 55 ms 10 (1987He10) and 63 ms 16 (1996Le09). Assignment: from $(\alpha_1 - \alpha_2)$ correlations between ^{207}Ra isomer ($E\alpha_1 = 7331$ keV 15 and $T_{1/2} = 63$ ms 16) and the known isomer in the daughter nuclide ^{203}Rn ($E\alpha_2 = 6548$ keV 3 and $T_{1/2} = 28$ s 2) (1996Le09). configuration: $((\pi h_{9/2})_{0+}^{+6}(\nu i_{13/2})^{-1})$.
554 15	$(13/2^+)$	59 ms 4		