

^{204}Fr α decay (2.05 s) 2013Ja06,2005Uu02,1992Hu04

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 192,1 (2023)	1-Aug-2023

Parent: ^{204}Fr : $E=0$; $J^\pi=(3^+)$; $T_{1/2}=2.05$ s 12; $Q(\alpha)=7170.3$ 24; $\% \alpha$ decay=96 2

^{204}Fr - $T_{1/2}$: Weighted average of 1.9 s 5 (2005Uu02), 1.7 s 3 (1992Hu04), 2.1 s 2 (1974Ho27), 2.2 s 2 (1967Va20) and 2.0 s 5 (1964Gr04).

^{204}Fr - $\% \alpha(^{204}\text{Fr})$ from 1995BiZZ; Other: 70% 15 (1974Ho27).

 ^{200}At Levels

E(level) [†]	J^π [†]	$T_{1/2}$ [†]
0	(3 ⁺)	43.1 s 8
113 1	(2,4) ⁺	

[†] From Adopted Levels.

 α radiations

$E\alpha$ [‡]	E(level)	$I\alpha$ ^{‡#}	HF [†]	Comments
6916 8	113	0.6 2	152 52	$E\alpha$: Other: 7031 keV 5 (2013Ja06), 7033 keV 6 (2005Uu02), correlated with $E\alpha=6467$ keV 6 depopulating the $J^\pi=(3^+)$ g.s. in the daughter nucleus ^{200}At , 7027 keV 5 (1974Ho27), 7028 keV 5 (1967Va20) and 7020 30 (1964Gr04).
7031 5	0	99.4 2	2.32 16	

[†] Using $r_0(^{200}\text{At})=1.517$ 6 unweighted average of 1.525 14 (^{200}Rn), 1.5287 42 (^{202}Rn), 1.5106 49 (^{198}Po) and 1.5026 13 (^{200}Po) from 2020Si16.

[‡] From 1992Hu04.

[#] For absolute intensity per 100 decays, multiply by 0.96 2.

 $\gamma(^{200}\text{At})$

E_γ [†]	E_i (level)	J_i^π	E_f	J_f^π	Mult.	Comments
113 1	113	(2,4) ⁺	0	(3 ⁺)	M1	Mult.: Reported in 1992Hu04, but no spectroscopic information is presented by the authors.

[†] From 6916 α - γ coin in 1992Hu04.

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