

²³⁴Pu α decay

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. Morse	NDS 197,259 (2024).	26-Sep-2023

Parent: ²³⁴Pu: E=0.0; T_{1/2}=8.8 h I; Q(α)=6310 5; % α decay \approx 6

²³⁴Pu-T_{1/2}: From 1973Ja06.

²³⁴Pu-Q(α): From 2021Wa16.

²³⁴Pu-% α decay: From 1956Ho99. Other: % α <10 (1973Ja06).

The information in this dataset stems almost exclusively from private communications which cannot be verified by the evaluator.

Corroborating measurements are provided where possible, but otherwise, the evaluator cannot vouch for the accuracy of the information.

²³⁰U Levels

E(level) [†]	J π [‡]
0.0 [†]	0 ⁺
51.737 [†] 23	2 ⁺
169.35 [†] 4	4 ⁺

[†] Band(A): K=0⁺ g.s. band.

[‡] From Adopted Levels.

α radiations

E α [†]	E(level)	I α ^{‡@}	HF#	Comments
6031	169.35	0.4	26	
6151	51.737	32	1.2	E α : Observed in 1973Ja06 but the energy is quoted from Nuclear Data Sheets.
6202	0.0	68	1	E α : Other measurement: 6.19 MeV I (1952Or03). Observed in 1973Ja06 but the energy is quoted from Nuclear Data Sheets.

[†] Measured by 1960Ho18. The original energies are increased by 6 keV, as recommended by 1991Ry01, due to changes in the calibration energies.

[‡] α intensity per 100 α decays, measured by 1960Ho18.

The nuclear radius parameter r₀(²³⁰U)=1.5176 is deduced by assuming HF=1.0 for the ground-state to ground-state alpha decay branch.

@ For absolute intensity per 100 decays, multiply by \approx 0.06.

^{234}Pu α decayBand(A): $K=0^+$ g.s. band 4^+ 169.35 2^+ 51.737 0^+ 0.0 $^{230}_{92}\text{U}_{138}$