^{179}Pt α decay 1982Bo04,1979Ha10,1970Ha18

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 102, 719 (2004)	1-Jun-2004

Parent: ^{179}Pt: E=0.0; $J^\pi=1/2^-$; $T_{1/2}$=21.1 s *4*; Q(α)=5416 *10*; %α decay=0.24 *3*

^{179}Pt-%α decay: %α=0.24 *3*, weighted average of %α=0.27 *4* (1970Ha18), and %α=0.21 *4* (1980Sc09).

Activity produced by protons on U, Th, Au, and Ta; E=5 GeV. Measured Eα. Detector: Surface Barrier Silicon Detector (1982Bo04). Activity produced by protons on Pb; E=600 MeV. Measured Eα, Iα. Detector: Surface Barrier Silicon Detector (1979Ha10,1970Ha18).

^{175}Os Levels

E(level)	J^π	Comments
102.3 *4*	($1/2^-$)	J^π: From Adopted Levels.

α radiations

Additional information 1.

Eα	E(level)	Iα[‡]	HF	Comments
5195 *9*	102.3	100	0.91[†] *13*	Eα: Weighted average of 5194 *10* (1979Ha10) and 5200 *20* (1970Ha18). Other values: 5150 *10* (1966Si08), 5156 *3* (1982Bo04), 5161 or 5201 (1980Da09). Values of Eα given by 1982Bo04 and 1966Si08 do not agree with those given by 1979Ha10 and 1970Ha18. Eα data 5150 *10* in 1966Si08 identification based on systematics of (HI,xnγ) excitation functions, $T_{1/2}$=33 s *2*; 5200 *20* in 1970Ha18 from daughter in mass separated source; 5194 *10* in 1979Ha10 from daughter in mass separated Hg source, 5156 *3* in 1982Bo04 using calibration which incorporated the 1966Si08 datum; identified from Eα; $T_{1/2}$=54 s *4*; and 5161 or 5201 in 1980Da09 identified from Eα; ΔE unstated. However, the adopted $T_{1/2}$=21.2 s *4* raises doubts about the identity of the α group observed by 1982Bo04 (Eα and $T_{1/2}$ are close to values for ^{180}Pt), and suggests that $T_{1/2}$ from 1966Si08 is also a little high, possibly due to difficulty resolving ^{180}Pt and ^{179}Pt α groups in that experiment.

[†] Using r_0=1.535, average of $r_0(^{174}Os)$=1.54 *3*, and $r_0(^{176}Os)$= 1.53 *4* (1998Ak04).

[‡] For absolute intensity per 100 decays, multiply by 0.0024 *3*.