^{230}Pu α decay (102 s) 2002CaZZ

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	B. Singh and S. Singh	ENSDF	31-Mar-2014

Parent: ^{230}Pu: E=0.0; $J^{\pi}=0^+$; $T_{1/2}$=102 s *10*; Q(α)=7180 *8*; %α decay≈100.0

^{230}Pu-$T_{1/2}$: From ^{230}Pu Adopted Levels, based on measurement by 2002CaZZ.

^{230}Pu-Q(α): From 2012Wa38.

2002CaZZ: measured Eα, Iα, $T_{1/2}$, α fine structure.

By using the Geiger-Nuttall relationship between α energy and its partial half-life, systematic studies for α-decaying isotones were performed by 1993Po14, 1991Po21, 1987Po06 and 1985Po25; the partial half-life of the α decay to g.s. was calculated as 5.2 min (1993Po14), 3.25 min (1991Po21), 5.8 min (1987Po06) and 1.6 min (1985Po25).

^{226}U Levels

E(level)	J^{π}	Comments
0.0	0^+	
59 *18*	(2^+)	E(level): level energy is lower than 80.5 keV from (^{22}Ne,4nγ) study (1998Gr19), but marginally agrees within the large uncertainty from α decay.

α radiations

Eα[‡]	E(level)	Iα[‡#]	HF[†]	Comments
6999 *15*	59	19 *4*	≈2.5	
7057 *10*	0.0	81 *4*	1.0	Eα: other: 7050 *20* (measured by 1993AnZS, Δ(Eα)=15 keV in 1990An22).

[†] $r_0(^{226}U)$=1.520 fm *10* is obtained from systematics of r_0 values (1998Ak04).

[‡] From 2002CaZZ.

[#] For absolute intensity per 100 decays, multiply by ≈1.0.