^{207}Ac α decay 1994Le05,1998Es02

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 177, 509, 2021	4-Jul-2021

Parent: ^{207}Ac: E=0.0; J^π=(9/2$^-$); $T_{1/2}$=27 ms *+11−6*; Q(α)=7840 *60*; %α decay≈100.0

^{207}Ac-J^π,$T_{1/2}$: From 2011Ko04.

^{207}Ac-Q(α): From 2021Wa16.

1994Le05: Isotope produced by ^{175}Lu(^{40}Ar,8n). E(^{40}Ar)=208-224 MeV. A typical beam intensity of 3*10^{11} particles/s. Target: natural Lu 330 μg/cm^2 thick; Detectors: gas-filled recoil mass separator, position sensitive silicon detector. Measured: Eα, $T_{1/2}$, Eα-Eα correlations.

1998Es02: Isotope produced by ^{175}Lu(^{36}Ar,4n). E(^{36}Ar)=197-198 MeV. A typical beam intensity of 280-300 enA. Target: natural Lu 320 μg/cm^2 thick; Detectors: gas-filled recoil mass separator, position sensitive silicon detector. Measured: Eα, $T_{1/2}$, Eα-Eα correlations.

Other: 1998LuZV.

^{203}Fr Levels

E(level)	J^π[†]	$T_{1/2}$[†]
0.0	9/2$^-$	0.55 s *1*

[†] From the Adopted Levels.

α radiations

Eα	E(level)	Iα[‡]	HF[†]	Comments
7693 *25*	0.0	100	≈1.1	Eα,Iα: From 1998Es02. Eα is correlated with subsequent decays of ^{203}Fr, ^{199}At and ^{195}Bi. Others: 7712 keV *25* (1994Le05) and 7734 keV *50* (1998LuZV). HF$_\alpha$=1.1 *+5−2*.

[†] Using r_0(^{203}Fr)=1.529 *4*, from the neighboring ^{202}Rn (N=116) isotope using HF$_\alpha$=1.0.

[‡] For absolute intensity per 100 decays, multiply by ≈1.