^{209}Fr α decay 1974Ho27

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 166, 1 (2020)	20-Apr-2020

Parent: ^{209}Fr: E=0.0; $J^{\pi}=9/2^{-}$; $T_{1/2}$=50.5 s *7*; Q(α)=6778 *4*; %α decay=89 *3*

^{209}Fr-1974Ho27: Mass separated source produced at the ISOLDE facility using 600 MeV, 50 nA proton beam incident on a target containing an alloy of La and Th. Detectors: silicon surface barrier detector with typical energy resolution of 20 keV. Measured: Eα, Iα, $T_{1/2}$, %α. The energy calibration was performed using a mass-separated ^{228}Th source and ^{239}Pu, ^{241}Am and ^{244}Cm combination source. Others: 1964Gr04 and 1967Va20.

^{209}Fr-E,J^{π},$T_{1/2}$: From Adopted Levels for ^{209}Fr (2015Ch30).

^{209}Fr-Q(α): From 2017Wa10.

^{205}At Levels

E(level)	J^{π}	$T_{1/2}$	Comments
0	$9/2^{-}$	26.9 min *8*	J^{π},$T_{1/2}$: From Adopted Levels.

α radiations

Eα	E(level)	Iα[‡]	HF[†]	Comments
6646 *5*	0	100	1.39 *7*	Eα: From 1974Ho27. Others: 6647 keV *5* (1967Va20), 6650 keV *20* (1964Gr04) and 6650 keV *17* (2015Ma63), corresponding to both ^{208}Fr and ^{209}Fr decay.

[†] Using $r_0(^{205}At)$=1.484 *8*, unweighted average deduced from values for neighboring even-even ^{204}Po (r_0=1.476 *6*) and ^{206}Rn (r_0=1.491 *3*) nuclei and HF_{α}=1.

[‡] For absolute intensity per 100 decays, multiply by 0.89 *3*.