^{258}Rf α decay (12.0 ms) 2008Ga08

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 156, 1 (2019)	31-Jan-2019

Parent: ^{258}Rf: E=0; $J^{\pi}=0^+$; $T_{1/2}$=12.0 ms *12*; Q(α)=9190 *30*; %α decay=4.9 *16*

^{258}Rf-$T_{1/2}$: From ^{258}Rf Adopted Levels in the ENSDF database (August 2017 update).

^{258}Rf-Q(α): From 2017Wa10.

^{258}Rf-%α decay: %α=4.9 *16* (from ^{258}Rf Adopted Levels in the ENSDF database (August 2017 update)).

2008Ga08: ^{258}Rf produced in ^{238}U($^{26}Mg^{6+}$,6n) reaction at E=4.9-6.0 MeV/nucleon; $^{238}UF_4$ rotating target at 88-Inch cyclotron facility at LBNL and with Berkeley gas-filled recoil separator (BGS) of the LBNL. Evaporation residues recoiling from the target were separated by the BGS from the beam and other reaction products on the basis of magnetic rigidities in He gas. Measured (evaporation residues)α and (evaporation residues)$\alpha\alpha$ correlations, α decay, SF decay, half-life, excitation functions.

^{254}No Levels

E(level)	J^{π}†	$T_{1/2}$†	Comments
0.0	0^+	51.2 s *4*	
44.2 *4*	2^+		E(level): from Adopted Levels. Other: 90 keV *60* from Eα and Q(α) values, which is likely to correspond to the first 2^+ state in Adopted Levels.

† From Adopted Levels.

α radiations

Eα	E(level)	Comments
8960 *50*	44.2	Eα: from 2008Ga08. One event observed which had 90 keV lower α energy than the other three, this event was interpreted as an α transition to an excited state in ^{254}No.
9050 *30*	0.0	Eα: from 2008Ga08. Iα: intensity of this α can be estimated to be about 85 *15* per 100 α decays from systematics of g.s. to g.s. α intensities for even-even nuclei in this region.