^{208}Fr

In 1964, Griffioen and MacFarlane reported the identification of ^{208}Fr in the paper "Alpha-decay properties of some francium isotopes near the 126-neutron closed shell" (1964Gr04). ^{197}Au, ^{203,205}Tl, and ^{208}Pb targets were bombarded with ^{16}O, ^{12}C, and ^{11}B beams with energies up to 10.38 MeV/amu from the Berkeley HILAC. Recoil products were collected on a catcher foil which was positioned in front of gold surface-barrier detector which measured subsequent α decay. "Fr^{209} and Fr^{208}: ... Once again there were indications that this alpha group is a result of two different isotopes. The Tl^{203}+C^{12} excitation function is somewhat broadened and distorted and no other alpha groups with an excitation function corresponding to a (C^{12},7n) reaction were found. The excitation function from the Au^{197}+O^{16} system is also consistent with the assignment to Fr^{209} and Fr^{208}... " The measured half-life was 37.5(20) s.

Adapted from reference (2013Fr09)

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