^{267}Db

^{267}Db was first observed by Oganessian et al. in 2004 as reported in "Experiments on the synthesis of element 115 in the reaction ^{243}Am(^{48}Ca,xn)$^{291-x}$115" (2004Og03). The Dubna U400 cyclotron was used to bombard an AmO_2 target enriched in ^{243}Am with 253 MeV and 248 MeV ^{48}Ca beams to form ^{287}115 and ^{288}115 in (4n) and (3n) fusion evaporation reactions, respectively. ^{267}Db was populated by subsequent α-decays. The residues were separated with a gas-filled recoil separator and implanted in a semiconductor detector array. Subsequent α particle decay and spontaneous fission events were recorded in this array and in eight detectors arranged in a box configuration around the implantation detector. "The experimental decay scheme for ^{287}115 is also supported by the agreement of the observed decay properties of the other nuclides in the decay chain with the expectations of theory. This means that the SF occurs directly in the decay of ^{267}Db since the calculated α-decay energies and EC-decay energies for this isotope are rather low (Q_α =7.41 MeV, Q_{EC} = 1 MeV) and their expected partial half-lives significantly exceed the observed time interval of 106 min." One decay chain involving ^{267}Db was observed.

Adapted from reference (2013Th02)

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Please cite this abstract as: "FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:10.11578/frib/2279152"