^{228}Rn

^{228}Rn was first discovered by Borge et al. and the results were published in the 1989 paper "The new neutron-rich isotope ^{228}Rn" (1989Bo11). The CERN synchro-cyclotron was used to bombard a ^{232}Th target with 600 MeV protons. Decay curves were measured with a 4π plastic scintillation detector following mass separation with the ISOLDE II on-line separator. "From the growth and decay pattern of the Ra $K_{\alpha 1}$ X-rays and the two strongest γ-lines from the decay of ^{228}Fr at 141 and 474 keV a half-life of 36$\pm$2 s was obtained for ^{228}Fr when the value of 65 s has been kept fixed for the precursor ^{228}Rn, and a half-life of 62$\pm$3 s for ^{228}Rn resulted when the value of 38 s has been kept fixed for the daughter nucleus ^{228}Fr."

Adapted from reference (2013Fr09)

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