^{83}Se

Snell discovered ^{83}Se in 1937 as reported in "The Radioactive Isotopes of Bromine: Isomeric Forms of Bromine 80" (1937Sn02). The Berkeley cyclotron was used to bombard selenium targets with 5.5 MeV deuterons and ^{83}Se was produced in the reaction ^{82}Se(d,p). The activities were measured with a quartz-fiber electroscope following chemical separation. The observation of ^{83}Se was discussed in the context of the observation of ^{83}Br which was proposed to be produced in the decay of ^{83}Se. "...By growth from a hitherto unknown selenium 83; i.e., the bromine 83 would be the second member in a pair of successive β-emitters, the reactions being $Se^{82}(D,p)Se^{83}$, $Se^{83} \rightarrow Br^{83} + e^{-}$, $Br^{83} \rightarrow Kr^{83} + e^{-}$. There was evidence for the second process in the decay curves of the selenium fractions obtained in the experiments, and it appeared that the selenium 83 had a half-life of 17$\pm$5 minutes."

Adapted from reference (2012Gr02)

1937Sn02 A. H. Snell, Phys. Rev. **52**, 1007 (1937).

2012Gr02 J. L. Gross, J. Claes, J. Kathawa, and M. Thoennessen, At. Data Nucl. Data Tables **98**, 75 (2012).

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