^{83}Br

In 1937, Snell discovered ^{83}Br as reported in "The Radioactive Isotopes of Bromine: Isomeric Forms of Bromine 80" (1937Sn02). The Berkeley cyclotron was used to accelerate deuterons and α-particles to produce neutrons which were then used to irradiate samples of arsenic, selenium and bromine. A variety of reactions were used to assign the three previously observed half-lives of 18 min., 4.5 h and 35 h to the correct bromine isotopes. ^{83}Br 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}, $Se^{83} \rightarrow Br^{83} + e^{-}$, $Br^{83} \rightarrow Kr^{83} + e^{-}$."

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).

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