^{89}Kr

Hahn and Strassmann reported the first identification of ^{89}Kr in Berlin in the 1943 paper "Über die bei der Uranspaltung auftretenden aktiven Strontium- und Yttrium-Isotope" (1943Ha10). The isotope was observed following neutron irradiation of uranium and a half-life of 2.5 m was measured. "Sicher ist nur, daß das 2.5-Minuten-Krypton über ein 15.4-Minuten-Rubidium in das 55-Tage-Strontium übergeht." [The only certain assignment is the decay of the 2.5 m krypton, via the 15.4 m rubidium to the 55 d strontium.] Further details were discussed in a subsequent publication (1943Ha09). A krypton activity of 2.5−3 m had already been observed in 1940 by Seelman-Eggebert (1940Se05); however, it could only be linked to a 15.5 m rubidium activity which had been reported by Glasoe and Steigman who at that time had not assigned a mass to the activity (1940Gl06). Only a few weeks later Glasoe and Steigman (1940Gl05) assigned the decay to ^{89}Rb and indirectly implied the existence of ^{89}Kr unaware of the Seelman-Eggebert result.

Adapted from reference (2010He02)

1940Gl05 G. N. Glasoe and J. Steigman, Phys. Rev. **58**, 1 (1940).
1940Gl06 G. N. Glasoe and J. Steigman, Phys. Rev. **57**, 566 (1940).
1940Se05 W. Seelmann-Eggebert, Naturwissenschaften **28**, 451 (1940).
1943Ha09 O. Hahn and F. Strassmann, Z. Phys. **121**, 729 (1943).
1943Ha10 O. Hahn and F. Strassmann, Naturwissenschaften **31**, 249 (1943).
2010He02 M. Heim, A. Fritsch, A. Schuh, A. Shore, and M. Thoennessen, At. Data Nucl. Data Tables **96**, 333 (2010).

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