^{39}Ar

In the 1950 article "Argon^{39} beta-spectrum" Brosi et al. from the Chemistry Division of Oak Ridge National Laboratory described the observation of ^{39}Ar (1950Br66). Potassium salt was irradiated with neutrons in nuclear reactors. Activities were measured with a proportional counter and a NaI(Tl) detector. "This new long-lived argon isotope is presumably A^{39} formed by an (n,p) reaction on K^{39}. An attempt to find the 4-min. activity previously assigned to A^{39} was unsuccessful." The 1940 table of isotopes assigns a 4 min half-life to ^{39}Ar (1940Li01) quoting a 1937 paper by Pool et al. However, although Pool reported a 4 min half-life observed following the irradiation of potassium with neutrons, they did not assign the activity to a specific isotope (1937Po04).

Adapted from reference (2012Th10)

1937Po04 M. L. Pool, J. M. Cork, and R. L. Thornton, Phys. Rev. **52**, 239 (1937).
1940Li01 J. J. Livingood and G. T. Seaborg, Rev. Mod. Phys. **12**, 30 (1940).
1950Br66 A. R. Brosi, H. Zeldes, and B. H. Ketelle, Phys. Rev. **79**, 902 (1950).
2012Th10 M. Thoennessen, At. Data Nucl. Data Tables **98**, 933 (2012).

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