

⁵⁹Cu

Leith et al. reported the first observation of ⁵⁹Cu in the 1947 paper “Radioactivity of Cu⁶⁰” (1947Le07). Protons from 5 to 15 MeV from the Berkeley 37-in. frequency-modulated cyclotron bombarded separated ⁵⁸Ni and ⁶⁰Ni targets. Activities were measured with an ionization chamber and Ryerson-Lindemann electrometer. They tentatively assigned ⁵⁹Cu: “The 81-second and 7.9-minute positron activities produced by proton bombardment of Ni, observed by Delsasso, et al., and tentatively assigned to either Cu⁵⁸ or Cu⁶⁰, correspond to 81-second and 10-minute activities after bombarding Ni⁵⁸ with protons in the 37-in. cyclotron. These are tentatively assigned to Cu⁵⁹ and Cu⁵⁸, respectively, on the basis of threshold and excitation considerations.” The half-life for ⁵⁸Cu was not verified.

Adapted from reference (2012Ga06)

- 1947Le07 C. E. Leith, A. Bratenahl, and B. J. Moyer, Phys. Rev. **72**, 732 (1947).
2012Ga06 K. Garofali, R. Robinson, and M. Thoennessen, At. Data Nucl. Data Tables **98**, 356 (2012).

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