

⁶⁴Cu

Van Voorhis reported the discovery of ⁶⁴Cu in the 1936 paper “The Artificial Radioactivity of Copper, a Branch Reaction” (1936Va02). Copper targets were bombarded with 5 to 6 MeV deuterons accelerated with the Berkeley “magnetic resonance accelerator or cyclotron.” The activities were measured with a pressure ionization chamber and FP-54 Pliotron. The upper boundaries of energy were studied, as well as absorption curves for the positron and electron activities that were analyzed from data taken in an ionization chamber. “...the half-life of both positron and electron activities was found to be exactly the same, a more exact measurement giving the value 12.8 ± 0.1 hours.” A previous report of a stable ⁶⁴Cu isotope (1923De01) was incorrect.

Adapted from reference (2012Ga06)

- 1923De01 A. J. Dempster, *Nature* **112**, 7 (1923).
1936Va02 S. N. Van Voorhis, *Phys. Rev.* **50**, 895 (1936).
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”