

⁴⁷Ca

In 1951, Batzel et al. described the first observation of ⁴⁷Ca in “The High Energy Spallation Products of Copper” (1951Ba84). ⁴⁷Ca was formed by spallation of copper by 340 MeV protons at the Berkeley 184-inch cyclotron. The existence of ⁴⁷Ca was determined from the observation of the decay of ⁴⁷Sc. “One was the 150-day Ca⁴⁵ and the other was a 4.8±0.2-day beta-emitter with an energy of about 1.2 Mev as determined by an aluminum absorption measurement. This activity is probably the 5.8-day calcium activity reported as Ca⁴⁷ by Matthews and Pool. The growth of a 3.4-day scandium was observed in the decay of the calcium fraction and the scandium daughter was milked from the fraction.” The mentioned activity by Matthews and Pool was only reported in a conference abstract (1947Ma32).

Adapted from reference (2011Am01)

- 1947Ma32 D. E. Matthews and M. L. Pool, Phys. Rev. 72, 163, G8 (1947).
1951Ba84 R. E. Batzel, D. R. Miller, and G. T. Seaborg, Phys. Rev. **84**, 671 (1951).
2011Am01 S. Amos, J. L. Gross, and M. Thoennessen, At. Data Nucl. Data Tables **97**, 383 (2011).

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