^{187}Au

Smith and Hollander first observed ^{187}Au at the Berkeley Radiation Laboratory in 1955 and the results were reported in "Radiochemical Study of Neutron-Deficient Chains in the Noble Metal Region" (1955Sm42). The isotope was primarily produced in (p,xn) reactions with protons of energies between 50 and 130 MeV accelerated with the 184-cyclotron. Additional measurements were performed with 32 MeV protons from the Berkeley linear accelerator and protons and heavy ions from the 60-inch cyclotron. Identification was achieved with timed chemical separation. Characteristic γ-ray spectra were measured with a NaI detector. "Several other genetic experiments were done to identify the mass 187 chain. on two occasions, platinum metal was irradiated with 130-Mev protons, and pure gold fractions prepared. As was expected, the gold fraction decay curves were complex, with at least five components." The measured half-life was $\sim$15 m.

Adapted from reference (2010Sc35)

1955Sm42 W. G. Smith and J. M. Hollander, Phys. Rev. **98**, 1258 (1955).

2010Sc35 A. Schuh, A. Fritsch, J. Q. Ginepro, M. Heim *et al.*, At. Data Nucl. Data Tables **96**, 307 (2010).

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