

¹⁶¹Lu

In 1973, the identification of ¹⁶¹Lu was reported in “A 7.3 ms isomer of ¹⁶¹Lu” by Anholt et al. (1973An10). An enriched ¹⁴⁸Sm target was bombarded with 110–150 MeV ¹⁹F ions from the Yale heavy ion accelerator and ¹⁶¹Lu was formed in the (6n) fusion evaporation reaction. Decay curves and γ -ray spectra of the subsequent activities were measured with a Ge(Li) detector. “The mass number of the decay chain to which this activity belongs has been established as 161 by observing the excitation function for this line and comparing it to those of γ -ray peaks associated with radioactive decay products of ¹⁶⁰Lu, ¹⁶¹Lu and ¹⁶²Lu” The reported half-life was 7.3(4) ms and corresponds to an isomer. Six years later Alkhazov et al. claimed the discovery of ¹⁶¹Lu by reporting the measurement of the 72(6) s ground state (1979A116). The connection of the internal transition to the ground state has still not been measured.

Adapted from reference (2012Gr19)

- 1973An10 R. Anholt, J. O. Rasmussen, and I. Rezanka, Nucl. Phys. A **209**, 72 (1973).
1979A116 G. D. Alkhazov, L. K. Batist, E. Y. Berlovich, Y. S. Blinnikov *et al.*, Z. Phys. A **291**, 397 (1979).
2012Gr19 J. L. Gross and M. Thoennessen, At. Data Nucl. Data Tables **98**, 983 (2012).

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