

¹⁶⁵Re

The 1981 paper “New neutron deficient isotopes in the range of elements Tm to Pt” reported the discovery of ¹⁶⁵Re by Hofmann et al. at the GSI linear accelerator UNILAC (1981Ho10). ¹⁶⁵Re was produced in reactions bombarding neutron deficient targets between Mo and Sn with a beam of ⁵⁸Ni as well as bombarding targets between V and Ni with a beam of ¹⁰⁷Ag, with energies between 4.4 MeV/u and 5.9 MeV/u. Residues were separated using the velocity filter SHIP. “An α line of 5506 keV was observed as daughter in the ¹⁶⁹Ir decay and is assigned to ¹⁶⁵Re.” The observed α energy corresponds to the decay of an isomeric state and the half-life of the ground state (1.6(6) s) was only reported in a refereed publication 31 years later by Thornthwaite et al. (2012Th13).

Adapted from reference (2012Ro36)

- 1981Ho10 S. Hofmann, G. Munzenberg, F. Hessberger, W. Reisdorf *et al.*, Z. Phys. A **299**, 281 (1981).
- 2012Ro36 R. Robinson and M. Thoennessen, At. Data Nucl. Data Tables **98**, 911 (2012).
- 2012Th13 A. Thornthwaite, D. O’Donnell, R. D. Page, D. T. Joss *et al.*, Phys. Rev. C **86**, 064315 (2012).

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