^{138}Nd

In 1965, Gromov et al. discovered ^{138}Nd in "Decay of Neutron-Deficient Neodymium Isotopes. A New Isotope Nd^{138}" (1964Gr32). Erbium oxide or tantalum targets were irradiated with 660 MeV protons from the Dubna synchrocyclotron. Conversion electron and γ-ray spectra were measured to identify ^{138}Nd. "Observation of the E0 transition conversion lines, whose intensity decays with a ≈5-hour half-life, is experimental proof of the assumed isotope Nd^{138} with this half-life." An activity of 22(2) m, most likely the half-life of ^{139}Nd, had previously been assigned incorrectly to ^{138}Nd (1951St03).

Adapted from reference (2012Gr02)

1951St03 B. J. Stover, Phys. Rev. **81**, 8 (1951).

1964Gr32 K. Y. Gromov, A. S. Danagulyan, L. N. Nikityuk, V. V. Muraveva *et al.*, Soviet Phys. JETP **20**, 1104 (1965).

2012Gr02 J. L. Gross, J. Claes, J. Kathawa, and M. Thoennessen, At. Data Nucl. Data Tables **98**, 75 (2012).

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