

¹²⁷Rh

In 2015, Lorusso et al. reported the discovery of ¹²⁷Rh in the paper “ β -Decay Half-Lives of 110 Neutron-Rich Nuclei across the N= 82 Shell Gap: Implications for the Mechanism and Universality of the Astrophysical r Process” (2015Lo04). A 345 MeV/nucleon ²³⁸U beam from the RIKEN cyclotron accelerator complex was incident on a beryllium target and “After selection and identification, exotic nuclei were implanted at a rate of 50 ions/s in the stack of eight double-sided silicon strip detectors WAS3ABi, surrounded by the 84 high-purity germanium detectors of the EURICA array to detect γ radiation from the excited reaction products.” The table in the paper listing the measured half-lives included the newly identified isotope ¹²⁷Rh with a half-life of 20^{+20}_{-7} ms.

Adapted from reference (2016Th03)

2015Lo04 G. Lorusso, S. Nishimura, Z. Y. Xu, A. Jungclaus *et al.*, Phys. Rev. Lett. **114**, 192501 (2015).

2016Th03 M. Thoennessen, Int. J. Mod. Phys. E **25**, 1630004 (2016).

Please cite this abstract as: “FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:[10.11578/frib/2279152](https://doi.org/10.11578/frib/2279152)”