

## **<sup>155</sup>Yb**

“Alpha-decay properties of some thulium and ytterbium isotopes near the 82-neutron shell” by Macfarlane announced the discovery of <sup>155</sup>Yb in 1964 ([1964Ma45](#)). Samarium oxide (enriched in <sup>144</sup>Sm) and neodymium oxide (enriched in <sup>142</sup>Nd) were bombarded with 106–151 MeV <sup>16</sup>O and 131–195 MeV <sup>20</sup>Ne beams from the Berkeley heavy-ion linear accelerator Hilac, respectively. <sup>155</sup>Yb was formed in (xn) fusion evaporation reactions and identified by measuring excitation functions and  $\alpha$ -decay spectra. “The second Yb alpha activity that was observed has an alpha-particle energy of 5.21 MeV, and decays with a half-life of 1.65 sec. The assignment of this activity to Yb<sup>155</sup> was made by a procedure used for Yb<sup>154</sup>, making use of excitation function data from previous work to identify the reaction producing the activity.”

Adapted from reference ([2013Fr10](#))

[1964Ma45](#) R. D. Macfarlane, Phys. Rev. **136**, B941 (1964).

[2013Fr10](#) C. Fry and M. Thoennessen, At. Data Nucl. Data Tables **99**, 520 (2013).

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)”