

¹⁵³Dy

Toth and Rasmussen reported the discovery of ¹⁵³Dy in the 1958 paper “Studies of rare earth alpha emitters” (1958To27). ¹⁵²Gd was bombarded with 48 MeV alpha particles accelerated by the Berkeley 60-in. cyclotron. Subsequent α emission was measured following chemical separation. The mass assignment was achieved with the stacked foil technique. “The 5-hr isotope was present only in a small amount at 33.5 Mev and was absent at 23.3 Mev. Since (α ,3n) thresholds are approximately at 28 Mev, one is forced to the conclusion that the 5-hr alpha emitter must have been made by an (α ,3n) reaction on Gd¹⁶². It must be Dy¹⁶³.” Previously, Rasmussen et al. had assigned the half-life of 2.3(2) h to a dysprosium isotope with $149 \leq A \leq 153$ (1953Ra02).

Adapted from reference (2013Fr10)

- 1953Ra02 J. O. Rasmussen Jr., S. G. Thompson, and A. Ghiorso, Phys. Rev. **89**, 33 (1953).
1958To27 K. S. Toth and J. O. Rasmussen, Phys. Rev. **109**, 121 (1958).
2013Fr10 C. Fry and M. Thoennessen, At. Data Nucl. Data Tables **99**, 520 (2013).

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