

¹⁴¹Tb

The first observation of ¹⁴¹Tb was reported by Wilmarth et al. in their 1986 paper entitled “Beta-delayed proton emission in the lanthanide region” (1986Wi15). ⁵⁴Fe beams of 298 and 276 MeV from the Berkeley SuperHILAC bombarded a ⁹²Ru target. ¹⁴¹Tb was populated by β -decay from ¹⁴¹Dy produced in a (2p3n) reaction. Beta-delayed particles, X-rays and γ -rays were measured following mass separation with the on-line isotope separator OASIS. “From an analysis of the γ -rays populated in β -decay, a half-life of 20 ± 4 s for ¹⁴¹Gd is in agreement with the β -delayed proton decay data and the value in [the reference]. This γ -ray analysis also resulted in the identification of the new isotope ¹⁴¹Tb with a half-life of 3.5 ± 0.9 s.”

Adapted from reference (2013Ma01)

1986Wi15 P. A. Wilmarth, J. M. Nitschke, R. B. Firestone, and J. Gilat, Z. Phys. A **325**, 485 (1986).

2013Ma01 E. May and M. Thoennessen, At. Data Nucl. Data Tables **99**, 1 (2013).

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