

¹⁴⁶Tm

“Proton radioactivity from ¹⁴⁶Tm. The completion of a sequence of four odd-odd proton emitters” announced the discovery of ¹⁴⁶Tm by Livingston et al. in 1993 ([1993Li18](#)). An enriched ⁹²Mo target was bombarded with a 287 MeV ⁵⁸Ni beam and ¹⁴⁶Tm was populated in the ⁹²Mo(⁵⁸Ni,p3n) fusion-evaporation reaction. Reaction products were separated with the Daresbury Recoil Separator and implanted in a double-sided silicon strip detector which also recorded subsequent proton emissions. “On this basis, the two lines observed in the A=146 region are assigned to proton emission from ¹⁴⁶Tm with corresponding Q-values of 1127±5 keV and 1197±5 keV. The measured half-lives of these lines are 235±27 ms and 72±23 ms, indicating that the lines originate from different states of ¹⁴⁶Tm.”

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

[1993Li18](#) K. Livingston, P. J. Woods, T. Davinson, N. J. Davis *et al.*, Phys. Lett. B **312**, 46 (1993).

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

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