

¹³⁰Pm

¹³⁰Pm was discovered in 1985 by Wilmarth et al. and the results were published in the paper entitled “Beta-delayed proton precursors with $59 \leq Z \leq 62$ ” (1985Wi07). A 170 MeV ⁴⁰Ca beam from the Berkeley Super HILAC was used to produce ¹³⁰Pm in the fusion-evaporation reaction ⁹²Mo(⁴⁰Ca,pn). Charged-particles, X-rays and γ -rays were measured following mass separation with the on-line separator OASIS. “A weak β -delayed proton activity with a half life of $2.2^{+0.6}_{-0.4}$ s was observed at this mass. The Nd K x-rays measured in coincidence with the protons assign the activity to the new isotope ¹³⁰Pm. This is the first observation of proton emission from a promethium precursor.”

Adapted from reference (2012Ma48)

1985Wi07 P. A. Wilmarth, J. M. Nitschke, P. K. Lemmertz, and R. B. Firestone, *Z. Phys. A* **321**, 179 (1985).

2012Ma48 E. May and M. Thoennessen, *At. Data Nucl. Data Tables* **98**, 960 (2012).

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