

¹²¹Sn

Lindner and Perlman discovered ¹²¹Sn in 1948 in “Neutron Deficient Isotopes of Tellurium and Antimony” (1948Li02). An 18 MeV deuteron beam accelerated by the Berkeley 60-inch cyclotron bombarded an isotopically enriched ¹²⁰Sn target and the β -decay of the tin precipitate was recorded. “The tin fraction was found to contain a single β^- -activity of 28-hour half-life. The maximum β^- -energy was found from absorption in beryllium and from beta-ray spectrometer measurements to be about 0.4 Mev and no γ -radiation was present. The 26-hr. Sn of Livingood and Seaborg is therefore Sn¹²¹, formed in this case by the reaction Sn¹²⁰(d,p)Sn¹²¹.” Originally ¹²¹Sn had incorrectly been observed to be stable (1922As01). A 24 h activity had previously been assigned to either ¹²¹Sn, ¹²²Sb, or ¹²⁴Sb (1936Li02), and a 28(2) h half-life to ¹¹³Sn, ¹²¹Sn, or ¹²³Sn (1936Li01). The 26-h activity referred to by Lindner and Perlman was not believed to belong to ¹²¹Sn by Livingood and Seaborg: “the 26-hour tin isotope from tin plus deuterons plus neutrons is not necessarily associated with Sn¹²¹, although it may be.” (1939Li04). Finally, in 1947 Seren assigned a 26 h half-life to ₅₀Sn^{<125} (1947Se33).

Adapted from reference (2011Am01)

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