# $^{195}$Pb

Andersson et al. observed $^{195}$Pb as reported in the 1957 article "Lead and thallium isotopes in the mass range 195-199" (1957An53). Natural thallium targets were bombarded with 45−115 MeV protons from the Uppsala synchrocyclotron creating lead isotopes in (p,xn) reactions. Conversion electrons and $\gamma$-spectra were measured. "The decay curve of a mass 195 sample could be decomposed into three components: 11.4 hr (probably identical with 9.5 hr $Hg^{195}$), 1.2 hr and <30 min. The 1.2 hr activity turned out to have a 37 keV $\gamma$-ray that is undoubtly identical with a transition earlier found in the decay of $Hg^{195m}$ and is thus assigned to $Tl^{195}$. Knight and Baker (1955Kn34) report exactly the same half-life for this isotope, which they obtained by deuteron bombardment of Hg, enriched in mass 196. It was natural to expect the short-lived component to be associated with $Pb^{195}$." The measured half-life was 17(1) min and corresponds to an isomeric state. The ground state half-life (∼15 min) of $^{195}$Pb was first measured twenty-five years later by Hicks et al. (1982Hi04).

Adapted from reference (2013Fr04)


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