^{229}Pa

The discovery of ^{229}Pa by Hyde et al. was described in the 1949 paper "A new isotope of protactinium: Pa^{229}" (1949Hy01). A thorium target was bombarded with 22 MeV deuterons from the Berkeley 60-in. cyclotron forming ^{229}Pa in the reaction ^{230}Th(d,3n). After chemical separation, α-ray spectra were measured with a pulse-analyzer. "A search in the protactinium fraction for unidentified activities that might be due to Pa^{229} and Pa^{228} revealed the presence of a previously unknown α emitter. The decay of this activity could not be followed directly because U^{230} and its daughters were growing into the protactinium fraction. However, it was possible to follow the decay of the unknown activity by making frequent measurements of the α-ray spectrum of the protactinium fraction with a pulse analyzer and by following the decay of the unknown peak. From such measurements a half life of 1.4±0.4 days was determined."

Adapted from reference (2013Fr03)

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