^{205}Rn

Valli et al. reported the discovery of ^{205}Rn in the 1967 article "Alpha-decay properties of neutron-deficient isotopes of emanation" (1967Va17). Platinum, gold, mercury, and thallium targets were bombarded with ^{16}O, ^{14}N, and ^{12}C beams from the Berkeley HILAC. Alpha-particle spectra were measured with a Si(AU) detector following chemical separation. "Emanation-206 and Emanation-205: ...From an analysis of many decay curves of the 6.260-MeV α group we found a two-component mixture with half-life periods of 6.5$\pm$1 min and 1.8$\pm$0.5 min. The longer-lived component corresponds to the ^{206}Em reported by Stoner and Hyde (1957St10). The 1.8-min period can be assigned to the previously unknown ^{205}Em from arguments based on our excitation function results." Stoner and Hyde had reported a 3 min half-life and assigned it to either ^{204}Rn or ^{205}Rn (1957St10).

Adapted from reference (2013Fr09)

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