

^{214}At

Meinke et al. reported the observation of ^{214}At in the 1949 paper “Three additional collateral alpha-decay chains” (1949Me54). Thorium was bombarded by 150 MeV deuterons from the Berkeley 184-inch cyclotron. Alpha-decay chain from ^{226}Pa was measured following chemical separation. “Although the mass type has not yet been identified through known daughters as above, general considerations with regard to the method of formation and half-life of the parent substance, and the energies of all the members of the series suggest a collateral branch of the $4n+2$ family: ${}_{91}\text{Pa}^{226} \xrightarrow{\alpha} {}_{89}\text{Ac}^{222} \xrightarrow{\alpha} {}_{87}\text{Fr}^{218} \xrightarrow{\alpha} {}_{85}\text{Fr}^{214} \xrightarrow{\alpha} {}_{83}\text{Bi}^{210}(\text{RaE})$.” In a table summarizing the energies and half-lives of the decay chain only the α -decay energy was given for ^{214}At stating a calculated half-life of 10^{-6} s.

Adapted from reference (2013Fr09)

1949Me54 W. W. Meinke, A. Ghiorso, and G. T. Seaborg, Phys. Rev. **75**, 314 (1949).

2013Fr09 C. Fry and M. Thoennessen, At. Data Nucl. Data Tables **99**, 497 (2013).

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