^{204}At

The paper "α-particle branching ratios for neutron-deficient astatine isotopes" by Latimer et al. reported the observation of ^{204}At in 1961 (1961La02). Gold and platinum foils were irradiated with 50−125 MeV ^{12}C and 65−130 MeV ^{14}N beams, respectively, from the Berkeley HILAC. Alpha-particle spectra were measured with a gridded ionization chamber following chemical separation. "In this study, an α-group of 5.95 MeV energy and half-life of 9±1 min has been observed. Excitation functions support the assignment of this activity to ^{204}At." An earlier report of a 22 min half-life (1951Ba14) was incorrect. Also, about three months later Forsling et al. independently reported a 9(3) min half-life (1961Fo04) and in 1959 Hoff et al. had reported a half-life of 9.3(2) min in a conference abstract (1959Ho86).

Adapted from reference (2013Fr09)

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