^{211}At

The discovery of ^{211}At was reported in "Artificially radioactive element 85" by Corson et al. in 1940 (1940Co02). The Berkeley 60-inch cyclotron was used to bombard a bismuth target with 32 MeV alpha particles. Alpha particles, gamma-, and x-rays were measured following chemical separation. "All these radiations separate together chemically as element 85, and all show the same half-life of 7.5 hours. The probable explanation of these effects is the following: Bi^{209}, by an (α,2n) reaction, goes to 85^{211}, which decays either by K-electron capture to actinium C'(Po^{211}) or by alpha-particle emission (range 4.5 cm) to Bi^{207}." The discovery of the element astatine in this experiment had been published earlier without a mass assignment (1940Co01).

Adapted from reference (2013Fr09)

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1940Co02 D. R. Corson, K. R. MacKenzie, and E. Segre, Phys. Rev. **58**, 672 (1940).
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