

## $^{234}\text{U}$

Geiger and Nuttall described the observation of a new uranium isotopes,  $\text{U}_{II}$  ( $^{234}\text{U}$ ) at the University of Manchester in the 1912 paper “The ranges of the  $\alpha$  particles from uranium” (1912Ge01). The  $\alpha$ -particle ranges from a uranium source were measured with a Bragg ionization chamber. “Uranium I. therefore, which has a period of  $5 \times 10^9$  years, emits  $\alpha$  particles of range 2.5 cm in air at atmospheric pressure and at  $15^\circ \text{C}$ ., and is followed by another  $\alpha$ -ray product, uranium II., which has a period of about  $2 \times 10^6$  years and emits  $\alpha$  particles of range 2.9 cm.” Earlier, the existence of a second  $\alpha$  emitting uranium isotope was suspected from the number of emitted  $\alpha$  particles per uranium atom (1908Bo01, 1910Ge01).

Adapted from reference (2013Fr03)

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