^{216}Po

In 1910, Geiger and Marsden from the University of Manchester reported the observation of short lived α-activity in the decay of thorium emanation (^{216}Po): "Über die Zahl der von der Aktinium- und Thoriumemanation ausgesandten α-Teilchen" (1910Ge02). A thorium emanation source was placed between two zinc sulphide screens which were viewed by two microscopes. The number of simultaneous or emissions in short successions were counted. "Derartige Szintillationen in rascher Aufeinanderfolge zeigten sich auch dann, wenn die pro Minute beobachtete Zahl von Szintillationen äußerts gering war, so daß die Wahrscheinlichkeit eines zufälligen zeitlichen und örtlichen Zusammentreffens zweier Szintillationen verschwindend klein ist. Es erscheint damit die Existenz von mindestens einem α-Strahlenprodukt in der Thoriumemanationsgruppe von mittlerer Lebensdauer von etwa 1/5 Sekunde erwiesen." [This rapid succession of scintillations were also present, when the observed number of scintillations per minute were extremely small, so that the probability for random temporal and spacial coincidences of two scintillations were vanishingly small. Therefore it seems that the existence of at least one α-decay product in the thorium emanation group with a half-life of about 1/5 seconds has been demonstrated.] This activity was later named ThA (1911Ru02) and corresponds to ^{216}Po.

Adapted from reference (2013Fr04)

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