^{253}Es

Thompson et al. from Berkeley were the first to publish unclassified evidence for the existence of ^{253}Es in 1954 in their paper "Transcurium Isotopes Produced in the Neutron Irradiation of Plutonium" (1954Th01). ^{239}Pu was irradiated with neutrons in the Idaho Materials Testing Reactor and ^{253}Cf was chemically separated. "The isotope of element 99 emitting 6.6-MeV alpha particles is logically assigned as 99^{253}. A reasonable half-life estimated from systematics, assuming a hindrance factor of ten, would be very roughly a month." The paper was published shortly after the report on the discovery of ^{246}Es and contained the same statement regarding the discovery of element 99: "There is unpublished information relevant to element 99 at the University of California, Argonne National Laboratory, and Los Alamos Scientific Laboratory. Until this information is published the question of the first preparation should not be prejudged on the basis of this paper." The Argonne group (1954St98) published their results on ^{253}Es only a few weeks later, stating "A number of arguments indicate that the probable mass assignment of the element-99 isotope is 253." The paper included a footnote with regards to the discovery of the new element: "These elements (99 and 100) have previously been discovered in other work at Argonne National Laboratory, University of California Radiation Laboratory, and Los Alamos Scientific Laboratory, not yet published." ^{253}Es was the einsteinium isotope credited with the discovery of element 99, published in 1955 (1955Gh01). It was identified on December 19-20, 1952 from uranium which had been irradiated by neutrons in the "Mike" thermonuclear explosion in November 1952.

Adapted from reference (2011Me01)

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