^{146}Sm

"Alpha activity of Sm^{146} as detected with nuclear emulsions" was published in 1953 by Dunlavey et al. reporting the observation of ^{146}Sm (1953Du21). A neodymium metal target was bombarded with 40 MeV ^{4}He from the Berkeley 60-in. cyclotron. Alpha-particle tracks in nuclear photographic emulsions were examined with a microscope. "An approximation of the total Sm^{146} produced was then made through yield comparisons by calculating the amounts of both Sm^{153} and Sm^{145} initially formed and by estimating the ratio of the amount of Sm^{146} formed to each of these. Correlation with the observed rate of 2.55 MeV alpha-particle emission gives a half-life approximation of 5×10^{7} years for Sm^{146}."

Adapted from reference (2013Ma01)

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