^{49}Ca

^{49}Ca was first observed by der Mateosian and Goldhaber from Argonne National Laboratory in 1950, reported in "The Question of Isomerism in Ca^{49}" (1950De08). Enriched calcium was exposed to slow neutrons from the Argonne heavy water reactor and β-decay curves were recorded following chemical separation. "To our surprise, we were unable to confirm the existence of either of the reported activities when Ca enriched in the isotope of mass 48 (62 percent Ca^{48}) was exposed to slow neutrons from the Argonne heavy water reactor. Instead, we noticed two activities of 8.5 min. and 1 hr. half-life... By chemical separation we could show that the 8.5-min. activity was due to a Ca isotope, Ca^{49}, and the 1-hr. activity due to a Sc isotope, Sc^{49}." The unconfirmed activities mentioned in the quote refer to half-lives of 30 m and 2.5 h reported in 1940 (1940Wa03).

Adapted from reference (2011Am01)

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