

¹⁰⁹I

Faestermann et al. published “Evidence for proton radioactivity of ¹¹³Cs and ¹⁰⁹I” in 1984 describing the first observation of ¹⁰⁹I ([1984Fa04](#)). Enriched ⁵⁸Ni targets were bombarded with a 250 MeV ⁵⁸Ni beam from the Munich MP Tandem-linear accelerator. Evaporation residues were collected on a catcher foil and charged particles were measured with a parallel plate avalanche counter and a Bragg curve spectroscopy ionization chamber. “...the proton line of 0.83 MeV observed with the ⁵⁸Ni + ⁵⁴Fe reaction can only be due to the decay of ¹⁰⁹I or ¹⁰⁵Sb. We consider the former as more probable because the production cross section is similar to that for ¹¹³Cs, thus favoring also the (p2n) evaporation channel. In conclusion we assign the observed 0.98 MeV proton line definitely to the decay of ¹¹³Cs and the 0.83 MeV line tentatively to ¹⁰⁹I.”

Adapted from reference ([2013Ka01](#))

[1984Fa04](#) T. Faestermann, A. Gillitzer, K. Hartel, P. Kienle, and E. Nolte, Phys. Lett. B **137**, 23 (1984).

[2013Ka01](#) J. Kathawa, C. Fry, and M. Thoennessen, At. Data Nucl. Data Tables **99**, 22 (2013).

Please cite this abstract as: “FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:[10.11578/frib/2279152](https://doi.org/10.11578/frib/2279152)”