^{72}Ga

Sagane identified ^{72}Ga in 1939 as reported in "Radioactive isotopes of Cu, Zn, Ga and Ge" (1939Sa02). Metallic gallium targets were irradiated by slow and fast neutrons produced by deuteron bombardments of lithium and beryllium from the Berkeley cyclotron. ^{72}Ga was produced by neutron capture reactions and the resulting activities were measured with a Lauritsen-type quartz fiber electroscope. "As shown in [the figure] the decay curves obtained with slow neutron bombardments gave only two periods; the well-known 20-min. period and a new 14-hr. period. No trace of the 23-hr. period reported by Fermi and others or by the Michigan group was found... These two points support very well the conclusion that this 14-hr. period should be caused by Ga^{72}" Earlier, Amaldi et al. reported a 23 h half-life without a mass assignment (1935Am01). Subsequently, without measuring it themselves Bothe and Gentner, as well as Mann assigned this activity to ^{72}Ga (1937Bo10, 1937Ma08). Only a few month later Pool et al. measured a 22 h period assigning it to ^{72}Ga (1937Po04). In the following year, Livingston reported a 14 h half-life, however, it was not explicitly assigned to ^{72}Ga (1938Li06).

Adapted from reference (2012Gr19)

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Please cite this abstract as: "FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:10.11578/frib/2279152"