^{153}Gd

^{153}Gd was discovered in 1947 by Inghram et al. as reported in the paper "Activities induced by pile neutron bombardment of samarium" (1947In07). A Sm_2O_3 sample was irradiated with neutrons at the Hanford Pile. ^{153}Gd was subsequently identified by mass spectroscopy at Argonne National Laboratory. "The 169 activity could conceivably have been caused by samarium, gadolinium, erbium, or ytterbium. Since no line was observed as mass 153 the possibility of samarium was ruled out. Gadolinium, which emits mostly as GdO^+, could have caused the line as could erbium or ytterbium emitting as Er^+ and Yb^+. However, since gadolinium was a known impurity in the samarium sample and no erbium or ytterbium impurities could be detected, it was concluded that the 169 mass line was caused by a gadolinium isotope of mass 153."

Adapted from reference (2013Ma01)

1947In07 M. G. Inghram, R. J. Hayden, and D. C. Hess Jr., Phys. Rev. **71**, 643 (1947).

2013Ma01 E. May and M. Thoennessen, At. Data Nucl. Data Tables **99**, 1 (2013).

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