# $^{89}$Br

Perlow and Stehney observed $^{89}$Br at Argonne National Laboratory as described in the 1959 article "Halogen Delayed-Neutron Activities" (1959Pe28). $^{235}$U was irradiated with thermal neutrons and the activities of the bromine isotopes were measured following chemical separation. "The 4.4-sec bromine was observed by Sugarman by neutron-counting after chemical separation, but the half-life assignment in that work was open to some question because the delayed-neutron character of $Br^{88}$ was not known at that time. The present work corroborates its existence and furnishes a good measurement of the lifetime. This isotope is frequently assigned to mass 89, although a search for mass 89 descendents following AgBr precipitation was not successful. The 1.6-sec bromine has not been observed previously."

The ∼4.5 s half-life had earlier been reported without any element nor isotope identification (1947Re02). Sugarman assigned the half-life to bromine with possible mass numbers between 87 and 90 (1947Su24); subsequently it was narrowed down to 89 or 90 (1949Su14).

Adapted from reference (2012Gr02)


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