^{117}Ba

Bogdanov et al. reported the discovery of ^{117}Ba in 1977 in their article "New Neutron-Deficient Isotopes of Barium and Rare-Earth Elements" (1977Bo02). An enriched ^{92}Mo target was bombarded with an 180-190 MeV sulfur beam produced by the JINR Laboratory of Nuclear Reactions U-300 Heavy Ion Cyclotron and ^{117}Ba was produced in the fusion evaporation reaction ^{92}Mo(^{32}S,2p5n). The isotope was separated with the BEMS-2 on-line ion source and identified by its delayed proton emission. "As the proton emission of the A = 117 isobar, it is unambiguously related to ^{117}Ba, since the reaction leading to the formation of ^{117}Cs was energetically impossible in our experiments."

Adapted from reference (2010Sh20)

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