^{215}Fr

In the 1970 article "Production and decay properties of protactinium isotopes of mass 222 to 225 formed in heavy-ion reactions," Borggreen et al. identified ^{215}Fr (1970Bo13). The Berkeley heavy-ion linear accelerator (HILAC) was used to bombard ^{208}Pb and ^{205}Tl targets with ^{19}F and ^{22}Ne beams forming ^{224}Pa and ^{223}Pa in (3n) and (4n) fusion-evaporation reactions, respectively. ^{215}Fr was then populated by subsequent α-decay. Recoil products were deposited by a helium gas stream on a metal surface located in front of a gold surface-barrier detector which recorded the subsequent α decay. "The assignment of the 9.365-MeV group to ^{215}Fr seems particularly secure owing to the very restricted number of possible assignments of α groups above 9.3-MeV energy." For ^{215}Fr only an upper limit of $<$500 ns was given.

Adapted from reference (2013Fr09)

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