^{222}Pa

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 ^{222}Pa (1970Bo13). The Berkeley heavy-ion linear accelerator (HILAC) was used to bombard ^{209}Bi, ^{208}Pb and ^{205}Tl targets with ^{16}O, ^{19}F and ^{22}Ne beams forming ^{222}Pa in (xn) fusion-evaporation reactions. 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 8.18-MeV ^{222}Pa peak and the 9.21-MeV ^{218}Ac peak provided the best data leading to a value of 5.7$\pm$0.5 msec for the ^{222}Pa half-life."

Adapted from reference (2013Fr03)

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