^{201}Tl

In 1950, Neumann and Perlman described the first observation of ^{201}Tl in "Isotopic assignments of bismuth isotopes produced with high energy particles" (1950Ne77). Lead targets were bombarded with 100 MeV protons and deuterons from the Berkeley 184-inch cyclotron and bismuth isotopes were chemically separated. ^{201}Tl was identified from the decay of ^{201}Bi. "When this experiment was done, a new decay chain consisting of an 8-hr. lead and 72-hr. thallium was indeed found. The thallium in particular was best assigned to Tl^{201}, because Tl^{198}, Tl^{199}, and Tl^{200} have been assigned to other activities, while Tl^{202} is not only assigned to a different activity, but would be blocked by long-lived Pb^{202}." Previously reported half-lives of 10.5 h and 44 h assigned to ^{200}Tl and/or ^{201}Tl (1940Kr08) were incorrect.

Adapted from reference (2013Fr04)

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