^{201}Bi

In 1950, Neumann and Perlman described the first observation of ^{201}Bi 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 ^{201}Bi was identified following chemical separation measuring α- and β-activities with a mica end-window Geiger tube and a parallel plate chamber, respectively. "Bi^{201} Isomers: ...the half-life for the Bi^{201} parent in the first experiments turned out to be about 90 min. rather than 62 min., the half-life of the alpha-activity thought to be Bi^{201}. The most promising solution at present is to assume that there are independently decaying isomers, one of about 1-hr half-life which has measurable alpha-branching, and another of about 2-hr. half-life which only exhibits electron capture decay." The latter half-life corresponds to the ground state of ^{201}Bi. Previously, 9 min, 27 min and $1-2$ hr. half-lives was reported without a mass assignment (1948Te01).

Adapted from reference (2013Fr04)

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