

¹⁹²Bi

¹⁹²Bi was identified by Tarantin et al. in the 1970 paper “Identification and study of the radioactive properties of bismuth isotopes with an electromagnetic mass separator in a heavy-ion beam” ([1970Ta14](#)). A 200 MeV ²⁰Ne beam from the Dubna U-300 cyclotron bombarded a ¹⁸¹Ta target forming ^{192–195}Bi in (9n-6n) fusion-evaporation reactions. Recoil products were separated with an online mass separator and the subsequent α decay was measured with a semiconductor α counter. The α -decay energies and half-lives are summarized in a table. For ¹⁹²Bi only the decay energy (6.09(2) MeV) was given which could correspond to the ground or an isomeric state. Earlier Treytl and Vali had assigned a 5.892(5) MeV, 74(5) s activity to either ¹⁹²Bi or ¹⁹⁶Bi. Tarantin et al. did not consider these observations discoveries referring to an overview article by Eskola ([1967Es05](#)), who listed results for these isotopes based on a private communication by Siivola. The half-lives of the isomeric and the ground state were first measured later to be 42.3(23) s by Gauvin et al. ([1972Ga27](#)) and 33(2) s by van Duppen et al. ([1987Va09](#)), respectively.

The discovery date was changed from the original assignment to credit the original Russian publication.

Adapted from reference ([2013Fr04](#))

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- [1987Va09](#) P. Van Duppen, E. Coenen, K. Deneffe, M. Huyse, and J. L. Wood, Phys. Rev. C **35**, 1861 (1987).
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