

¹⁹⁷Bi

¹⁹⁷Bi 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 ¹⁹⁷Bi in (4n) 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. The measured half-life was 9.5 min for a 5.81(2) MeV α decay. The observed decay corresponds to an isomer. Tarantin et al. did not consider this observation a discovery referring to an overview article by Eskola ([1967Es05](#)), who listed results for these isotopes based on a private communication by Siivola. The half-life of the β -decaying ground state of 560(30) s was measured by Vanhorenbeeck et al. 21 years later ([1991Va09](#)).

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

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

- [1967Es05](#) P. Eskola, Ark. Fys. **36**, 477 (1967).
- [1970Ta14](#) N. I. Tarantin, A. P. Kabachenko, and A. V. Demyanov, Yad. Fiz. **12**, 455 (1970).
- [1991Va09](#) J. Vanhorenbeeck, P. Del Marmol, E. Coenen, M. Huyse *et al.*, Nucl. Phys. A **531**, 63 (1991).
- [2013Fr04](#) C. Fry and M. Thoennessen, At. Data Nucl. Data Tables **99**, 365 (2013).

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