

²²²Bi

²²²Bi was discovered by Alvarez-Pol et al. and the results were published in the 2010 paper “Production of new neutron-rich isotopes of heavy elements in fragmentation reactions of ²³⁸U projectiles at 1A GeV” (2010A124). A beryllium target was bombarded with a 1 A GeV ²³⁸U beam from the GSI SIS synchrotron. The isotopes were separated and identified with the high-resolving-power magnetic spectrometer FRS. “To search for new heavy neutron-rich nuclei, we tuned the FRS magnets for centering the nuclei ²²⁷At, ²²⁹At, ²¹⁶Pb, ²¹⁹Pb, and ²¹⁰Au along its central trajectory. Combining the signals recorded in these settings of the FRS and using the analysis technique previously explained, we were able to identify 40 new neutron-rich nuclei with atomic numbers between Z=78 and Z=87; ²⁰⁵Pt, ^{207–210}Au, ^{211–216}Hg, ^{214–217}Tl, ^{215–220}Pb, ^{219–224}Bi, ^{223–227}Po, ^{225–229}At, ^{230,231}Rn, and ²³³Fr.”

The assignment was changed (2015Th03) from the original compilation (2013Fr04) which credited an earlier paper by Alvarez-Pol et al. (2009A132) with the discovery of ²²²Bi. However, this paper was part of the topical issue of the 5th International Conference on Exotic Nuclei and Atomic Masses (ENAM) in 2008.

- 2009A132 H. Alvarez-Pol, J. Benlliure, E. Casarejos, L. Audouin *et al.*, Eur. Phys. J. A **42**, 485 (2009).
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