

## $^{215}\text{Hg}$

$^{215}\text{Hg}$  was discovered by Alvarez-Pol and the results were published in the 2010 paper “Production of new neutron-rich isotopes of heavy elements in fragmentation reactions of  $^{238}\text{U}$  projectiles at 1 A GeV” (2010A124). A beryllium target was bombarded with a 1 A GeV  $^{238}\text{U}$  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  $^{227}\text{At}$ ,  $^{229}\text{At}$ ,  $^{216}\text{Pb}$ ,  $^{219}\text{Pb}$ , and  $^{210}\text{Au}$  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  $Z=87$ ;  $^{205}\text{Pt}$ ,  $^{207-210}\text{Au}$ ,  $^{211-216}\text{Hg}$ ,  $^{214-217}\text{Tl}$ ,  $^{215-220}\text{Pb}$ ,  $^{219-224}\text{Bi}$ ,  $^{223-227}\text{Po}$ ,  $^{225-229}\text{At}$ ,  $^{230,231}\text{Rn}$ , and  $^{233}\text{Fr}$ .”

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