

## <sup>231</sup>Rn

<sup>231</sup>Rn 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 <sup>238</sup>U projectiles at 1A GeV” (2010A124). A beryllium target was bombarded with a 1 A GeV <sup>238</sup>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 <sup>227</sup>At, <sup>229</sup>At, <sup>216</sup>Pb, <sup>219</sup>Pb, and <sup>210</sup>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; <sup>205</sup>Pt, <sup>207–210</sup>Au, <sup>211–216</sup>Hg, <sup>214–217</sup>Tl, <sup>215–220</sup>Pb, <sup>219–224</sup>Bi, <sup>223–227</sup>Po, <sup>225–229</sup>At, <sup>230,231</sup>Rn, and <sup>233</sup>Fr.”

Adapted from reference (2013Fr09)

2010A124 H. Alvarez-Pol, J. Benlliure, E. Casarejos, L. Audouin *et al.*, Phys. Rev. C **82**, 041602 (2010).

2013Fr09 C. Fry and M. Thoennessen, At. Data Nucl. Data Tables **99**, 497 (2013).

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