

## **<sup>228</sup>Fr**

In 1972, Klapisch et al. reported the first observation of <sup>228</sup>Fr in “Half-life of the new isotope <sup>32</sup>Na; Observation of <sup>33</sup>Na and other new isotopes produced in the reaction of high-energy protons on U” (1972K104). Uranium targets were bombarded with 24 GeV protons from the CERN proton synchrotron. <sup>228</sup>Fr was identified by on-line mass spectrometry and decay curves were measured. “Following the same procedure as for Na, the isotopes <sup>48</sup>K, <sup>49</sup>K, and <sup>50</sup>K were found. However, their half-lives were not short compared with the diffusion time, and hence could not be determined. We also observed the new neutron-rich isotopes <sup>227</sup>Fr and <sup>228</sup>Fr produced in the spallation of the uranium target.”

Adapted from reference (2013Fr09)

1972K104 R. Klapisch, C. Thibault, A. M. Poskanzer, R. Prieels *et al.*, Phys. Rev. Lett. **29**, 1254 (1972).

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

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