

²⁵⁸No

In 1989, Hulet et al. described the identification of ²⁵⁸No in “Spontaneous fission properties of ²⁵⁸Fm, ²⁵⁹Md, ²⁶⁰Md, ²⁵⁸No, and ²⁶⁰[104]: Bimodal fission” (1989Hu09). A ²⁴⁸Cm metal target was bombarded with a 67.6 MeV ¹³C beam from the Berkeley 88-in. cyclotron and ²⁵⁸No was produced in the (3n) fusion-evaporation reaction. Spontaneous fission products were measured with the Spinning-Wheel Analyzer for Millisecond Isotopes (SWAMI). “Assuming a 5% efficiency for SWAMI, we obtained a 17 ± 18 nb cross section for the formation of what we believe to be ²⁵⁸No.” A half-life of 1.2(2) ms was measured for ²⁵⁸No. This half-life had previously been reported in an unpublished report (1969NuZZ). An even earlier search for ²⁵⁸No was unsuccessful (1967Gh01).

Adapted from reference (2013Th02)

- 1967Gh01 A. Ghiorso, T. Sikkeland, and M. J. Nurmia, Phys. Rev. Lett. **18**, 401 (1967).
1969NuZZ M. Nurmia, K. Eskola, P. Eskola, and A. Ghiorso, REPT-UCRL-18667 **18667**, p. 63 (1969).
1989Hu09 E. K. Hulet, J. F. Wild, R. J. Dougan, R. W. Lougheed *et al.*, Phys. Rev. C **40**, 770 (1989).
2013Th02 M. Thoennessen, At. Data Nucl. Data Tables **99**, 312 (2013).

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