

¹³⁰Sm

Sonzogni et al. reported the observation of ¹³⁰Sm in the 1999 paper “Fine structure in the decay of highly deformed proton emitter ¹³¹Eu” ([1999So17](#)). A ⁵⁸Ni target was bombarded with a 402 MeV ⁷⁸Kr beam from the ATLAS accelerator facility and ¹³⁰Sm was populated following the proton decay of the fusion-evaporation product ¹³¹Eu. The recoil products were separated with the Argonne Fragment Mass Analyzer and stopped in a double-sided silicon strip detector. “In addition to the previously observed ground-state line, measured here with a proton energy of 932(7) keV, a second proton peak with energy 811(7) keV was observed. We interpret this line as proton decay from the ¹³¹Eu ground state to the first excited 2⁺ state of the daughter nucleus ¹³⁰Sm.”

Adapted from reference ([2013Ma01](#))

[1999So17](#) A. A. Sonzogni, C. N. Davids, P. J. Woods, D. Seweryniak *et al.*, Phys. Rev. Lett. **83**, 1116 (1999).

[2013Ma01](#) E. May and M. Thoennessen, At. Data Nucl. Data Tables **99**, 1 (2013).

Please cite this abstract as: “FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:[10.11578/frib/2279152](https://doi.org/10.11578/frib/2279152)”