

¹⁰⁵Sb

In the 1994 paper “Evidence for the ground-state proton decay of ¹⁰⁵Sb,” Tighe et al. reported the discovery of ¹⁰⁵Sb ([1994Ti03](#)). Enriched ⁵⁰Cr₂O₃ targets were bombarded with 220 and 260 MeV ⁵⁸Ni beams from the Berkeley 88-in. cyclotron. Evaporation residues were deposited by a helium jet on a slow moving tape in the center of a low-energy proton detector ball consisting of six gas-ΔE, gas-ΔE, Si-E triple telescopes. “Thus, this 478 keV group must originate from a direct proton emitter produced in the ⁵⁸Ni+⁵⁰Cr compound nuclear reaction forming ¹⁰⁸Te... we assign the group at 478 keV to the ground-state proton decay of ¹⁰⁵Sb.” A previous search for ¹⁰⁵Sb was unsuccessful ([1987Gi02](#)).

Adapted from reference ([2013Ka01](#))

- [1987Gi02](#) A. Gillitzer, T. Faestermann, K. Hartel, P. Kienle, and E. Nolte, *Z. Phys. A* **326**, 107 (1987).
- [1994Ti03](#) R. J. Tighe, D. M. Moltz, J. C. Batchelder, T. J. Ognibene *et al.*, *Phys. Rev. C* **49**, R2871 (1994).
- [2013Ka01](#) J. Kathawa, C. Fry, and M. Thoennessen, *At. Data Nucl. Data Tables* **99**, 22 (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)”