

¹³⁵Sb

Bemis et al. reported the observation of ¹³⁵Sb in the 1964 article “Half life of ¹³⁵Sb and evidence on the half life of ¹³⁴Sb” (1964Be06). Uranium samples were irradiated with thermal neutrons in the MIT Reactor. Decay curves were measured with a BF₃-filled proportional counter surrounded with a paraffin moderator following chemical separation. “The ¹³⁵Sb decay curve is shown in [the figure]. Uncertainties in activities arise almost entirely from statistical uncertainties in the ¹³⁵I activities, as the net counting rates were often lower than the background rate. Time uncertainties include possible errors in correlating the stop-watch with the master clock controlling the pneumatic-tube operation and uncertainties in the time of SbH₃ generation, the duration of which was usually limited to ~2 sec by closing a valve. From the data of [the figure], we derive a half life of $1.9_{-0.5}^{+0.9}$ sec for ¹³⁵Sb”

Adapted from reference (2013Ka01)

- 1964Be06 C. E. Bemis, G. E. Gordon, and C. D. Coryell, *J. Inorg. Nucl. Chem.* **26**, 213 (1964).
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)”