

¹⁰⁵Nb

“Odd Neutron Nuclei near A = 100: Rotational bands in ¹⁰³Mo and ¹⁰⁵Mo populated in the β^- decays of ¹⁰³Nb and ¹⁰⁵Nb,” by Shizuma et al., was the first article to report the observation of ¹⁰⁵Nb in 1984 ([1984Sh03](#)). Fission products from thermal fission of ²³⁵U were studied at the Jülich DIDO reactor and the high-flux reactor of the ILL at Grenoble. ¹⁰⁵Nb was identified with the fission product separators JOSEF and LOHENGRIN. “Least squares fits through the data for A = 105 assuming one single half-life give an average value of $t_{1/2} = (2.95 \pm 0.06)$ s.” Previously, a γ -transition of 193.6 keV had been assigned ([1972Ho08](#)) incorrectly to ¹⁰⁵Nb. The primary credit for the discovery is given to Jülich because most of the data for the half-life measured were taken with JOSEF and these results were also presented in the paper.

Adapted from reference ([2012Ny02](#))

- [1972Ho08](#) F. F. Hopkins, J. R. White, G. W. Phillips, C. F. Moore, and P. Richard, Phys. Rev. C **5**, 1015 (1972).
[1984Sh03](#) K. Shizuma, H. Ahrens, J. P. Bocquet, N. Kaffrell *et al.*, Z. Phys. A **315**, 65 (1984).
[2012Ny02](#) A. Nystrom and M. Thoennessen, At. Data Nucl. Data Tables **98**, 95 (2012).

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