

¹¹⁹Ba

In 1974, Bogdanov et al. observed ¹¹⁹Ba, which they reported in the article “Delayed-proton emitter ¹¹⁹Ba” ([1974Bo20](#)). An enriched ¹⁰⁶Cd target was bombarded with an 85 MeV oxygen beam produced by JINR Laboratory of Nuclear Reactions U-300 Heavy Ion Cyclotron. ¹¹⁹Ba was produced in the fusion-evaporation reaction ¹⁰⁶Cd(¹⁶O,3n). The delayed proton spectrum was measured with a telescope of a thin proportional-counter and a surface-barrier detector. “The observed activity was due mainly to two radiators with half-lives $T_{1/2} = 5.0 \pm 0.6$ sec, with an excitation function peaking at $E_{16O} = 85$ MeV, and $T_{1/2} = 15.0 \pm 1.0$ sec with its maximum yield at a higher energy... Thus, the most probable identification of the 5-second emitter is ¹¹⁹Ba.”

Adapted from reference ([2010Sh20](#))

- [1974Bo20](#) D. D. Bogdanov, V. A. Karnaukhov, and L. A. Petrov, *Sov. J. Nucl. Phys.* **19**, 481 (1975).
[2010Sh20](#) A. Shore, A. Fritsch, J. Q. Ginepro, M. Heim *et al.*, *At. Data Nucl. Data Tables* **96**, 749 (2010).

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