

²⁷¹Bh

Oganessian et al. reported the first observation of ²⁷¹Bh in the 2013 paper “Investigation of the ²⁴³Am + ⁴⁸Ca reaction products previously observed in the experiments on elements 113, 115, and 117” (2013Og01). The Dubna U400 cyclotron was used to bombard enriched ²⁴³Am targets with ⁴⁸Ca beams to form ²⁸⁷115 in (4n) fusion evaporation reactions. ²⁷¹Bh was populated by subsequent α -decays. The residues were separated with a gas-filled recoil separator and implanted in a semiconductor detector array. Alpha particle decay and spontaneous fission events were recorded in this array and in eight detectors arranged in a box configuration around the implantation detector.

“Here, the α -decay energy and lifetime of ²⁷¹Bh were detected for the first time.”

This decay chain had been observed already in 2004, however, the decay of ²⁷¹Bh had been missed (2004Og03).

Adapted from reference (2014Th03)

- 2004Og03 Yu. Ts. Oganessian, V. K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin *et al.*, Phys. Rev. C **69**, 021601 (2004).
- 2013Og01 Yu. Ts. Oganessian, F. Sh. Abdullin, S. N. Dmitriev, J. M. Gostic *et al.*, Phys. Rev. C **87**, 014302 (2013).
- 2014Th03 M. Thoennessen, Int. J. Mod. Phys. E **23**, 1430002 (2014).

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