

²⁶⁸Db

²⁶⁸Db was first observed by Oganessian et al. in 2004 as reported in “Experiments on the synthesis of element 115 in the reaction $^{243}\text{Am}(^{48}\text{Ca},xn)^{291-x}115$ ” (2004Og03). The Dubna U400 cyclotron was used to bombard an AmO₂ target enriched in ²⁴³Am with 253 MeV and 248 MeV ⁴⁸Ca beams to form ²⁸⁷115 and ²⁸⁸115 in (4n) and (3n) fusion evaporation reactions, respectively. ²⁶⁸Db was populated by subsequent α -decays. The residues were separated with a gas-filled recoil separator and implanted in a semiconductor detector array. Subsequent α particle decay and spontaneous fission events were recorded in this array and in eight detectors arranged in a box configuration around the implantation detector. “In the decay chains shown in [the figure], we assigned SF events to the isotope ²⁶⁸Db following five consecutive α decays.” Three chains involving ²⁶⁸Db were observed.

Adapted from reference (2013Th02)

2004Og03 Yu. Ts. Oganessian, V. K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin *et al.*, Phys. Rev. C **69**, 021601 (2004).

2013Th02 M. Thoennessen, At. Data Nucl. Data Tables **99**, 312 (2013).

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