

²⁵⁶Db

Heßberger et al. reported the first observation of ²⁵⁶Db in “Decay properties of neutron-deficient isotopes ^{256,257}Db, ²⁵⁵Rf, ^{252,253}Lr” in 2001 ([2001He35](#)). A ²⁰⁹Bi target was bombarded with a 5.08 MeV/u ⁵⁰Ti beam from the GSI UNILAC accelerator and ²⁵⁶Db was formed in (3n) fusion-evaporation reactions. Recoil products were separated with the velocity filter SHIP and implanted in a position-sensitive 16-strip PIPS detector which also measured subsequent α -decay and spontaneous fission. In addition, escaping α -decay and spontaneous fission events were recorded in six silicon detectors located in the backward hemisphere. “The identification of the isotopes ²⁵⁶Db and ²⁵²Lr was based on a total of 16 α -decay chains, that were followed down to ²⁴⁴Cf according to the sequences ²⁵⁶Db $\xrightarrow{\alpha}$ ²⁵²Lr $\xrightarrow{\alpha}$ ²⁴⁴Es \xrightarrow{EC} ²⁴⁴Cf $\xrightarrow{\alpha}$ ²⁴⁰Cm or ²⁵⁶Db $\xrightarrow{\alpha}$ ²⁵²Lr $\xrightarrow{\alpha}$ ²⁴⁸Md \xrightarrow{EC} ²⁴⁸Fm $\xrightarrow{\alpha}$ 4²⁴⁴Cf $\xrightarrow{\alpha}$ ²⁴⁰Cm.”

Adapted from reference ([2013Th02](#))

[2001He35](#) F. P. Hessberger, S. Hofmann, D. Ackermann, V. Ninov *et al.*, Eur. Phys. J. A **12**, 57 (2001).

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

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