

## **<sup>280</sup>Rg**

<sup>280</sup>Rg 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 AmO<sub>2</sub> target enriched in <sup>243</sup>Am with 253 MeV and 248 MeV <sup>48</sup>Ca beams to form <sup>287</sup>115 and <sup>288</sup>115 in (4n) and (3n) fusion evaporation reactions, respectively. <sup>280</sup>Rg was populated by subsequent  $\alpha$ -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. “The  $\alpha$ -decay energies attributed to the isotopes of Mt and Bh coincide well with theoretical values. For the isotopes <sup>279,280</sup>111 and <sup>283,284</sup>113 the difference between theoretical and experimental Q $\alpha$  values amounts to 0.6-0.9 MeV.” Three chains involving <sup>280</sup>Rg 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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