

## $^{272}\text{Hs}$

In 2023,  $^{272}\text{Hs}$  was discovered by Oganessian et al. in “New isotope  $^{276}\text{Ds}$  and its decay products  $^{272}\text{Hs}$  and  $^{268}\text{Sg}$  from the  $^{232}\text{Th} + ^{48}\text{Ca}$  reaction” (2023Og03). The DC280 cyclotron at the SHE Factory at JINR in Dubna accelerated a  $^{48}\text{Ca}$  beam to 230–250 MeV impinging on  $^{232}\text{Th}$  targets. Evaporation residues from the reaction  $^{232}\text{Th}(^{48}\text{Ca},4n)$  were separated and identified with the gas-filled separator DGFRS-2 which also detected subsequent  $\alpha$  decays. “Three new nuclides were synthesized for the first time: [...] an  $\alpha$  decaying  $^{272}\text{Hs}$  with  $T_{\alpha} = 0.16^{+0.19}_{-0.06}$  s,  $E_{\alpha} = 9.63 \pm 0.02$  MeV.”

Adapted from reference (2024Th02)

2023Og03 Yu. Ts. Oganessian, V. K. Utyonkov, M. V. Shumeiko, F. Sh. Abdullin *et al.*, Phys. Rev. C **108**, 024611 (2023).

2024Th02 M. Thoennessen, Int. J. Mod. Phys. E **33**, 2430001 (2024).

Please cite this abstract as: “FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:10.11578/frib/2279152”