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## New nucleus $^{277}\text{Hs}$ : in between two islands of stability

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The nuclear fusion reactions  $^{244}\text{Pu}(48\text{-Ca}, 3n)^{289}\text{-114}$  and  $^{244}\text{Pu}(48\text{-Ca}, 4n)^{288}\text{-114}$  were studied at the new, highly efficient gas-filled recoil separator TASCA. The large number of thirteen observed decay chains assigned to  $^{288}\text{-114}$  and  $^{289}\text{-114}$  enabled reliable cross sections measurements. The highest cross section was  $8.2 (+4.0 / -2.8)$  pb measured for the  $4n$  evaporation channel. The new nucleus  $^{277}\text{Hs}$  was observed. It decayed by spontaneous fission after a lifetime of 4.5 ms. Model calculations, which reproduce the properties of nuclides in the region around longer-lived deformed doubly-magic  $^{270}\text{Hs}$  well suggest  $^{277}\text{Hs}$  to be located near a minimum of shell stabilization between this island of deformed nuclei and the island of stability of spherical superheavy nuclei.

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