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Production yields of neutron-rich heavy nuclei in the $^{238}\text{U}+^{124}\text{Sn}$ multinucleon transfer reaction

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In this experiment we intend to measure the $^{238}\text{U}+^{124}\text{Sn}$ multinucleon transfer reaction by using the PRISMA + NOSE + AGATA set-up to study the details of the A, Z, Q-value distributions and associated gamma rays. In addition, we will employ a high resolution kinematic coincidence to extract the light-heavy mass-mass correlation and the transfer induced fission probability of the heavy partner. By a cross comparison of these informations we will be able to define at best the yields of heavy partners. The results will provide precious inputs for a variety of experimental and theoretical studies whose developments require knowledge of the population yields of nuclear species produced via transfer mechanism that differ by a substantial amount of protons and neutrons from ^{238}U

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