Seminarium Astrofizyczne

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What can relativistic ion collisions teach us about neutron stars

Collisions of ions at relativistic energies and studied at BNL (USA) and at CERN. Soon, a dedicated NICA accelerator complex will be completed at JINR in Dubna, and soon after the FAIR complex at GSI. All those facilities aim to study the phase diagram of strongly interacting matter, which is directly related to the neutron star equation of state. In addition a large number of baryons, including the ones containing strangeness, are created in the collisions. Their mutual interaction can be studied with the femtoscopy technique. Knowledge about the interaction may help us determine, whether strange matter appears in the cores of neutron stars. In the lecture I will explain how such studies are carried out, what are the most recent results and plans for the near future.

Serdecznie zapraszam, Agnieszka Majczyna