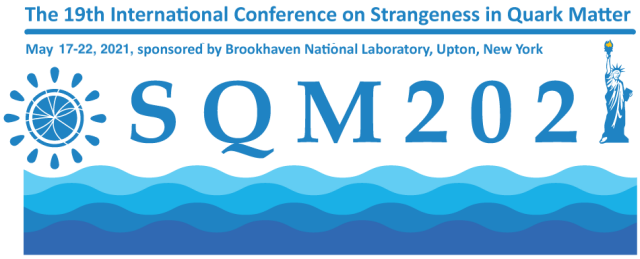

Contribution ID: **75** Type: **Experimental talk**

The heavy-ion program at the upgraded Baryonic Matter@Nuclotron Experiment at NICA

Tuesday 18 May 2021 12:10 (20 minutes)

In the coming years, the Nuclotron at JINR in Dubna will deliver gold beams with energies of up to 3.8A GeV and intensities of up to 2.5⊠106 ions/s. These beams are well suited for experiments devoted to the study of the equation of state of dense baryonic matter, and the exploration of microscopic degrees of freedom emerging at neutron star core densities. The relevant observables in heavy-ion collisions at these energies include the yields and multi-differential distributions of (multi-) strange particles, the collective flow of identified particles, fluctuation of conserved quantities, and hypernuclei. In order to measure these observables in Au+Au collisions with rates of up to 50 kHz, the existing BM@N setup in the Nuclotron target hall will be upgraded with a highly granulated and fast hybrid tracking system, and a forward calorimeter for event plane determination. The BM@N physics program, the detector upgrades, and physics performance studies will be presented.

Collaboration

BM@N collaboration

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