



Contribution ID: 126

Type: not specified

Symmetry Energy at supra-saturation densities studied with neutron-proton elliptic flows

P. Russotto for the ASY-EOS II collaboration

The symmetry energy contribution to the nuclear equation of state is of fundamental importance in both nuclear physics and astrophysics. In the last decades several works, based on different observable, have allowed to constrain the symmetry energy mainly below saturation density. Vice versa, few works have been able to study the behaviour of the symmetry energy above the saturation density.

In this talk we will present the results of the ASY-EOS experiment at GSI, where we measured neutron and light charged particle elliptic flows in Au+Au collision at 400 AMeV. The analysis, based on the comparison of the elliptic flows ratio with QMD calculations, has allowed to provide a stringent constraint for the symmetry energy behaviour at supra-saturation densities. We will present also our future plans aiming to extend elliptic flows measurements at higher beam energies, in order to explore higher densities. The possibility to measure pions will be also discussed.

P. Russotto et al., Physics Letters B697, 471-476 (2011).

P. Russotto et al., Physical Review C94, 034608 (2016).

Selected session

Nuclear Structure, Spectroscopy, and Dynamics

Primary author: RUSSOTTO, Paolo (LNS)

Presenter: RUSSOTTO, Paolo (LNS)