



Contribution ID: 294

Type: **Talk**

Asymmetry energy and nuclear matter equation of state: High density perspectives at GSI/FAIR.

Tuesday, 31 August 2021 18:00 (30 minutes)

From several heavy-ion collision (HIC) experiments at relativistic energies (ALADiN, KaoS, FOPI, ASY-EOS) performed with the SIS accelerator at GSI Darmstadt in the last three decades, a density dependence of the nuclear equation of states can be drawn from 0.3 to 2 times the saturation density, for both the symmetric matter (KaoS, FOPI experiments) and the symmetry energy part of the nuclear matter equation of states (AsyEOS and ALADiN). The density dependence of the pressure in neutrons stars deduced from such experiments confirms the results from most recent and precise gravitational wave and astrophysical multi-messenger measurements with a similar accuracy. Furthermore, this competitive input of HIC's to the knowledge of neutron star properties can be much improved by increasing both the precision of measurements and probed densities. It is in this perspective that the ASY-EOS Collaboration has launched a new program of experiments at higher incident energies.

Is this abstract from experiment?

Yes

Name of experiment and experimental site

GSI/FAIR

Is the speaker for that presentation defined?

Yes

Details

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Internet talk

Yes

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Session Classification: Workshop on Physics at FAIR-NICA-SPS-BES/RHIC