International Workshop on Multi-facets of EOS and Clustering



ID de Contribution: 17

Type: Regular talk (YP)

Probing the nucleon effective mass with n/p ratios using Bayesian analysis

mardi 23 novembre 2021 12:30 (25 minutes)

Abstract: In this study, we analyze the experimental data from heavy-ion collision (HIC) using 40Ca and 48Ca beams at 140 MeV/u impinging on 58Ni and 64Ni targets. The experimental set up includes a charged particle array HiRA10 and the neutron wall array, LANA. From the charged particles, we construct coalescence invariant ratios of pseudo-neutrons and protons as a function of transverse momentum. The data is compared with nuclear transport model predictions using Bayesian analysis technique to infer the correlations of nucleon effective masses.

Acknowledgement: This work is partly supported by U.S. Department of Energy (Office of Science) under Grant No. DE-NA0003908.

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Classification de Session: Nuclear Dynamics : from fission to multifragmentation

Classification de thématique: Nuclear Dynamics : from fission to multifragmentation: Probing the nucleon effective mass with n/p ratios using Bayesian analysis