

# Spectra and flow of light nuclei in relativistic heavy ion collisions at energies available at the BNL Relativistic Heavy Ion Collider and at the CERN Large Hadron Collider

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Within the framework of the coalescence model based on the phase-space distributions of protons and neutrons generated from the `iEBE-VISHNU` hybrid model with `AMPT` initial conditions, we study the spectra and elliptic flow of deuterons and helium-3 in relativistic heavy ion collisions at the Relativistic Heavy Ion Collider (RHIC) and the Larger Hadron Collider (LHC). Results from our model calculations for Au + Au collisions at  $\sqrt{s_{NN}} = 200$  GeV at RHIC and Pb+Pb collisions at  $\sqrt{s_{NN}} = 2.76$  TeV at the LHC are compared with available experimental data. Good agreements are generally seen between theoretical results and experimental data, except that the calculated yield of helium-3 in Pb + Pb collisions at  $\sqrt{s_{NN}} = 2.76$  TeV underestimates the data by about a factor of two. Possible reasons for these discrepancies are discussed. We also make predictions on the spectra and elliptic flow of deuterons and helium-3 in Pb + Pb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV that are being studied at LHC.

## Type

Parallel talk

## Sessions (parallel only)

Heavy Ions

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