

# Comparison study of transport models, DJBUU and SQMD

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The equation of state (EoS) of dense matter, such as EoS for neutron stars, remains an open question as it has not yet fully been established. To gain insights into the structure of dense stellar objects, we could rely on experimental information provided by heavy ion collisions. These collisions serve as terrestrial experiments that offer valuable data on the EoS. Transport models, in particular, enable us to describe the time evolution of dynamics, and therefore they are well-suited for studying the nature of high baryon number density produced in heavy ion collisions. In this study, we compare the results of simulations using the DJBUU and SQMD transport codes, which are developed based on two different frameworks: Boltzmann-Uheling-Uhlenbeck (BUU) and Quantum Molecular Dynamics (QMD). Specifically, we focus on the comparison of the largest primary fragments observed in simulations of the  $^{208}\text{Pb}+^{40,48}\text{Ca}$  collision scenarios.

## Presentation type

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