Opportunities of OO and pO collisions at the LHC



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Dynamical Modeling of the Collectivity in pO and OO Collisions

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Small collision systems, such as pO and OO, can provide valuable information about the collisions' early-stage dynamics. They also present high sensitivity to initial state fluctuations at multiple length scales. In this talk, we employ the hybrid IP-Glasma + hydrodynamics + hadronic transport approach to simulate the pO and OO collisions' bulk dynamics at the LHC energies. All the model parameters were fixed in the large heavy-ion collisions. We will discuss the challenges of extrapolating the hydrodynamic description to these small systems and identify new aspects of the many-body properties of the hot QCD matter these small systems can probe.

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