

Study of Thermodynamic Quantities in O+O collisions at $\sqrt{(S_{NN})}=7$ TeV using the Color String Percolation Model at the LHC

The Large Hadron Collider (LHC) at CERN has a plan to have Oxygen-Oxygen (O+O) collisions at $\sqrt{(S_{NN})}=7$ TeV in the forthcoming run. As the system size of O+O collisions have the final state multiplicity overlap with those produced in Pb+Pb, p+Pb, and pp collisions, it becomes exciting to study thermodynamic quantities using the Color String Percolation Model (CSPM). The thermodynamic quantities like temperature, energy density, speed of sound, shear viscosity to entropy density ratio, and trace anomaly are obtained from the soft region of the transverse momentum spectra of O+O collisions at $\sqrt{(S_{NN})}=7$ TeV. The percolation approach within CSPM can effectively describe the initial stages of high energy heavy ion collisions in the soft region. The obtained results for O+O collisions are compared with the published results from pp and A-A collisions using ALICE data.

Track type

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