Abstract Submitted
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Multiplicity distributions from heavy-ion collisions at the Large Hadron Collider NEGIN ALIZADEHVANDCHALI, University of Houston — Collisions of relativistic heavy-ions at the Large Hadron Collider (LHC) are carried out in order to create a unique state of matter known as the Quark Gluon Plasma (QGP). In this state, hadronic matter melts, and quarks and gluons become the relevant degrees of freedom. It is believed that the universe temporally existed in such a state shortly after the big bang. The distribution of produced charged particles (multiplicity) provides critical information regarding the initial state of these collisions. I will present the latest multiplicity distributions and mean transverse momentums measured by the ALICE collaboration at the LHC. I will discuss comparisons of these distributions to theoretical models, the measurements of the speed of sound experimentally and detail future plans regarding new measurement techniques.

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