

Abstract Submitted
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Strangeness Production in Jets with ALICE at the LHC¹

MICHEAL TYLER II, RODNEY CARMONA, AUSTIN HARTON, EDMUNDO GARCIA, Chicago State University, RON SOLTZ, Lawrence Livermore National Laboratory Livermore, ALICE COLLABORATION — The study of strangeness production is integral to understanding high energy relativistic heavy ion collisions. The measurement of production yields and particle ratios, dominated by the low energy region of the spectra, helps to understand the properties of the QCD medium created during the collisions. The baryon over meson ratio at intermediate pT allows the study of hadronization taking place as the medium evolves. Furthermore, the study of strange particles in collisions provides information on parton fragmentation, a fundamental QCD process. To establish a baseline, measurements are first performed in proton-proton (pp) data. However, the role of high-momentum observables is equally important to understanding QCD matter. Low- and mid-pT strangeness measurements are already in progress at RHIC and the LHC, and it is imperative to extend these observables to higher pT. We propose to extract flavor characteristics, specifically strangeness, of jets, the high-pT early probes of heavy ion collisions. Starting with pp, we will measure the strangeness yields in jets to understand the particle fragmentation process, setting the basis for a study in the heavy ion data. In this poster we will introduce the ALICE experiment, we will describe the methodology used for the data analysis and the current status of the data analysis will be presented.

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