

Abstract Submitted
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Inclusive jet measurements in small system collisions at $\sqrt{s_{NN}} = 200$ GeV in STAR¹ TONG LIU, Yale University, STAR COLLABORATION
— With the observation of flow-like correlations in small system collisions (p+Pb, p+Au, and d+Au) at the LHC and RHIC, the existence of the quark-gluon plasma (QGP) in small systems, initially assumed to be absent, became an open question and has been actively investigated over recent years. High momentum partons produced at early stages of heavy-ion collisions generate collimated sprays of hadrons called jets. These partons lose energy when passing through the QGP medium, experiencing a phenomenon usually known as jet quenching. As a successful probe of the QGP in heavy-ion collisions, jet quenching has been widely studied in small systems across experiments. While most results in minimum-bias events are consistent with expectations from the absence of the QGP, indications of suppression/enhancement are observed in different event activity (EA) bins. In this talk, we present investigations of p/d+Au collisions at $\sqrt{s_{NN}}=200$ GeV at STAR for possible evidence of jet quenching by studying the inclusive jet yield. Progress towards the resultant nuclear modification factor $R_{p/d+Au}$ will be presented. Efforts towards a definition of EA suitable for the system, as well as the comparison between jet yields in high and low EA bins, will also be discussed.

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