

Abstract Submitted
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Probing the CP violation signal in the quark-gluon plasma at RHIC using the PHENIX detector NUGGEHALLI AJITANAND, SUNY Stony Brook, PHENIX COLLABORATION — A recently developed method for the quantitative measurement of charge separation about the reaction plane is used to constrain the values of the Local CP Violation in the sQGP medium discovered at RHIC. This method uses a correlation function whose shape is concave when there is a net separation of positive and negative charges. Correlations not specifically associated with a charge separation, do not influence the shape or magnitude of the correlation function. Detailed simulations are used to demonstrate the effectiveness of the method for the quantitative measurement of charge separation. Such measurements are a pre-requisite to the investigation of topological charge effects in the QGP leading to local CP violation. Results are presented for the application of the method to the PHENIX data from 200 GeV Au+Au collisions at RHIC.

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