

Study of Conical Emission of Particles from Heavy Quark Energy Loss via Azimuthal Angle Correlations Triggered by Non-Photonic Electrons at STAR

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High- p_t partons lose a significant amount of energy when traversing the dense QCD medium created in central Au+Au collisions, which leads to the suppression of high- p_t hadron yields and changes in the azimuthal angle correlation of hadrons. A conical emission pattern has been observed in di-hadron azimuthal correlations. Study of the particle emission pattern from heavy quark energy loss in the dense QCD medium will provide insight on the mechanism responsible for the emission pattern and the flavor dependence.

In this talk, we will present STAR preliminary measurements of azimuthal correlations between non-photonic electrons and charged hadrons in Au+Au and Cu+Cu collisions at 200 GeV. The comparison between different collision systems enables us to study the system-size dependence of heavy quark energy loss and the conical emission of its associate particles.