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Charmed Meson Reconstruction Using Micro Vertexing Technique and Silicon Trackers in STAR Experiment at RHIC[1] JAIBY JOSEPH, Kent State University, STAR COLLABORATION — Charm quarks are produced during the early stages of collision, making it a powerful probe of the hot and dense medium created at RHIC. Its measurement through the semi-leptonic decay channel can provide some insight, although the relative yield of charm and bottom are highly uncertain in such measurements. It is essential to disentangle charm and bottom yields experimentally to understand the observed suppression at high pT in central Au+Au collisions. A direct measurement of charm can separate the c contribution and resolve this ambiguity. Measurements of charm elliptic flow (v_2) can give us pivotal information on the medium properties. We use a microvertexing technique for the direct reconstruction of D^0 and $\bar{D^0}$ through the decay channel $K^{\mp}\pi^{\pm}$ in Au+Au and Cu+Cu collisions at $\sqrt{s_{NN}}$ = 200GeV at RHIC in the year 2007 and 2005. This method uses a kinematically constrained fit for secondary vertex reconstruction. The datasets were collected with Silicon Drift and Silicon Strip detectors, and their pointing capabilities are crucial for this analysis. Preliminary results on neutral D-meson measurements will be presented.

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