QUARK MATTER 2015
Sep. 27 – Oct. 3, 2015 Kobe, Japan

Contribution ID: **70** Type: **Poster**

Localized event-by-event charge separation in Au+Au collisions at 200 GeV

Tuesday 29 September 2015 16:30 (2 hours)

In the recent years, there have been lot of interests in measuring and understanding the azimuthal correlations, amongst particles produced in heavy ion collisions,separately for same-sign pairs and for opposite-sign pairs and to see their differences. This is because the Chiral Magnetic Effect (CME) states that Parity-odd domains can interact with the very large magnetic fields in non-central heavy-ion collisions resulting charge-separation parallel to the system's orbital angular momentum. Both at RHIC and LHC energies, differences have been found in the azimuthal correlations for same-sign and for opposite-sign pairs.

We propose to use the Sliding Window Method,SWM,(Phys.Lett. B638 (2006) 39) to search for localized Event-by-Event charge separation in different azimuthal windows in the pseudo-rapidity region $|\eta| < 1$ in non-central Au+Au collisions at 200 GeV. The efficiency of the SWM as a function of injected signal will be presented for 2M Au+Au hijing events at 200 GeV.

Primary author: AGGARWAL, Madan (Physics Department,Panjab University,Chandigarh,India)

Co-author: ATTRI, Anjali (Physics Department,Panjab University,Chandigarh,India)

Presenter: AGGARWAL, Madan (Physics Department,Panjab University,Chandigarh,India)

Session Classification: Poster Session

Track Classification: Correlations and Fluctuations