

Coulomb effects in relativistic heavy ion collisions from CBM experiment

At AGS and SPS energies, the ratio of negative to positive pions at low pion transverse momenta reflects the effect of Coulomb repulsion, because the charged particles, especially pions, are highly influenced by the Coulomb field produced by the net charge of the reaction protons. The interaction between charged pions and net charged of protons changes the transverse momentum of pions with a Coulomb momentum or Coulomb „kick”.

We will use simulated Au+Au data with HIJING and UrQMD codes, as well as other suited MC models, in order to obtain this Coulomb “kick” for the collision systems detected with future CBM (Compressed Baryonic Matter) experiment at FAIR available energies. The predictions for Coulomb “kick” at CBM will be compared with 200 GeV Au+Au results.

Primary author: Dr RISTEA, Oana (University of Bucharest, Faculty of Physics)

Presenter: Dr RISTEA, Oana (University of Bucharest, Faculty of Physics)

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