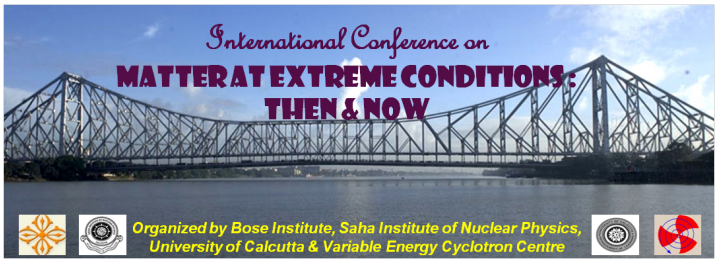

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Rapidity dependence of the produced particles at FAIR energies

Wednesday 15 January 2014 12:45 (15 minutes)

The variation of width of the rapidity distribution on beam rapidity and the rapidity distribution of strangeness enhancement factor have been studied for a number of mesons and baryons with UrQMD-3.3p1 generated events at various FAIR energies. The results on the width of the rapidity distribution on beam rapidity, thus obtained with our UrQMD generated events, have been compared with the existing experimental data (E877, E891, E896, NA49). For both experimental and UrQMD data, the width of the rapidity distribution is found to bear a power law with beam rapidity for all the studied hadrons. Such power law behavior follows a mass ordering separately for mesons and baryons which is observed to be violated at Λ baryon if the studied hadrons are taken together. From the study of variation of strangeness enhancement factor E_S with rapidity, two distinct patterns could be seen for the studied mesons and baryons.

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