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## CHARGE FLUCTUATIONS AND CORRELATIONS IN Pb + Pb , Si + Si AND p + p COLLISIONS AT 20 - 158 GeV BEAM ENERGIES AT THE CERN SPS (NA49)

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### Abstract

The charge fluctuations and the correlations are studied for p + p , Si + Si and Pb + Pb collisions with the NA49 large acceptance detector at the CERN - SPS.

The measure of charge fluctuations  $\Delta\Phi_q$  is studied as a function of the rapidity interval in an energy scan from 20 to 158 AGeV Pb + Pb collisions. The results are discussed in view of their significance as a signal of the deconfinement.

Also , long range charged particle correlations are studied using the Balance Function method. The results on p + p , Si + Si and centrality selected Pb + Pb interactions at 40 and 158 AGeV are presented. The width of the Balance Function decreases with increasing centrality of the collision , which could suggest a delayed hadronization scenario.

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