

Energy dependence of fluctuations in central Pb+Pb collisions from NA49 at the CERN SPS

M. Rybczynski for the NA49 Collaboration

Institute of Physics, Swietokrzyska Academy,
Kielce, 25-406, Poland, *Maciej.Rybczynski@pu.kielce.pl*

The latest NA49 results on fluctuations of event-by-event multiplicity, average transverse momentum and the K/π ratio are presented for central Pb+Pb interactions over the whole SPS energy range (20A - 158A GeV).

The scaled variance of the multiplicity distribution and the Φ_{p_T} measure of $\langle p_T \rangle$ fluctuations are small and independent of collision energy. Thus in central Pb+Pb collisions these fluctuations do not show an indication of the critical point of strongly interacting matter.

The multiplicity distributions for positively and negatively charged hadrons are narrower than predictions for a hadron-resonance gas within grand-canonical and canonical ensembles. Dynamical K/π fluctuations show an increase at low SPS energies, which is qualitatively consistent with the expectation for the onset of deconfinement.