

## Dynamical $K/\pi$ , $p/\pi$ , and $K/p$ fluctuations in $\sqrt{s_{NN}} = 7.7-200$ GeV Au+Au collisions

*Monday, May 23, 2011 4:00 PM (20 minutes)*

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Dynamical fluctuations in global conserved quantities such as baryon number, strangeness, or charge may be observed near a QCD critical point. Results from new measurements of dynamical  $K/\pi$ ,  $p/\pi$ , and  $K/p$  ratio fluctuations are presented. The commencing of a QCD critical point search at RHIC has extended the reach of possible measurements of dynamical  $K/\pi$ ,  $p/\pi$ , and  $K/p$  ratio fluctuations from Au+Au collisions to lower energies.

The STAR experiment has performed a comprehensive study of the energy dependence of these dynamical fluctuations in Au+Au collisions at the energies  $\sqrt{s_{NN}} = 7.7, 11.5, 39, 62.4,$  and 200 GeV. New results are compared to previous measurements and to theoretical predictions from several models. The measured dynamical  $K/p$  fluctuations are found to be independent of collision energy, while dynamical  $p/\pi$  and  $K/p$  fluctuations have a negative value that increases toward zero at top RHIC energy.

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**Session Classification:** Correlations and fluctuations

**Track Classification:** Correlations and fluctuations