Abstract Submitted
for the HAW09 Meeting of
The American Physical Society

K/π and p/π Fluctuations in Au+Au Collisions in STAR GARY WESTFALL, Michigan State University, STAR COLLABORATION — The freeze-out of an extended, strongly-interacting system created in a relativistic heavy ion collision near the QCD critical endpoint could create observable non-statistical fluctuations in net charge, strangeness and baryon number. We present results for K/π and p/π fluctuations from central Au+Au collisions at $\sqrt{s_{NN}}$ = 20, 62.4, 130, and 200 GeV in terms of the variable $\sigma_{\rm dyn}$. We compare these results with recent data from NA49 [1] for central Pb-Pb collisions. The energy dependence of the present data for central collisions extends smoothly from the NA49 measurements. We present the centrality dependence of K/π and p/π fluctuations from Au+Au collisions at $\sqrt{s_{NN}}$ = 62.4 and 200 GeV in terms of the variable $\nu_{{\rm dyn},K\pi}$. To minimize contributions from background protons, we restrict our measurements for p and $\overline{p}$ to the transverse momentum range $0.4 < p_t < 1.0$ GeV/c. We present results for K/π and p/π fluctuations separated by sign as a function of centrality. In addition, we present results for net charge fluctuations (π^+/π^-), net strangeness fluctuations (K^+/K^-), and net baryon fluctuations ($p/\overline{p}$). We compare our results with the predictions of the Statistical Hadronization, HIJING, UrQMD, and HSD models.

[1] T. Anticic et al., Phys. Rev. C **79**, 044910 (2009).

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Date submitted: 30 Jun 2009 Electronic form version 1.4