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Dynamical K/π , p/π , and K/p Fluctuations in $\sqrt{s_{NN}} = 7.7\text{-}200$ GeV Au+Au Collisions TERENCE TARNOWSKY, Michigan State University, STAR COLLABORATION — 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/π , p/π , 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/π , p/π , 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/π fluctuations are found to be independent of collision energy, while dynamical p/π and K/p fluctuations have a negative value that increases toward zero at top RHIC energy.

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