Mean p_T fluctuations in 3.0 GeV fixed target collisions from the RHIC Beam Energy Scan

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We present the first charged particle event-by-event p_T fluctuations from central Au+Au collisions at $\sqrt{s_{NN}} = 3.0$ GeV in STAR. These fluctuations can be related to temperature fluctuations which quantify the specific heat of the system. Any non-monotonic change of the specific heat as a function of the incident energy can be interpreted as a possible signal of criticality. Mean p_T fluctuations are calculated for different acceptance windows in pseudorapidity and compared with the previous BES-I results at $\sqrt{s_{NN}} = 20$, 62.4, 130 and 200 GeV, as well as the results from transport model and thermodynamic calculations at $\sqrt{s_{NN}} = 3.0$ GeV. We also consider the effects of primordial protons on the p_T fluctuations.