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HENIX Measurements of Higher-order Flow Harmonics for Identified Charged Hadrons in Au+Au Collisions at $\sqrt{s_{NN}} = 39 - 200$ GeV YI GU, Stony Brook University, PHENIX COLLABORATION — Collective flow measurements continue to play an important role in ongoing efforts to map out the temperature dependence of the transport coefficient $\frac{\eta}{s}(T)$, for the strongly interacting matter produced in heavy ion collisions at RHIC. Recently, the PHENIX experiment has performed a detailed set of measurements of the higher-order flow coefficients (v_n for n=2,3,4), for both inclusive and identified charged hadrons at mid-rapidity. The results from these new measurements will be presented, as a function of p_T , centrality and beam collision energy, along with several scaling properties observed for these data. The role of these results as additional constraints for $\frac{\eta}{s}(T)$ will also be discussed.

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