**Beam Energy Dependence of Rapidity Correlation Structure in Nuclear Collisions** TYLER KOSTUN, SEAN GAVIN, Wayne State University, GEORGE MOSCHELLI, Lawrence Technological University, CHRISTOPHER ZIN, Wayne State University — Viscous diffusion can broaden the rapidity dependence of two-particle transverse momentum fluctuations. Furthermore, detailed changes in the rapidity dependence of these correlations can be used to determine the characteristic time $\tau_\pi$ for the rate of isotropization of the stress energy tensor. Measurements at the top RHIC energy by the STAR collaboration exhibit a rapidity distribution roughly consistent with $\tau_\pi/\nu \sim 10$ [1]. We extend the second order dissipative hydrodynamics with noise of ref. 1 to include a realistic equation of state and temperature dependent transport coefficients. Our computations are used to predict the energy dependence of the rapidity distribution.

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