1063-35-233 Thomas Chen and Natasa Pavlovic^{*} (natasa@math.utexas.edu), Department of Mathematics, University of Texas at Austin, 1 University Station, C 1200, Austin, TX 78712, and Nikolaos Tzirakis. Energy conservation and blow-up of solutions for focusing Gross-Pitaevskii hierarchies.

The Gross-Pitaevskii (GP) hierarchy is an infinite system of coupled linear non-homogeneous PDEs, which appear in the derivation of the nonlinear Schrödinger equation (NLS). Inspired by the PDE techniques that have turned out to be useful on the level of the NLS, we realized that, in some instances we can introduce analogous techniques at the level of the GP. In this talk we will discuss one of those techniques and present a sufficient condition for a finite-time blow-up. (Received August 17, 2010)