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Finite Temperature Transport in a Non-Fermi Liquid Phase of a Quadratic Semimetal PHILIPP DUMITRESCU, Univ of California - Berkeley — We study finite temperature transport in the Luttinger-Abrikosov-Beneslavskii phase – an interacting, scale invariant, non-Fermi liquid phase found in quadratic semimetals which has been recently suggested to be realized in strongly correlated pyrochlore iridate systems. We develop a kinetic equation formalism to describe the d.c. transport properties, which are dominated by collisions, and consider the shear viscosity η as a model transport coefficient. The ratio of shear viscosity to entropy density η/s is a measure of the strength of interaction between the excitations of a quantum fluid. As a consequence of the quantum critical nature of the system, η/s is a universal number and we find it to be consistent with a bound proposed from gauge-gravity duality.

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