

MAR17-2016-002273

Abstract for an Invited Paper
for the MAR17 Meeting of
the American Physical Society

Hydrodynamics of the Dirac fluid in graphene

ANDREW LUCAS, Stanford University

Recent advances in materials physics have allowed us to observe hydrodynamic electron flow in multiple materials. A uniquely interesting possibility is the emergence of a quasi-relativistic plasma of electrons and holes appearing in Dirac semimetals such as graphene. I will briefly review the unique features of the hydrodynamics of the Dirac fluid, and then discuss the theoretical signatures for the Dirac fluid, and its observation in experiment.