Abstract Submitted
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Turbulent Hydrodynamic Flow of a Dirac Fluid in a Two Dimensional Solid MARK WATSON, University of Colorado, Colorado Springs — In the present numerical study we explore the possibility of a turbulent flow in the electric transport of a two dimensional solid, with particular focus on graphene. We use a relativistic hydrodynamic simulation to analyze the flow of the massless charge carriers in a solid with impurities. We find evidence of the possibility of a chaotic and perhaps pre-turbulent flow. Experimental consequences are discussed.

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