

Abstract Submitted  
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**Thermal Smearing of the Magneto-Kohn Anomaly for Dirac materials and comparison with the Two-dimensional electron Liquid** DIPENDRA DAHAL, Department of Physics and Astronomy, Graduate Center and Hunter College of the City University of New York, 695 Park Avenue, New York, NY 10065, ANTONIOS BALASSIS, Department of Physics, Fordham University, NY, USA, GODFREY GUMBS, Department of Physics and Astronomy, Hunter College of the City University of New York, 695 Park Avenue, New York, NY 10065, M. L. GLASSER, Department of Physics, Clarkson University, Potsdam, New York 13699-5820, USA, GRAPHENE PROJECTS COLLABORATION — We compute and compare the effects due to a uniform perpendicular magnetic field and the temperature on the static polarization functions for monolayer graphene (MLG) associated with the Dirac point with that for the two-dimensional electron liquid (2DEL). Previous results for the 2DEL are discussed and we point out a flaw in reported analytic derivation to exhibit the smearing of the Fermi surface for 2DEL. The relevance of our study to the Kohn anomaly in low-dimensional structures and the Friedel oscillations for the screening of the potential for a dilute distribution of impurities is reported.

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