

Abstract Submitted  
for the MAR12 Meeting of  
The American Physical Society

**Screening in Chiral Multilayer Graphene<sup>1</sup>** HONGKI MIN, Department of Physics and Astronomy, Seoul National University, Seoul 151-747, Korea, EUYHEON HWANG, SANKAR DAS SARMA, Condensed Matter Theory Center, Department of Physics, University of Maryland, College Park, Maryland 20742, USA — We calculate the static polarization function of multilayer graphene and study the effects of stacking arrangement, carrier density and onsite energy difference. At low densities, the energy spectrum of multilayer graphene is described by a set of chiral two-dimensional electron systems and the associated chiral nature determines the screening properties of multilayer graphene showing very different behavior depending on whether chirality indices are even or odd. As the density increases, the energy spectrum follows that of monolayer graphene thus the polarization function approaches that of monolayer graphene.

<sup>1</sup>The work is supported by ONR-MURI and NRI-SWAN.

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Date submitted: 27 Nov 2011

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