

Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

Quantum Hall effect in multi-terminal suspended graphene devices FERESHTE GHAHARI, YUE ZHAO, Physics Department, Columbia University, KIRILL BOLOTIN, Physics Department, Vanderbilt University, PHILIP KIM, Physics Department, Columbia University — The integer and fractional quantum hall effects have been already observed in two terminal suspended graphene devices. However in this two probe device geometry, mixing between magnetoresistance ρ_{xx} and Hall resistance ρ_{xy} for incompletely developed quantum Hall states leads to substantial deviation of conductance plateaus values. In this talk, we present the experimental results from four terminal suspended graphene devices. The quality of quantum Hall effect will be discussed in multi-terminal device geometry in conjunction with the current-induced annealing process to improve the quality of graphene samples.

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Date submitted: 30 Nov 2009

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