Abstract Submitted for the MAR13 Meeting of The American Physical Society

**Transport Spectroscopy of gate controlled cavity in CVD bilayer graphene transistor** KYUNGHOON LEE, Department of Electrical Engineering and Computer Science, University of Michigan, YUN SUK EO, CAGLIYAN KUR-DAK, Randall Laboratory of Physics, University of Michigan, ZHAOHUI ZHONG, Department of Electrical Engineering and Computer Science, University of Michigan — Graphene nanostructure provides an ideal platform for understanding distinctive quantum transport properties such as Klein tunneling and suppression of backscattering due to its chiral nature. Quantum interference of phase coherent electron waves in single-layer graphene has attracted wide attention recently, while few experimental works examine the quantum transport of massive Dirac Fermion in bilayer graphene. To this end, we report the low temperature electrical transport spectroscopy of gate controlled cavity in CVD bilayer graphene transistor. Fabry-Perot like conductance oscillation was observed in both monopolar and bipolar bilayer graphene structures defined by electrostatic gating. Transport comparison between single-layer graphene and bilayer graphene will be also discussed.

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