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Magnetoconductance Oscillations in High-Mobility Suspended Bilayer and Trilayer Graphene WENZHONG BAO, ZENG ZHAO, HANG ZHANG, GANG LIU, PHILIP KRATZ, LEI JING, JAIRO VELASC, DMITRY SMIRNOV, CHUN NING LAU, DEPARTMENT OF PHYSICS, UNIVERSITY OF CALIFORNIA, RIVERSIDE, RIVERSIDE, CA 92521 TEAM, NATIONAL HIGH MAGNETIC FIELD LABORATORY, TALLAHASSEE, FL 32310 COLLABORATION — We observed pronounced magnetoconductance oscillations on suspended bilayer and trilayer graphene devices with mobilities up to 270,000 cm^2/Vs. For bilayer devices, we observe conductance minima at all integer filling factors n between 0 and -8, as well as a small plateau at n=1/3. For trilayer devices, we observe features at n=-1, -2, -3 and -4, and at n$\sim$0.5 that persist to 4.5K at B=8T. All of these features persist for all accessible values of Vg and B, and could suggest the onset of symmetry breaking of the first few Landau (LL) levels and fractional quantum Hall states.

Wenzhong Bao

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