

Abstract Submitted
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Quantum transport in high-quality Bilayer Graphene pnp Junctions YONGJIN LEE, LEI JING, JAIRO VELASCO JR., PHILIP KRATZ, GANG LIU, WENZHONG BAO, MARC BOCKRATH, CHUN NING LAU, Department of Physics, University of California, Riverside, California 92521 — Using high-quality bilayer graphene pnp junctions with suspended top gates, we perform transport measurements. At a magnetic field $B=0$, by an applied perpendicular electric field, band gap opens at 260mK. Within the band gap, we demonstrate the conductance decreases exponentially by 3 orders of magnitude with increasing electric field and this can be explained by variable range hopping with a gate-tunable density of states, effective mass, and localization length.

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