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Quantum Transport in Graphene pnp Junctions with Contactless Top Gates JAIRO VELASCO JR., GANG LIU, WENZHONG BAO, CHUN NING LAU, University of California at Riverside — Graphene offers the unique opportunity to explore relativistic physics in a condensed matter system. One such example is the phenomenon of klein tunneling in graphene pnp junctions. By using a contactless top gate, we are able to fabricate very high quality pnp junctions, and perform electrical transport spectroscopy measurements in zero and finite magnetic fields. We observe oscillations in conductance of the pnp junction and changes in magnetoresisitance. Latest experimental progress and comparison with theoretical predictions will be discussed.

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