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Electronic transport in ABA trilayer graphene E.A. HENRIKSEN, D. NANDI, J.P. EISENSTEIN, California Institute of Technology — We present measurements of the electronic transport in ABA trilayer graphene field-effect devices fabricated with both a back and top gate, at zero, low and high magnetic fields. While the zero field resistivity exhibits a saddle point as a function of the two gate voltages that is similar to bilayer graphene, the low-field Hall data are consistent with a two-band system having a band overlap characteristic of semimetals. At high magnetic fields the quantum Hall effect is clearly observed, and displays features which can be traced to the underlying band overlap, as well as a lifting of the lattice mirror symmetry. Overall the transport in ABA trilayers is that of a semimetal in which the band structure can be strongly modified via the electric field effect. This work is supported by the DOE under grant No. DE-FG03-99ER45766 and the Gordon and Betty Moore Foundation.

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