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Transport study under microwave photoexcitation in epitaxial graphene[1] RAMESH MANI, Georgia State University, JOHN HANKINSON, CLAIRE BERGER[2], WALT DE HEER, Georgia Institute of Technology — Single layers of carbon known as graphene are a promising new electronic material with potential for high frequency applications. For electronics, top-gated graphene field-effect transistors fabricated on large area epitaxial graphene wafers have already indicated switching cutoff frequencies up to 100 GHz [1]. Microwave and terahertz radiation-sensing constitutes another area of interest. Hence, we examine the electrical photo-response of graphene devices in the microwave band, and report transport measurements under microwave photo-excitation (f $<$ 120 GHz) carried out on micron sized Hall bars at liquid Helium temperatures.

[1] Y-M Lin et al., Science 327, 662 (2010).

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