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Transport and Raman measurements in Graphene: Interaction strength and scattering mechanisms SEBASTIAN REMI, ANNA SWAN, BENNETT GOLDBERG, Boston University — Among the most common techniques for characterization of Graphene materials have been electronic transport and Raman measurements, for instance both can be easily tuned by changing the charge carrier density and electronic screening. In each situation the underlying physics is connected to the interactions and relaxation mechanisms in the material. However it is well known that the electronic scattering time does not necessarily describe the broadening observed in Raman measurements. Here we present micro Raman and transport measurements of single layer graphene field effect devices. We discuss interaction and scattering mechanisms and how these are connected in the different measurements.

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