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Electron energy relaxation in disordered graphene via e-phonon interaction WEI CHEN, AASHISH CLERK, McGill University — Motivated by recent experiments, we study theoretically the energy relaxation of hot electrons in disordered graphene via electron-phonon interactions. In contrast to previous treatments [1], we explicitly treat the effects of electronic disorder. Using the Keldysh diagram technique, and including vertex corrections, we identify various mechanisms through which disorder can significantly change the magnitude and temperature dependence of the electronic energy relaxation rate. [1]Felix Von Oppen, Francisco Guinea, Eros Mariani, Phys. Rev.B 80, 075420 (2009)

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