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Phonon dispersion of graphene revisited SILVIA VIOLA KUSMINSKIY, DAVID CAMPBELL, ANTONIO CASTRO NETO, Boston University — We calculate the phonon spectrum for a graphene sheet resulting from the model proposed by T. Lenosky *et al.* (Nature **355**, 333 (1992)) for the free energy of the lattice. This model takes into account not only the usual bond bending and stretching terms, but captures the possible misalignements of the p_z orbitals. We compare our results with previous models used in the literature. We analyze the effect of anharmonic terms.

Silvia Viola Kusminskiy
Boston University

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