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Electronic structure of multilayer graphene with a mixture of Bernal and rhombohedral stacking MIKITO KOSHINO, Department of Physics, Tohoku University, EDWARD MCCANN, Department of Physics, Lancaster University, Lancaster — We propose a general scheme to describe the electronic band structure of multilayer graphene with an arbitrary mixture of Bernal and rhombohedral stacking. The system can be viewed as a series of finite Bernal graphite sections connected by rhombohedral-type stacking faults. We find that the low-energy eigenstates are mostly localized in each Bernal section, and the whole spectrum is well approximated by a collection of the spectra of independent sections. In the ensemble-averaged electronic structure, there are frequently-appearing linear bands and quadratic bands with particular band velocities or curvatures, corresponding to finite Bernal sections and their combinations.

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