

Abstract Submitted  
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**The strong coupling limit of twisted bilayer graphene at large twist angles** HRIDIS PAL, STEPHEN SPITZ, MARKUS KINDERMANN, Georgia Institute of Technology — Using a recently proposed long-wavelength theory for twisted graphene bilayers near commensuration [1], we show that a strong distortion of energy bands can occur in such systems at large angles of twist. This is in contrast with the previously accepted belief that such non-trivial physics can arise only at extremely small angles of twist. At large angles, sufficiently close to commensuration, the system is driven to a non-perturbative regime (in the effective interlayer coupling), and it becomes locally gapped. We discuss the implications of this for the energy spectrum of the bilayer. [1] Theory of Twisted Bilayer Graphene Near Commensuration, Hridis K. Pal, Steven Carter, and M. Kindermann, arXiv:1409.1971.

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