

Abstract Submitted
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‘Hot-spot’ Charge-Density Wave Nesting in Cuprates¹ ROBERT MARKIEWICZ, Northeastern University, GOETZ SEIBOLD, BTU Cottbus-Senftenberg, JOSE LORENZANA, Universita di Roma “La Sapienza”, ARUN BANSIL, Northeastern University — Recent experiments have found evidence for at least short-range charge-density wave (CDW) order in several families of cuprates. Theories of this order fall into two categories: intermediate coupling theories where the transition involves Fermi surface nesting and coupling to a lattice distortion[1], and strong-coupling theories of purely electronic CDWs where the ordering vector is a form of ‘hot-spot’ nesting associated with underlying antiferromagnetic fluctuations[2]. Surprisingly, both models find the same nesting vectors[3]. We will discuss ways of distinguishing the models, and of the relationship of this CDW order with the pseudogap phenomena in underdoped cuprates. 1. R.S. Markiewicz, J. Lorenzana, G. Seibold, and A. Bansil, arXiv:1207.5715. 2. K.B. Efetov, H. Meier, and C. Pépin, *Nature Phys.* 9, 442 (2013); R. La Placa and S. Sachdev, *Phys. Rev. Lett.* 111, 027202 (2013); Y. Wang and A.V. Chubukov, *Phys. Rev. B* 90, 035149 (2014). 3. R.S. Markiewicz, J. Lorenzana, G. Seibold, and A. Bansil, *Phys. Rev. B* 81, 014509 (2010).

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