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Chiral charge order from interlayer tunneling in the hole doped cuprates[1] AKASH MAHARAJ, SRINIVAS RAGHU, Stanford University — We show how charge density waves in layered materials can be gyrotropic, *i.e.* break spatial inversion and all mirror symmetries. This order is stabilized by coherent interlayer tunneling whose amplitude depends on in-plane momentum. We present mean field calculations which demonstrate the presence of this chiral configuration of charge density waves, and justify these results using a Landau-Ginzburg theory. The implications for recent experiments (*e.g.* Kerr, X-ray etc.) in underdoped YBCO are also discussed.

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Akash Maharaj
Stanford University

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