

Abstract Submitted
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Effect of spin-orbit scattering on the observed time-reversal violating phase in the Pseudogap phase of the Cuprates VIVEK AJI, CHANDRA VARMA, UC Riverside — Fauque et al. [1] have recently reported observing the predicted symmetry breaking [2] in the Pseudogap region in the phase-diagram of the Cuprates, which had also been earlier inferred from dichroism in ARPES. Following Wu et al. [3], we study the effects of spin-orbit scattering in the observed symmetry breaking. We study the following issues: spin-current, accompanying orbital currents, symmetry of any accompanying spin-order, and the effect of an external magnetic-field on the ordered state. 1. Fauque et al., arXiv.org/cond-mat/0509210; 2. M.E. Simon and C.M.Varma, *Phys.Rev. Lett.* 89, 247003 (2002) 3.Wu et al., arXiv.org/cond-mat/0505544

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