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d-wave pairing instability due to quantum critical fluctuations of the loop current order VIVEK AJI, University of California at Riverside, CHANDRA VARMA, University of California at Riverside, ARKADY SHEKHTER, National High Magnetic Field Laboratory — The quantum critical fluctuations of the time reversal breaking order parameter observed in the pseudogap regime in the Cuprates couple to the lattice angular momentum of the fermions. Such a coupling is anisotropic in momentum space and unambiguously promotes d-wave pairing. In this talk I will discuss the origin and the nature of the coupling and show that the same parameters that describe the normal state transport properties give the right order of magnitude of the transition temperature and the normalized zero temperature gap.

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