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Collective Fluctuations of the Loop-Current Phase in Cuprates ARKADY SHEKHTER, VIVEK AJI, CHANDRA VARMA, UC Riverside — We have calculated the collective modes of the loop-current ordered phase observed in underdoped Cuprates. Besides the modes given by the fluctuations of the Ashkin-Teller model, we find that the current fluctuations introduce a mode whose properties are similar to that of electro-magnetic vector potentials. We calculate the coupling of such a mode to the Ashkin-Teller modes and to the Fermions.

Arkady Shekhter UC Riverside

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