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Unconventional superconductivity and charge fluctuations in $\mathbf{Li_{0.9}Mo_6O_{17}}$[1] NATALIA LERA, JOSE ALVAREZ, Departamento de Fisica de la Materia Condensada. Universidad Autonoma de Madrid — We study superconductivity in $Li_{0.9}Mo_6O_{17}$ considering charge and spin fluctuations as the pairing mechanism. We model the low-energy electronic properties of the material with a multiorbital extended Hubbard model and compute the superconducting vertex within the RPA. We found that charge collective modes induced by Coulomb repulsion favor the superconductivity both the singlet and triplet channels. Superconductivity is favored as the charge ordering transition of the model is approached by tuning the interaction. We compare with another quasi-one-dimensional approach where the superconductivity is an instability of a generalized Luttinger Liquid (LL) to higher dimensions, known as Quantum Smectic Metal or Sliding LL. We also discuss these results on the context of the dimensional crossover issue in the unconventional metallic phase of the material.

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