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Origin of charge density wave instability in the underdoped cuprates[1] VIVEK MISHRA, M. R. NORMAN, Materials Science Division, Argonne National Laboratory, Lemont, IL 60439. — The exact nature of the normal state in the underdoped cuprates is still debatable. Recent experimental results favor the existence of an unconventional charge density wave with d-wave form factor above the superconducting transition. Here we study the charge density wave instability within the Eliashberg framework. We find the full momentum structure of the leading charge density wave order and compare its strength to the superconductivity driven by spin-fluctuation mediated pairing interaction.

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