Abstract Submitted
for the MAR07 Meeting of
The American Physical Society

What does charge order have to do with the mechanism of high temperature superconductivity? STEVEN KIVELSON, Stanford University, EDUARDO FRADKIN, University of Illinois — Charge order clearly "competes" with superconductivity under many circumstances. It always tends to suppress the superfluid stiffness of the superconducting state by localizing electrons that might otherwise participate in the superconducting condensate. Thus, where the superconducting T_c is determined by phase fluctuations, charge order suppresses T_c. However, there is suggestive experimental and theoretical evidence that charge ordering of just the right sort can enhance pairing, and hence "assist" superconductivity. Some of this evidence will be presented.

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Date submitted: 20 Nov 2006 Electronic form version 1.4