It was during this period that I feel we made our greatest progress towards a final theory of high Tc superconductivity. The work is best summarized in my conference talk given at the Interlaken meeting on the 29th of February, 1988. The key elements are the work by Zou and myself on normal state properties, and by Hsu, Wheatley and myself on the actual mechanism for Tc.
I enclose a list of some of the papers prepared, submitted or given by our group in the period of the above grant.

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With the understanding (ZA) of the large anisotropy and other transport properties in the normal state, the model is uniquely determined: one must have one version or another of a holon-spinon quantum fluid state, which is not a normal fermi liquid. And with the recognition (HWA) of the large repulsion holon-holon interactions, we have the first way of thinking quantitatively about the superconducting state.

Meantime Doucot, Liang and Shastry as well as myself, John, et al were doing very interesting work on the pure Heisenberg system, which is related but not necessarily crucial to understanding the superconducting properties. This is described in the various papers by these authors.
CMT GROUP PUBLICATION LIST

P.W. Anderson

   Comment on “Two Dimensional Antiferromagnetic Quantum Fluid State in La$_2$CuO$_4$” by Shirane, et al

   “Normal” Tunneling and “Normal” Transport: Diagnostics for the Resonating-Valence-Bond State

   The Theory of High T$_c$ Superconductors

   The Theory of High T$_c$ Superconductors

   Interlayer Pair Hopping: Superconductivity from the RVB State

   A Theory of the New Superconductors: “Popular” version for AAAS

   Fermions and Topology in the Two-Dimensional Antiferromagnet: Topological Stability of “Merons”

   Some New Variational RVB-type Wave Functions for the Spin 1/2 Antiferromagnetic Heisenberg Model on a Square Lattice

J. Wheatley

1. J. Wheatley Fermi Condensate: a Saddle Point View of RVB, to be submitted to Physica C

2. J. Wheatley, Does the Two-dimensional Large-U Hubbard Model Ever Show Fermi Liquid Behavior?, to be submitted to Journal of Physics C.
Z. Zou


B. Sriram Shastry

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