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Phase Fluctuations in high-Tc Superconductors
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— Thermal fluctuation induced destruction of phase coherence of superconductivity in High-Tc superconductors is investigated via numerical quantum Monte Carlo solution of a new theoretical model at finite-temperature. Our simple effective boson Hamiltonian, derived from the pairing sector of the t'-t"-J model, can be considered as a natural extension of the hard-core boson with additional information about the internal structure of the local fermion pairs. The local solution is found to consist of d-wave pairing, hybridizing with neighboring p-wave pairs. The possible connection with the pseudo-gap phase will also be addressed.

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