PSEUDOGAP ANOMALIES IN THE NORMAL STATE OF THE ATTRACTIVE HUBBARD MODEL

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The normal state temperature one- and two-particle Green's functions are calculated within the framework of the conserving self-consistent approximation accounting for the fluctuations in the particle-particle channel for the attractive Hubbard model. The Padé continuation to the complex plane is used to study the pole structure of the retarded one-particle Green's function. The momentum and temperature dependences of the positions of the leading quasiparticle poles are consistent with Bogolyubov's picture, when the second leading pole emerges and rapidly moves toward the real axes. The non-Fermi liquid behavior of the first leading pole is detected at the intermediate coupling. The two-particle Green's function is used to calculate the temperature dependence of the uniform static spin susceptibility, which is shown to exhibit the diamagnetic tendency, as the system approaches the superconducting phase transition.