Dynamics of a N-S contact

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A contact consisting of a normal metal and a superconductor is studied using the quasiclassical theory of superconductivity. Its linear response to an electrical field, $E(\omega)$, perpendicular to the contact is described within the Keldish formalism. The dynamic conductance is calculated for frequencies which are comparable to the superconducting gap, i.e. $\hbar\omega \sim \Delta$. Results of self-consistent calculations are compared with such without self-consistency.