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Determining Transport Parameters for Superconductor/Normal Metal Point Contacts in an Applied Magnetic Field from Conductance versus Field Data at Fixed Temperature PAUL J. DOLAN, JR., Northeastern Illinois University, CHARLES W. SMITH, University of Maine — Superconductor/normal metal point contact transport data often consists of normalized conductance as a function of reduced temperature, from which the elastic scattering parameter and the inelastic scattering parameter for the contact can be determined, in addition to other features of interest. We show a strategy for determining these parameters from normalized conductance as a function of reduced applied magnetic field, at fixed temperature, even when conductance versus variable temperature data is absent. This analysis strategy will be demonstrated for several point contacts, over a wide range of parameter values.

Paul Dolan
NEIU

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