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The Role of Inelastic Scattering in Intermediate Spin Polarized Normal Metal/Superconductor Point Contacts CHARLES W. SMITH, University of Maine, Orono, ME, PAUL J. DOLAN, JR., Northeastern Illinois University, Chicago, IL — Charge transport in ferromagnetic normal metal/superconductor point contacts is constrained by both the limited minority spin population, which reduces the probability of the Andreev reflection process, and by quasiparticle finite-lifetime effects, i.e., inelastic scattering, which influences the probability of ordinary electron transport. For the case of intermediate polarization $0.30 \leq P \leq 0.60$, where $0 \leq P \leq 1.0$, these processes can play equally important roles. We present results for normalized conductance at zero bias, as a function of temperature, and for conductance as a function of voltage, at $P = 0.40$, parametrically, for the entire range of inelastic scattering. Experimental results for point contacts will be presented.

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