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Point Contact Spectroscopy in Half-Heusler Compounds STEVEN ZIEMAK, RONGWEI HU, YASUYUKI NAKAJIMA, PAUL SYERS, JOHN-PIERRE PAGLIONE, University of Maryland College Park, PAGLIONE RESEARCH GROUP TEAM — The half-Heusler family of compounds have been predicted to exhibit topologically non-trivial behavior. Some members, including YPtBi and LuPtBi, exhibit superconductivity, suggesting the possibility of a topological superconductor. We have performed soft point contact spectroscopy measurements on the superconducting half-Heusler compound YPtBi to investigate gap structure and density of states as a function of temperature and magnetic field. We report properties of the conductivity spectra and discuss implications of the superconducting gap features for interpretation of the nature of superconductivity in these compounds.

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