

Abstract Submitted  
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**Search for Superconductivity in Extraterrestrial Materials<sup>1</sup>** IVAN K. SCHULLER, S. GUÉNON, J.G. RAMIREZ, ALI C. BASARAN, Department of Physics and Center for Advanced Nanoscience, University of California San Diego, M. THIEMENS, Department of Chemistry and Biochemistry, University of California San Diego, S. TAYLOR, Cold Regions Research and Engineering Laboratory, Dartmouth College New Hampshire — Extraterrestrial and in particular presolar materials have formed under very extreme and unconventional growth conditions. They are highly heterogeneous and they consist of an unmatched variety of chemical compounds. In order to test this materials for superconductivity, we use the very sensitive and highly selective technique of Magnetic Field Modulated Microwave Spectroscopy. The sample is placed in a microwave cavity and the microwave reflectivity is monitored in the presence of a small AC magnetic field. Among others, we have investigated micrometeorites that were extracted from the water well of the Amundsen-Scott South Pole Station and materials from the Allende and Murchinson meteorite. First results will be presented and the challenges of this research project will be discussed.

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