

Abstract Submitted  
for the MAR10 Meeting of  
The American Physical Society

**Proposed experiment to test existence of horizontal nodal lines in  $\text{Sr}_2\text{RuO}_4$**  DAVID PARKER, Naval Research Laboratory — Since the original proposal of an unconventional chiral order parameter in the ruthenate perovskite superconductor  $\text{Sr}_2\text{RuO}_4$ , much attention has been given to the possibility of horizontal nodal lines on the predominant  $\gamma$  cylindrical Fermi surface given thermodynamic evidence, such as power law specific heat and spin relaxation rate behavior, for low-lying quasiparticle excitations in this material. Here I propose Andreev and tunneling spectroscopy experiments exploiting the peculiar Fermi surface topology of the normal electrode graphite to determine whether such nodal lines in fact exist.

David Parker  
Naval Research Laboratory

Date submitted: 20 Nov 2009

Electronic form version 1.4