

Abstract Submitted  
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**Detecting Semimetal Surface Modes in Kitaev Spin Liquids**

BRENT PERREAULT, University of Minnesota, JOHANNES KNOLLE, Cavendish Laboratory, NATALIA B. PERKINS, F. J. BURNELL, University of Minnesota — Raman scattering is a useful probe for Kitaev-type” spin liquids because it couples only to the dispersing (and potentially gapless) fermionic degrees of freedom in these systems. I will discuss Raman scattering in Kitaev spin liquids on the 3D hyperhoneycomb (H-0) lattice, where these fermionic degrees of freedom realize topologically non-trivial band structures with protected gapless surface states. I will describe Raman signatures both of bulk 3D samples, and thin-film samples of these materials, where the resonant Raman response can detect the protected surface modes.

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