Abstract Submitted
for the MAR16 Meeting of
The American Physical Society

**Spin liquids on an anisotropic kagome lattice** ROBERT SCHAFFER, KYUSUNG HWANG, YEJIN HUH, YONG BAEK KIM, Univ of Toronto — Much recent theoretical and experimental effort has been devoted to the search for quantum spin liquids, which arise in the presence of strong frustration of magnetic interactions. Motivated by recent experiments on the vanadium oxyfluoride material DQVOF, we examine possible spin liquid phases on an anisotropic kagome lattice of $S = 1/2$ spins, in which the $C_6$ symmetry is broken to $C_3$. Using the projective symmetry group analysis, we determine the possible phases for both bosonic and fermionic $Z_2$ spin liquids on this lattice. Using VMC, we study the Heisenberg model on this lattice, and show that a $Z_2$ spin liquid emerges as the ground state in the presence of this anisotropy.

Robert Schaffer
Univ of Toronto

Date submitted: 06 Nov 2015 Electronic form version 1.4