Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

Spin $1/2$ **Heisenberg antiferromanget on kagome: $\mathbf{Z_2}$ spin liquid with fermionic spinons**[1] ZHIHAO HAO, Department of Physics and Astronomy, University of Waterloo, Waterloo, ON, OLEG TCHERNYSHYOV, Department of Physics and Astronomy, Johns Hopkins University, Baltimore, MD — Motivated by recent numerical and experimental studies of spin 1/2 Heisenberg antiferromagnet on kagome, we formulate a many-body model for the fermionic spinons introduced in Phys. Rev. Lett. 103, 187203. The spinons experience strong onsite attraction. They also couple with a compact U(1) gauge field. The ground state of the model is generically a Z_2 liquid. We calculate the edge of the two-spinon continuum, which can be measured in numerics and inelastic neutron scattering experiments.

Zhihao Hao
Department of Physics and Astronomy,
University of Waterloo, Waterloo, ON

Date submitted: 08 Nov 2012　　　　　　　　　　　　Electronic form version 1.4