Momentum polarization of non-Abelian topologically ordered states YI ZHANG, XIAO-LIANG QI, Stanford University — We study momentum polarization of non-Abelian topologically ordered states for the Gutzwiller projected Chern insulator wave function with Chern number C=2. The resulting quasiparticle topological spin and edge central charge confirm the field theory description of an SU(2) gauge field coupled to $\nu = 2$ fermions and rule out other candidate theories. We also discuss characteristic differences and the quantum phase transition between this non-Abelian topological phase and an Abelian topological phase described by the projected wave function of two C=1 Chern insulators.

Yi Zhang
Stanford University

Date submitted: 15 Nov 2013