

Abstract Submitted  
for the MAR09 Meeting of  
The American Physical Society

**Pfaffian statistics through adiabatic transport in the 1D coherent state representation** ALEXANDER SEIDEL, Department of Physics, Washington University in St. Louis — Recent work has shown that certain quantum Hall states and their excitations can be efficiently labeled by simple one-dimensional patterns. One way to achieve this is to observe that the low energy sector of these states is adiabatically connected to simple charge-density-wave patterns that appear when the system is deformed, e.g., into a thin torus. In this talk it will be shown that the patterns emerging in this limit already determine the non-abelian statistics of the  $\nu = 1$  Moore-Read state. Aside from the knowledge of these patterns, the method essentially relies only on the principle of adiabatic continuity, and topological as well as locality arguments. [References: A. Seidel, Phys. Rev. Lett. 101, 196802 (2008), A. Seidel, D.-H. Lee, Phys. Rev. B 76, 155101 (2007).]

Alexander Seidel  
Department of Physics, Washington University in St. Louis

Date submitted: 21 Nov 2008

Electronic form version 1.4