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*Fractional topological states in electronic flattened bands with non-zero Chern number.*

Topology finds many applications in physics, and recently there has been a surge of activity in the study of phases of matter whose properties cannot be described by local order parameters, and instead are topological in nature. Recently discovered topological insulators and topological superconductors are examples of such systems. Even more recently, attention has turned to fractional topological states in lattice models which occur when interacting electrons propagate on flattened Bloch bands with non-zero Chern number. Here I shall discuss some of the features of the topologically ordered many-particle states that can emerge when these bands are partially filled, including a possible realization of the fractional quantum Hall effect without external magnetic fields. I shall also discuss an effective description of certain fractional topological insulators by considering the time-reversal symmetric pendant to the topological quantum field theories that encode the Abelian fractional quantum Hall liquids. (Received September 22, 2011)