

Abstract Submitted  
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**Detecting Majorana Bound States** COLIN BENJAMIN, Univ. of Georgia, Athens, GA, USA, JIANNIS PACHOS, Univ. of Leeds, UK — We propose a set of interferometric methods on how to detect Majorana bound states induced by a topological insulator. The existence of these states can be easily determined by the conductance oscillations as function of magnetic flux and/or electric voltage. We study the system in the presence and absence of Majorana bound states and observe strikingly different behaviors. Importantly, we show that the presence of coupled Majorana bound states can induce a persistent current in absence of any external magnetic field.

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