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Dan Li* (li1863@math.purdue.edu), 150 N University St., West Lafayette, IN 47907, and **Ralph M Kaufmann** and **Birgit Wehefritz-Kaufmann**. *Noncommutative topological \mathbb{Z}_2 invariant*. Preliminary report.

Topological insulators are time reversal symmetry protected topological order, we will give some background on the topological \mathbb{Z}_2 invariant, which characterizes time reversal invariant topological insulators. In a disordered system, non-commutative geometry provides a practical methodology, and in this talk, we will give a noncommutative generalization of the classical topological \mathbb{Z}_2 invariant. (Received February 04, 2017)