

Abstract Submitted  
for the MAR12 Meeting of  
The American Physical Society

**Actinide Topological Insulator Materials with Strong Interaction**<sup>1</sup> XIAO ZHANG, HAIJUN ZHANG, Department of Physics, Stanford University, CLAUDIA FELSER, Johannes Gutenberg University of Mainz, SHOU-CHENG ZHANG, Department of Physics, Stanford University — Topological band insulators have recently been discovered in spin-orbit coupled two and three dimensional systems. In this work, we theoretically predict a class of topological Mott insulators where interaction effects play a dominant role. In actinide elements, simple rocksalt compounds formed by Pu and Am lie on the boundary of metal to insulator transition. We show that interaction drives a quantum phase transition to a topological Mott insulator phase with a single Dirac cone on the surface.

<sup>1</sup>This work is supported by the ARO with grant number W911NF-09-1-0508.

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Date submitted: 11 Nov 2011

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