## Abstract Submitted for the MAR17 Meeting of The American Physical Society

Symmetry-protected topological insulator and its symmetry-enriched topologically ordered boundary<sup>1</sup> JUVEN WANG, Institute for Advanced Study, XIAO-GANG WEN, Massachusetts Institute of Technology, ED-WARD WITTEN, Institute for Advanced Study — We propose a mechanism for achieving symmetry-enriched topologically ordered boundaries for symmetry-protected topological states, including those of topological insulators. Several different boundary phases and their phase transitions are considered, including confined phases, deconfined phases, symmetry-breaking, gapped and gapless phases.

<sup>1</sup>National Science Foundation PHY-1606531, Corning Glass Works Foundation Fellowship, NSF Grant DMR- 1506475 and NSFC 11274192, the BMO Financial Group and the John Templeton Foundation No. 39901.

Juven Wang Institute for Advanced Study

Date submitted: 11 Nov 2016 Electronic form version 1.4