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Topological insulators on a Mobius Strip¹ LANG-TAO HUANG, Department of Physics, Tsinghua University, Beijing 100084, China, DUNG-HAI LEE², Department of Physics, University of California at Berkeley, Berkeley, CA 94720, USA — We study the two dimensional Chern insulator and spin Hall insulator on a non-orientable Riemann surface, the Mobius strip, where the usual bandstructure topological invariant is not defined. We show that while the flow pattern of edge currents can detect the twist of the Mobius strip in the case of Chern insulator, it can not do so in spin Hall insulator [1].

[1] Lang-Tao Huang and Dung-Hai Lee, Phys. Rev. B **84**, 193106 (2011)

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