Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

Surface States on Topological Insulators: Angle-Resolved Photoemission Spectroscopy Studies[1] TONICA VALLA, Brookhaven National Laboratory, ZHIHUI PAN, PETER JOHNSON, Brookaven National Laboratory, D. GARDNER, S. CHU, Y. S. LEE, MIT, RONGWEI HU, CEDOMIR PETROVIC, Brookaven National Laboratory — We have studied the electronic structure of several topological insulators using high resolution Angle-Resolved Photoemission Spectroscopy. We have observed two types of metallic surface states: a) pairs of spin-orbit split states with opposite spin chirality and b) unpaired spin chiral state. Through the adsorption of various atomic/molecular species, we were able to vary the filling, tune the spin-orbit coupling and alter the spin texture of these states.

[1]This work was supported by DOE

Tonica Valla
Brookhaven National Laboratory

Date submitted: 20 Nov 2009 Electronic form version 1.4