Abstract Submitted
for the MAR17 Meeting of
The American Physical Society

Quantum Hall Effect in Black Phosphorus Two-dimensional System FANGYUAN YANG, ZUOCHENG ZHANG, Fudan University, NAI ZHOU WANG, GUO JUN YE, University of Science and Technology of China, KENJI WATANABE, TAKASHI TANIGUCHI, National Institute for Materials Science, XIAN HUI CHEN, University of Science and Technology of China, YUANBO ZHANG, Fudan University — Recent advent of black phosphorus two-dimensional electron systems (2DESs) has attracted great attention because of its exceptional electronic and optoelectronic properties. In this talk, we will present our recent experimental progress on integer quantum Hall effect in high quality black phosphorus 2DESs. In extremely high magnetic fields, temperature and tilt angle dependent electronic transport measurements reveal a wealth of information on the charge carriers in this new 2DES. We will discuss the implication of our findings in the fractional quantum Hall regime.

Fangyuan Yang
Fudan University

Date submitted: 11 Nov 2016 Electronic form version 1.4