



清华大学高等研究院

Institute for Advanced Study, Tsinghua University

物理学术报告 Physics Seminars (biweekly)

Title: Fractional Quantum Hall Plateaus Induced by Confinement

Speaker: Xi Lin (*Peking University*)

Time: 4:00pm, Wednesday, Dec 28, 2016
(3:30~4:00pm, Tea, Coffee, and Cookie)

Venue: Conference Hall 322, Science Building, Tsinghua University

Abstract

Induced from a $5/3$ filling factor quantum Hall state in a single layer two-dimensional electron gas, an unexpected $3/2$ quantum plateau is observed for the first time with modest confinement conditions. This even-denominator quantum Hall plateau develops below 300 mK at a local filling factor of $5/3$, with a quantization of 0.04%. A new series of fractional quantum Hall plateaus between filling factor 1 and 2 is also found within a confined region.