



清华大学高等研究院

Institute for Advanced Study, Tsinghua University

物理学学术报告 Physics Seminars (biweekly)

- Title:** Transport properties of recent discovered Weyl semimetals
- Speaker:** Shuang Jia
Peking University
- Time:** 4:00pm, Wednesday, April 8, 2015
(3:30~4:00pm, Tea, Coffee, and Cookie)
- Venue:** Conference Hall 322, Science Building, Tsinghua University

Abstract

Recent observation of the Fermi arc surface states in the non-central-symmetric tantalum monoarsenide in ARPES measurements indicates the existence of the topological Weyl semimetals. In this talk, I will show our results of the electric transport measurements on TaAs and several other possible Weyl semimetals. Our studies show that TaAs is a compensated semimetal with extremely low carrier concentrations and ultrahigh mobility. The Strong SdH oscillations and large, linear magnetoresistance in TaAs indicate a strong backscattering protection in these Weyl semimetals. I will also discuss the negative longitudinal magnetoresistance which is possibly caused by the well-known ABJ anomaly.