



SPeCial4Young

SYSU-PKU Collider physics forum For Young scientists



中山-北大联合高能物理青年论坛第十四期

自希格斯玻色子发现后，标准模型预言的粒子都已被找到。然而近些年来，在实验中发现越来越多与标准模型不符合的迹象，例如中微子质量、轻子味道普适性破坏以及CDF实验测量W玻色子质量反常等问题。这些“乌云”催促我们去寻找标准模型之外的新物理。高能物理界提出了各种不同的未来实验项目，例如基于LHC对撞机的升级计划（HL-LHC、HE-LHC）、未来环形对撞机（FCC、SPPC）、国际直线对撞机（ILC）、紧凑型直线对撞机（CLIC）、环形正负电子对撞机（CEPC）、缪子对撞机（MuC）、电子-缪子乃至电子-中微子对撞机等。

本论坛目的在于为高能物理工作者提供平台交流其在高能物理前沿的进展与经验，包括但不限于对撞机技术、软件模拟、物理分析等，同时也为高年级本科生及研究生提供接触高能物理前沿的机会。

报告题目: Characterizing the Higgs boson and axion-like particles at muon collider

缪子对撞机上的希格斯粒子与类轴子粒子的物理研究

摘要: With the anticipated high CM energies and high luminosities, a multi-TeV muon collider could provide us with unparalleled precision for Higgs physics, and offer some of the most stringent experimental tests of the SM Higgs sector. In this talk, I will discuss the expected precision at a multi-TeV muon collider for measuring the Higgs boson couplings with electroweak gauge bosons, as well as the trilinear Higgs self-coupling. Beyond testing the Standard Model Higgs boson, muon collider also has great discovery potential for physics beyond the Standard Model. In particular, I will discuss the perspectives for searching for heavy axion-like particles at muon colliders.



报告人简介: 王星 (Xing Wang), graduated from Tsinghua University in 2013 and obtained PhD at University of Pittsburgh in 2019, is now a postdoc at University of California at San Diego. He works on high energy phenomenology, with special interests in Higgs physics, Dark Matter physics, and extra dimension models.

时间: 8月31日 周三 19:00 ---19:30, 线上

会议ID: 487 887 1035 (Zoom) Passcode: 527772

Indico: <https://indico.ihep.ac.cn/event/17318/>

Meeting link: <https://cern.zoom.us/j/4878871035?pwd=SjJuekR3cnBueUx3Y1pvUzl6QkZNUt09>

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