



SPeCial4Young

SYSU-PKU Collider physics forum For Young scientists



中山-北大联合高能物理青年论坛第四十九期

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： Searches for supersymmetry using two same-sign leptons or three leptons with ATLAS detector

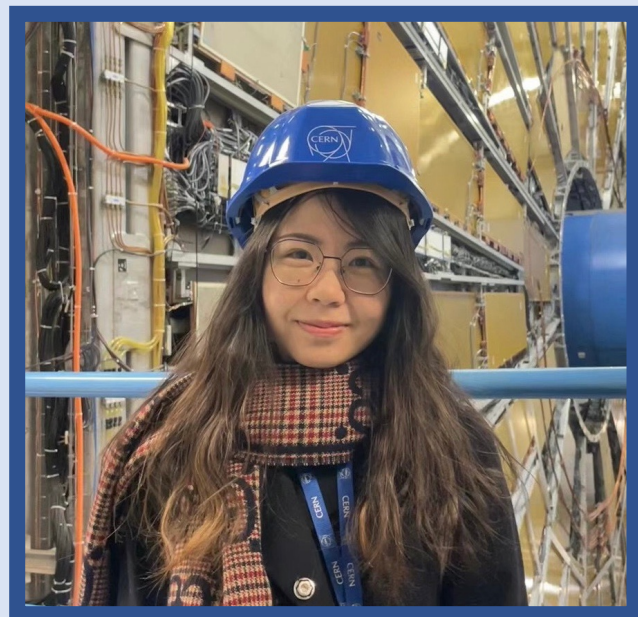
摘要： The Large Hadron Collider offers a great opportunity to search for supersymmetry (SUSY) particles at TeV scale. SUSY is a compelling extension of Standard Model (SM) by introducing a new symmetry relates fermions and bosons. I will talk about two recent searches for SUSY with two same-sign leptons or 3 leptons signature in the ATLAS experiment. The first analysis targets the pair production of electroweak gauginos, and the second targets the pair production of strongly-interacting squarks and gluinos. The analysed dataset corresponds to 13 TeV proton-proton collision data collected by ATLAS detector with an integrated luminosity of 139 fb⁻¹. No significant excess has been observed over the SM predictions. The results are interpreted in the context of different R-parity conserving and R-parity violating SUSY scenarios. Exclusion limits at 95% CL are placed on masses of the SUSY particles involved in the considered scenarios. Model-independent upper limits on the BSM events that may contribute to the signal regions defined in the analyses are also computed.

报告人简介： 黄姝慧， After obtaining the Bachelor degree in Sun Yat-sen University, continued the study as a Ph.D student in Department of Physics, University of Hong Kong since 2019.

Indico: <https://indico.ihep.ac.cn/event/20316/>

时间： 9月13日 周三 17: 30 ---18: 00, 线上

会议ID： 677 0508 2266 (Zoom) Passcode: 123456



Meeting link: <https://cern.zoom.us/j/67705082266?pwd=RWx4RjBOUXZ0VFdZbVZvS2ZQcmJqQT09>

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