



The 219th HENPIC Seminar

Electron-Ion Collider in China

Speaker: Dr. Yuxiang Zhao

November 21, 2024, Thursday, 10:30 am (UTC+8)

Zoom meeting ID: 421173735 Passcode: 644179

Abstract:

Studying the origin of nucleon spin and mass in QCD is essential for understanding the fundamental constituents of visible matter and the underlying strong force that governs their interactions. The Electron-ion collider in China (EicC) has been proposed to carry out dedicated research to explore these open questions. The EicC will feature highly polarized electrons (with a polarization of $\sim 80\%$) colliding with protons (with a polarization of $\sim 70\%$) at the variable center of mass energies ranging from 15 to 20 GeV and a luminosity of $(2-4) \times 10^{33} \text{ cm}^{-2} \text{ s}^{-1}$. Polarized deuterons and Helium-3, as well as unpolarized ion beams from Carbon to Uranium, will also be available. The conceptual design report of EicC will be released soon.

In this talk, I will present a few highlighted physics at EicC, particularly focusing on the complementarity between EIC@BNL and EicC, together with the detector conceptual design for the EicC spectrometer. In the end, I will briefly discuss a proposal about China Hyperon-Nuclear Spectrometer (CHNS) at HIAF, which paves the way both for physics and detectors towards EicC.

About the speaker:

Yuxiang Zhao (赵宇翔) is a physicist at the Quark Matter Research Center of Institute of Modern Physics. He is mainly working on the nucleon spin structure via lepton scatterings as well as hadronization via e^+e^- collisions. Before joining IMP in 2019, he worked on the JLab experiments in the US and the COMPASS experiment at CERN.



HENPIC website: <https://indico.ihep.ac.cn/event/11115>

Sponsored by Guangdong Major Project of Basic and Applied Basic Research(2020B0301030008)

HENPIC Organizing Committee (按姓氏拼音排序):

陈金辉 (Fudan) 黄梅 (UCAS) 黄旭光 (Fudan) 黄焕中 (Fudan) 梁作堂 (SDU) 刘玉鑫 (PKU) 罗晓峰 (CCNU)
马余刚 (SINAP) 宋慧超 (PKU) 唐泽波 (USTC) 王群 (USTC) 王新年 (CCNU) 邢宏喜 (SCNU) 徐庆华 (SDU)
叶早晨 (SCNU) 尹伊 (CUHK-SZ) 赵宇翔 (IMP) 庄鹏飞 (THU) 朱相雷 (THU)

