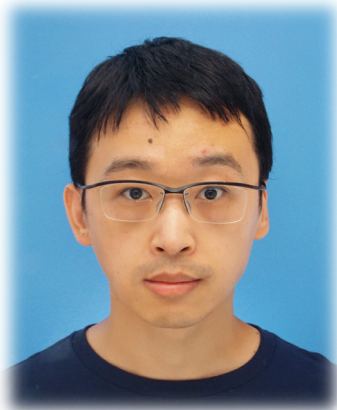


The Quest for Muon-to-Electron Conversion: Searching for New Physics with Charged Lepton Flavor Violation



Speaker: Dr. Chen Wu (吴琛, Osaka U.)
Time: 10am Wed 19th Jul
Location: 228 Multidisciplinary Building
Indico: indico.ihep.ac.cn/event/20172
Zoom ID: 9124 9031 984
Password: 123456

Abstract:

The concept of lepton flavor, a fundamental aspect of the Standard Model (SM) in elementary particle physics, remains unexplained in terms of its underlying symmetries. While the SM predicts highly suppressed transitions between generations of charged leptons, referred to as charged lepton flavor violation (CLFV), numerous theories beyond the SM propose detectable rates of CLFV processes that ongoing or proposed experiments can probe. Among all the CLFV processes, the muon-to-electron conversion process has gained significant attention due to its unparalleled potential in probing the realm of new physics, for its exceptional capability in exploring the realm of new physics. This presentation offers a comprehensive review of the historical developments, current progress, and future prospects in the search for muon-to-electron conversion.

About the speaker:

Dr Chen Wu received his PhD from Nanjing University on the topic of “Research of the beam and detector for the COMET Phase-I experiment”. He joined the COMET experiment in 2012 and became muon beam line subgroup leader since 2015. His research activities include the optimizations of the muon beamline, the background and sensitivity study, and the performance evaluation of the COMET drift chamber. He is now a specially appointed assistant professor at RCNP, Osaka University. His current focus is the reconstruction in the COMET drift chamber.