東北大学　宇宙創成物理学国際共同大学院プログラム

GPPU Seminar

# 1) “Ongoing Study of Λ(1405) Electroproduction at JLab CLAS12”

**by Tatsuhiro Ishige (Tohoku University)**

**Time and Date: 13:00-15:30, Feb 17, 2025**

**Place: Room 745, Science Complex B (H-03) (hybrid)**

**Registration:** "https://us02web.zoom.us/meeting/register/3eUGLMGbTh-nexYxiw4dlg"

The CLAS collaboration conducts hadron mass spectroscopy via photo- and electroproduction at Jefferson Lab (JLab) in the United States. To date, we have measured the differential cross section of the Λ(1405) resonance by detecting its Σπ decay final states with high statistics, providing support for its hadron-molecular state. However, the available data on its Q2 dependence remains insufficient and we haven’t revealed its structural dynamics. To address it, I am analyzing the data from CLAS12 Run Group K (RG-K) experiments, conducted in 2018 and 2024, which focus on the electroproduction of hyperons with high statistics. In this seminar, I will provide an overview of hadron physics and the current understanding of Λ(1405), followed by an introduction to the CLAS12 RG-K experiment and a report on the current status of my analysis.

Contact： Kazuhiro Watanabe (kazuhiro.watanabe.b8 [at] tohoku.ac.jp)