

Report for Onsite Training in Earth-Space Frontier Science

Name	CHENGPENG YU
Affiliation	Department of Physics, Graduate School of Science
Hosting Institution	High Energy Accelerator Research Organization (KEK)
Period	01/ 08/ 2023 ~ 01 / 21/ 2023 *mm/dd /yyyy

During my 2-week stay at High Energy Accelerator Research Organization (KEK), under the kind guidance of Prof. Yoshimasa Hidaka, I conduct the following activities:

1. I listened to the reports and journal clubs given by the people at KEK and discussed with them. The date, speaker, and title of the reports are:

- 2023.1.13, Protick Mohanta, Construction of Heavy Hadron states on lattice with NRQCD bottom and HISQ lighter quarks.
- 2023.1.16, Hiromasa Takaura, Method to obtain parton distribution functions from the lattice
- 2023.1.16, Daiki Suenaga, Heavy-quark spin polarization induced by the Kondo effect in a magnetic field
- 2023.1.16, Glennys Farrar, The muon g-2 and lattice QCD hadronic vacuum polarization may point to new, long-lived neutral hadrons
- 2023.1.17, Valerie Domcke, Searching for high-frequency GWs with axion haloscopes
- 2023.1.20, Shotaro Funai, Strings in infinite dimensions?

2. On 2023.1.10, I gave a talk about one of my current research projects (unpublished yet).

3. I discuss with Prof. Hidaka for several times, during which:

- I learned a special skill to deal with one special function integral, which is very useful in one of my current studies.
- I told Prof. Hidaka a new research idea I have come up with, which is partly based on one of his publications. He told me a lot about this work, and we agreed to conduct cooperative research on this topic.

Attachment: My photos at KEK

