

## **Kaonic atom X-rays at J-PARC**

Speaker: **Tadashi Hashimoto**, Japan Atomic Energy Agency, JAEA

Friday, September 17, 2021, 11:40 - 12:00

X-ray spectroscopy of kaonic atom is a powerful tool to investigate the  $K\bar{K}N$  interaction and  $K\bar{K}$  nucleus interaction at zero kinetic energy. Using a high-intensity kaon beam at J-PARC, we are conducting two kaonic atom experiments. One is to determine the strong-interaction-induced  $2p$  shift in kaonic helium-3 and -4 with a precision to sub eV by a novel cryogenic X-ray detector, to distinguish potential models. The other one aims at the first observation of  $2p$  to  $1s$  transition X-rays from kaonic deuterium, to resolve the isospin dependent interaction together with kaonic hydrogen data. In this contribution, we will present the results of the kaonic helium experiment performed in June, 2018, and the status of the kaonic deuterium experiment.