



Contribution ID: 139

Type: **Invited/Solicited talk in mini-symposium**

The present and future of primordial black holes as dark matter

Tuesday, 12 December 2023 16:30 (20 minutes)

The primordial black hole (PBH) is a unique candidate for dark matter (DM). It does not require a new particle for DM and the inflationary perturbation explains both the initial condition and the growth promoter of the cosmological perturbation. So far, astrophysical or cosmological observations have constrained the PBH abundance tightly and the window for PBH-DM remains only at the asteroid mass range. As such a small BH is hard to observe directly, the stochastic gravitational wave (GW) background induced by the large density perturbation is expected to be indirect evidence. To make it robust evidence, the relation among the inflation model, the PBH abundance, and the GW spectrum should be clarified accurately. I would like to discuss what we can do about this problem in the next decade.

Primary author: TADA, Yuichiro (Nagoya University)

Presenter: TADA, Yuichiro (Nagoya University)

Session Classification: Dark Matter