Contribution ID: **59** Type: **Invited**

JWST View of the Earliest Supermassive Black Holes

Tuesday 8 October 2024 17:50 (30 minutes)

The formation and growth of the earliest supermassive black holes (SMBHs) and the assembly of early massive galaxies are among the most important open questions. As the most luminous non-transit objects, quasars at z > 6 are indispensable probes of the early Universe. The recent high-z quasar surveys have pushed quasar frontier to z>7.5. The launch of JWST opens up a new era in the study of early quasars, with the unparalleled wavelength coverage, high sensitivity, and high spatial resolution. I will summarize recent studies of high-redshift (z>˜6) quasars using JWST with regard to these early SMBHs and their host galaxies. These new results include measurements of BH masses, direct image of UV/optical emission in the quasar host galaxy, evidence of strong AGN feedback, detailed investigation of the quasar-galaxy merging system, and constraints on the quasar environment. All of these can provide us with a more comprehensive picture, helping to connect active SMBHs, their host galaxies, and large-scale environments as a whole in the early Universe. In addition, JWST offers the first chance to systematically search for obscured and faint AGN at high redshift, complementary to the findings from luminous quasars.

Author: YANG, Jinyi

Presenter: YANG, Jinyi

Session Classification: Black holes, QSOs and galaxies at cosmic down