

Unveiling the Cosmic Cradles: Morphological Analysis of a Sample of $z \sim 6$ Quasar Host Galaxies

Thursday 21 November 2024 10:40 (20 minutes)

The James Webb Space Telescope (JWST) has revolutionized our understanding of the early universe, particularly in the study of quasars (QSOs) at redshifts beyond 6. In this talk, I will present groundbreaking results from our Cycle 1 JWST program, which targeted 12 QSOs from the Hyper Suprime-Cam Subaru Strategic Program (HSC-SSP). Our analysis has successfully detected host galaxies for the majority of these targets. I will discuss the size-mass relationship of these distant quasar host galaxies and its intriguing alignment with the star-forming galaxy relation from the COSMOS-Webb sample. Additionally, I will present a comparative analysis of the host galaxy morphologies we've detected, offering unprecedented insights into the nature of these early cosmic structures.

Presenter: DING, Xuheng (Wuhan University)