

Subject : Galaxy Formation Over the Cosmic History

Title : Exploring the Cosmic History with Large Telescopes

--- Knowns and Unknowns about the Early Galaxy Formation ---

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Outline :

There are significant progresses in deep observations for the early universe with large telescopes including optical Subaru telescope and ALMA radio interferometer. Observational studies have reached the distant Universe up to redshift ~ 11 , probing the 13.8-Gyr long cosmic history only except the first few hundred million years. In this lecture, I will overview the picture of cosmic structure formation, specifically galaxy formation, so far understood by observations, showing basic observational measurements such as cosmic star-formation rate density, stellar mass density, and metallicity. I will also present key open questions about cosmic history, and introduce the latest observational results and on-going/future observational programs.

Learning objectives :

Learning and thinking about the following three topics

- Observations with large telescopes
- Cosmic history so far revealed by observations
- Latest observational studies and open questions for future researches

Textbooks and references : N/A