TDLI Astronomy Interview Seminar

Mengtao Tang (唐梦涛)

University of Arizona

Title: **Spectroscopy of Early Galaxies and Implications for Cosmic Reionization**

Time: 9:00-10:00, 7 February (Friday), Shanghai time

Host: Dong Lai

Location: Online

Join Tencent Meeting： https://meeting.tencent.com/dm/wpb5Kr5Y8mSr

Meeting ID: 387335104 (no password）

Abstract：

The epoch of reionization is the last major phase-transition period of the Universe and provides important clues to understanding the history of cosmic structure formation. Key questions in reionization study include: 1) When did reionization start and end? 2) How did reionization happen? 3) What sources are primarily responsible for reionization? 4) What are the physical properties of galaxies in the reionization era? I will review my research on interpreting the nature of early galaxies and probing cosmic reionization. Using the spectroscopy of early galaxies obtained from JWST and large ground-based telescopes, I will discuss the production and escape of hydrogen ionizing photons in reionization-era galaxies, the physical properties of early galaxies, and constraints on the timeline and topology of reionization. Finally, I will present my future research plan on studying high-redshift galaxies and cosmic reionization with JWST and next generation facilities.

Biography:

Mengtao Tang (唐梦涛) is currently a JWST Arizona/Steward Postdoc in Early galaxies and Reionization (JASPER) scholar at Steward Observatory, the University of Arizona. Mengtao's work focuses on utilizing JWST and large ground-based telescopes to investigate the physical properties of galaxies in the reionization era and their analogs at lower redshifts, as well as the constraints these galaxies impose on the process of cosmic reionization. Before joined Steward as a JASPER scholar, Mengtao was a postdoctoral researcher at University College London from 2020 to 2022. In 2020, Mengtao received his Ph.D. in Astronomy & Astrophysics from the University of Arizona.

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