Astronomy Colloquium

Prof. Zheng Zheng

(郑政)

University of Utah

Lyman-alpha Intensity Mapping from the SDSS Spectra: Measurements and Implications

Time: 15:00-15:45, 18 June (Tuesday), Shanghai time

Venue: N601（TDLI）

Host: Pengjie Zhang

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Abstract:

Hydrogen Lyman-alpha emission provides a key probe of the high-redshift universe. In this talk, I will first briefly introduce several processes and phenomena related to Lyman-alpha emission associated with star-forming galaxies (e.g., Lyman-alpha radiative transfer, extended Lyman-alpha emission, and clustering of Lyman-alpha emitting galaxies). Then I will talk about large-scale Lyman-alpha emission distribution at z~2.5 from intensity mapping through cross-correlating SDSS BOSS/eBOSS quasar positions and residual spectra of luminous red galaxies. I will review the history and effort of the Lyman-alpha intensity mapping, present the latest measurements, and discuss the connections to star-forming galaxies.

Biography:

Zheng Zheng obtained his BS from Peking University, his MS from Beijing Astronomical Observatory (now NAOC), and his PhD from the Ohio State University. He was a postdoctoral researcher at the Institute for Advanced Study, Princeton (as a Hubble Fellow and John Bahcall Fellow / long-term member) and at the Yale Center for Astronomy and Astrophysics (as a YCAA Prize Fellow). Currently he is Professor and Associate Chair in the Department of Physics and Astronomy at the University of Utah. Zheng Zheng has broad research interests in astrophysics, with a focus on large-scale structure and galaxy clustering, galaxy formation and evolution, and cosmology.