Yuexing Li

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Education:

Columbia University: Ph. D., Astronomy, 2005 (Dissertation advisor: M.-M. Mac Low)
Peking University, Beijing: M. A., Astrophysics, 1998
University of Science & Technology Beijing: B. A., Physics, 1994

Professional History:

2009 – Present, Assistant Professor, Dept. of Astronomy & Astrophysics, Penn State University
2005 –2009, Postdoctoral Research Fellow, Harvard-Smithsonian Center for Astrophysics
1998 – 2005, Research Assistant, Department of Astronomy, Columbia University, and AMNH
1998 – 2000, Teaching Assistant, Department of Astronomy, Columbia University

Fellowships and Grants:

1. November 2009, awarded NSF grant AST-0965694 (PI Yuexing Li, transferred from AST-0807312) to study galaxies and quasars in the epoch of reionization.
2. December 2008, became co-I of the Spitzer Warm Mission proposal "Spitzer Extended Deep Survey" granted by NASA (ES 60022, PI Giovanni Fazio) to study galaxy assembly at different redshifts.
3. July 2008, awarded NSF grant (AST-0807312, PI Yuexing Li, co-I Giovanni Fazio) for a collaborative proposal with Dr. Tom Abel to study the epoch of reinization.
4. February 2007, awarded Keck Postdoc Fellowship at Harvard-Smithsonian CfA.
5. February 2005, awarded ITC Postdoc Fellowship at Harvard-Smithsonian CfA.
6. January 2005, awarded a special grant with 360,000 SU computing time (PI M.-M. Mac Low) by Pittsburgh Supercomputing Center to simulate the collision between MilkyWay and Andromeda.
7. February 2004, awarded 150,000 SU computing time by NRAC on NCSA to simulate the formation of star cluster in turbulent medium with M.-M. Mac Low (PI)
8. May 2003, thesis support started from NSF grant (AST-0307854) that I wrote initial draft of (PI M.-M. Mac Low and co-I Z. Haiman)
9. March 2003, awarded Travel Grant by American Astronomical Society, which supported my trip to the IAU-XXV conference in Sydney, July 2003
10. April 2002, awarded Annette Kade Fellowship by AMNH, which supported my two visits of three months to Astron. Inst. Potsdam, Germany

Research Interest:

- **Cosmology:** formation, evolution, and clustering of large-scale structure, galaxies and quasars
- **Radiative transfer:** multi-wavelength properties of galaxies and quasars, and reionization history

I study the formation, evolution, and multi-band properties (from X-ray to radio) of galaxies and quasars from cosmic dawn to present day, by combining multi-scale cosmological simulations with multi-wavelength radiative transfer calculations, which I have developed over the past few years. My research bridges simulations and observations, and uses the comparison with observations to improve theoretical models, and to understand the underlying physical processes, and the nature of dark matter and dark energy.

My recent work on galaxies and quasars in the early Universe show that the exciting and puzzling observations of z~6 luminous quasars are consistent with standard LCDM cosmology: they form self-regulatedly through hierarchical mergers in highly overdense regions, and are highly clustered.