

## Ying Zu

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## Education

### The Ohio State University, Columbus, Ohio

*Ph.D. in Astrophysics*

Advisor: David H. Weinberg

2008 – 2013

### Shanghai Astronomical Observatory, China

*Graduate Research Associate*

Advisor: Yipeng Jing

2006 – 2008

### Nanjing University with highest honours, China

*B.S. in Astronomy*

2001 – 2005

## Research Interests

Theoretical Astrophysics and Cosmology with close ties to observations:

- Galaxy-Dark Matter Connection, Galaxy and Cluster Formation, Weak Lensing
- Theories of Cosmic Acceleration, Cosmology, Large-Scale Structure
- Quasar Variability, Blackhole Mass Measurement (Reverberation Mapping)

## Awards and Honors

Distinguished University Fellowship (OSU)

2008/2009, 2012/2013

National Science Fellowship of China (Ministry of Education, China)

2003, 2004, 2005

Scholarship for Excellence in Undergraduate Study (NJU)

2004, 2005

## Positions

Postdoctoral Fellow (McWilliams Cosmology Center, Carnegie Mellon Univ.)

Sep, 2013 –

## Conference Talks and Department Seminars

- Unbiased Cosmology Workshop, Institute for Advanced Study *Sep, 2015*
- Galaxy Footsteps Workshop, Univ. of Birmingham *Sep, 2015*
- Center for Astronomy and Astrophysics Colloquium, Shanghai Jiaotong Univ. *Apr, 2015*
- Galaxy Bias Workshop, OSU *Nov, 2014*
- DESI Meeting, Lawrence Berkeley National Lab *May, 2014*
- SDSS Collaboration Meeting, Carnegie Mellon University *Dec, 2012*
- Small Scale Clustering Meeting, Stanford *Oct, 2012*
- Berkeley Cosmology Group Seminar, UC Berkeley *Oct, 2012*
- Chinese Academy of Sciences Colloquium, Shanghai Observatory *Aug, 2010*

## Professional Activities and Outreach

- Reviewer for MNRAS, ApJ, A&A, JOAA, Austrian Science Fund (FWF)
- Organizer of CMU Astro-Coffee Discussions *Oct, 2013 –*
- Media Coordinator of McWilliams Center (Youtube & Twitter Channels) *Oct, 2013 –*
- Co-organizer of LSST workshop on Machine Learning and Statistics, Pittsburgh, PA *Jun, 2015*

- Co-I for *HST* Cycle21 GO-13330 “Mapping the AGN Broad Line Region by Reverberation” 2013
- Wrote and distributed software to simulate and analyze quasar light curves (JAVELIN)

## References

*Prof.* David H. Weinberg



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*Prof.* Rachel Mandelbaum

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- **Zu, Y.**, and Mandelbaum, R. (2015). Mapping stellar content to dark matter halos. II. Halo mass is the main driver of galaxy quenching. arXiv e-print 1509.06758. 
- Mandelbaum, R., Wang, W., **Zu, Y.**, White, S., Henriques, B., and More, S. (2015). Strong bimodality in the host halo mass of central galaxies from galaxy-galaxy lensing. arXiv e-print 1509.06762.
- Edelson, R., Gelbord, J. M., Horne, K., McHardy, I. M., Peterson, B. M., Arévalo, P., Breeveld, A. A., De Rosa, G., Evans, P. A., Goad, M. R., Kriss, G. A., Brandt, W. N., Gehrels, N., Grupe, D., Kennea, J. A., Kochanek, C. S., Nousek, J. A., Papadakis, I., Siegel, M., Starkey, D., Uttley, P., Vaughan, S., Young, S., Barth, A. J., Bentz, M. C., Brewer, B. J., Crenshaw, D. M., Dalla Bontà, E., De Lorenzo-Cáceres, A., Denney, K. D., Dietrich, M., Ely, J., Fausnaugh, M. M., Grier, C. J., Hall, P. B., Kaastra, J., Kelly, B. C., Korista, K. T., Lira, P., Mathur, S., Netzer, H., Pancoast, A., Pei, L., Pogge, R. W., Schimoia, J. S., Treu, T., Vestergaard, M., Villforth, C., Yan, H., and **Zu, Y.** (2015). Space Telescope and Optical Reverberation Mapping Project. II. Swift and HST Reverberation Mapping of the Accretion Disk of NGC 5548. *The Astrophysical Journal*, 806:129.
- De Rosa, G., Peterson, B. M., Ely, J., Kriss, G. A., Crenshaw, D. M., Horne, K., Korista, K. T., Netzer, H., Pogge, R. W., Arévalo, P., Barth, A. J., Bentz, M. C., Brandt, W. N., Breeveld, A. A., Brewer, B. J., Dalla Bontà, E., De Lorenzo-Cáceres, A., Denney, K. D., Dietrich, M., Edelson, R., Evans, P. A., Fausnaugh, M. M., Gehrels, N., Gelbord, J. M., Goad, M. R., Grier, C. J., Grupe, D., Hall, P. B., Kaastra, J., Kelly, B. C., Kennea, J. A., Kochanek, C. S., Lira, P., Mathur, S., McHardy, I. M., Nousek, J. A., Pancoast, A., Papadakis, I., Pei, L., Schimoia, J. S., Siegel, M., Starkey, D., Treu, T., Uttley, P., Vaughan, S., Vestergaard, M., Villforth, C., Yan, H., Young, S., and **Zu, Y.** (2015). Space Telescope and Optical Reverberation Mapping Project. I. Ultraviolet Observations of the Seyfert 1 Galaxy NGC 5548 with the Cosmic Origins Spectrograph on Hubble Space Telescope. *The Astrophysical Journal*, 806:128.
- **Zu, Y.**, and Mandelbaum, R. (2015). Mapping stellar content to dark matter halos using galaxy clustering and galaxy-galaxy lensing in the SDSS DR7. *Monthly Notices of the Royal Astronomical Society*, 454 (2): 1161-1191. 
- Shen, Y., Brandt, W. N., Dawson, K. S., Hall, P. B., McGreer, I. D., Anderson, S. F., Chen, Y., Denney, K. D., Eftekharzadeh, S., Fan, X., Gao, Y., Green, P. J., Greene, J. E., Ho, L. C., Horne, K., Jiang, L., Kelly, B. C., Kinemuchi, K., Kochanek, C. S., Pâris, I., Peters, C. M., Peterson, B. M., Petitjean, P., Ponder, K., Richards, G. T., Schneider, D. P., Seth, A., Smith, R. N., Strauss, M. A., Tao, C., Trump, J. R., Wood-Vasey, W. M., **Zu, Y.**, Eisenstein, D. J., Pan, K., Bizyaev, D., Malanushenko, V., Malanushenko, E., and Oravetz, D. (2015). The sloan digital sky survey reverberation mapping project: Technical overview. *The Astrophysical Journal Supplement Series*, 216:4.
- **Zu, Y.**, Weinberg, D. H., Jennings, E., Li, B., and Wyman, M. (2014). Galaxy infall kinematics as a test of modified gravity. *Monthly Notices of the Royal Astronomical Society*, 445:1885–1897.
- Peterson, B. M., Grier, C. J., Horne, K., Pogge, R. W., Bentz, M. C., De Rosa, G., Denney, K. D., Martini, P., Sergeev, S. G., Kaspi, S., Minezaki, T., **Zu, Y.**, Kochanek, C. S., Siverd, R. J., Shappee, B., Araya Salvo, C., Beatty, T. G., Bird, J. C., Bord, D. J., Borman, G. A., Che, X., Chen, C., Cohen, S. A., Dietrich, M., Doroshenko, V. T., Drake, T., Efimov, Y. S., Free, N., Ginsburg, I., Henderson,

C. B., King, A. L., Koshida, S., Mogren, K., Molina, M., Mosquera, A. M., Motohara, K., Nazarov, S. V., Okhmat, D. N., Pejcha, O., Rafter, S., Shields, J. C., Skowron, D. M., Skowron, J., Valluri, M., van Sadlers, J. L., and Yoshii, Y. (2014). Reverberation mapping of the seyfert 1 galaxy NGC 7469. *The Astrophysical Journal*, 795:149.

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• **Zu, Y.**, Weinberg, D. H., Rozo, E., Sheldon, E. S., Tinker, J. L., and Becker, M. R. (2014). Cosmological constraints from the large scale weak lensing of SDSS MaxBCG clusters. *Monthly Notices of the Royal Astronomical Society*, 439:1628–1647. 


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- **Zu, Y.**, Zheng, Z., Zhu, G., and Jing, Y. P. (2008). Environmental effects on real-space and redshift-space galaxy clustering. *The Astrophysical Journal*, 686:41–52.