

# Qu, Zhijie

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## Employment

Postdoctoral Associate, University of Chicago, 2021-.  
*Host: Hsiao-Wen Chen.*

## Education

PhD, Astrophysics, University of Michigan, 2017-2021.  
*Advisor: Joel N. Bregman.*

MS, Astrophysics, University of Michigan, 2015-2017.

BS, Astronomy (Graduate with Honors), Peking University, 2011-2015  
*Advisor: Renxin Xu and M.B.N. (Thijs) Kouwenhoven.*

## Research Experiences

Sept. 2015 - *present*  
Graduate research assistant, University of Michigan, Ann Arbor.

Sept. 2014 - Jan. 2015  
Visiting scholar, University of California, Santa Cruz.

Aug. 2013  
Visiting research assistant, Institute of High Energy Physics, Chinese Academy of Sciences.

## Scholarships & Awards

2020 - Rackham Dissertation Fellowship, The University of Michigan.

2016-2019 - Rackham Travel Awards, The University of Michigan.

2015 - Weiming Physics Scholarship, School of Physics, Peking University.

2015 - Xingcheng Undergrad Research Forum, First Prize, School of Physics, Peking University.

2014 - Science Base Scholarship, Second Prize, Peking University.

2014 - NAOC Scholarship, National Astronomical Observatories, Chinese Academy of Sciences.

2013 - Lin Bridge Scholarship, Department of Astronomy, Peking University.

2013 - Zhang Wenxin Scholarship, School of Physics, Peking University.

## Teaching Experience

Graduate Student Instructor - Astro 102: Stars, Galaxies, and the Universe

Graduate Student Instructor - Astro 106: Aliens

## Research Advising

4. Co-adviser: Cameron Pratt (Grad UMich), 2020-present, *"The Hot Gas Halo Surrounding Poor Galaxy Groups in SZ"*.
3. Co-adviser: Hang Yang (visiting Grad at UMich from PMO), 2019-present, *"The Escaping Ionizing Radiation From Galaxies"*.
2. Co-adviser: Xiaodi Yu (Grad at XMU), 2019-present, *"Probing the He II re-Ionization ERA via Absorbing C IV Historical Yield (HIERACHY)"*.
1. Adviser: Ryan Lindley (Undergrad at UMich), 2019-present, *"The C IV Absorption Line Survey of the Milky Way"*.

## Proposals

6. 2021 - NASA Astrophysics Data Analysis Program, Co-I (PI: Bregman), \$692.8k (\$80.0k goes to U. Chicago)  
"Resolving the Hot Halos to the Virial Radius and Beyond in the Local Universe"
5. 2019 - *Hubble Space Telescope*, Cycle 27, 15806, Archival Research (PI), \$97.6k  
"The Rotation, Accretion, and Mass of the Milky Way Warm Gas Disk and CGM"
4. 2018 - NASA Astrophysics Data Analysis Program, Co-I (PI: Bregman), 526.4k  
"Hot Halos of Galaxies and Galaxy Groups-Reservoirs of Baryons and Metals"
3. 2018 - Magellan Telescope, Cycle 2018A, 2 nights (PI)  
"Host Galaxies of the Mg X/Ne VIII Absorption Systems: LBQS 1435-0134"
2. 2018 - Magellan Telescope, Cycle 2017B, 3 nights (PI)  
"Host Galaxies of the Mg X/Ne VIII Absorption Systems: PHL 1377"
1. 2017 - *Chandra* X-ray Observatory, Cycle 18, 50 ks (Co-I)  
"Gaseous Galaxy Halos in the Transition Between Hot and Cold Mode Accretion."

## Conferences & Talks

10. Jan. 19 2021 - OSU CCAPP Seminar, "Warm-Hot Circumgalactic Medium and its Co-Evolution with Galaxy Disk", Columbus, Ohio.
9. Nov. 19 2020 - Caltech CGM Seminar, "Warm-Hot Circumgalactic Medium and its Co-Evolution with Galaxy Disk", Pasadena, California.
8. Oct. 7th 2019 - WIM Workshop, Contributing Talk, "The Warm Gas in the MW – Rotation, Accretion, and Mass", Green Bank, West Virginia.

7. Aug. 28th 2018 - XXX IAU General Assembly, "The Mass and Column Densities of Galactic Gaseous Halos", Vienna, Austria.
6. Jul. 31st 2018 - CGM Workshop 2018, Contributing Talk, "The Mass and Column Densities of Galactic Gaseous Halos", Northwestern University, Evanston, Illinois.
5. Mar. 6th 2018 - Dinner Talk, "Understanding the Galaxy Evolution with Gaseous Halos", Peking University, Beijing, China.
4. Mar. 1st 2018 - Colloquium Talk, "Understanding the Galaxy Evolution with Gaseous Halos", The Purple Mountain Observatory, Nanjing, China.
3. Jan. 2018 - 231st AAS Meeting, "The Mass and Absorption Columns of Galactic Gaseous Halos", Washington, DC.
2. Aug. 2017 - 16th HEAD Meeting, "Detection of Possible Intervening Mg X Associated with A Hot Gaseous Galaxy Halo", Sun Valley, Idaho.
1. Jul. 2014 - Fast Pulsar Symposium 3, "Analysis of Short Bursts in AXPs/SGRs", Shanghai, China.

## Publications (First-Authored and Student-Authored \*)

12. Zhijie Qu and Joel N. Bregman. Absorption Line Search Through Three Local Group Dwarf Galaxy Halos. *submitted*, October 2021
11. Zhijie Qu, Ryan Lindley, and Joel N. Bregman. The Warm Gas in the MW: the Kinematical Model of C IV and its Connection with Si IV. *ApJ accepted*, page 2110.14715, October 2021
10. \*C. T. Pratt, Z. Qu, and J. N. Bregman. The Resolved Sunyaev–Zel’dovich Profiles of Nearby Galaxy Groups. *arXiv e-prints*, page arXiv:2105.01123, May 2021
9. \*Xiaodi Yu, Jiang-Tao Li, Zhijie Qu, Ian U. Roederer, Joel N. Bregman, Xiaohui Fan, Taotao Fang, Sean D. Johnson, Feige Wang, and Jinyi Yang. Probing the He II re-Ionization ERA via Absorbing C IV Historical Yield (HIERACHY) I: A strong outflow from a  $z \sim 4.7$  quasar. *MNRAS*, 505(3):4444–4455, August 2021
8. Zhijie Qu, Rui Huang, Joel N. Bregman, and Jiang-Tao Li. An X-Ray- and SZ-bright Diffuse Source toward M31: A Local Hot Bridge. *ApJ*, 907(1):14, January 2021
7. Zhijie Qu, Joel N. Bregman, Edmund Hodges-Kluck, Jiang-Tao Li, and Ryan Lindley. The Warm Gas in the MW: A Kinematical Model. *ApJ*, 894(2):142, May 2020
6. Zhijie Qu and Joel N. Bregman. The Warm Gaseous Disk and the Anisotropic Circumgalactic Medium of the Milky Way. *ApJ*, 880(2):89, Aug 2019
5. Zhijie Qu, Joel N. Bregman, and Edmund J. Hodges-Kluck. HST/COS Observations of the Warm Ionized Gaseous Halo of NGC 891. *ApJ*, 876(2):101, May 2019
4. Zhijie Qu and Joel N. Bregman. The Mass and Absorption Column Densities of Galactic Gaseous Halos. II. The High Ionization State Ions. *ApJ*, 862(1):23, July 2018
3. Zhijie Qu and Joel N. Bregman. The Mass and Absorption Columns of Galactic Gaseous Halos. *ApJ*, 856(1):5, March 2018
2. Zhijie. Qu and Joel N. Bregman. A Hot Gaseous Galaxy Halo Candidate with Mg X Absorption. *ApJ*, 832:189, December 2016
1. Zhijie Qu, Zhaosheng Li, Yupeng Chen, Shi Dai, Long Ji, Renxin Xu, and Shu Zhang. The Short Bursts in SGR 1806-20, 1E 1048-5937, and SGR 0501+4516. *PASP*, 127(949):211, March 2015

## Publications (Co-Authored)

3. Joel N. Bregman, Edmund Hodges-Kluck, Zhijie Qu, Cameron Pratt, Jiang-Tao Li, and Yansong Yun. Hot Extended Galaxy Halos Around Local  $L^*$  Galaxies From Sunyaev-Zeldovich Measurements. *arXiv*, page 2107.14281, July 2021
2. Joel N. Bregman, Michael E. Anderson, Matthew J. Miller, Edmund Hodges-Kluck, Xinyu Dai, Jiang-Tao Li, Yunyang Li, and Zhijie Qu. The Extended Distribution of Baryons around Galaxies. *ApJ*, 862(1):3, July 2018
1. Zhaosheng Li, Zhijie Qu, Li Chen, Yanjun Guo, Jinlu Qu, and Renxin Xu. An Ultra-low-mass and Small-radius Compact Object in 4U 1746-37? *ApJ*, 798(1):56, January 2015

Last updated: November 1, 2021