

Yong Zheng (郑永)

Curriculum Vitae

Miller Postdoctoral Fellow
Department of Astronomy, 313 Campbell Hall,
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RESEARCH INTERESTS

- Halo gas, aka circumgalactic medium, of star-forming galaxies
- Baryonic cycles between galaxies and halos – gas Inflows and outflows
- Synthetic observations of MW-mass galaxies with cosmological hydrodynamic simulations
- Optical/UV spectroscopy, IFUs, Radio H I 21cm emission line observations

EDUCATION

- Columbia University, New York, NY, USA
Ph.D., Astronomy 06/2018
Thesis Project: *The Cycle of Gaseous Baryons between the Disk and Halo*
Thesis Advisors: Mary E. Putman, Joshua E. G. Peek
M.A., M.Phil., Astrophysics 2014
- Peking University, Beijing, China
B.S., Astronomy 07/2012
- Fuzhou No.1 High School, Fujian, China 06/2008

AWARDS

- Miller Fellow, Miller Institute Postdoctoral Scholar Award, UC Berkeley 2018-2021
- Hubble Fellow, NASA Hubble Fellowship Program Postdoctoral Fellowship (Declined) 2018
- Finalist for MIT Pappalardo Fellowship 2017
- Dean's Fellowship, Graduate School of Arts and Science, Columbia University 2012-2018
- First Prize, Linbridge Prize for Excellent Undergraduate Research Projects in Astronomy and Astrophysics, Kavli Institute for Astronomy and Astrophysics, Beijing, China 2011
- Scholarship of Astronomical Alumni Fund for Excellent Undergraduates in Astronomy, Kavli Institute for Astronomy and Astrophysics, Beijing, China 2011
- Scholarship of National Astronomical Observatories, Chinese Academy of Sciences (NAOC) Beijing, China 2010

PROPOSALS

- **PI**, Green Bank Telescope, 18B-376 11/2018
Title: Observations of HI toward the halo of a dwarf galaxy
- **CoI**, Hubble Space Telescope Cycle 26, GO 15656 (PI Peek), 75 orbits 10/2018
Title: QuaStar: The first unobscured view of the Milky Way's Circumgalactic Medium
- **CoI**, Green Bank Telescope, 18B-331 (PI Denny) 02/2018
Title: Constraining the Origin of A Very High-Velocity Cloud Toward M33 with GBT
- **PI**, Hubble Space Telescope Cycle 25, GO 15156, 32 orbits 06/2017
Title: Mapping Gas Flows from the Disk to the Circumgalactic Medium

SCIENTIFIC TALKS

24. Invited Colloquium, University of Washington, Seattle	05/2019
23. Invited Colloquium, UC Santa Cruz, California	02/2019
22. Lunch Talk, UC Berkeley, California	09/2018
21. Dissertation Talk, 231st AAS Meeting, DC	01/2018
20. Brown Bag Seminar, MIT, Boston, Massachusetts	12/2017
19. Seminar, University of Chicago, Chicago, Illinois	11/2017
18. UCSC FLASH Seminar, Santa Cruz, California	11/2017
17. Caltech Tea Talk Seminar, Los Angeles, California	11/2017
16. Invited Talk, Princeton Thunch Seminar, New Jersey	09/2017
15. Conference, In & Out. What Rules the Galaxy Baryon Cycle? Munich Institute for Astro- and Particle Physics, Munich, Germany	07/2017
14. Conference, What Matter(s) Around Galaxies: Resolving the Physics of the Circumgalactic Medium, Durham University, Durham, UK	06/2017
13. Conference, Life Cycle of Metals Throughout the Universe: Celebrating 50 Years of UV Astronomy, STScI Spring Symposium, Maryland	04/2017
12. Invited Seminar, American Museum of Natural History, New York	10/2016
11. Invited Talk, JILA Seminar, University of Colorado Boulder, Colorado	02/2016
10. UCSC IMPS Winter Retreat, Santa Cruz, California	02/2016
9. Conference, Observational Evidence of Gas Accretion onto Galaxies, NRAO, Charlottesville, Virginia	10/2015
8. Conference, Life Cycle of Gas in Galaxies: A Local Perspective, ASTRON, Dwingeloo, Netherlands	09/2015
7. Invited Talk, KIAA Seminar, Peking University, Beijing, China	09/2015
6. NAOC Seminar, Beijing, China	09/2015
5. Invited Talk, UCSC Seminar, Santa Cruz, CA	05/2015
4. Conference, The Role of Hydrogen in the Evolution of Galaxies, Kuching, Malaysia	09/2014
3. Poster, AAS Winter Meeting, Maryland	01/2013
2. Third Korean-Chinese Informal Workgroup Meeting on Astro-dynamics for Stars and Galaxies, NAOC, Beijing, China	12/2011
1. Symposium of Astronomy Undergraduate Students, Kavli Institute for Astronomy and Astrophysics & Peking University, Beijing, China	09/2011

SCHOOLS & INTERNSHIPS

• NAIC/NRAO Single-Dish & NAASC Interferometry Schools, Green Bank Telescope, Charlottesville, Virginia Project: Measuring H I Masses of Shocked Post-Starburst Galaxies Advisor: Robert F. Minchin	07/2015
• Academic Writing for International Students, American Language Program, School of Professional Studies, Columbia University	Fall 2013
• Graduate Internship, Very Large Array, NRAO, Socorro, New Mexico Project: Modeling the Non-thermal Radio Emission of a Classical Nova V1723Aql Advisors: Michael Rupen, Amy Mioduszewski	Summer 2013
• English Pronunciation for International Teaching Fellows, School of Professional Studies, Columbia University	Fall 2012 & Spring 2013
• Observational Astronomy School, Kavli Institute for Astronomy & Astrophysics, Peking University & National Astronomical Observatories, Chinese Academy of Sciences (NAOC), Beijing, China	10/2011
• Summer Internship, Shanghai Astronomical Observatory, Shanghai, China	Summer 2011

ADVISING & TEACHING

- Advisor of Columbia Undergrad Harrison Cook's Summer Research and Thesis Summer 2018-present
- Advisor of Columbia Undergrad Amalya Johnson's Undergrad Research Spring 2018
- Advisor of Columbia Undergrad Larry Li's Summer Research Summer 2015
- Lab Observing Instructor, Astronomy Labs I & II, Columbia Fall 2014-Fall 2015
- Lab Instructor, Stars, Galaxies and Cosmology (W1904), Columbia Spring 2014
- Lab Instructor, Earth, Moon, and Planets (W1903), Columbia Fall 2013
- Mentor, Astronomy Undergraduate Mentoring Program, Columbia 2015-2017
- Mentor, Astronomy Peer Mentoring Program, Columbia 2015-2017

PUBLIC OUTREACH

- Astronomy on Tap, Lecture: Astronomy Version X 09/2017
- [Reading Team Math Program](#) for Kindergarteners and 1st-grades from Low-income Families, Math Tutor for Kindergarteners Every Friday 2017-2018
- Girls Science Day at Columbia, Experiment leader, Drafted Astronomy Experiment Proposal for High-School Girl Visits 10/2016
- Columbia Public Lectures and Stargazing Nights, Volunteer and Telescope Operator 2012 - present
- Public Lecture: The Gas that Fills Invisible Space 03/2016
- GOALS for Girls Summer Intensive Program, Aviation and Space Science Summer 2016 & Mentorship Day, The Intrepid Sea, Air Space Museum, New York Summer 2017
- Mentor for 8th/9th Grade Girls to Share Career Experience as a Woman in STEM
- World Science Festival, Brooklyn Bridge Park, New York, Telescope Volunteer 06/2016

SKILLS

- Spectroscopic Analysis Techniques
- 3D Datacube Analysis Techniques
- Python, yt, IDL, Adobe Illustrator, Glue Data Visualization Tool, HTML

LANGUAGES

- 福州话, Fuzhounese (Native)
- 汉语, Mandarin (Native)
- English (Fluent)

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Publication List

FIRST-AUTHORED JOURNAL ARTICLES

4. **Y. Zheng**, J.E.G. Peek, M.E. Putman, & J.K. Werk. *Revealing the Milky Way's Hidden Circumgalactic Medium with the COS Quasar Database for Galactic Absorption Lines*. [ApJ](#), 871, 35, (2019)
3. **Y. Zheng**, J.E.G. Peek, J.K. Werk, & M.E. Putman. *HST/COS Observations of Ionized Gas Accretion at the Disk-Halo Interface of M33*. [ApJ](#), 834, 179Z, (2017)
2. **Y. Zheng**, J.K. Werk, J.E.G. Peek, & M.E. Putman. *The Discovery and Origin of A Very-High Velocity Cloud toward M33*. [ApJ](#), 840, 65Z, (2017)
1. **Y. Zheng**, M. E. Putman, J.E.G. Peek, & M.R. Joung. *The Circumgalactic Medium of the Milky Way is Half Hidden*. [ApJ](#), 807, 103Z, (2015)

CO-AUTHORED JOURNAL ARTICLES

6. J.X. Prochaska, & **Y. Zheng**, *Probing Galactic Halos with Fast Radio Bursts*, 2019, submitted to MNRAS
5. J.E.G. Peek, B.L. Babler, **Y. Zheng**, S.E. Clark, K. Douglas, E.J. Korpela, M.E. Putman, S. Stanimirovic, S. Gibson, C. Heiles. *The GALFA-HI Survey Data Release 2*. [ApJS](#), 234, 2, (2018)
4. J.H.S. Weston, J.L. Sokoloski, B.D. Metzger, **Y. Zheng**, L. Chomiuk, M.I. Krauss, J.D. Linford, T. Nelson, A.J. Mioduszewski, M.P. Rupen, T. Finzell, & K. Mukai. *Non-thermal Radio Emission from Colliding Flows in Classical Nova V1723 Aql*. [MNRAS](#), 457, 887-901, (2016)
3. J.E.G. Peek, R. Bordoloi, H. Sana, J. Roman-Duval, J. Tumlinson, & **Y. Zheng**. *The First Distance Constraint on the Renegade High-Velocity Cloud Complex WD*. [ApJ](#), 828L, 20P, (2016)
2. M.S. Xiang, X.W. Liu, H.B. Yuan, Z.Y. Huo, Y. Huang, **Y. Zheng**, H.W. Zhang, B.Q. Chen, H.H. Zhang, N.C. Sun, C. Wang, Y.H. Zhao, J.R. Shi, A.L. Luo, G.P. Li, Z.R. Bai, Y. Zhang, Y.H. Hou, H.L. Yuan, G.W. Li. *Relative Flux Calibration for the LAMOST Spectroscopic Survey of the Galactic Anticentre*. [MNRAS](#), 448, 90-103, (2015)
1. R. de Grijs, C. Li, **Y. Zheng**, L. Deng, Y. Hu, M.B.N. Kouwenhoven, & J.E. Wicker. *Gravitational Conundrum? Dynamical Mass Segregation versus Disruption of Binary Stars in Dense Stellar Systems*. [ApJ](#), 765, 4D, (2013)