Yong Zheng (郑永)

Curriculum Vitae

Miller Postdoctoral Fellow
Department of Astronomy, 313 Campbell Hall,
University of California, Berkeley, CA 94720

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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: 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? 07/2017
    Munich Institute for Astro- and Particle Physics, Munich, Germany
14. Conference, What Matter(s) Around Galaxies: Resolving the Physics of the 06/2017
    Circumgalactic Medium, Durham University, Durham, UK
13. Conference, Life Cycle of Metals Throughout the Universe: Celebrating 50 Years 04/2017
    of UV Astronomy, STScI Spring Symposium, Maryland
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, 10/2015
   NRAO, Charlottesville, Virginia
8. Conference, Life Cycle of Gas in Galaxies: A Local Perspective, 09/2015
   ASTRON, Dwingeloo, Netherlands
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 12/2011
   Stars and Galaxies, NAOC, Beijing, China
1. Symposium of Astronomy Undergraduate Students, Kavli Institute for 09/2011
   Astronomy and Astrophysics & Peking University, Beijing, China

Schools & Internships

- NAIC/NRAO Single-Dish & NAASC Interferometry Schools, 07/2015
  Green Bank Telescope, Charlottesville, Virginia
  Project: Measuring H I Masses of Shocked Post-Starburst Galaxies
  Advisor: Robert F. Minchin
- Academic Writing for International Students, American Language Program, Fall 2013
  School of Professional Studies, Columbia University
- Graduate Internship, Very Large Array, NRAO, Socorro, New Mexico Summer 2013
  Project: Modeling the Non-thermal Radio Emission of a Classical Nova V1723Aql
  Advisors: Michael Rupen, Amy Mioduszewski
- English Pronunciation for International Teaching Fellows, Fall 2012 & Spring 2013
  School of Professional Studies, Columbia University
- Observational Astronomy School, Kavli Institute for Astronomy & Astrophysics, 10/2011
  Peking University & National Astronomical Observatories, Chinese Academy
  of Sciences (NAOC), Beijing, China
- 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 Mentorship Day, The Intrepid Sea, Air Space Museum, New York — Summer 2016 & 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.* Accepted for publication on ApJ. arXiv: 1710.10703

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*, 2018, 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)