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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ORCID:0000-0003-4158-5116

Research Interests

4. Galaxy halo gas, aka circumgalactic medium
3. Baryonic cycles between galaxies and halos – gas Inflows, outflows, and recycling
2. Synthetic observations of MW-mass galaxies with cosmological hydrodynamic simulations
1. Optical/UV spectroscopy, IFUs, Radio H I 21cm emission line observations

Education

3. 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
2. Peking University, Beijing, China
   B.S., Astronomy 07/2012
1. Fuzhou No.1 High School, Fujian, China 06/2008

Awards

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

Proposals

4. **PI**, Green Bank Telescope, 18B-376 11/2018
   Title: Observations of H I toward the halo of a dwarf galaxy
3. Co I, 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
2. Co I, Green Bank Telescope, 18B-331 (PI Denny) 02/2018
   Title: Constraining the Origin of A Very High-Velocity Cloud Toward M33 with GBT
1. **PI**, Hubble Space Telescope Cycle 25, GO 15156, 32 orbits 06/2017
   Title: Mapping Gas Flows from the Disk to the Circumgalactic Medium

Talks & Conferences

25. Invited Colloquium, University of Washington, Seattle 05/2019
24. Invited Seminar Talk, Center for Astrophysics & Space Sciences, UC San Diego 04/2019
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

Advising & Teaching

9. Mentor, Society of Women in the Physical Sciences, UC Berkeley Fall 2018
8. Advisor, Undergrad H. Cook's Summer Research and Thesis, Columbia Univ. Summer 2018-present
7. Advisor, Undergrad A. Johnson's Undergrad Research, Columbia Univ. Spring 2018
6. Advisor, Undergrad L. Li's Summer Research, Columbia Univ. Summer 2015
5. Lab Observing Instructor, Astronomy Labs I & II, Columbia Univ. Fall 2014-Fall 2015
4. Lab Instructor, Stars, Galaxies and Cosmology (W1904), Univ. Spring 2014
3. Lab Instructor, Earth, Moon, and Planets (W1903), Univ. Fall 2013
2. Mentor, Astronomy Undergraduate Mentoring Program, Univ. 2015-2017
1. Mentor, Astronomy Peer Mentoring Program, Univ. 2015-2017

Schools & Internships

6. 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
5. Academic Writing for International Students, American Language Program, Fall 2013
   School of Professional Studies, Columbia University
4. 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
3. English Pronunciation for International Teaching Fellows, Fall 2012 &
   School of Professional Studies, Columbia University Spring 2013
2. Observational Astronomy School, Kavli Institute for Astronomy & Astrophysics, 10/2011
   Peking University & National Astronomical Observatories, Chinese Academy
   of Sciences (NAOC), Beijing, China
1. Summer Internship, Shanghai Astronomical Observatory, Shanghai, China Summer 2011

Public Outreach

6. Astronomy on Tap, Lecture: Astronomy Version X 09/2017
5. Reading Team Math Program for Kindergarteners and 1st-grades from 2017-2018
   Low-income Families, Math Tutor for Kindergarteners Every Friday
4. Girls Science Day at Columbia, Experiment leader, Drafted Astronomy Experiment 10/2016
   Proposal for High-School Girl Visits
3. Columbia Public Lectures and Stargazing Nights, Volunteer and Telescope Operator 2012 - 2018
   Public Lecture: The Gas that Fills Invisible Space 03/2016
2. GOALS for Girls Summer Intensive Program, Aviation and Space Science 07/2016, 07/2017
   Mentorship Day, The Intrepid Sea, Air Space Museum, New York
   Mentor for 8th/9th Grade Girls to Share Career Experience as a Woman in STEM
1. World Science Festival, Brooklyn Bridge Park, New York, Telescope Volunteer 06/2016

Languages

3. 福州话，Fuzhounese (Native)
2. 汉语，Mandarin (Native)
1. English (Fluent)

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Publication List

(My publication record can also be found through ADS)

FIRST-AUTHORED JOURNAL ARTICLES

5. **Y. Zheng**, M. E. Putman, A. Emerick, K. B. W. McQuinn, J. K. Werk, F. J. Lockman, B. D. Oppenheimer, A. J. Fox, E. N. Kirby, J. N. Burchett. *The Circumgalactic Medium of the Isolated Low-Mass Dwarf Galaxy WLM*, submitted to MNRAS, 04/2019.

4. **Y. Zheng**, J. E. G. Peek, M. E. Putman, & J. K. Werk. *Revealing the Milky Way's Hidden Circumgalactic Medium with the Cosmic Origins Spectrograph Quasar Database for Galactic Absorption Lines*, ApJ, 871, 35, (2019), & ADS Link

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), & ADS Link

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), & ADS Link

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), & ADS Link

CO-AUTHORED JOURNAL ARTICLES

7. J. K. Werk, K. H. R. Rubin, H. V. Bish, J. X. Prochaska, **Y. Zheng**, J. M. OMeara, D. Lenz, C. Hummels, A. J. Deason. *The Nature of Ionized Gas in the Milky Way Galactic Fountain*, submitted to ApJ. Arxiv: 1904.11014, 04/2019.

6. J. X. Prochaska, & **Y. Zheng**, *Probing Galactic Halos with Fast Radio Bursts.* MNRAS, 2019, in press; arXiv: 1901.11051, & ADS Link

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), & ADS Link

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), & ADS Link

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), & ADS Link

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), & ADS Link

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), & ADS Link