

Curriculum Vitae

Qizhou Zhang

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Education **Ph.D.** in Astrophysics, Harvard University, 1997
M.S. in Astrophysics, Harvard University, June 1993
B.S. in Astronomy, Nanjing University, China June 1983

Working Experiences

1998-present Astrophysicist, Harvard-Smithsonian Center for Astrophysics
2002-2013 Lecturer on Astronomy, Harvard University
Oct. 97-Mar. 98 Jansky Fellow, National Radio Astronomy Observatory
Feb. 97-Sept. 97 Post Doctoral Fellow, Harvard-Smithsonian Center for Astrophysics
1991-1996 Research Assistant, Astronomy Department, Harvard University
1986-1989 Lecturer, Astronomy Department, Nanjing University, China

Fellowships and Awards

- Jansky Fellowship, 1997.
- Advancement Award in Science and Technology, 1987, Chinese National Education Commission.

Grants

- PI, NRAO ALMA Student Observing Support program “A Statistical Study of Magnetic Fields in Massive Star Formation”, 2017
- PI, SI Scholarly Studies Awards Grant “Are Magnetic Fields Dynamically Important in Massive Star Formation?”, 2017
- Co-PI, “Probing Physical Processes of Star Formation at High Angular Resolution”, NSF China, 2017 - 2020
- PI, NRAO ALMA Student Observing Support program “Are Sub-virial Cores in IRDC G28.34 Supported by Magnetic Fields?”, 2016
- PI, NRAO ALMA Student Observing Support program “Formation of O Stars by Accretion of Ionized Gas”, 2015
- PI, SI Competitive Grants Program for Science “Magnetic Fields and Massive Star Formation”, 2015

- PI, SI Competitive Grants Program for Science “Star formation in the Central Molecular Zone of the Milky Way”, 2014
- Co-I, SI Competitive Grants Program for Science “Astronomy and Atmospheric Science from Dome A, Antarctica”, 2013
- Co-PI, “Probing Physical Processes of Star Formation at High Angular Resolution”, NSF China, 2013 - 2014
- Co-I, NASA ADAP grant proposal “Dark Filaments, Clouds and Cores: A Multiband IR Study of the Early Stages of Star Formation in Extended Structures as Seen by Herschel and Spitzer”, 2012
- Co-I, SI Scholarly Studies Grant “Characterizing the far-infrared atmosphere at Dome A, Antarctica”, 2012
- Co-I, Herschel Space Observatory observing program “HIFI Observations of Cold Cores in Infrared Dark Clouds”, 2011
- PI, SI Endowment Grant “Constraining the effect of stellar heating during early fragmentation”, 2010
- Co-I, Herschel Space Observatory observing program “High-J lines of HCN as tracer of feedback processes in high-mass star formation”, 2010
- PI, SI Endowment Grant “Initial Fragmentation for Massive Cluster Star Formation”, 2009
- Co-I, SI Endowment Grant “Exploring the Terahertz window from Dome A, Antarctica: Site testing and atmospheric modeling”, 2009
- Co-I, Herschel Space Observatory observing program “Hi-GAL: The Herschel infrared Galactic Plane Survey”, 2007
- Co-PI, International Partner Group Fund, Chinese Academy of Sciences, 2007-2011
- Co-I, Ammonia Galactic Plane Survey (AGPS), NSF China, 2007-2011
- PI: Spitzer Space Telescope Cycle 1 Observing Grant “IRAC and MIPS imaging of high mass outflows: Probing the role of accretion and clustering in massive star formation”, 2004
- Co-PI, Outstanding Young Scientist Fund (B), NSF China, 2002-2005

Committees

- CfA Professional Accomplishments Evaluation Committee 11-13, 2017-
- Science Advisory Committee, Five-hundred-meter Aperture Spherical Telescope (FAST), 2017-
- SMA Time Allocation Committee, 2006-present. Chair, 2007-2009, 2013-2016
- SMA Post Doctoral Fellowship Selection Committee, 2006-
- CfA Post Doctoral Fellowship Selection Committee, 2015
- Advisory Panel, School of Astronomy and Space Science, Nanjing University, 2014-
- SMA Large-Scale Project Review Committee, 2013-2015
- External Expert Review Panel, Chinese Academy of Sciences, 2013-2015

- CfA Library Committee, 2013-2016
- Foreign Expert Panel, Qitai 110m Radio Telescope (QTT) project, 2012-
- Science Advisory Panel, Purple Mountain Astronomical Observatory, Chinese Academy of Sciences, 2010-
- Science Advisory Committee, Chinese TMT project, 2010-2012
- CfA Prize Committee, 2007-2010
- SMA Legacy Science Committee, 2004-2005
- CfA Pre Doctoral Fellowship Oversight Committee, 2004-2006
- Science Advisory Panel, National Astronomical Observatories of China, Chinese Academy of Sciences, 2001-2009
- CfA Post Doctoral Fellowship Selection Committee, 2002-2004
- CfA Pre Doctoral Fellowship Selection Committee, 2002-2004

Societies

- Member of American Astronomical Society
- Member of International Astronomical Union

Professional Activities

- Reviewer for NASA ATP Program, NSF University Radio Observatory Program, the Chilean Research Fund Council, the Dutch National Science Foundation (NWO), NSF China grant proposals, and Very Large Array observing proposals. Referee for major astronomy journals
- SOC member, IAU General Assembly focus meeting “Magnetic fields along the star-formation sequence: bridging polarization-sensitive views”, Vienna, Austria, 2018
- SOC member, “Magnetic Fields or Turbulence: Which is the critical factor for the formation of stars and planetary disks?” Taipei, Taiwan, 2018
- SOC member, “Radio Astronomy Forum”, Guizhou, China, 2017
- SOC member, “Multi-Scale Star Formation”, Morelia, Mexico, 2017
- Co-Chair of SOC , “Terahertz Astronomy”, Suzhou, China, 2016
- SOC member, “SMA science in the Next Decade”, Taipei, Taiwan, 2016
- SOC member, “The Soul of High Mass Star Formation”, Puerto Varas, Chile, 2015
- SOC member, “SMA: First Decade of Discovery”, Cambridge, MA, 2014
- SOC member, “Frontiers in Radio Astronomy and FAST Early Sciences”, 2012
- SOC co-chair, “THz Astronomy from Dome A, Antarctica”, Nanjing, China, 2008
- SOC member, “Site Survey in Western China”, Tibet, China, 2004
- SOC co-chair, “Astronomy and Chinese Astronomy: Present and Future”, Beijing, 2001

Teaching Experience

2011-	Astronomy 191, Advanced Laboratory Astrophysics (Prof. Kovac), Department of Astronomy, Harvard University
2016-2017	Astronomy 99, Senior Thesis, Department of Astronomy, Harvard University
2013	Astronomy 98, Junior Research Tutorial, Department of Astronomy, Harvard University
2011-2012	Astronomy 99, Senior Thesis, Department of Astronomy, Harvard University
2010	Astronomy 98, Junior Research Tutorial, Department of Astronomy, Harvard University
2004-2008	Astronomy 191, Advanced Laboratory Astrophysics (Prof. Thaddeus), Department of Astronomy, Harvard University

Invited Talks and Colloquia

1. “ALMA Science”, 5th U.S. - China Workshop on Radio Astronomy Science & Technology, Charlottesville, VA, July, 2017
2. “Fragmentation and Massive Cluster Formation”, Purple Mountain Observatory, Chinese Academy of Sciences, Nanjing, China, April, 2017
3. Colloquium “SMA: More than a Decade of Discovery and its Future”, School of Astronomy and Space Science, Nanjing University, Nanjing, China, April, 2017
4. “Massive Star Formation in the ALMA Era”, conference Half a Decade of ALMA: Cosmic Dawns Transformed, Indian Wells, CA, September 2016
5. “Fragmentation and protocluster formation”, Early Phases of Star Formation (EPoS), Ringberg Castle, Germany, June 2016
6. Colloquium “Massive Star Formation”. National Radio Astronomical Observatory, Socorro, NM, May 2016
7. “Magnetic Fields and Massive Star Formation”, conference From Stars to Massive Stars, Gainesville, FL, April 2016
8. “Star Formation Science with DATE5 Telescope”, workshop on Terahertz Astronomy, Suzhou, China, March, 2016
9. Colloquium “Massive Star Formation”, School of Astronomy and Space Science, Nanjing University, March, 2016
10. “Polarized Dust Emission in Massive Star Forming Regions”, conference the Magnetic Fields in the Universe , Corsica, France, October 2015

11. “Magnetic Fields in Star Formation”, Harvard-Heidelberg Workshop on Star Formation, Cambridge, MA, May 2015
12. Colloquium “How to Make Massive Stars”, University of Toronto/Dunlap Institute of Astronomy, Toronto, Canada, November 2014
13. “Workshop Summary: identifying the big questions”, conference Mass Assembly from clouds to clusters, Sexton, Italy, July 2014
14. “Fragmentation of Molecular Clumps and Formation of Massive Cores”, AASTCS 4: Workshop on Dense Cores: Origin, Evolution, and Collapse, Monterey, CA, July 2014
15. Colloquium “Magnetic Fields and Massive Star Formation”, School of Astronomy and Space Science, Nanjing University, Nanjing, China, April 2014
16. Colloquium “Massive Star Formation” at Purple Mountain Observatory, Chinese Academy of Sciences, Nanjing, China, April 2014
17. Colloquium “How to Make Massive Stars”, Astronomy Department of Boston University, Boston, MA, March 2014
18. Colloquium “Three Problems with Massive Star Formation”, Institut de Ciències de l’Espai (CSIC-IEEC), Barcelona, Spain, June 2012
19. Colloquium “Massive Star Formation through Accretion of Ionized Gas”, Peking University and Kavli Institute for Astronomy and Astrophysics, Beijing, China, June 2012
20. Colloquium “How to Make Massive Stars”, National Radio Astronomical Observatory and University of Virginia, Charlottesville, VA, April 2012
21. “Massive Star Formation: an Observer’s View”, University of Florida, Gainesville, FL, February 2012
22. Colloquium “How to Make Big Stars”, Peking University and Kavli Institute for Astronomy and Astrophysics, Beijing, China, November 2011
23. Colloquium “Unsolved Problems in Massive Star Formation”, CRyA, UNAM, August 2011
24. Colloquium “Early Phases of Massive Star Formation”, Purple Mountain Observatory, Chinese Academy of Sciences, Nanjing, China, February 2011
25. “From Cold Cores to Hot Cores: Early Phases of Massive Star Formation”, conference Frontier on Interstellar Medium, Beijing, China, June 2010
26. “THz Astronomy from Dome A, Antarctica”, conference Astronomy and Astrophysics in Antarctica, Beijing, China, August 2010
27. Colloquium “Unsolved Problems in Star Formation”, Department of Astronomy, Nanjing University, Nanjing, China, August 2010

28. Colloquium “Outflows and Massive Star Formation”, Northwestern University, Evanston, IL, January 2010
29. Colloquium “Recent Development in Massive Star Formation”, JPL, Pasadena, CA, December 2009
30. “Massive Star Formation: From Infrared Dark Clouds to Hyper-Compact HII Regions”, Millimeter and Submillimeter Astronomy at High Angular Resolution, Taipei, Taiwan, June 2009
31. “THz Astronomy from Dome A, Antarctica” in URSI conference, Boulder, CO, January 2009
32. “Star and Planet Formation, Science Drivers for Dome A THz Telescope”, workshop THz Astronomy from Dome A, Antarctica, Nanjing China, November 2008
33. “Fragmentation in (Pre)cluster Forming Regions” in conference Transformational Science with ALMA: The Birth and Feedback of Massive Stars, Within and Beyond the Galaxy, Charlottesville, VA, September 2008
34. “Massive Star Formation: From Infancy to Adolescence” in conference From Chemistry to Life, Taipei, Taiwan, December 2007
35. “Centimeter to Sub-millimeter Views of Disks” in conference Massive Star Formation, Observations Confront Theory, Heidelberg, Germany, September 2007
36. “Science from the SMA”, in international conference ‘Legacy of Multi-wavelength Surveys’, Cambridge, MA, August 2007
37. “Massive Star Disks”, at IAU Symposium 227 Massive star birth: A crossroads of Astrophysics, Sicily, Italy, May 2005
38. “Early Results from the SMA”, in IAU Symposium 221 Star Formation at High Angular Resolution, Sydney, Australia, July 2003
39. “Massive Star Formation and the SMA”, at Workshop Magnetohydrodynamics, Radiation Diagnostics, and Chemistry of Star Formation, Taipei, Taiwan, June 2002
40. “Massive Star Formation: Many Unsolved Mysteries”, in conference Astronomy and Chinese Astronomy: Present and Future, Beijing, China, December 2001
41. Colloquium “Formation of High-Mass Stars: Coalescence or Accretion?”, ATNF, Australia, December 2001
42. Colloquium “High-mass Star Formation: Coalescence vs. Accretion”, IfA, University of Hawaii, Manoa, HI, June 2001
43. Colloquium “Dynamic Collapse and Disks in High-mass Star Forming Region”, National Radio Astronomical Observatory and University of Virginia, Charlottesville, VA, February, 1998

Research Highlights and Media Coverage

1. “A Young Protostellar Dust Disk”, 2017, CfA Science Update, <http://adsabs.harvard.edu/abs/2014ApJ...792..116Z>
2. “The Coldest, Driest, Most Remote Place on Earth Is the Best Place to Build a Radio Telescope”, 2016, Smithsonian Magazine, <http://www.smithsonianmag.com/smithsonian-institution/coldest-driest-place-earth-best-place-radio-telescope-180961495/>
3. “Antarctic Site Promises to Open a New Window on the Cosmos”, 2016, CfA press release, <https://www.cfa.harvard.edu/news/2016-28>
4. “As Stars Form, Magnetic Fields Influence Regions Big and Small”, 2015, CfA press release, <https://www.cfa.harvard.edu/news/2015-09>
5. “Study Supports Role of Magnetic Fields in Star Formation”, 2015, The Harvard Crimson, <http://www.thecrimson.com/article/2015/4/15/magnetic-fields-star-formation>
6. “Scientists track growth of an embryo of a star”, 2015, provided expert commentary to CBS News report, <https://www.cbsnews.com/news/a-star-is-forming-and-scientists-are-there-to-see-it/>
7. “SMA Unveils How Small Cosmic Seeds Grow Into Big Stars, 2014”: CfA press release, <https://www.cfa.harvard.edu/news/2014-04>
8. “SMA Reveals Giant Star Cluster in the Making, 2013”: CfA press release, <https://www.cfa.harvard.edu/news/2013-31>
9. AAS press conference during the 2013 AAS Winter meeting announcing the findings in the paper by Kauffmann, Pillai and Zhang 2013
10. “A Cloudy Mystery”, 2013: Caltech press release, <http://www.caltech.edu/content/cloudy-mystery>
11. “Masers in Stellar Nurseries”, 2012: CfA Science Update, <http://www.cfa.harvard.edu/news/2012/su201244.html>
12. “Hot Cores in Dark Clouds”, 2011: CfA Science Update, <http://www.cfa.harvard.edu/news/2011/su201148.html>
13. “Astronomers Witness a Star Being Born”, 2010: Yale University press release, <http://news.yale.edu/2010/06/17/astronomers-witness-star-being-born>
14. “Magnetic Fields Dominate Young Stars of all Sizes?” 2009: <http://www.universetoday.com/32205/magnetic-fields-dominate-young-stars-of-all-sizes>
15. “Jets from a Possible Young Brown Dwarf”, 2009: CfA Science Update, <http://www.cfa.harvard.edu/news/2009/su200932.html>
16. “Turbulence May Promote the Birth of Massive Stars”, 2009: CfA press release, <http://www.cfa.harvard.edu/news/2009/pr200907.html>

17. “Stellar Giants Thrive on Chaos”, 2009:
<http://news.sciencemag.org/sciencenow/2009/02/25-03.html>
18. “Spiraling Jets in New Stars”, 2008: CfA Science Update,
<http://www.cfa.harvard.edu/news/2008/su200802.html>
19. “Ammonia in Dark Clouds”, 2008: CfA Science Update,
<http://www.cfa.harvard.edu/news/2008/su200806.html>
20. “Jets are a real drag”, 2007”, CfA press release,
<http://www.cfa.harvard.edu/news/2007/pr200734.html>
21. “How to Build a Big Star, 2005”, CfA press release,
<http://www.cfa.harvard.edu/news/2005/pr200527.html>
22. Research on long-term solar brightness changes (Zhang et al. 1994) was cited and presented in details in United Nations Intergovernmental Panel on Climate Change (IPCC) Second Assessment Report, 1996, pp 116-117, and the Atmospheric Sciences Entering the Twenty-First Century: National Academy of Sciences Report, 1998, P 271

Graduate Student Research

1. Daniel Callanan, PhD student (SAO predoctoral program), 2017-
2. Fang Xiong, PhD student (SAO predoctoral program), 2017-
3. Shanghuo Li, PhD student (SAO predoctoral program), 2017-
4. Patrick King, PhD student (SAO predoctoral program), 2016-2017
5. Nannan Yue, PhD student (SAO predoctoral program), 2015-2017
6. Daniel Walker, PhD student (SAO predoctoral program), 2015-2016
7. Tao-Chung Ching, PhD student (SAO predoctoral program), 2013-2015
8. Xing Lu, PhD student (SAO predoctoral program), 2012-2015
9. Victor Rivilla, visiting PhD Student, 2011
10. Hau-Yu Liu, PhD student (SAO predoctoral program, co-adviser: Paul Ho), 2009-2012
11. Laura Gomez, visiting PhD Student, 2009
12. Ke Wang, PhD student (SAO predoctoral program), 2008-2012
13. Javier Rodon, visiting PhD Student, 2008
14. Felipe Alves, visiting PhD Student, 2008

15. Roberto Galvan-Madrid, PhD student (SAO predoctoral program, co-adviser: Paul Ho), 2007-2011
16. Cassandra Fallscheer, visiting PhD student, 2007
17. Gemma Busquet, visiting PhD student, 2007
18. Keping Qiu, PhD student (SAO predoctoral program), 2006-2009
19. Yang Wang, PhD student (SAO predoctoral program), 2003-2006
20. Peter Sollins, PhD student (Harvard, co-adviser: Paul Ho), 2002-2006
21. Junzhi Wang, PhD student (SAO predoctoral program), 2002-2005
22. Yuan Chen, Master student (Harvard), 2002-2005

PhD Thesis Committee

1. Christopher Faesi, Harvard University University, 2016-
2. How-Huan Chen, Harvard University University, 2016-
3. Riwaj Pokhrel, Chair of SAO Predoc Committee, 2016-
4. Sadia Hoq, Boston University, 2015-2016
5. Gozde Saral, SAO Predoc Committee, 2013
6. Patricio Sanhueza, Boston University, 2013
7. Susanna Finn, Boston University, 2012
8. Katharina Immer, Chair of SAO Predoc Committee, 2011
9. Gemma Busquet, Chair of Thesis Committee, University of Barcelona, 2010
10. Edward Chambers, Boston University, 2009
11. Ya-Wen Tang, National Taiwan University, 2009
12. Katharine Johnston, Chair of SAO Predoc Committee, 2009-2010
13. Pamela Klaassen, SAO Predoc Committee, 2006-2007
14. Aina Palau, University of Barcelona, 2006

Undergraduate Student Research

1. Deanna Emery, SAO intern, 2017

2. Charles Law, SAO intern, 2017
3. May Wang, summer student, Harvard University, 2017
4. Deanna Emery, Harvard Senior Thesis, 2016-2017
5. Anna Laws, University of Southampton SAO Student Exchange Program (co-advisor Joseph Hora), 2016-2017
6. Juliana Garcia-Mejia, undergrad research assistant, Harvard University, 2014-2015
7. Sophie Welsh, summer student, Harvard University, 2014
8. James Kirk, University of Southampton SAO Student Exchange Program (co-advisor with Joseph Hora), 2013-2014
9. Brian Claus, Junior research tutorial, Harvard University, 2013
10. Zoey Bergstrom, undergrad research assistant, Harvard University, 2012 - 2013
11. Marion Dierickx, summer student, Harvard University, 2012
12. Lindsey Wimberly, summer student, Boston University, 2012
13. William Hawley, Harvard Senior Thesis, 2011-2012
14. How-Huan Chen, summer student, Harvard University, 2011
15. Andrea Silva, SAO intern, 2010-2012
16. Stephanie Wang, summer student, Harvard University, 2009
17. Furgan Fazal, summer student (co advisor T. K. Sridharan), 2007
18. Mark Kramer, summer student, 2000
19. Paul Hamilton, Junior research, Harvard University, 2000
20. Beth Lindsey, summer student (co-advisor David Wilner), 1998

Publications in Refereed Journals

1. SMA Observations of the Hot Molecular Core IRAS 18566+0408, Silva, Andrea, **Zhang, Qizhou**, Sanhueza, Patricio, Lu, Xing, Beltran, Maria T., Fallscheer, Cassandra, Beuther, Henrik, Sridharan, T. K., Cesaroni, Riccardo 2017, accepted to Astrophysical Journal, arXiv:1708.07431
2. A rotating protostellar jet launched from the innermost disk of HH 212, Lee, Chin-Fei, Ho, Paul. T. P., Li, Zhi-Yun, Hirano, Naomi, **Zhang, Qizhou**, Shang, Hsien 2017, Nature Astronomy, 1, 0152
3. Simultaneous low- and high-mass star formation in a massive protocluster: ALMA observations of G11.92-0.61, Cyganowski, C. J., Brogan, C. L., Hunter, T. R., Smith, R., Kruijssen, J. M. D., Bonnell, I. A., **Zhang, Q.** 2017, MNRAS, 468, 3694
4. ALMA observations of dust polarization and molecular line emission from the Class 0 protostellar source Serpens SMM1, Hull, Charles L. H., Girart, Josep M., Tychoniec, ukasz, Rao, Ramprasad, Coréts, Paulo C., Pokhrel, Riway, **Zhang, Qizhou**, Houde, Martin, Dunham, Michael M., Kristensen, Lars E. et al. 2017, accepted to Astrophysical Journal, arXiv:1707.03827
5. Magnetized Converging Flows toward the Hot Core in the Intermediate/High-mass Star-forming Region NGC 6334 V, Juárez, C., Girart, J. M., Zamora-Avilés, M., Manuel, Tang, Ya-Wen, Koch, Patrick M., Liu, Hanyu Baobab, Palau, Aina, Ballesteros-Paredes, Javier, **Zhang, Qizhou**, Qiu, Keping 2017, Astrophysical Journal, 844, 44
6. Formation and Atmosphere of Complex Organic Molecules of the HH 212 Protostellar Disk, Lee, Chin-Fei, Li, Zhi-Yun, Ho, Paul T. P., Hirano, Naomi, **Zhang, Qizhou**, Shang, Hsien 2017, Astrophysical Journal, 843, 27
7. The Galactic Center Molecular Cloud Survey. II. A lack of dense gas and cloud evolution along Galactic center orbits, Kauffmann, Jens, Pillai, Thushara, **Zhang, Qizhou**, Menten, Karl M., Goldsmith, Paul F., Lu, Xing, Guzmán, Andrés E., Schmiedeke, Anika 2017, Astronomy & Astrophysics, 603, A90
8. The Galactic Center Molecular Cloud Survey. I. A steep linewidth-size relation and suppression of star formation, Kauffmann, Jens, Pillai, Thushara, **Zhang, Qizhou**, Menten, Karl M., Goldsmith, Paul F., Lu, Xing, Guzmán, Andrés E. 2017, Astronomy & Astrophysics, 603, A89
9. A Massive Prestellar Clump Hosting No High-mass Cores, Sanhueza, Patricio, Jackson, James M., **Zhang, Qizhou**, Guzmán, Andrs E., Lu, Xing, Stephens, Ian W., Wang, Ke, Tatematsu, Kenichi 2017, Astrophysical Journal, 841, 97
10. The ALMA view of W33A: a spiral filament feeding the candidate disc in MM1-Main, Maud, L. T., Hoare, M. G., Galván-Madrid, R., **Zhang, Q.**, de Wit, W. J., Keto, E., Johnston, K. G., Pineda, J. E. 2017, MNRAS, 467, L120

11. ALMA reveals sequential high-mass star formation in the G9.62+0.19 complex, Liu, Tie, Lacy, John, Li, Pak Shing, Wang, Ke, Qin, Sheng-Li, **Zhang, Qizhou**, Kim, Kee-Tae, Garay, Guido, Wu, fang, Mardones, Diego, and et al. 2017, arXiv:1705.04907
12. First detection of equatorial dark dust lane in a protostellar disk at submillimeter wavelength, Lee, Chin-Fei, Li, Zhi-Yun, Ho, Paul T. P., Hirano, Naomi, **Zhang, Qizhou**, Shang, Hsien 2017, Science Advances, 3, e1602935
13. The Molecular Gas Environment in the 20 km s⁻¹ Cloud in the Central Molecular Zone, Lu, Xing, **Zhang, Qizhou**, Kauffmann, Jens, Pillai, Thushara, Longmore, Steven N., Kruijssen, J. M. Diederik, Battersby, Cara, Liu, Haiyu Baobab, Ginsburg, Adam, Mills, Elisabeth A. C, Zhang, Zhi-Yu, Gu, Qiusheng 2017, Astrophysical Journal, 839, 1
14. Magnetic Fields in the Massive Dense Cores of the DR21 Filament: Weakly Magnetized Cores in a Strongly Magnetized Filament, Ching, Tao-Chung, Lai, Shih-Ping, **Zhang, Qizhou**, Girart, Josep M., Qiu, Keping, Liu, Haiyu B. 2017, Astrophysical Journal, 838, 121
15. Angular Momentum in Disk Wind Revealed in the Young Star MWC 349A, **Zhang, Q.**, Claus, B., Watson, L., & Moran, J. 2017, Astrophysical Journal, 837, 53
16. Growth of a Massive Young Stellar Object Fed by a Gas Flow from a Companion Gas Clump, Chen, X., Ren, Z., **Zhang, Q.**, Shen, Z., & Qiu, K. 2017, Astrophysical Journal, 835, 227
17. Formation of ethylene glycol and other complex organic molecules in star-forming regions, Rivilla, V. M., Beltrán, M. T., Cesaroni, R., Fontani, F., Codella, C., **Zhang, Q.** 2017, Astronomy & Astrophysics, 598, A59
18. Anatomy of the internal bow shocks in the IRAS 04166+2706 protostellar jet, Tafalla, M., Su, Y.-N., Shang, H., Johnstone, D., **Zhang, Q.**, Santiago-García, J., Lee, C.-F., Hirano, N., Wang, L.-Y. 2017, Astronomy & Astrophysics, 597, A119
19. Terahertz and far-infrared windows opened at Dome A in Antarctica, Shi, Sheng-Cai, Paine, Scott, Yao, Qi-Jun, Lin, Zhen-Hui, Li, Xin-Xing, Duan, Wen-Ying, Matsuo, Hiroshi, **Zhang, Qizhou**, Yang, Ji, Ashley, M. C. B., Shang, Zhaohui, Hu, Zhong-Wen, 2016, Nature Astronomy, 1, 0001
20. Dense Core Properties in the Infrared Dark Cloud G14.225-0.506 Revealed by ALMA, Ohashi, Satoshi, Sanhueza, Patricio, Chen, Huei-Ru Vivien, **Zhang, Qizhou**, Busquet, Gemma, Nakamura, Fumitaka, Palau, Aina, Tatematsu, Kenichi 2016, Astrophysical Journal, 833, 209
21. Magnetically Dominated Parallel Interstellar Filaments in the Infrared Dark Cloud G14.225-0.506, Santos, F. P., Busquet, G., Franco, G. A. P., Girart, J. M., & **Zhang, Q.** 2016, Astrophysical Journal, 832, 186
22. G11.92-0.61 MM1: a Keplerian disc around a massive young proto-O star, Ilee, J. D., Cyganowski, C. J., Nazari, P., Hunter, T. R., Brogan, C. L., Forgan, D. H., **Zhang, Q.** 2016, MNRAS, 462, 4386

23. 880 μm SMA Polarization Observations of the Quasar 3C 286, Hull, C. L. H., Girart, J. M., & **Zhang, Q.** 2016, *Astrophysical Journal*, 830, 124
24. Star Formation Laws in Both Galactic Massive Clumps and External Galaxies: Extensive Study with Dust Continuum, HCN (4-3), and CS (7-6), Liu, Tie, Kim, Kee-Tae, Yoo, Hyunju, Liu, Sheng-yuan, Tatematsu, Ken'ichi, Qin, Sheng-Li, **Zhang, Qizhou**, Wu, fang, Wang, Ke, Goldsmith, Paul F., Juvela, Mika, Lee, Jeong-Eun, Tóth, L. Viktor, Mardones, Diego, Garay, Guido, Bronfman, Leonardo, Cunningham, Maria R., Li, Di, Lo, Nadia, Ristorcelli, Isabelle, Schnee, Scott 2016, *Astrophysical Journal*, 829, 59
25. The structure and early evolution of massive star forming regions. Substructure in the infrared dark cloud SDC13, McGuire, C., Fuller, G. A., Peretto, N., **Zhang, Q.**, Traficante, A., Avison, A., Jimenez-Serra, I. 2016, *Astronomy & Astrophysics*, 594, A118
26. Outflow Detection in a 70 μm Dark High-Mass Core, Feng, Siyi, Beuther, Henrik, **Zhang, Qizhou**, Liu, Haiyu Baobab, Zhang, Zhiyu, Wang, Ke, Qiu, Keping 2016, *Astrophysical Journal*, 828, 100
27. Are infrared dark clouds really quiescent? Feng, S., Beuther, H., **Zhang, Q.**, Henning, Th., Linz, H., Ragan, S., Smith, R. 2016, *Astronomy & Astrophysics*, 592, A21
28. Rotating Bullets from A Variable Protostar, Chen, X., Arce, H. G., **Zhang, Q.**, Launhardt, R., & Henning, T. 2016, *Astrophysical Journal*, 824, 72
29. Discovery of an Extremely Wide-angle Bipolar Outflow in AFGL 5142, Liu, Tie, **Zhang, Qizhou**, Kim, Kee-Tae, Wu, Yuefang, Lee, Chang-Won, Goldsmith, Paul F., Li, Di, Liu, Sheng-Yuan, Chen, Huei-Ru, Tatematsu, Ken'ichi, Wang, Ke, Lee, Jeong-Eun, Qin, Sheng-Li, Mardones, Diego, Cho, Se-Hyung 2016, *Astrophysical Journal*, 824, 31
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