Feng Long

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Employment

Center for Astrophysics | Harvard & Smithsonian **Cambridge, USA**
Submillimeter Array (SMA) Fellow *Sept. 2019 -*

Education

Peking University **Beijing, China**
Ph.D, Astrophysics *2013 - 2019*
Advisor - Prof. Gregory J. Herczeg
Thesis - Probing the Early Stage of Planet Formation: ALMA Surveys of Planet-forming Disks

Peking University **Beijing, China**
B.S., Astronomy *2009 - 2013*

Research Interests

Star and planet formation, protoplanetary disks, (sub)mm interferometry, astrochemistry

Research Experience and Training

10/2019: Science presentation skill course, CfA, USA

01-03/2018: Visiting student with Dr. Paola Pinilla, Univ. of Arizona, USA

09/2017 & 03/2019: Visiting student at Prof. Ewine van Dishoeck's group, MPE

03-05/2016: Visiting student at Prof. Ilaria Pascucci's group, Univ. of Arizona, USA

07/2015: NAIC/NRAO Single-Dish & NAASC Interferometry Schools, Green Bank, USA

Approved Observing Proposals as PI

*Involved as co-I in 9 ALMA projects, including one Large program; in 2 VLA projects, including one large program; as well as co-I in projects with SMA (3), JWST (3), HST (1), and VLT (1)

2021: ALMA Cycle 8, 2021.1.00473.S, 13.9h, "A Chemistry Survey of Protoplanetary Disks in Binary Systems"

2021: ALMA Cycle 8, 2021.1.00864.S, 14.9h, "Tracing planet-forming pebbles across the water snow line with the synergy of ALMA and JWST"

2021: ALMA Cycle 8, 2021.1.01050.S, 17.1h, "A Closer Look at the Small Disks"

2021: VLA 21B-141, B-array, 16h, "Testing Trapping of Large Grains in a Dust Disk Ring"

2020: VLA 20B-342, A-array, 54h, "Testing Trapping of Large Grains in a Dust Disk Ring"

2020: SMA 20B-S026, 8 tracks, "Mapping the Gas Environment of Heavily Veiled Young Stars"

2020: SMA 20A-S024 & 20B-S027, 4 tracks, "Testing Binary Formation with Disk Alignment"

2019: SMA 19B-S011, 3 tracks, "The Synergy between SMA and ALMA: test disk formation and evolution models"

2019: ALMA Cycle 7, 2019.1.00607.S (open-sky), 13.8h, "A Closer Look at the Small Disks"

2018: ALMA Cycle 6, 2018.1.00614.S (open-sky), 12.2h, "Are Large Grains Trapped in Disk

Rings?"

Selected Awards and Honors

2021: AAS and IOP Publishing China Top Cited Paper Award for Long et al. (2019)

2020: AAS and IOP Publishing China Top Cited Paper Award for Long et al. (2018)

2017: National Scholarship, Peking University

2016: Presidential Scholarship, Peking University

2016: Award for Community and Public Service, Peking University

Service & Outreach

- SMA Science Seminar Organizer
- SMA Time Allocation Committee
- Co-organizer of the Lorentz center workshop (online): *Planet-forming Disks: From Surveys to Answers*, Sept. 2021, Leiden, the Netherlands
- Science Advisor of SAO/Latino Initiative Program
- SMA Interferometry School, SOC, Cambridge, USA
- NASA FINESST ASTRO19/20 external reviewer
- CfA Postdoc Council Member
- Referee for ApJ, ApJL, A&A, and MNRAS
- 2014 - 2018, Undergraduate Mentor, School of Physics, Peking University

Conference Presentations (* for invited talks)

10/2020*: From Clouds to Planets II: The Astrochemical Link *(postponed to 2022)*, Germany

12/2020: Five years after HL Tau: a new era in planet formation, Chile

09/2019: CfA Postdoc Science Symposium, Cambridge, USA

05/2019*: exoplanet workshop, Peking University, China

05/2019: New Horizons in Planetary Systems, Victoria, Canada

03/2019*: Planet-Forming Disks: A workshop to honor Antonella Natta, Italy

08/2017: Chinese Astronomical Society annual meeting, Xinjiang, China

Colloquia & Seminars

11/2021: Origins Seminar, University of Arizona, USA

11/2021: CEHW Seminar, Penn State University, USA

05/2021: Departmental Seminar, University of Leicester, UK

03/2021: Monday Science Seminar, University of Wisconsin-Madison, USA

01/2021: Planetary Science Seminar, Caltech, USA

10/2020: Colloquium, University of Massachusetts Amherst, USA

05/2020: Planet Formation Group Seminar, Lund University, Sweden

04/2020: Planet Formation Group Seminar, MPIA, Germany

06/2019: Seminar, SWIFAR, Yunnan University, China

12/2018: SMA Seminar, SAO/CfA, Cambridge, USA

12/2018: TUNA lunch Talk, NARO/UVa, Virginia, USA

12/2018: Seminar, UT Austin, Austin, USA

09/2017: Star and Planet Formation Seminar, ESO, Germany

Publication List

See the full publication list on ADS

ORCID ID: 0-0002-7607-719X

Total Publications: 36, with citations of 1235 (Nov. 2021)

First Author Publications: 7 (+1 to be submitted), with citations of 412

As first-author:

***) Long, F.**; Andrews, S. et al. *A Sample Study of Gas Disk Sizes from CO Line Observations*, to be submitted to AAS journal

7) Long, F.; Andrews, S., Vega, J. et al., *The Architecture of the V892 Tau System: The Binary and Its Circumbinary Disk*, 2021, ApJ, 915, 131
6) Long, F.; Bosman, A., Cazzoletti, P. et al., *Exploring HNC and HCN line emission as probes of the protoplanetary disk temperature*, 2021, A&A, 647, A118
5) Long, F.; Pinilla, P.; Herczeg, G. J. et al., *Dual-wavelength ALMA Observations of Dust Rings in Protoplanetary Disks*, 2020, ApJ, 898, 36
4) Long, F.; Herczeg, G. J., Harsono, D. et al., *Compact Disks in a High-resolution ALMA Survey of Dust Structures in the Taurus Molecular Cloud*, 2019, ApJ, 882, 49
3) Long, F.; Pinilla, P.; Herczeg, G. J. et al., *Gaps and Rings in an ALMA Survey of Disks in the Taurus Star-forming Region*, 2018, ApJ, 869, 17
2) Long, F.; Herczeg, G. J.; Pascucci, I. et al., *An ALMA Survey of faint disks in the Chamaeleon I star-forming region: Why are some Class II disks so faint?*, 2018, ApJ, 863, 61
1) Long, F.; Herczeg, G. J.; Pascucci, I. et al., *An ALMA Survey of CO isotopologue emission from Protoplanetary Disks in Chamaeleon I*, 2017, ApJ, 844, 99

As co-author:

29) Schwarz, K., et al. (including **Long, F.**, *Molecules with ALMA at Planet-forming Scales (MAPS) XX. The Massive Disk Around GM Aurigae*, 2021, ApJS, in press
28) Huang, J., et al. (including **Long, F.**, *Molecules with ALMA at Planet-forming Scales (MAPS) XIX. Spiral Arms, a Tail, and Diffuse Structures Traced by CO toward the GM Aur Disk*, 2021, ApJS, in press
27) Teague, R., et al. (including **Long, F.**), *Molecules with ALMA at Planet-forming Scales (MAPS) XVIII: Kinematic Substructures in the Disks of HD 163296 and MWC 480*, 2021, ApJS, in press
26) Calahan, J., et al. (including **Long, F.**), *Molecules with ALMA at Planet-forming Scales (MAPS) XVII. Determining the 2D Thermal Structure of HD 163296*, 2021, ApJS, in press
25) Booth, A., et al. (including **Long, F.**), *Molecules with ALMA at Planet-forming Scales (MAPS) XVI. Characterising the Impact of the Molecular Wind on the Evolution of theHD 163296 System*, 2021, ApJS, in press
24) Bosman, A., et al. (including **Long, F.**), *Molecules with ALMA at Planet-forming Scales (MAPS) XV. Tracing Proto-planetary Disk Structure within 20 au*, 2021, ApJS, in press
23) Sierra, A., et al. (including **Long, F.**, *Molecules with ALMA at Planet-forming Scales (MAPS) XIV: Revealing disk substructures in multi-wavelength continuum emission*, 2021, ApJS, in press
22) Bergner, J., et al. (including **Long, F.**), *Molecules with ALMA at Planet-forming Scales (MAPS) XI: CN and HCN as Tracers of Photochemistry in Disks*, 2021, ApJS, in press
21) Cataldi, G., et al. (including **Long, F.**), *Molecules with ALMA at Planet-forming Scales (MAPS) X. Studying deuteration at high angular resolution toward protoplanetary disks*, 2021, ApJS, in press
20) Alarcon, F., et al. (including **Long, F.**), *Molecules with ALMA at Planet-forming Scales (MAPS) VIII. CO Gap in AS 209 - Gas Depletion or Chemical Processing?*, 2021, ApJS, in press
19) Bosman, A., et al. (including **Long, F.**), *Molecules with ALMA at Planet-forming Scales (MAPS) VII. Sub-stellar O/H and C/H and super-stellar C/O in planet feeding gas*, 2021, ApJS, in press

18) Guzman, V., et al. (including **Long, F.**), *Molecules with ALMA at Planet-forming Scales (MAPS) VI: Distribution of the small organics HCN, C_2H, and H_2CO*, 2021, ApJS, in press
17) Zhang, K., et al. (including **Long, F.**, *Molecules with ALMA at Planet-forming Scales (MAPS) V: CO gas distributions*, 2021, ApJS, in press
16) Law, J. C., et al. (including **Long, F.**), *Molecules with ALMA at Planet-forming Scales (MAPS) IV: Emission Surfaces and Vertical Distribution of Molecules*, 2021, ApJS, in press
15) Law, J. C., et al. (including **Long, F.**), *Molecules with ALMA at Planet-forming Scales (MAPS) III: Characteristics of Radial Chemical Substructures*, 2021, ApJS, in press
14) Öberg, K. I., et al. (including **Long, F.**), *Molecules with ALMA at Planet-forming Scales (MAPS) I: Program Overview and Highlights.*, 2021, ApJS, in press
13) Pegues, J., et al. (including **Long, F.**), *An Atacama Large Millimeter/submillimeter Array Survey of Chemistry in Disks around M4-M5 Stars*, 2021, ApJ, 911, 150
12) Pegues, J., et al. (including **Long, F.**), *Dynamical Masses and Stellar Evolutionary Model Predictions of M Stars*, 2021, ApJ, 908, 42
11) Kurtovic, N. T., Pinilla, P., **Long, F.**, et al., *Size and structures of disks around very low mass stars in the Taurus star-forming region*, 2021, A&A, 645, 139
10) Banzatti, A., et al. (including **Long, F.**), *Hints for Icy Pebble Migration Feeding an Oxygen-rich Chemistry in the Inner Planet-forming Region of Disks*, 2020, ApJ, 903, 124
9) Veronesi, B., et al. (including **Long, F.**), *Is the gap in the DS Tau disc hiding a planet?*, 2020, MNRAS, 495, 1913
8) Manara, C. F., Tazzari, M., **Long, F.**, et al., *Observational constraints on dust disk sizes in tidally truncated protoplanetary disks in multiple systems in the Taurus region*, 2019, A&A, 628, 95
7) Lodato, G., Dipierro, G., Ragusa, E., **Long, F.**, et al., *The newborn planet population emerging from ring-like structures in discs*, 2019, MNRAS, 486, 453
6) Liu, Y., et al. (including **Long, F.**), *The Ring Structure in the MWC 480 Disk Revealed by ALMA*, 2019, A&A, 622, 75
5) Herczeg, G. J., et al. (including **Long, F.**), *How Do Stars Gain Their Mass? A JCMT/SCUBA-2 Transient Survey of Protostars in Nearby Star-forming Regions*, 2017, ApJ, 849, 43
4) Holoien, T. W., et al. (including **Long, F.**), *The ASAS-SN bright supernova catalogue - I. 2013-2014*, 2017, MNRAS, 464, 2672
3) Pascucci, I., Testi, L., Herczeg, G. J., **Long, F.**, et al., *A Steeper than Linear Disk Mass-Stellar Mass Scaling Relation*, 2016, ApJ, 831, 125
2) Holoien, T. W., et al. (including **Long, F.**), *Six months of multiwavelength follow-up of the tidal disruption candidate ASASSN-14li and implied TDE rates from ASAS-SN*, 2016, MNRAS, 455, 2918
1) Jose, J., Guo, Z., **Long, F.**, et al., *ASAS-SN Discovery of an Unusual Nuclear Transient in PGC 043234*, 2014, ATel, 6777, 1