JANE HUANG

Assistant Professor
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CONTACT INFORMATION

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APPOINTMENTS

Assistant Professor
Columbia University Dept. of Astronomy *July 2023-present*
NASA Hubble Fellowship Program Sagan Fellow
University of Michigan Dept. of Astronomy *August 2020-June 2023*
Postdoctoral Researcher
Center for Astrophysics | Harvard & Smithsonian *July 2020-August 2020*

EDUCATION

Harvard University, Cambridge, MA, United States
Ph.D., Astronomy and Astrophysics *May 2020*
Secondary Field: Computational Science and Engineering
M.A., Astronomy and Astrophysics *May 2016*

University of Chicago, Chicago, IL, United States
B.S., Chemistry (with honors) with a minor in physics *June 2014*

RESEARCH INTERESTS

Planet formation, protoplanetary disks, astrochemistry, radio observations

AWARDS, FELLOWSHIPS, AND SCHOLARSHIPS

Astronomical Society of the Pacific Robert J. Trumpler Award (PhD thesis prize) *2021*
International Astronomical Union PhD Prize, Division F (Planetary Systems and Bioastronomy) *2021*
National Radio Astronomy Observatory R. L. Brown Outstanding Dissertation Award *2021*
NASA Hubble Fellowship Program Sagan Postdoctoral Fellowship *2020-2023*
National Science Foundation Graduate Research Fellowship *2015-2020*
Peirce Fellowship (Harvard University) *2014-2017*
Goldwater Scholarship *2013*
Chicago Public Schools Scholarship (University of Chicago) *2010-2014*

GRANTS

National Science Foundation AAG #2307916 *09/2023-08/2026*
Unveiling diverse planet formation environments with millimeter imaging, $449,288 (PI)

COLLOQUIA & SEMINARS

Summer Science Seminar, Wesleyan University *2024*
Colloquium, Carnegie Observatories *2023*
Astrophysics Lunch Seminar, Jet Propulsion Laboratory *2023*
Astronomy Seminar, Michigan State University *2022*
Astrophysics Colloquium, Massachusetts Institute of Technology *2022*

Astronomy Colloquium, Columbia University	*2022*
Astronomy Colloquium, University of California, Berkeley	*2022*
Astro Seminar, Queen's University (Canada)	*2021*
Colloquium, National Radio Astronomy Observatory/University of Virginia	*2021*
Planetary Science Seminar, California Institute of Technology	*2021*
DAO Astronomy Colloquium, NRC Herzberg	*2021*
Astronomy Colloquium, Yale University	*2021*
Astronomy Colloquium, University of California, Berkeley	*2021*
Exoplanet Meeting, University of Cambridge	*2021*
Astrophysics Seminar, University of Leicester	*2020*
Astronomy Seminar, Rice University	*2020*
Tuesday UVa/NRAO Astronomy Lunch Talk, National Radio Astronomy Observatory/University of Virginia	*2020*
Exoplanet Seminar, Yale University	*2020*
AstroCoffee, University of Hawai'i	*2019*
Exoplanets Tea, Massachusetts Institute of Technology	*2019*
Exoplanets Discussion Group, Princeton University	*2019*
CIERA Observational Astronomy Meeting, Northwestern University	*2019*
Center for Integrative Planetary Science Seminar, University of California, Berkeley	*2019*
Origins Seminar, University of Arizona	*2019*
Astro Seminar, Carnegie Earth and Planets Laboratory	*2019*
Astrochemistry Seminar, Leiden University	*2019*
Exoplanets and Disks Seminar, University of Amsterdam	*2019*
Star and Planet Formation Seminar, European Southern Observatory-Garching	*2019*
Astro Seminar, American Museum of Natural History	*2019*
ITC Luncheon, Center for Astrophysics | Harvard & Smithsonian	*2019*
Exoplanet Pizza Lunch, Center for Astrophysics | Harvard & Smithsonian	*2018*
Small-Scale Seminar, Center for Astrophysics | Harvard & Smithsonian	*2016*
AstroStatistics Seminar, Harvard University	*2015*

CONFERENCE PRESENTATIONS

Invited talks

- "An Astronomer's View of Molecules in Protoplanetary Disks," *Molecular Astrophysics: Linking interstellar molecules with the organic inventory of (exo)-Planets and the Solar System* (Focus session at the *American Physical Society March Meeting 2024*), Minneapolis, USA, 2024
- "Insights into Planet Formation from Protoplanetary Disk Observations," *Exoplanets: Atmospheres to Architectures* (Ninth Annual Giant Magellan Telescope Community Science Meeting), Washington, DC, 2023
- "Insights into Planet Formation from Molecular Mapping of Protoplanetary Disks," *The Astrochemistry Subdivision: A Decade of Progress and Prospects for the Next Decade*, Symposium at the *ACS Fall 2023 National Meeting*, San Francisco, CA, 2023
- "Unveiling the Birth Sites of Planets: Recent Results and Future Prospects with ALMA," *ALMA Status and Plans for Increased Capability*, ALMA Special Session at the *241st Meeting of the American Astronomical Society*, Seattle, WA, 2023
- "Inferring the Characteristics of Young Planets from High Resolution Protoplanetary Disk Imaging," *The Hidden Newly Born Planets* session at *Europlanet Science Congress 2022*, Granada, Spain, 2022
- "Observational Signatures of Planet-Disk Interactions," *Planet and Binary Formation in Gravitationally Unstable Protoplanetary Discs in the High-Resolution Era,* Leicester, United Kingdom, 2022
- "Rings and Spirals in Protoplanetary Disks: The ALMA View of Planet Formation," Division F meeting (Planetary Systems and Bioastronomy) at the International Astronomical Union General Assembly, Busan, South Korea, 2022
- "Millimeter Observations of Protoplanetary Disks," *The Dynamical and Chemical Connection,* Lorentz Center Workshop, Leiden, Netherlands, 2022
- "An Observational Overview of Substructures in Protoplanetary Disks," *Gaps, Rings, Spirals, and Vortices: Structure Formation in Planet-forming Disks* , Munich Institute for Astro- and Particle Physics workshop, Munich, Germany, 2021 (remote participant)
- "The Millimeter Perspective on Disk Substructures," *Planet-forming Disks: From Surveys to Answers*, Lorentz Center Workshop (virtual), 2021

- "Towards Resolving Terrestrial-Scale Planet Formation," *The Scientific Quest for High Angular Resolution*, ngVLA Special Session at the *235th Meeting of the American Astronomical Society*, Honolulu, HI, 2020
- "Insights into Disk Structures from High Angular Resolution ALMA Observations," *Great Barriers in Planet Formation*, Palm Cove, Australia, 2019
- "The Molecular View of Disk Substructures," *Ringberg Workshop: Turbulence and Structure Formation in Protoplanetary Disks 2019*, Kreuth, Germany, 2019

Contributed talks

- "High Resolution ALMA Observations of Disks in σ Orionis," *New Heights in Planet Formation*, Garching, Germany, 2024
- "Molecular Mapping of the Peculiar DR Tau System," *241st Meeting of the American Astronomical Society*, Seattle, United States, 2023
- "Molecular Mapping of the Peculiar DR Tau System," *NASA Hubble Fellows Symposium*, Baltimore, United States, 2022 (remote participant)
- "Contextualizing Planet Formation: Mapping the Complex Environments of Protoplanetary Disks," *NASA Hubble Fellows Symposium* (virtual), 2021
- "Spiral Structures Traced by CO Emission Around RU Lup and GM Aur," *Five Years After HL Tau* (virtual), 2020
- "Observing Spiral Structures in Protoplanetary Disks," *NASA Hubble Fellows Symposium*, (virtual), 2020
- "The ALMA View of Planet Formation in Disks Around Young Stars," Dissertation talk at the *235th Meeting of the American Astronomical Society*, Honolulu, HI, USA, 2020
- "An Introduction to the Disk Substructures at High Angular Resolution Project," *Planet-forming disks: A workshop to honor Antonella Natta*, Menaggio, Italy, 2019
- "Small-scale Substructures in Protoplanetary Disks," *Boston Area Exoplanets Science Meeting #5*, Boston, USA, 2019
- "High Angular Resolution ALMA Observations of Protoplanetary Disks," *Astrochemistry 2018: Past, Present, and Future*, Pasadena, CA, USA, 2018
- "High Resolution ALMA Observations of Gas and Dust in Protoplanetary Disks," *Star and Planet Formation in the Southwest 2*, Oracle, AZ, USA, 2018
- "High Resolution ALMA Observations of Gas and Dust in Protoplanetary Disks," *Exoplanets and Planet Formation*, Shanghai, China, 2017
- "An ALMA Survey of Deuterium Chemistry in Protoplanetary Disks," *Protoplanetary Discussions*, Edinburgh, United Kingdom, 2016
- "Modeling Linear Molecules as Carriers of the λ5797 Å and λ6613 Å Diffuse Interstellar Bands," *69th International Symposium on Molecular Spectroscopy*, Urbana-Champaign, IL, USA, 2014

ADVISING AND MENTORING

Graduate students advised: Sally Jiang (Columbia Astronomy first-year PhD project, 2023-present)

Undergraduates advised: Shiqi (Bronco) Yang (Columbia, 2024-present), Catherine Harmon (Barnard College, 2023-present), Amelie Sharples (Columbia, 2022-2023), Xinyue (Lúthien) Liu (University of Michigan, 2021-2023), Feilong Meng (University of Michigan, 2021)

Postdocs advised: Shangjia Zhang (NHFP Sagan Fellow at Columbia, 2024-present)

Postbacs advised: Forrest Weintraub (2024-present)

High school students advised: Asher Johnson (2024, Columbia Engineering the Next Generation program)

Committees: Ben Cassese (Columbia Astronomy second-year PhD project and thesis committee, 2023-present), Thomas Pfeil (Flatiron CCA Postdoc Mentoring Committee, 2024-present)

COURSES TAUGHT

ASTRUN3105: Exoplanets and Astrobiology *Spring 2024*
ASTRG9003: Research Seminar I *Fall 2023*

SELECTED OUTREACH ACTIVITIES

Presentations and Q&As

- Guest speaker, "'Tell Me More' with Suzan-Lori Parks," The Glade at Little Island, July 12, 2024
- Virtual Q&A for ASTR 19 (Habitable Planets), Dartmouth University, April 11, 2024
- Guest speaker, Columbia University Society of Physics Students meeting, March 28, 2024
- Guest lecture for Science Research Fellows Seminar, Columbia University, November 17, 2023
- Guest lecture for ASTRUN2900 (Frontiers of Astrophysics), Columbia University, November 10, 2023
- Guest lecture for Astro 220 (New Discoveries in Astronomy), University of Michigan, September 29, 2022
- "The Worlds Outside Our Solar System" presentation, Oak Park School District Hoffman Planetarium, Nov. 17, 2021
- "Mapping the Birthplaces of Planets" presentation, Project Exploration STEM Summer Camp, Aug. 4, 2021
- Guest lecture for Astro 220 (New Discoveries in Astronomy), University of Michigan, March 11, 2021
- Astronomy Club Guest Lecture, Thomas Jefferson High School for Science and Technology Oct. 7, 2020
- "Ask an Astronomer" Panel, Astronomy at the Beach Sept. 26, 2020
- "Mapping the Birthplaces of Planets" presentation, YouthAstroNet Astro Chat*May 19, 2020*

NHFP Anti-Racism Initiative *2020-2023*

Developed online resources to make the postdoc application process more transparent and equitable, including a one-on-one mentoring program for PhD students, workshops on the NASA Hubble Fellowship Program application process, a bank of past successful applications, a crowd-sourced compilation of information about talk opportunities suitable for early career researchers, and a program to provide feedback on application drafts

Harvard Observing Project session leader *2015-2020*

- Led several observing sessions each semester introducing members of the Harvard community to the 16" Clay Telescope
- Provided guidance to three undergraduates using data from the observing sessions to prepare posters for American Astronomical Society meetings and to one undergraduate preparing a paper for *The Minor Planet Bulletin*

Worldwide Telescope Ambassador *2014-2020*

- Performed demonstrations of WorldWide Telescope for children and adults at Cambridge Explores the Universe (April 19, 2015; April 24, 2016; April 23, 2017; April 22, 2018; April 14, 2019)
- Co-taught workshops on Worldwide Telescope for Girl Scouts from the 4th to 8th grade at the "Geek is Glam" Expo, Worcester Polytechnic Institute, October 18, 2014

Python Workshop instructor, SAO Latino Initiative

"Scientific Computing with SciPy" *July 13, 2020*

"Image Processing with scikit-image" *August 12, 2019*

Instructor, Banneker Institute *July 2017, July 2018*

Taught an order-of-magnitude physics course for two weeks in 2017 and one week in 2018 for a Harvard-Smithsonian Center for Astrophysics summer research program aimed at undergraduates from underrepresented backgrounds

Science in the News (Harvard University) blog editor *2017-2019*

PROFESSIONAL SERVICE

NRAO Users Committee	*2024-present*
Chair of the (NRAO) Data Management and Software Panel of the Users Committee	*2024-present*
New York Area Exoplanets Meeting organizing committee	*2024*
James Webb Space Telescope Time Allocation Committee panelist	*2024*
Columbia Astronomy faculty search committee	*2023-2024*
Hubble Space Telescope Time Allocation Committee panelist	*2023*

CASA Users Committee	*2022-2023*
Journal referee (*The Astrophysical Journal*, *Astronomy & Astrophysics*, *Nature Astronomy*, *Monthly Notices of the Royal Astronomical Society*)	*2017-present*
Colloquium co-organizer, University of Michigan Astronomy Department	*2022-2023*
Grant review panel chair on a NASA research and analysis program	*2022*
Subject-matter expert reviewer in a NASA peer review	*2022*
University of Michigan Astronomy Department Diversity, Equity, and Inclusion Committee member	*2021-2022*
University of Michigan Astronomy Department Faculty Meeting Postdoc Representative	*2020-2021*
Co-organizer, University of Michigan Astronomy booth, National Society for Black Physicists meeting	*2020*
FONDECYT (Chile's National Fund for Scientific and Technological Development) grant reviewer	*2020*
Grant review panelist on a NASA research and analysis program	*2020*

PUBLICATIONS

Refereed publications as first author:

14) **Huang, J.**, Ansdell, M., Birnstiel, T. et al., "High Resolution ALMA Observations of Richly Structured Protoplanetary Disks in σ Orionis," submitted to AAS Journals

13) **Huang, J.**, Bergin, E. A., Le Gal, R. et al., 2024, "Constraints on the gas-phase C/O ratio of DR Tau's outer disk from CS, SO, and C_2H observations," accepted by ApJ

12) **Huang, J.**, Bergin, E. A., Bae, J. et al., 2023, "Molecular Mapping of DR Tau's Protoplanetary Disk, Envelope, Outflow, and Large-Scale Spiral Arm," ApJ, 943, 107

11) **Huang, J.**, Ginski, C., Benisty, M. et al., 2022, "Disk Evolution Study Through Imaging of Nearby Young Stars (DESTINYS): A Panchromatic View of DO Tau's Complex Kilo-astronomical-unit Environment," ApJ, 930, 171

10) **Huang, J.**, Bergin, E. A., Öberg, K. I. et al. 2021, "Molecules with ALMA at Planet-forming Scales (MAPS) XIX. Spiral arms, a tail, and diffuse structures traced by CO around the GM Aur disk," ApJS, 257, 19

9) **Huang, J.**, Andrews, S. M., Öberg, K. I. et al., 2020, "Large-scale CO Spirals and Complex Kinematics Associated with the T Tauri Star RU Lup," ApJ, 898, 140

8) **Huang, J.**, Andrews, S. M., Dullemond, C. P. et al., 2020, "A Multi-Frequency ALMA Characterization of Substructures in the GM Aur Protoplanetary Disk," ApJ, 891, 48

7) **Huang, J.**, Andrews, S. M., Pérez, L. M. et al. 2018, "The Disk Substructures at High Angular Resolution Project (DSHARP). III. Spiral Structures in the Millimeter Continuum of the Elias 27, IM Lup, and WaOph 6 Disks," ApJL, 869, L43

6) **Huang, J.**, Andrews, S. M., Dullemond, C. P. et al. 2018, "The Disk Substructures at High Angular Resolution Project (DSHARP). II. Characteristics of Annular Substructures," ApJL, 869, L42

5) **Huang, J.**, Andrews, S. M., Cleeves, L. I. et al. 2018, "CO and Dust Properties in the TW Hya Disk From High-Resolution ALMA Observations," ApJ, 852, 122

4) **Huang, J.**, Öberg, K. I., Qi, C. et al. 2017, "An ALMA Survey of DCN/$H^{13}CN$ and $DCO^+/H^{13}CO^+$ in Protoplanetary Disks," ApJ, 835, 231

3) **Huang, J.**, Öberg, K. I., and Andrews, S. M. 2016, "Evidence of a CO Desorption Front in the Outer AS 209 Disk," ApJL, 823, L18

2) **Huang, J.** and Oka, T., 2015, "Constraining the Size of the Carrier of the λ5797.1 Diffuse Interstellar Band," Mol. Phys., 113, 2159-2168

1) **Huang, J.** and Öberg, K. I., 2015, "Detection of N_2D^+ in a protoplanetary disk," ApJL, 809, 26

Refereed publications as second or third author:

11) Zhang, Y., Ginski, C., **Huang, J.** et al. 2023, "Disk Evolution Study Through Imaging of Nearby Young Stars (DESTINYS): Diverse outcomes of binary-disk interactions," A&A, 672, 145

10) Teague, R., Law, C. J., **Huang, J.**, Meng, F., 2021, "disksurf: Extracting the 3D Structure of Protoplanetary Disks," *Journal of Open Source Software*, 6(67), 3827

9) Ginski, C., Facchini, S., **Huang, J.** et al., 2021, "Disk Evolution Study Through Imaging of Nearby Young Stars (DESTINYS): Late Infall Causing Disk Misalignment and Dynamic Structures in SU Aur," ApJL, 908, 25

8) Le Gal, R., Öberg, K. I., **Huang, J**. et al., 2020, "A 3 mm Chemical Exploration of Small Organics in Class I YSOs,"

ApJ, 898, 131

7) Teague, R., Bae, J., **Huang, J.**, & Bergin, E. A., 2019, "Spiral Structure in the Gas Disk of TW Hya," ApJL, 884, L56

6) Isella, A., **Huang, J.**, Andrews, S. M. et al., 2018, "The Disk Substructures at High Angular Resolution Project (DSHARP). IX. A high definition study of the HD 163296 planet forming disk," ApJL, 869, L49

5) Guzmán, V. V., **Huang, J.**, Andrews, S. M. et al., 2018, "The Disk Substructures at High Angular Resolution Project (DSHARP). VIII. The Rich Ringed Substructures in the AS 209 Disk," ApJL, 869, L48

4) Zhang, S., Zhaohuan, Z., **Huang, J.** et al., 2018, "The Disk Substructures at High Angular Resolution Project (DSHARP). VII. The Planet-Disk Interactions Interpretation," ApJL, 869, L47

3) Dullemond, C. P., Birnstiel, T., **Huang, J.** et al., 2018, "The Disk Substructures at High Angular Resolution Project (DSHARP). VI. Dust trapping in thin-ringed protoplanetary disks," ApJL, 869, L46

2) Andrews, S. M., **Huang, J.**, Pérez, L. M. et al., 2018, "The Disk Substructures at High Angular Resolution Project (DSHARP). I. Motivation, Sample, Calibration, and Overview," ApJL, 869, L41

1) Guzmán, V. V., Öberg, K. I., **Huang, J.** et al., 2017, "Nitrogen Fractionation in Protoplanetary Disks from the $H^{13}CN/HC^{15}N$ Ratio," ApJ, 836, 30

Other refereed papers as contributing author:

66) Ginski, C. et al. (including **J. Huang**), "Disk Evolution Study Through Imaging of Nearby Young Stars (DESTINYS): Evidence for planet-disk interaction in the MASSJ16120668-3010270 system?," submitted to A&A

65) Yamato, Y. et al. (including **J. Huang**), 2024, "Detection of Dimethyl Ether in the MWC 480 Protoplanetary Disk," accepted by ApJ

64) Long, D. et al. (including **J. Huang**), 2024, "Exploring the Complex Ionization Environment of the Turbulent DM Tau Disk," accepted by ApJ

63) Carvalho, A. S. et al. (including **J. Huang**), 2024,"A Dust-Trapping Ring in the Planet-Hosting Disk of Elias 2-24," accepted by ApJ

62) Derkink, A. et al. (including **J. Huang**), 2024, "Disk Evolution Study Through Imaging of Nearby Young Stars (DESTINYS): PDS 111, an old T Tauri star with a young-looking disk," accepted by A&A

61) Andrews, S. M. et al. (including **J. Huang**), 2024, "On Kinematic Measurements of Self-Gravity in Protoplanetary Disks,", ApJ, 970, 153

60) Tanious, M. et al. (including **J. Huang**), 2024, "Anatomy of the Class I protostar L1489 IRS with NOEMA: disk, streamers, outflow(s) and bubbles at 3mm," A&A, 687, 92

59) Valegård, Per-Gunnar, (including **J. Huang**), 2024, "The SPHERE view of the Orion star-forming region,", A&A, 685, 54

58) Garufi, A. et al. (including **J. Huang**), 2024, "The SPHERE View of the Taurus Star-Forming Region,", A&A, 685, 53

57) Ginski, C. et al. (including **J. Huang**), 2024, "The SPHERE view of the Chamaeleon I star-forming region,", A&A, 685, 52

56) Muñoz-Romero, C. et al. (including **J. Huang**), 2024, "JWST-MIRI Spectroscopy of Warm Molecular Emission and Variability in the AS 209 Disk," ApJ, 964, 36

55) Miley, J. et al. (including **J. Huang**), 2024, "High-resolution ALMA observations of compact discs in the wide-binary system Sz 65 and Sz 66," A&A, 682, A55

54) Galloway-Sprietsma, M. et al. (including **J. Huang**), 2023, "Molecules with ALMA at Planet-forming Scales (MAPS). Complex Kinematics in the AS 209 Disk Induced by a Forming Planet and Disk Winds," ApJ, 950, 147

53) Law, C. J. et al. (including **J. Huang**), 2023, "Mapping Protoplanetary Disk Vertical Structure with CO Isotopologue Line Emission," ApJ, 948, 60

52) Pegues, J. et al. (including **J. Huang**), 2023, "An SMA Survey of Chemistry in Disks around Herbig AeBe Stars," ApJ, 948, 57

51) Muñoz-Romero, C. et al. (including **J. Huang**), 2023, "Cold Deuterium Fractionation in the Nearest Planet-Forming Disk," ApJ, 943, 35

50) Calahan, J. et al. (including **J. Huang**), 2023, "UV-driven Chemistry as a Signpost for Late-Stage Planet Formation," Nature Astronomy, 7, 49

49) Pinilla, P. et al. (including **J. Huang**), 2022, "The Distributions of Gas, Small-, and Large-grains in the LkHα 330 Disk Trace a Young Planetary System," A&A, 665, 128

48) Long, F. et al. (including **J. Huang**), 2022, "ALMA Detection of Dust Trapping around Lagrangian Points in the LkCa 15 Disk," ApJL, 937, 1

47) Teague, R. et al. (including **J. Huang**), 2022, "Mapping the Complex Kinematic Substructure in the TW Hya Disk," ApJ, 936, 163

46) Bae, J. et al, (including **J. Huang**), 2022, "Molecules with ALMA at Planet-forming Scales (MAPS). XXI. A Circumplanetary Disk Candidate in Molecular Line Emission in the AS 209 Disk," ApJL, 934, L20

45) Law, C. J. et al. (including **J. Huang**), 2022, "CO Line Emission Surfaces and Vertical Structure in Mid-Inclination Protoplanetary Disks,", ApJ, 932, 114

44) Teague, R. et al. (including **J. Huang**), 2022, "Gas and Dust Shadows in the TW Hydrae Disk," ApJ, 930, 144

43) Martín-Domenéch, R. et al. (including **J. Huang**), 2021, "Hot corino chemistry in the Class I binary source Ser-emb 11," ApJ, 923, 155

42) Schwarz, K. R. et al. (including **J. Huang**), 2021, "Molecules with ALMA at Planet-forming Scales (MAPS) XX. The Massive Disk Around GM Aurigae," ApJS, 257, 20

41) Teague, R. et al. (including **J. Huang**), 2021, "Molecules with ALMA at Planet-forming Scales (MAPS) XVIII. Kinematic Substructure in the Disks of HD 163296 and MWC 480," ApJS, 257, 18

40) Calahan, J. et al. (including **J. Huang**), 2021, "Molecules with ALMA at Planet-forming Scales (MAPS) XVII. Determining the 2D Thermal Structure of HD 163296," ApJS, 257, 17

39) Booth, A. et al. (including **J. Huang**), 2021, "Molecules with ALMA at Planet-forming Scales (MAPS) XVI. Characterising the Impact of the Molecular Wind on the Evolution of the HD 163296 System," ApJS, 257, 16

38) Bosman, A. et al. (including **J. Huang**), 2021, "Molecules with ALMA at Planet-forming Scales (MAPS) XV. Tracing Proto-planetary Disk Structure within 20 au," ApJS, 257, 15

37) Sierra, A. et al. (including **J. Huang**), 2021, "Molecules with ALMA at Planet-forming Scales (MAPS) XIV. Revealing Disk Substructures in Multi-wavelength Continuum Emission," ApJS, 257, 14

36) Aikawa, Y. et al. (including **J. Huang**), 2021, "Molecules with ALMA at Planet-forming Scales (MAPS) XIII. HCO^+ and Disk Ionization," ApJS, 257, 13

35) Le Gal, R. et al. (including **J. Huang**), 2021, "Molecules with ALMA at Planet-forming Scales (MAPS) XII. Inferring the C/O and S/H Ratios in Protoplanetary Disks with Sulfur Molecules," ApJS, 257, 12

34) Bergner, J. B. et al. (including **J. Huang**), 2021, "Molecules with ALMA at Planet-forming Scales (MAPS) XI. CN and HCN as Tracers of Photochemistry in Disks," ApJS, 257, 11

33) Cataldi., G. et al. (including **J. Huang**), 2021, "Molecules with ALMA at Planet-forming Scales (MAPS) X. Distributions of Deuterated Molecules," ApJS, 257, 10

32) Ilee, J. et al. (including **J. Huang**), 2021, "Molecules with ALMA at Planet-forming Scales (MAPS) IX. Distribution and Properties of the Large Organic Molecules HC_3N, CH_3CN, and *c*-C3H2," ApJS, 257, 9

31) Alarcón, F. et al. (including **J. Huang**), 2021, "Molecules with ALMA at Planet-forming Scales (MAPS) VIII. Gap Chemistry in AS 209 : Gas Depletion or Chemical processing?," ApJS, 257, 8

30) Bosman, A. et al. (including **J. Huang**), 2021, "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," ApJS, 257, 7

29) Guzmán, V. V. et al. (including **J. Huang**), 2021, "Molecules with ALMA at Planet-forming Scales (MAPS) VI. Distribution of the Small Organics HCN, C_2H, and H_2CO," ApJS, 257, 6

28) Zhang, K. et al. (including **J. Huang**), 2021, "Molecules with ALMA at Planet-forming Scales (MAPS) V. CO Gas Distributions," ApJS, 257, 5

27) Law, C. J. et al.(including **J. Huang**), 2021, "Molecules with ALMA at Planet-forming Scales (MAPS) IV. Emission Surfaces and Vertical Distribution of Molecules," ApJS, 257, 4

26) Law, C. J. et al. (including **J. Huang**), 2021, "Molecules with ALMA at Planet-forming Scales (MAPS) III. Characteristics of Radial Chemical Substructures," ApJS, 257, 3

25) Czekala, I. et al. (including **J. Huang**), 2021, "Molecules with ALMA at Planet-forming Scales (MAPS) II. CLEAN Strategies for Synthesizing Images of Molecular Line Emission in Protoplanetary Disks," ApJS, 257, 2

24) Öberg, K. I. et al. (including **J. Huang**), 2021, "Molecules with ALMA at Planet-forming Scales (MAPS) I. Program Overview and Highlights," ApJS, 257, 1

23) Andrews, S. M. et al. (including **J. Huang**), 2021, "Limits on Millimeter Continuum Emission from Circumplanetary Material in the DSHARP Disks," ApJ, 916, 51

22) Pegues, J. et al. (including **J. Huang**), 2021, "An ALMA Survey of Chemistry in Disks around Low-Mass M-Stars," ApJ, 911, 150

21) Cleeves, L. I. et al. (including **J. Huang**), 2021, "The TW Hya Rosetta Stone Project IV: A Hydrocarbon Rich Disk Atmosphere," ApJ, 911, 29

20) Macías, E. et al. (including **J. Huang**), 2021, "Characterizing the dust content of disk substructures in TW Hya," A&A, 648, A33

19) Jorquera, S. et al. (including **J. Huang**), 2021, "A search for companions via direct imaging in the DSHARP planet-forming disks," AJ, 161, 146

18) Pegues, J. et al. (including **J. Huang**), 2021, "Dynamical Masses and Stellar Evolutionary Model Predictions of M-Stars," ApJ, 908, 42

17) Calahan, J. et al., (including **J. Huang**), 2021, "The TW Hya Rosetta Stone Project III: Resolving the Gaseous Thermal Profile of the Disk," ApJ, 908, 8

16) Terwisscha van Scheltinga, J. (including **J. Huang**), 2021, "The TW Hya Rosetta Stone Project II: Spatially Resolved Emission of Formaldehyde Hints at Low-temperature Gas-phase Formation," ApJ, 906, 111

15) Öberg, K. I. et al. (including **J. Huang**), 2021, "The TW Hya Rosetta Stone Project I: Radial and Vertical Distributions of DCN and DCO^+," AJ, 161, 38

14) Ginski, C. et al. (including **J. Huang**), 2020, "Disk Evolution Study Through Imaging of Nearby Young Stars (DESTINYS): A Close Low Mass Companion to ET Cha?," A&A, 642, A119

13) Bergner, J. B. et al. (including **J. Huang**), 2020, "An Evolutionary Study of Volatile Chemistry in Protoplanetary Disks," ApJ, 898, 97

12) Loomis, R. A. et al. (including **J. Huang**), 2020, "An Unbiased ALMA Spectral Survey of the LkCa 15 and MWC 480 Protoplanetary Disks," ApJ, 893, 101

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