Curriculum Vitae — Richard Teague

Contact Information

Department of Earth, Atmospheric, and Planetary Sciences
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Employment

Massachusetts Institute of Technology — Jul. 2022 – Present
Department of Earth, Atmospheric and Planetary Sciences
Kerr McGee Development Assistant Professor

Smithsonian Astrophysical Observatory — May 2022 – Apr. 2025
Research Associate

Center for Astrophysics | Harvard & Smithsonian — Sep. 2019 – Apr. 2022
Submillimeter Array Fellow

University of Michigan — May 2017 – Jul. 2019
Postdoctoral Researcher

Max-Planck-Institute for Astronomy — Jan. 2017 – Apr. 2017
Postdoctoral Researcher

Education

Max-Planck-Institute for Astronomy, Heidelberg, Germany
Ph.D. in Astronomy (Magna Cum Laude) — Oct. 2013 – Jan. 2017

University of Edinburgh, Edinburgh, United Kingdom
MPhys Astrophysics (First Class Honours) — Sep. 2008 – May 2013

Honours & Awards

pH Lectureship — Sep. 2022
Recognize a CfA scientist who shows exceptional promise early in their career.

Harvard Data Science Initiative Research Fund ($9,700) — Mar. 2020
Regularized Maximum Likelihood Imaging: A New Method for Detecting Planets

Ernst Patzer Award — Nov. 2016
Awarded for the best refereed publication by a young scientist.

Pre-Honours Certificate of Merit — May 2011
Awarded for top 5% performance in pre-honours exams.

Pre-Honours Certificate of Merit — May 2010
Awarded for top 5% performance in pre-honours exams.

Publication Summary

20 lead author papers, including one published in *Nature*, and 83 co-author papers, including one published in *Nature*, totaling **3413 citations** (ADS). A full publication list, including those currently under review, can be found at the end of the CV.

Observational Time Summary

I have been awarded over **332 hours** (480 hours) of time on **ALMA** as PI (co-I), including as the `exoALMA` Large Program of which I am PI, **20 hours** (165 hours) on **IRAM** telescopes as PI (co-I), **46 hours** (30 hours) on the **SMA** as PI (co-I) and **8 hours** (18 hours) on **JWST** as co-PI (co-I). I have also been a co-investigator on projects for the **HST**, **VLA**, the **VLT** and the **Magellan** telescopes, with awards of 70 hours, 25 hour and 2 nights, respectively. A break down of PI proposals can be found at the end of the CV.

Professional Services

exoALMA Start of Science Workshop — Dec. 2022
Boston, MA, USA

Vertical Shear Instability Meeting SOC — Nov. 2022
Virtual Meeting

SMA Interferometry School SOC — Mar. 2021
SMA, Hilo, Hawaii, USA

Advanced Data Analysis Techniques for ALMA SOC — Oct. 2020
NRAO, Charlottesville, Virginia, USA [postponed due to Covid-19]

SMA Seminar Organizer 2020 - 2021
Departmental Seminar Series

Visualizing the Kinematics of Planet Formation SOC Oct. 2019
Flatiron Institute, New York City, USA

Postdoc and Research Scientist DEI Representative 2018 – 2019
Department Diversity, Equity and Inclusion Committee Member

Equi-Tea Organizer 2018 – 2019
Diversity, Equity and Inclusion Journal Club

Stars, Planets and Formation Seminar Organizer 2018 – 2019
Departmental Seminar Series

Conversations on Equity and Inclusion Co-organizer 2018 – 2019
Joint Physics / Astronomy / Space Sciences DEI Colloquium Series

NESSF External Reviewer 2018, 2020

Heidelberg MPG Student Workshop Organizer 2016

PSF Coffee Organizer 2015 – 2017
Departmental Seminar Series

MPIA Student Representative 2015 – 2017

MPIA Student Workshop Organizer 2015 – 2016

IMPRS Graduate Student Representative 2013 – 2017

Referee for AAS, A&A, MNRAS and Nature journals

SUPERVISION

Aidan van Duzer MIT 2023 -
Undergraduate Research Opportunity Program

Anna Orgel MIT 2022 -
Undergraduate Research Opportunity Program

Carol Chen MIT 2022 -
Undergraduate Research Opportunity Program

Haochuan Yu Beijing Normal University 2020 - 2022
Undergraduate student.

Alessandra Canta Harvard University 2020 - 2021
Undergraduate student. Co-supervised with Karin Öberg, Harvard

Felipe Alcaron University of Michigan 2019 – 2020
Graduate student. Co-supervised with Ted Bergin and Ke Zhang, UMich.

Jenny Calahan University of Michigan 2019 – 2020
Graduate student. Co-supervised with Ted Bergin and Ke Zhang, UMich.

Deryl Long University of Michigan 2019
Undergraduate student. Co-supervised with Ted Bergin and Ke Zhang, UMich.

Case Hazewinkel University of Michigan 2019
Undergraduate student. Co-supervised with Ted Bergin, UMich.

Jeanne Kwon University of Michigan 2018 – 2019
Undergraduate Research Opportunity Program

Julian Penzinger Ludwig Maximilian University 2016, 2018
Summer student. Co-supervised with Dmitry Semenov, MPIA.

TALKS & SEMINARS

ALMA at 10 Years: Past, Present, and Future Dec. 2023
The Dynamical Structure of Planet Forming Disks *(invited)*

Gordon Conference on the Origins of Solar Systems Jun. 2023
Witnessing the Formation of Giant Planets and their Moons *(invited)*

MATH + X: Planet Formation and Habitability May 2023
Witnessing the Earliest Stages of Planet Formation *(invited)*

Boston University Astrophysics Seminar May 2023
Witnessing the Formation of Giant Planets and their Moons *(invited)*

MIT Haystack Colloquium Apr. 2023
Witnessing the Formation of Giant Planets and their Moons *(invited)*

Ohio State University Astronomy Colloquium Mar. 2023
Witnessing the Formation of Giant Planets and their Moons *(invited)*

Harvard University Department of Earth and Planetary Sciences Colloquium Feb. 2023
Witnessing the Formation of Giant Planets and their Moons *(invited)*

From Clouds to Planets II: The Astrochemical Link Oct. 2022
ALMA's 3D View of Planet Formation *(invited)*

Center for Astrophysics | Harvard & Smithsonian pH Lecture Sep. 2022
Exploring the Youngest Planetary Systems *(invited)*

University of Florida Astronomy Colloquium Feb. 2022
Detecting the Youngest Planets *(invited)*

Penn State CEHW Seminar Series Feb. 2022
Detecting the Youngest Planets *(invited)*

Pan-Experiment Galactic Science Group Seminar Series Nov. 2021
Detecting Molecular Line Polarization in Protoplanetary Disks *(invited)*

Munich Join Astronomical Colloquium Oct. 2021
Mapping the Assembly of Planetary Systems in 6 Dimensions *(invited)*

Center for Astrophysics | Harvard & Smithsonian Colloquium Sep. 2021
Mapping the Assembly of Planetary Systems in 6 Dimensions *(invited)*

ETH Zurich Exoplanets & Habitability Seminar May 2021
Witnessing the Assembly of Planetary Systems *(invited)*

Cambridge Exoplanet Center Seminar May 2021
Witnessing the Assembly of Planetary Systems *(invited)*

Towards the Comprehensive Characterization of Exoplanets: Science at the Interface of Multiple Measurement Techniques Apr. 2021
Transforming ALMA into a Planet Hunting Facility

McMaster University Astrophysics Seminar Apr. 2021
Witnessing the Assembly of Planetary Systems *(invited)*

Circumplanetary Disks II Mar. 2021
Observations and Observational Predictions *(invited)*

Max Planck Research Group Selection Symposium Feb. 2021
Witnessing the Assembly of Planetary Systems *(invited)*

Caltech Dix Planetary Science Department Seminar Feb. 2021
Planet Formation in Six Dimensions *(invited)*

Five Years After HL Tau: A New Era in Planet Formation Dec. 2020
Observing the Kinematics of Gaseous Substructures

Research Unit Transition Disks (RUTD) Conference Oct. 2020
Observing the Dynamics of Planet Disk Interactions *(invited)*

Exoplanets III July 2020
Kinematical Detection and Characterizing of Protoplanets with ALMA

MPIA Königstuhl Colloquium July 2020
Visualizing the Assembly of Planetary Systems *(invited)*

JPL Astrophysics Colloqium Nov. 2019
Witnessing the Dynamics of Planetary Assembly *(invited)*

Visualizing the Kinematics of Planet Formation Oct. 2019
Exploiting ALMA's Potential for Planet Hunting

Gordon Research Seminar June 2019
Unveiling the Dynamics of Planet Formation

IAU Symposium 350: Laboratory Astrophysics Apr. 2019
The Physical Conditions of Planet Formation with Molecular Excitation (invited)

Planet-Forming Disks Mar. 2019
Unveiling the Dynamics of Planet Formation (invited)

NAOJ Theoretical Astronomy Seminar Oct. 2018
Observing the Kinematics of Planet-Disk Interactions with ALMA (invited)

LMU Munich Astronomy Colloquium Aug. 2018
Using Kinematics to Search for Embedded Protoplanets (invited)

University of Tübingen Astronomy Seminar Aug. 2018
Kinematical Detections of Embedded Protoplanets (invited)

Astrophysical Frontiers in the Next Decade and Beyond Apr. 2018
The First Kinematical Detection of Embedded Protoplanets

Magnetic Fields or Turbulence Feb. 2018
A Spatially Resolved Search for Turbulence in TW Hya

MPIA Patzer Awards Colloquium Nov. 2016
Measuring Turbulence in TW Hya with ALMA: Methods and Limitations (invited)

MPIA Königstuhl Colloquium Nov. 2016
Observing the Earliest Stages of Planet Formation (invited)

Astrochemistry with ALMA Cycle 4 Jun. 2016
Detecting Turbulence in Protoplanetary Disks (invited)

Sant-Cugat Forum on Astrophysics Apr. 2016
Turbulence in Protoplanetary Disks: Methods and Limitations

Protoplanetary Discussions Mar. 2016
Turbulence in TW Hya

Chemical Diagnostics of Star and Planet Formation Jan. 2015
Deuterium Fraction in Protoplanetary Disks (invited)

ZAG - IPAG - MPIA Workshop on Planet Formation Jan. 2015
Deuterium Fraction in DM Tau (invited)

Successful Telescope Proposals (as PI)

ALMA PI: **Teague, R.**, 18 hours, 2022.1.00840.S, A ranked 2022
The Most Sensitive Search for Magnetic Fields in a Solar Nebula Analogue

ALMA PI: **Teague, R.**, 5 hours, 2022.1.00887.S, B ranked 2022
Ultra-High Velocity Resolutions of the Planet-Disk Interactions in TW Hya

ALMA PI: **Teague, R.**, 11 hours, 2022.1.00799.S, C ranked 2022
Mapping the Influence of Magnetic Fields on the Evolution of HD 163296

ALMA PI: **Teague, R.**, 33 hours, 2022.1.00993.S, C ranked 2022
Mapping the Magnetic Field Morphology in TW Hya

SMA PI: **Teague, R.**, 30 hours, 2020A-S033, A ranked 2021b
Is the Magneto-Rotational Instability Driving Protoplanetary Disk Evolution?

ALMA PI: **Teague, R.**, 183 hours, 2021.1.01123.L, A ranked 2021
co-PIs: Bensity, M., Facchini, S., Fukagawa, M. & Pinte, C.
exoALMA Large Program

JWST co-PIs: Cugno, G. & **Teague, R.**, 8 hours, 2153, Cycle 1
Detecting a Young 2 Jupiter Mass Planet Embedded in the Disk of HD 163296

SMA PI: **Teague, R.**, 6 hours, 2020A-S033, B ranked 2020b
A 3D Exploration of an Edge-On Self-Gravitating Disk

SMA PI: **Teague, R.**, 10 hours, 2020A-S033, A ranked 2020a
A 3D Exploration of an Edge-On Self-Gravitating Disk

ALMA PI: **Teague, R.**, 13.8 hours, 2019.1.01357.S, A ranked 2019
Constraining the H2 Surface Density Profile in IM Lup

ALMA PI: **Teague, R.**, 3.0 hours, 2019.1.00794.S, B ranked 2019
Detecting the Photoevaporative Wind in IM Lup

ALMA PI: **Teague, R.**, 33.2 hours, 2019.1.00419.S, B ranked — 2019
Mapping the 3D Kinematic Structure of Planet Formation

ALMA PI: **Teague, R.**, 20.2 hours, 2018.A.00021.S, DDT — 2019
Confirmation of an Embedded Planet in the Disk of TW Hya

Magellan/MagAO PI: **Teague, R.**, 6 hours — 2018
Searching for Wide Separation Planets in AS 209

ALMA PI: **Teague, R.**, 6.7 hours, 2018.1.00980.S, A ranked — 2018
An Unambiguous Detection of a Magnetic Field in a Protoplanetary Disk

ALMA PI: **Teague, R.**, 5.3 hours, 2016.1.00440.S, A ranked — 2016
Model Independent Study of Turbulence and Temperature in TW Hya

IRAM PdBI PI: **Teague, R.**, 19.9 hours, W14BI, C ranked — 2014
Disk Diagnostics with Deuteration

(AS CO-I) Including over 480 hours with **ALMA**, 150 hours with **IRAM** telescopes, 30 hours with the **SMA**, 50 hours with the **VLA**, 70 hours with **VLT** (X-SHOOTER, SPHERE and CRIRES), 2 nights with **Magellan** (MagAO/MagAOx), 3 orbits with **HST** and 18 hours with **JWST**.

OUTREACH

University of Michigan Lowbrow Astronomers — Nov. 2020
How to Find Baby Planets

SCHOOL PARTICIPATION

45th Saas-Fee Course — 2015
From Protoplanetary Disks to Planet Formation

Heidelberg Graduate School on Fundamental Physics — 2015

DIANA Protoplanetary Disk School — 2014

OBSERVING EXPERIENCE

Sub-Millimeter Array — Sep. 2019 –
Monthly rota

MPG/ESO 2.2m — 2016
14 nights

TEACHING

12.410 - Observational Techniques for Optical Astronomoy — 2022

Wavefront Analysis Laboratory Instructor — 2014

PUBLICATIONS (LEAD AUTHOR)

20. **Teague, R.**, Bae, J., Andrews, S. M., et al., 2022, ApJ, 936, 163
Mapping the Complex Kinematic Substructure in the TW Hya Disk

19. **Teague, R.**, Bae, J., Benisty, M., et al., 2022, ApJ, 930, 144
Gas and Dust Shadows in the TW Hydrae Disk

18. **Teague, R.**, Law, C. J., Huang, J. et al., 2021, JOSS, 6
`disksurf`*: Extracting the 3D Structure of Protoplanetary Disks*

17. **Teague, R.**, Bae, J., Aikawa, Y., et al., 2021, ApJS, 257
MAPS XVIII: Kinematic Substructure in the Disks of HD 163296 and MWC 480

16. **Teague, R.**, Hull, C. L. H., Bergin, E. A., et al., 2021, ApJ, 922
Discovery of Molecular Line Polarization in the Disk of TW Hya

15. **Teague, R.** & Loomis, R. A., 2020, ApJ, 899
The Excitation Conditions of CN in TW Hya

14. **Teague, R.**, Jankovic, M. R., Haworth, T. J., et al., 2020, MNRAS, 495
A Three Dimensional View of Gomez's Hamburger

13. **Teague, R.**, 2019, IAU Proceedings Series, 350
Tracing The Physical Conditions of Planet Formation with Molecular Excitation

12. **Teague, R.**, Bae, J., Huang, J., Bergin, E. 2019, ApJL, 884
Spiral Structure in the Gas Disk of TW Hya

11. **Teague, R.**, Bae, J., Bergin, E. 2019, Nature, 574
Meridional Flows in the Disk Around a Young Star

10. **Teague, R.**, 2019, Journal of Open Source Software, 4
GoFish: Fishing for Line Observations in Protoplanetary Disks

9. **Teague, R.**, 2019, RNAAS, 3
[non-refereed] Statistical Uncertainties in Moment Maps of Line Emission

8. **Teague, R.**, 2019, Journal of Open Source Software, 4
eddy: Extracting Protoplanetary Disk Dynamics with Python

7. **Teague, R.**, Bae, J., Birnstiel, T. & Bergin, E., 2018, ApJ, 868
Evidence For A Vertical Dependence on the Pressure Structure in AS 209

6. **Teague, R.** & Foreman-Mackey, D., 2018, RNAAS, 2
[non-refereed] A Robust Method to Measure Centroids of Spectral Lines

5. **Teague, R.**, Henning, T., Guilloteau, S., et al., 2018, ApJ, 864
Temperature, Mass, and Turbulence: A Spatially Resolved Multiband Non-LTE Analysis of CS in TW Hya

4. **Teague, R.**, Bae, J., Bergin, E. A., et al., 2018, ApJL, 860
A Kinematical Detection of Two Embedded Jupiter-mass Planets in HD 163296

3. **Teague, R.**, Semenov, D., Gorti, U., et al., 2017, ApJ, 835
Surface Density Perturbations in the TW Hydrae Disk at 95 au Traced by Molecular Emission

2. **Teague, R.**, Guilloteau, S., Semenov, D., et al., 2016, A&A, 592
Measuring turbulence in TW Hya with ALMA: methods and limitations

1. **Teague, R.**, Semenov, D., Guilloteau, S., et al., 2015, A&A, 574
Chemistry in disks. IX. Observations and modelling of HCO^+ and DCO^+ in DM Tauri

(CO-AUTHOR) All papers with a substantial component of student supervision are marked.

83. De, K., MacLeod, M., Karambelkar, V., et al., Nature, in press
An infrared transient from a star engulfing a planet

82. Lankhaar, B., **Teague, R.**, A&A, in press
3D magnetic field imaging of protoplanetary disks using Zeeman broadening and linear polarization observations

81. Galloway-Spreitsma, M., Bae, J., **Teague, R.**, et al., ApJ, in press
MAPS: Complex Kinematics in the AS 209 Disk Induced by Forming Planet and Disk Winds

80. Law, C. J., **Teague, R.**, Öberg, K., , et al., ApJ, in press
[student paper] Mapping Protoplanetary Disk Vertical Structure with CO Isotopologue Line Emission

79. Pinte, C., **Teague, R.**, Flaherty, K., et al., 2023Protoplanets & Planets VII, in press
Kinematic Structures in Planet-Forming Disks

78. Stadler, J., Benisty, M., Izquierdo, A., et al., 2023, A&AL, 670
A kinematically-detected planet candidate in a transition disk

77. Calahan, J., Bergin, E. A., Bosman, A. D., et al., 2023, Nature Astronomy, 94c
UV-Driven Chemistry as a Signpost of Late-stage Planet Formation

76. Muñoz-Romero, C. E. Öberg, K. I., Law, C. J., et al., 2023 ApJ, 943
Cold Deuterium Fractionation in the Nearest Planet-Forming Disk

75. Alarcon, F., Bergin, E. A. & **Teague, R.**, 2022, ApJL, 941
A localized kinematic structure detected in atomic carbon emission spatially coincident with a proposed protoplanet in the HD 163296 disk

74. Garg, H., Pinte, C., Price, D. J., et al., 2022, MNRAS, 517, 4
Kinematic evidence for a planet carving the gap of HD 169142

73. Bae, J., **Teague, R.**, Andrews, S. M., et al., ApJL, 934
MAPS: A Circumplanetary Disk Candidate in Molecular-line Emission in the AS 209 Disk

72. Wölfer, L., Facchini, S., van der Marel, N., et al., 2022, A&A, in press
Kinematics and Brightness Temperature of Transition Discs

71. Law, C. J., Crystian, S., **Teague, R.**, et al., 2022, ApJ, 932
[student paper] CO Line Emission Surfaces and Vertical Structure in Mid-Inclination Protoplanetary Disks

70. Ilee, J. D., Walsh, C., Jennings, J., , et al., 2022, MNRAS, in 515
Unveiling the outer dust disc of TW Hya with deep ALMA observations

69. Long, F., Andrews S. M., Rosotti, G., et al., 2022, ApJ, 931
Gas Disk Sizes from CO Line Observations: A Test of Angular Momentum Evolution

68. Hull, C. H. L., Haifeng Y., Cortés, P. C., et al., 2022, ApJ, 930
Polarization from Aligned Dust Grains in the β Pic Debris Disk

67. Bohn, A. J., Benisty, M., Perraut, K., et al., 2022, A&A, 658
Probing Inner and Outer Disk Misalignments in Transition Disks

66. Yu, H., **Teague, R.**, Bae, J. & Öberg, K., 2021, ApJL, 920
[student paper] Mapping the 3D Kinematical Structure of the Gas Disk of HD 169142

65. Öberg, K. I., Guzmán, V. V., Walsh, C., et al., 2021, ApJS, 257
MAPS I: Program Overview and Highlights

64. Czekala, I., Loomis, R. A., **Teague, R.**, et al., 2021, ApJS, 257
MAPS II: CLEAN Strategies for Synthesizing Images of Molecular Line Emission in Protoplanetary Disks

63. Law C. J., Loomis, R. A., **Teague, R.**, et al., 2021, ApJS, 257
[student paper] MAPS III: Characteristics of Radial Chemical Substructures

62. Law C. J., **Teague, R.**, Loomis, R. A., et al., 2021, ApJS, 257
[student paper] MAPS IV: Vertical Disk Chemical Structures

61. Zhang, K., Booth, A. S., Law, C. J., et al., 2021, ApJS, 257
MAPS V: CO Gas Distributions

60. Guzmán, V., Ö, K. I., Aikawa, Y., et al., 2021, ApJS, 257
MAPS VI: Distribution of the small organics HCN, C_2H and H_2CO

59. Bosman, A., Alarcon, F., Bergin, E. A., et al., 2021, ApJS, 257
MAPS VII: Sub-stellar O/H and C/H and Super-stellar C/O in Planet Feeding Gas

58. Alarcon, F., Bosman, A., Bergin, E. A., et al., 2021, ApJS, 257
MAPS VIII: Gap chemistry in AS 209 – Gas Depletion or Chemical Processing?

57. Ilee, J. D., Walsh, C., Booth, A. S., et al., 2021, ApJS, 257
MAPS IX: Distribution and properties of the Large Organic molecules HC_3N, CH_3CN and c-C_3H_2

56. Cataldi, G., Yamato, Y., Aikawa, Y., et al., 2021, ApJS, 257
MAPS X: Distributions of Deuterated Molecules

55. Bergner, J., Öberg, K. I., Bosman, A., et al., 2021, ApJS, 257
MAPS XI: CN and HCN as Tracers of Photochemistry in Disks

54. Le Gal, R., Öberg, K. I., Aikawa, Y., et al., 2021, ApJS, 257
MAPS XII: Inferring the C/O and S/H ratios in Protoplanetary Disks with Sulfur Molecules

53. Aikawa, Y., Cataldi, G., Yamato, Y., et al., 2021, ApJS, 257
MAPS XIII: HCO^+ and Disk Ionization

52. Sierra, A., Peréz, L. M., Guzmán, V. V., et al., 2021, ApJS, 257
MAPS XIV: Revealing Dust Disks Substructures From Nulti-wavelength Continuum Emission

51. Bosman, A., Bergin, E. A., Öberg, K. I., et al., 2021, ApJS, 257
MAPS XV: Tracing Protoplanetary Disk Structure Within 20 AU

50. Booth, A. S., Tabone, B., Aikawa, Y., et al., 2021, ApJS, 257
MAPS XVI: Zooming in on the HD 163296 Disk Wind with CO Isotopologues

49. Calahan, J., Bergin, E. A., Zhang, K., et al., 2021, ApJS, 257
MAPS XVII: Uncovering the 2D Thermal Structure of HD 163296

48. Huang, J., Bergin, E. A., Öberg, K. I., et al., 2021, ApJS, 257
MAPS XIX: Spiral Arms, a Tail, and Diffuse Structures Traced by CO Toward the GM Aur Disk

47. Schwarz, K., Calahan, J., Zhang, K., et al., 2021, ApJS, 257
MAPS XX: The Massive Disk Around GM Aurigae

46. Canta, A., **Teague, R.**, le Gal., R., et al., 2021, ApJ, 922
[student paper] The first detection of CH_2CN in a protoplanetary disk

45. Benisty, M., Bae, J., Facchini, S., et al., 2021, ApJL, 916
A Circumplanetary Disk Around PDS 70c

44. Andrews, S. M., Elder, W., Zhang, S., et al., 2021, ApJ, 916
Limits on Millimeter Continuum Emission from Circumplanetary Material in the DSHARP Disks

43. Long, F., Andrews, S. M., Vega, J., et al., 2021, ApJ, 915
The Architecture of the V892 Tau System: the Binary and its Circumbinary Disk

42. Rich, E., **Teague, R.**, Monnier, J., et al. 2021, ApJ, 913
Are Small Dust Grains actually coupled to the Gas in Protoplanetary Disks?

41. Pegues, J., Öberg, K. I., Bergner, J. B., et al., 2021, ApJ, 911
An ALMA Survey of Chemistry in Disks around Late-Type M-Stars

40. Facchini, S., **Teague, R.**, Bae, J., et al., 2021, ApJ, 162
The chemical inventory of the planet-hosting disk PDS 70

39. Boehler, Y., Ménard, F., Robert, C. M. T., et al., 2021, A&A, 650
Vortex-like kinematic signal, spirals, and beam smearing effect in the HD 142527 disk

38. Bae, J., **Teague, R.** & Zhu, Z., 2021, ApJ, 912
Tightly-Wound Spirals Driven by Buoyancy Resonance in Protoplanetary Disks

37. Cleeves, L. I., Loomis, R. A., **Teague, R.**, et al., 2021, ApJ, 911
The TW Hya Rosetta Stone Project IV: A hydrocarbon rich disk atmosphere

36. Pegues, J., Czekala, I., Andrews, S. M., 2021, ApJ, 908
Dynamical Masses and Stellar Evolutionary Model Predictions of Low-Mass M-Stars

35. Harrison, R. E., Looney, L. W., Stephens, I. W., et al., 2021, ApJ, 908
ALMA CN Zeeman Observations of AS 209: Limits on Magnetic Field Strength and Magnetically Driven Accretion Rate

34. Garufi, A., Podio, L., Codella, C., et al., 2021, A&A, 645
ALMA chemical survey of disk-outflow sources in Taurus (ALMA-DOT V)

33. Calahan, J., Bergin, E. A., Zhang, K., et al., 2021, ApJ, 908
[student paper] The TW Hya Rosetta Stone Project. III. Resolving the Gaseous Thermal Profile of the Disk

32. Wölfer, L., Facchini, S., Kurtovic, N. T., et al., 2021, A&A, 648
A highly non-Keplerian protoplanetary disc

31. Terwisscha, J. v. S., Hogerheijde, M. R., Cleeves, L. I., et al., 2021, ApJ, 906
Spatially resolved emission of formaldehyde hints at low-temperature gas-phase formation

30. Öberg, K., Cleeves, L. I., Bergner, J., et al., 2021, AJ, 161
The TW Hya Rosetta Stone Project. I. Radial and vertical distributions of DCN and DCO^+ in the TW Hya disk

29. Podio, L., Garufi, A., Codella, C., et al., 2020, A&A, 644
ALMA chemical survey of disk-outflow sources in Taurus (ALMA-DOT II)

28. Alarcón, F., **Teague, R.**, Zhang, K., et al., 2020, ApJ, 905
[student paper] Chemical Evolution in a Protoplanetary Disk with Dust Substructures

27. White, J. A., Kóspál, Á, Hughes, A. G. Hughes, et al., 2020, ApJ, 904
ALMA and VLA Observations of EX Lupi in its Quiescent State

26. Stephens, I. W., Fernández-López, M., Li, Z.-H., et al., 2020, ApJ, 901
Low Level Carbon Monoxide Line Polarization in two Protoplanetary Disks

25. Hall, C., Dong, R., **Teague, R.,**, et al., 2020, ApJ, 904
Kinematic Evidence for Gravitational Instability

24. Long, D. E., Zhang, K., **Teague, R.**, et al., 2020, ApJL, 895
[student paper] Hints of a Population of Solar System Analog Planets from ALMA

23. Facchini, S., Benisty, M., Bae, J., et al., 2020, A&A, 639
Annular substructures in the transition disks around LkCa 15 and J1610

22. Garufi, A., Codella, C., Rygl, K., et al., 2020, A&A, 636
ALMA chemical survey of disk-outflow sources in Taurus (ALMA-DOT I)

21. Rosotti, G., **Teague, R.**, Dullemond, C., et al., 2020, MNRAS, 495
The Efficiency of Dust Trapping in Ringed Protoplanetary Discs

20. Semenov, D. & **Teague, R.** 2020, Europhysics News, 51
Accretion disks around young stars: the cradles of planet formation

19. Huang, J., Andrews, S. M., Dullemond, C. P., et al., 2020, ApJ, 891
A multi-frequency ALMA characterization of substructures in the GM Aur protoplanetary disk

18. Rosotti., G., Benisty, M., Juhazs, A., et al., 2020, MNRAS, 491
Spiral arms in the proto-planetary disc HD100453 detected with ALMA

17. Bae, J., Zhu, Z., Baruteau, C., et al., 2019, ApJL, 884
An Ideal Testbed for Planet-disk Interaction: Two Giant Protoplanets in Resonance Shaping the PDS 70 Disk

16. Isella, A., Benisty, M., **Teague, R.**, et al., 2019, ApJL, 879
Detection of Continuum Submillimeter Emission Associated with Candidate Protoplanets

15. Cleeves, L. I., Loomis, R. A., **Teague, R.**, et al., 2019, BAAS, 51
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