

Curriculum Vitae

Richard Teague

CONTACT INFORMATION	Department of Earth, Atmospheric, and Planetary Sciences Massachusetts Institute of Technology Cambridge, MA 02139, USA	(+1) 617-495-7259 https://richteague.github.io rteague@mit.edu
EMPLOYMENT	Massachusetts Institute of Technology Department of Earth, Atmospheric and Planetary Sciences <i>Kerr McGee Development Assistant Professor</i> Smithsonian Astrophysical Observatory <i>Research Associate</i> Center for Astrophysics Harvard & Smithsonian <i>Submillimeter Array Fellow</i> University of Michigan <i>Postdoctoral Researcher</i> Max-Planck-Institute for Astronomy <i>Postdoctoral Researcher</i>	Jul. 2022 – Present May 2022 – Apr. 2025 Sep. 2019 – Apr. 2022 May 2017 – Jul. 2019 Jan. 2017 – Apr. 2017
EDUCATION	Max-Planck-Institute for Astronomy , Heidelberg, Germany Ph.D. in Astronomy (Magna Cum Laude) University of Edinburgh , Edinburgh, United Kingdom MPhys Astrophysics (First Class Honours)	Oct. 2013 – Jan. 2017 Sep. 2008 – May 2013
HONOURS & AWARDS	pH Lectureship <i>Recognize a CfA scientist who shows exceptional promise early in their career.</i> Harvard Data Science Initiative Research Fund (\$9,700) <i>Regularized Maximum Likelihood Imaging: A New Method for Detecting Planets</i> Ernst Patzer Award <i>Awarded for the best refereed publication by a young scientist.</i> Pre-Honours Certificate of Merit <i>Awarded for top 5% performance in pre-honours exams.</i> Pre-Honours Certificate of Merit <i>Awarded for top 5% performance in pre-honours exams.</i>	Sep. 2022 Mar. 2020 Nov. 2016 May 2011 May 2010
PUBLICATION SUMMARY	20 lead author papers , including one published in <i>Nature</i> , and 84 co-author papers, including one published in <i>Nature</i> , totaling 3491 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 26 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 <i>Boston, MA, USA</i> Vertical Shear Instability Meeting SOC <i>Virtual Meeting</i> SMA Interferometry School SOC <i>SMA, Hilo, Hawaii, USA</i> Advanced Data Analysis Techniques for ALMA SOC <i>NRAO, Charlottesville, Virginia, USA [postponed due to Covid-19]</i>	Dec. 2022 Nov. 2022 Mar. 2021 Oct. 2020

	SMA Seminar Organizer <i>Departmental Seminar Series</i>	2020 - 2021
	Visualizing the Kinematics of Planet Formation SOC <i>Flatiron Institute, New York City, USA</i>	Oct. 2019
	Postdoc and Research Scientist DEI Representative <i>Department Diversity, Equity and Inclusion Committee Member</i>	2018 – 2019
	Equi-Tea Organizer <i>Diversity, Equity and Inclusion Journal Club</i>	2018 – 2019
	Stars, Planets and Formation Seminar Organizer <i>Departmental Seminar Series</i>	2018 – 2019
	Conversations on Equity and Inclusion Co-organizer <i>Joint Physics / Astronomy / Space Sciences DEI Colloquium Series</i>	2018 – 2019
	NESSF External Reviewer	2018, 2020
	Heidelberg MPG Student Workshop Organizer	2016
	PSF Coffee Organizer <i>Departmental Seminar Series</i>	2015 – 2017
	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 <i>Undergraduate Research Opportunity Program</i>	2023 -
	Anna Orgel MIT <i>Undergraduate Research Opportunity Program</i>	2022 -
	Carol Chen MIT <i>Undergraduate Research Opportunity Program</i>	2022 -
	Haochuan Yu Beijing Normal University <i>Undergraduate student.</i>	2020 - 2022
	Alessandra Canta Harvard University <i>Undergraduate student. Co-supervised with Karin Öberg, Harvard</i>	2020 - 2021
	Felipe Alcaron University of Michigan <i>Graduate student. Co-supervised with Ted Bergin and Ke Zhang, UMich.</i>	2019 – 2020
	Jenny Calahan University of Michigan <i>Graduate student. Co-supervised with Ted Bergin and Ke Zhang, UMich.</i>	2019 – 2020
	Deryl Long University of Michigan <i>Undergraduate student. Co-supervised with Ted Bergin and Ke Zhang, UMich.</i>	2019
	Case Hazewinkel University of Michigan <i>Undergraduate student. Co-supervised with Ted Bergin, UMich.</i>	2019
	Jeanne Kwon University of Michigan <i>Undergraduate Research Opportunity Program</i>	2018 – 2019
	Julian Penzinger Ludwig Maximilian University <i>Summer student. Co-supervised with Dmitry Semenov, MPIA.</i>	2016, 2018
TALKS & SEMINARS	ALMA at 10 Years: Past, Present, and Future <i>The Dynamical Structure of Planet Forming Disks</i>	Dec. 2023 (invited)
	Gordon Conference on the Origins of Solar Systems <i>Witnessing the Formation of Giant Planets and their Moons</i>	Jun. 2023 (invited)
	MATH + X: Planet Formation and Habitability <i>Witnessing the Earliest Stages of Planet Formation</i>	May 2023 (invited)

Boston University Astrophysics Seminar <i>Witnessing the Formation of Giant Planets and their Moons</i>	May 2023 (invited)
MIT Haystack Colloquium <i>Witnessing the Formation of Giant Planets and their Moons</i>	Apr. 2023 (invited)
Ohio State University Astronomy Colloquium <i>Witnessing the Formation of Giant Planets and their Moons</i>	Mar. 2023 (invited)
Harvard University Department of Earth and Planetary Sciences Colloquium <i>Witnessing the Formation of Giant Planets and their Moons</i>	Feb. 2023 (invited)
From Clouds to Planets II: The Astrochemical Link <i>ALMA's 3D View of Planet Formation</i>	Oct. 2022 (invited)
Center for Astrophysics Harvard & Smithsonian pH Lecture <i>Exploring the Youngest Planetary Systems</i>	Sep. 2022 (invited)
University of Florida Astronomy Colloquium <i>Detecting the Youngest Planets</i>	Feb. 2022 (invited)
Penn State CEHW Seminar Series <i>Detecting the Youngest Planets</i>	Feb. 2022 (invited)
Pan-Experiment Galactic Science Group Seminar Series <i>Detecting Molecular Line Polarization in Protoplanetary Disks</i>	Nov. 2021 (invited)
Munich Join Astronomical Colloquium <i>Mapping the Assembly of Planetary Systems in 6 Dimensions</i>	Oct. 2021 (invited)
Center for Astrophysics Harvard & Smithsonian Colloquium <i>Mapping the Assembly of Planetary Systems in 6 Dimensions</i>	Sep. 2021 (invited)
ETH Zurich Exoplanets & Habitability Seminar <i>Witnessing the Assembly of Planetary Systems</i>	May 2021 (invited)
Cambridge Exoplanet Center Seminar <i>Witnessing the Assembly of Planetary Systems</i>	May 2021 (invited)
Towards the Comprehensive Characterization of Exoplanets: Science at the Interface of Multiple Measurement Techniques <i>Transforming ALMA into a Planet Hunting Facility</i>	Apr. 2021
McMaster University Astrophysics Seminar <i>Witnessing the Assembly of Planetary Systems</i>	Apr. 2021 (invited)
Circumplanetary Disks II <i>Observations and Observational Predictions</i>	Mar. 2021 (invited)
Max Planck Research Group Selection Symposium <i>Witnessing the Assembly of Planetary Systems</i>	Feb. 2021 (invited)
Caltech Dix Planetary Science Department Seminar <i>Planet Formation in Six Dimensions</i>	Feb. 2021 (invited)
Five Years After HL Tau: A New Era in Planet Formation <i>Observing the Kinematics of Gaseous Substructures</i>	Dec. 2020
Research Unit Transition Disks (RUTD) Conference <i>Observing the Dynamics of Planet Disk Interactions</i>	Oct. 2020 (invited)
Exoplanets III <i>Kinematical Detection and Characterizing of Protoplanets with ALMA</i>	July 2020
MPIA Königstuhl Colloquium <i>Visualizing the Assembly of Planetary Systems</i>	July 2020 (invited)
JPL Astrophysics Colloquium <i>Witnessing the Dynamics of Planetary Assembly</i>	Nov. 2019 (invited)
Visualizing the Kinematics of Planet Formation <i>Exploiting ALMA's Potential for Planet Hunting</i>	Oct. 2019
Gordon Research Seminar <i>Unveiling the Dynamics of Planet Formation</i>	June 2019

	IAU Symposium 350: Laboratory Astrophysics <i>The Physical Conditions of Planet Formation with Molecular Excitation</i>	Apr. 2019 (invited)
	Planet-Forming Disks <i>Unveiling the Dynamics of Planet Formation</i>	Mar. 2019 (invited)
	NAOJ Theoretical Astronomy Seminar <i>Observing the Kinematics of Planet-Disk Interactions with ALMA</i>	Oct. 2018 (invited)
	LMU Munich Astronomy Colloquium <i>Using Kinematics to Search for Embedded Protoplanets</i>	Aug. 2018 (invited)
	University of Tübingen Astronomy Seminar <i>Kinematical Detections of Embedded Protoplanets</i>	Aug. 2018 (invited)
	Astrophysical Frontiers in the Next Decade and Beyond <i>The First Kinematical Detection of Embedded Protoplanets</i>	Apr. 2018
	Magnetic Fields or Turbulence <i>A Spatially Resolved Search for Turbulence in TW Hya</i>	Feb. 2018
	MPIA Patzer Awards Colloquium <i>Measuring Turbulence in TW Hya with ALMA: Methods and Limitations</i>	Nov. 2016 (invited)
	MPIA Königstuhl Colloquium <i>Observing the Earliest Stages of Planet Formation</i>	Nov. 2016 (invited)
	Astrochemistry with ALMA Cycle 4 <i>Detecting Turbulence in Protoplanetary Disks</i>	Jun. 2016 (invited)
	Sant-Cugat Forum on Astrophysics <i>Turbulence in Protoplanetary Disks: Methods and Limitations</i>	Apr. 2016
	Protoplanetary Discussions <i>Turbulence in TW Hya</i>	Mar. 2016
	Chemical Diagnostics of Star and Planet Formation <i>Deuterium Fraction in Protoplanetary Disks</i>	Jan. 2015 (invited)
	ZAG - IPAG - MPIA Workshop on Planet Formation <i>Deuterium Fraction in DM Tau</i>	Jan. 2015 (invited)
SUCCESSFUL TELESCOPE PROPOSALS (AS [CO-]PI)	JWST PI: Benisty, M. , 18 hours, 3254 coPIs: Facchini, S., Fukagawa, M., Pinte, C. & Teague, R. <i>Direct detection of kinematically-detected protoplanet candidates</i>	Cycle 2
	ALMA PI: Teague, R. , 18 hours, 2022.1.00840.S, A ranked <i>The Most Sensitive Search for Magnetic Fields in a Solar Nebula Analogue</i>	2022
	ALMA PI: Teague, R. , 5 hours, 2022.1.00887.S, B ranked <i>Ultra-High Velocity Resolutions of the Planet-Disk Interactions in TW Hya</i>	2022
	ALMA PI: Teague, R. , 11 hours, 2022.1.00799.S, C ranked <i>Mapping the Influence of Magnetic Fields on the Evolution of HD 163296</i>	2022
	ALMA PI: Teague, R. , 33 hours, 2022.1.00993.S, C ranked <i>Mapping the Magnetic Field Morphology in TW Hya</i>	2022
	SMA PI: Teague, R. , 30 hours, 2020A-S033, A ranked <i>Is the Magneto-Rotational Instability Driving Protoplanetary Disk Evolution?</i>	2021b
	ALMA PI: Teague, R. , 183 hours, 2021.1.01123.L, A ranked co-PIs: Benisty, M., Facchini, S., Fukagawa, M. & Pinte, C. <i>exoALMA Large Program</i>	2021
	JWST PIs: Cugno, G. & Teague, R. , 8 hours, 2153, <i>Detecting a Young 2 Jupiter Mass Planet Embedded in the Disk of HD 163296</i>	Cycle 1
	SMA PI: Teague, R. , 6 hours, 2020A-S033, B ranked <i>A 3D Exploration of an Edge-On Self-Gravitating Disk</i>	2020b
	SMA PI: Teague, R. , 10 hours, 2020A-S033, A ranked <i>A 3D Exploration of an Edge-On Self-Gravitating Disk</i>	2020a

	ALMA PI: Teague, R. , 13.8 hours, 2019.1.01357.S, A ranked <i>Constraining the H2 Surface Density Profile in IM Lup</i>	2019
	ALMA PI: Teague, R. , 3.0 hours, 2019.1.00794.S, B ranked <i>Detecting the Photoevaporative Wind in IM Lup</i>	2019
	ALMA PI: Teague, R. , 33.2 hours, 2019.1.00419.S, B ranked <i>Mapping the 3D Kinematic Structure of Planet Formation</i>	2019
	ALMA PI: Teague, R. , 20.2 hours, 2018.A.00021.S, DDT <i>Confirmation of an Embedded Planet in the Disk of TW Hya</i>	2019
	Magellan/MagAO PI: Teague, R. , 6 hours <i>Searching for Wide Separation Planets in AS 209</i>	2018
	ALMA PI: Teague, R. , 6.7 hours, 2018.1.00980.S, A ranked <i>An Unambiguous Detection of a Magnetic Field in a Protoplanetary Disk</i>	2018
	ALMA PI: Teague, R. , 5.3 hours, 2016.1.00440.S, A ranked <i>Model Independent Study of Turbulence and Temperature in TW Hya</i>	2016
	IRAM PdBI PI: Teague, R. , 19.9 hours, W14BI, C ranked <i>Disk Diagnostics with Deuteration</i>	2014
(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 <i>How to Find Baby Planets</i>	Nov. 2020
SCHOOL PARTICIPATION	45th Saas-Fee Course <i>From Protoplanetary Disks to Planet Formation</i>	2015
	Heidelberg Graduate School on Fundamental Physics	2015
	DIANA Protoplanetary Disk School	2014
OBSERVING EXPERIENCE	Sub-Millimeter Array <i>Monthly rota</i>	Sep. 2019 –
	MPG/ESO 2.2m <i>14 nights</i>	2016
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 <i>Mapping the Complex Kinematic Substructure in the TW Hya Disk</i>	
	19. Teague, R. , Bae, J., Benisty, M., et al., 2022, ApJ, 930, 144 <i>Gas and Dust Shadows in the TW Hydrae Disk</i>	
	18. Teague, R. , Law, C. J., Huang, J. et al., 2021, JOSS, 6 <i>disksurf: Extracting the 3D Structure of Protoplanetary Disks</i>	
	17. Teague, R. , Bae, J., Aikawa, Y., et al., 2021, ApJS, 257 <i>MAPS XVIII: Kinematic Substructure in the Disks of HD 163296 and MWC 480</i>	
	16. Teague, R. , Hull, C. L. H., Bergin, E. A., et al., 2021, ApJ, 922 <i>Discovery of Molecular Line Polarization in the Disk of TW Hya</i>	
	15. Teague, R. & Loomis, R. A., 2020, ApJ, 899 <i>The Excitation Conditions of CN in TW Hya</i>	
	14. Teague, R. , Jankovic, M. R., Haworth, T. J., et al., 2020, MNRAS, 495 <i>A Three Dimensional View of Gomez's Hamburger</i>	

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.
84. Balsalobre-Ruza, O., de Gregorio-Monsalvo, I., Lillo-Box, I., et al., A&A, in press
Tentative co-orbital submillimeter emission within the Lagrangian point L5 of the protoplanet PDS 70 b
 83. De, K., MacLeod, M., Karambelkar, V., et al., Nature, 617
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., 2023 Protoplanets & 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 Disks
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, C₂H and H₂CO
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 HC₃N, CH₃CN and c-C₃H₂
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., Pérez, L. M., Guzmán, V. V., et al., 2021, ApJS, 257
MAPS XIV: Revealing Dust Disks Substructures From Multi-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 CH₂CN 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
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