

CONTACT INFORMATION	Center for Astrophysics 60 Garden Street MS 78 Cambridge, MA, 02138	(+1) 617-495-7259 https://richteague.github.io richard.d.teague@cfa.harvard.edu
------------------------	---	--

CITIZENSHIP	United Kingdom
-------------	----------------

RESEARCH EXPERIENCE	Smithsonian Astrophysical Observatory <i>Submillimeter Array Fellow</i>	Sep. 2019 – Apr. 2020
	University of Michigan <i>Postdoctoral Researcher</i>	May 2017 – Jul. 2019
	Max-Planck-Institute for Astronomy <i>Postdoctoral Researcher</i>	Jan. 2017 – Apr. 2017

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)	Sept. 2008 – May 2013

HONOURS & AWARDS	Ernst Patzer Award <i>Awarded for the best refereed publication by a young scientist.</i>	Nov. 2016
	Pre-Honours Certificate of Merit <i>Awarded for top 5% performance in pre-honours exams.</i>	May 2011
	Pre-Honours Certificate of Merit <i>Awarded for top 5% performance in pre-honours exams.</i>	May 2010

PUBLICATION SUMMARY	13 first author papers , including one published in <i>Nature</i> , and 19 co-author papers, totaling 364 citations . A full bibliography can be found at the end of the CV. Data from NASA's ADS.
------------------------	--

OBSERVATIONAL TIME SUMMARY	I have been awarded over 82 hours (200 hours) of time on ALMA as PI (co-I), 20 hours (150 hours) on IRAM telescopes as PI (co-I). A break down of proposals can be found at the end of the CV.
-------------------------------	--

PROFESSIONAL SERVICES	Advanced Data Analysis Techniques for ALMA SOC <i>NRAO, Charlottesville, Virginia, USA</i>	Oct. 2020
	Visualizing the Kinematics of Planet Formation SOC <i>Flatiron Institute, New York City, USA</i>	Oct. 2019

	Postdoc and Research Scientist DEI Representative	2018 – 2019
	<i>Department Diversity, Equity and Inclusion Committee Member</i>	
	Equi-Tea Organizer	2018 – 2019
	<i>Diversity, Equity and Inclusion Journal Club</i>	
	Stars, Planets and Formation Seminar Organizer	2018 – 2019
	<i>Departmental Seminar Series</i>	
	Conversations on Equity and Inclusion Co-organizer	2018 – 2019
	<i>Joint Physics / Astronomy / Space Sciences DEI Colloquium Series</i>	
	NESSF External Reviewer	2018 –
	Heidelberg MPG Student Workshop Organizer	2016
	PSF Coffee Organizer	2015 – 2017
	<i>Departmental Seminar Series</i>	
	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	Felipe Alcaron University of Michigan	2019 –
	<i>Graduate student. Co-supervised with Ted Bergin and Ke Zhang, UMich.</i>	
	Jenny Calahan University of Michigan	2019 –
	<i>Graduate student. Co-supervised with Ted Bergin and Ke Zhang, UMich.</i>	
	Deryl Long University of Michigan	2019
	<i>Undergraduate student. Co-supervised with Ted Bergin and Ke Zhang, UMich.</i>	
	Case Hazewinkel University of Michigan	2019
	<i>Undergraduate student. Co-supervised with Ted Bergin, UMich.</i>	
	Jeanne Kwon University of Michigan	2018 – 2019
	<i>Undergraduate Research Opportunity Program</i>	
	Julian Penzinger Ludwig Maximilian University	2016, 2018
	<i>Summer student. Co-supervised with Dmitry Semenov, MPIA.</i>	
TALKS & SEMINARS	From Clouds to Planets II: The Astrochemical Link	October 2020
	<i>ALMA's 3D View of Planet Formation</i>	(invited)
	JPL Astrophysics Colloquium	November 2019
	<i>Witnessing the Dynamics of Planetary Assembly</i>	(invited)
	Gordon Research Seminar	June 2019
	<i>Unveiling the Dynamics of Planet Formation</i>	
	IAU Symposium 350: Laboratory Astrophysics	Apr. 2019
	<i>Tracing The Physical Conditions of Planet Formation with Molecular Excitation</i>	(invited)

	Planet-Forming Disks	Mar. 2019
	<i>Unveiling the Dynamics of Planet Formation</i>	(invited)
	NAOJ Theoretical Astronomy Seminar	Oct. 2018
	<i>Observing the Kinematics of Planet-Disk Interactions with ALMA</i>	(invited)
	LMU Munich Astronomy Colloquium	Aug. 2018
	<i>Using Kinematics to Search for Embedded Protoplanets</i>	(invited)
	University of Tübingen Astronomy Seminar	Aug. 2018
	<i>Kinematical Detections of Embedded Protoplanets</i>	(invited)
	Astrophysical Frontiers in the Next Decade and Beyond	Apr. 2018
	<i>The First Kinematical Detection of Embedded Protoplanets</i>	
	Magnetic Fields or Turbulence	Feb. 2018
	<i>A Spatially Resolved Search for Turbulence in TW Hya</i>	
	MPIA Patzer Awards Colloquium	Nov. 2016
	<i>Measuring Turbulence in TW Hya with ALMA: Methods and Limitations</i>	(invited)
	MPIA Königstuhl Colloquium	Nov. 2016
	<i>Observing the Earliest Stages of Planet Formation</i>	(invited)
	Astrochemistry with ALMA Cycle 4	Jun. 2016
	<i>Detecting Turbulence in Protoplanetary Disks</i>	(invited)
	Sant-Cugat Forum on Astrophysics	Apr. 2016
	<i>Turbulence in Protoplanetary Disks: Methods and Limitations</i>	
	Protoplanetary Discussions	Mar. 2016
	<i>Turbulence in TW Hya</i>	
	Chemical Diagnostics of Star and Planet Formation	Jan. 2015
	<i>Deuterium Fraction in Protoplanetary Disks</i>	(invited)
	ZAG - IPAG - MPIA Workshop on Planet Formation	Jan. 2015
	<i>Deuterium Fraction in DM Tau</i>	(invited)
SCHOOL PARTICIPATION	45th Saas-Fee Course	2015
	<i>From Protoplanetary Disks to Planet Formation</i>	
	Heidelberg Graduate School on Fundamental Physics	2015
	DIANA Protoplanetary Disk School	2014
OBSERVING EXPERIENCE	Sub-Millimeter Array	2019 –
	<i>Monthly rota.</i>	
	MPG/ESO 2.2m	2016
	<i>14 nights</i>	
TEACHING	Wavefront Analysis Laboratory Instructor	2014

SUCCESSFUL TELESCOPE PROPOSALS (AS PI)	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 200 hours with **ALMA**, 150 hours with **IRAM** telescopes, two nights with **VLT** (X-shooter and SPHERE), and a night with **Magellan** (MagAO/MagAOx).

PUBLICATIONS (FIRST AUTHOR)	<p>Teague, R., 2019, IAU Proceedings Series, in press. <i>Tracing The Physical Conditions of Planet Formation with Molecular Excitation</i></p> <p>Teague, R., Bae, J., Huang, J., Bergin, E. 2019, ApJL, 884 <i>Spiral Structure in the Gas Disk of TW Hya</i></p> <p>Teague, R., Bae, J., Bergin, E. 2019, Nature, 574 <i>Meridional Flows in the Disk Around a Young Star</i></p> <p>Teague, R., 2019, Journal of Open Source Software, 4 <i>Statistical Uncertainties in Moment Maps of Line Emission</i></p> <p>Teague, R., 2019, RNAAS, 3 <i>Statistical Uncertainties in Moment Maps of Line Emission</i></p> <p>Teague, R., 2019, Journal of Open Source Software, 4 <i>eddy: Extracting Protoplanetary Disk Dynamics with Python</i></p> <p>Teague, R., Bae, J., Birnstiel, T. & Bergin, E., 2018, ApJ, 868 <i>Evidence For A Vertical Dependence on the Pressure Structure in AS 209</i></p> <p>Teague, R. & Foreman-Mackey, D., 2018, RNAAS, 2 <i>A Robust Method to Measure Centroids of Spectral Lines</i></p> <p>Teague, R., Henning, T., Guilloteau, S., et al., 2018, ApJ, 864 <i>Temperature, Mass, and Turbulence: A Spatially Resolved Multiband Non-LTE Analysis of CS in TW Hya</i></p> <p>Teague, R., Bae, J., Bergin, E. A., et al., 2018, ApJL, 860 <i>A Kinematical Detection of Two Embedded Jupiter-mass Planets in HD 163296</i></p>
--------------------------------	--

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

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

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

Long, D. E., Zhang, K., **Teague, R.**, et al., ApJ, submitted
Hints of a Population of Solar System Analog Planets from ALMA

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

Rosotti, G., Benisty, M., Juhász, A., et al., 2019, MNRAS, in press.
Spiral arms in the proto-planetary disc HD100453 detected with ALMA

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 Protoplanetary Disk

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

Gallo, E., **Teague, R.**, Plotkin, R. M., et al., 2019, MNRAS, 488
ALMA observations of A0620-00: fresh clues on the nature of quiescent black hole X-ray binary jets

Schwarz, K., **Teague, R.**, Bergin, E., et al., 2019, ApJL, 876.
Line Ratios Reveal N_2H^+ Emission Originates above the Midplane in TW Hydrae

Keppler, M., **Teague, R.**, Bae, J., et al., 2019, A&A, 625
Highly structured disk around the planet host PDS 70 revealed by high-angular resolution observations with ALMA

Semenov, D., Favre, C., Fedele, D., et al., 2018, A&A, 617
Chemistry in disks. XI. Sulfur-bearing species as tracers of protoplanetary disk physics and chemistry: the DM Tau case

Flaherty, K. M., Hughes, A. M., **Teague, R.**, et al., 2018, ApJ, 856
Turbulence in the TW Hya Disk

Fedele, D., Tazzari, M., Booth, R., et al., 2018, A&A, 610
ALMA continuum observations of the protoplanetary disk AS 209. Evidence of multiple gaps opened by a single planet

- Flock, M., Nelson, R. P., Turner, N. J., et al., 2017, ApJ, 850
Radiation Hydrodynamical Turbulence in Protoplanetary Disks: Numerical Models and Observational Constraints
- Dutrey, A., Guilloteau, S., Piétu, V., et al., 2017, A&A, 607
The Flying Saucer: Tomography of the thermal and density gas structure of an edge-on protoplanetary disk
- Beuther, H., Linz, H., Henning, T., et al., 2017, A&A, 605
Multiplicity and disks within the high-mass core NGC 7538IRS1. Resolving cm line and continuum emission at 0.06×0.05 resolution
- Parfenov, S. Y., Semenov, D. A., Henning, T., et al., 2017, MNRAS, 468
On the methanol emission detection in the TW Hya disc: the role of grain surface chemistry and non-LTE excitation
- van Boekel, R., Henning, T., Menu, J., et al., 2017, ApJ, 837
Three Radial Gaps in the Disk of TW Hydrae Imaged with SPHERE
- Haworth, T. J., Ilee, J. D., Forgan, D. H., et al., 2016, PASA, 33
Grand Challenges in Protoplanetary Disc Modelling
- Feng, S., Beuther, H., Semenov, D., et al., 2016, A&A, 593
Inferring the evolutionary stages of the internal structures of NGC 7538 S and IRS1 with chemistry