

A. Meredith Hughes

Van Vleck Observatory
96 Foss Hill Dr.
Middletown, CT 06459
Office: VVO109

amhughes@wesleyan.edu
<http://amhughes.web.wesleyan.edu/>
Phone: (860) 685-3667

EDUCATION

Harvard University, Cambridge, Massachusetts
Ph.D., Astronomy (Advisor: Dr. David Wilner) May 2010
Thesis title: *Circumstellar Disk Structure through Resolved Submillimeter Observations*

Yale University, New Haven, Connecticut
B.S., Astronomy and Physics (with distinction), summa cum laude 2005

PROFESSIONAL EXPERIENCE

Assistant Professor, Wesleyan University Department of Astronomy 2013-present
Miller Fellow, UC Berkeley Department of Astronomy 2010-2012
Graduate Student Researcher, Harvard University Department of Astronomy 2005-2010

RESEARCH INTERESTS

Planet formation. Circumstellar disk structure and dynamics: gas and dust.
Disk evolution: viscous transport and clearing processes.
Radio astronomy. Aperture synthesis techniques.

HONORS AND AWARDS

Bok Prize, Harvard University Dept of Astronomy (research excellence by PhD under age 35) 2015
Miller Fellowship, Miller Institute for Basic Research in Science, UC Berkeley 2010-2012
Fireman Fellowship, Harvard University Dept of Astronomy (outstanding PhD thesis) 2010
National Science Foundation Graduate Research Fellowship 2007-2010
Certificate of Distinction in Teaching, Derek Bok Center at Harvard University 2009
George Beckwith Prize in Astronomy, Yale University 2005
Phi Beta Kappa, Yale University (top 1% of Junior class) 2003

SEMINARS AND COLLOQUIA

Astronomy Colloquium, University of Michigan, Ann Arbor, MI 2017
Astronomy Colloquium, Amherst College, Amherst, MA 2017
Astronomy Colloquium, American Museum of Natural History, New York, NY 2017
Geology & Planetary Science Club Brown Bag Lunch, Central Connecticut State University, CT 2015
Astronomy Colloquium, University of Florida, Gainesville, FL 2015
Bok Prize Lecture, Harvard University, Cambridge, MA 2015
Joint NRAO/UVA Colloquium, National Radio Astronomy Observatory, Charlottesville, VA 2015
Astronomy Colloquium, University of Massachusetts, Lowell, MA 2015
Astrophysics Colloquium, NRC-Herzberg, Victoria, BC, Canada 2015
Colloquium, University of British Columbia, Vancouver, BC, Canada 2015
ITC Lunch Talk, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 2015
Colloquium, Space Telescope Science Institute, Baltimore, MD 2014
Astronomy Colloquium, Caltech, Pasadena, CA 2014
Physics Colloquium, University of Massachusetts, Lowell, MA 2014
NASA Goddard Astrophysics Science Division Colloquium, Greenbelt, MD 2014
Sigma Pi Sigma Colloquium, University of Connecticut, Storrs, CT 2014
Astronomy Colloquium, Boston University, Boston, MA 2014
EAPS Colloquium, MIT, Cambridge, MA 2014

Colloquium, University of West Virginia, Morgantown, WV	2013
Joint Colloquium, Steward Observatory and NOAO, Tucson, AZ	2013
Colloquium, Princeton University, Princeton, NJ	2013
Seminar, Yale Center for Astronomy and Astrophysics, New Haven, CT	2013
Colloquium, Carnegie Institute Department of Terrestrial Magnetism, Washington, DC	2013
Colloquium, Columbia University, New York, NY	2012
SOFIA Seminar, NASA Ames, Moffett Field, CA	2012
Colloquium, UCLA, Los Angeles, CA	2012
CARMA lunch seminar, Big Pine, CA	2011
Colloquium, UC Santa Cruz, Santa Cruz, CA	2011
LMA Seminar, University of Maryland, Baltimore, MD	2011
Seminar, Wesleyan University, Middletown, CT	2011
Colloquium, University of Washington, Seattle, WA	2011
Colloquium, UC Berkeley, Berkeley, CA	2010
R&G Lunch Talk, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA	2010
APS Colloquium, CU Boulder, Boulder, CO	2010
HIA Seminar, HIA, Victoria, Canada	2010
Astrophysics Journal Club Seminar, Brown University, Providence, RI	2009
Astrobiology Seminar, GSFC, Greenbelt, MD	2009
Astronomy Group Meeting Seminar, Carnegie DTM, Washington, DC	2009
TUNA Lunch Talk, NRAO, Charlottesville, VA	2009
Radio Astronomy Lab Seminar, UC Berkeley, Berkeley, CA	2009
Star Formation Lunch Talk, University of Hawaii IfA, Honolulu, HI	2009

TEACHING & ADVISING

Postdoctoral Collaborators Supervised

Kevin Flaherty, 2013-present

MA Theses Supervised

2013-present

2. Sam Factor '15 – Now a PhD student at UT Austin

ALMA Observations of Molecular Gas Emission from a Protoplanetary Disk in the Orion Nebula Cluster

1. Amy Steele '14 – Now a PhD student at U. Maryland

Resolved Millimeter-wavelength Observations of Debris Disks around Sun-like Stars

BA Theses Supervised

2013-present

1. Jesse Lieman-Sifry '15 – Now working for Arterys, Inc.

The Mysterious Case of 49 Ceti: A Gas-Rich Debris Disk and its Implications for Planet Formation

KNAC REU Projects Supervised

2013-present

Sanaea Rose 2015 (Wellesley College)

Frankie Encalada 2013 (Broward College, transferred to U. Florida)

Will Harney 2013 (Union College)

Other Student Research Supervised

B. A. research: Jonas Powell '18, 2017-present

M.A. research: Evan Carter '18, 2016-present

B. A. research: Zachary Lambros '17, 2016-present

B. A. research: Cail Daley '18, 2015-present

B. A. research: Julia Zachary '16, spring-summer 2015

M.A. research: Jesse Shanahan '17, summer 2015

M.A. research: Rebecca Nakaba, 2013-2014

UC Berkeley (in collaboration with Gaspard Duchene): Angelo Ricarte and Noel Moldvai (2012-2013)

Lead Instructor, Wesleyan University

2013-present

ASTR105: Exploring the Cosmos, Fall 2016

ASTR155: Introductory Astronomy, Fall 2013, 2015
 ASTR211: Observational Astronomy, Spring 2014, 2015
 ASTR240: Radio Astronomy, Spring 2013, Fall 2014 (New course created by A. M. Hughes)
 ASTR430: Astronomical Pedagogy, Fall 2013, 2014, 2015, 2016
 ASTR431: Research Discussion in Astronomy, Spring 2014, 2015
 ASTR555: Planetary Science Seminar, Fall 2014

Teaching Fellow, Harvard University 2006-2008
 Science A-36: Observing the Sun and Stars (lead instructors: Josh Grindlay & Lisa Kaltenegger) 2008
 Astronomy 218: Radio Astronomy (lead instructor: Jim Moran) 2007
 Astronomy 2: Celestial Navigation (lead instructor: Phil Sadler) 2006

Teaching Assistant, Summer Science Program, Ojai, CA 2005
 Guided gifted HS students in astronomical data collection, reduction and analysis; small-group tutoring in physics, math, astronomy, and computer science; conducted astrograph maintenance; oversaw aspects of residential life

Physics and Astronomy Tutor, Yale College Dean's Office 2003-2005
 Tutored Yale undergraduates one-on-one in introductory astronomy and physics (1-3 per semester)

EDUCATION AND OUTREACH

Kids' Night and Space Night Programs at VVO, Middletown, CT 2015
 As part of NSF Broader Impacts, redesigned Astronomical Pedagogy curriculum to prepare students to give public talks and remodeled outreach efforts at Van Vleck Observatory. Instituted a series of Space Nights (rain-or-shine public level presentation plus observing) and Kids' Nights (bimonthly kids' activities) for the Spring 2015 semester. In its first year, draws regular crowds of 1-2 dozen per event. Improved communication by starting a Facebook page and email list, gathering over 200 addresses, and sending out surveys to visitors to ask for feedback.

AAPT Workshop for New Physics and Astronomy Faculty, College Park, MD 2014
 Interacted with science education researchers and expert teachers to explore new teaching techniques

CAE Tier I Teaching Workshop, Austin, TX 2012
 Interacted with science education researchers and expert teachers to explore new teaching techniques

Panelist, Path of Professorship Workshop, MIT 2012
 Advised female grad students and postdocs about the process of applying for faculty jobs

Mentor, Society of Women in the Physical Sciences, UC Berkeley 2011-2012
 Mentored female undergraduates and grad students in the physical sciences (2-3 per year)

Astronomy VIP (Volunteers In Parks), Bryce Canyon National Park August 2010
 Operated small telescopes for solar and night sky observing, discussed basic astronomy concepts with members of the public, oriented visitors to park resources, gave public presentations (hundreds of interactions per day)

Family Night Coordinator, Harvard-Smithsonian CfA 2007-2008
 Developed a series of monthly astronomy programs for children including interactive lectures, demonstrations, hands-on activities, and observing with small telescopes

Mentor, WISHR Mentoring Program, Harvard University 2005-2010
 Mentored female Harvard undergraduates considering majors in the physical sciences (1-2 per year)

Volunteer Exhibit Hall Interpreter, Museum of Science, Boston, MA 2005-2010
 Taught basic physical and biological concepts through interactive demonstrations with members of the public; subjects include scanning electron microscopes, ultrasound, infrared cameras, small telescopes, and live animals

Public Observatory Night Assistant, Harvard-Smithsonian CfA 2005-2010
Operated small telescopes and answered questions about basic astronomy for members of the public

Public Talks and Programs:

Science Saturday at Wesleyan, Middletown, CT	2016
Westport Astronomical Society Speaker, Westport, CT	2016
Summer Science Program Alumni Dinner, Cambridge, MA	2015
Space Night at Wesleyan, Middletown, CT	2015
Hot Chocolate and Stargazing with WesWIS, Middletown, CT	2014-6
Second Hour, First Church of Christ, Middletown, CT	2014-5
Wesleyan Thinks Big, Middletown, CT	2013
Hot Chocolate and Stargazing with WesWIS, Middletown, CT	2013
Chabot Space Science Center (Transit of Venus), Oakland, CA	2012
Peninsula Astronomical Society, Palo Alto, CA	2012
Trinity School 4 th grade class visit, Menlo Park, CA	2011
Mt. Diablo Astronomical Society, Concord, CA	2011
Science @ Cal, Berkeley, CA	2011
Cal Day, Berkeley, CA	2011
Cal Science & Engineering Festival, Berkeley, CA	2011
East Bay Astronomy Society, Oakland, CA	2010
Bryce Canyon National Park, Bryce, UT	2010
Red Canyon, Dixie National Forest, UT	2010
Kodachrome Basin State Park, Cannonville, UT	2010
Kingsley Montessori School, Boston, MA	2010
Somerville High School Astronomy Club, Somerville, MA	2010
Newton South High School, Newton, MA	2010
Monthly Observatory Night, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA	2009
Museum of Science podcast, Boston, MA	2006

ACADEMIC SERVICE**National Level:**

Referee , ApJ, ApJL, A&A, PASJ (2-3 papers per year)	2010-present
Panel Reviews (NSF, NASA)	2013, 2014, 2017
SOC member , "Extreme Solar Systems III"	2014-2015
External Committee Member , Katherine Rosenfeld PhD Thesis Defense, Harvard Astronomy	2015
Organizing Committee , "Inclusive Astronomy"	2014-2015
Committee On the Status of Women in Astronomy member, liaison to WGLE	2012-2015
Member of Admissions and Outreach Committees , Summer Science Program	2008-2014
SOC member , "Bringing Fundamental Astrophysical Processes into Focus"	2014
TAC member , CARMA (2012a, 2012b), HST (Cycle 20)	2012
SOC chair, LOC member , 2011 CARMA Science Symposium	2010-2011

Campus level:

Faculty Advisor , Wesleyan Women in Science	2014-present
Organizer , Keck Northeast Astronomy Consortium Undergraduate Research Symposium	2016
Co-Organizer (with C. Othon), Conference for Undergraduate Women in Physics at Wesleyan	2014-2016
Allbritton Center Faculty Advisory Board Member	2014-2016

Department level:

Astronomy Colloquium Organizer	Fall semesters: 2013, 2014, 2015, 2016
Astronomy Graduate Admissions Committee	2013-present
Astronomy Graduate Qualifying Exam Committee	2013-present
Selected Senior and MA thesis committees	2013-present

EXTERNAL FUNDING

Who Stirs the Pot? Resolving the Vertical Thickness of Debris Disks

PI of ALMA project 2016.1.00878.S, NRAO Student Observing Support, \$35k, 2017-8

Bringing NASA Scientist Aki Roberge to Wesleyan

PI of NASA CT Space Grant Faculty Travel Grant, \$1k, 2015-6

Hosting the Conference for Undergraduate Women in Physics (CUWiP) at Wesleyan

PI of NASA CT Space Grant Faculty STEM Education Programming grant, \$4.7k, 2015-6

Searching for Non-Axisymmetry in the Unusual Gas Disk around a Main Sequence Star

Advisor to PI Cail Daley, NASA CT Space Grant Undergraduate Research Fellowship, \$5k, 2015-6

Understanding the Transitional Stage between Protoplanetary and Debris Disks

Advisor to PI Jesse Lieman-Sifry, NASA CT Space Grant Directed Campus Scholarship, \$5k, 2014-5

Travel to 225th Meeting of the American Astronomical Society, Seattle, Washington

Advisor to PI Sam Factor, NASA CT Space Grant Student Travel Fellowship, \$1k, 2014-5

Dust and Gas in Debris Disks Reveal the Origins of Planetary Systems

PI of NSF AST grant, \$529k, 2014-2017

Building a CMB Telescope at Wesleyan

PI of NASA CT Space Grant Faculty Curriculum Development Grant, \$3.7k, 2014

Measuring Turbulence in Protoplanetary Disks

PI of NASA Origins of Solar Systems Grant, \$266K, 2013-2015

Who Stirs the Pot? Resolving the Vertical Thickness of Debris Disks

PI of ALMA project 2012.1.00198-S, NRAO Student Observing Support, \$29K, 2013-2014

REFEREED PUBLICATIONS

(**bold** = me, underlined = students/postdocs directly under my supervision)

52. *ALMA Observations of Asymmetric Molecular Gas Emission from a Protoplanetary Disk in the Orion Nebula*

S. M. Factor, **A. M. Hughes**, K. M. Flaherty, R. K. Mann, J. Di Francesco, J. P. Williams, L. Ricci, B. C. Matthews, J. Bally, D. Johnstone, *Astrophysical Journal*, in press (arXiv:1704.1970)

51. *Radial Surface Density Profiles of *as* and Dust in the Debris Disk around 49 Ceti*

A. M. Hughes, J. Lieman-Sifry, K. M. Flaherty, C. M. Daley, A. Roberge, A. Kospal, A. Moor, I. Kamp, D. J. Wilner, S. M. Andrews, J. H. Kastner, P. Abraham, *Astrophysical Journal*, 839, 86, 2017 (arXiv:1704.01972)

50. *Exocometary Gas Structure, origin and physical properties around β Pictoris through ALMA CO multi-transition observations*

L. Matra, W. R. F. Dent, M. C. Wyatt, Q. Kral, D. J. Wilner, O. Panic, **A. M. Hughes**, I. de Gregorio-Monsalvo, A. Hales, J.-C. Augereau, J. Greaves, A. Roberge, *Monthly Notices of the Royal Astronomical Society*, 464, 1415, 2017 (arXiv: 1609.06718)

49. *ALMA Observations of HD 141569's Circumstellar Disk*

J. A. White, A. C. Boley, **A. M. Hughes**, K. M. Flaherty, E. Ford, D. Wilner, S. Corder, M. Payne, *Astrophysical Journal*, 829, 6, 2016 (arXiv: 1606.00442)

48. *Exocometary Gas in the HD 181327 Debris Ring*

- S. Marino, L. Matra, C. Stark, M. C. Wyatt, S. Casassus, G. Kennedy, D. Rodriguez, B. Zuckerman, S. Perez, W. R. F. Dent, M. Kuchner, **A. M. Hughes**, G. Schneider, A. Steele, A. Roberge, J. Donaldson, E. Nesvold, *Monthly Notices of the Royal Astronomical Society*, 460, 2933, 2016 (arXiv: 1605.05331)
47. *Debris Disks in the Scorpius-Centaurus OB Association Resolved by ALMA*
J. Lieman-Sifry, **A. M. Hughes**, J. M. Carpenter, U. Gorti, A. Hales, K. M. Flaherty
Astrophysical Journal, 828, 26, 2016 (arXiv: 1606.07068)
46. *Ringed Substructure and a Gap at 1 au in the Nearest Protoplanetary Disk*
S. M. Andrews, D. J. Wilner, Z. Zhu, T. Birnstiel, J. M. Carpenter, L. M. Perez, X.-N. Bai, K. I. Oberg,
A. M. Hughes, A. Isella, L. Ricci, *Astrophysical Journal Letters*, 820, 40, 2016 (arXiv: 1603.09352)
45. *Constraints on Planetesimal Collision Models in Debris Disks*
M. A. MacGregor, D. J. Wilner, C. Chandler, L. Ricci, S. T. Maddison, S. R. Cranmer, S. M. Andrews,
A. M. Hughes, A. S. Steele, *Astrophysical Journal*, 823, 79, 2016 (arXiv: 1603.05644)
44. *Resolved CO gas Interior to the Dust Rings of the HD 141569 Disk*
K. M. Flaherty, **A. M. Hughes**, S. M. Andrews, C. Qi, D. J. Wilner, W. Harney, J. Zachary
Astrophysical Journal, 818, 97, 2016 (arXiv:1601.02642)
43. *Resolved Millimeter-Wavelength Observations of Debris Disks around Solar-type Stars*
A. Steele, **A. M. Hughes**, J. M. Carpenter, A. Ricarte, S. M. Andrews, D. J. Wilner, E. Chiang
Astrophysical Journal, 816, 27, 2016 (arXiv: 1510.08890)
42. *Weak Turbulence in the HD 163296 Protoplanetary Disk Revealed by ALMA CO Observations*
K. M. Flaherty, **A. M. Hughes**, K. A. Rosenfeld, S. M. Andrews, E. I. Chiang, J. B. Simon, S. Kerzner, D.
J. Wilner, *Astrophysical Journal*, 813, 99, 2015 (arXiv: 1510:01375)
41. *Chemical Imaging of the CO Snow Line in the HD 163296 Disk*
C. Qi, K. I. Oberg, S. M. Andrews, D. J. Wilner, E. A. Bergin, **A. M. Hughes**, M. Hogerheijde, P.
D'Alessio, *Astrophysical Journal*, 813, 128, 2015 (arXiv: 1510.00968)
40. *Signatures of MRI-Driven Turbulence in Protoplanetary Disks: Predictions for ALMA Observations*
J. B. Simon, **A. M. Hughes**, K. M. Flaherty, X.-N. Bai, P. J. Armitage
Astrophysical Journal, 808, 180, 2015 (arXiv: 1510.02808)
39. *Resolved Millimeter Emission from the HD 15115 Debris Disk*
M. A. MacGregor, D. J. Wilner, S. M. Andrews, **A. M. Hughes**
Astrophysical Journal, 801, 59, 2015 (arXiv: 1501.05962)
38. *ALMA observations of the debris disk around the young Solar Analog HD 107146*
L. Ricci, J. M. Carpenter, **A. M. Hughes**, S. Corder, A. Isella
Astrophysical Journal, 798, 124, 2014 (arXiv: 1410.8265)
37. *Spatially Resolved Magnetic Field Structure in the Disk of a T Tauri Star*
I. W. Stephens, L. W. Looney, W. Kwon, M. Fernandez-Lopez, **A. M. Hughes**, L. G. Mundy,
R. M. Crutcher, Z.-Y. Lin, R. Rao
Nature, 514, 7524, 2014 (arXiv: 1409.2878)
36. *ALMA observations of a misaligned binary protoplanetary disk system in Orion*
J. P. Williams, R. K. Mann, J. DiFrancesco, S. M. Andrews, **A. M. Hughes**, L. Ricci, J. Bally,
D. Johnstone, B. Matthews
Astrophysical Journal, 796, 120, 2014 (arXiv: 1410.3570)
35. *A CO survey in planet-forming disks: characterizing the gas content in the epoch of planet formation*
A. S. Hales, I de Gregorio-Monsalvo, B. Montesinos, S. Casassus, W. F. R. Dent, C. Dougados,

- C. Eiroa, **A. M. Hughes**, G. Garay, D. Mardones, F. Menard, A. Palau, S. Perez, N. Phillips, J. M. Torrelles, D. J. Wilner
Astronomical Journal, 148, 47, 2014 (arXiv:1405.6966)
34. *Molecular Gas Clumps from the Destruction of Icy Bodies in the beta Pictoris Debris Disk*
W. R. F. Dent, M. C. Wyatt, A. Roberge, J.-C. Augereau, S. Casassus, S. Corder, J. S. Greaves, I. de Gregorio-Monsalvo, A. Hales, A. P. Jackson, **A. M. Hughes**, A.-M. Lagrange, B. Matthews, D. Wilner
Science, 343, 6178, 2014 (arXiv:1404.1380)
33. *ALMA Observations of the Orion Proplyds*
R. K. Mann, J. Di Francesco, D. Johnstone, S. M. Andrews, J. P. Williams, J. Bally, L. Ricci, **A. M. Hughes**, B. C. Matthews
Astrophysical Journal, 784, 82, 2014 (arXiv: 1403.2026)
32. *TADPOL: A 1.3 mm Survey of Dust Polarization in Star-forming Cores and Regions*
C. L. H. Hull and 24 coauthors (incl. **Hughes**)
Astrophysical Journal Supplements, 213, 13, 2014 (arXiv:1310.6653)
31. *ALMA Continuum Observations of a 30 Myr Old Gaseous Debris Disk around HD 21997*
A. Moor, A. Juhasz, A. Kospal, P. Abraham, D. Apai, T. Csengeri, C. Grady, Th. Henning, **A. M. Hughes**, C. Kiss, I. Pascucci, M. Schmalzl, K. Gabanyi
Astrophysical Journal Letters, 777, 25, 2013 (arXiv:1310.5069)
30. *ALMA Observations of the Molecular Gas in the Debris Disk of the 30 Myr Old Star HD 21997*
Kospal, A., Moor, A., Juhasz, A., Abraham, P., Apai, D., Csengeri, T., Grady, C. A., Henning, Th., **A. M. Hughes**, Kiss, Cs., Pascucci, I., Schmalzl, M.
Astrophysical Journal, 776, 77, 2013 (arXiv:1310.5068)
29. *A Spatially Resolved Vertical Temperature Gradient in the HD 163296 Disk*
K. A. Rosenfeld, S. M. Andrews, **A. M. Hughes**, D. J. Wilner, C. Qi
Astrophysical Journal, 774, 16, 2013 (arXiv:1306.6475)
28. *Resolving The Moth at Millimeter Wavelengths*
A. Ricarte, N. Moldvai, **A. M. Hughes**, G. Duchene, J. P. Williams, S. M. Andrews, D. J. Wilner
Astrophysical Journal, 774, 80, 2013 (arXiv:1307.3560)
27. *CO(6-5) and [CI](2-1) Pointed Observations of Five Protoplanetary Disks: Warm Gas in HD 142527*
S. Casassus, A. Hales, I. de Gregorio, W. R. F. Dent, A. Belloche, R. Gusten, F. Menard, **A. M. Hughes**, D. Wilner, V. Salinas
Astronomy & Astrophysics, 553, 64, 2013
26. *Interferometric Upper Limits on Millimeter Polarization of the Disks around DG Tau, GM Aur, and MWC 480*
A. M. Hughes, C. L. H. Hull, D. J. Wilner, R. L. Plambeck
Astronomical Journal, 145, 115, 2013 (arXiv:1302.4745)
25. *Asteroid Belts in Debris Disk Twins: Vega and Fomalhaut*
K. Y. L. Su, G. H. Rieke, R. Malhotra, K. R. Stapelfeldt, **A. M. Hughes**, A. Bonsor, D. J. Wilner, Z. Balog, D. M. Watson, M. W. Werner, K. A. Misselt
Astrophysical Journal, 763, 118, 2013 (arXiv:1301.1331)
24. *Misalignment of Magnetic Fields and Outflows in Protostellar Cores*
C. L. H. Hull and 24 coauthors (incl. **Hughes**)
Astrophysical Journal, 768, 159, 2013 (arXiv:1212.0540)
23. *Millimeter Emission Structure in the First ALMA Image of the AU Mic Debris Disk*

- M. A. MacGregor, D. J. Wilner, K. A. Rosenfeld, S. M. Andrews, B. Matthews, **A. M. Hughes**, M. Booth, E. I. Chiang, J. R. Graham, P. Kalas, G. Kennedy, B. Sibthorpe
Astrophysical Journal Letters, 762, 21, 2013 (arXiv:1211.5418)
22. *Flows of Gas through a Protoplanetary Gap*
S. Casassus and 16 coauthors (incl. **Hughes**)
Nature, 493, 131, 2013
21. *Kinematics of CO Gas in the Inner Regions of the TW Hya Disk*
K. A. Rosenfeld, C. Qi, S. M. Andrews, D. J. Wilner, S. A. Corder, C. P. Dullemond, S.-Y. Lin, **A. M. Hughes**, P. D'Alessio, P. T. P. Ho
Astrophysical Journal, 757, 129, 2012 (arXiv:1208.1285)
20. *A Resolved Millimeter Emission Belt in the AU Mic Debris Disk*
D. J. Wilner, S. M. Andrews, M. A. MacGregor, **A. M. Hughes**
Astrophysical Journal Letters, 749, 27, 2012 (arXiv:1203.1896)
19. *Confirming the Primarily Smooth Structure of the Vega Debris Disk*
A. M. Hughes, D. J. Wilner, B. Mason, J. M. Carpenter, R. Plambeck, H.-F. Chiang, S. M. Andrews, J. P. Williams, A. S. Hales, K. Y. L. Su, E. I. Chiang, S. Dicker, P. Korngut, M. Devlin
Astrophysical Journal, 750, 82, 2012 (arXiv:1203.0318)
18. *The TW Hya Disk at 870um: Comparison of CO and Dust Radial Structures*
S. M. Andrews, D. J. Wilner, **A. M. Hughes**, C. Qi, K. A. Rosenfeld, K. I. Oberg, T. Birnstiel, C. Espaillat, L. A. Cieza, J. P. Williams
Astrophysical Journal, 744, 162, 2012 (arXiv:1111.5037)
17. *Resolving the CO Snow Line in the Disk around HD 163296*
C. Qi, P. D'Alessio, K. I. Oberg, D. J. Wilner, **A. M. Hughes**, S. M. Andrews, S. Ayala
Astrophysical Journal, 740, 84, 2011 (arXiv:1107.5061)
16. *Resolved Submillimeter Observations of the HR 8799 and HD 107146 Debris Disks*
A. M. Hughes, D. J. Wilner, S. M. Andrews, J. P. Williams, K. Y. L. Su, R. A. Murray-Clay, C. Qi
Astrophysical Journal, 740, 84, 2011 (arXiv:1107.3153)
15. *Resolved Images of Large Cavities in Protoplanetary Transition Disks*
S. M. Andrews, D. J. Wilner, C. C. Espaillat, **A. M. Hughes**, C. P. Dullemond, M. K. McClure, C. Qi, J. M. Brown
Astrophysical Journal, 732, 42, 2011 (arXiv:1103.0284)
14. *Millimeter Imaging of the beta Pictoris Debris Disk: Evidence for a Planetesimal Belt*
D. J. Wilner, S. M. Andrews, **A. M. Hughes**
Astrophysical Journal Letters, 727, 42, 2011 (arXiv:1012.2313)
13. *Empirical Constraints on Turbulence in Protoplanetary Accretion Disks*
A. M. Hughes, D. J. Wilner, S. M. Andrews, C. Qi, M. R. Hogerheijde
Astrophysical Journal, 727, 85, 2011 (arXiv:1011.3826)
12. *Protoplanetary Disk Structure in Ophiuchus II: Extension to Fainter Sources*
S. M. Andrews, D. J. Wilner, **A. M. Hughes**, C. Qi, C. P. Dullemond
Astrophysical Journal, in press (arXiv:1007.5070)
11. *Structure and Composition of Two Transitional Circumstellar Disks in Corona Australis*
A. M. Hughes, S. M. Andrews, D. J. Wilner, M. R. Meyer, J. M. Carpenter, C. Qi, A. S. Hales, S. Casassus, M. R. Hogerheijde, E. E. Mamajek, S. Wolf, T. Henning, M. D. Silverstone
Astronomical Journal, 140, 887, 2010 (arXiv:1007.3267)

10. *Truncated Disks in TW Hya Association Multiple Star Systems*
S. M. Andrews, I. Czekala, D. J. Wilner, C. Espaillat, C. P. Dullemond, **A. M. Hughes**
Astrophysical Journal, 710, 462, 2010 (arXiv:0912.3537)
9. *New Stringent Limits on the Polarized Submillimeter Emission from Protoplanetary Disks*
A. M. Hughes, D. J. Wilner, J. Cho, D. P. Marrone, A. Lazarian, S. M. Andrews, R. Rao
Astrophysical Journal, 704, 1204, 2009 (arXiv:0909.1345)
8. *Protoplanetary Disk Structures in Ophiuchus*
S. M. Andrews, D. J. Wilner, **A. M. Hughes**, C. Qi, C. P. Dullemond
Astrophysical Journal, 700, 1502, 2009 (arXiv:0906.0730)
7. *IRC+10216's Innermost Envelope -- The eSMA's View*
H. Shinnaga, K. H. Young, R. P. J. Tilanus, R. Chamberlin, M. A. Gurwell, D. J. Wilner,
A. M. Hughes, H. Yoshida, R. Peng, B. Force, P. Friberg, S. Bottinelli, E. F. van Dishoek,
T. G. Phillips
Astrophysical Journal, 698, 1924, 2009 (arXiv:0904.0280)
6. *A Spatially Resolved Inner Hole in the Disk around GM Aurigae*
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3. *The Structure of the DoAr 25 Circumstellar Disk*
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2. *Gas and Dust Emission at the Outer Edges of Protoplanetary Disks*
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1. *An Inner Hole in the Disk around TW Hydrae Resolved in 7 Millimeter Dust Emission*
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UNREFEREED PUBLICATIONS

3. *The 2013 CSWA Demographics Survey: Portrait of a Generation of Women in Astronomy*
A. M. Hughes
STATUS (the semiannual publication of the American Astronomical Society Committee on the Status of Women in Astronomy), January 2014
2. *Physical and chemical structure of planet-forming disks probed by millimeter observations and modeling (review)*
A. Dutrey, D. Semenov, E. Chapillon, U. Gorti, S. Guilloteau, F. Hersant, M. Hogerheijde, **A. M. Hughes**,
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Protostars and Planets VI, in press

1. *The eSMA: Description and First Results*

S. Bottinelli, K. H. Young, R. Chamberlin, R. P. J. Tilanus, M. A. Gurwell, D. J. Wilner, H. Shinnaga, H. Yoshida, P. Friberg, H. J. van Langevelde, E. F. van Dishoeck, M. R. Hogerheijde, **A. M. Hughes**, R. D. Christensen, R. E. Hills, J. S. Richer, E. Curtis, Proceedings of the SPIE, Volume 7012, pp. 70120D-70120D-12, 2008 (arXiv:0808.2554)

CONFERENCE CONTRIBUTIONS

39. *Observational Constraints on Turbulence in Protoplanetary Disks* (invited talk)
KITP Conference: Disks, Dynamos, and Data: Confronting MHD Accretion Theory with Observations, 2017, Santa Barbara, CA
38. *Circumstellar Disks and Planet Formation with ALMA* (contributed talk)
MA-CT Regional Star Formation Meeting, 2017, New Haven, CT
37. *Outer Architecture of Debris Disks and Planet-Disk Interactions* (invited talk)
High-Contrast Imaging in Space, 2016, Baltimore, MD
36. *Protoplanetary and Debris Disks* (invited talk)
US Radio/Millimeter/Submillimeter Science Futures in the 2020s, 2015, Chicago, IL
35. *Debris Disks in the Age of ALMA* (invited talk)
International Astronomical Union General Assembly, 2015, Honolulu, HI
34. *Inclusive Astronomy: Women's Scattered Lunch* (contributed talk)
International Astronomical Union General Assembly, 2015, Honolulu, HI
33. *Very Large Array: The Next Generation* (contributed talk)
International Astronomical Union General Assembly, 2015, Honolulu, HI
32. *Structure and Composition of Gas and Dust in Debris Disks* (invited talk)
Gordon Conference: Origins of Solar Systems, 2015, South Hadley, MA
31. *Masters in Astronomy at Wesleyan University: A Path to the PhD for Non-Traditional Students* (poster)
Inclusive Astronomy Meeting, 2015, Nashville, TN
30. *Planet formation in the Age of ALMA* (invited talk)
National Society of Black Physicists Meeting, 2015, Baltimore, MD
29. *NextGen VLA Observations of Protoplanetary Disks* (invited talk)
Next Generation VLA Workshop, 225th American Astronomical Society Meeting, 2014, Seattle, WA
28. *Gas and Dust in Circumstellar Disks: Review of Recent Results* (invited talk)
Revolution in Astronomy with ALMA – The 3rd Year, 2014, Tokyo, Japan
27. *49 Ceti and the Mystery of Gas-Rich Debris Disks* (contributed talk)
Characterizing Planetary Systems Across the HR Diagram, 2014, Cambridge, UK
26. *Survey of Recent Results for Young Disks* (invited talk)
Sagan Workshop: Imaging Planets and Disks, 2014, Pasadena, CA
25. *Gas and Dust in Debris Disks* (contributed talk)
Submillimeter Array: First Decade of Discovery, 2014, Cambridge, MA

24. *CSWA Town Hall: Portrait of a Generation of Women in Astronomy* (Special session organizer)
American Astronomical Society Meeting #223, 2014, National Harbor, MD
23. *Observational Constraints on Turbulence in Protoplanetary Disks* (invited talk)
Putting Accretion Theory to the Test, 2013, Annapolis, MD
22. *Planet Formation through Radio Eyes* (invited talk)
Astronomical Society of New York Meeting, 2013, Schenectady, NY
21. *Protoplanetary Disk Observations: Gas and Dust* (invited talks)
HiPACC Astrocomputing Summer School, 2013, Santa Cruz, CA
20. *Debris Disk Morphology and the Dynamics of Planetary Systems* (poster)
IAU Symposium: Exploring the Formation and Evolution of Planetary Systems, 2013, Victoria, Canada
19. *Magnetic Fields in T Tauri Disks: What Millimeter Polarimetry Can Tell Us* (invited talk)
Magnetic Fields from Cloud Cores to Protostellar Disks, 2013, Heidelberg, Germany
18. *Millimeter-Wavelength Observations of Debris Disks* (invited talk)
From Stars to Life, 2013, Gainesville, FL
17. *Millimeter-Wavelength Observations of Debris Disks and What they Can (or Can't) Tell us about Planets*
(contributed talk) Bay Area Exoplanet Science Meeting, 2012, Mountain View, CA
16. *Spatially-Resolved Millimeter Wavelength Imaging of Debris Disks* (poster)
American Astronomical Society Meeting #220, 2012, Anchorage, AK
15. *Dynamics of Protoplanetary and Debris Disks: Turbulence, Magnetic Fields, and Clumps* (invited talk)
Revealing Evolution of Protoplanetary Disks in the ALMA Era, 2012, Kyoto University, Japan
14. *Early ALMA Observations of Circumstellar Disks* (invited talk in special session)
American Astronomical Society Meeting #219, 2012, Austin, TX
13. *Protoplanetary Disks and Star Formation* (invited talk)
Bash Symposium, 2011, Austin, TX
12. *SMA Observations of Circumstellar Disks: Structure, Evolution, and Dynamics* (invited talk)
Star Formation through Spectroimaging at High Angular Resolution, 2011, Taipei, Taiwan
11. *Planet Formation in Circumstellar Disks* (poster)
Miller Institute Interdisciplinary Symposium, 2011, Tomales Bay, CA
10. *Observational Constraints on Accretion Processes from mm Interferometry* (contributed talk)
Transport Processes and Accretion in YSOs, 2011, Ringberg Castle, Germany
9. *Circumstellar Disk Structure and Evolution through Resolved Submillimeter Observations* (dissertation talk)
American Astronomical Society Meeting #215, 2010, Washington, D. C.
8. *Millimeter Wavelength Signatures of Viscous Transport in Protoplanetary Disks* (contributed talk)
From Circumstellar Disks to Planetary Systems, 2009, Garching, Germany
7. *Millimeter Wavelength Signatures of Viscous Transport in Protoplanetary Disks* (poster)
Gordon Conference: Origins of Solar Systems, 2009, Northampton, MA
6. *Constraining Polarized Emission from Circumstellar Disks* (contributed talk)

CfA SMA Science Symposium, 2009, Cambridge, MA

5. *Millimeter-Wavelength Signatures of Disk Accretion* (poster)
5th Spitzer Science Conference: New Light on Young Stars, 2008, Pasadena, CA
4. *Resolving Structure in Transition Disks: Inner Holes* (poster)
Transformational Science with ALMA, 2007, Charlottesville, VA
3. *Resolving Structure in Transition Disks Around Young Stars: Inner Holes* (poster)
ALMA Symposium 2006, Madrid, Spain
2. *Self-Similarity in the Rosette Molecular Cloud* (poster)
American Astronomical Society Meeting #205, 2004, San Diego, CA
1. *Principal Component Analysis of New QSO Samples* (poster)
American Astronomical Society Meeting #203, 2003, Atlanta, GA

Last Updated: May 2017