

Dr. Katherine Brutlag Follette

Assistant Professor of Astronomy
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Educational Research Lab Website: www.quantitativescience.com

RESEARCH INTERESTS

Planet formation and evolution, accretion, high contrast imaging, optical and infrared observational astronomy, circumstellar disks, polarimetric imaging, image processing, adaptive optics, numeracy, general education science courses.

EDUCATION

Ph.D. in Astronomy, Steward Observatory, University of Arizona 2014
Dissertation Title: " Filling in the Gaps: Illuminating (a) Clearing Mechanisms in Transitional Protoplanetary Disks and (b) Quantitative Illiteracy Among Undergraduate Science Students"
Advisors: Prof. Laird Close, Prof. Don McCarthy
Minor: Planetary Sciences

M.S. in Astronomy, Steward Observatory, University of Arizona 2010

Certificate in College Teaching, University of Arizona 2010

B.A. in Physics and Japanese Studies, Middlebury College 2004
Magna cum laude, with honors in Physics

ACADEMIC APPOINTMENTS

Assistant Professor, Amherst College, Amherst, MA 2017-present

Postdoctoral Scholar, Stanford University 2015-2016

PhD Student, Steward Observatory 2008-2014

Adjunct Instructor, Pima Community College, Tucson, AZ 2009-2014

Instructor and Department Head, Fusion Academy, Solana Beach, CA 2006-2008

FELLOWSHIPS, GRANTS, AWARDS AND RECOGNITIONS

Research Corporation Scialog: Signatures of Life in the Universe Fellow 2022-24

Center for Teaching and Learning Faculty Fellow 2022-24

Cottrell Scholar 2022-25

Amherst College Lazerowitz Lecturer 2019
Annual lecture selected by nomination from among Amherst College untenured faculty

NASA Sagan Postdoctoral Fellowship, Stanford University 2016

NSF Astronomy and Astrophysics Postdoctoral Fellowship (declined) 2016

College of Science Service Award, University of Arizona 2014

TRIF Imaging Fellowship, University of Arizona 2012-2013

NSF Graduate Research Fellowship, University of Arizona 2009-2012

NASA FameLab Astrobiology Science Communication Competition National Finalist 2012

College of Science Teaching Award, University of Arizona 2011

NSF East Asian and Pacific Studies Fellowship, National Astronomical Observatory of Japan 2011

College of Science Fellowship, University of Arizona 2008-2009

RESEARCH AFFILIATIONS AND EXPERIENCE

Research Team Affiliations

Outflows and Disks around Young Stars: Synergies for the Exploration of Ulysses Spectra (ODYSSEUS) Team

Hubble Space Telescope Archival Legacy Program

Habitable Exoplanet Observatory (HabEx) Participating Scientist

Next generation mission concept for consideration by the 2020 Decadal Survey in Astronomy

WFIRST Telescope Science Investigation Team (SIT) Member

Approved NASA mission to be launched in 2023

Coronagraphic Imaging Instrument (CGI) SIT member - expert on protoplanet and young circumstellar disk science

Gemini Planet Imager Exoplanet Survey Team

A dedicated exoplanet direct imaging instrument that recently completed a major 4 year, 600 star survey on the Gemini South telescope, resulting in 50+ peer-reviewed publications

Received funding from the NSF and Heising-Simons foundation in 2019 for upgrade and move to Gemini North in Hawaii in 2021 (now 2023-24 due to pandemic delays)

Amherst College has one of the four dedicated remote observing stations for the instrument team, the only one on the East coast

Magellan Adaptive Optics Instrument Team

Innovative visible light adaptive optics imaging system on the Magellan 6.5m Clay Telescope undergoing major NSF-funded upgrade in December 2019

Strategic Exploration of Exoplanets and Disks with Subaru Team (2011-2016)

Major first generation exoplanet direct imaging survey with the Subaru Telescope, completed in 2016

Telescope Observing

Magellan 6.5m (***VisAO**, ***Clio2**), Large Binocular Telescope 8.4m (***Pisces**, ***LMIRCam**), Subaru 8.4m (HiCIAO), MMT 6.4m (***Clio**, ***Clio2**), Steward Bok 2.3m (***B&C Spectrograph**), CTIO 1.5m (RC Spectrograph), Gemini South (***GPI**), NASA Infrared Telescope Facility (iSHELL), Keck (***LRIS**), SOAR (ArCoIRIS), Hubble Space Telescope (HST)
***Principal Investigator**

SELECTED PEER-REVIEWED RESEARCH PUBLICATIONS

See comprehensive list at end of CV

Follette lab [undergraduate](#) or [graduate](#) student author

1. **Follette, K.B.** et al. 2022, "Results of the MagAO Giant Accreting Protoplanet Survey". *AJ*, *accepted*.
2. Benisty, M., Dominik, C., **Follette, K.B.** et al. 2022, "The Optical and Near-infrared View of Planet-forming Disks and Protoplanets," *Protostars and Planets VII*.
3. **Betti, S.**, **Follette, K.B.** et al. 2022. *Near-infrared Accretion Signatures from the Circumbinary Planetary Mass Companion Delorme 1 (AB)b*. *ApJL*, 935, 18B.
4. **Balmer, W.**, **Follette, K.B.** et al. 2022. *Improved Orbital Constraints and H-alpha Photometric Monitoring of the Directly Imaged Protoplanet Analog HD 142527B*. *AJ*, 164, 29B.
5. **Betti, S.**, **Follette, K.B.** et al. 2022. *Detection of Near-Infrared Water Ice at the Surface of the (pre)Transitional Disk of AB Aur: Informing Icy Grain Abundance, Composition, and Size*. *AJ*, 163, 145B.
6. Ward-Duong, K, Patience, J., **Follette, K.B.** et al. 2021. *Gemini Planet Imager Spectroscopy of the Dusty Substellar Companion HD206893 B*. *AJ*, 61, 5W.
7. Wagner, K., **Follette, K.B.** et al. 2018. *Magellan Adaptive Optics Imaging of PDS 70: Measuring the Mass Accretion Rate of a Young Giant Planet within a Gapped Disk*. *Astrophysical Journal Letters*, 863, 8W.
8. **Follette, K.B.** et al. 2017. *Complex Spiral Structure in the HD 100546 Transitional Disk as Revealed by GPI and MagAO*. *AJ*, 153, 264F.

9. Rameau, J., **Follette, K.B.** et al. 2017. *An Optical/near-infrared investigation of HD 100546 b with the Gemini Planet Imager and MagAO*. *AJ*, 153, 244R.
10. **Follette K.B.** et al. 2017, "The Quantitative Reasoning for College Science (QuaRCS) Assessment 2: Demographic, Academic and Attitudinal Variables as Predictors of Quantitative Ability", *Numeracy*, Vol. 10: Iss. 1, Article 5.
11. **Follette, K.B.**, et al. 2015, "The Quantitative Reasoning for College Science (QuaRCS) Assessment 1: Development and Validation", *Numeracy*, Vol. 8: Iss. 2, Article 2.
12. Sallum, S., **Follette, K.B.** et al. 2015. *Accreting protoplanets in the LkCa 15 transition disk*. **Nature**, 527, 342S.
13. **Follette, K.B.** et al 2015, "Asymmetric Scattered Light Adaptive Optics Imaging of the Oph IRS 48 Transitional Disk", *Astrophysical Journal*, 798, 132F.
14. Close, L.M., **Follette, K.B.** et al, 2014, "Discovery of H-Alpha Emission from the Close Companion inside the Gap of Transitional Disk HD142527", *Astrophysical Journal Letters*, 781L, 30C.
15. Rodigas, T.J., **Follette, K.B.** et al, 2014, "Polarized Light Imaging of the HD 142527 Transition Disk with the Gemini Planet Imager: Dose Around the Close-In Companion", *Astrophysical Journal Letters*, 79, 37R.
16. **Follette, K.B.** et al, 2013B, "The First Circumstellar Disk Imaged in Silhouette at Visible Wavelengths with Adaptive Optics: MagAO Imaging of Orion 218-354", *Astrophysical Journal Letters*, 775, L13.
17. **Follette, K.B.** et al, 2013A, "The SR21 Transitional Disk Imaged in Scattered Polarized Light at H-band with Adaptive Optics", *Astrophysical Journal*, 767, 10F.
18. Dong, R., Rafikov, R., Zhu, Z., Hartmann, L., Whitney, B., Brandt, T., Muto, T., Hashimoto, J., Grady, C., **Follette, K.** et al. 2012, "The Missing Cavities In The SEEDS Polarized Scattered Light Images Of Transitional Protoplanetary Disks I: A Generic Disk Model." *Astrophysical Journal*, 750, 161D.

INVITED PUBLICATIONS

1. **Follette, K.** "News and Views - Charge on Collision", *Nature Physics*, Vol. 16, Iss. 2 2019.
2. **Follette, K.** and McCarthy, D. *How We Serve (or Underserve) our Students Through 'Dumbing Down'*, Mercury Magazine, Winter 2012.
3. **Follette, K.B.**, 2013. "The Road to Becoming an Exemplary College Science Teacher" (Invited Chapter), *Exemplary College Science Teaching*, Editor: Robert E Yager.

PUBLICATIONS IN PREPARATION AND UNDER REVIEW

1. Adams, J., **Follette, K.B.** et al. 2022. "Optimization Techniques for Karhounen-Loeve Image Processing: Application to MagAO GAPlanetS Data". *Under review at the astronomical journal*
2. Komarova, L., Ward-Duong, K., Edwards, S., Peterson, M., **Follette, K.B.**, et al., 2022, "V410 X-ray 6: Transition Disk Properties at the Substellar Boundary", *Under internal review*.
3. **Follette, K.** "High Contrast Differential Imaging Techniques". *Publications of the Astronomical Society of the Pacific* tutorial article, *invited review, in preparation*.
4. **Follette, K.** "The Effect of Affect: The Role of Anxiety, Self-Efficacy, etc. in Student Performance on the Quantitative Reasoning for College Science (QuaRCS) Study". *In preparation for submission to the Journal of Research in Science Teaching*.

OTHER PUBLICATIONS

1. Dacus, B., Plunkett, C., Wang, H., **Follette, K.B.**, Betti, S., Peck, A., Robinson, C., Ward-Duong, K. "Toward Assembling a Comprehensive Database of Substellar Accretion Rates", *RNAAS*, 5, 7, 2021
2. Moravec, E, Czekala, I. and **Follette, K** 2019. "The Early Career Perspective on the Coming Decade, Astrophysics Career Paths, and the Decadal Survey Process." White Paper submitted to the Astro2020 Decadal Survey.
3. Sallum, S. et al. 2019. "Imaging Giant Protoplanets with the ELTs". White paper submitted to the Astro2020 Decadal Survey.

4. Jang-Condell, H. et al. 2019. "Protoplanetary Disk Science Enabled by Extremely Large Telescopes". White paper submitted to the Astro2020 Decadal Survey.
5. **Follette, K.B.** 2012. "Encouraging Graduate Students to be Good Teachers and Better Communicators". Women in Astronomy blog guest post.
6. Mikulecky, P., **Brutlag K.**, Rose-Gilman, M. and Peterson, B. *The Chemistry Workbook for Dummies*, Wiley Publications, 2009.
7. Mikulecky, P., Rose-Gilman, M. and **Brutlag, K.** *AP Chemistry for Dummies*, Wiley Publications, 2009.

GRANTS AND PROPOSALS

RECENT GRANTS

* as Principal Investigator

- 2022 ***"Scialog: Signatures of Life in the Universe" Grant**, Heising-Simons Foundation (\$50,000)
 2022 **NASA Future Investigators in Earth and Space Sciences and Technology (FINESST) Fellowship**, Future Investigator: Betti, Science PI: Follette, Administrative PI: Calzetti, [abstract](#), (\$50,000)
 2022 ***Cottrell Scholar Award, Research Corporation** (\$100,000)
 2021 ***NASA Keck 2021B Observing Support Agreement** (\$13,000)
 2020 ***NSF Improving Undergraduate STEM Education** (\$300,000)
 2020 ***NASA Keck 2021A Observing Support Agreement** (\$13,000)
 2019 ***NSF Astronomy and Astrophysics Research Grants** (\$350,000)

TELESCOPE OBSERVING PROPOSALS

*as Principal Investigator, student or postdoc PI

- 2022 Hubble Space Telescope Cycle 30 (PIs: **Robinson**, Ward-Duong, Bowler)
 2022 NASA Keck 2022B (PI: Ward-Duong)
 2022 NSF OIRLab 2022B (PI: **Betti**)
 2022 NSF OIRLab 2022A (PI: **Betti**)
 2021 ***NASA Keck 2021B**
 2021 NSF OIRLab 2021B (PI: **Betti**)
 2021 Hubble Space Telescope Cycle 29 (PI: Zhou)
 2020 NSF OIRLab 2021A (PI: **Betti**)
 2020 NSF OIRLab 2021A (PI: **Betti**)
 2020 ***NASA Keck 2021A**
 2020 Hubble Space Telescope Cycle 28 I (PI: Wu)
 2020 NSF OIRLab 2020B (PI: **Betti**)
 2019 ***National Optical Astronomy Observatory Gemini 2020A**
 2019 NASA Infrared Telescope Facility (PI: **Ward-Duong**)
 2019 National Optical Astronomy Observatory Gemini 2019B (PI: **Ward-Duong**)

TALKS AND SEMINARS

RECENT INVITED CONFERENCE TALKS

- 2022 "In the Spirit of Lyot" Conference, Leiden, Netherlands
 2022 American Astronomical Society Meeting, Pasadena, CA
 2021 Sagan Summer Workshop (virtual, [full talk](#), [abbreviated version](#))
 2021 Five Years after HL Tau: A New Era in Planet Formation (panelist, virtual)
 2021 Keynote Speaker, Southeastern-Massachusetts Quantitative Engagement and Literacy (SEQuEL)
 2021 American Astronomical Society Meetings (January and June)
 2021 National Numeracy Network Annual Meeting (virtual)
 2020 American Astronomical Society Meeting, Honolulu, HI

2019 “In the Spirit of Lyot” Conference, Tokyo
2019 National Numeracy Network Annual Meeting, Austin, TX
2019 Extreme Solar Systems III Conference, Reykjavik
2019 Habitable Exoplanet Explorer Mission Special Session at Summer AAS, Kansas City, MO
2019 American Astronomical Society Meeting, Seattle, WA
2018 Sagan Summer Workshop, Pasadena, CA ([talk](#))
2018 National Numeracy Network Annual Meeting, Lansing, MI
2018 Sagan Fellows Symposium, Pasadena, CA

RECENT INVITED SEMINARS AND COLLOQUIA

2021 Jet Propulsion Laboratory (JPL) Colloquium, Pasadena, CA
2021 MIT Planetary Lunch Seminar (virtual)
2020 NASA Goddard Space Flight Center Colloquium, Baltimore, MD
2019 University of Texas ExoUpdate
2018 New Mexico State University Physics Colloquium
2018 Cal Poly San Luis Obispo Physics Colloquium
2017 Wesleyan University Astronomy Colloquium
2017 Williams College Physics and Astronomy Colloquium
2017 University of Massachusetts Amherst Astronomy Colloquium

RECENT PUBLIC TALKS

2022 *Astronomy on Tap*, Leiden, Netherlands ([recording](#))
2022 “[Space Tour](#)” talk (virtual)
2018 *Cal Poly Cosmic Evolution Public Seminar Series*

COURSE INSTRUCTION

At Amherst College

Physics, Astronomy, and Society (PHYS/AST 255) – Spring 2023
Exploring the Cosmos (AST 111) – Fall 2022
Introduction to Data Science with Astronomical Applications (AST 200) – Spring 2023, Spring 2021, Spring 2020, Spring 2019, Spring 2017
Introductory Astrophysics (AST 228) – Fall 2022, Fall 2020, Fall 2019, Fall 2018
Observational Techniques (AST 337) – Fall 2020, Fall 2017
Alien Worlds (AST 112) – Fall 2019, Fall 2018, Fall 2017

At Pima Community College (Tucson, AZ, 2009-2014)

Stars, Galaxies Universe (AST102IN) – Spring 2014, Spring 2011, Spring 2010, Fall 2009
Solar System (AST101IN) – Spring 2012, Fall 2011

At Fusion Academy (Solana Beach, CA, 2006-2008)

Sciences: Biology, Chemistry*, Physics*, Astronomy
Mathematics: Geometry, Algebra, Algebra II, Precalculus, Calculus*
Other: Japanese 1, Japanese 2, Health
*including honors

MENTORING

Postdoctoral Scholars

Kimberly Ward-Duong (July 2017-2020)
Connor Robinson (2020-present)

Graduate Students

Sarah Betti (2020-present)

Jada Louison (2022-present)

Post-baccalaureate Students

Cat Sarosi (Summer 2022, AY 22-23)

Julio Morales (Summer 2022)

Khalid Mohamed (Summer 2022)

Jéa Adams (Summer 2021)

William Balmer (Summer 2021)

Undergraduate Theses Supervised

*Winner of the Mary Daly Irvine Prize for Distinguished Senior Thesis in the Five College Astronomy Department
Summa cum laude nominated

| Name | Class Year | Title |
|---------------------------------------|---------------------------|---|
| Cailin Plunkett | 2023 | TBD |
| Alyssa Cordero | 2023 | TBD |
| Lillian Jiang <i>Smith College</i> | 2022 | "An FUV to NIR Accretion Luminosity Accounting of the Young Brown Dwarf 2M1207A" <i>co-supervised with Kim Ward-Duong</i> |
| Cat Sarosi | 2022 <i>Statistics</i> | "Item Response Theory Models for the Quantitative Reasoning for College Science Assessment" <i>co-supervised with Amy Wagaman</i> |
| Beck Dacus | 2022 | "Constraining Sub-Stellar Accretion Models Using Infrared Spectral Line Diagnostics" |
| Khalid Mohamed | 2022 | "Simulating the Observed and Unobserved: Computational Modeling and Detection Estimates of (Sub)Stellar Accreting Objects" |
| Julio Morales <i>UMass</i> | 2022 | "Accretion Variability in Transitional Disk Host-Stars: Second-to-Minute Timescale H-alpha Variability from the Giant Accreting Protoplanet Survey" |
| Jéa Adams | 2021 | " <u>Optimization Techniques for Exoplanet Direct Imaging</u> " |
| William Balmer | 2021 | " <u>Constraining the Orbit and Photometric Variability of HD 142527B</u> " |
| Joe Palmo | 2021 | " <u>Simulated Scatter: Computational Modeling of (Sub)Stellar Accretion Rates</u> " <i>co-supervised with Connor Robinson</i> |
| Soon-Young Shimizu | 2020 <i>INTE</i> | Psychological Factors as Mediators of Demographic Differences in Performance on the QuaRCS Quantitative Literacy Assessment" |
| Anne Peck <i>Smith College</i> | 2020 | "A Statistical Exploration of Accretion Rates in Substellar Objects" <i>co-supervised with Kim Ward-Duong</i> |
| Clare Leonard | 2019 | "Optimizing Computational Techniques for Exoplanet Direct Imaging" |
| Elijah Spiro | 2018E | "Applying Direct Imaging Techniques to the HD169142 Star System" |
| Alex Watson | 2018 | " <i>Examining Astrometry and Photometry of the Close Companion HD 142527 B Through Direct Imaging</i> "* |
| Michaela Ednie | 2018 | "Characterization of the Mysteriously Cool Brown Dwarf HD 4113C" <i>co-supervised with Kim Ward-Duong</i> |

Special Topics (AST 490) Courses

Eliza Hillenkamp (Fall 2022) – "Painting the Universe"

Sarah Vierling (Fall 2022) – "From Exoplanets to Microbes"

Lena Treiber (Spring 2021) – "Substellar Accretion"

Sierra Gomez (UMass) – 4 credits (Fall 2021), 1 credit (Spring 2022)

Huichen (Will) Wang (Fall, 2020) – "Astrophysical Accretion"

Fernando Garcia-Toro (Spring, 2020) – "Planetarium Programming"

Elijah Spiro (Spring, 2019) – "Computational Astronomy"

Undergraduate Research Students Mentored in Exoplanet Lab

| Name and Year <i>(Primary Supervisor = Ward-Duong/Robinson)</i> | Terms Supported | Type of Support | Awards <i>Conference Presentations Publications</i> |
|--|-----------------|-----------------|--|
| <i>(Eliza Hillenkamp '24)</i> | Summer 2022 | SURF | |

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|------------------------------|---|---|--|
| (Adrian Friedman '24) | Summer 2022 | SURF | |
| Alex Del Franco '24 | AY 21-22 Summer 2021 | SURF | June 2022 AAS |
| Ry Bleckel '24 | Summer 2021 | SURF | |
| Carson Marano '23 | Summer 2021 | Greg Call Intern | |
| Dane Mansfield '23 | Summer 2021 | Greg Call Intern | |
| Cailin Plunkett '23 | AY 22-23 Summer 2020 | Senior Honors Thesis SURF | Goldwater Scholar January 2021 AAS <u>Dacus+ 2021 (RNAAS)</u> |
| Huichen (Will) Wang | Summer 2020 | SURF | January 2021 AAS <u>Dacus+ 2021 (RNAAS)</u> |
| Lena Treiber '22E | Sp22-Fa22 Fall 2020 AY 19-20 Summer 2019 | Senior Honors Thesis Research Assistant Greg Call Intern SURF | Goldwater Scholar <u>Follette+ 2022</u> |
| (David Formica '22E) | Summer 2022 AY 21-22 Summer 2021 | Greg Call Intern Senior Honors Thesis Greg Call Intern | Cool Stars 2022, June 2022 AAS |
| Cat Sarosi '22 | Summer 2022 | Postbac | <u>Follette+ 2022</u> |
| Julio Morales '22 (UMass) | Summer 2022 AY 21-22 Summer 2021 | Postbac Senior Honors Thesis FCAD Internship | AAS Chambliss Award Cool Stars 2022, June 2022 AAS <u>Follette+ 2022, Balmer+2022</u> |
| Khalid Mohamed '22 | Summer 2022 AY 21-22 AY 20-21 Summer 2020 AY19-20 Summer 2019 | Postbac Senior Honors Thesis Greg Call Intern SURF Greg Call Intern Greg Call Intern | Amherst College Fellowship January 2021 AAS |
| Beck Dacus '22 | AY 21-22 AY 20-21 Summer 2020 AY 19-20 Summer 2019 | Senior Honors Thesis Greg Call Intern SURF Greg Call Intern SURF | Amherst College Fellowship <u>Dacus+ 2021 (RNAAS), Follette+ 2022</u> January 2021 AAS |
| Lillian Jiang '22 (Smith) | AY21-22 Summer 2021 | Senior Honors Thesis FCAD Internship | AAS Chambliss honorable mention Cool Stars 2022, June 2022 AAS Keck Telescope observing (2021-22,remote) |
| Sierra Gomez '22 (UMass) | AY 21-22 Summer 2021 | Independent Study FCAD Internship | Five Colleges Lorna Peterson Prize AAS Chambliss honorable mention Keck Telescope observing (2021-22,remote) June 2022 AAS |
| Rafael Vanin Munoz '22 | AY 21-22 AY 20-21 Summer 2020 | Greg Call Intern | January 2021 AAS |
| Joseph Martinez '22 | Summer 2020 | Greg Call Intern | January 2021 AAS |
| Jéa Adams '21 | Summer 2021 AY 20-21 AY 19-20 AY 18-19 Summer 2018 | Postbac Senior Honors Thesis Greg Call Intern Greg Call Intern Clare Booth Luce | Goldwater Scholarship, Five Colleges Lorna Peterson Prize, AAS Chambliss honorable mention January 2021 AAS, Spirit of Lyot 2022 <u>Adams+ 2022, Follette+ 2022, Balmer+ 2022</u> |
| William Balmer '21 | Summer 2021 AY 20-21 AY 19-20 Summer 2019 AY 18-29 Summer 2018 | Postbac Senior Honors Thesis Greg Call Intern Greg Call Intern Greg Call Intern SURF | January 2021 AAS, Cool Stars 2022 <u>Balmer+ 2022, Adams+ 2022, Follette+ 2022</u> |

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| Joe Palmo '21 | AY 20-21 Summer 2019 Sp19 | Senior Honors Thesis SURF Greg Call Intern | <i>January 2021 AAS <u>Follette+ 2022</u></i> |
| <i>(Chloe Wohlgemuth '21)</i> | AY 19-20 | Greg Call Intern | |
| <i>(Justin Ahwah '21)</i> | AY 19-20 Summer 2019 | Greg Call Intern SURF | |
| David Wang '21 | Summer 2018 | Greg Call Intern | <u>Follette+ 2022</u> |
| Karina Thanawala '21 | AY 19-20 Summer 2019 | Greg Call Intern | |
| Fernando Garcia Toro '20E | Sp20 Summer 2018 | Independent Study Greg Call Intern | <u>Follette+ 2022</u> |
| <i>(Michaela Guzzetti '20) Smith College</i> | AY 19-20 | Senior Honors Thesis | <i>IRTF Telescope Observing (2020, Hawaii)</i> |
| Anne Peck '20 <i>Smith College</i> | AY 19-20 | Senior Honors Thesis | <i>IRTF Telescope Observing (2020, Hawaii)</i> |
| Raymond Saitoti '20 | Summer 2017 | SURF | <u>Follette+ 2022</u> |
| <i>(Arpit Jain '20) UMass</i> | AY 19-20 Summer 2019 | Independent Study Five College Intern | |
| <i>(Sebastian Gameros Corona '19) UMass</i> | AY 18-19 Summer 2018 | Independent Study Five College Intern | AAS Chambliss honorable mention |
| <i>(Lena Komarova '19) Smith College</i> | AY 18-19 | Senior Honors Thesis | Five College Astronomy Mary Daly Irvine Thesis Prize |
| Clare Leonard '19 | AY 18-19 Summer 2018 Summer 2017 Summer 2016 (@ Stanford) | Senior Honors Thesis Greg Call Intern Clare Both Luce Scholar Grant Funding | <i>Magellan Telescope Observing (Chile)</i> <u>Follette+ 2022, Adams+ 2022</u> |
| Wyatt Mullen '19 <i>Stanford University</i> | Summer 2016 (@ Stanford) | Stanford SURF | <u>Follette+ 2022</u> |
| Elijah Spiro '18E | Sp18-Fa18 Summer 2016 (@ Stanford) | Senior Honors Thesis Grant Funding | <u>Follette+ 2022</u> |
| Mark Schoen '18E | Summer 2017 | SURF | |
| Michaela Ednie '18 | AY 17-18 | Senior Honors Thesis | |
| Alex Watson '18 | AY 17-18 Summer 2017 | Senior Honors Thesis Greg Call Intern | Five College Astronomy Mary Daly Irvine Thesis Prize <u>Follette+ 2022, Balmer+ 2022</u> |
| Ben Spar '18 <i>Stanford University</i> | Summer 2016 (@ Stanford) | Stanford SURF | |

Undergraduate Research Students Mentored in QuaRCS Lab

| Name and Year | Terms Supported | Type of Support | Awards |
|-----------------------------------|--|------------------|---|
| | | | Conference Presentations <u>Publications</u> |
| Michelle Contreras Catalan '25 | AY 21-22 | Greg Call Intern | <i>National Numeracy Network 2021</i> |
| Vanesa Farooq '24 | Summer 2022 AY 21-22 Summer 2021 | Greg Call Intern | <i>National Numeracy Network 2021, Astronomical Society of the Pacific 2021</i> |
| Huichen (Will) Wang '23 | Summer 2022 AY 20-21 | Greg Call Intern | |
| Lorraine Oloo '23 | AY 21-22 Summer 2021 | Greg Call Intern | <i>Astronomical Society of the Pacific 2021</i> |
| Sam Hodges '23 | AY 21-22 | Greg Call Intern | |

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| Ian Husler Matute | AY 21-22 | Greg Call Intern | |
| Cat Sarosi '22 | AY 21-22 Summer 2021 AY 20-21 AY 19-20 Summer 2019 | Senior Honors Thesis Clare Booth Luce Scholar Greg Call Intern Greg Call Intern Greg Call Intern | <i>National Numeracy Network 2021, 2020</i> |
| Zahra Shah '22 | Summer 2021 | Greg Call Intern | |
| Malyaka Imran '22 | Summer 2021 | Greg Call Intern | |
| Chloe Wohlgemuth '22 | AY 19-20 | Greg Call Intern | <i>National Numeracy Network 2021</i> |
| Justin Ahwah '21 | AY 20-21 | Greg Call Intern | <i>National Numeracy Network 2021</i> |
| Derrick Newberry '21 | AY 20-21 | Greg Call Intern | <i>National Numeracy Network 2020</i> |
| Nicolas Carolan '21 | AY 19-20 Summer 2019 | Greg Call Intern | |
| Yevhen Melnyk '21 | Summer 2018 | Greg Call Intern | |
| Heather Scott '21 | AY 19-20 | Greg Call Intern | |
| Soon Young Shimizu '20 | AY 19-20 | Senior Honors Thesis | |
| Camilo Ortiz '20 | Summer 2019 | Greg Call Intern | |
| Ilija Nikolov '20 | AY 17-18 Summer 2017 | Greg Call Intern | <i>National Numeracy Network 2017</i> |
| Jonah Gilbert '19 | AY 18-19 Summer 2018 | Greg Call Intern | |
| Amalia Cruz '19 | AY 18-19 Summer 2018 | Greg Call Intern | |
| Maggie Shea '19 | AY 17-18 Summer 2017 Spring 2017 | Greg Call Intern | <i>National Numeracy Network 2017</i> |
| Abdoulaye Sanogo '18E | Summer 2017 | Greg Call Intern | <i>National Numeracy Network 2017</i> |
| Brendan Seto '18 | AY 17-18 Spring 2017 | Greg Call Intern | <i>National Numeracy Network 2017</i> |

Student Awards

NASA Future Investigators in Earth and Space Science and Technology (FINESST) Graduate Fellowship – Sarah Betti (2022-23)

Goldwater Scholars: Jea Adams '21, Lena Treiber '22E, Cailin Plunkett '23

Five Colleges Lorna Peterson Prize: Jea Adams '21, Sierra Gomez '22

AAS Chambliss Undergraduate Presentation Award: Julio Morlaes '22

AAS Chambliss Undergraduate Presentation Award Honorable Mention: Sierra Gomez '22, Lillian Jiang '22, Jea Adams '21, Sebastian Gameros Corona '20

COLLEGE SERVICE

Committees and Departmental Duties

Faculty Hiring Committee (2021-22)

Five College Astronomy Department Senate (2017-present)

Physics and Astronomy Climate and Community Committee (2020-21)

University of Massachusetts, Amherst Colloquium Committee (2017-18)

ASTR 341 Kitt Peak Observing Trip Chaperone, January 2019

Smith College TOO Hiring Committee (Spring 2018, Spring 2019)

FCAD Postdoctoral Fellow Hiring Committee (2016-17, 2019-20)

Amherst College Astronomy Program Lead

Formal and informal academic advising of astronomy majors, planning and coordination of comprehensive exams in astronomy, design and maintenance of astronomy curriculum, supervision of observatory design

and construction, observatory maintenance and repair, recruitment of majors, social and outreach event organization, procurement, planning, and organization of astronomy teaching materials and demos

On Campus Talks and Events

Amherst Faculty Colloquium, December 2021

SURF “Faculty Celebration and Debrief” Presenter, August 2021, *SURF*

Panel on Identity-based Harassment, November 2020, *Spectra (Physics & Astronomy Club)*

Nergis Mavalvala Commencement Host, May 2019, *Conferences and Special Events*

Dimensionism and Relativity Panel, April 2019, *Meade Art Museum*

Careers in Space Sciences Panel, March 2019, *Amherst LEADS*

Amherst College Family Weekend Talk, October 2018, *Advancement Office*

Amherst College Reunions Talk, May 2018, *Alumni Relations*

Talk to Boise, ID Alumni, August 2017, *Alumni Relations*

Amherst College Reunions Talk, May 2017, *Alumni Relations*

PROFESSIONAL SERVICE

Career Panelist, Sagan Fellows Symposium (2018), Stanford KIPAC (2021), and the National Science Foundation Astronomy and Astrophysics Postdoctoral Fellows Symposium (2022)

Member, American Astronomical Society Education Committee (2020-present)

NASA-Commissioned **Reviewer** of the Hubble Postdoctoral Fellowship Program (2021, [webinar](#), [report](#))

Reviewer, Decadal Survey in Astronomy and Astrophysics “State of the Profession” (National Academies, 2021)

James Webb Space Telescope Cycle 1 **Master Class Participant and Workshop Host** (competitive application, 2019-20)

National Academies Early Career Focus Session **Representative/Presenter** to the Decadal Survey in Astronomy and Astrophysics (competitive application, 2018-20)

National Numeracy Network Advisory **Board Member** (elected, 2014-present)

Recent Grant/Proposal Review Panels

- National Academies Ford Foundation Fellowship program
- NASA Astrophysics Research and Analysis (APRA) program
- NASA Strategic Astrophysics Technology – Technology Development for Exoplanet Missions (SAT-TDEM)
- NASA Exoplanet Research Program (XRP) Grants
- National Science Foundation CAREER Grants
- NASA New Hubble Postdoctoral Fellowship Program, subpanel chair

Recent Telescope Time Allocation Committees

- NASA Keck Telescope (3 semesters, 1 as chair)
- Hubble Space Telescope Cycle 25

Recent journal peer reviews

- *Nature*
- *Nature Physics*
- *Astrophysical Journal Letters*
- *Astronomy and Astrophysics*
- *Astronomy and Astrophysics Letters*
- *Astrophysical Journal*
- *Numeracy*

PEDAGOGICAL TRAINING

Course Design Institute, Amherst College

2022

Foundations of Inclusive Teaching Course, Effective and Efficient Faculty

2021

Race, Racism and Anti-Racism Curricular Innovation Working Group, Amherst College

2021

| | |
|---|------|
| Course Design Seminar, Association of College and University Educators | 2020 |
| Students as Partners Faculty Learning Community, Amherst College | 2020 |
| Preparing for Faculty Careers Course, Stanford University | 2016 |
| Scientific Leadership and Management Skills Course, UCSF | 2016 |
| Science Teaching through Art, Stanford University | 2015 |
| Alan Alda Center Communicating Science Workshop, Stanford University | 2015 |
| Master Class in Science Communication, NASA FameLab Astrobiology | 2012 |
| Faculty Institute for NASA Earth and Space Science Education, NASA | 2010 |
| Certificate in College Teaching , University of Arizona | 2010 |

IN THE NEWS

[“Astronomers See Moons Forming in Disk Around Distant Exoplanet”](#). Robin Andrews, *The New York Times*. (2021, July 23)

[“Hotel Mars Broadcast 3733”](#), The Space Show, CBS Eye on the World, Radio Interview.

[“A Close Look at Newborn Planets Reveals Hints of Infant Moons”](#). Joshua Sokol, *Quanta Magazine*. (2019, June 11).

[“Solar System Twin Is Missing Its Baby Jupiters”](#). Steve Murray, *Sky & Telescope* (2019, May 14).

[“U.S. Astronomers Ponder Science Priorities for the 2020s and Beyond”](#). Nadia Drake, *Scientific American*. (2019, Jan 28).

[“These dusty young stars are changing the rules of planet-building”](#). Rebecca Boyle, *Nature - News Feature*. (2018, Dec 4).

[“Stellar Disks Reveal How Planets Get Made”](#). Joshua Sokol, *Quanta Magazine*. (2018, May 1).

Full Publication List – Katherine B. Follette

SCIENTIFIC RESEARCH PUBLICATIONS (CHRONOLOGICAL)

Journal Abbreviations: AJ = Astronomical Journal, ApJ = Astrophysical Journal, ApJL = Astrophysical Journal Letters, JATIS = Journal of Astronomical Telescopes and Instruments, A&A = Astronomy and Astrophysics, Ap&SS = Astrophysics and Space Sciences

Refereed Publications

1. Zhou, Y. et al, 2022. *HST/WFC3 H α Direct-Imaging Detection of a Point-like Source in the Disk Cavity of AB Aur*. ApJL, in press.
2. **Balmer, W., Follette, K.B.** et al. 2022. *Improved Orbital Constraints and H-alpha Photometric Monitoring of the Directly Imaged Protoplanet Analog HD 142527B*. AJ, 164, 29B.
3. Jorquera, S., et al. 2022. *LBT search for companions and sub-structures in the (pre)transitional disk of AB Aurigae*. ApJ, 926, 71J.
4. **Betti, S., Follette, K.B.** et al. 2022. *Detection of Near-Infrared Water Ice at the Surface of the (pre)Transitional Disk of AB Aur: Informing Icy Grain Abundance, Composition, and Size*. AJ, 163, 145B.
5. Marleau, G., Aoyama, Y., Kuiper, G., **Follette, K.B.** et al. 2021. *Accreting protoplanets: Spectral signatures and magnitude of gas and dust extinction at H alpha*. A&A, 657A, 38M.
6. Ward-Duong, K, Patience, J., **Follette, K.B.** et al. 2021. *Gemini Planet Imager Spectroscopy of the Dusty Substellar Companion HD206893 B*. AJ, 61, 5W.
7. Arriaga, P. et al. 2020. *Multiband Polarimetric Imaging of HR4796A with the Gemini Planet Imager*. AJ, 160, 79A.
8. Chen, C. et al. 2020. *Multiband GPI Imaging of the HR 4796A Debris Disk*. ApJ, 898, 55C.
9. Esposito, T. et al., 2019. *Debris Disk Results from the Gemini Planet Imager Exoplanet Survey's Polarimetric Imaging Campaign*. AJ, 160, 24E.
10. Duchene, G. et al. 2020. *The Gemini Planet Imager View of the HD 32297 Debris Disk*. AJ, 159, 251D.
11. Nguyen, M. M. et al. 2020. *HD16504: An Astrometric Calibration Field for High-contrast Imagers in Baade's Window*. AJ, 159, 244N.
12. Uyama, T. et al. 2020. *Near-Infrared Imaging of a Spiral in the CQ Tau Disk*. AJ, 159, 118U.
13. Nielsen, E. et al. 2020. *The Gemini Planet Imager Exoplanet Survey: Dynamical Mass of the Exoplanet Beta Pic b from Combined Direct Imaging and Astrometry*. AJ, 159, 71N.
14. Bruzzone, J.S. et al. 2020. *Imaging the 44 au Kuiper Belt Analog Debris Ring around HD 141569A with GPI Polarimetry*. AJ, 159, 53B
15. De Rosa, R. et al. 2020. *Revised Astrometric Calibration of the Gemini Planet Imager*. JATIS, 6a5006D.
16. Hom, J. et al. 2020. *First Resolved Scattered-Light Images of Four Debris Disks in Scorpius-Centaurus with the Gemini Planet Imager*. AJ, 159, 31H.
17. Mayama, S. et al. 2020. *Subary Near-Infrared Imaging Polarimetry of Misaligned Disks around the SR24 Hierarchical Triple System*. AJ, 159, 12M.
18. De Rosa, R. et al. 2020. *An updated visual orbit of the directly-imaged exoplanet 51 Eridani b and prospects for a dynamical mass measurement with Gaia*. AJ, 159, 1D
19. De Rosa, R. et al. 2019. *Detection of a low-mass stellar companion to the accelerating A2IV star HR 1645*. AJ, 158, 226D.
20. Madurowicz, A. et al. 2019. *Asymmetries in adaptive optics point spread functions*. JATIS, 5d9003M.
21. Ren, B. et al. 2019. *An Exo—Kuiper Belt with an Extended Halo around HD 191089 in Scattered Light*. ApJ, 882, 64R.
22. Nielsen, E., et al. 2019. *The Gemini Planet Imager Exoplanet Survey: Giant Planet and Brown Dwarf Demographics from 10 to 100 au*. AJ, 158, 13N.
23. Greenbaum, A. et al. 2019. *Performance of the Gemini Planet Imager Non-redundant Mask and Spectroscopy of Two Close-separation Binaries: HR 2690 and HD 142527*. AJ, 157, 249G.

24. Wagner, K., **Follette, K.B.** et al. 2018. *Magellan Adaptive Optics Imaging of PDS 70: Measuring the Mass Accretion Rate of a Young Giant Planet within a Gapped Disk.* ApJL, 863, 8W.
25. Wang, J. et al. 2018. *Dynamical Constraints on the HR 8799 Planets with GPI.* AJ 156, 192W.
26. Esposito, T. et al. 2018. *Direct Imaging of the HD35841 Debris Disk: A Polarized Dust Ring from Gemini Planet Imager and an Outer Halo from HST/STIS.* AJ, 156, 47E.
27. Greenbaum, A. Z. et al. 2018. *GPI Spectra of HR 8799 c, d, and e from 1.5 to 2.4 microns with KLIP Forward Modeling.* AJ, 155, 226G.
28. Wang, J. et al. 2018. *Automated Data Processing Architecture for the Gemini Planet Imager Exoplanet Survey.* JATIS, 4A, 8002W.
29. Nielsen, E.L. et al. 2017. *Evidence that the Directly Imaged Planet HD 131399 Ab is a Background Star.* AJ, 154, 218N.
30. Shan, Y. et al. 2017. *The Multiplicity of M Dwarfs in Young Moving Groups.* ApJ, 846, 93S.
31. Rajan, A. et al 2017. *Characterizing 51 Eri b from 1 to 5 microns: A Partly Cloudy Exoplanet.* AJ, 154, 10R.
32. Ruffio, J.B. et al. 2017. *Improving and Assessing Planet Sensitivity of the GPI Exoplanet Survey with a Forward Model Matched Filter,* ApJ, 842, 14R.
33. **Follette, K.B.** et al. 2017. *Complex Spiral Structure in the HD 100546 Transitional Disk as Revealed by GPI and MagAO.* AJ, in press
34. Rameau, J., **Follette, K.B.** et al. 2017. *An Optical/near-infrared investigation of HD 100546 b with the Gemini Planet Imager and MagAO.* AJ, in press.
35. Johnson-Groh et al. 2017. *Integral Field Spectroscopy of the Low-mass Companion HD 984 B with the Gemini Planet Imager.* AJ, 153, 190J.
36. Chilcote, J. et al. 2017. *1 to 2.4 Micron Near-IR Spectrum of the Giant Planet Beta Pictoris b Obtained with the Gemini Planet Imager,* ApJ, 153,182C.
37. Kooistra, R. et al. 2017. *Radial Decoupling of Small and Large Dust Grains in the Transitional Disk RX J1615.3-3255.* A&A, 597A, 132K.
38. Nielsen, E. et al. 2016. *Dynamical Mass Measurement of the Young Spectroscopic Binary V343 Normae AaAb Resolved with Gemini Planet Imager.* ApJ, 152, 175.
39. Millar-Blanchaer, M. et al. 2017. *Imaging an 80 au Radius Dust Ring Around the F5V Star HD 157587.* ApJ, 152, 128.
40. Wang, J. et al. 2016. *The Orbit and Transit Prospects for Beta Pictoris b Constrained with One Milliarcsecond Astrometry.* ApJ, 152, 97.
41. Konopacky, Q. et al. 2016. *Discovery of the Substellar Companion to the Nearby Debris Disk Host HR 2562.* ApJL, 829, 4.
42. Ohta, Y. et al. 2016. *Extreme Asymmetry in the Polarized Disk of V1247 Orionis.* PASJ, 68, 3.
43. Draper, Z. et al. 2016. *The Peculiar Debris Disk of HD 111520 as Resolved by the Gemini Planet Imager.* ApJ, 826, 147.
44. Morzinski, K.M., et al. 2015. *Magellan Adaptive Optics First-light Observations of the Exoplanet β Pic b. II. 3-5 μ m Direct Imaging with MagAO+Clío, and the Empirical Bolometric Luminosity of a Self-luminous Giant Planet.* ApJ, 815, 108M.
45. Sallum, S., **Follette, K.B.** et al. 2015. *Accreting protoplanets in the LkCa 15 transition disk.* **Nature**, 527, 342S.
46. Wu, Y.L. et al, 2016. *Magellan AO System Z, Y and L Observations of the Very Wide 650AU HD106906 Planetary System.* ApJ, 823, 24W.
47. Poyneer, L.A., Palmer, D.W., Macintosh, B., Savransky, D, Sadakuni, N., Thomas, S., Veran, J-P., **Follette, K.B.** et al. 2015 *Performance of the Gemini Planet Imager's Adaptive Optics System.* Applied Optics, 55, 323-340.
48. Kalas, P. et al. 2015, *Direct Imaging of an Asymmetric Debris Disk in the HD106906 Planetary System,* ApJ, 814, 32K.
49. DeRosa, R.J. et al. 2015. *Astrometric Confirmation and Preliminary Orbit Parameters of the Young Exoplanet 51 Eridani b with the Gemini Planet Imager,* ApJL, 814, 3D.

50. Macintosh, B. et al. 2015, *Discovery and Spectroscopy of the young Jovian planet 51 Eri b with the Gemini Planet Imager*, **Science**, 350, 6256. .
51. Millar-Blanchaer, M.A. et al. 2015. *Beta Pictoris' Inner Disk in Polarized Light and New Orbital Parameters for Beta Pictoris b*. ApJ, 811, 18M.
52. Rich, E.A. et al. 2015. *Near-IR Polarized Scattered Light Imagery of the DoAr 28 Transitional Disk*. ApJ, in press.
53. Momose, M. et al. 2015, *Detailed Structure of the Outer Disk Around HD169142 with Polarized Light in H-band*, PASJ, 67, 83M.
54. Wu, Y.-L., Close, L.M., Males, J.R., Barman, T.S., Morzinski, K.M., **Follette, K.B.** et al. 2015, *New Extinction and Mass Estimates of the Low-mass Companion 1RXS 1609B with the MagAO System: Evidence of an Inclined Dust Disk*. ApJ, 870L, 13W.
55. deLeon, J., et al. 2015, *Near-IR High-Resolution Imaging Polarimetry of the SU Aur Disk: Clues for Tidal Tails?* ApJ, 806L, 10D.
56. Sallum, S., Eisner, J.A., Close, L.M., Skemer, A.J., Bailey, V., Briguglio, R., **Follette, K.B.** et al. 2015, *New Spatially Resolved Observations of the T Cha Transition Disk and Constraints on the Previously Claimed Substellar Companion*. ApJ, 801, 85S.
57. Wu, Y.L., Close, L.M., Males, J.R., Barman, T.S., Morzinski, K.M., **Follette, K.B.**, et al. 2015. *New Extinction and Mass Estimates from Optical Photometry of the Very Low Mass Brown Dwarf Companion CT Chamaeleontis B with the MagAO System*. ApJ, 801, 4W.
58. Grady, C. et al. 2015. *The Outer Disk of Herbig Stars from the UV to NIR*. Ap&SS, 355, 253G.
59. **Follette, K.B.** et al 2015, *SEEDS Adaptive Optics Imaging of the Asymmetric Transition Disk Oph IRS 48 in Scattered Light*. ApJ, 798, 132F.
60. Rodigas, T.J. et al. 2014, *On the Morphology and Chemical Composition of the HR4796A Debris Disk*, ApJ, 798, 96R.
61. Currie, Thayne et al. 2014. *Recovery of the Candidate Protoplanet HD 100546 b with Gemini/NICI and Detection of Additional (Planet-induced?) Disk Structure at Small Separations*. ApJ, 796L, 30C.
62. Takami, M. et al. 2014, *Surface Geometry of Protoplanetary Disks Inferred From Near-Infrared Imaging Polarimetry*, ApJ, 795, 71T
63. Biller, B.A., Males, J.M., Rodigas, T.J., Morzinski, K.M., Close, L.M, Juhasz, A., **Follette, K.B.**, et al. 2014, *An Enigmatic Point-Like Feature within the HD 169142 Transitional Disk*, ApJL, 792, 22B
64. Skemer, A.J. et al. 2014. *Directly Imaged L-T Transition Exoplanets in the Mid-infrared*. ApJ, 792, 17S.
65. Rodigas, T.J., **Follette, K.B.** et al, 2014, *Polarized Light Imaging of the HD 142527 Transition Disk with the Gemini Planet Imager: Duse Around the Close-In Companion*. ApJ, 791L, 37R.
66. Males, J.R., Close, L.M., Morzinski, K.M., Wahhaj, Z., Liu, M.C., Kopon, D., **Follette, K.B.**, et al., 2013, *Magellan Adaptive Optics First-Light Observations of β Pic b. I. Direct Imaging of an Exoplanet with MagAO/VisAO and NICI*, ApJ, 786, 32M
67. Close, L.M., **Follette, K.B.** et al, 2013, *Discovery of H-Alpha Emission from the Close Companion inside the Gap of Transitional Disk HD142527*, 2014, ApJL, 781L, 30C.
68. Bailey, V. et al. 2014, *HD 106906 b: A Planetary-mass Companion Outside a Massive Debris Disk*, ApJL, 780L, 4B.
69. **Follette, K.B.** et al, 2013B, *The First Circumstellar Disk Imaged in Silhouette at Visible Wavelengths with Adaptive Optics: MagAO Imaging of Orion 218-354*, ApJL, 775, L13.
70. Close, L.M., Males, J.R., Morzinski, K., Kopon, D., **Follette, K.B.** et al, 2013, *Diffraction-Limited Visible Light Images of Orion Trapezium Cluster with the Magellan Adaptive Secondary Adaptive Optics System (MagAO)*, ApJ, 774, 94C
71. Wu, Y.-L., Close, L.M., Males, J.R., **Follette, K.B.**, et al., 2013, *High Resolution H-Alpha Images of the Binary Low-mass Propylid LV1 With the Magellan AO system*, ApJ, 774, 45W.
72. Takami, M. et al. 2013, *High-contrast Near-infrared Polarimetry of the Protoplanetary Disk Around RY Tau*, ApJ, 772, 145T.
73. **Follette, K.B.** et al, 2013A, *Mapping H-band Scattered Light Emission in the Mysterious SR21 Transitional Disk*, ApJ, 767, 10F.

74. Grady, C.A. et al, 2013 *Spiral Arms in the Asymmetrically Illuminated Disk of MWC 758 and Constraints on Giant Planets*, ApJ, 762, 48G.
75. Mayama, S. et al. 2012, *Subaru Imaging of Asymmetric Features in a Transitional Disk in Upper Scorpius*, ApJ, 760L, 26M
76. Skemer, A. et al. 2012, *First Light LBT AO Images of HR 8799 bcde at 1.6 and 3.3m: New Discrepancies between Young Planets and Old Brown Dwarfs*. ApJ, 753, 14S
77. Rodigas et al. 2012, *The Grey Needle: Large Grains In The Hd 15115 Debris Disk From LBT/Pisces/Ks and LBTI/LMIRCam/L' Adaptive Optics Imaging*. ApJ, 752, 57R.
78. Dong, R., Rafikov, R., Zhu, Z., Hartmann, L., Whitney, B., Brandt, T., Muto, T., Hashimoto, J., Grady, C., **Follette, K.** et al. 2012, *The Missing Cavities In The SEEDS Polarized Scattered Light Images Of Transitional Protoplanetary Disks I: A Generic Disk Model*. ApJ, 750, 161D.
79. Close et al. 2012, *High Resolution Images of Orbital Motion in the Orion Trapezium Cluster with the LBT AO System*. ApJ, 749, 180C.

PROCEEDINGS

1. Close, L.M. et al. 2020. *Prediction of the planet yield of the MaxProtoPlanetS high-contrast survey for H-alpha protoplanets with MagAO-X based on first light contrasts*. Proc. SPIE, Vol. 11448.
2. Close, L.M. et al. 2018. *Status of MagAO and Review of Astronomical Science with Visible Light Adaptive Optics*. Proc. SPIE, Vol. 10703, Art. 0L.
3. Males, J.R. et al. 2018. *MagAO-X: Project Status and First Laboratory Results*. Proc. SPIE, Vol. 10703, Art. 09.
4. Perrin, M., Ingraham, P., **Follette, K.B.** et al. 2016. *Gemini Planet Imager Observational Calibrations XI: Pipeline Improvements and Enhanced Calibrations After Two Years on Sky*. Proc. SPIE, Vol. 9908, 37P.
5. Sallum, S., Eisner, J., Close, L.M., Hinz, P.M., **Follette, K.B.** et al. 2016. *Imaging Protoplanets: Observing Transition Disks with Non-Redundant Masking*. Proc. SPIE, Vol. 9907, 0DS.
6. Close, L.M., Males, J.R., **Follette, K.B.** et al. 2014. *Into the Blue: AO Science with MagAO in the Visible*. Proc. SPIE, Vol. 9148, 1MC.
7. Males, J.R., Close, L.M., Guyon, O., Morzinski, K., Puglisi, A., Hinz, P., **Follette, K.B.** et al 2014. *Direct Imaging of Exoplanets in the Habitable Zone with Adaptive Optics*. Proc. SPIE, Vol. 9148, 20M.
8. Morzinski, K.M. et al. 2014. *MagAO: Status and On-sky Performance of the Magellan Adaptive Optics System*. Proc. SPIE, Vol. 9148, 04M.
9. Morzinski, K.M. et al, 2014. *Direct Imaging of Beta Pictoris b with First-Light Magellan Adaptive Optics*. Proc. IAUS, 299, 252M.
10. **Follette, K.B.** et al, 2014. *Visible Light Adaptive Optics Imaging of the Orion 218-354 Silhouette Disk*. Proc. IAUS, 299, 159F.
11. Males, J.R. et al, 2014. *High Contrast Imaging of an Exoplanet with the Magellan VisAO Camera*. Proc. IAUS, 299, 46M.
12. Close, L.M., **Follette, K.B.** et al. *Visible AO Observations at Halpha for Accreting Young Planets*. Proc. IAUS, 299, 32C.
13. Close, L.M., Males, J., Morzinski, K., Kopon, D., **Follette, K.** et al 2013. *Into the Blue: AO Science in the Visible with MagAO*. Proc. "AO for ELTs", 91.
14. Morzinski, K. et al. 2013. *High Contrast Exoplanet Imaging with Clio2, the Magellan Adaptive Optics Infrared Camera*. Proc. "AO for ELTs", 59.
15. Males, J. Close, L. Morzinski, K., Kopon, D., **Follette, K.** et al. *High Contrast Imaging with the Magellan VisAO Camera*. Proc. "AO for ELTs", 50.
16. Males, J.R. et al. 2012. *Laboratory Demonstration of Real-Time Frame Selection with MagAO*. Proc. SPIE, 8447E, 42M.
17. Kopon et al. 2012, *Status Update and Closed-Loop Performance of the Magellan Adaptive Optics VisAO Camera*, Proc. SPIE Vol. 8847, 3DK.

18. Close, L.M., Males, J.R., Kopon, D.A., Gasho, V., **Follette, K.B.**, et al 2012, , *First Closed-Loop Visible AO Test Results for the Advanced Adaptive Secondary AO System for the Magellan Telescope: MagAO's Performance and Status.*, Proc. SPIE, Vol. 8447, 926545.
19. Males, J.R., Close, L.M., Kopon, D., Gasho, V. and **Follette, K.** *Frame Selection Techniques for MagAO's VisAO Camera.* Proc. SPIE, Vol. 7736, 60M.
20. Kopon, D., Close, L.M., Males, J., Gasho, V. and **Follette, K.** *The Magellan Adaptive Secondary VisAO Camera: Diffraction-Limited Broadband Visible Imaging and 20mas Fiber Array IFU.* Proc. SPIE, Vol. 7736, 2VK.
21. Close, L.M., Gasho, V., Kopon, D., Males, J., **Follette, K.** et al. *The Magellan Telescope Adaptive Secondary AO System: A Visible and mid-IR AO Facility.* Proc. SPIE, Vol. 7736, 05C.
22. **Follette, K.B.** et al, 2010, *The First VisAO-Fed Integral Field Spectrograph: VisAO IFS,* Proc. SPIE, Vol. 7735, 77351P.

TEACHING AND EDUCATIONAL RESEARCH PUBLICATIONS

**Proceedings*

1. **Follette K.B.** et al. 2017, "The Quantitative Reasoning for College Science (QuaRCS) Assessment 2: Demographic, Academic and Attitudinal Variables as Predictors of Quantitative Ability", *Numeracy*, Vol. 10: Iss. 1, Article 5.
2. **Follette, K.B.** et al. *The Quantitative Reasoning for College Science (QuaRCS) Assessment, 1: Development and Validation.* Numeracy, Vol. 8, Iss.2, Article 2.
3. ***Follette, K.** and McCarthy, D, 2014. *Science Literacy's Neglected Twin: Numeracy.* Proc. ASPC, 483, 31F.
4. ***McCarthy, D.** and **Follette, K.**, 2013. *Re-Numerate: A Workshop to Restore Essential Numerical Skills and Thinking Via Astronomy Education.* Proc. ASPC, 473, 10F.
5. **Follette, K.B.**, "The Road to Becoming an Exemplary College Science Teacher", *Exemplary College Science Teaching*, Editor: Robert E Yager, 2013.
6. **Follette, K.** and McCarthy, D. *How We Serve (or Underserve) our Students Through 'Dumbing Down'*, Mercury Magazine, Winter 2012.
7. ***Follette, K.** and McCarthy, D., 2012. *An Informed Approach to Improving Quantitative Literacy and Mitigating Math Anxiety in Undergraduates Through Introductory Science Courses.* Proc. ASPC, 457, 295F.
8. ***Follette, K.** 2010. *A Novice Instructor's Perspective on Learner-Centered Teaching Techniques.* Proc. Cosmos in the Classroom.
9. Mikulecky, P., **Brutlag K.**, Rose-Gilman, M. and Peterson, B. *The Chemistry Workbook for Dummies*, Wiley Publications, 2009.
10. Mikulecky, P., Rose-Gilman, M. and **Brutlag, K.** *AP Chemistry for Dummies*, Wiley Publications, 2009.