

Anne E. Jaskot

CONTACT INFORMATION	Williams College Department of Astronomy 33 Lab Campus Drive Williamstown, MA 01267, USA	08aej@williams.edu (413) 597-2776
RESEARCH INTERESTS	Low-mass starburst galaxies throughout cosmic time: <ul style="list-style-type: none">• <i>Starburst formation</i>: galaxy mergers, neutral gas• <i>Ionizing LyC radiation</i>: LyC-leaking galaxies, LyC diagnostics, massive stars• <i>High-redshift galaxies</i>: reionization, emission-line diagnostics	
EDUCATION	Ph.D., Astronomy and Astrophysics University of Michigan, Ann Arbor, Michigan Thesis: <i>H I Gas Cycles and Lyman Continuum Optical Depth in Low-Redshift Starbursts</i> Advisor: Prof. Sally Oey	August 2014
	B.A., Astrophysics and Anthropology Williams College, Williamstown, Massachusetts <i>Magna cum laude</i> , with highest honors in Astrophysics	June 2008
APPOINTMENTS AND FELLOWSHIPS	Assistant Professor , Williams College	2019–present
	NASA Hubble Fellowship , University of Massachusetts	2017–2019
	Five College Astronomy Department Teaching and Research Fellowship , Smith College	2014–2017
	NSF Graduate Research Fellowship , University of Michigan	2011–2014
TEACHING EXPERIENCE	Williams College <i>ASTR 111: Introduction to Astrophysics</i> <i>ASTR 211: Astronomical Observing and Data Analysis</i> <i>ASTR 330: The Nature of the Universe</i> <i>ASTR 402T: Between the Stars: The Interstellar Medium</i> <i>ASTR 404T: Unsolved Problems in Galaxy Evolution</i>	2019–present
	Smith College <i>AST 341: Observational Techniques II</i> <ul style="list-style-type: none">• Research-based course using WIYN 0.9m telescope at Kitt Peak• Supervised 13 student research projects <i>AST 337: Observational Techniques I</i>	2015–2017
	Mt. Holyoke College <i>AST 115: Introduction to Astronomy</i>	2016
	University of Michigan, Instructor of Record <i>ASTRO 127: Naked Eye Astronomy</i>	2013

MENTORSHIP

Graduate Students

- Sophia Flury (UMass) **2019–present**
- Jed McKinney (UMass) **2017–2018**

Undergraduate Thesis Students

- Patricia Fofie (Williams College) **2020–2021**
- Nicole Ford (Williams College) **2018–2020**
- Connor Marti (Williams College) **2019–2020**
- Tara Dowd (UMass) **2017–2018**
- Heather Kurtz (Smith College) **2015–2016**

Undergraduate Research Students

- Noor Alsairafi (Williams College) **Summers 2020–2021**
- Michael Arena (Williams College) **Summer 2021**
- Abby Kinney (Williams College) **Summer 2021**
- Tasan Smith-Gandy (Williams College) **Summer 2021**
- Anneliese Silveyra (Williams College) **2020–2021**
- Ashraf Dhahbi (Williams College) **Summer 2020**
- Erik Drybread (UMass-Boston) **Summer 2020**
- John Inoue (Williams College) **Summer 2018**
- Rachel O'Connor (Smith College) **2017–2018**
- AST 341 Course Projects (27 students from the Five Colleges) **2015–2017**
- Allyson Bergeron (UMass) **Summer 2016**
- Derek Carroll (UMass) **2015–2016**
- Kay Lowden (Mt. Holyoke College) **Spring 2015**

PROFESSIONAL
AND UNIVERSITY
SERVICE

- Williams representative for Apache Point Observatory **2019–present**
- Williams Divisional Research Funding Committee **2019–present**
- Referee for A&A and ApJ **2016–present**
- Williams Library and Special Collections Committees **2020–2021**
- Williams Inclusive Roundtable Participant **2021**
- *Hubble Space Telescope* Proposal Peer Review Panelist **2015–2016; 2021**
- NASA Earth and Space Science Fellowship Reviewer **2018–2019**
- Scientific Organizing Committee Member for Tokyo Spring Cosmic Lyman-Alpha Workshop (Sakura CLAW) **2018**
- Organizer of Five College Astronomy Dept. Galaxy Group **2017–2018**
- Five College Astronomy Dept. Colloquium Committee **2016–2018**

OUTREACH

- Mathematics tutor for high school equivalency class **2017–2018**
- Guest lecturer and leader of high school science writing workshop **2017**
- Organized volunteers to teach elementary school Science Olympiad team **2013**
- Led hands-on astronomy activities for local scout troops **2010, 2012**

TECHNICAL
EXPERIENCE

Multi-wavelength observations:

- X-ray spectra and imaging: *Chandra X-ray Observatory*
- UV spectroscopy: *Hubble Space Telescope*
- Optical imaging: *Hubble Space Telescope* and WIYN 0.9m telescopes
- Optical spectroscopy: Magellan, Keck, Apache Point Observatory
- H I 21 cm spectroscopy: Arecibo ALFALFA Survey and Very Large Array

Querying large datasets (SDSS, WISE, GALEX)

Computing: Cloudy photoionization modeling, IDL, Python, IRAF

REFEREED
PUBLICATIONS

1. **S. R. Flury***, **A. E. Jaskot**, H. C. Ferguson, G. Worseck, K. Makan, J. Chisholm, A. Saldana-Lopez, D. Schaerer, S. R. McCandliss, B. Wang, **N. M. Ford***, T. Heckman, Z. Ji, M. Giavalisco, R. Amorín, H. Atek, J. Blaizot, S. Borthakur, C. Carr, M. Castellano, S. Cristiani, S. De Barros, M. Dickinson, S. L. Finkelstein, B. Fleming, F. Fontanot, T. Garel, A. Grazian, M. Hayes, A. Henry, V. Mauerhofer, G. Micheva, M. S. Oey, G. Östlin, C. Papovich, L. Pentericci, S. Ravindranath, J. Rosdahl, M. Rutkowski, P. Santini, C. Scarlata, H. Teplitz, T. Thuan, M. Trebitsch, E. Vanzella, A. Verhamme, & X. Xu (2021): “The Low-Redshift Lyman Continuum Survey I: New, Diverse Local Lyman-Continuum Emitters”, *ApJS*, Submitted.
2. **S. R. Flury***, **A. E. Jaskot**, H. C. Ferguson, G. Worseck, K. Makan, J. Chisholm, A. Saldana-Lopez, D. Schaerer, S. R. McCandliss, B. Wang, **N. M. Ford***, M. S. Oey, T. Heckman, Z. Ji, M. Giavalisco, R. Amorín, H. Atek, J. Blaizot, S. Borthakur, C. Carr, M. Castellano, S. Cristiani, S. De Barros, M. Dickinson, S. L. Finkelstein, B. Fleming, F. Fontanot, T. Garel, A. Grazian, M. Hayes, A. Henry, V. Mauerhofer, G. Micheva, G. Östlin, C. Papovich, L. Pentericci, S. Ravindranath, J. Rosdahl, M. Rutkowski, P. Santini, C. Scarlata, H. Teplitz, T. Thuan, M. Trebitsch, E. Vanzella, & A. Verhamme (2021): “The Low-Redshift Lyman Continuum Survey II: New Insights into LyC Diagnostics”, *ApJ*, Submitted.
3. A. Saldana-Lopez, D. Schaerer, J. Chisholm, **S. R. Flury***, **A. E. Jaskot**, S. Gazagnes, G. Worseck, K. Makan, V. Mauerhofer, A. Verhamme, R. O. Amorín, R. Marques-Chaves, H. C. Ferguson, M. Giavalisco, A. Grazian, M. J. Hayes, T. M. Heckman, A. Henry, Z. Ji, S. R. McCandliss, M. S. Oey, G. Östlin, L. Pentericci, T. X. Thuan, M. Trebitsch, E. Vanzella, & X. Xu (2021): “The Low-Redshift Lyman Continuum Survey: Unveiling the ISM properties of low-z Lyman continuum emitters”, *A&A*, Submitted.
4. B. Wang, T. M. Heckman, R. Amorín, S. Borthakur, J. Chisholm, H. Ferguson, **S. Flury***, M. Giavalisco, A. Grazian, M. Hayes, A. Henry, **A. Jaskot**, Z. Ji, K. Makan, S. McCandliss, M. S. Oey, G. Östlin, A. Saldana-Lopez, D. Schaerer, T. Thuan, G. Worseck, & X. Xu (2021): “The Low-redshift Lyman-continuum Survey: [S II]-deficiency and the leakage of ionizing radiation”, *ApJ*, Accepted, arXiv:2104.03432.
5. N. Eggen, C. Scarlata, E. Skillman, & **A. Jaskot** (2021): “Blow-Away in the Extreme Low-Mass Starburst Galaxy Pox 186”, *ApJ*, 912, 12.
6. S. Ravindranath, T. Monroe, **A. Jaskot**, H. C. Ferguson, & J. Tumlinson (2020): “The Semi-Forbidden C III] λ 1909Å Emission in the Rest-Ultraviolet Spectra of Green Pea Galaxies”, *ApJ*, 896, 170.
7. L. Hogarth, R. Amorín, J. M. Vílchez, G. F. Hägele, M. Cardaci, E. Pérez-Montero, V. Firpo, **A. Jaskot**, & R. Chávez (2020): “Chemodynamics of green pea galaxies - I. Outflows and turbulence driving the escape of ionizing photons and chemical enrichment,” *MNRAS*, 494, 3541.
8. Z. Ji, M. Giavalisco, E. Vanzella, B. Siana, L. Pentericci, **A. Jaskot** et al. (2020): “HST Imaging of the Ionizing Radiation from a Star-forming Galaxy at $z=3.794$ ”, *ApJ*, 888, 109.

*Research Student

9. **A. E. Jaskot**, **T. Dowd***, M. S. Oey, C. Scarlata, & **J. McKinney*** (2019): “New Insights on Ly α and Lyman Continuum Radiative Transfer in the Greenest Peas,” *ApJ*, 885, 96.
10. **J. H. McKinney***, **A. E. Jaskot**, M. S. Oey, M. S. Yun, **T. Dowd***, & J. D. Lowenthal (2019): “Neutral Gas Properties and Ly α Escape in Extreme Green Pea Galaxies”, *ApJ*, 874, 52.
11. G. Micheva, M. S. Oey, R. P. Keenan, **A. E. Jaskot**, & B. L. James (2018): “Mapping Lyman Continuum Escape in Tololo 1247-232”, *ApJ*, 867, 2.
12. I. Orlitová, A. Verhamme, A. Henry, C. Scarlata, **A. Jaskot**, M. S. Oey, & D. Schaerer (2018): “Puzzling Lyman-alpha Line Profiles in Green Pea Galaxies”, *A&A*, 616, 60.
13. **A. E. Jaskot**, M. S. Oey, C. Scarlata, & **T. Dowd*** (2017): “Kinematics and Optical Depth in the Green Peas: Suppressed Superwinds in Candidate LyC Leakers,” *ApJL*, 851, 9.
14. M. S. Oey, C. N. Herrera, S. Silich, M. Reiter, B. L. James, **A. E. Jaskot**, & G. Micheva (2017): “Dense CO in Mrk 71-A: Superwind Suppressed in a Young Super Star Cluster”, *ApJL*, 849, 1.
15. R. P. Keenan, M. S. Oey, **A. E. Jaskot**, & B. L. James (2017): “Haro 11: Where is the Lyman Continuum Source?”, *ApJ*, 848, 12.
16. G. Micheva, M. S. Oey, **A. E. Jaskot**, & B. L. James (2017): “Mrk 71 / NGC 2366: The Nearest Green Pea Analog”, *ApJ*, 845, 165.
17. **A. E. Jaskot** & S. Ravindranath (2016): “Photoionization Models for the Semi-Forbidden C III] λ 1909 Emission in Star-Forming Galaxies,” *ApJ*, 833, 136.
18. A. Van Sistine, J. J. Salzer, A. Sugden, R. Giovanelli, M. P. Haynes, S. Janowiecki, **A. E. Jaskot**, & E. M. Wilcots (2016): “The ALFALFA H α Survey. I. Project Description and The Local Star-formation Rate Density from the Fall Sample,” *ApJ*, 824, 25.
19. H. Yang, S. Malhotra, M. Gronke, J. E. Rhoads, M. Dijkstra, **A. E. Jaskot**, Z. Zheng, & J. Wang (2016): “Green Pea Galaxies Reveal Secrets of Ly α Escape,” *ApJ*, 820, 130.
20. **A. E. Jaskot**, M. S. Oey, J. J. Salzer, A. Van Sistine, E. F. Bell, & M. P. Haynes (2015): “From H I to Stars: H I Depletion in Starbursts and Star-forming Galaxies in the ALFALFA H α Survey,” *ApJ*, 808, 66.
21. **A. E. Jaskot** & M. S. Oey (2014): “Linking Ly α and Low-ionization Transitions at Low Optical Depth,” *ApJ Letters*, 791, 19.
22. **A. E. Jaskot** & M. S. Oey (2013): “The Origin and Optical Depth of Ionizing Radiation in the ‘Green Pea’ Galaxies,” *ApJ*, 766, 91.
23. E. W. Pellegrini, M. S. Oey, P. F. Winkler, S. D. Points, R. C. Smith, **A. E. Jaskot**, & J. Zastrow (2012): “The Optical Depth of H II Regions in the Magellanic Clouds,” *ApJ*, 755, 40.
24. **A. E. Jaskot**, D. K. Strickland, M. S. Oey, Y.-H. Chu, & G. García-Segura (2011): “Observational Constraints on Superbubble X-ray Energy Budgets,” *ApJ*, 729, 28.

25. R. B. C. Henry, K. B. Kwitter, **A. E. Jaskot**, B. Balick, M. A. Morrison, & J. B. Milingo (2010): “Abundances of Galactic Anticenter Planetary Nebulae and the Oxygen Abundance Gradient in the Galactic Disk,” *ApJ*, 724, 748.
26. J. L. Elliot, M. J. Person, A. A. S. Gulbis, S. P. Souza, E. R. Adams, B. A. Babcock, W. J. Gangestad, **A. E. Jaskot**, et al. (2007): “Changes in Pluto’s Atmosphere: 1988-2006,” *AJ*, 134, 1.
27. A. R. Hajian, S. M. Movit, D. Trofimov, B. Balick, Y. Terzian, K. H. Knuth, D. Granquist-Fraser, K. A. Huyser, A. Jalobeanu, D. McIntosh, **A. E. Jaskot**, S. Palen, & N. Panagia (2007): “An Atlas of [N II] and [O III] Images and Spectra of Planetary Nebulae,” *ApJS*, 169, 289.

CONFERENCE
PROCEEDINGS

1. **A. E. Jaskot**, *J. H. McKinney**, *T. Dowd**, S. Oey, M. Yun, C. Scarlata, & J. Lowenthal (2020): “Neutral gas and the escape of ionizing radiation: Lessons from the low-redshift Green Peas,” *Proceedings of the International Astronomical Union Symposium*, Vol. 15, Symposium S352, (eds.) E. da Cunha, J. Hodge, J. Afonso, L. Pentericci, & D. Sobral.
2. **A. E. Jaskot** & M. S. Oey (2015): “The Green Peas: Searching for LyC Emitters at Low Redshift,” *Proceedings International Astronomical Union Symposium No. 319*, (eds.) S. Kaviraj & H. Ferguson.
3. **A. E. Jaskot**, M. S. Oey, J. J. Salzer, A. Van Sistine, E. F. Bell, & M. P. Haynes (2015): “ALFALFA H α Reveals How Galaxies Use Their H I Fuel,” *Proceedings International Astronomical Union Symposium No. 315*, (eds.) P. Jablonka, F. Van der Tak, & P. André.
4. **A. E. Jaskot** & M. S. Oey (2014): “The Origin and Optical Depth of Ionizing Photons in the Green Pea Galaxies,” *Massive Young Clusters Near and Far: From the Milky Way to Reionization*, (eds.) D. Rosa-Gonzalez, Y. D. Mayya, & E. Terlevich, (INAOE & AMC).
5. M. S. Oey, E. W. Pellegrini, J. Zastrow, & **A. E. Jaskot** (2014): “Ionization by Massive Young Clusters as Revealed by Ionization-Parameter Mapping,” *Massive Young Clusters Near and Far: From the Milky Way to Reionization*, (eds.) D. Rosa-Gonzalez, Y. D. Mayya, & E. Terlevich, (INAOE & AMC).
6. **A. E. Jaskot**, D. K. Strickland, M. S. Oey, & Y.-H. Chu (2010): “The Origin of Excess X-ray Emission in Two LMC Superbubbles,” *The Dynamic ISM: A Celebration of the Canadian Galactic Plane Survey*, (eds.) R. Kothes, T. L. Landecker, & A. G. Willis, (San Francisco: ASP), 342.

INVITED TALKS

1. *Zoom-In and Out: From the Interstellar Medium to the Large Scale Structure of the Universe*, Nordita Workshop, Nordic Institute for Theoretical Physics, Stockholm, Sweden, Jun. 2019.
2. *Exploring the high-redshift Universe in advance of JWST* Session at the European Week of Astronomy and Space Science, Liverpool, UK, Apr. 2018.

*Research Student

3. *Spectral Diagnostics to Explore the Cosmic Dawn with JWST* Conference, Space Telescope Science Institute, Baltimore, MD, Aug. 2017.
4. *Galaxy Evolution Across Time* Conference, L'Observatoire de Paris, Paris, France, Jun. 2017.
5. *How Galaxies Form Stars* Conference, Stockholm University, Stockholm, Sweden, Aug. 2016.

COLLOQUIUA

1. Colloquium, Goddard Space Flight Center, Greenbelt, MD, Apr. 2021.
2. Colloquium, University of Texas, Austin, TX, Sept. 2020.
3. Colloquium, Colby College, Waterville, ME, Nov. 2019.
4. Colloquium, Dunlap Institute, University of Toronto, Toronto, ON, Canada, Apr. 2019.
5. Colloquium, Texas A&M University, College Station, TX, Apr. 2019.
6. Colloquium, Amherst College, Amherst, MA, Mar. 2019.
7. Colloquium, Bates College, Lewiston, ME, Feb. 2019.
8. Colloquium, University of Connecticut, Storrs, CT, Feb. 2018.
9. Colloquium, Carnegie Observatories, Pasadena, CA, Jan. 2018.
10. Colloquium, Yale University, New Haven, CT, Nov. 2017.
11. Colloquium, University of Minnesota, Minneapolis, MN, Nov. 2017.
12. Public Lecture, Quinsigamond Community College, Worcester, MA, Nov. 2016.
13. Colloquium, Williams College, Williamstown, MA, Oct. 2014.

CONTRIBUTED
TALKS

1. *235th Meeting of the American Astronomical Society*, Honolulu, HI, Jan. 2020.
2. *Revolutionary Spectroscopy of Today as a Springboard to Webb*, invited participant, Lorentz Center Workshop, Leiden, The Netherlands, Oct. 2019.
3. *Uncovering Early Galaxy Evolution in the ALMA and JWST Era*, International Astronomical Union Symposium 352, Viana do Castelo, Portugal, Jun. 2019.
4. *Hubble Fellows Symposium*, Space Telescope Science Institute, Baltimore, MD, Mar. 2019.
5. *Hubble Fellows Symposium*, Space Telescope Science Institute, Baltimore, MD, Mar. 2018.
6. *231st Meeting of the American Astronomical Society*, Washington, DC, Jan. 2018.
7. *Characterizing Galaxies with Spectroscopy with a View for JWST*, invited participant, Lorentz Center Workshop, Leiden, The Netherlands, Oct. 2017.
8. *Life-cycle of Gas in Galaxies: A Local Perspective* Conference, the Netherlands Institute for Radio Astronomy, Dwingeloo, The Netherlands, Sept. 2015.

9. *Star Formation Across Space and Time* Conference, ESA European Space Research and Technology Centre, Noordwijk, The Netherlands, Nov. 2014.
10. *223rd Meeting of the American Astronomical Society*, Washington, DC, Jan. 2014.
11. *5th Guillermo Haro Conference: Massive Young Star Clusters Near and Far*, Puebla, Mexico, Dec. 2013.

POSTER
PRESENTATIONS

1. *Cosmic Dawn of Galaxy Formation, 32nd Institut d'Astrophysique de Paris Colloquium*, Paris, France, June 2016.
2. *Saas Fee Advanced Course: Lyman Alpha as an Astrophysical and Cosmological Tool*, Les Diablerets, Switzerland, Mar. 2016.
3. *Focus Meeting 7: Stellar Physics in Galaxies Throughout the Universe, International Astronomical Union General Assembly*, Honolulu, HI, Aug. 2015.
4. *Symposium 315: From Interstellar Clouds to Star-Forming Galaxies: Universal Processes?*, International Astronomical Union General Assembly, Honolulu, HI, Aug. 2015.
5. *Symposium 319: Galaxies at High Redshift and Their Evolution Over Cosmic Time*, International Astronomical Union General Assembly, Honolulu, HI, Aug. 2015.
6. *9th Marseille Cosmology Conference: Physical Processes of Galaxy Formation*, Aix-en-Provence, France, July 2013.
7. *2012 STScI May Symposium: Gas Flows in Galaxies*, Baltimore, MD, May 2012.
8. *The Dynamic Interstellar Medium: A Celebration of the Canadian Galactic Plane Survey*, Naramata, BC, Canada, June 2010.

POPULAR

1. J. Howard, "Green Pea' Galaxies May Shed Light on High-Energy Event Seen in Early Universe," *Huffington Post*, 2013 April 09.
2. J. Williams, "Green Peas' Offer Tiny Clues to Early Universe," *Universe Today*, 2013 April 05.
3. N. C. Moore, "Green Pea Galaxies Could Help Astronomers Understand Early Universe," University of Michigan press release, 2013 April 03.
4. A. Hadhazy, "Peas Porridge Hot," *Natural History*, Vol. 121, No. 3, 2013 April 01.

FUNDING

1. "Extreme Star-Forming Galaxies: Local laboratories to constrain models of ionizing sources in the reionization epoch," *Hubble Space Telescope Cycle 28*, 20 orbits, 2021
Co-Investigator; Award amount: \$9,930

2. "The Evolution of Galactic Structure: Quantifying the Influence of the Most Massive Stars with the SPRITE CubeSat," NASA, 2020-2022
Co-Investigator; Award amount: \$49,441
3. "UV emission line spectra of $z=0.3-0.4$ Lyman continuum emitters: a key reference to uncover the sources of cosmic reionization," *Hubble Space Telescope* Cycle 27, 42 orbits, 2019
Co-Investigator; Award amount: \$6,052
4. "The Low-Redshift Lyman Continuum Survey," *Hubble Space Telescope* Cycle 26, 134 orbits, 2018
Principal Investigator; Award amount: \$1,090,197
5. "LyC, Ly α , and Low Ions in Green Peas: Diagnostics of Optical Depth, Geometry, and Outflows," *Hubble Space Telescope* Cycle 23, 50 orbits, 2015
Principal Investigator; Award amount: \$198,394
6. "Spectral Diagnostics for the Reionization Era: Exploring the Semi-Forbidden C III] Emission in Low Metallicity Green Pea Galaxies," *Hubble Space Telescope* Cycle 23, 18 orbits, 2015 (Co-I)
Co-Investigator; Award amount: \$12,976
7. "Green Pea Galaxies: Extreme, Optically Thin Starbursts?" *Hubble Space Telescope* Cycle 21, 24 orbits, 2013
Principal Investigator; Award amount: \$131,060

OTHER OBSERVING
PROPOSALS,
PRINCIPAL
INVESTIGATOR

1. "Revealing the Ionizing Spectrum of Low-Metallicity Galaxies with MIRI," *James Webb Space Telescope* Cycle 1, 24.5 hours, 2021
2. "The Nebular Properties of Lyman Continuum Emitters: Deep Spectroscopy for the HST Low-Redshift Lyman Continuum Survey," Keck Telescopes, two nights, 2020
3. "The Molecular Gas Content of Green Pea Galaxies," Large Millimeter Telescope, 10 hours, 2017
4. "HI in the High Ionization Regime: The Extreme Green Pea J1608+3528," Very Large Array, 7 hours, 2016
5. "The Green Peas: Low Optical Depths or Hard Ionizing Sources?" Magellan Telescopes, 2 nights, 2014
6. "Are the 'Green Peas' Optically Thin?" Magellan Telescopes, 4 nights, 2012
7. "The Green Peas: Escaping Ionizing Radiation at Low-Redshift?" Magellan Telescopes, 2 nights, 2012