

Jason E. Young  
 SETI Institute  
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## Education

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| <b>Pennsylvania State University</b><br>Doctor of Philosophy in Astronomy and Astrophysics   | University Park, PA<br>December 2012 |
| <b>University of Arizona</b><br>Bachelor of Science in Astronomy and Physics, minor in Latin | Tucson, AZ<br>May 2005               |

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## Employment

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| <b>SETI Institute</b>           | Mountainview, CA  | Research Scientist   | 7/2025 – present |
| <b>Williams College</b>         | Williamstown, MA  | Visiting Professor   | 7/2024 – 6/2025  |
| <b>Univ. of Massachusetts</b>   | Amherst, MA       | Postdoctoral Scholar | 9/2022 – 6/2024  |
| <b>Mount Holyoke College</b>    | South Hadley, MA  | Visiting Lecturer    | 7/2016 – 9/2022  |
| <b>Amherst College</b>          | Amherst, MA       | Visiting Professor   | 7/2015 – 6/2016  |
| <b>Mount Saint Mary's Univ.</b> | Emmitsburg, MD    | Adjunct Professor    | 6/2014 – 7/2015  |
| <b>Penn State University</b>    | State College, MA | Adjunct Lecturer     | 6/2013 – 6/2014  |
| <b>Penn State University</b>    | State College, MA | Postdoc              | 1/2013 – 6/2013  |

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## Publications

- Jason Young, Alexandra Pope, Anna Sajina, Lin Yan, Thiago S. Gonçalves, Miriam Eleazer, Stacey Alberts, Lee Armus, Matteo Bonato, Daniel A. Dale, Duncan Farrah, Carl Ferkinhoff, Christopher C. Hayward, Jed McKinney, Eric J. Murphy, Nicole Nesvadba, Patrick Ogle, Leonid Sajkov, and Sylvain Veilleux. Halfway to the Peak: Spatially Resolved Star Formation and Kinematics in a  $z = 0.54$  Dusty Galaxy with JWST/MIRI. *ApJ*, 958(1):L5, November 2023. doi: 10.3847/2041-8213/ad07e1.
- J. E. Young, Rachel Kuzio de Naray, and Sharon X. Wang. A recent starburst in the low surface brightness galaxy UGC 628. *MNRAS*, 493(1):55–69, March 2020. doi: 10.1093/mnras/staa191.
- Jason E. Young and Miriam Eleazer. The hyper-stable disc of UGC 8839. *MNRAS*, 499(4): 6105–6119, December 2020. doi: 10.1093/mnras/staa3220.
- J. E. Young, R. Kuzio de Naray, and S. X. Wang. The distribution of star formation and metals in the low surface brightness galaxy UGC 628. *MNRAS*, 452:2973–2983, September 2015. doi: 10.1093/mnras/stv1492.
- J. E. Young, C. Gronwall, J. J. Salzer, and J. L. Rosenberg. Comparing infrared star formation rate indicators with optically derived quantities. *MNRAS*, 443:2711–2721, September 2014a. doi: 10.1093/mnras/stu1338.
- J. E. Young, M. Eracleous, O. Shemmer, H. Netzer, C. Gronwall, D. Lutz, R. Ciardullo, and E. Sturm. Locating star-forming regions in quasar host galaxies. *MNRAS*, 438:217–239, February 2014b. doi: 10.1093/mnras/stt2145.
- J. E. Young. *Star formation across galactic environments*. PhD thesis, The Pennsylvania State University, 2012.

- Anna Sajina, Alexandra Pope, Henrik Spoon, Lee Armus, Miriam Eleazer, Duncan Farrah, Mark Lacy, Thomas Lai, Jed McKinney, Sylvain Veilleux, Lin Yan, and Jason Young. Halfway to the Peak: Ice Absorption Bands at  $z \approx 0.5$  with JWST MIRI/MRS. *ApJ*, 985(2):201, June 2025. doi: 10.3847/1538-4357/ad44a.
- Matheus C. Carvalho, Bavithra Naguleswaran, Pauline Barmby, Mark Gorski, Sabine Köenig, Benne Holwerda, and Jason Young. A multi-wavelength overview of the giant spiral UGC 2885. *A&A*, 692:A105, December 2024. doi: 10.1051/0004-6361/202450916.
- Clayton Robertson, Benne W. Holwerda, Jason Young, William C. Keel, Jessica M. Berkheimer, Kyle Cook, Christopher J. Conselice, Brenda L. Frye, Norman A. Grogin, Anton M. Koekemoer, Camella-Rosa Nasr, Divya Patel, Wade Roemer, Dominic Smith, and Rogier A. Windhorst. Ground- and Space-based Dust Observations of VV 191 Overlapping Galaxy Pair. *AJ*, 167(6): 263, June 2024. doi: 10.3847/1538-3881/ad39c4.
- Leonid Sajkov, Anna Sajina, Alexandra Pope, Stacey Alberts, Lee Armus, Duncan Farrah, Jamie Lin, Danilo Marchesini, Jed McKinney, Sylvain Veilleux, Lin Yan, and Jason Young. Halfway to the Peak: The JWST MIRI 5.6  $\mu\text{m}$  Number Counts and Source Population. *ApJ*, 977(1):115, December 2024. doi: 10.3847/1538-4357/ad8c22.
- C. R. Mulcahey, S. K. Leslie, T. M. Jackson, J. E. Young, I. Prandoni, M. J. Hardcastle, N. Roy, K. Malek, M. Magliocchetti, M. Bonato, H. J. A. Röttgering, and A. Drabent. Star formation and AGN feedback in the local Universe: Combining LOFAR and MaNGA. *A&A*, 665:A144, September 2022. doi: 10.1051/0004-6361/202142215.
- Benne W. Holwerda, John F. Wu, William C. Keel, Jason Young, Ren Mullins, Joannah Hinz, K. E. Saavik Ford, Pauline Barmby, Rupali Chandar, Jeremy Bailin, Josh Peek, Tim Pickering, and Torsten Böker. Predicting the Spectrum of UGC 2885, Rubin’s Galaxy with Machine Learning. *ApJ*, 914(2):142, June 2021. doi: 10.3847/1538-4357/abffcc.
- X. Fan, J. F. Hennawi, G. T. Richards, M. A. Strauss, D. P. Schneider, J. L. Donley, J. E. Young, J. Annis, H. Lin, H. Lampeitl, R. H. Lupton, J. E. Gunn, G. R. Knapp, W. N. Brandt, S. Anderson, N. A. Bahcall, J. Brinkmann, R. J. Brunner, M. Fukugita, A. S. Szalay, G. P. Szokoly, and D. G. York. A Survey of  $z \approx 5.7$  Quasars in the Sloan Digital Sky Survey. III. Discovery of Five Additional Quasars. *AJ*, 128:515–522, August 2004. doi: 10.1086/422434.
- X. Fan, M. A. Strauss, G. T. Richards, J. F. Hennawi, R. H. Becker, R. L. White, A. M. Diamond-Stanic, J. L. Donley, L. Jiang, J. S. Kim, M. Vestergaard, J. E. Young, J. E. Gunn, R. H. Lupton, G. R. Knapp, D. P. Schneider, W. N. Brandt, N. A. Bahcall, J. C. Barentine, J. Brinkmann, H. J. Brewington, M. Fukugita, M. Harvanek, S. J. Kleinman, J. Krzesinski, D. Long, E. H. Neilsen, Jr., A. Nitta, S. A. Snedden, and W. Voges. A Survey of  $z > 5.7$  Quasars in the Sloan Digital Sky Survey. IV. Discovery of Seven Additional Quasars. *AJ*, 131:1203–1209, March 2006. doi: 10.1086/500296.
- A. M. Diamond-Stanic, X. Fan, W. N. Brandt, O. Shemmer, M. A. Strauss, S. F. Anderson, C. L. Carilli, R. R. Gibson, L. Jiang, J. S. Kim, G. T. Richards, G. D. Schmidt, D. P. Schneider, Y. Shen, P. S. Smith, M. Vestergaard, and J. E. Young. High-redshift SDSS Quasars with Weak Emission Lines. *ApJ*, 699:782–799, July 2009. doi: 10.1088/0004-637X/699/1/782.
- S. C. Gallagher, P. R. Durrell, D. M. Elmegreen, R. Chandar, J. English, J. C. Charlton, C. Gronwall, J. Young, P. Tzanavaris, K. E. Johnson, C. Mendes de Oliveira, B. Whitmore, A. E. Hornschemeier, A. Maybhate, and A. Zabludoff. Hierarchical Structure Formation and Modes of Star Formation in Hickson Compact Group 31. *AJ*, 139:545–564, February 2010. doi: 10.1088/0004-6256/139/2/545.

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## Successful Proposals

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| <i>A Low-Surface Brightness Analog to the Local Group with GCMS</i><br>Six nights on the GCMS IFU on the 2.7m at the McDonald Observatory                                                      | May 2025              |
| <i>Clumpy HI in Barred Low Surface Brightness Galaxies</i><br>23 hours of VLA B+D Time                                                                                                         | January 2025          |
| <i>Barred and Unbarred Extreme LSB Spirals with GCMS</i><br>Six nights on the GCMS IFU on the 2.7m at the McDonald Observatory                                                                 | January 2025          |
| <i>IFU Spectroscopy of a Post-Burst LSB Spiral: Part 2</i><br>Seven nights on the GCMS IFU on the 2.7m at the McDonald Observatory                                                             | January 2024          |
| <i>Searching for a Dark Matter Bar: Year 2</i><br>Nine nights on the GCMS IFU on the 2.7m at the McDonald Observatory                                                                          | September 2024        |
| <i>Exploring the Evolution of Low Surface Brightness Spirals</i><br>36.4 ks of UVOT time + \$30k                                                                                               | October 2023          |
| <i>HI Dynamics in an Extreme LSB Spiral with the VLA</i><br>Nine hours of VLA C Time (Priority A)                                                                                              | October 2023          |
| <i>A Low-Surface Brightness Analog to the Local Group with GCMS</i><br>Eight nights on the GCMS IFU on the 2.7m at the McDonald Observatory                                                    | August 2023           |
| <i>Searching for Disk/Halo Coupling in a Low Surface Brightness Spiral Galaxy</i><br>Nine nights on the GCMS IFU on the 2.7m at the McDonald Observatory                                       | January 2023          |
| <i>A Low-Surface Brightness Analog to the Local Group with GCMS</i><br>Six nights on the GCMS IFU on the 2.7m at the McDonald Observatory                                                      | August/September 2022 |
| <i>VIRUS-P Observations of a Low Surface Brightness Spiral in a Near-Compact Group</i><br>Six nights on the VIRUS-P IFU on the 2.7m at the McDonald Observatory                                | May 2022              |
| <i>Exploring the Sparse Neighborhood of a Low Surface Brightness Spiral</i><br>Seven nights on the VIRUS-P IFU on the 2.7m at the McDonald Observatory                                         | Oct/Nov 2021          |
| <i>IFU Spectroscopy of a Post-Burst LSB Spiral</i><br>Six nights on the VIRUS-P IFU on the 2.7m at the McDonald Observatory                                                                    | April/May 2021        |
| <i>Capturing the molecular content of LSB galaxies: the bright starburst in UGC731</i><br>40 Hours on the IRAM 30m Telescope                                                                   | August 2021           |
| <i>IFU Spectroscopy of Low Surface Brightness Galaxies</i><br>Nine nights on the VIRUS-P IFU on the 2.7m at the McDonald Observatory                                                           | August 2020           |
| <i>VLA Search for Tidal Disruption of Post-Burst LSB</i><br>Three hours of VLA C/D Time                                                                                                        | June 2020             |
| <i>IFU Spectroscopy of Low Surface Brightness Galaxies</i><br>Seven nights on the VIRUS-P IFU on the 2.7m at the McDonald Observatory<br>(awarded but canceled due to COVID-19)                | May 2020              |
| <i>IFU Spectroscopy of Low Surface Brightness Galaxies</i><br>Four nights on the VIRUS-P IFU on the 2.7m at the McDonald Observatory                                                           | February 2020         |
| <i>MUSCEL: Revealing the Star Formation History of Low Surface Brightness Galaxies using IMACS-IFU</i><br>One night on the Magellan Baade Telescope with IMACS at the Las Campanas Observatory | November 2017         |

*MUSCEL: Revealing the Star Formation History of Low Surface Brightness Galaxies* June 2017  
*using IMACS-IFU*

One night on the Magellan Baade Telescope with IMACS at the Las Campanas Observatory

*Broadband and H $\alpha$  Imaging of the MUSCEL Galaxy UGC 10140: Structural Parameters, Group Membership, and Star Formation* January 2017

Six nights on the WIYN 0.9m at the Kitt Peak National Observatory

*IFU Spectroscopy of Low Surface Brightness Galaxies* September 2014

Three nights on the VIRUS-P IFU on the 2.7m at the McDonald Observatory

*CO Maps of LSB in Parallel With Optical/UV/IR Star-Formation Histories* August 2014

5 hours on GBT ARGUS

*Anchoring the Blue End of Low Surface Brightness Disk Galaxy SEDs* September 2013

9.1 hours on the Swift UVOT

*IFU Spectroscopy of Low Surface Brightens Galaxies* August 2013

Four nights on the VIRUS-P IFU on the 2.7m at the McDonald Observatory

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## Teaching Experience

**Mount Holyoke College** South Hadley, MA

*Visiting Professor* July 2016 - June 2022

Introductory and Advanced astronomy courses, Physics Courses and Labs

**Amherst College** Amherst, MA

*Visiting Assistant Professor* August 2015 - May 2016

Introductory and Advanced astronomy courses

**Mount St. Mary's University** Emmitsburg, MD

*Lecturer* August 2014 - May 2015

Introductory astronomy

*Lecturer* January 2015 - May 2015

Physics Lab

**The Pennsylvania State University** University Park, PA

*Lecturer* August 2013 - May 2014

Introductory astronomy course emphasizing on the sky and planets

*Instructor* August 2005 - August 2012

Elementary astronomy laboratory for undergraduate non-majors

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## Invited Talks

- “Star Formation in the Diffuse Universe”  
colloquium, Western Ontario University, 2025
- “Halfway to the peak: A bridge program to map coeval star formation and supermassive black hole growth”  
colloquium, University of Massachusetts Amherst, 2022

- “Investigating the Life Story of Low Surface Brightness Galaxies” colloquium, Amherst College, 2015
- “Investigating the Life Story of Low Surface Brightness Galaxies” colloquium, Union College, 2014
- “Quasar Host Galaxies: What’s Really Going On?” lunch talk, Space Telescope Science Institute, 2013
- “Quasar Host Galaxies: What’s Really Going On?” lunch talk, Goddard Space Flight Center, 2012
- “Quasar Host Galaxies: What’s Really Going On?” lunch talk, Cornell, October 2012
- “In Search of Star Formation in Quasar Host Galaxies” Penn State departmental talk, 2011
- “Quasar Host Galaxies: The Story of a Hidden Train Wreck” departmental talk, 2009

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## Senior Theses Supervised

- Jaya Nagarajan-Swenson (Mount Holyoke 2022) is using IFU spectroscopy to determine the dark matter concentration indices of LSB galaxies.
- Lindsey Hands (Mount Holyoke 2022) is using IFU spectroscopy to examine the ISM metallicity gradients in LSB galaxies; initial findings indicate that flat gradients, contrary to typical spiral galaxies.
- Isabel McIntyre (Mount Holyoke 2022) is applying the same method a developed in Pa Chia Thao’s thesis to intermediate redshift galaxies with the aim of understanding the evolution of hot dust over cosmic time.
- Johari Rhett (Hampshire 2021) Examined the effects of isolation on a large sample of LSB spirals, and concluded that isolation at the 1-10 Mpc scale does not play a major role in evolution.
- Celia Mulcahey (Mount Holyoke 2021) used MaNGA and LOFAR data to investigate the role of AGN on the star-formation histories of their host galaxies by comparing the distribution and intensity of star-forming regions in AGN-hosts versus non-AGN-hosts.
- Isabel Burgess (Mount Holyoke 2019) used Dawn observations of Ceres to identify and study PINGOs (ice heave-like structures), which indicate the presence of sub-surface hydrology.
- Andy Cohn (Hampshire 2018) investigated a hypothesized but as-of-yet observed pulsation mechanism in low-mass stars.
- Liz Post (Mount Holyoke 2018) examined the variance of the cosmic x-ray background to search for signs of inherent variability in addition to the much larger effect of Poissonian noise. She found a lack of inherent variability, which implies that x-ray background is primarily powered early stars instead of AGN.
- Bishop Grimm (Amherst College 2018) searched the Illustris Simulation for LSB galaxies. Most simulations to-dates do not produce LSB galaxies, however Bishop findings show that this new simulation produces at least some LSB galaxies, allowing us to compare their histories to those that our program derives for real galaxies.

- Pa Chia Thao (Mount Holyoke 2017) used Spitzer IRAC images to search for hot dust in LSB galaxies for her senior thesis. Hot dust observations provide a direct window into obscured star formation, dust content, and metal enrichment over the disks of these galaxies.
- Alexander Campbell (Hampshire College 2017) searched x-ray images of LSB galaxies for his senior thesis, and detected a faint x-ray excess from one galaxy; this is likely due to star formation, and may provide insights and/or constraints on IMF variations across galaxy types.

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## Conference Posters & Presentations

- “The Star Formation History of Rubin’s Galaxy”  
Young, J. talk, Winter AAS meeting, 2021
- “Dark Matter Halo Reshaping Energy Budget”  
Young, J., and Kuzio de Naray, R. and Wang, S. X., poster, Winter AAS Meeting, 2019
- “Star Formation Histories of MUSCEL Galaxies”  
, Young, J., and Kuzio de Naray, R. and Wang, S. X., talk, Winter AAS Meeting, 2018
- “Star Formation in MUSCEL Galaxies”  
Young, J. E., Kuzio de Naray, R., Wang, X., poster, 229th AAS Meeting, 2017
- “Inside Out or Outside In? Metallicity Gradients in Low Surface Brightness Galaxies”  
Young, J. E., Wang, X., Kuzio de Naray, R., poster, 227th AAS Meeting, 2016,
- “Burst and Quench? The Life Story of Low Surface Brightness Galaxies”  
Young, J. E., Wang, X., Kuzio de Naray, R., poster, NRAO Conference: Transformational Science in the ALMA Era: Multi-Wavelength Studies of Galaxy Evolution, 2014
- “Star Formation Across Galactic Environments”  
Young, J. E., dissertation talk, Winter AAS Meeting, 2013
- “In Search of Star Forming Regions in Quasar Hosts Galaxies”  
Young, J. E., Eracleous, M., Gronwall, C., Shemmer, O., Netzer, H., Sturm, E., & Ciardullo, R., Winter AAS Meeting, 2011
- “In Search of Star-Forming Regions in the Host Galaxies of Nearby Quasars”  
Young, J. E., Eracleous, M., Shemmer, O., Gronwall, C., Netzer, H., Lutz, D., Sturm, E., & Ciardullo, R., 215th AAS Meeting, 2010
- “ACS Photometry of Tidal Debris in HCG 31”  
Young, J. E., Gronwall, C., Charlton, J. C., Durrell, P. R., Elmegreen, D., Gallagher, S. C., Johnson, K., & Chandar, R., 211th AAS Meeting, 2008
- “Spitzer IRAC Observations of Nearby Star-Forming Galaxies and Implications for Star-Formation Rates”  
Young, J. E., Gronwall, C., Rosenberg, J. L., & Salzer, J. J., 209th AAS Meeting, 2007

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## Committees

- American Astronomical Society Tinsley Prize Committee (2025)
- American Astronomical Society Education Award Committee (2020, 2021)
- National Science Foundation (NSF) Review Panel, Experimental Program to Stimulate Competitive Research (2020)
- National Science Foundation (NSF) Review Panel, Astronomy and Astrophysics Research Grant (AAG) (2019)

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## Outreach Experience

**Flandrau Science Center** Tucson, AZ

*Planetarium Console Operator* 2000 - 2005  
Gave sky tours and operated planetarium.

*Planetarium Maintenance Assistant* 2003 - 2005  
Performed technical maintenance of planetarium projection equipment.

*Science Education Assistant* 2002 - 2005  
Performed science demonstrations and experiments for visiting groups.

*Telescope Operator* 2002 - 2005  
Operated the 16-inch observatory for the general public.

**Pennsylvania State University** University Park, PA

*Volunteer* 2005 - 2013

- AstroFest, ~2,000 visitors/year, Volunteer & Organizer, 2005-2012
- Space Day / Exploration Day, ~1,000 visitors/year, Volunteer & Organizer, 2005-2012
- Astronomy Open House, ~200 visitors/year, Volunteer & Organizer, 2005-Present
- Shaver's Creek Environmental Center, Teaching Volunteer & Special Guest Lecturer, 2008-Present

*Night Sky Radio Program* 2008 - 2011  
Weekly guest on a public radio program; provided night sky updates and viewing suggestions.