

Jaclyn B. Champagne

Ph.D. Candidate | Office 16.310 | 2515 Speedway Blvd | Austin, TX 78712

🌐 jackiechampagne.com

✉ jchampagne@utexas.edu

📷 jbchampagne

☎ 732-580-5134

EDUCATION

University of Texas Austin

Ph.D., Astronomy (in progress, anticipated 2022)

Supervisor: Prof. Caitlin Casey

Austin, TX

Aug. 2016–present

M.A., Astronomy

Aug. 2018

Thesis: "No Evidence for 1.2 mm Source Overdensities in the Fields of $z \geq 6$ Quasars," Supervisor: Prof. Caitlin Casey

Rutgers, State University of New Jersey

B.S., Physics & Astrophysics

Summa Cum Laude with Highest Honors in Physics,

Supervisor: Prof. Charles Keeton

New Brunswick, NJ

May 2016

RESEARCH INTERESTS

Galaxy protoclusters, cosmological large-scale structure, dusty star-forming galaxies, high-redshift galaxy evolution, infrared/submillimeter/radio observations, interferometry

RESEARCH EXPERIENCE

Graduate Research Assistant

UT Austin, Supervisor: Prof. Caitlin Casey

Aug. 2016–present

Research Intern

Max Planck Institute for Astronomy, Supervisor: Dr. Fabian Walter

Summer 2015

NSF REU Scholar

Cornell University, Supervisor: Prof. Dominik Riechers

Summer 2014

Senior Peer Instructor

Aresty Research Center for Undergraduates, Rutgers University, Supervisor: Prof. Charles Keeton

2014–2016

TEACHING & MENTORING

Teaching Assistant

AST376: Observational Techniques in Astronomy, UT Austin

Spring 2020

Teaching Assistant

AST307: Introductory Astronomy, UT Austin

Spring 2018

Seminar Leader for Python Crash Course

Texas Astronomy Undergraduate Research for Underrepresented Students (TAURUS)

Developed and lead a yearly 10-hour programming crash course on bash scripting and introductory Python, including lectures and exercises (available publicly at github.com/jbchampagne/pythontutorials/)

2017–2021

Undergraduate Teaching Assistant

Analyzing the Universe, Rutgers University

Fall 2015

DATA & OBSERVING EXPERIENCE

Atacama Large Millimeter Array	2019
15 hours awarded in Cycle 7, PI: J. Champagne	
Australian Telescope Compact Array	2019, 2020
15 nights total, PI: H. Dannerbauer	
Hubble Space Telescope	2017
Reduction and photometry of 13 orbits ACS/WFC3 imaging in Cycle 25, PI: C. Casey	
Jansky Very Large Array	2016
Reduction and imaging of 46 hours total in Semester 2015B, Pi: C. Casey	
Submillimeter Array	2020
1 night awarded for SMA Interferometry School 2020, 6 tracks awarded in Semester 2020A, PI: J. Champagne	

PUBLICATIONS ORCID: 0000-0002-6184-9097

Refereed and Working Papers (First Author)

- [Citations: N/A] **Champagne, J. B.**, Casey, C. M., Finkelstein, S. L., et al. *The environments of $6 < z < 7$ Quasars: Rich with dusty starbursts?* **2021**, in prep.
- [Citations: N/A] **Champagne, J. B.**, Casey, C. M., Zavala, J. A., Cooray, A., Dannerbauer, H., Fabian, A., Hayward, C. C., Long, A. S., Spilker, J. S. *Comprehensive Gas Characterization of a $z = 2.5$ Protocluster: A Cluster Core Caught in the Beginning of Virialization?* **2021**, ApJ, 913, 110
- [Citations: 17] **Champagne, J. B.**, Decarli, R., Casey, C. M., Venemans, B., Bañados, Eduardo, Walter, F., Bertoldi, F., Fan, X., Farina, E. P., Mazzucchelli, C., Riechers, D. A., Strauss, M. A., Wang, R., Yang, Y. *No Evidence for Millimeter Continuum Source Overdensities in the Environments of $z \geq 6$ Quasars.* **2018**, ApJ, 867, 153

Refereed Papers (Co-author)

- Manning, S. M., Casey, C. M., Zavala, J. A., Magdis, G. E., Drew, P. M., **Champagne, J. B.**, Aravena, M., Bethermin, M., Clements, D. L., Finkelstein, S. L., Fujimoto, S., Hayward, C. C., Hodge, J. A., Ilbert, O., Kartaltepe, J. S., Knudsen, K. K., Koekemoer, A. M., Man, A. W., Sanders, D. B., Sheth, K., Spilker, J. S., Staguhn, J., Talia, M., Treister, E., Yun, M. S. *Characterization of Two 2 mm-detected Optically-Obscured Dusty Star-Forming Galaxies.* **2021**, ApJ submitted
- Jin, S., Dannerbauer, H., Emonts, B., Serra, P., Lagos, C. D. P., Thomson, A. P., Bassini, L., Lehnert, M., Allison, J. R., **Champagne, J. B.**, Indermuhle, B., Norris, R. P., Seymour, N., Shimakawa, R., Casey, C. M., De Breuck, C., Drouart, G., Hatch, N., Kodama, T. Y., Macgregor, P., Miley, G., Overzier, R., Perez-Martinez, J. M., Rodriguez-Espinosa, J. M., Rottgering, H., Sanchez Portal, M., Ziegler, B. *COALAS: I. ATCA CO(1-0) survey and luminosity function in the Spiderweb protocluster at $z = 2.16$.* **2021**, Astronomy & Astrophysics in press
- Casey, C. M., Zavala, J. A., Aravena, M., Bethermin, M., Caputi, K. I., **Champagne, J. B.**, Clements, D. L., da Cunha, E., Drew, P. M., Finkelstein, S. L., Hayward, C. C., Kartaltepe, J. S., Knudsen, K. K., Koekemoer, A. M., Magdis, G. E., Man, A. W., Manning, S. M., Scoville, N. Z., Sheth, K., Spilker, J. S., Staguhn, J., Talia, M., Taniguchi, Y., Toft, S., Treister, E., Yun, M. *Physical Characterization of an Unlensed, Dusty Star-forming Galaxy at $z = 5.85$,* **2019**, ApJ 887, 55
- Zavala, J. A., Casey, C. M., Scoville, N., **Champagne, J. B.**, Chiang, Y., Dannerbauer, H., Drew, P. M., Fu, H., Spilker, J. S., Spitler, L., Tran, K. V., Treister, E., Toft, S. *On the Gas Content, Star Formation Efficiency, and Environmental Quenching of Massive Galaxies in Proto-Clusters at $z \approx 2.0 - 2.5$.* **2019**, ApJ, 887, 183

White Papers & Conference Proceedings

- Casey, C. M., Capak, P., Staguhn, J., Armus, L., Blain, A., Bethermin, M., **Champagne, J. B.** (7 of 27), Cooray, A., et al. *Taking Census of Massive, Star-Forming Galaxies formed < 1 Gyr After the Big Bang.* **2019**, Astro2020 White Papers, 2019arXiv190305634C
- Casey, C. M., Narayanan, D., Carilli, C., **Champagne, J. B.** (4 of 12), Hung, C.-L., Davé, R., Decarli, R., Murphy, E. J., Popping, G., Riechers, D., Somerville, R. S., Walter, F. *Imaging Cold Gas to 1 kpc Scales in High-Redshift Galaxies with the ngVLA.* **2018**, ASPC, 517, 629

CONFERENCE PRESENTATIONS

"The highest redshift cluster core at $z=2.5$: is it too good to be true?"

E-poster by J. B. Champagne, C M. Casey, J. A. Zavala, H. Dannerbauer, et al.

Protoclusters: Galaxies in Confinement

August 2020

"Molecular Gas Characterization of a Complex Galaxy Cluster Progenitor at $z = 2.5$ "

Contributed talk+poster by J. B. Champagne, C M. Casey, J. A. Zavala, H. Dannerbauer, et al.

2019 COSMOS Team Meeting

May 2019

IAU Symposium 352: Uncovering early galaxy evolution in the ALMA and JWST era

June 2019

"No Evidence for 1.2 mm Dust Continuum Overdensities around $z > 6$ Quasars"

Poster by J. B. Champagne, R. Decarli, C. M. Casey, F. Walter, B. Venemans, et al.

Astrophysical Frontiers, Portland, OR

June 2018

Large Scale Structure Summer School, Berlin, Germany

July 2018

"Molecular Gas Content of SMGs in a $z = 2.47$ Starbursting Protocluster"

Poster by J. B. Champagne, C. M. Casey, D. B. Sanders, C. Hales, et al.

SMG20: Twenty Years of Submillimeter Galaxies, Durham University

August 2017

Bash Fest, University of Texas Austin

October 2017

"Simulated Observations of CO(2-1) and CO(1-0) in DSFGs at $2 < z < 4$ "

Poster by J. B. Champagne, C. M. Casey, C.-L. Hung, D. Narayanan, C. Carilli, et al.

next generation Very Large Array (ngVLA) Community Studies Meeting

June 2017

"Searching for Galaxy Overdensities in the Fields of 10 $z > 6$ Quasars"

Poster by J. C. Bradli, F. Walter, B. Venemans, R. Decarli, L. Zschaechner

American Astronomical Society Winter Meeting

January 2016

"Star Formation Properties in Dusty Early Universe Galaxies using Gravitational Lensing"

Poster by J. C. Bradli, D.A. Riechers, R. S. Bussmann, D. Clements, I. Perez-Fournon

American Astronomical Society Winter Meeting

January 2015

"Differential Microlensing of SDSS J0924+0129"

Poster by J. C. Bradli, C. R. Keeton

Rutgers Aresty Undergraduate Research Symposium

April 2014

PROFESSIONAL DEVELOPMENT & PUBLIC OUTREACH

TAURUS Summer Program Student Organizer

June 2017–present

- Organize student seminars including research presentations, career advice panels, and observing workshops; participated in peer mentoring program

Graduate Student Representative*May 2018–May 2019, May 2021–present*

- Liaison between astronomy graduate students and faculty, including attendance at faculty meetings, participation in graduate admissions, representing students in faculty hiring process, and peer mediation between students
- Represent astronomy graduate students in monthly meetings of the UT Graduate Student Assembly

UCSC Institute for Science & Engineer Educators (ISEE) Professional Development Program (PDP)
2019, 2020

- Inquiry Design Team Leader (cancelled 2020 due to COVID-19), began development of a galaxy classification activity for undergraduates
- Inquiry Design Team Member (2019), participated in 6-month inquiry teaching workshop and helped develop and deliver a galaxy spectral classification activity for undergraduate summer scholars (TAURUS)

Astronomy on Tap ATX*September 2016–present*

- Help organize events and recruit speakers, lead social media advertising, give monthly public science talks including “Astronomy in the News”

Association of Women in Astronomy Research & Education (AWARE)*September 2016–present*

- Co-organize yearly Girl Day event and lead astronomy demonstrations for K-12 students

UT Equity & Inclusion Discussion Group*September 2016–present*

- Organize & participate in meetings regarding sociopolitical issues faced by under-represented groups in astronomy

AWARDS & ACHIEVEMENTS

- Beatrice Tinsley Graduate Fellowship, UT Astronomy Department, Summer 2022
- University Continuing Graduate Fellowship, UT Austin Graduate School, 2020-2021
- Professional Development Award (\$625 for conference travel), UT Austin Graduate School, 2019
- National Science Foundation Graduate Research Fellowship, Honorable Mention 2016, 2018
- Astronomy Excellence Fellowship, UT Austin College of Natural Sciences, 2016
- Chambliss Astronomy Achievement Student Award, American Astronomical Society, 2015
- Rutgers University Department of Physics Scholarships: Mohan S. Kalelkar (2016), Mary Wheeler Wigner (2015), and Noemie B. Koller (2014) Awards
- Rutgers School of Arts & Sciences Presidential Scholarship, 2012–2016