Megan T. Tillman

Department of Physics & Astronomy
Rutgers University
Piscataway, NJ 08854

Tel: 469-525-1823
Email: megantillman.16@gmail.com

Mail: 15445 Ridgewood Drive
Frisco, TX
75035-7401

Education

Rutgers University, Piscataway, NJ — 2020 - present
PhD Candidate

Texas A&M University, College Station, TX — Class of 2020
Bachelor of Science in Physics (Honors) – Minors in Math and Astrophysics

Awards and Honors

National Science Foundation Graduate Research Fellowship Program
Honorable mention. *2022*

Faculty Student Achievement Award
Department of Physics and Astronomy Texas A&M *2020*

CIERA Undergraduate Research Fellow
Northwestern University 10-week funded research work – continuing projects from the CIERA REU. *2019 & 2020*

Department of Physics and Astronomy Undergraduate Travel Grant
$500 Funded by the Phillip and Doris Moses Ranch Fund. *2019*

Mitchell Institute Travel Grant
$500 Funded by the Mitchell Institute. *2019*

Philip and Doris Moses Fund Honors Scholarship
$1000 yearly scholarship awarded for Departmental Honors in Physics and Astronomy program (total of $2000). *2018 & 2019*

CIERA Research Experience for Undergraduates
Northwestern University NSF funded 10-week REU. *2018*

Outreach & Teaching Experience

MiPA Web Master - Rutgers University Minorities in Physics and Astronomy web master. *2023*

Graduate Teaching Assistant - Rutgers University Department of Physics and Astronomy teaching assistant. *2020 - 2022*

Undergraduate Teaching Fellow - Texas A&M University Department of Physics and Astronomy teaching assistant. *2019 - 2020*

Discover, Explore, and Enjoy Physics and Engineering (DEEP) - Undergraduate demonstrator and demonstration designer – physics education and outreach at Texas A&M University. *2017 - 2019*

Talks & Presentations

Max Planck Institute for Astrophysics Cosmology Seminar
"The effects of AGN and stellar feedback on the low-z Lyman-α forest."
Max Planck Institute, Garching, Germany *June 2023*

Modelling of Multiphase Astrophysical Media
"AGN Feedback Effects on the Low Redshift Lyman-α Forest in Simba"
Aspenstein Castle, Lake Kochel, Germany *June 2023*

Simba Collaboration Workshop
"AGN Feedback Effects on the Low Redshift Lyman-α Forest in Simba"

Flatiron Institute, Simons Foundation, NYC *May 2023*

Galaxy Formation and Evolution in the Data Science Era
"Too Hot to Handle: The Role of Supermassive Black Holes in Heating the Low Redshift Intergalactic Medium"
Kavli Institute for Theoretical Physics, UC Santa Barbara, CA *March 2023*

Joint KITP-CCA Workshop
"AGN Feedback Effects on the Low Redshift Lyman-α Forest"
Flatiron Institute, Simons Foundation, NYC *January 2023*

CAMELS Workshop
"AGN Feedback Effects on the Low Redshift Lyman-α Forest"
Flatiron Institute, Simons Foundation, NYC *December 2022*

American Physical Society Mid-Atlantic Section Meeting
"Supermassive Black Holes and the Low Redshift Lyman-α Forest."
(poster presentation)
Rutgers University *December 2021*

American Astronomical Society Meeting 235
"Running Late: The observable implications of delayed supermassive black hole growth."
(10-minute talk)
Honolulu Convention Center *January 2020*

Society of Physics Students Meeting
"Developing the Quasar Luminosity Function for FIRE Simulations"
Texas A&M University - College Station *February 2019*

Conference for Undergraduate Women in Physics (CUWiP)
"Testing Models of Supermassive Black Hole Evolution with the Quasar Luminosity Function" (poster)
Texas A&M University - Corpus Christi *January 2019*

American Astronomical Society Meeting 233
"Testing Models of Supermassive Black Hole Evolution with the Quasar Luminosity Function" (poster)
Washington State Convention Center *January 2019*

Texas Astronomy Undergraduate Research Symposium
"The Quasar Luminosity Function From FIRE Simulations"
University of Texas at Austin *October 2018*

CIERA Research Experience for Undergraduates
"Testing Models of Supermassive Black Hole Evolution with the Quasar Luminosity Function" (poster)
Northwestern University & Adler Planetarium, Chicago Illinois *August 2018*

Publications

Megan Tillman, Blakesley Burkhart, Stephanie Tonnesen, Simeon Bird, Greg L. Bryan, Daniel Anglés-Alcázar, Sultan Hassan, Rachel S. Somerville, Romeel Davé, Federico Marinacci, Lars Hernquist, and Mark Vogelsberger 2023. *"An Exploration of AGN and Stellar Feedback Effects in the Intergalactic Medium via the Low Redshift Lyman-α Forest"*, submitted to ApJ, arXiv:2307.06360

Megan Tillman, Blakesley Burkhart, Stephanie Tonnesen, Simeon Bird, Greg L. Bryan, Daniel Anglés-Alcázar, Romeel Davé, Shy Genel, 2023. *"Efficient long-range active galactic nuclei feedback affects the low redshift Lyman-α forest"*, ApJL, 945, L17, arXiv:2210.02467

Amanda Butler Contreras, Erwin T. Lau, Benjamin D. Oppenheimer, Ákos Bogdán, **Megan Tillman**, Daisuke Nagai, Orsolya E. Kovács, Blakesley Burkhart, 2022. *"X-ray absorption lines in the warm-hot intergalactic medium: probing Chandra observations with the CAMEL simulations"*, MNRAS, Volume 519, Issue 2, Pages 2251-2261, arXiv:2211.15675

Blakesley Burkhart, **Megan Tillman**, Alexander B. Gurvich, Simeon Bird, Stephanie Tonnesen, Greg L. Bryan, Lars E. Hernquist, Rachel S. Somerville, 2022. *"The low redshift Lyman-α Forest as a constraint for models of AGN feedback."*, ApJL, 933, L46, arXiv:2204.09712.

Francisco Villaescusa-Navarro et. al. including **Megan Tillman**, 2022. *"The CAMELS project: public data release"*, arXiv:2201.01300.

Megan Tillman, Sarah Wellons, Claude-André Faucher-Giguère, Luke Zoltan Kelley, and Daniel Anglés-Alcázar, 2022. *"Running Late: Testing Delayed Supermassive Black Hole Growth Models Against the Quasar Luminosity Function"*, MNRAS, Volume 511, Issue 4, Pages 5756–5767, arXiv:2109.14647.

Jonathan H. Cohn, Joel Leja, Kim-Vy H. Tran, Ben Forrest, Benjamin D. Johnson, **Megan Tillman**, Leo Alcorn, Charlie Conroy, Karl Glazebrook, Glenn G. Kacprzak, Daniel D. Kelson, Themiya Nanayakkara, Casey Papovich, Pieter G. van Dokkum, Tiantian Yuan, 2018. *"ZFOURGE Extreme 5007Å Emission May Be a Common Early-lifetime Phase for Star-forming Galaxies at z >2.5"*, ApJ, 86, 141C, arXiv:1811.00025.