HANNAH HASSON

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EDUCATION

University of Texas at Austin *May 2018*
Bachelor of Physics, Bachelor of Astronomy Honors Overall GPA: 3.6805/4.0
Special Honors in Astronomy

TECHNICAL STRENGTHS

Computer Languages	Python, Mathematica, MATLAB, Bash
Software & Tools	VisIT, LaTeX, ImageJ, AutoCAD, Excel
Hard skills	Soldering, mill, lathe, basic and high-voltage electronics Experience w/ handling contained radioactive sources
Communication	Comfortable with public speaking, intermediate Spanish speaker

EXPERIENCE

University of Rochester Physics & Astronomy Dept August 2018 - present
Graduate Research Assistant under P. Gourdain *Rochester, NY*

· Simulating novel 3D printed loads for pulsed power plasma jet experiment
· Constructing and testing Thomson scattering diagnostic with 1J green laser
· Constructed shearing interferometer plasma diagnostic

Sandia National Lab June - August 2019
Graduate Research Intern under C. Myers *Albuquerque, NM*

· Wrote MATLAB scripts to test b-dot calibration methods for Z Machine
· Helped construct shadowgraphy plasma diagnostic for Mykonos driver

University of Texas Astronomy Department August 2016 - August 2018
Undergraduate Researcher under K. McQuinn *Austin, TX*

· Observed for 3 nights on the 107" telescope at McDonald Observatory
· Used IRAF code to reduce CCD data and calculate star formation rates of dwarf galaxies

Rice University Physics & Astronomy Department June 2014 - Jan 2018
Undergraduate Researcher under E. Liang *Houston, TX*

· Built and tested novel scintillator gamma-ray spectrometer
· Collected spectral data and served as co-lead for positron experiment at Texas Petawatt Laser
· Conducted filter stack spectrometer calibration tests with Na-22 source

University of Texas at Austin Astronomy Department January 2015- December 2015
Student in Freshman Research Initiative under M. Montgomery *Austin, TX*

· Reduced streaked spectra from white dwarf experiment at Sandia National Lab
· Implemented MESA stellar evolution software for hydrogen flashes in extremely low-mass white dwarf stars
· Observed on 30", 36", and 82" telescopes at McDonald Observatory

PUBLICATIONS

Design of a 3-D Printed Experimental Platform for Studying the Formation and Magnetization of Turbulent Plasma Jets
H. R. Hasson, M. B. Adams, M. Evans, R. Shapovalov, I. West-Abdallah, J. Young, J. Greenly, D. Hammer, B. Kusse, C. Seyler, A. Frank, P.-A. Gourdain
DOI: 10.1109/TPS.2020.3020000
Published September 18, 2020

TALKS & POSTERS

The Generation of Magnetized Jets Using 3D Printed Loads on a Pulsed-Power Driver
Poster presented at the 2020 ZNetUS conference

The Generation of Magnetized Jets Using 3D Printed Loads on a Puled-Power Driver
Poster presented at the 2019 APS Division of Plasma Physics conference

A Study of Magnetized Jet Stability Using High Energy Density Plasmas
Talk given at the 2019 Pulsed Power and Plasma Science conference

A Study of Magnetized Jet Stability Using High Energy Density Plasmas
Poster presented at the 2019 Women in Space conference

A Study of Disk-Jet Transitions Using Pulsed-Power Generators
Poster presented at the 2018 APS Division of Plasma Physics conference

AWARDS & HONORS

APS CUWiP Research Poster Award	*Jan 2018*
Barry Goldwater National Scholarship-Honorable Mention	*Spring 2017*
APS CUWiP Research Poster Award	*Jan 2017*
Kemp-Forman Memorial Endowed Presidential Scholarship	*Fall 2016-Spring 2017*
Merner Scholarship in Natural Sciences	*Fall 2016-Spring 2017*
Darrell W. Moffitt, Jr. Endowed Presidential Scholarship	*Spring 2016*
Walter E. Millet Scholarship	*Fall 2015-Spring 2016*
National Instruments Endowed Scholarship for Excellence	*Fall 2015-Spring 2016*

TEACHING

PHY 122P (Electricity & Magnetism), PHY 121P (Mechanics) August 2018 - May 2019
Graduate Teaching Assistant *University of Rochester*

· Head TA for two semesters of flipped-classroom undergraduate introductory physics courses. Worked one-on-one teaching students, graded exams, met with students needing guidance

Gourdain lab summer internship August 2020
Graduate mentor, curriculum developer *University of Rochester*

· Worked with other members of Gourdain lab to develop and implement month-long high school science internship
· Developed and taught two-day introductory python course to two groups of students
· Mentored and taught three high school students about filtering image data in python with Fourier transforms

AST 307 (Intro Astronomy) Fall 2017
Undergraduate teaching assistant *University of Texas at Austin*

· Provided in-class assistance for students
· Shared grading of assignments and exams with graduate TA

LEADERSHIP

Graduate Women in Physics & Astronomy October 2018 - present
Board Member *University of Rochester*

· Organizing mentorship and community among women graduate students in physics

Physics & Astronomy Graduate Student Association August 2019 - present
Board Member *University of Rochester*

· Conducting events for career development, outreach, and community building among physics graduate students

Undergraduate Women in Physics August 2014 - May 2018
Treasurer, Vice President, President, Senior Board Member *UT Austin*

· Mentored and provided resources to fellow undergraduate women in physics and astronomy
· Presented science demonstrations at outreach events for local youth

Deans Scholars Honors Program August 2014-May 2016
Council Member *UT Austin*

· Coordinating with team of 10 students responsible for planning social and mentoring events
· Volunteered tutoring math once a week at local high school

Freshman Research Initiative January 2016 - May 2016
Peer Mentor *UT Austin*

· Led students in research project with MESA stellar evolution code
· Helped teach students Python coding and other astronomy research tools