Megan Christina Davis

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Education

2015 – 2019
Michigan State University (MSU), East Lansing.
Bachelors of Science from the Honors College in Astrophysics with a minor in Computational Mathematics, Science, and Engineering, 3.6 GPA.
Expected May 2019.

Work and Research Experience

May – Aug. 2018 **National Aeronautics and Space Administration (NASA) Intern**
Jet Propulsion Laboratory in Pasadena, California

- Studied Starshades and their use in direct exoplanet imaging
- Built a fully-automated testbed model of a Starshade-Telescope System to test Formation Flying concepts
- Contributed Python scripts for the creation of a sensor model

May – Aug. 2017 **IceCube International Research Experience for Students (IRES)**
Vrije Universiteit Brussel in Brussels, Belgium

- Worked on scintillator data reduction and analysis techniques in Python for the LOFAR Radio Telescopes LORA scintillating detectors
- Began development of data display software for outreach purposes
- Made Monte Carlo simulations of cosmic ray showers passing through a LORA detector

May – Aug. 2016 **IceCube Research Experience for Undergraduates (REU)**
University of Wisconsin- River Falls in River Falls, WI

- Worked in an optics lab, studying optical fibers and their properties for possible use in IceCube Gen2 light detectors
- Was selected as the alternate undergraduate to go to Antarctica for research

Michigan State University

2018 –	**Undergraduate Researcher**

- Uses the NuPyCEE Galactic Chemical Evolution Python code to make simulations of the Milky Way
- Building new functionality to account for radial migration of gas and stars in the thin disk of the Milky Way

2017 –	**Observer at the Campus Observatory**

- Takes calibration frames and images of various sources, like exoplanet candidates or cataclysmic variable stars
- Reduces raw data and submits it to the American Association of Variable Star Observers, KELT Collaboration, and Center for Backyard Astrophysics
- Assists with monthly public outreach events and specializes in small telescope observations and operations

2017 –	**Learning Assistant** AST 208 an introduction to exoplanet and observational techniques AST 207- an introductory course for astronomy majors ISP 205- an introductory astronomy course for non-science majors

- Helps students understand course materials during weekly office hours
- Attends lecture to assist with questions and in-class activities
- Grades assignments and quizzes, while also proctoring occasional exams

2016 – 2017	**Resident Assistant in *Case Hall***

- Assisted fellow undergraduate students with everyday college life
- Provided resources and support to the building community
- Winner of the Most Compassionate RA 2016-2017

OUTREACH EXPERIENCE

2015 –	Abrams Planetarium and MSU Observatory Outreach Assistant
2014 –	Conference organizer - Rotary Internationals Seminar for Tomorrows Leaders, ran in London, Ontario, Canada

Invited Outreach Talks and Panels

January 2019	MSU Honors College Student Recruitment Weekend Panelist
November 2018	**Storytellers: Lets Talk NASA**- Impact89 FM Radio Interview

October 2018   **Interview a Professional** at Freeman Elementary School in Flint, MI

ADDITIONAL SKILLS

- Competent to program in Python, including in Jupyter Notebooks and Spyder
- Familiar with programming in C++
- Proficient in AstroImageJ, MaximDL, and Microsoft Office
- Regularly use DSLR and CCD cameras for astrophotography and photometry
- Proficient in French with elementary German and Dutch language skills
- Conflict resolution and personal development training

EXTRACURRICULAR ACTIVITIES

2018 –   Sigma Pi Sigma Honors Society

2017 –   Order of Omega Honors Society

2016 –   Alpha Omicron Pi Sorority, Beta Gamma Chapter

2015 –   MSU Astronomy Club

2015 –   Society of Physics Students

      2018 –   President

      2017 – 2018   Vice President

      2016 – 2017   Treasurer

LaTeX formatting credit to Dr. Edward Brown, a Professor at Michigan State University.