

CASSIDY MAGNOLIA WAGNER

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EDUCATION

The University of Illinois at Urbana-Champaign

June 2018 — Present

Department of Astronomy

Ph. D. in Astronomy, concentration in CSE

Expected May 2023

The University of Oklahoma

August 2015 — May 2018

Homer L. Dodge Department of Physics and Astronomy

B.S. in Astrophysics, May 2018

RESEARCH EXPERIENCE

The University of Illinois at Urbana-Champaign

June 2018 — Present

Research Assistant

- Implementing driven subgrid-scale turbulence modeling in GAMER
- Hydrodynamical visualizations in yt

The University of Oklahoma

January 2016 — May 2018

Undergraduate Research Assistant

- Used MCMC to constrain and fit quasar spectral energy distributions
- Used linear regression techniques to characterize correlations in quasars
- On-site and remote observations at the MDM Observatory and APO
- Reduced, cleaned, reconstructed, and fit broad absorption line quasar spectra

The University of Texas Rio Grande Valley

June 2017 — August 2017

Research Experience for Undergraduates

- Created methods to simulate pulsar signal components and incorporate into pulsar signal simulator
- Contributed to incorporation of gravitational waves in pulsar timing software PINT
- Made progress in generating PSRFITS files from simulated pythonic data

The University of Oklahoma

May 2016 — August 2016

Research Experience for Undergraduates

- Fit composite quasar spectra to generate models for spectral principal component analysis
- Reconstructed broad absorption line quasar spectra from eigenspectra generated from SPCA

TECHNICAL SKILLS

Computer Languages

Python, Shell, C++, CSS

Software and Tools

Jupyter, Sherpa, GAMER, Mathematica, MESA, Git, Vim, L^AT_EX

Operating Systems

Unix, Windows