# Hugh W. Sharp

hugh.sharp@uconn.edu | (713)-560-9912 | linkedin.com/in/hugh-sharp-656a95193/
Department of Physics, University of Connecticut - Storrs, CT 06269-3046

## EDUCATION

*2025* | Physics PhD
*2022* | Physics M.A.
University of Connecticut

*2020* | Physics B.S.
Astronomy Minor
Texas A&M University

## SKILLS

Programming:
**Python** (NumPy, astropy, Pandas, scikit-learn, Bokeh and way more)
Julia
MATLAB
SQL
HTML
JAVA
Git

Other:
Mentoring Experience
Bayesian Statistics
850 hrs of Telescope Time

## AWARDED PROPOSALS

**Las Cumbres Observatory 2023B**: Echo Mapping Accretion and Emission of Hypervariable Quasars (110 hrs)
**Las Cumbres Observatory 2024A**: A Fundamental Test of Black Hole Masses: Multi-Scale Echo Mapping of Luminous Quasars (95 hrs)

## REFERENCES

- jonathan.trump at uconn.edu
- stephany.santos at uconn.edu
- kate.grier at astro.wisc.edu
- walsh at tamu.edu

## WORK EXPERIENCE

### BLACKHOLE ACCRETION | Graduate Research Assistant
Aug 2020 - Current | University of Connecticut

- Characterized accretion disk size/structure of 20 quasars, utilizing various signal processing analysis methods on their multi-band lightcurves.
- Designed, managed, and analyzed image data of ∼850 hrs of observation time.
- Proposed multiple successful projects, which collected data over many months.
- Explored high-dimensional data in the context of accretion disk structure dependence on the vast quasar properties of 95 quasars.
- Planned and implemented many joint observations for the success of collaborator's projects.

### TEACHING & MENTORING | Instructor/Teaching Assistant
Aug 2020 - Current | University of Connecticut

- Mentored 2 undergraduate researchers, cultivating projects, managed research organization, and planned for their future career paths.
- Physics Instructor for BRIDGE; a summer program bridging the gap between high school and college, providing research and industry opportunities, as well as scholarships for students of underrepresented backgrounds.
- 6 semesters of TAing the engineering/pre-med mechanics course.

### STELLAR KINEMATICS | Undergrad Research Assistant
Jan 2018 - Jul 2020 | Texas A&M University

- Created model spectra using linear combinations of stellar spectral data.
- Deconvolved line-of-sight velocity distributions from redshifted galaxy spectra.
- Worked with spatially resolved spectra, in 3D and 4D data cubes.

### ASTRONOMICAL INSTRUMENTATION | Undergrad Research Assistant
Jan 2017 - Jan2018 | Texas A&M University

- Gained hands on experience with charge coupled device (CCD) detectors, and cultivating budgeting information for the lab.
- Experience designing photometric calibration systems.

## PUBLICATIONS

### PRIMARY AUTHOR

- Sharp, H. W., et al (in prep.), *The SDSS-V Black Hole Mapper Reverberation Mapping Project: Echo Mapping Accretion onto Supermassive Black Holes across Cosmic Time*
- Sharp, H. W., et al 2024, *The Sloan Digital Sky Survey Reverberation Mapping Project: Investigation of Continuum Lag Dependence on Broad-Line Contamination and Quasar Properties*

### CO-AUTHORSHIPS

- Fries, L. B., et al 2024, *The SDSS-V Black Hole Mapper Reverberation Mapping Project: A Kinematically Variable Broad-line Region and Consequences for the Masses of Luminous Quasars*
- Fries, L. B., et al 2023, *The SDSS-V Black Hole Mapper Reverberation Mapping Project: Unusual Broad-Line Variability in a Luminous Quasar*