CAMEREN SWIGGUM

5121 E. Cheryl Pkwy., Apt 114 ⋄ Fitchburg, WI 53711
(608)658-2097 ⋄ swiggum2@wisc.edu

EDUCATION

University of Wisconsin, Madison *September 2016 - May 2020*
B.S. in Astronomy-Physics
Department of Astronomy

RESEARCH

UW-Madison Department of Astronomy *May 2018 - Present*
Research Assistant *Advisor: Prof. Christy Tremonti*

- Assistance with exposure time calculations and proposal writing for the Hubble Space Telescope.
- Mapping of star formation rates for over 800 SDSS IV MANGA galaxies, done using Python.
- South African Large Telescope (SALT) long-slit spectra reduction using IRAF packages.
- Analysis of spectra to understand physical processes undergone in AGN and their host galaxies.
- Data querying from multiple telescope survey databases.
- Time-series statistical analysis of multi-wavelength photometry to investigate quasar variability.

UW-Madison Department of Astronomy *January 2020 - Present*
Research Assistant *Advisor: Prof. Elena D'Onghia*

- Unsupervised clustering analysis to unveil young stellar associations in the Orion star-forming region.
- Analyzing stellar kinematics with Gaia EDR3, SDSS-IV APOGEE 2, and GALAH DR3.
- Stellar model fitting to unveil the 3D age distribution of Orion.

JOURNAL PUBLICATIONS

- **Swiggum, C.** Tremonti C., Perrotta S., Schaefer A., et al."Understanding the Nature of a Post-Starburst Galaxy with Exceptionally Strong Ne V Emission", 2020, *Submitted to the Astrophysical Journal*
- **Swiggum, C.**, D'Onghia, E., et al. "Evidence for Radial Expansion at the Core of the Orion Complex with Gaia EDR3", 2021, *Submitted to the Astrophysical Journal*

PRESENTATIONS

- (Poster) "A Kinematic Study of New Stellar Groups in the Orion Complex"
American Astronomical Society Meeting (AAS#236, id.240.01), *June 2020*
- (Talk) "Investigating a Galaxy with an Ultra-fast Outflow of Ionized Gas" UW-Madison Department of Astronomy Fall Board of Visitors Meeting, *September 2019*
- (Poster) UW-Madison Undergraduate Symposium, *March 2019*
- (Poster) "High Ionization Quasar-driven Outflows in a z~1 Post-starburst Galaxy"
American Astronomical Society Meeting (AAS#233, id.242.05), *January 2019*

COMPUTATIONAL SKILLS

- **Python:** Numpy, Scipy, Astropy, Matplotlib, Pandas, Galpy, Scikit-learn
- **IRAF/PyRAF:** Data reduction, wavelength calibration
- **Other:** Unix (Bash shell), SQL, DS9, LaTeX, C++, Java, Vim

OUTREACH

- **UW-Madison Space Place** *October 2019 - Present*
  Monthly outreach program focusing on K-12 astronomy education. Assistance with telescope setup and demos.

REFERENCES

Available upon request.