

Sebastian Lopez

Curriculum Vitae

Department of Astronomy
McPherson Laboratory
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Columbus, OH 43210

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Education:

The Ohio State University, Columbus, OH

- Ph.D in Astronomy Aug 2020 - Present

University of Florida, Gainesville, FL

- Bachelor's of Science in Astrophysics and Physics Jun 2016 - Apr 2020
 - GPA: 3.67/4.00
 - Dean's List Recipient: Fall 2018, Spring 2019, Fall 2019, Spring 2020
 - Summa Cum Laude

Miami-Dade College, Miami, FL

- Associate of Arts Aug 2014 - Apr 2016
 - High School Dual Enrollment Program
 - I simultaneously took college and high school classes and was awarded an A.A degree right after high school graduation.
 - GPA: 3.94/4.00
 - Graduated with Highest Honors

Experience:

University of Florida, Department of Astronomy

- Undergraduate Research Assistant May 2017 - Feb 2020
 - Project: The Three-mm Ultimate Mopra Milky Way Survey (ThrUMMS)
 - Advisor: Dr. Peter J. Barnes
 - Using 1-0 and 2-1 ^{13}CO data from ThrUMMS, a mm-wave molecular-line mapping survey of most of ($300^\circ < l < 360^\circ$ and $|b| \leq 1^\circ$) the Milky Way's fourth quadrant, and SEDIGISM, a molecular line survey covering 78 deg^2 of the inner Galaxy ($-60^\circ \leq l \leq 18^\circ$ and $|b| \leq 0.5^\circ$), respectively, I wrote radiative transfer analysis code to calculate column densities, excitation temperatures, and optical depths for the overlapping regions of the surveys.
- Undergraduate Research Assistant May 2019 - July 2020
 - Project: Spatially Resolved Galaxy Gas Accretion
 - Advisor: Dr. Paul A. Torrey

- Using data from the IllustrisTNG 50 cosmological magnetohydrodynamical simulation I studied how gas from the IGM accretes onto galactic disks. I used and wrote several Python codes to conduct the analysis and investigate its effects on the metallicity and star formation rates of galaxies.

Involvement:

Astronomy and Astrophysics Society, Gainesville, FL

- Treasurer May 2019 - Apr 2020
- Member Aug 2016 - Apr 2020

Starry Night at the Florida Museum of Natural History, Gainesville, FL

- Outreach Event Volunteer Fall 2017, 2018, 2019

Skills:

Computer Skills:

- Languages
 - Proficient in Python, MATLAB, bash, csh, tcsh
 - Familiar with C
- Operating Systems
 - Linux, Windows, Chrome OS, Mac OS
- Miscellaneous
 - LaTeX
 - Miriad/Karma
 - Microsoft Office Programs

Observational Skills:

- Experienced in taking observations using 14" and 12" Meade telescopes, using CCD's in the optical range, and writing code to reduce images and analyze images.

Data analysis:

- Experienced in analyzing and reducing both observational and simulation data as well as writing computer codes to perform these functions when applicable.

Bilingual

- English and Spanish