Michael Smith

(973) 409-1521 michael.josmith21@gmail.com
Professional Website

EDUCATION

Stony Brook University, Stony Brook, NY May 2021

Bachelor of Science in Physics and Astronomy & Planetary Science

Magna Cum Laude with Honors in Physics

***Cumulative GPA**: 3.75 /4.0* ***Junior/Senior Year GPA:** 3.87 /4.0*

RESEARCH INTERESTS

- My current research interests, and project, involve Supernovae, and Stellar Remnants. Additionally, I have a strong interest in black holes, accretion disc dynamics, tidal disruption events, and a general interest in galaxy evolution and structure formation.

WORK AND RESEARCH EXPERIENCE

Data Analyst / Research Assistant (ASAS-SN), The Ohio State University June 2021-Present

Dr. Krzysztof Stanek, Dr. Christopher Kochanek

- Full-Time paid Research Assistant for the All-Sky Automated Survey for Supernovae (ASAS-SN) team.
- Responsible for image quality control for data collected nightly from ASAS-SN's twenty-four 14cm telescopes positioned around the globe.
- Responsible for follow up of potential transient sources, as well as naming and releasing of candidates such as supernovae and cataclysmic variables.
- Resulted in a co-authorship on a journal article publish to ApJ and multiple Astronomer's Telegrams.

Core-Collapse Supernovae Analysis, The Ohio State University Oct. 2021-Nov. 2022

Dr. Christopher Kochanek

- Resulted in a first-author journal article recently submitted to MNRAS.
- Late time evolution analysis of multiple core-collapse supernova spanning the last 40 years using data from the collaboration of Ohio State with the Large Binocular Telescope (LBT).
- Responsible for reducing data from LBT, plotting light-curves, and scientific analysis of photometry.

Astronomy Undergraduate Research, Stony Brook University Nov. 2019- June 2021

Condor Array Telescope, Dr. Kenneth Lanzetta

- Developed code to optimize the characterization of the PSF over large angles to study low-surface-brightness outer regions of the Milky Way, LMC, SMC and distant galaxies. Model spread of starlight to study contribution of light to a given point in the field.
- Developed code to simulate images of a selected field of the sky to push through our data analysis pipeline in preparation to deploy the array telescope to Chile.
- Working towards placing constraints on the number of White Dwarves that contain transiting exoplanets.
- Refurbished a computer cluster and replaced dated or broken parts for use by the telescope for various purposes as well as, setting up operating systems and re-establishing a network for the cluster.

PUBLICATIONS & PRESENTATIONS

Submitted

First Author

Rizzo Smith, M. et al. 2022, "*The Late-Time Optical Evolution of Twelve Core-Collapse Supernovae: Detection of Normal Stellar Winds*" Recently Submitted to MNRAS

Published

Co-author

Kawash, A. et al. 2022, "*The Galactic Nova Rate: Estimates from the ASAS-SN and Gaia Surveys*" *ApJ, 937, 64*

Non-Referred Publications and Presentations

Jul. 2022	ATel #15531 "An Update on ASASSN-21qj: A Rapidly Fading, Sun-Like Star; Back with a Vengeance."
Apr. 2022	ATel #15308 "ASASSN-22el: A Deep Eclipse Event."
Sept. 2021	ATel #14937 "ASASSN-21sa: A Deep Dimming Event."
Aug. 2021	ATel #14878 "ASASSN-21qj: A Rapidly Fading, Sun-Like Star"
July 2021	ATel #14803 "ASASSN-21nn: An Unusual Dimming Event in a Red Giant Star.
July 2021	ATel #14778 "ASASSN-21ml: Discovery of an Extreme (Delta g > 10 mag) L-Dwarf Flare"
May 2020	Presentation: "American Museum of Natural History Astronomy Seminar" Condor Array Telescope research project was presented.
May 2020	Presentation: "URECA Celebration: Undergraduate Symposium" Poster presentation of software produced in the development of Condor Array Telescope.

TEACHING EXPERIENCE

Paid Physics and Math Tutor Nov. 2019 - Apr. 2022

- Regularly scheduled lessons (6-8) hours a week with a student for their college intro physics sequence
- Prepare lessons and assigned supplemental practice problems
- Provide students with additional materials outside of scheduled lessons

Undergraduate Teaching Assistant, Stony Brook University Aug. 2019 - May 2020

- Undergraduate TA for a 200 level Astrophysics Course
- Learned critical adaptation skills as an instructor in the shift to online learning due to COVID-19
- Held weekly office hours to assist with homework problems and exam review
- Offered a group lesson to students in preparation for the final exam

HONORS AND AWARDS

May 2021	Magna Cum Laude with Honors Degree in Physics
Feb. 2020	Sigma Pi Sigma National Physics Honor Society Member
Fall 2017 - Spring 2021	Dean's List
Fall 2017	Stony Brook Campus Scholarship ($26,000 for four years)
Spring 2017	NJ Passaic County Board of Education Scholarship

RELEVANT COURSES (NOT ON TRANSCRIPT / NOT FOR CREDIT)

- Observed Properties of Astronomical Systems (OSU Graduate Course AST 5830)

SKILLS

Programming Languages (in order of experience)**:** Python, Fortran, Java, MATLAB, C++, IDL

Applications and Packages: ds9, LaTeX, Github, Gnuplot, Wolfram Mathematica, Microsoft Excel, Microsoft Office, NumPy, AstroPy

Observing Equipment: Mt. Stony Brook 14-inch telescope, Condor Array Telescope, CCD cameras

LEADERSHIP ROLES AND ACTIVITIES

President of Residential Hall Council, Stony Brook NY Sep. 2020 - May 2021

- Chairs and preside over all Executive Board meetings, an elected position
- Manage a yearly budget, organize, and plan programs and activities for residential students

Vice President of Residential Hall Council, Stony Brook NY Sep. 2017 - May 2018

- Chairs and preside over meetings with the general body of residential students, an elected position