JAMES LILLY
jlilly365@yahoo.com ● (443) 875-7192

EDUCATION

University of Wyoming   Laramie, WY
Master of Science in Physics   May 2022

University of Arizona (UA), Honors College   Tucson, AZ
Bachelor of Science in Physics and Astrophysics with Honors   May 2020
Cumulative GPA: 3.78/4.00

TECHNICAL SKILLS

Programming Languages: Python, C, R, HTML, Visual Basic, IRAF
Software/Libraries: Git, Microsoft Office, Anaconda, LaTeX, Terminal, Zoom
Operating Systems: Windows, Unix, Linux

WORK EXPERIENCE

University of Wyoming   Laramie, WY
Graduate Teaching Assistant   Aug 2020 – May 2021
- Guided weekly in-person problem-solving sessions and online labs for undergraduate physics courses
- Collaborated with lab coordinator to prepare course learning materials and troubleshoot experiments

Vatican Observatory Foundation   Mt. Graham, AZ
Telescope Operator   Jun 2019 – Aug 2019
- Facilitated observations for NASA's Transiting Exoplanet Survey Satellite (TESS) at the Vatican Advanced Technology Telescope (VATT)
- Coordinated operational procedures with remote observers and 3 other telescope technicians

PROJECTS/RESEARCH

University of Wyoming   Laramie, WY
Graduate Research Assistant   March 2021 – Present
- Construct tools for Python pipeline to identify stellar clusters and associations in Hubble Space Telescope data as part of PHANGS collaboration
- Co-author PHANGS-HST Survey Paper: Lee et al. 2021 – Computed statistics of stellar associations
- Co-author Turner et al. 2022 – Rendered multi-telescope images; examined cluster-cloud correlations

University of Arizona/NASA Space Grant   Tucson, AZ
Undergraduate Research Assistant   Aug 2018 – May 2020
- Analyzed hierarchical structure of molecular clouds within the Milky Way Galaxy
- Evaluated radio astronomy observations with Python to determine properties of prestellar cores

National Radio Astronomy Observatory   Charlottesville, VA
Undergraduate Research Assistant   May 2018 – Aug 2018
- Investigated structure of nearby molecular clouds in Green Bank Telescope data

RELEVANT COURSEWORK

Introduction to Scientific Computing	Theoretical Astrophysics
Computational Physics	Electricity & Magnetism I & II
Atomic and Molecular Spectroscopy for Experimentalists I	Methods in Experimental Physics I & II