CURRICULUM VITAE

Daniel J. Henningsen
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(a) Education & Training

Arizona State University	Tempe, AZ	B.S.	Astrophysics	2023	*magna cum laude*
Arizona State University	Tempe, AZ	B.S.	Physics	2023	*magna cum laude*
Arizona State University	Tempe, AZ	Minor	Sustainability	2023	*magna cum laude*
Mesa Community College	Mesa, AZ	A.S.	Science	2020	*with high distinction*
Mesa Community College	Mesa, AZ	AGEC-S	General Education	2020	*with high distinction*

(b) Papers

1. Daniel Henningsen, 2023, "Modeling Earth-shine Bias in SKYSURF Database". Senior Thesis, Arizona State University.

2. O'Brien *et al.* (including Daniel Henningsen), 2022, "SKYSURF-4: Panchromatic Hubble Space Telescope All-Sky Surface-brightness Measurement Methods and Results". In: AJ 165.6, 237 (June 2023), p. 237. doi: 10.3847/1538- 3881/acccee.

3. Carleton *et al.* (including Daniel Henningsen), 2022, "SKYSURF: Constraints on Zodiacal Light and Extragalactic Background Light through Panchromatic HST All-Sky Surface-Brightness Measurements: II. First Limits on Diffuse Light at 1.25, 1.4, and 1.6 microns" In: The Astronomical Journal 164.5 (Oct. 2022), p. 170. doi: 10.3847/1538-3881/ac8d02.

4. Windhorst *et al.* (including Daniel Henningsen), 2022, "SKYSURF: Constraints on Zodiacal Light and Extragalactic Background Light through Panchromatic HST All-Sky Surface-Brightness Measurements: I. Survey Overview and Methods" In: The Astronomical Journal 164.4 (Sept. 2022), p. 141. doi: 10.3847/1538-3881/ac82af.

5. Carter, Henningsen *et al.*, under preparation (TBA), "SKYSURF: Object Counts".

(c) Research Experience

1. SKYSURF Research Assistant, 2021-2023
   - Created a model for calculating earth-shine in HST's Wide-Field Camera 3 IR filter.
   - Assisted in ensuring images used in sky brightness calculations did not have anomalies that would effect the calculated value.
   - Created algorithm that generates plots of earth-shine models for individual HST exposures.
   - Ensured pilot lists for AWS runs did not have missing or duplicated exposure entries.
2. NASA Space Grant Intern, 2021-2022
   - Part of team that used several AWS instances for testing different AWS configurations to minimize cost per image to process.
   - Ran mass Astrodrizzle run on SKYSURF database using algorithm created by collaborator on AWS cloud computers.

(d) Synergistic Activities & Outreach

1. Windhorst Research Group Outreach, 2022
   - ASU Earth and Space Exploration Day
     - Discuss differences between Hubble and James Webb telescopes with attendees.
     - Hubble Deep Field image with interactive AHaH application to explore the image in-depth with attendees.
     - JWST VV191 image poster with interactive 3D printed version for visually impaired.
2. NASA Space Grant Outreach, 2021-2022
   - Mesa Community College Astronomy nights, answered guest questions about own research and the James Web Space Telescope.
3. Private Tutor for Math and Sciences, 2019-2020
   - Tutored students in high school to community college level math and science classes.
4. NASA Community College Aerospace Scholar (NCAS), 2020:
   - Selected as team MVP for on-site portion by mentor.
   - Helped orchestrate and present to a team of judges a mock NASA mission to the moon with a team of other NCAS members while mentored by a NASA employee.
   - Completed a research project on Lunar In-Situation Resource Utilization (ISRUs)
   - Completed a fast paced five week course earning top marks.
5. Mesa Community College Astronomy Outreach Volunteer, 2020:
   - Volunteered with the community outreach program for Mesa Community College's Astronomy Department with a goal of working with elementary school students to introduce and foster an interest in space science.
   - Coordinated activities such as impact cratering with flour and brown sugar and a "solar system ruler" to increase kid's knowledge of space while also having fun.

(e) Additional Work Experience

1. In-Room Dining (IRD) Server at The Phoenician, a Luxury Collection Resort 2014-present
   - Recommended for supervisor position (declined in favor of school).
   - Communication skills for coordinating between the kitchen, IRD phone operator and guest, as well as any other departments for guest requests or complaints.

(f) Other Skills

- Python
- Pandas
- Matplotlib
- Data Modeling
- LaTeX
- Google Workplace Suite
- Microsoft Office Suite
- Java
- Amazon Web Services
- R
- Linux
- Windows OS
- macOS
- Presentation Skills
- Science Communication
- Shell Scripting
- Command Line
- Bash