

ASTR/PHYS Professional Development

*Careers in Optics,
Telescopes and
Observatories*

*Join a panel of industry and
institutional experts to discuss
options and opportunities*

*Moderated by Rose Smith, Sommers Bausch Observatory
Nick Schneider, APS*

Wednesday, 7 February

5:00-6:00 pm

Duane G130

Plus FREE PIZZA!

<https://www.colorado.edu/aps/undergraduate-studies/professional-development>

Astrophysical & Planetary Sciences

COLLEGE OF ARTS AND SCIENCES

[Home](#) > [Undergraduate Studies](#) > Professional Development

Professional Development

APS/PHYS Professional Development is a resource for undergrads in fields related to physics and astronomy at CU Boulder. This website includes resources and information designed to help undergraduates in APS/Physics develop successful longterm careers. This website is designed to offer resources and advice that will help you succeed in your career after graduating CU Boulder. Navigate with the following main sections:

Events for Academic Year 2023-2024

9 October, Grad school: [recording](#), [slides](#), [flyer](#)

30 October, Getting involved in Physics research: [recording](#), [flyer](#)

13 November, Careers in Heliophysics: [recording](#), [slides](#), [flyer](#)

5 December, Undergraduate Research Opportunities Symposium (Astrophysics, Planetary Science and Heliophysics): [recording](#), [slides](#), [flyer](#)

Note: All recordings can also be found [here](#)

Astro Tourism

- AstroTours, National Park Service, San Pedro de Atacama Celestial Explorations, and many more

Astronomy Industry (Consumer / Prosumer)

- Telescopes, Mounts, Cameras, Software, and Accessories Manufacturers
 - Planewave, Celestron, Meade, SkyWatcher, Software Bisque, Atik, ADM Astro-Physics, Tele Vue, Takahashi, Starlight Xpress, Primalucelab, Pegasus Astro, Lunt, Daystar, Diffraction Limited, and many more.
- Equipment Dealers
 - Cloud Break Optics, Woodland Hills Telescopes, Mile High Astronomy, High Point Scientific, Agena Astro, and many more.

Professional Telescopes

- University Teaching Observatories
 - Sommers-Bausch (CU Boulder), Harvard, Whitin (Wellesley College), Haystack (MIT), Dyer (Vanderbilt University), and many more.
- University Research Observatories
 - Apache Point (NMSU, Et al.), Keck (Cal Tech and University of California), McDonald (UT Austin), Palomar (Cal Tech), Lick (University of California, Santa Cruz), Haleakala (University of Hawaii), and many more*

*We'd love a volunteer to collect job posting URL's!

Professional Telescopes Continued

- Large Consortium Ground Based Observatories
 - NOIRLab, Giant Magellan Telescope, Extremely Large Telescope, Large Binocular Telescope, Rubin Observatory, Very Large Array, Atacama Large Millimeter Array, and many more.
- Space Observatories
 - HST, JWST, Chandra, Swift, Gaia, TESS, WISE, Euclid, Roman, Fermi, and many more.

Coda Lucas (They/ Them)

Astronomer, AstroTours

- Started working for AstroTours in 2021
- Graduated from APS in 2023
- Participated in outreach trips as a member of CU STARS for most of undergrad
- Teach online middle school astronomy classes for Astranova
- Coda@AstroTours.org



AstroTours is Hiring Tour Guides!

- We're calling all stargazers, night owls, and astronomy aficionados! If you've got a knack for storytelling and a passion for the stars, we want you on our team.
- For more information, check out our job posting at <https://www.astro tours.org/post/now-hiring-astronomy-tour-guides-for-2024-season> or email Coda@AstroTours.org
- Deadline for Application: March 9th

Matt Dahl (He/Him)

Owner, Cloud Break Optics

Former Mission Ops Flight Controller and lead Operational Planner,
Kepler Mission, LASP

- 2005 Student Research using DU's Meyer Womble Observatory - Search for Transiting Planets in NGC 6791 using milli-magnitude V+R Photometry
- 2008 Senior Thesis - Automation of the Student Astronomy Lab Telescope
- Graduated from University of Denver in 2008, B.S. Physics, minors Math and Astrophysics
- Joined LASP in 2008 for Kepler Mission; also worked SORCE and AIM, Kepler launched March 2009
- Opened Cloud Break Optics in 2015 in Seattle, WA where we sell and support astronomy and astrophotography gear to amateurs and professionals alike.
- matt@cloudbreakoptics.com



www.cloudbreakoptics.com



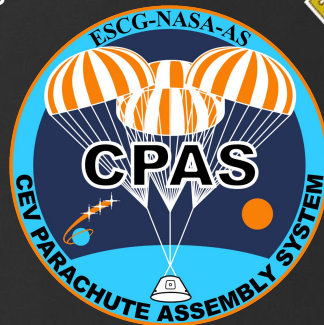
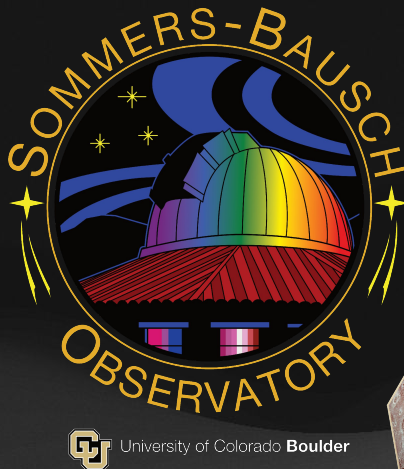
<https://lasp.colorado.edu/information/undergraduates/student-flight-controllers-program/>

Rose Smith (She/Her)

Manager, Sommers-Bausch Observatory

- Graduated in 2016 from the APS department.
- Worked for 4 years at Software Bisque, in Golden, CO
- Work on Crew Dragon, CPAS, and Virgin Galactic.
- Volunteered with SwRI on New Horizons and Lucy as an occultation observer.
- Worked with Sommers-Bausch Observatory since 2014, and as the manager since 2021.

rose@colorado.edu



Dylan Gatlin He/Him

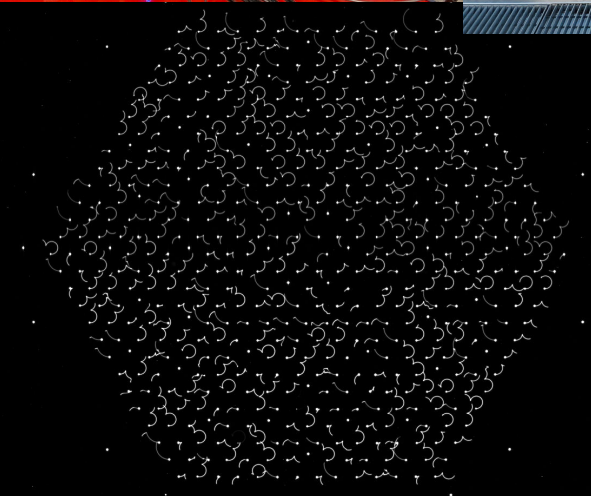
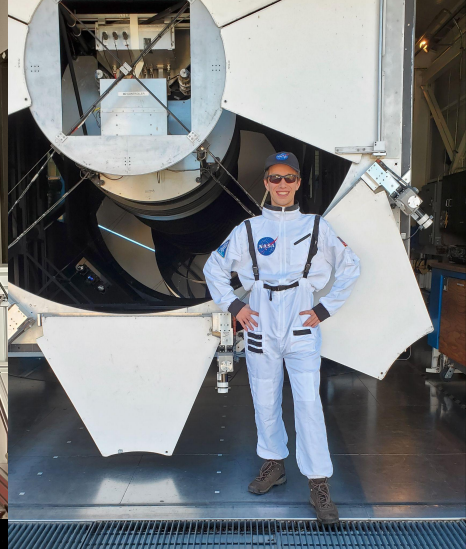
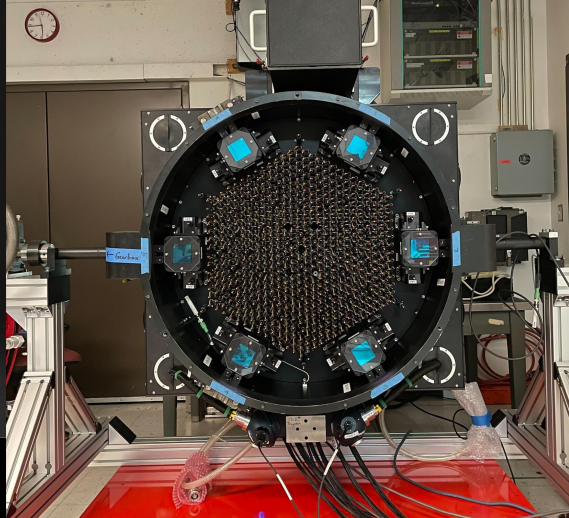
Telescope Operations Specialist
Sloan Digital Sky Survey

Undergrad:

- TA for ASTR 2600
- President of CU Astronomy Club
- Undergrad thesis on exoplanet atmospheres

SDSS Projects:

- Move observing scripts to version control
- Switch from SDSS IV plates to SDSS V Fiber Positioner System
- dgatlin5@proton.me

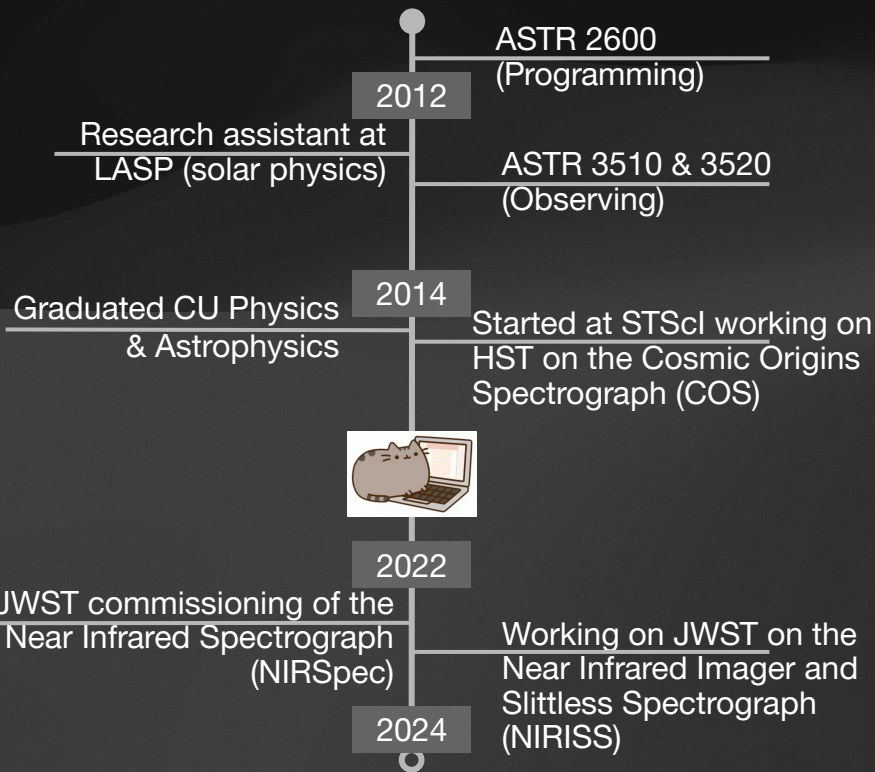


Rachel Plesha (She/Her)

Sr. Staff Scientist, Science Support
Space Telescope Science Institute (STScI)
Baltimore, MD
rplesha@stsci.edu



STScI | SPACE TELESCOPE
SCIENCE INSTITUTE



NGC 1566 HST & JWST



STScI Job Opportunities

Pre Graduation

- ★ Summer internships covering a wide range of topics including research projects using HST & JWST data, software tool development, and calibration projects for HST, JWST, and Roman instruments.
 - Applications are open from December to January every year

Post Graduation Bachelor's Degree Opportunities

- ★ Science Support Analysts
 - My current position; support calibration and health of science instruments on HST, JWST, & Roman
 - Positions open ~2/year; **Currently open for applications through February 11th**
- ★ Science Operations Analysts
 - Schedule observations on HST & JWST and work with scientists to ensure that the observations are safe to execute and follow standards.
 - Positions open ~1/year
- ★ JWST Flight Operations
 - Send commands to JWST and monitor the daily health of the observatory
 - Positions open as needed

Current Job Listings

- ★ <https://recruiting2.ultipro.com/SPA1004AURA/JobBoard/93330e50-7b3a-4ba8-94f2-6f32360aa4e1>
 - Also listed at: <https://jobregister.aas.org/>

So, how can you prepare?

- Observing Classes: ASTR3510/20/60: Imaging, Spectroscopy, Instrumentation
- Computing & Research skills: ASTR2600, ASTR3800, ASTR3400
- Work Experience: Sommers-Bausch Observatory, Fiske, LASP, SWRI, AstroTours, National Park summer programs (including RMNP)
- Clubs: CU STARs, Astronomy Club
- Research: Undergraduate RA, REU
- At Home: Learn to use a telescope, any telescope, including digital imaging



Questions?

Upcoming ASTR/PHYS Professional Development Events

All in G130, 5-6pm, Wednesdays – with pizza!

- 7 Feb: Careers in Telescopes and Observing *with Rose Smith*
- 28 Feb: Careers in Education and Outreach *with John Keller*
- 13 March: Careers in Industry & Aerospace
- 3 April: Careers in Startups
- 17 April: Applying for Jobs

ASTR/PHYS students: read your weekly emails!

Everyone: check our departmental websites:

<https://www.colorado.edu/aps>

<https://www.colorado.edu/physics>

