Future Advisors:

Please…

1. Add 1-2 slides to this deck, advertising a research opportunity for undergraduate students. Be clear about expectations, prerequisites, application instructions including deadline. Place your slides where you want them after slide 19.
2. Submit your job ad to the APS Undergraduate Research/Employment Opportunity form, to provide more equitable access to students seeking positions.
3. Show up on Wednesday, 4 December 2024 at Duane G1B30 to present your slide(s), or delegate someone else to present it for you (we happily volunteer).
4. If you're submitting a recording, please place a youtube link in your slides or email your recording to nick.schneider@lasp.colorado.edu

ASTR/PHYS Professional Development

2024 Undergraduate Research Opportunities Symposium

Astrophysics, Planetary Science, & Heliophysics

- Summer Research Experiences for Undergraduates (REU's)
- Undergraduate Research Opportunities (UROP's)
- Independent Study
- ASTR 3400 - Research Methods
- A dozen recruitment presentations by researchers in APS and associated units LASP, NSO, CASA, JILA, FISKE, and SBO

5:00-6:30 PM

Wednesday December 4

Duane G1B30

Welcome!

APS Undergraduate Research Opportunities Symposium

Open positions posted here

Recording here

Presenter Index here

4 December 2024 | 5:00pm | Duane G1B30

John Keller & Nick Schneider

ASTR/PHYS Professional Development

Undergrad Research Opportunities and How to Get Them

- UROP Proposals for funded research
- Independent study with a CU researcher
- Research Experience for Undergraduates Summer programs (REU’s)
- Research-focussed coursework
- Honors Theses
- Faculty-mentored research

UROP's, Independent Study, Courses and REU's

Are you ready for research?	Nick Schneider
Undergrad Research Opportunities ASTR 3400 Research Methods ASTR 3560 Instrumentation	John Keller John Keller John Keller
Research Experience for Undergraduates & the Boulder Solar Alliance REU REU listings	Willow Reed Nick Schneider

Click on presenter name to go to their slides
Slides may not appear in the same order as listed here

Speaker/Research Advisor	Organization	Research Topic
Julie Comerford	CASA	Paid internship running nighttime observing at Rocky Mountain National Park
Julie Comerford	CASA	Partners Across the Sky - Research pathway for Native American students
David Malaspina and Ben Short	APS/LASP	Parker Solar Probe Data Analysis
Fran Bagenal	LASP	Studies of interaction of Galilean moons with their space environment
Alexandros Chasapis	LASP	
Xiangning Chu	LASP	Data analysis and machine learning for physical insight: Exploring the near-Earth space environment
Zoltan Sternovsky	LASP	Modeling expansion of dust impact plasma from a surface of a spacecraft to calculate the electric signals from antenna instruments
Shah Bahauddin	LASP	Machine learning / deep learning to convert monochromatic images to spectra between different space-based instruments
Ed Thiemann	LASP	Mars upper atmosphere data analysis using MAVEN data
Sonal Jain	LASP	MAVEN Imaging UltraViolet Spectrograph Team
Kevin Reardon	NSO	Analysis of spectral images of solar photosphere and chromosphere
Serena Criscuoli	NSO	Machine learning techniques applied to DKIST observations in Balmer lines
Adrienne Pickerill	LASP	Student mission controller positions in LASP Mission Operations Center
David Brain	APS/LASP	Magnetospheres and atmospheric escape
John Keller	APS/Fiske	Fiske Employment and RECON Trojan Occultation Opportunities
John Keller	APS/Fiske	Research and Education Collaborative Occultation Network (RECON)

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

Upcoming Events:

4 December, Undergraduate Research Opportunities Symposium

Tentative Spring Dates:

5 February, Careers in Telescopes, Optics and Observatories

26 February, Careers in Education and Outreach

19 March, Careers in Industry, Aerospace

9 April, Careers in Startups

23 April, Applying for Jobs

Prospective Students
Current Courses
Degree Requirements
Honors Program
Mentoring
Scholarships
Research Opportunities
Help Room & Tutoring
CU Stars
Alumni Showcase
Professional Development
Events
Undergrad Opportunities

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

Research Opportunities

Participating in scientific research can be a highly valuable and rewarding part of your undergraduate education here at CU. Many students develop their interests, skills and contacts by working on one or more projects during their time at university.

Working in a research program can also be a significant help in ensuring success in your post-graduation plans. Research experience is highly recommended for those who are considering post-graduate academic programs, and can help you decide whether this is the right path for you. For any career path, a research advisor can provide letters of reference and valuable contacts. Being able to describe your research accomplishments can make your résumé a standout when applying for nearly any type of job after graduation.

Are you Ready for Research?

Students typically start to acquire useful skills, solidify their understanding of foundational math and physics concepts, and hone their interests after at least a year in our major. Below is a list of things you should consider, and steps you can take to help you get started.

You should keep in mind that finding research work may be competitive, and that resources may be tight (time for supervising your work, as well as pay). You will likely have to be patient and persistent to find a good match to your skill set and interests.

1. **Is your academic record solid?** If your GPA (either cumulative or in your math and science classes) is less than about 2.7-3.0, we STRONGLY suggest that you postpone an extracurricular activity like

Prospective Students
Current Courses
Degree Requirements
Honors Program
Mentoring
Scholarships
Research Opportunities
APS Research/Employment Opportunities
Research and Internship Opportunities
Help Room & Tutoring
CU Stars
Alumni Showcase
Professional Development

Are you ready for research? Some Resources

https://www.colorado.edu/aps/undergraduate-students/ready-research

My OfficialFirstname (alternatename) LastName
My address in Colorado
Email: myofficial.cuaddress@colorado.edu

Education

Previous college-level education (CC, transfer, etc.) Semesters or dates
Major in ASTR, whichever track, Other majors, minors
Expected graduation date:
GPA (mandatory!): overall and in major, if available

Experience (list all relevant)

Research Assistant, Institution or Dept. Semesters or dates
what you did in three or four words
Supervisor:

Tutor, grader, LA, other teaching, Dept. Semesters or dates
Topics, in a few words
Supervisor:

Other relevant volunteer or paid work, Semesters or dates
incl. relevant extra-curriculars (CUAC, STARS, Fiske, SBO)
Topics and activities in a few words

Research Skills

Computer skills, computer courses taken (grade)
Data analysis skills including statistics, relevant courses taken (grade)
Experience with telescopes: which, what did you do, relevant courses (grade)
Laboratory or other useful skills, relevant courses taken (grade)

Awards and Recognition

Scholarships for CU or other colleges
Awards or other recognition at the college level

Other skills (if space): Something that makes you stand out
Bass player for heavy metal band
Chain-saw certification
Fluent in Serbo-Croatian

Reference: email@colorado.edu
Someone at CU who has agreed to be your reference. Can be mentor, instructor who knows you well

UROP

UNDERGRADUATE RESEARCH OPPORTUNITIES PROGRAM

COLORADO.EDU/**UROP**

Overview

We offer funding options, or grants, for students and faculty to develop projects in all areas of study and professional practice. Most undergraduates and faculty members are eligible for UROP funding, and we encourage you to contact us with questions.

Timeline

We fund projects throughout the year in two "grant terms," but applications are awarded annually in the spring. Students can check for “Open Opportunities” on our website and explore more in the Curiosity Lab at any time.

Student Grants

ASSISTANTSHIPS ($1,000-2,000) provide funding to students to partner with a faculty mentor to help on an existing project.

INDIVIDUAL GRANTS ($1,500-3,000) allow students to take ownership of part or all of a project with an original proposal.

Applications due mid-Feb, 2025 (TBD).

Check the website for details!

Research Experience in Independent Study

- Earns academic credit but is not paid
- Usually 1-2 credits
- Research project jointly developed with a faculty* advisor
- Projects last one semester, with regular meetings through the semester
- Similar process to UROP, but less formal

* CU researchers serve as faculty research advisors

ASTR 3400: Research Methods (P. Hayne)

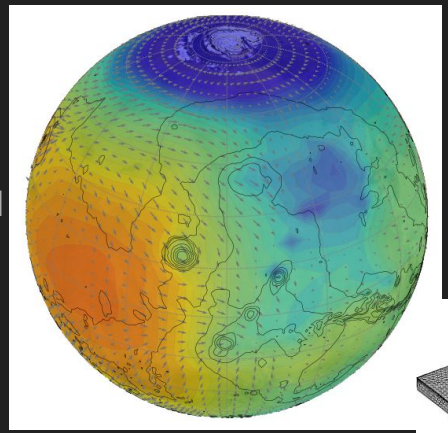
Purpose: Gain hands-on research experience in the classroom through guided project-based learning

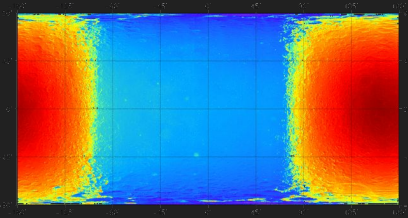
Topics covered: Scientific computing, data processing and analysis, numerical modeling, back-of-the-envelope calculations, reading the scientific literature, peer review, science communication, *and more!*

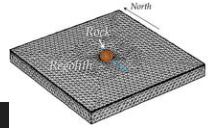
Focus for Spring ‘23: Planetary surfaces and atmospheres, remote sensing

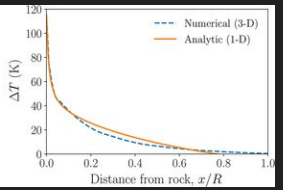
Previous terms have focused on: solar physics, black hole observations with EHT, asteroid occultation measurements with small telescopes

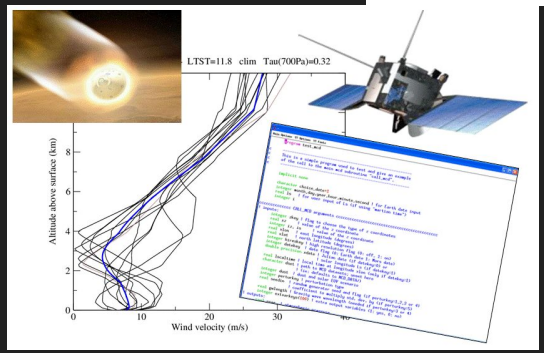
Prerequisites: ASTR 1040, PHYS 1125 or 1120, pre- or co-requisite of ASTR 2600 or PHYS 2600 (all minimum grade C-)











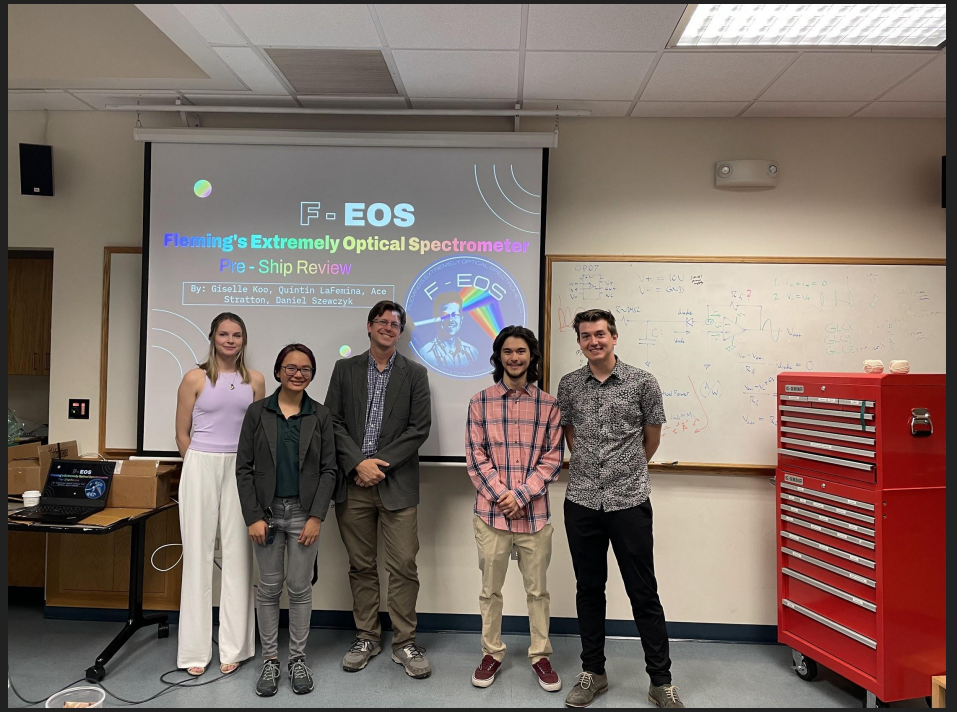
Examples of planetary datasets and models

So you think this is a little cool but aren't sure you want to join a space mission and/or work at a big ground-based observatory?

(then take a class…)

ASTR 3560

- Learn about optics!
- Play with lasers!
- Build your own detector!
- Project-based class – minimal lectures, lots of doing!
- No experience necessary – we will teach you how to understand astronomical instruments!
- You will leave this class with experience with experimentation and testing and exclamation points!



The first team ever (plus Professor) to build a spectrometer to measure the solar spectrum – F-EOS 2022

Can you be the second?

Research Experience for Undergraduates (REU) Programs

- The Research Experiences for Undergraduates (REU) program **supports active research participation by undergraduate students (enrolled Fall 2025) in any of the areas of research** funded by the National Science Foundation.
- REU projects **involve students in meaningful ways** in ongoing research programs or in research projects specifically designed for the REU program**.**
- These are **paid** research opportunities and the **REU site may be at either a US or foreign locations.**
- Undergraduate students supported with NSF funds **must be citizens or permanent residents of the United States** or its possessions.
- **Astronomical Sciences**, Chemistry, Earth Sciences, Materials Research, **Physics**, STEM Education, and more!

NSF's REU Sites Search

Willow Reed, bouldersolarreu@lasp.colorado.edu

ETAP

NSF Education and Training Application

- New application system from the NSF
- Common application - allows you to apply to multiple programs in one application.
- Most questions are standard for federally funded programs.
- Each program can add their own questions.
- **Not all REUs are on this system!**

Pro Tip: Do not apply to all the programs on ETAP just because you can.

Willow Reed, bouldersolarreu@lasp.colorado.edu

My advice on applying to REUs (or anything really)

Make it clear why you want to be part of that specific program!

- You could be applying for a lot of great reasons - such as bettering your resume - but that can be achieved with any program. Why this one?
- CU Boulder offers a lot of research opportunities. Why are you applying for this REU over finding research at CU?

Start your applications early and give plenty of time to your references!

- Most applications are due between January - March, with references due around the same time. Don’t wait until the last minute!

Don’t be afraid to apply!

Willow Reed, bouldersolarreu@lasp.colorado.edu

Boulder Solar Alliance REU Program

- A **10 week paid research summer program** where students get to work on a research project with a mentor.
- The topic areas span the **field of solar and space physics**; the Sun, the Sun-Earth system, the near-Earth environment, the heliosphere, and more.
- The **BSA REU works in partnership with several institutes around Boulder**, including LASP, NSO, HAO, NOAA, and more!
- Applicants **do not** need prior research or coding experience to apply.

Applications due January 22nd!

Boulder Solar Alliance
Research Experience for Undergrads
lasp.colorado.edu/home/reu

BSA REU Website

Willow Reed, bouldersolarreu@lasp.colorado.edu

Summer REU Opportunity Listings

NSF REU's:

Astronomy: https://www.nsf.gov/crssprgm/reu/list_result.jsp?unitid=5045

Physics: https://www.nsf.gov/crssprgm/reu/list_result.jsp?unitid=69

APS information:

https://www.colorado.edu/aps/undergraduate-studies/research-opportunities/research-and-internship-opportunities

American Astronomical Society (AAS) information

https://aas.org/careers/internships-summer-jobs

Division for Planetary Sciences (AAS/DPS) information

https://dps.aas.org/education/reu-programs

(most planetary programs are not NSF-funded and do not appear in other listings)

Deadlines are coming up! Competition is strong. But go for it!

The National Aeronautics and Space Administration

L'SPACE

TRAINING OPPORTUNITY

FOR FUTURE SCIENTISTS, ENGINEERS, PROJECT MANAGERS, *AND ALL INTERSTED IN ADVANCING SPACE SCIENCE!*

SCAN ME

APPLY TODAY

LSPACE.ASU.EDU

Must be 18+ and enrolled in a US college or university as an undergraduate student.

SOUTHWEST RESEARCH INSTITUTE®

? Help

Job Posting Search

Enter search criteria below to search our job postings.

STEP 1: Choose an Employment Status

Salaried | Hourly | Internships

Seeking students currently enrolled in college.

STEP 2: Refine your search [optional]

Keywords

Work Location: Boulder, Colorado

Job Categories: All Categories

Job Title: Contains

SwRI

SOUTHWEST RESEARCH INSTITUTE

jobs.swri.org

SCAN ME

katherine.kretke@swri.org

Summer 2025 Astronomy Internship at Rocky Mountain National Park

Two astronomy internships at Rocky Mountain National Park

The two interns will participate in nighttime astronomy programs, which include telescope viewings of the night sky and presentations about astronomy for park visitors

Any CU undergraduate can apply (graduating Fall 25 or later)

$16.85/hour; average of 7 hours per week

Look for ad in Weekly Planet in January; applications will open in January

If you don't get the Weekly Planet, ad will also be posted here in January: casa.colorado.edu/~juco5173/rmnp

Summer 2025 Astronomy Research with Partners Across the Sky

Program to open pathways to astronomy for Native American students

Matched with a research mentor at CU, summer research project in a field of astronomy

Mentoring, professional development, and visits to the Center for Native American and Indigenous Studies

Any CU undergraduate can apply (graduating Fall 25 or later)

$6000 stipend; free meal plan and CU housing; 40 hrs/week for 10 weeks

Look for ad in Weekly Planet in January; applications will open in January

If you don't get the Weekly Planet, ad will also be posted here in January: casa.colorado.edu/~juco5173/partners

Parker Solar Probe Research Opportunity

Topic:

- Heating / acceleration of the solar wind via plasma waves as Solar Probe “touches the Sun”

Skills learned on the job:

- Spacecraft data analysis (Parker Solar Probe)
- Python coding
- Solar wind physics

Desired applicant skills:

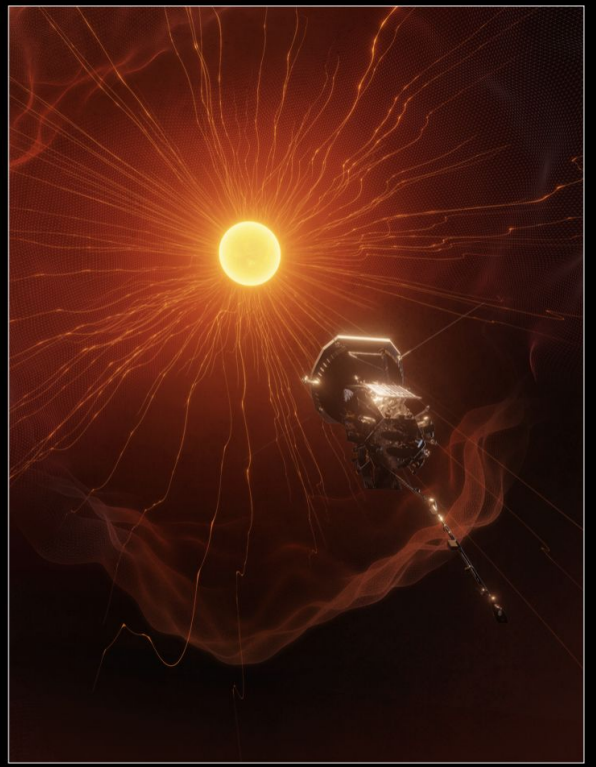
- Intro. Python coding (ASTR 2600 or equivalent)
- Clear written communication

Research group:

- LASP Solar Probe Research Group
- Faculty (David Malaspina)
  + Postdocs + Grad students + Undergrads

Timeline / Pay:

- 1 (possibly 2) positions
- Accepting applications now until Jan 10, 2025
- Primary work: Summer 2025 (May - August)
  - Can be extended by mutual agreement
  - Summers: ~40 hr / week paid
  - Academic year: ~15 hr / week paid



How to apply:

- email: David.Malaspina@colorado.edu
  - CV, list of courses taken
  - 1-2 paragraph expression of interest statement

Juno Mission in Jupiter's Vast Magnetosphere

Topic:

- Structure and dynamics of Jupiter's plasma sheet
- Analysis of 70 orbits of Juno measurements of sulfur and oxygen spewed from Io's volcanos

Skills To Start:

- Basic Python, Matlab or similar

Skills to be learned:

- Data analysis – picki out peak densities
- Coding to plot data
- What's a magnetosphere? What's Io up to?

Research Group:

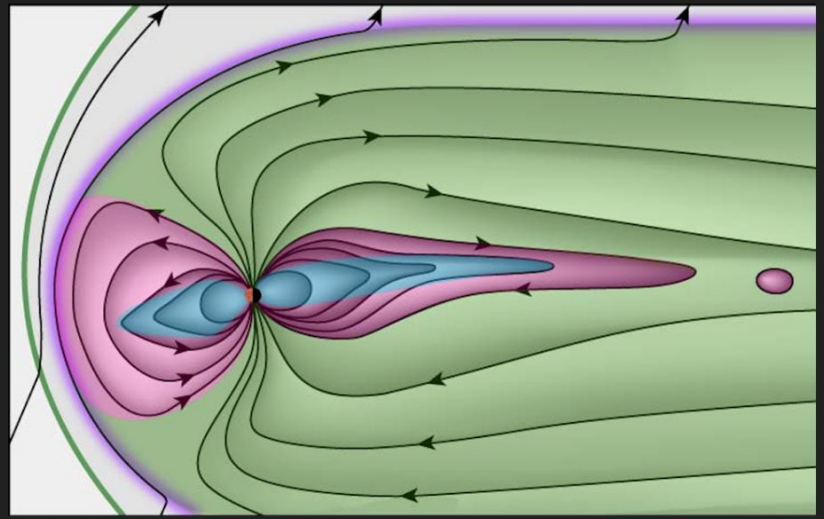
- LASP Magnetospheres of Outer Planets
- 5 researchers & students

Timeline/Pay:

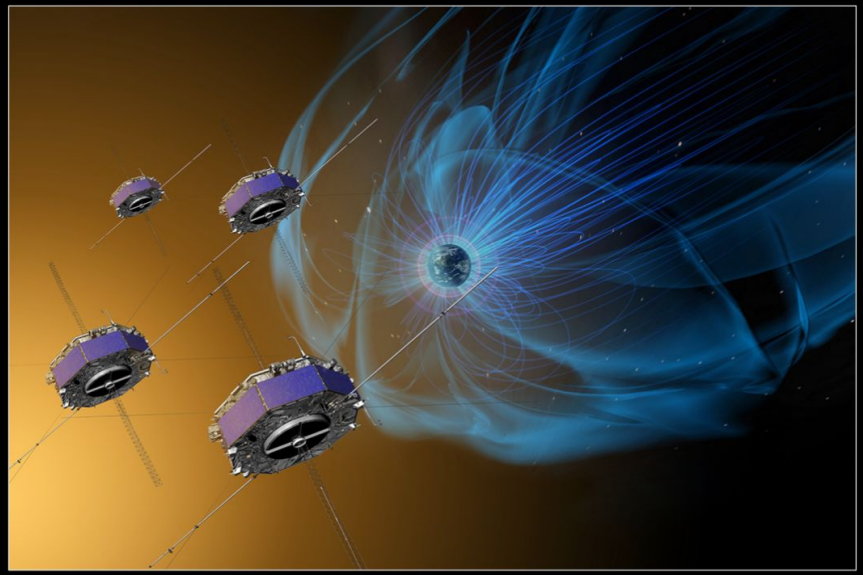
- 1 position – apply for UROP?
- Accepting applications now to Jan 10th
- Spring 2025 and/or Summer

How to apply:

- CV & 1-2 para. to bagenal@colorado.edu



Magnetospheric MultiScale Mission Research Opportunity



Topic:
- Solar wind magnetic structures, turbulence
- Earth magnetosphere

Skills learned on the job:
- Spacecraft data analysis
- Python coding
- Solar wind, turbulence physics

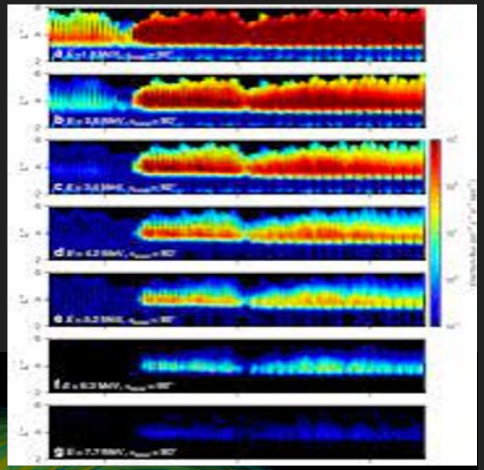
Desired applicant skills:
- Intro. Python coding (ASTR 2600 or equivalent)
- Clear written communication

Research group:
- LASP Space Plasmas Group

Timeline / Pay:
- 1 position
- Accepting applications until Dec 20, 2024
- Primary work: Spring 2025 and/or Summer 2025
  - Can be extended by mutual agreement
  - Summers: ~40 hr / week paid
  - Academic year: ~15 hr / week paid

How to apply:
- email: alexandros.chasapis@lasp.colorado.edu
  - CV, list of courses taken
  - 1-2 paragraph expression of interest statement

Machine Learning for Space Weather

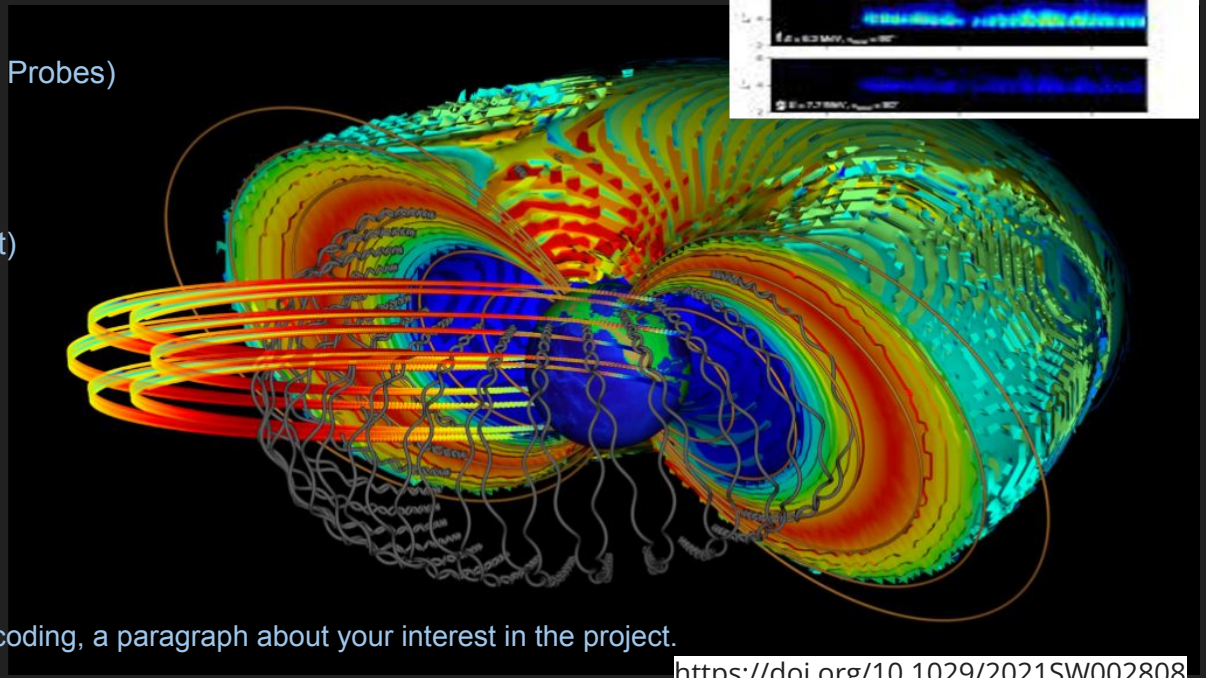


Project Description:

In this project, we will develop a number of machine learning based models to study the space environment, including the killer electrons and electromagnetic waves in the Earth's radiation belt, the geomagnetic indices, and geomagnetically induced currents on the ground.

Skills Acquired:

- Comprehensive data analysis (Van Allen Probes)
- Experienced with Python projects
- Machine learning model development



Desired Applicant skills:

- Python coding (ASTR 2600 or equivalent)
- Clear written communication
- Excitement for Machine learning

Timeline and pay:

- Application open until Jan 10, 2025
- Paid position starting in Jan, 2025
- Spring 2025: 10-15 hrs per week
- Summer 2025: ~40 hrs per week

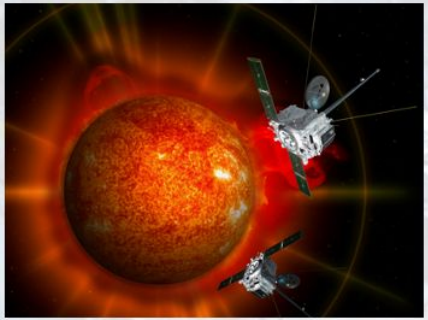
How to Apply:

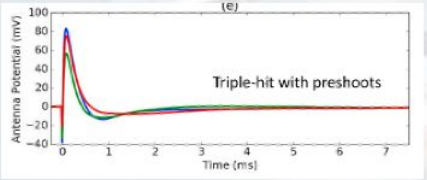
- Email: xiangning.chu@lasp.colorado.edu
- CV, list of courses taken, a sample of your coding, a paragraph about your interest in the project.

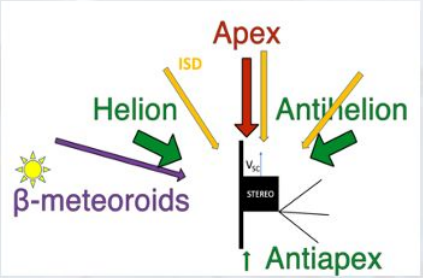
https://doi.org/10.1029/2021SW002808

Modeling antenna signals from dust impacts + data analysis

Prof Sternovsky (LASP), Zoltan.Sternovsky@colroado.edu







- Antenna instruments are sensitive to dust impacts
- STEREO A/B have detected thousands of dust impacts (middle fig)
- Help us to analyze the signals to sort the impacts into dust populations (bottom fig).
- See https://doi.org/10.1029/2021JA029645 for more details

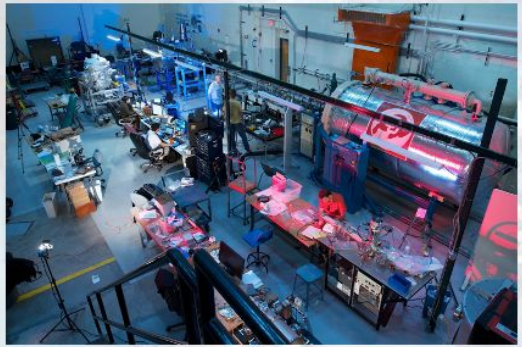
What we ask for:

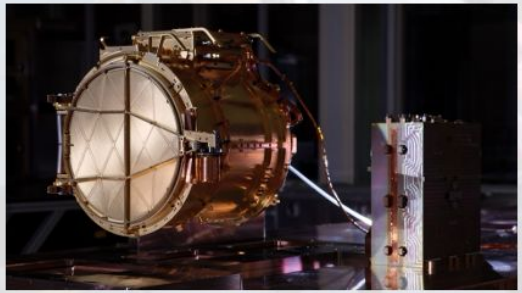
- Coding knowledge (Python)
- Dedication to research (~10 h/week)

What we offer:

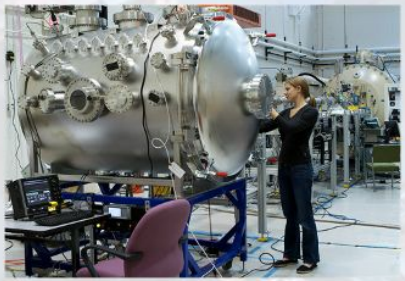
- Paid UG position
- Summer job (if interested)
- Co-authorship on a publications
- Involvement and mentorship

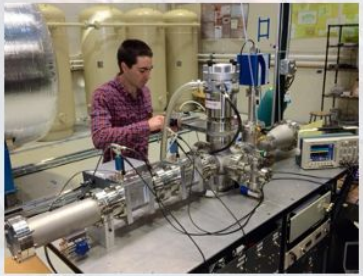
Who we are - Dust group at LASP

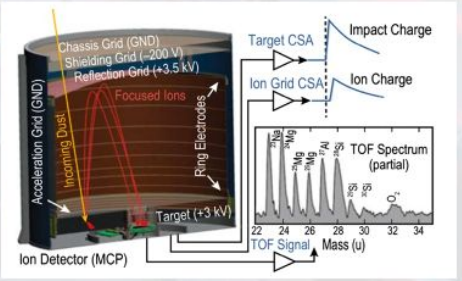




- Cosmic dust detection and analysis
- Dust accelerator at CU!
  - Impact.Colorado.edu
- Development of flight instrument
  - SUDA on Europa Clipper (on its way!)
  - IDEX on IMAP (launch in fall 2026)
- Studies of dust impact phenomena in the lab
- Modeling and data analysis….







Research Opportunity: Helio-FM

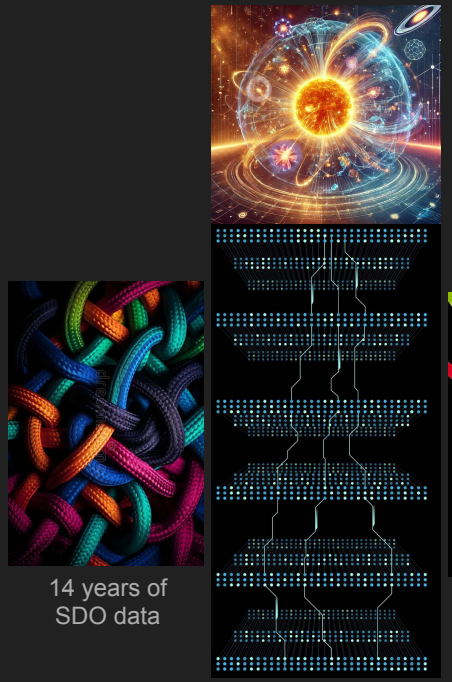
What is Heliophysics Foundation Model (FM): General purpose pre-trained transformer models on large-scale heliophysics datasets (image, text, spectra) that understands spatial and temporal structure of the data and will be used for downstream tasks, e.g., prediction, modelling, inference, etc.

- *A multi-institution collaboration of LASP/SWRI/IBM/NASA IMPACT*

Skills learned from this work: Deep Learning, Python Coding, Heliophysics, Space Physics

Skills Required: Basic Proficiency in Python, High-school level physics and mathematics, Written Communication

Timeline/Pay:
1 Undergrad Summer position (May - August 2025)
(Half or Full-time, Can be extended through mutual agreement)



14 years of SDO data

Learn Temporal Dynamics

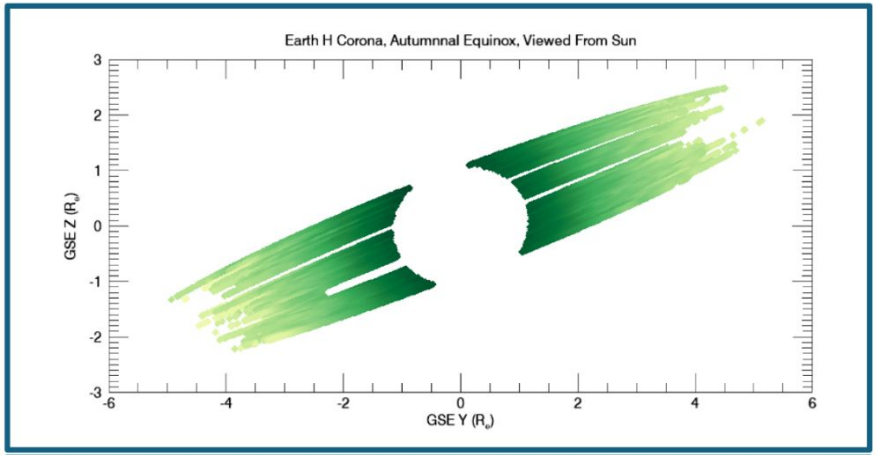
Apply to: **Shah Bahauddin before Jan 31, 2025**

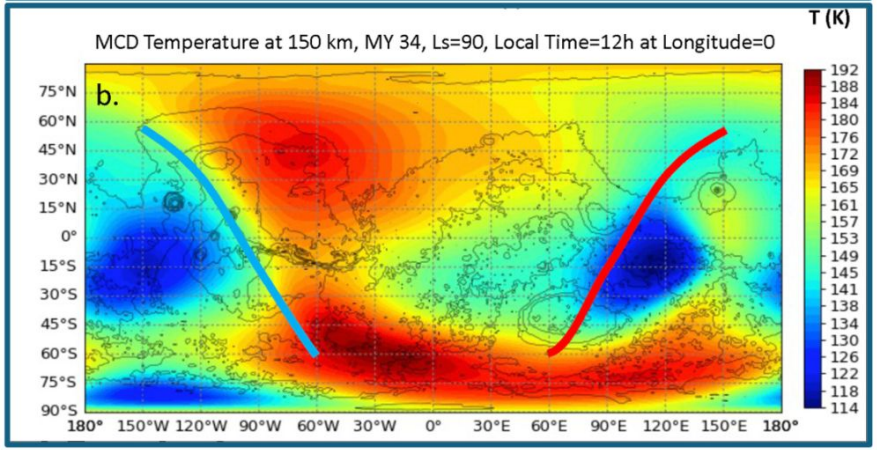
shah.bahauddin@lasp.colorado.edu

Send (1) CV, (2) A sample of your coding, (3) List of Math and/or Statistics courses taken.

Opportunities to study the upper atmospheres of Earth and Mars

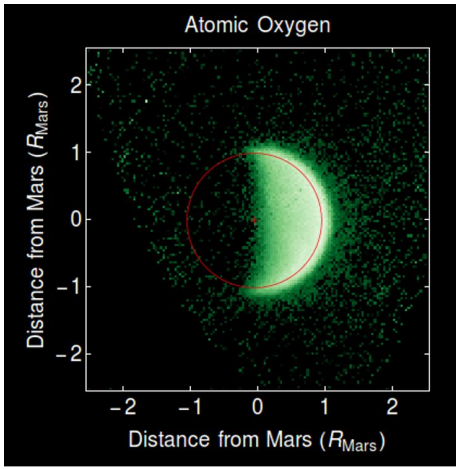
- Help advance the understanding of planetary evolution by analyzing measurements of Earth's Hydrogen exosphere.
  - *Project will start by investigating the latitudinal structure of new measurements of Earth's inner (<4 R_E) geocorona by GOES.*
- Help advance the understanding of heating in the Mars upper atmosphere.
  - *Project will start by investigating why simulations can't reproduce strong UV heating observed at dawn by MAVEN.*
- Apply if you're…
  - Interested in upper atmospheric science.
  - Have some coding experience.
  - Able to work part-time (~12 hrs/week) during Spring term and full-time (40 hrs/week) during Summer 2025.
    - Paid position
    - Summer time-off negotiable
  - Send questions or resumes to Ed Thiemann at thiemann@lasp.colorado.edu
    - Applications will be reviewed beginning December 30th.





Laboratory for Atmospheric and Space Physics
University of Colorado **Boulder**

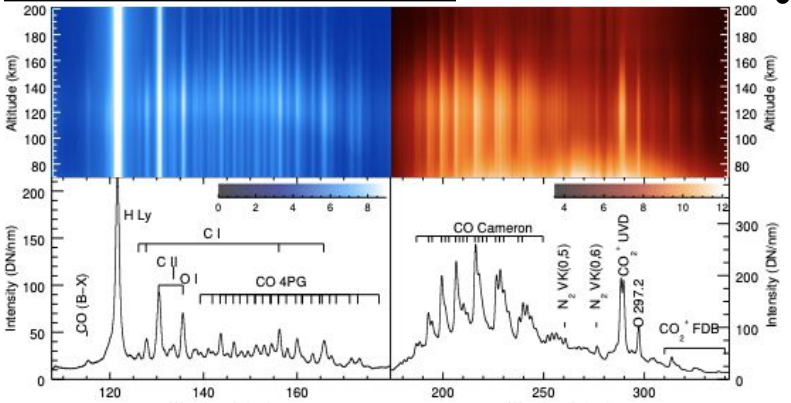
Using Ultraviolet observations to study the Martian upper atmosphere



IUVS: apoapse data from 35-hour orbit

Mentor: Sonal Jain, LASP, CU

- The ultraviolet airglow emissions emanates from Martian thermosphere
- The major production sources are photon or electron impact on the atmosphere constitutes.
- IUVS takes disk observations of Far ultraviolet emissions from MAVEN apoapsis.
- More than 10 years of data



IUVS periapse limb observation

Job Description

- Going through the nadir disk images and periapse limb data and identify any anomalous features in the dayside thermosphere.
- Working with IUVS limb data to understand the long term trend in the Martian thermosphere
- Analysis and interpretation of scientific results

Laboratory for Atmospheric and Space Physics
University of Colorado **Boulder**

Using Ultraviolet observations to study the Martian upper atmosphere

Requirement

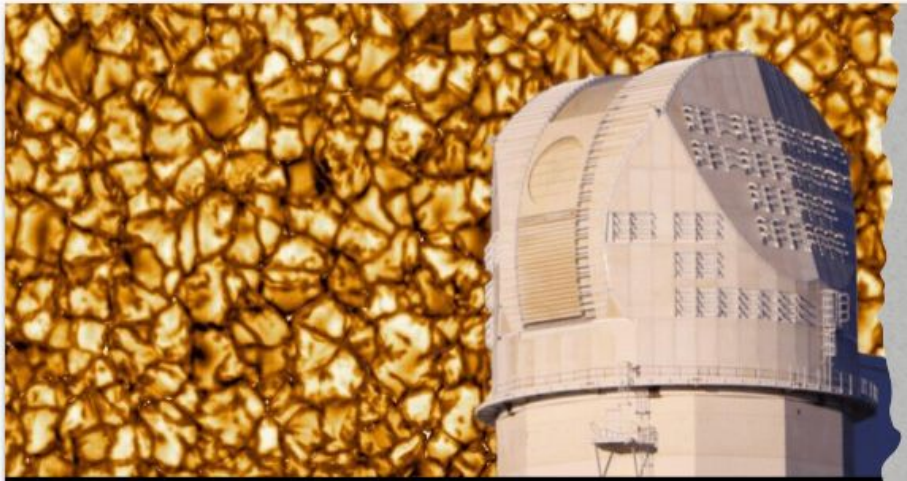
- Must: Python or any other scientific programming language
- Interest in planetary science and data visualization.

Commitment:

  - 10-20 hours/week for one semester (may be extended).
  - Meeting once or twice a week
- Paid position
- May be asked to work on another related projects

Application date: Review of applications will start on 13 Dec, 2024.

Contact: Sonal Jain; Sonal.Jain@lasp.colorado.edu



Understanding the radiative emission of the Sun, from the smallest scales to Sun-as-a-star

- Understand the effects of solar radiation on the Earth atmosphere and climate
- Understand stellar variability
- Exoplanets detectability and habitability

Serena Criscuoli
scriscuo@nso.edu

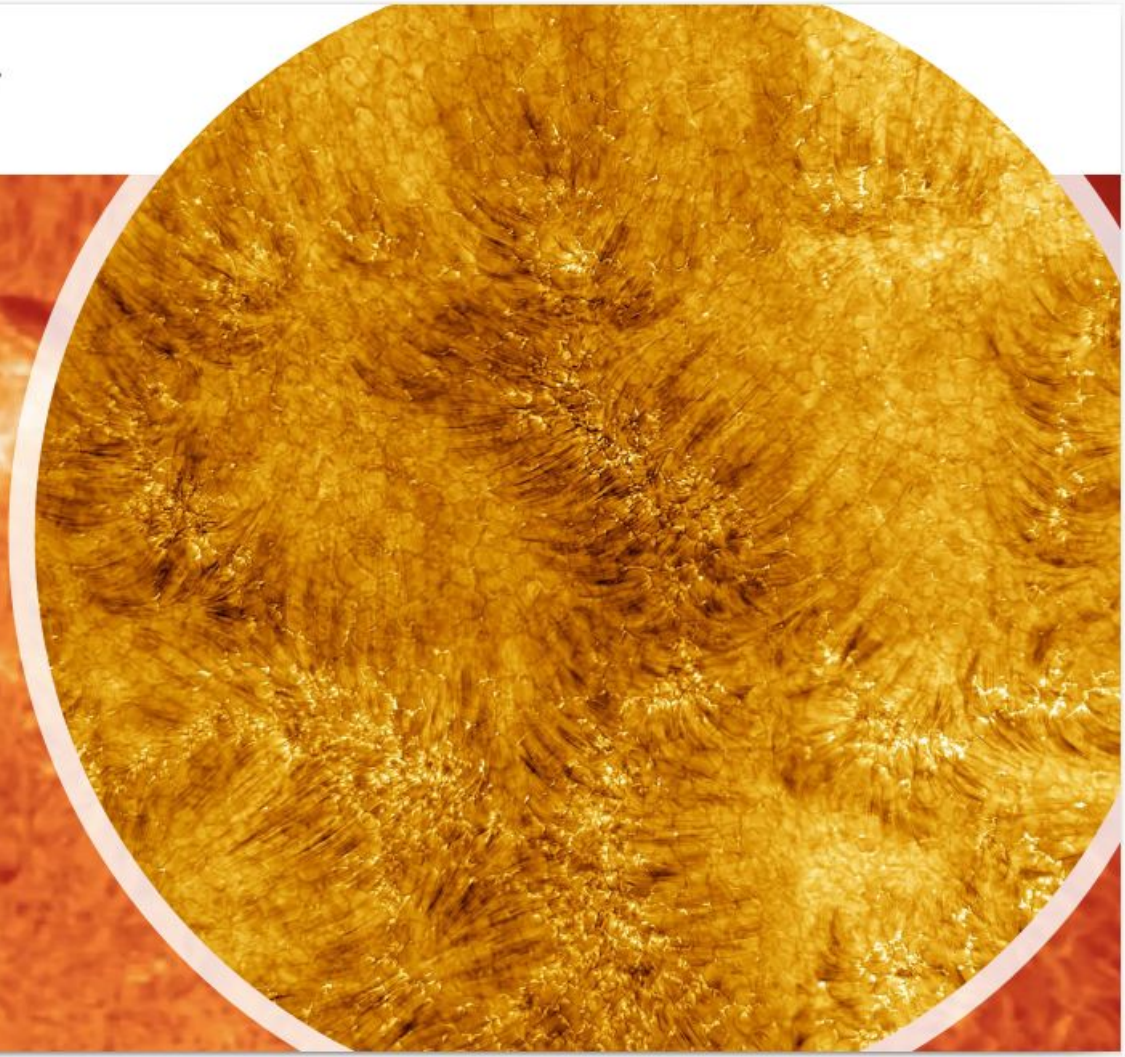
Cluster Analysis of DKIST observations in Balmer lines

In collaboration with Dr. Tom Schad, NSO - Maui

Requirements:
Some Python/IDL experience
Previous experience with ML data analysis tools
Curiosity!

Desired:
Observational Astronomy
Spectroscopy

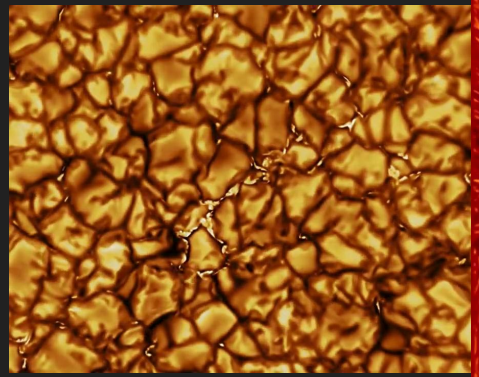
Support to travel to Maui
Application to UROP
10/15 hours per week
Start: ~February
Time frame: 1 semester
Application deadline: December 31st

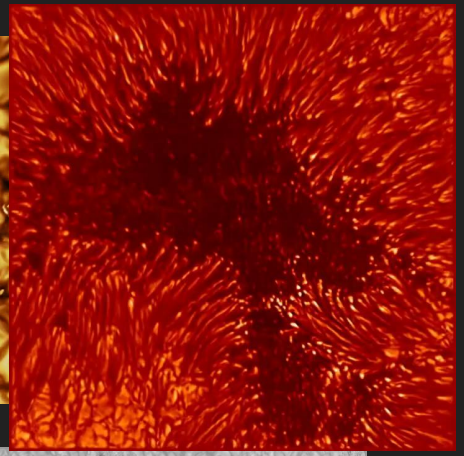


Solar Image Insights - DKIST Imagery Classification

kevin.reardon@colorado.edu

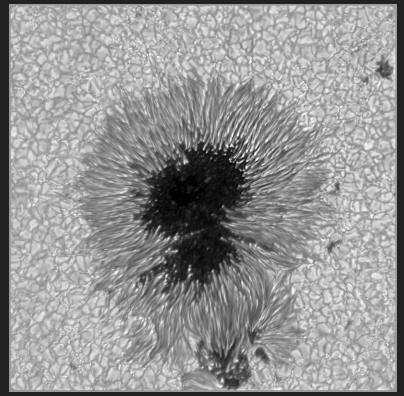
NSO National Solar Observatory

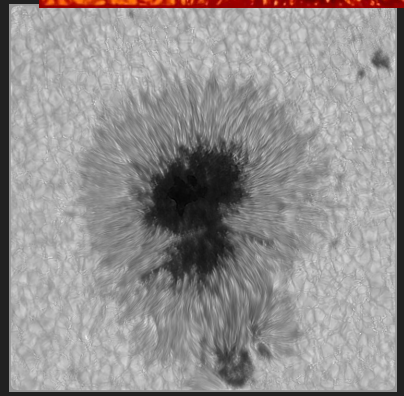




560 available image datasets
170,000 4k x 4k images
5+ TB of processed data

How to evaluate "quality" or "utility"?





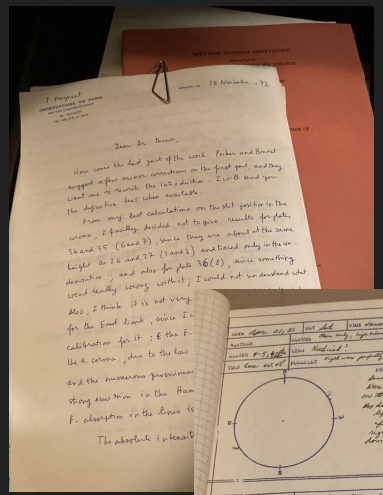
ML/AI?

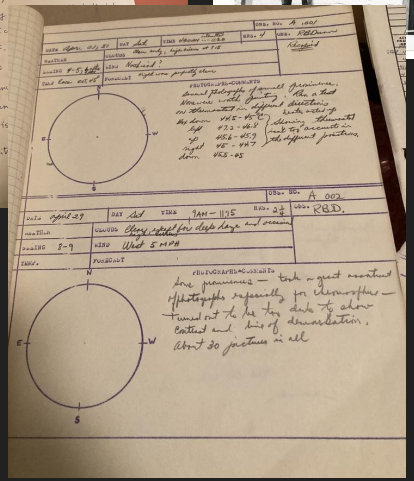
Paid or Independent Study,
UROP Proposal Support

History of Solar Physics in Boulder and Sac Peak

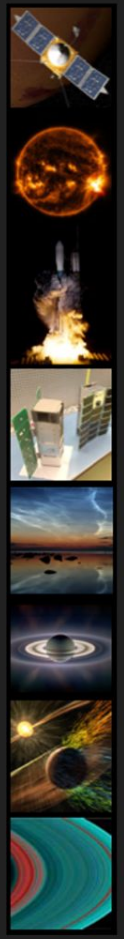
kevin.reardon@colorado.edu

Hanna Rose Shell - NSO Historian and Artist in Residence





- Evaluate and catalog old (1940's-1970's) artifacts and scientific documents from Sacramento Peak Observatory and elsewhere
- Compile information on historical instrumentation
- Contribute to talks and installations



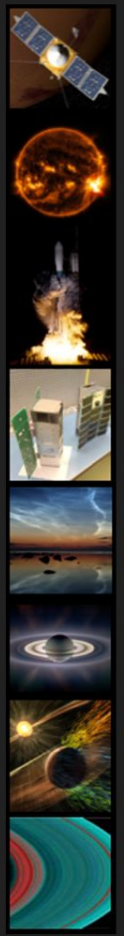
Undergraduate Job Opportunities in Spaceflight Operations

CU's Laboratory for Atmospheric and Space Physics is hiring students for its Space Flight Operations Team. LASP operates multiple NASA missions, several payloads and SmallSats, and new projects that are in development!

Students participate in all phases of a space mission (mission development, integration and test, launch, early orbit, routine operations, anomaly recovery, and end of life).

Job Responsibilities:

- Pre-launch environmental testing
- Real-time spacecraft operations
- Telemetry trending analysis
- Anomaly detection and resolution
- Process automation



Undergraduate Job Opportunities in Spaceflight Operations

Requirements:

- Full-time CU student with 3.0+ cumulative GPA in good academic standing. All majors welcome to apply.
- At least 4 *undergrad* semesters remaining to commit to working at LASP
- Ability to commit to 40 hours per week during the summer *and* 20 hours per week during the school year (this is not a summer internship)
- Willingness to work occasional evenings and weekends
- US Citizen or Permanent Resident required

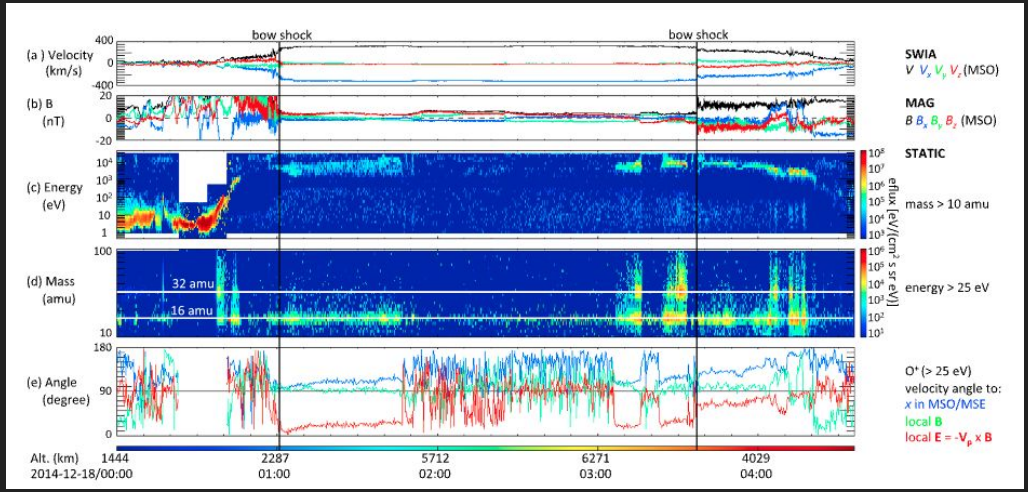
Logistics:

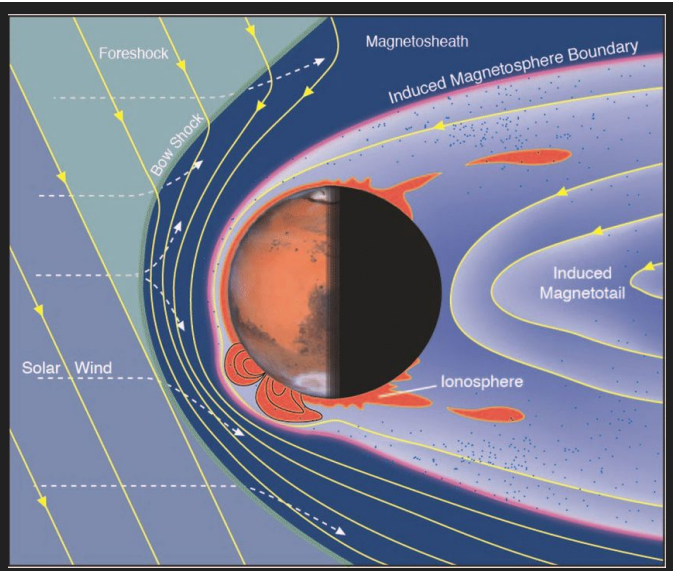
- Paid position
- Successful candidates can continue through grad school if they choose
- Application materials: resume, cover letter, unofficial transcript

Applications will open in January 2025 with info at https://lasp.colorado.edu/careers/

Contact Info:

Adrienne Pickerill, Flight Controller: adrienne.pickerill@lasp.colorado.edu
Robby Mendoza, Student Manager: raymond.mendoza@lasp.colorado.edu





MAVEN Data Analysis

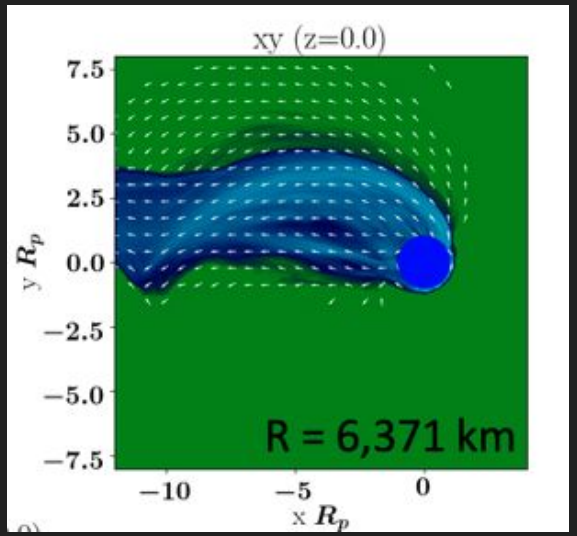
You: No previous research exp. necessary, but preferably comfortable with coding

Us: Brain Research Group at LASP

Task: Analyze magnetic field and charged particle data from Mars (& maybe Venus / Earth)

Topic: Negotiable, but probably related to magnetosphere, atmosphere escape, cool plasma physics, or crustal magnetic fields

Apply: Send CV and 1-2 paragraphs to david.brain@colorado.edu by Jan 10.



Retention of Habitable Atmospheres in Planetary Systems

You: No previous research exp. necessary, but preferably comfortable with coding

Us: Brain Research Group + RHAPS team

Task: Work with computer models (probably) or published results (maybe) or spacecraft data (maybe) or webpage construction (maybe)

Topic: Some aspect of “What kind of planet orbiting what kind of star is able to hold on to its atmosphere?”

Apply: Send CV and 1-2 paragraphs to david.brain@colorado.edu by Jan10.

FISKE
PLANETARIUM
University of Colorado Boulder

Our mission is to create innovative, immersive, and inclusive experiences to engage and inspire communities by connecting science, technology, and the arts.

Fiske Student Employment Opportunities

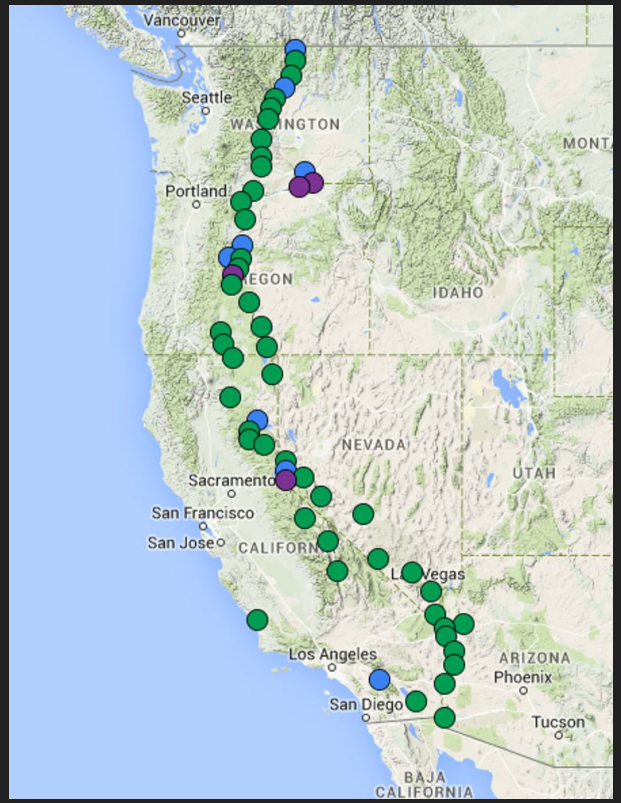
- Paid Student Positions at Fiske
  - Ushering
  - Ticketing
  - Navigating
  - Presenting
  - Producing
- To express interest in hiring opportunities
  - tinyurl.com/JoinFiske
  - Hiring typically in Jan, May, and Sept

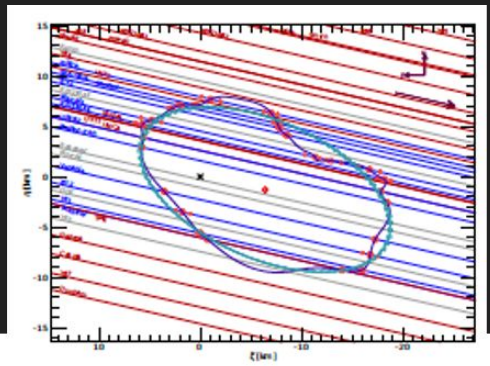
RECON 2.0 -
Research and Education Collaborative Occultation Network

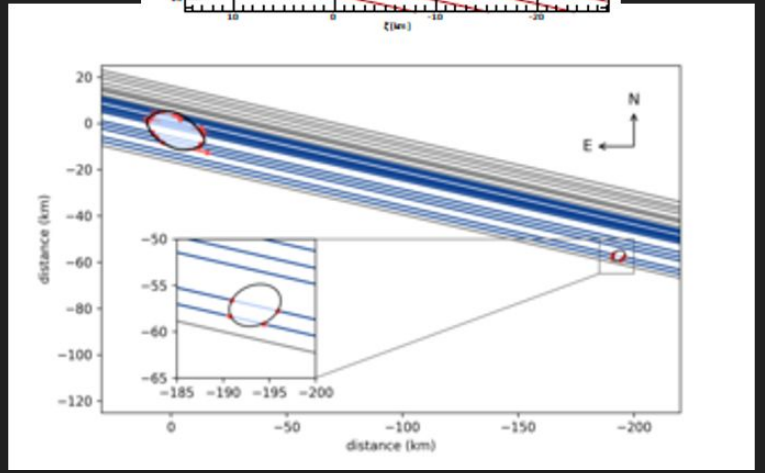
NASA SSO Award:

Solar system origins through Jupiter Trojan shapes

Shape and binarity for 100 Trojans







Click on presenter name to go to their slides
Slides may not appear in the same order as listed here

Speaker/Research Advisor	Organization	Research Topic
Julie Comerford	CASA	Paid internship running nighttime observing at Rocky Mountain National Park
Julie Comerford	CASA	Partners Across the Sky - Research pathway for Native American students
David Malaspina and Ben Short	APS/LASP	Parker Solar Probe Data Analysis
Fran Bagenal	LASP	Studies of interaction of Galilean moons with their space environment
Alexandros Chasapis	LASP	
Xiangning Chu	LASP	Data analysis and machine learning for physical insight: Exploring the near-Earth space environment
Zoltan Sternovsky	LASP	Modeling expansion of dust impact plasma from a surface of a spacecraft to calculate the electric signals from antenna instruments
Shah Bahauddin	LASP	Machine learning / deep learning to convert monochromatic images to spectra between different space-based instruments
Ed Thiemann	LASP	Mars upper atmosphere data analysis using MAVEN data
Sonal Jain	LASP	MAVEN Imaging UltraViolet Spectrograph Team
Kevin Reardon	NSO	Analysis of spectral images of solar photosphere and chromosphere
Serena Criscuoli	NSO	Machine learning techniques applied to DKIST observations in Balmer lines
Adrienne Pickerill	LASP	Student mission controller positions in LASP Mission Operations Center
David Brain	APS/LASP	Magnetospheres and atmospheric escape
John Keller	APS/Fiske	Fiske Employment and RECON Trojan Occultation Opportunities
John Keller	APS/Fiske	Research and Education Collaborative Occultation Network (RECON)

Please take our survey about your experience!! We want to hear from you :)