

NASA's Neurodiversity Network

Creating Inclusive Informal Learning Opportunities Across the Spectrum

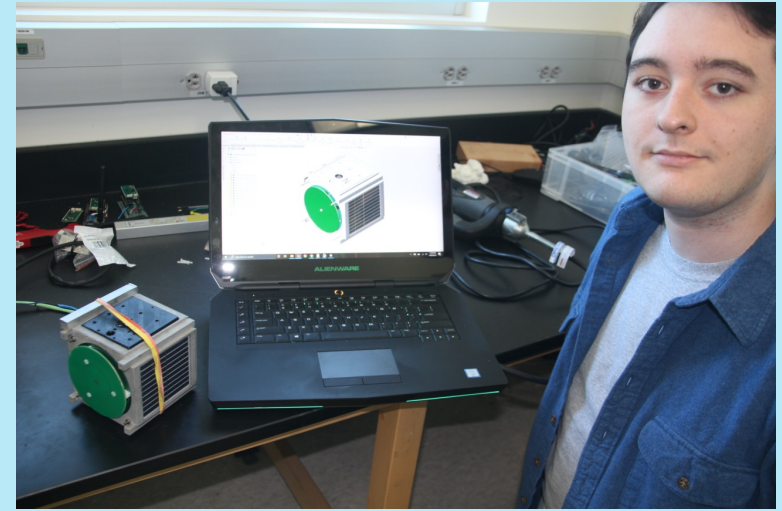
www.n3.sonoma.edu

Prof. Lynn Cominsky
Sonoma State University
and
Dr. Wendy Martin
EDC



Alex's Story

- Alex began volunteering at SSU when he was 18 and enrolled in local community college
 - Remote observing with GORT
 - Rocketry and payloads through Rising Data
 - NASA Community College programs
- Transferred to SSU as physics major
 - SSU's first CalBridge scholar
 - Summer research at UC Berkeley and Penn State
 - EdgeCube CAD and sensor development
- Now in graduate program in Physics and Material Science at UCI
- NSF Graduate Research Fellowship



Alex with CAD model of SSU's EdgeCube satellite

→ *Long term mentoring key to success*

Autism Self-Advocacy Movement

“Nothing for us or about us without us”

- Autistic people should be included in the development of autism supports
- We are co-designing and co-redeveloping existing NASA resources with autistic learners and adults.
- The internship program is also being developed with input from autistic youth and young adults.

Initial resources targeted for co-redevelopment

2021

Photometry activities on AfH were developed as part of NASA's Universe of Learning in an informal learning pathway that starts with image analysis using MicroObservatory



2023

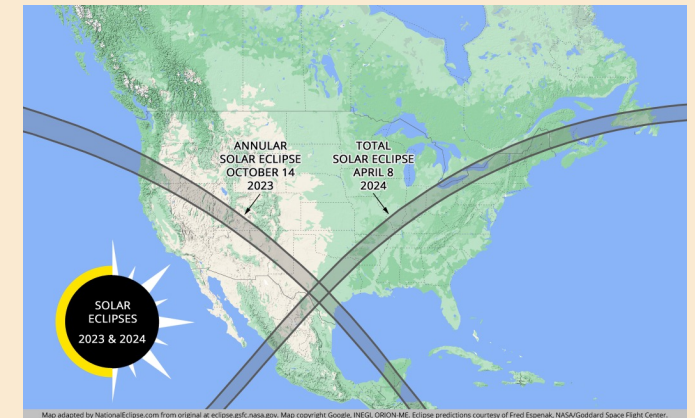
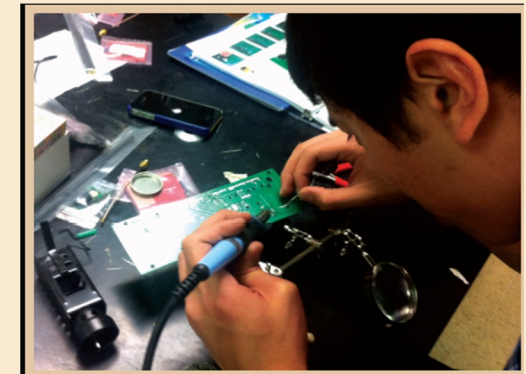
Heliophysics activities that include building a sun spotter and getting ready to observe eclipses in 2023 (annular) and 2024 (total) or partials.

Credit: https://nationaleclipse.com/maps/map_2023_2024.html



2022

Model rocketry and payload development program for URM community college students



Tips for Supporting Autistic Learners

- Provide a visual schedule
- Prime students for what's to come so they understand the context and process for their learning
- Embed interests
- Establish clear expectations
- Provide supportive visuals and/or other reference materials

N3 Internship Programs



Internship Program Details

- Summer interns complete at least 150 hours (one month of full-time work) between June 1 and August 15, 2023. Mentors meet with interns weekly.
- All internships will be completed virtually.
- Interns are paid a \$1,000 stipend and mentors are paid a \$2,000 stipend.
- All interns are paired with a Subject Matter Expert (SME) from NASA's Science Mission Directorate with expertise in at least one of the following areas: Astrobiology, Astrophysics, Earth and Environmental Science, Heliophysics and Planetary science, Space Instrumentation.
- Application for 2023 internships is now available!!
- Application for 2023 mentors is now available!!

n3.sonoma.edu/internships



NASA's Neurodiversity Network Summer Internship

NASA's Neurodiversity Network (N3) is looking for summer interns to work on projects with NASA scientists. The goal of the N3 program is to provide experiences for neurodiverse students, specifically those on the autism spectrum, that will spark their interest in careers in STEM (Science, Technology, Engineering and Mathematics).

160 hours of work between
June 1 to September 1, 2023

Go to our website n3.sonoma.edu/internships
for more information and to submit your application
due by **March 6, 2023 at 11:59 pm PT**

Details:

All interns will be paired with a Subject Matter Expert (SME) from NASA's network. The work schedule will be mutually agreed upon by the intern and the SME.

Internships will be completed remotely during Summer 2023 and N3 interns will receive a \$1,000 stipend upon completion of their internship.

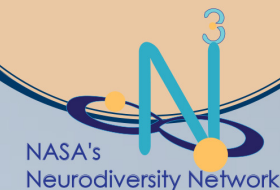
Eligibility:

Students must submit an online application and a teacher recommendation letter for full consideration.

Current high school students 16 years of age or older who identify as autistic and have completed algebra and at least one year of a physical science course are eligible.

Are you an
autistic high schooler
interested in working with
NASA scientists this summer?

*Learn more about our N3
internship program!*





Ways to connect with N3!

- HS students: apply for the N3 internship program! Applications for 2023 will close on 3/6/2023: <http://n3.sonoma.edu/internships>
- Check out Astronomy from Home Discover activities: afh.sonoma.edu
Additional remote astronomy resources are being developed and should be available soon. We will publicize them on our website when they are available.
- Watch our videos: <http://n3.sonoma.edu/media>

Questions?

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SONOMA STATE
UNIVERSITY



Internships

- 2021 intern projects included: 8 in Astronomy, 3 in Space Technology, 2 in Earth Science, 2 in Heliophysics and 1 Theory.
- 2022 Intern projects included: 6 in Astronomy, 2 in Space Technology, 3 in Earth Science, and 4 in Planetary Science
- Astronomy projects often used GORT, SSU's 14-inch NASA-funded robotic telescope but also analyzed data from Fermi and other NASA missions.
- Many interns are python experts and have helped mentors translate code from IDL (for example).

N3 Program Goals, 2021-2026

Providing a pathway to NASA participation and STEM employment for neurodiverse learners, with a focus on those on the autism spectrum.

- Enabling STEM education for a segment of the population that is significantly underserved by co-redeveloping existing NASA resources with autistic learners.
- Improving scientific literacy for this underserved population by providing authentic NASA experiences
- Providing internships, mentored by NASA Subject Matter Experts, to selected neurodiverse learners.