

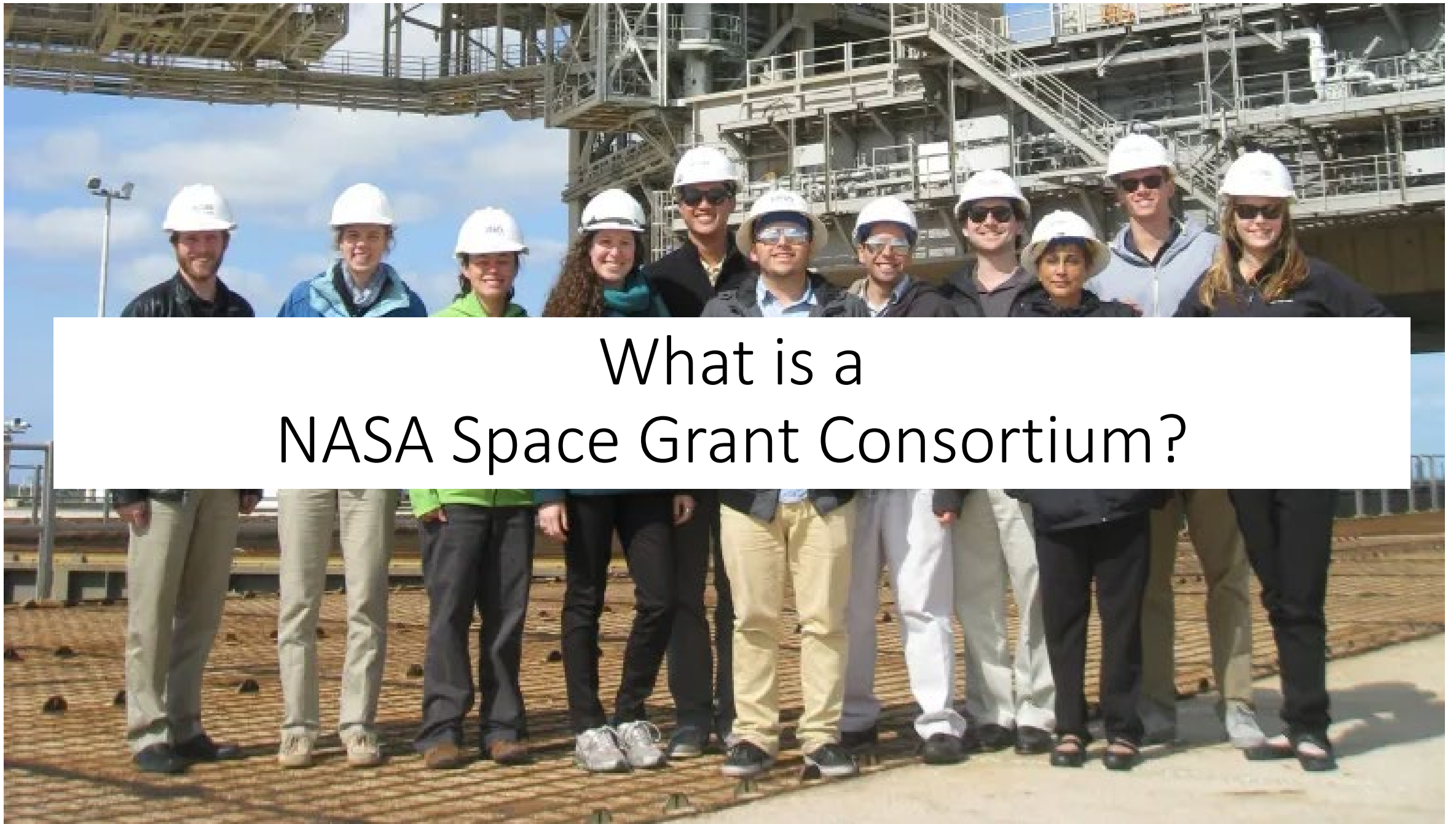
# NASA Space Grant Opportunities for Physics Educators in the Chesapeake Section

Nate Harshman

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Director, NASA DC Space Grant Consortium

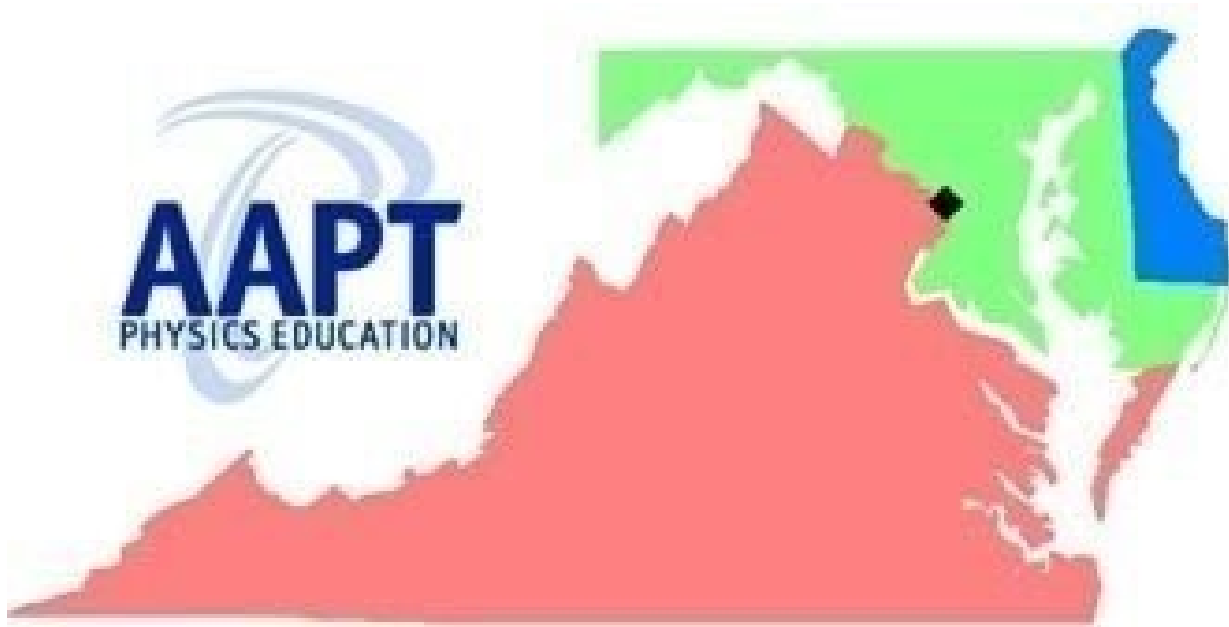
CSAAPT Fall Meeting 2023





What is a  
NASA Space Grant Consortium?

# 52 of them!



Including four in CSAAPT

- DC: American University
- Delaware: University of Delaware
- Maryland: Johns Hopkins
- Virginia: Old Dominion University



## **Project Goal:**

- Contribute to the nation's science enterprise by funding education, research and public engagement projects through a national network of university-based Space Grant consortia.

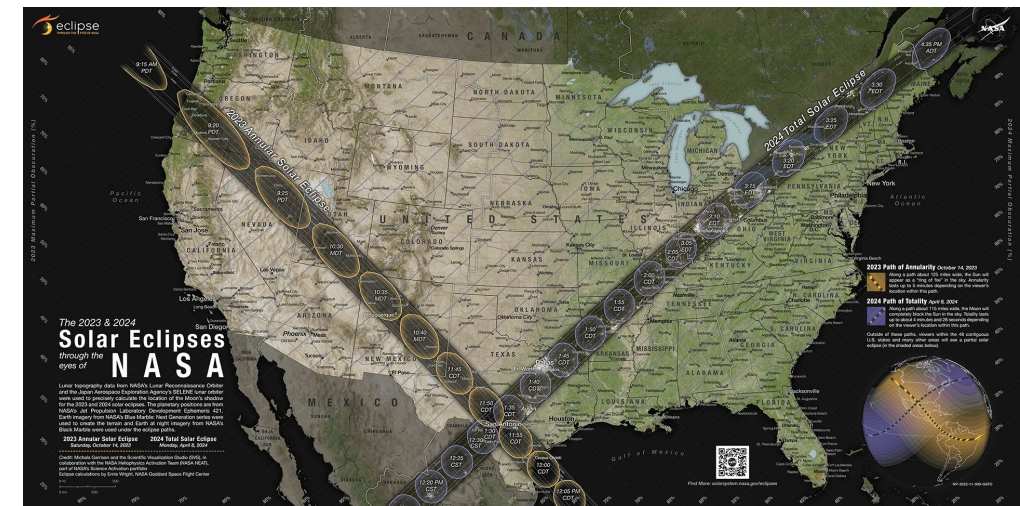
## **Objectives:**

- Establish and maintain a national network of universities.
- Encourage cooperative programs among universities; aerospace industry; and Federal, state and local governments.
- Encourage interdisciplinary education, research and public service programs related to aerospace.
- Recruit and train U.S. citizens, especially women, underrepresented minorities, and persons with disabilities.
- Promote a strong science, mathematics and technology education base from elementary through secondary levels.



# Key events in AY 2023-2024

- National Eclipse Ballooning Project (SMD)
  - Solar Eclipse (annular) Oct 14, 2023
  - Solar Eclipse (total) Apr 8, 2024
- Launches
  - ARMD: Quesst (quiet supersonic plane) in 2024
  - ESDMD: Starliner in 2024
  - SMD: OSIRIS-REx returned; Psyche just launched!



<https://www.nasa.gov/events/>



# Students look out for



- Participate in design challenges
  - SOMD: Artemis student challenges: <https://stem.nasa.gov/artemis/>
- NASA Center Internships
- PATHWAYS NASA Internships



# Summer 2024 DC STEM Teacher Professional Development Workshops

The DCSGC is pleased to offer the following three Summer 2024 PD workshops. Each offer a \$500 participation stipend and 30 Education Units. **All workshops will take place in July 2024, exact dates/times TBA.**

**PD #1.** The Nature of Light: Concepts and Applications.

**PD #2.** Doing Science: Cognitively Demanding Tasks in the NGSS Science Classroom.

**PD#3.** Flight Academy: In-person workshop held in Philadelphia, PA. Fly an airplane (with an FAA certified flight instructor!) and build and launch rockets! Includes hotel and meals.

**Contact:** Eric Day, DCSGC Program Manager at: [EDAY@AMERICAN.EDU](mailto:EDAY@AMERICAN.EDU)  
Scan our QR code for more details.

**Web:** DCSPACEGRANT.ORG



# Data Science Secondary Education Outreach

The DC Space Grant Consortium and the College of Arts and Science at American University sponsor the tuition and technology fees for selected teachers and high school students to take undergraduate and graduate level Data Science courses at American University.



**Our Primary Goal:** To share the potential, benefits, and opportunities of Data Science with underserved and underrepresented populations of the District of Columbia by training DC Public School teachers and students in Data Science.

34

Since Spring 2021, 34 teachers and 7 high school students have taken Data Science courses, including the 4 teachers and 3 high school students currently in the program.

7

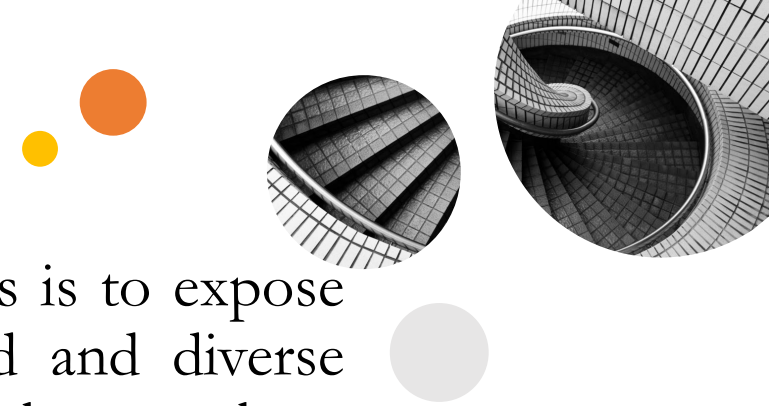


# Learning Objectives

Our goal in offering Data Science courses to teachers and students is to expose students to Data Science and create a pipeline of highly skilled and diverse teachers who are trained to incorporate Data Science into their lesson plans. Prior training in computer programming is beneficial, but not a requirement.

Topics covered in the courses include:

- *Fundamentals of Data Science*
- *Reproducible research using R*
- *Using R as a powerful calculator*
- *Importing data from external sources*
- *Performing analyses including hypothesis testing and regression*
- *Writing basic R programs using control and data structures*
- *Installing and using packages for specific applications*
- *Using graphical tools to visualize and understand data*



# Spring 2024 Data Science Enrollment

**K -12 teachers (DC schools only):** If you or your students are interested in taking Data Science courses sponsored by the NASA DC Space Grant Consortium in the Spring, please contact Chelsey Brown or scan the QR code below to apply.

**The Spring 2024 application deadline is December 1<sup>st</sup>.**

**Chelsey L. Brown**

[CLBrown@American.edu](mailto:CLBrown@American.edu)

Office: (202) 885 - 2325

STEM Grants and Partnerships Coordinator

Department of Physics: NASA DC Space  
Grant Consortium, Center for Data Science

American University

For more information and to apply,  
please scan this QR code





# DCSGC Contacts

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