

Welcome!

-2022-

**North Dakota Space Grant Consortium
Student Symposium & Affiliates Meeting**

April 8th & 9th, 2022
Online & Robin Hall, UND Campus



NDSGC Team



Caitlin Milera
P.I. & Director



Marissa Saad
Deputy Director



Tori McIntosh
Coordinator

Introductions

- Co-Hosts:
 - STEM Ambassadors: in person, then online
- In Person Attendees:
 - Right side of the room and moving to the left
- Online Attendees:
 - Tori will call out your name

Please tell us your name and the affiliate institution you represent!



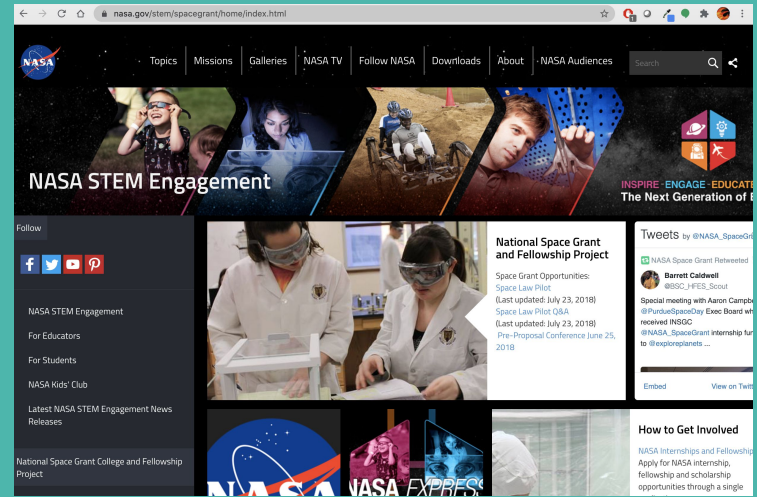
Before we get to the highlights....

What is Space Grant?

- National Space Grant College and Fellowship Project, established in 1989
- Network of colleges and universities
- Work to expand opportunities for individuals to understand and participate in NASA projects

Website:

<https://tinyurl.com/NASASpaceGrant>



Partner

What is the purpose of Space Grant?

Five Focus Areas

- 1.) NASA Internships, Fellowships, and Scholarships
- 2.) Higher Education
- 3.) Research Infrastructure
- 4.) Pre-college
- 5.) Informal Education

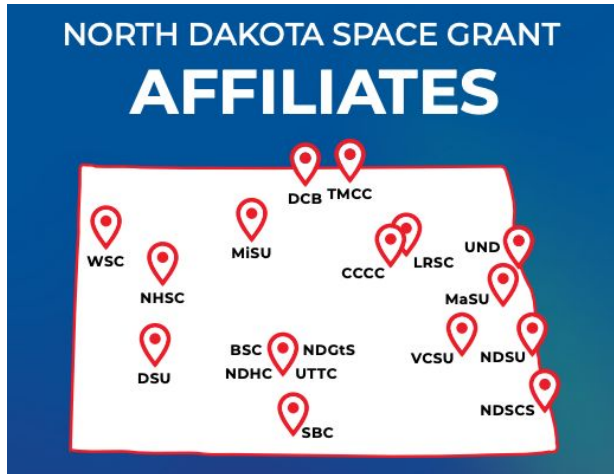
NASA Space Grant Mission Statement:

The NASA Space Grant College and Fellowship Program is a national network that promotes science, technology, engineering and mathematics (STEM) education through cooperative and multidisciplinary programs while recruiting and training the workforce.



Where is Space Grant?

- All 50 states, including DC and Puerto Rico
- In North Dakota: **Across the state!**
 - 18 Affiliates
 - Space Grant office is at UND



North Dakota NASA Space Grant Mission Statement:

The NDSGC fulfills the Space Grant mission by involving ND students, faculty, and K-12 teachers and students in multi-institutional, collaborative, NASA-relevant research and education projects, while also educating the ND citizenry about NASA, its purpose, and its missions.





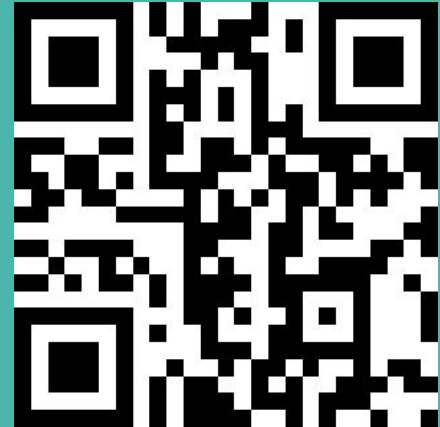
CANKDESKA CIKANA
COMMUNITY COLLEGE
Spirit Lake Dakota Nation



How does Space Grant Communicate?

- Email
 - Friday Roundups
 - Will come from core team
- Coffee Chats
- Informational Webinars
- Submittable
- Docusign

Join our electronic mailing list:
<https://tinyurl.com/NDSGCemail>



NDSGC Highlights

<https://tinyurl.com/2022Infographic>

9 Student Fellowships



Male



Non-Binary



Female

3

Educator
Mini-Grants

3

Student Research
Mini-Grants

3

Affiliate
Mini-Grants

112 Scholarships across 17 schools



Female Scholars: 59



Male Scholars: 51



Underrepresented Minority Scholars: 30

13 STEM Ambassadors from 3 Affiliate Institutions



Educator Professional
Development

11 Student Competition Teams

National & Regional Award Winners

NDSU's Pathbuilder X-hab Team

UND's Student Launch Rocketry Team

Hatton-Northwood's FIRST Robotics Team

4

Summer Faculty Fellowships



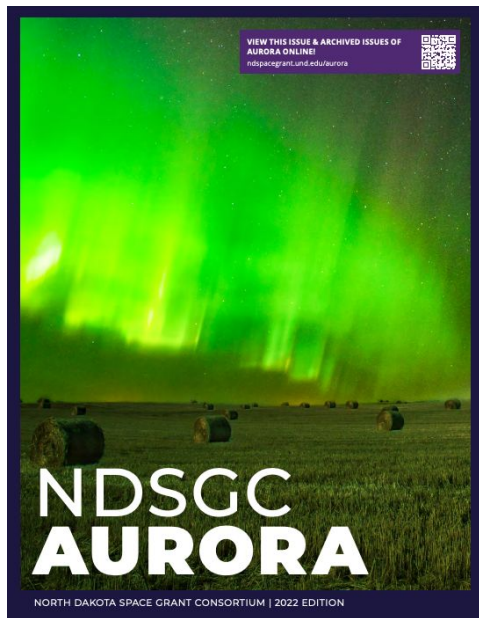
NASA Internships: 10



KSC HQ HQ GSFC Ames GSFC LaRC GSFC LaRC



NDSGC Highlights



<https://tinyurl.com/NDAurora>



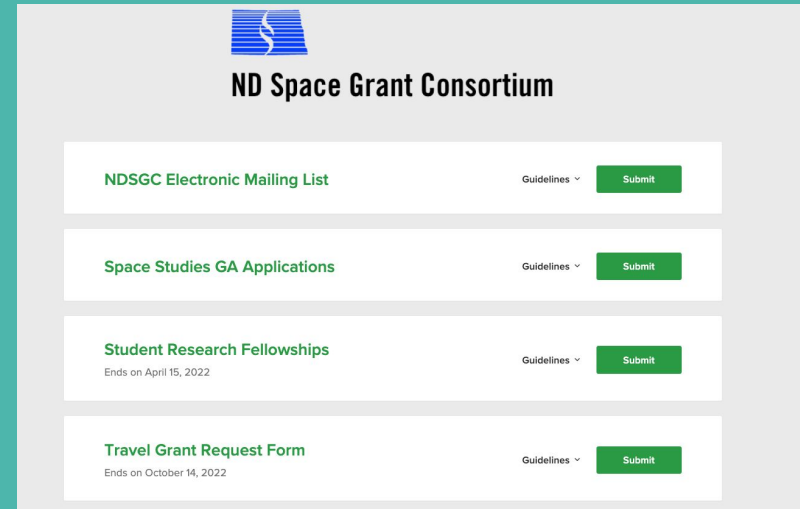
NDSGC Opportunities

- Summer: **April 15th**
- Fall: **August 15th**
- Spring: **December 1st**
- Summer Internship: **February 1st**
- Scholarship Funding: **February 15th**
- Competition Team Funding: **November 15th**

- **Bridge Fellowship Program:** 1st of each month
- **Internal Deadline for Summer NASA Internships:** February 1st
- **NDVS/SB Scholarship:** February 15th
- **NDSU Lillian Goettler Scholarship:** February 15th
- **UND Pearl I. Young Scholarship:** February 15th
- **STEM Ambassador Program:** April 15th
- **Summer Student Research Fellowships:** April 15th
- **Summer Faculty Fellowships:** April 15th
- **Summer Affiliate Mini-Grants:** April 15th
- **Summer Educator Mini-Grants:** April 15th
- **Summer College Student Research Mini-Grants:** April 15th
- **Fall Student Research Fellowships:** August 15th
- **Fall Affiliate Mini-Grants:** August 15th
- **Fall Educator Mini-Grants:** August 15th
- **Fall College Student Research Mini-Grants:** August 15th
- **Student Competition Team Applications:** November 15th
- **Spring Affiliate Mini-Grants:** December 1st
- **Spring Educator Mini-Grants:** December 1st
- **Spring Student Research Fellowships:** December 1st
- **Spring College Student Research Mini-Grants:** December 1st

How do you apply for NDSGC funding?

1. Investigate NDSGC website for funding opportunities: ndspacegrant.und.edu
2. Read through available guidance forms and site details
3. Click on the “Apply” button and read through the Submittable application
4. Contact the NDSGC team with any questions
5. Apply and submit application via Submittable



What happens when you are awarded?

- You will be sent an award letter via Submittable
- You will be asked to respond with an acceptance message
- You will be asked to complete an award set up form (or further award and communication details will be provided)



Award Expectations

1. Students will not earn class credit or receive other payments (from a different employer) for the same work they have proposed to the ND Space Grant Consortium.
2. Students will uphold and maintain integrity and professionalism while representing ND Space Grant.
3. Students who complete any NDSGC research, travel, or work will be invited to present their experiences at the annual statewide Affiliates Meeting.
4. Students must acknowledge the NDSGC support in all publications, posters, presentations, etc.
5. As defined by NASA, all ND intern, fellow, and some STEM Ambassador work (depending on hours worked) is considered a significant engagement and students must provide NASA with demographic data at the end of their award period (i.e. NASA will email you periodically, asking you about your career).
6. Students will be featured in the NDSGC's annual newsletter, called the Aurora.
7. Students will provide information on the Mid-Semester Check-in, Final Report, and any other emails prompting for status updates. **Students who fail to complete these forms will not be eligible for future NDSGC funding.**

Event Logistics

Agenda:

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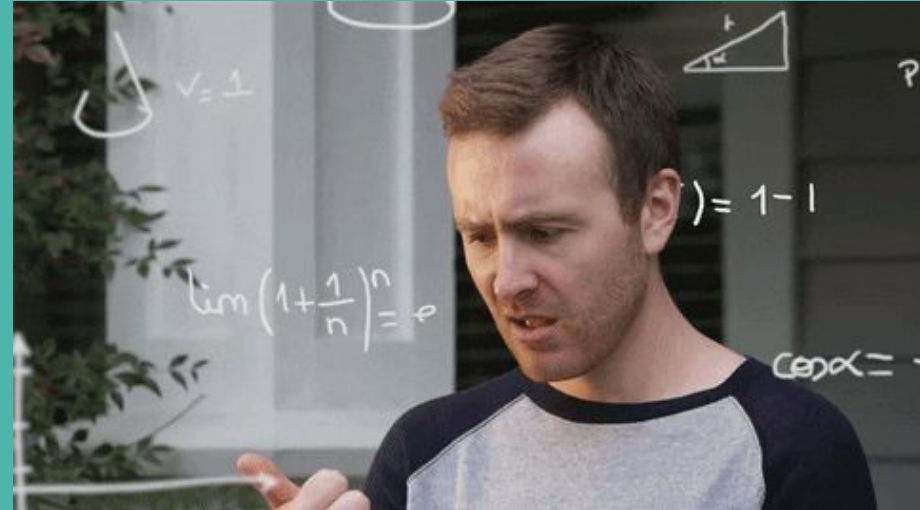
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MURAL



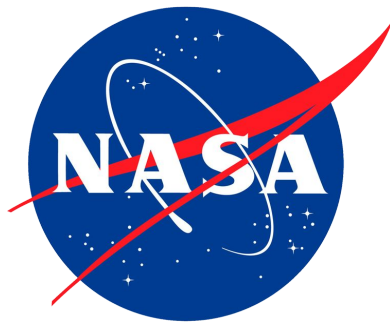
Door Prizes!

Let's see what we have!

Prizes

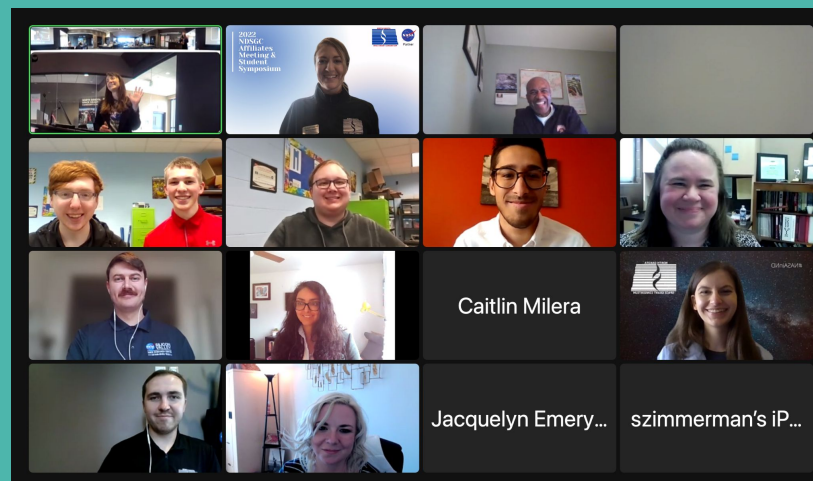
Wheel





Future Space Grant Goals and Collaborations

tinyurl.com/NDSGC-4-8-22



Future Items



National Eclipse Ballooning Project

We're doing it again!

55 teams in 2017

90+ teams in 2023-2024



National Eclipse Ballooning Project

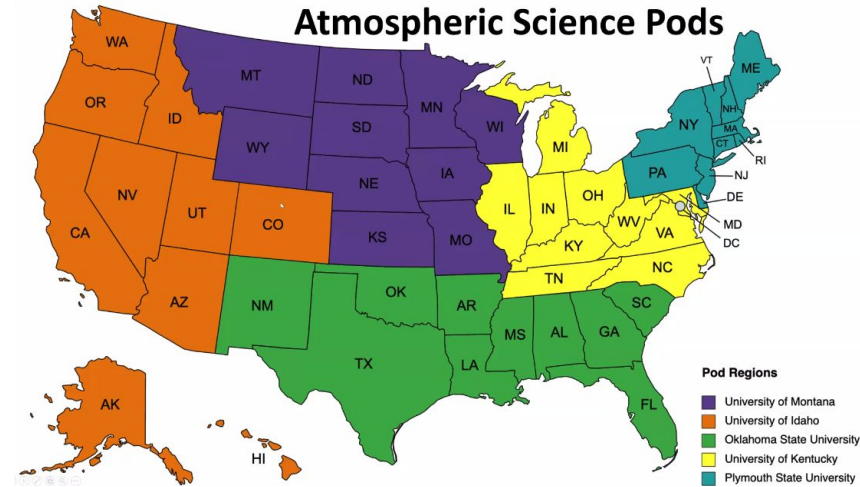
- August 21, 2017
- October 14, 2023*
- April 8, 2024

*annular



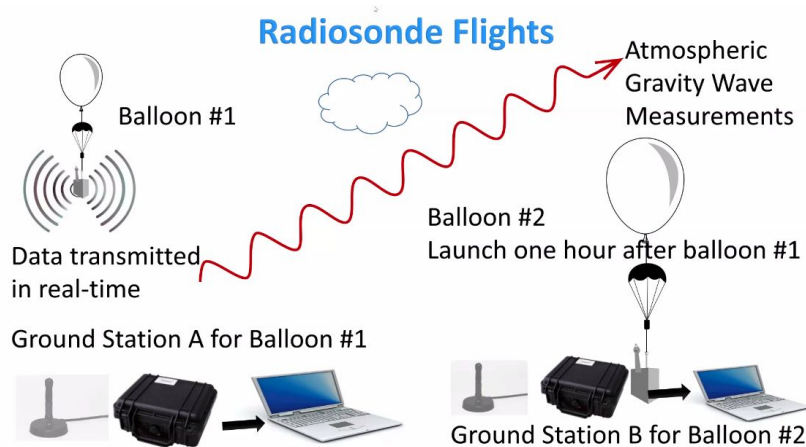
National Eclipse Ballooning Project

- ND will form a statewide ballooning team
- Two tracks: Engineering and *Atmospheric Science*
- Funding and Support
 - \$6.5 Million from Science Mission Directorate
 - Led by the Montana Space Grant Consortium
 - Each consortium funding their own efforts
- Strong DEIA push this time
 - (fewer sole research institutions, more early career faculty mentors, MSIs, and 2-year school involvement)
- We're hoping to fund affiliate team mentors who will work with us



National Eclipse Ballooning Project

Radiosonde Launches - once every hour



Atmospheric Science
Basic meteorology
Skew-t plots and temperature lapse rate
Meteorological sensors
Measurement uncertainty and quality control
Geophysical fluid dynamics in the atmosphere
Atmospheric gravity waves
Weather research and forecast model (WRF)
Satellite observations
Review previous eclipse observations and field campaigns
Radiosonde standard operating procedures and techniques
Structuring of teams for a successful project
Engineering
Basic ballooning – lift, launch, retrieval, payload stringing
Balloon path prediction and balloon tracking
FAA requirements, cut down system, power supply use
Fundamental electronics, programming, and mechanics
Single board computers, attached sensors, and data loggers
Understanding and analyzing recorded data
GPS and camera systems
Radio and antennas on the payloads and ground station
Internet requirements for streaming data and balloon tracking
Contingency planning
Structuring of teams for a successful project

National Eclipse Ballooning Project

Timeline:

Fall 2022: Recruitment! Team proposals due; Teams selected

Spring 2023: Students start participating

Summer 2023: In-person student launches; Regional meetings

Fall 2023: October 14th launch!

Spring 2024: April 8th launch!

2024-2025: data analysis, conferences, publishing, etc.

Total solar eclipses over North America in the 21st century



National Eclipse Ballooning Project

We would like to know if anyone is interested in participating!

Let us know with this survey:

<https://tinyurl.com/NDSGC-eclipse-interest>



IDEAS - Educator Professional Development

<http://blogs.und.edu/jdosas/2022/02/ideas-pd-workshop/>

What: In-service teacher workshop to improve inclusive eclipse pedagogy

Where: Grand Forks, ND! The nation is invited to join!

Who: South Carolina, North Carolina, ND Space Grants; Johns Hopkins, NASA Ames and Langley

Audience: 30 pre- or in-service educators. 10 seats are reserved for ND. Educators from rural or Tribal communities are encouraged to apply.

Applications: June 15, 2022 deadline



Bridge Program



- Thank you to Shaun Prince at Lake Region State College, we had our first Bridge Fellow through this newly revised program
 - 3rd student in the program, they transferred from LRSC to UND
- [UND Article #1](#) and [UND Article #2](#)
- This student worked on an interdisciplinary project, linking kinesiology with human factors in space

SciGirls in Space!

What: “SciGirls in Space!” Space Camp

Who: 5th, 6th, 7th, and 8th grade girls or underrepresented genders interested in Science, Technology, Engineering, and Mathematics (STEM).

Where: University of North Dakota campus,
School of Aerospace | Grand Forks, ND

Session dates: June 21, 22, 23, and 24, 2022

Time: 9:00 am – 12:00 pm



Human Spaceflight Lab explorations, engineering design missions, female role model interviews and networking, and more!

Educator Opportunities

We'd love to visit
your class!

-Methods

-Eng. Design
activities

-teambuilding
skills



April 15th Deadlines

1. Student Research Fellowships
2. Student Fellowship Bridge
3. STEM Ambassador Program
4. Student Mini-Grants
5. Affiliate Mini-Grants
6. Educator Mini-Grants
7. Summer Faculty Fellowships

All programs use *Submittable's* application service (same platform as your registration... you're all set to apply now!)

Affiliate Synergistic and Collaborative Engagements across ND (ASCEND)

- Up to two awards of up to \$15,000
- CfP: Summer 2022
- ASCEND is designed to promote, develop, and expand NASA research and projects within North Dakota. These grants, which may be research- or teaching-based, will be defined by the goals found within NASA's Mission Directorates (MDs) and the NDSGC's proposal.
- Eligibility: Any staff or faculty member at an [NDSGC Affiliate Institution](#) who is a US citizen and conducting STEM or STEM Education that is relevant to NASA is eligible. Affiliate PIs must be from a non-research NDSGC affiliate institution. Affiliate Co-PIs can be from UND, NDSU, or any NDSGC affiliate institution.

Coffee Chats

- Informal conversations to network and share opportunities and resources from NDSGC and from affiliate representatives
- Open to all affiliate representatives, funded students/staff/faculty, and prospective awardees
- 30-min. meeting at Noon on first Monday of each month
- Open to other days/times



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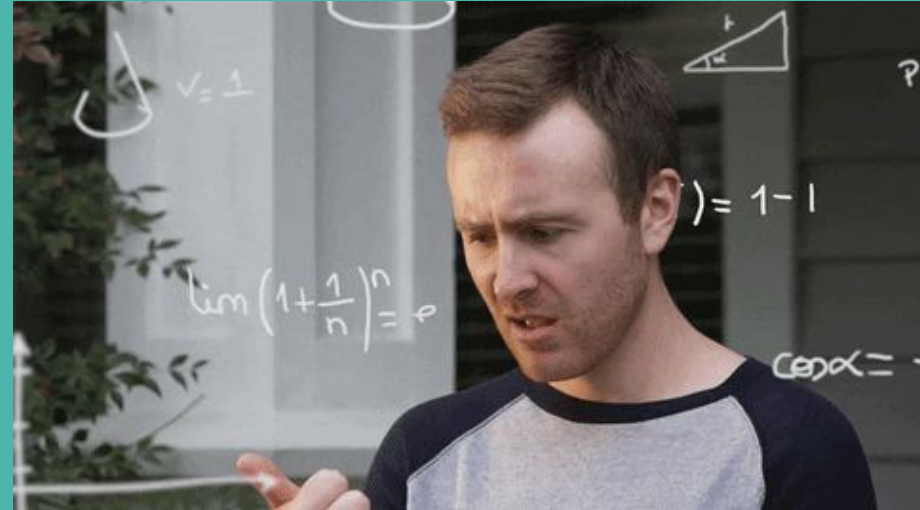
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MURAL



On Break!

**Next presentation at
10:55 am central!**

Door Prizes!

Let's see what we have!

Prizes

Wheel



Break

Next presentation at 2:20 pm central!

Check out our meeting
photos:



<https://tinyurl.com/NDSGC-4-8-22>

How did today go?

<https://tinyurl.com/AffiliatesMeetingNDSGC>

Open your **camera app** and point it here. A banner will pop up on your phone with the link!

No need to download anything

Completely anonymous



Thank you!

Student Symposium & Affiliates Meeting

Where shall we go next year?



Michaela's online Escape Room



Can you escape astronaut training
