

North Dakota Space Grant 13th Annual Affiliates Meeting

April 13-14, 2018



Host: Dr. Bora Suzen
North Dakota State University
Fargo, ND

Jim Casler
Director

Caitlin Nolby
Deputy Director

Marissa Saad
Coordinator

Agenda – Friday, April 13, 2018

- ▶ 1:15 pm Highlights of the Past Year
- ▶ 1:30 pm Student Presentations
- ▶ 2:30 pm *Break*
- ▶ 2:45 pm Student Presentations
- ▶ 4:00 pm Flipped Session
- ▶ 4:30 pm Adjourn!
- ▶ 6:00 pm *No-Host Dinner, Porter Creek*

Agenda – Saturday, April 14, 2018

- ▶ 8:15 am Breakfast
- ▶ 8:45 am Citizen Science Activity
- ▶ 9:15 am Group Picture
- ▶ 9:25 am Student Presentations
- ▶ 10:10 am Break
- ▶ 10:25 am Student Presentations
- ▶ 11:40 am Business Meeting and Lunch
- ▶ 12:30 pm NDSU Tour (*Optional*)



Purpose of Space Grant

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.

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.

Five Focus Areas:

- ▶ NASA Internships, Fellowships, and Scholarships
- ▶ Higher Education
- ▶ Research Infrastructure
- ▶ Pre-college
- ▶ Informal Education





BISMARCK
STATE COLLEGE



CANKDESKA CIKANA
COMMUNITY COLLEGE

Spirit Lake Dakota Nation



DAKOTA COLLEGE
AT BOTTINEAU



DICKINSON
STATE UNIVERSITY



HIDATSA
SAHNISH
NUETA
Established 1973
New Town, North Dakota
COLLEGE



Gateway
to
Science



Lake Region
State College



Mayville
State
University



Minot State
UNIVERSITY



THE SCIENCE OF SUCCESS.

North Dakota State College of Science



North Dakota State University



COLLEGE



COMMUNITY COLLEGE



Technical College



UNIVERSITY OF
NORTH DAKOTA



VALLEY CITY
STATE UNIVERSITY



WILLISTON
STATE COLLEGE



STATE
HISTORICAL
SOCIETY
OF NORTH DAKOTA



What have our students been up to?

FY17 Report Highlights

FY17 Report Highlights



▶ 108 NIFS

- ▶ 56% female
- ▶ 30% underrepresented minorities

▶ Scholarships

- ▶ 87 scholarships awarded
- ▶ 55% female, 34% underrepresented minorities
- ▶ 4 American Indian Scholarships
- ▶ 1 Pearl I. Young Scholarships (UND)

FY17 Report Highlights – NASA Internships



Ashley Peterson (NDSU)
Goddard SFC

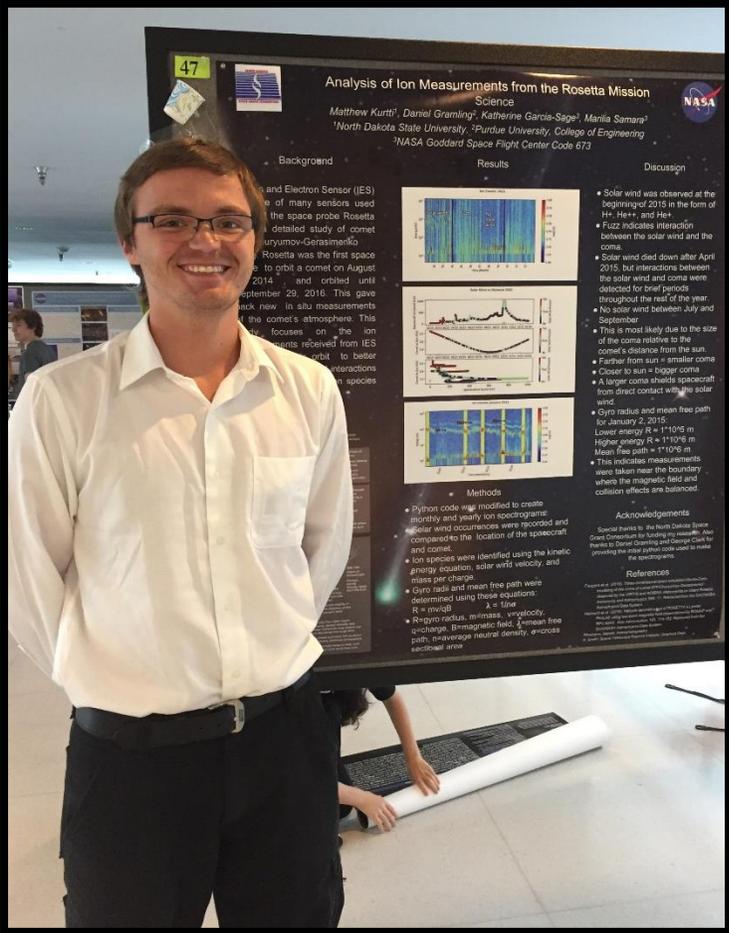


Brad Hoffmann (NDSU)
Goddard SFC



Colton Mosser (NDSU)
Marshall SFC

FY17 Report Highlights – NASA Internships



Matthew Kurtti (BSC, NDSU)
Goddard SFC



Skye Leake (UND)
Marshall SFC



Taren Wang (UND)
Marshall SFC

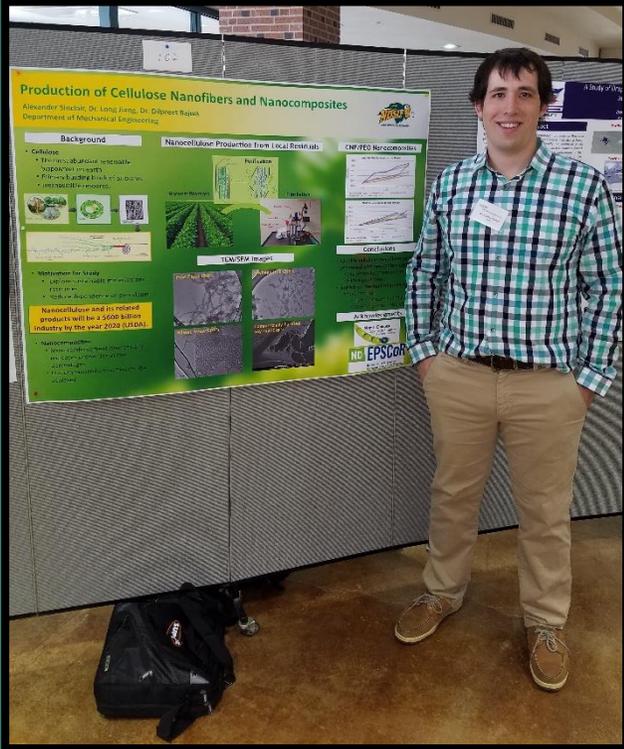
FY17 Report Highlights – Fellowships



Haylee Archer (UND)
Physics



Gabriel Ferragut (NDSU)
Physics



Alexander Sinclair (NDSU)
Mech. Engineering



Suzanne Voce (UND)
Mathematics

FY17 Report Highlights – Fellowships

14



Sophie Orr (UND)
Space Studies
(fall & summer)



Alan Perrault (NDSU)
Mech. Engineering



Elijah Matthews (UND)
Physics



Denise Buckner (UND)
Space Studies

FY17 Report Highlights – Fellowships

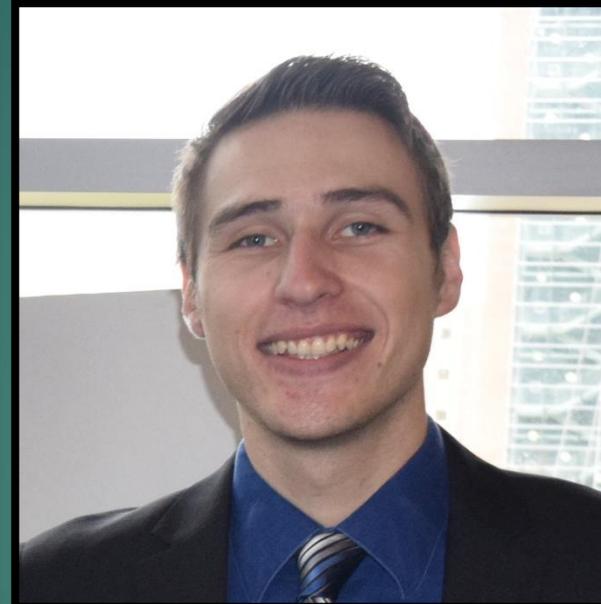
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Lance Wilson (UND)
Atmospheric Sci



Sean Mahoney (NDSU)
Health, Nutrition, Exercise Sci



Brad Hoffman (NDSU)
Mech. Engineering



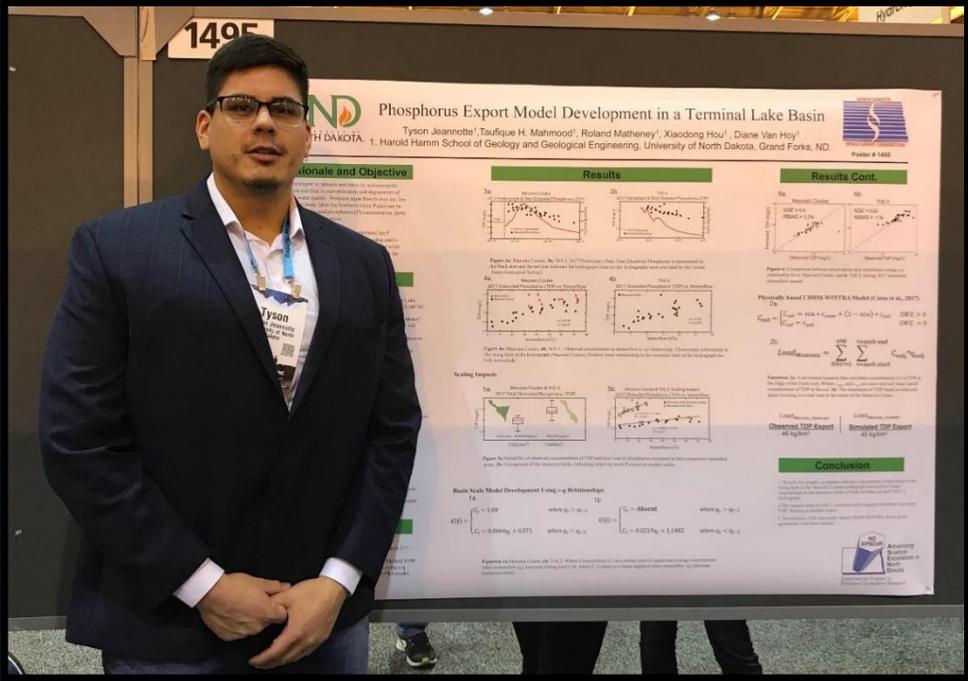
Drew Ross (UND)
Electrical Engineering

FY17 Report Highlights – Fellowships



Taylor Hewson
Bridge Fellowship
Summer 2017

FY17 Report Highlights –Travel Grants



Tyson Jeannotte (UND)
American Geophysical
Union Meeting



Denise Buckner (UND)
Academic High
Altitude Conference



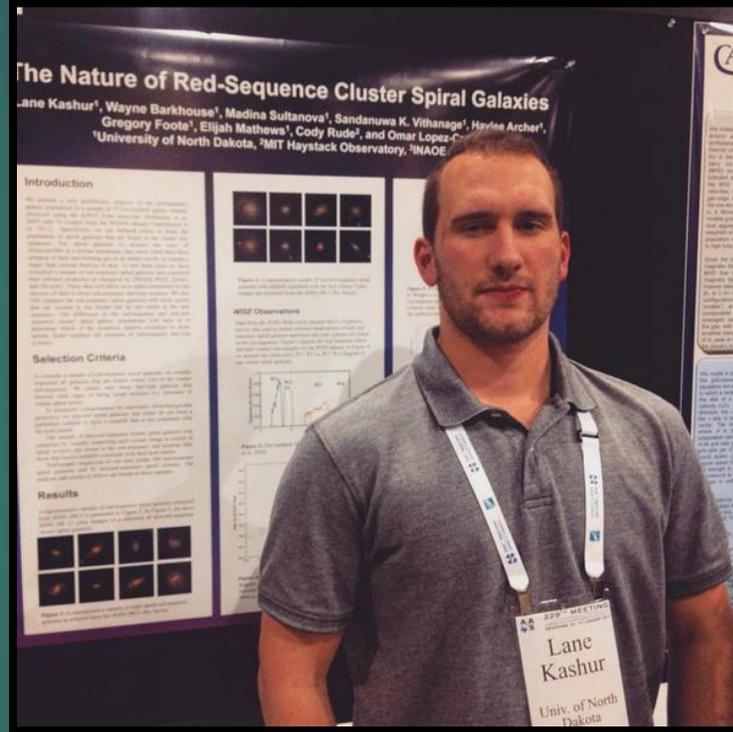
Peter Henson (UND)
Academic High
Altitude Conference

FY17 Report Highlights –Travel Grants

6



Gregory Foote (UND)
Kitt Peak National
Observatory



Lane Kashur (UND)
American Astronomical
Society Meeting



Haylee Archer (UND)
Kitt Peak National
Observatory

FY17 Report Highlights – Pre-College



West Fargo



Northwood/Hatton



Cando



FY17 Report Highlights – Pre-College Near-Space Balloon Competition



Garrison, Tower City,
Grand Forks, West Fargo,
Wahpeton, **Kindred**

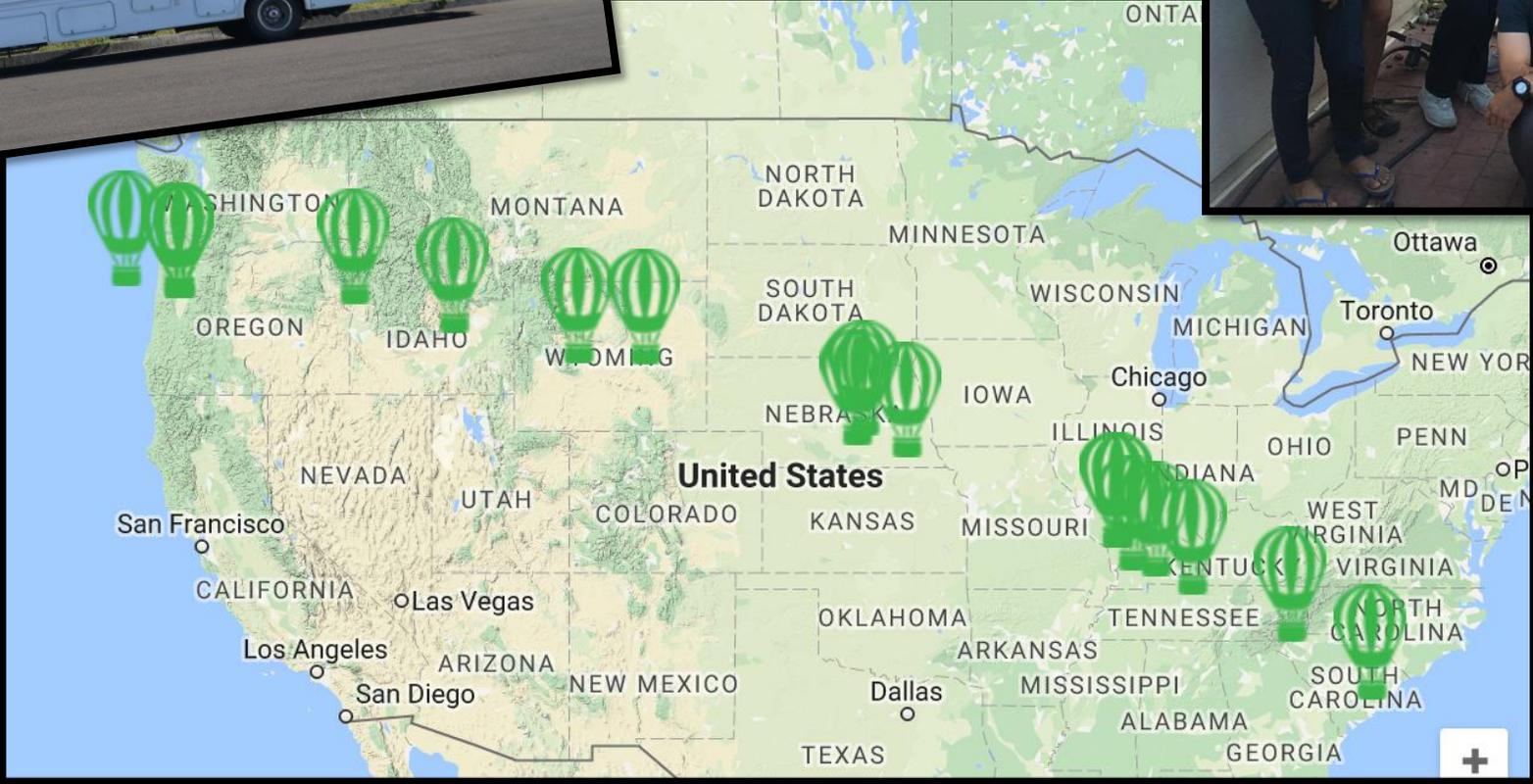
80,266 feet

FY17 NDVS/SB

ND Vision Services/School for the Blind



FY17 Eclipse Ballooning Project



FY17 Report Highlights

Career Fairs

- ▶ University of North Dakota
- ▶ American Indian Higher Education Conference (Bismarck – March 2018)
- ▶ Past Visits:
 - ▶ Williston State College
 - ▶ North Dakota State College of Science
 - ▶ New Town, ND – MHA Nations United College Fair

Does your institution have a scheduled involvement or career fair?



FY17 College NASA-Team Highlights



UND Formula SAE



NDSU Rover Challenge



UND Student Launch



UND Robotics Mining



NDSU Robotics Mining



NDSU AIAA

FY17 STEM Outreach Highlights

STEM Ambassadors



Matthew Kurtti
(NDSU)

Shae Skager
(UND)



Emma Twedt
(NDSU)



Jacob Leier
(Mayville)



Levi Lemer
(Mayville)



Connie Nelson
(Mayville; *Bottineau region*)

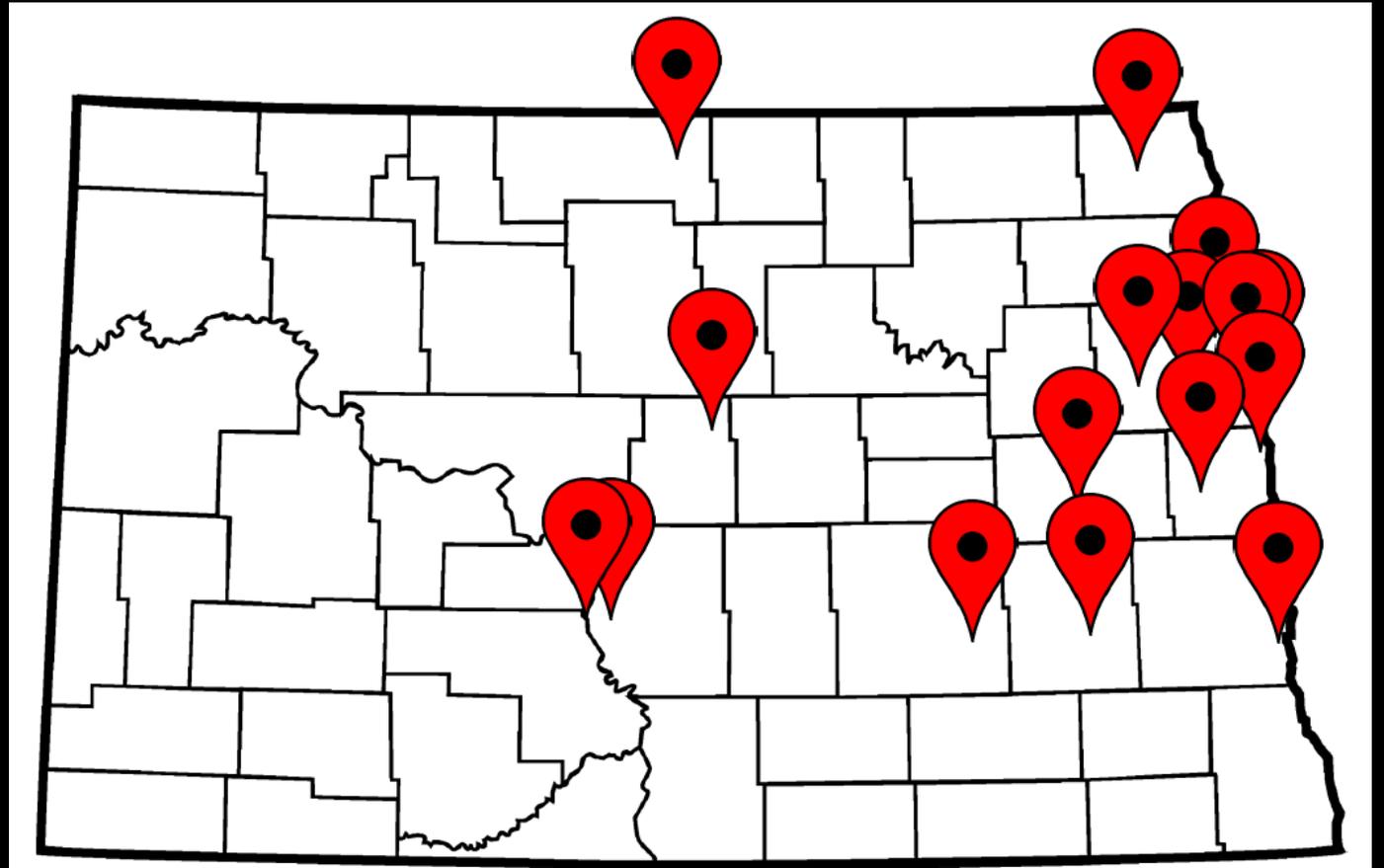
FY17 STEM Outreach Highlights

Training Workshop



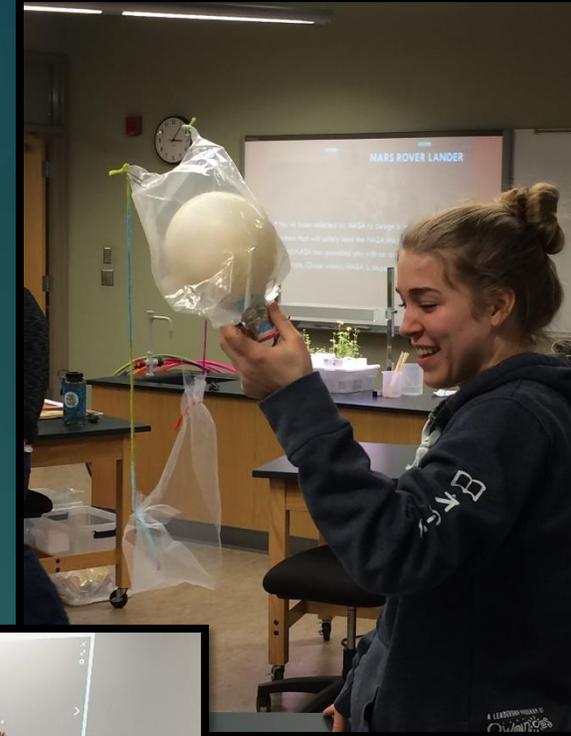
FY17 Report Highlights

2,258 people reached with Informal Education (Outreach)



FY17 Pre- and In- Service Education Highlights

- UND, with DCB'S Angie Bartholomay
 - 90 In-Service Teachers
- Minot, VCSU, and UND
 - 150 Pre-Service Teachers



FY17 Report Highlights

4 faculty reached



Nathan Hopkins
(DSU)



Angie Bartholomay
(DCB)



Craig Whippo
(DSU)



Larry Brooks
(DCB)

National Space Grant Meeting Grand Forks!



Other Programming

Faculty

- Summer Faculty Fellowships
- Research Focus Area Projects
- Meetings and other administrative expenses

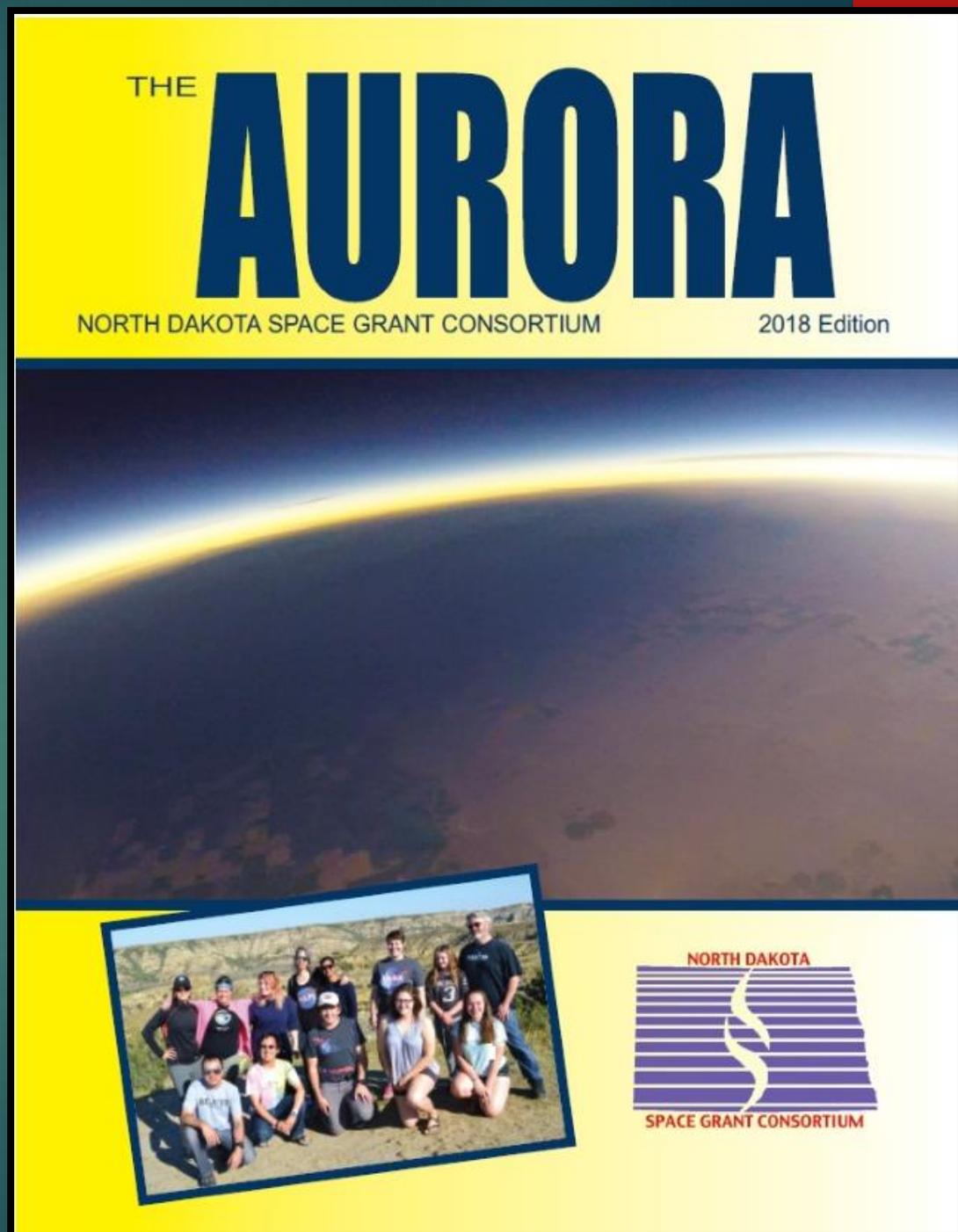
College-level Activities

- ▶ GRAs and Tuition Waivers
- ▶ Human Spaceflight Laboratory (rover, suits, habitat)



The New Aurora is out!

New look on website



Presentations

Interactive Flipped Session

BRAINSTORMING FOR THE NEXT PROPOSAL



What's going to happen?

- ▶ Think about the next proposal – what would you like to see modified?
- ▶ Everyone will find a group (students separate from staff & faculty)
- ▶ 5 minutes intro
- ▶ 15 minutes brainstorming
- ▶ 15 minutes sharing
- ▶ Listen for the bell!









Reimbursement Assistance

Reimbursement for Space Grant Affiliates Meeting

April 2018

In order to expedite your reimbursement, please provide the following information.

Name: _____

Email: _____



I am a: (check a box)

NDUS employee at (include work address) _____

Student at _____ K-12 Educator at _____

Other: _____

REIMBURSEMENT 411

MILEAGE: Note: NDSGC caps mileage reimbursement at \$250/trip.



Vehicle Driven: Personal State Fleet N/A - Passenger

Because we need to print a Google map to document your mileage reimbursement, if there was more than one way to Fargo, which route did you take? _____

RECEIPTS



Meals: not required for meals, unless claiming reimbursement for paying for another's meal(s).

Include list of name(s) with each meal receipt if you paid for someone else's meal(s).

Meal receipts must be original itemized slip, not a credit card receipt.



Lodging: Must be an itemized bill and show that it had been paid.

On the attached form, complete these boxes at the top:

- Name
- Last 4 of Social Security Number
- Permanent Home Address
- Date of Departure & Time of Departure
- Date of Return & Time of Return (an estimate based on the drive to Fargo)

Finally! Sign and date in the signature box at the bottom!





See you at Porter Creek!

6:00 PM



Good Morning!

Saturday, April 14, 2018

The logo for Citizen Science Day features a stylized orange molecular structure at the top, consisting of three circles connected by lines. Below this, the word "CITIZEN" is written in large, bold, dark blue capital letters. Underneath "CITIZEN", the word "SCIENCE" is written in large, bold, light blue capital letters. At the bottom right, the word "DAY" is written in large, bold, orange capital letters, preceded by a horizontal orange line.

CITIZEN
SCIENCE
DAY

April 14, 2018

#CitSciDay

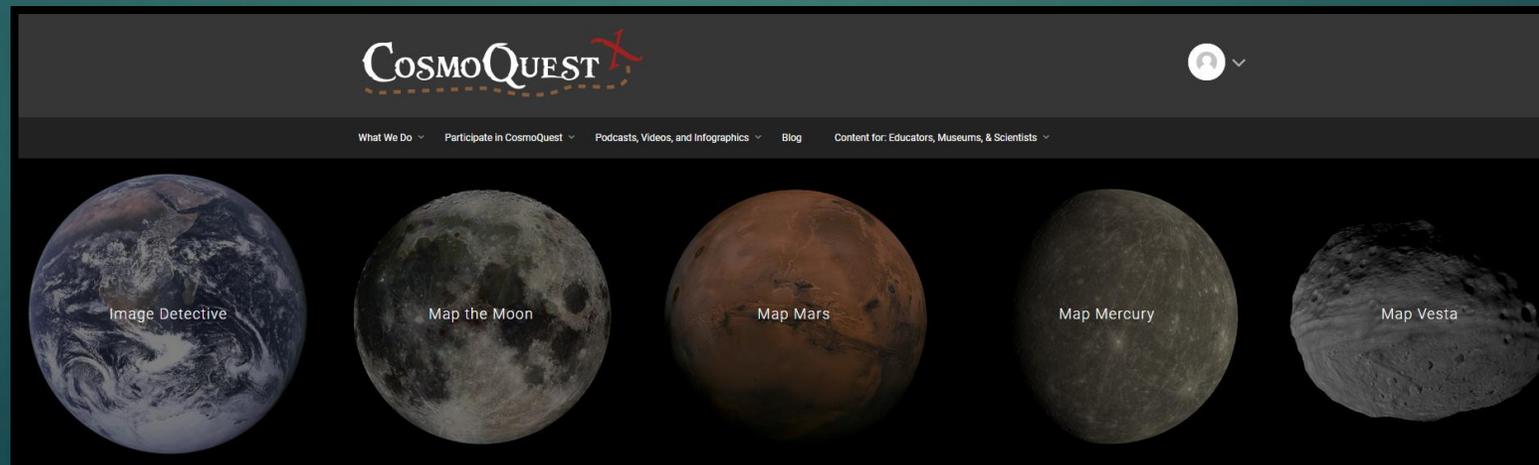
#CitSciDay2018

National Citizen Science Day

#CitSciDay
#CitSciDay2018

You may be familiar with some of these:

- ▶ Cornell Lab of Ornithology
 - ▶ eBird (app for world's largest biodiversity project)
 - ▶ Great Backyard Bird Count (migrations)
 - ▶ Christmas Day Bird count (real-time snapshot)
 - ▶ Hummingbirds at Home (Audubon)
- ▶ Cooperative Observer Program (since 1890!)
- ▶ [CosmoQuest](#) (mapping solar system objects)
- ▶ Logbook Transcription Project (transcribe Smithsonian's work from women computers/astronomers!)
- ▶ GLOBE (since 2016)





THE GLOBE PROGRAM

Globe.gov

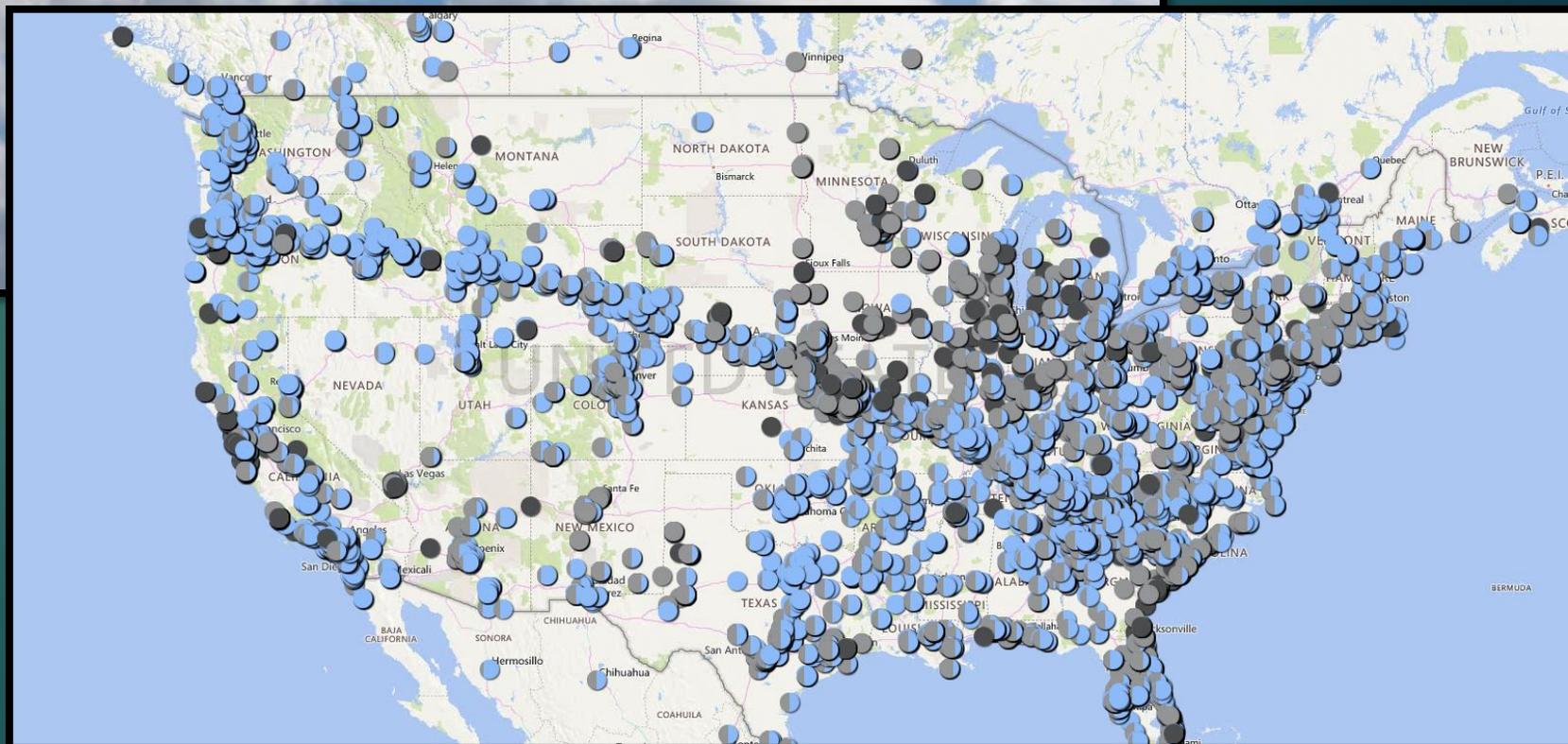
- ▶ NASA's Earth Science Division
- ▶ Supported by:
 - ▶ NSF
 - ▶ NOAA
 - ▶ Department of State
- ▶ 119 countries
- ▶ Tens of thousands trained teachers
- ▶ 150 million measurements
- ▶ K-12 curriculum integration
 - ▶ Cloud Data or Mosquito Habitat Mapping!
- ▶ Space Grant – K-12 Ballooning!

“The GLOBE Program is an international science and education program that provides students and the public worldwide with the opportunity to participate in data collection and the scientific process, and contribute meaningfully to our understanding of the Earth system and global environment.”

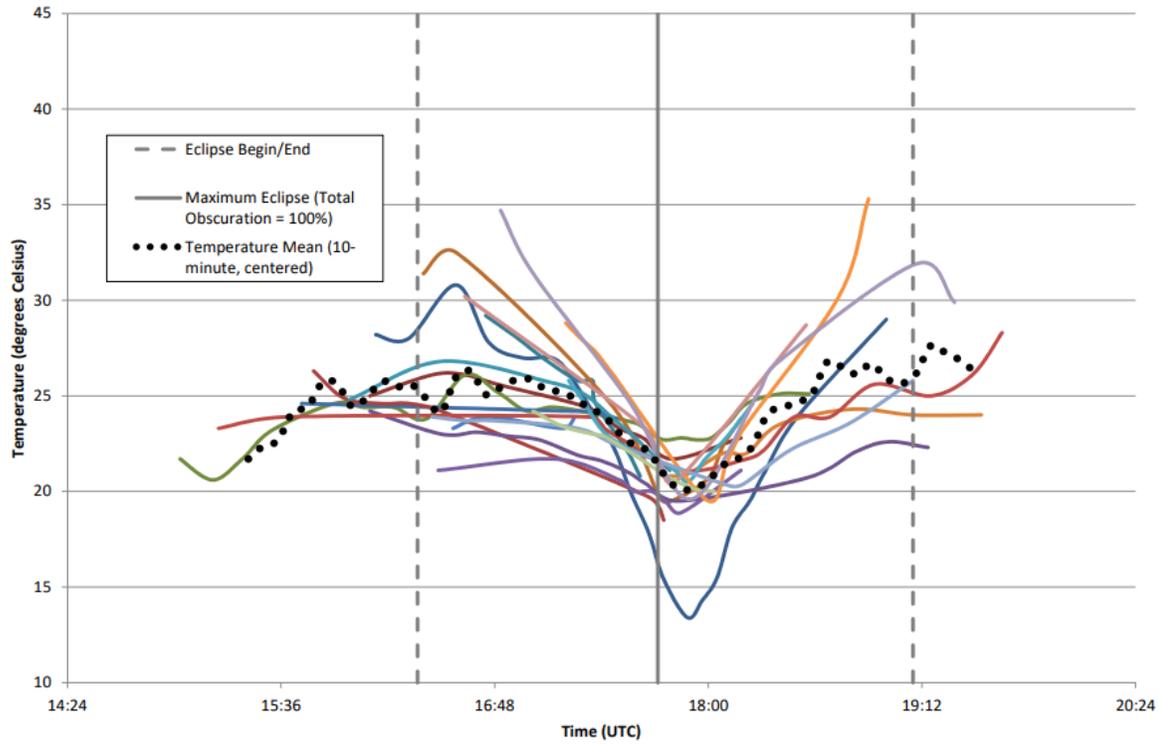
– NASA GLOBE Observer FB page

NASA GLOBE Clouds: Spring Cloud Observations Data Challenge

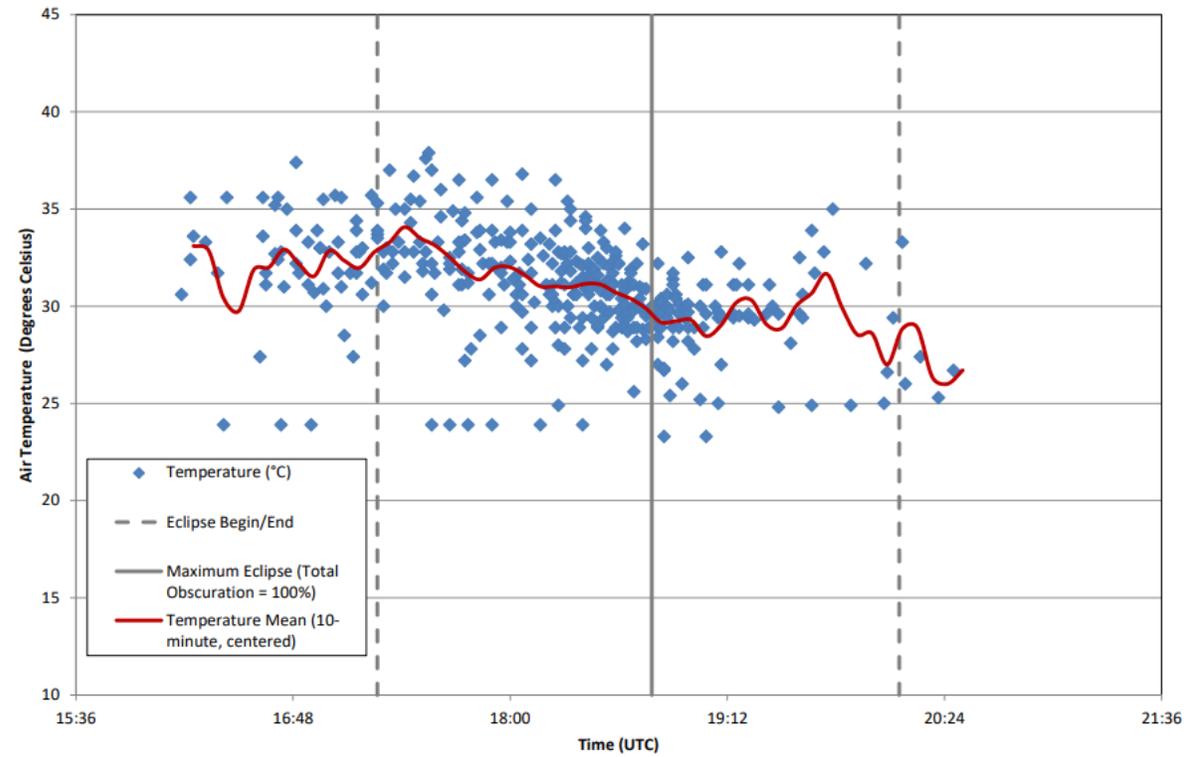
Head in the clouds? From 15 March - 15 April, enter your data using the GLOBE Observer app to win a video shout out from a NASA scientist.

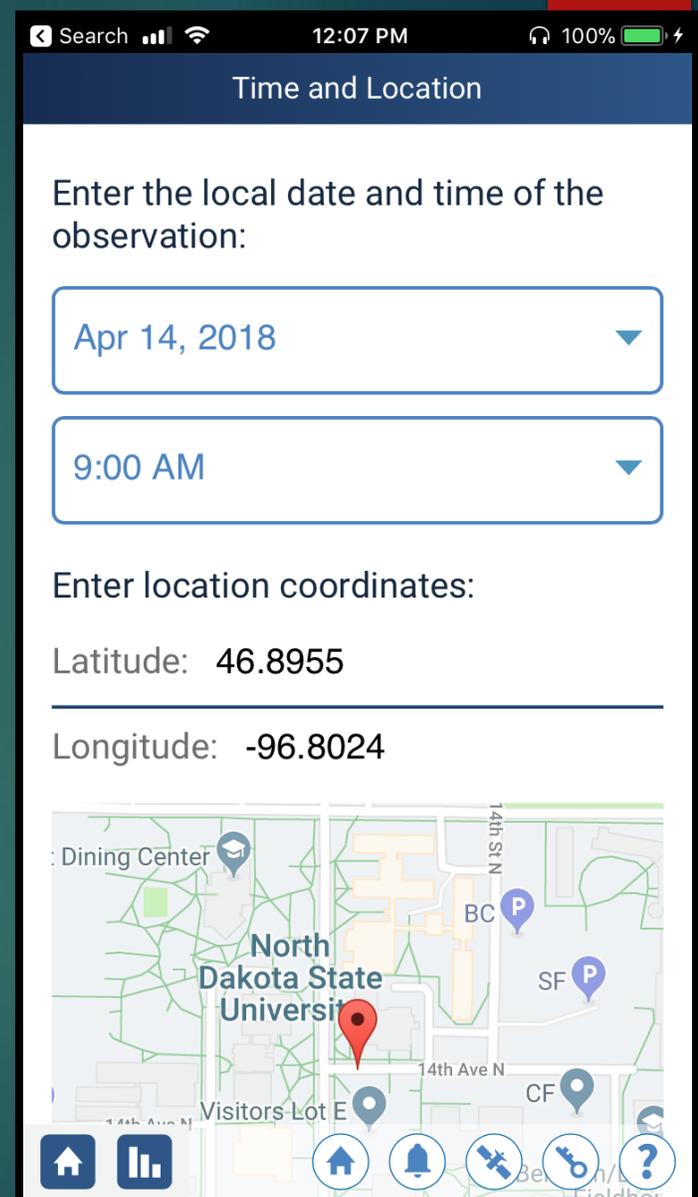
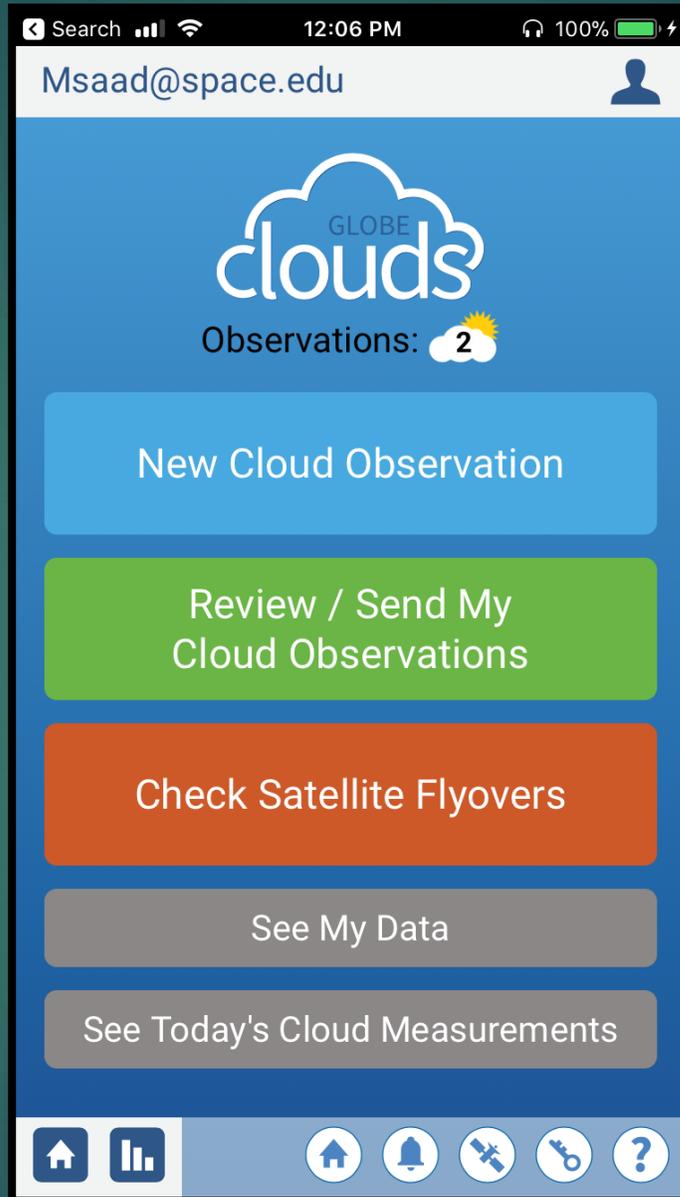
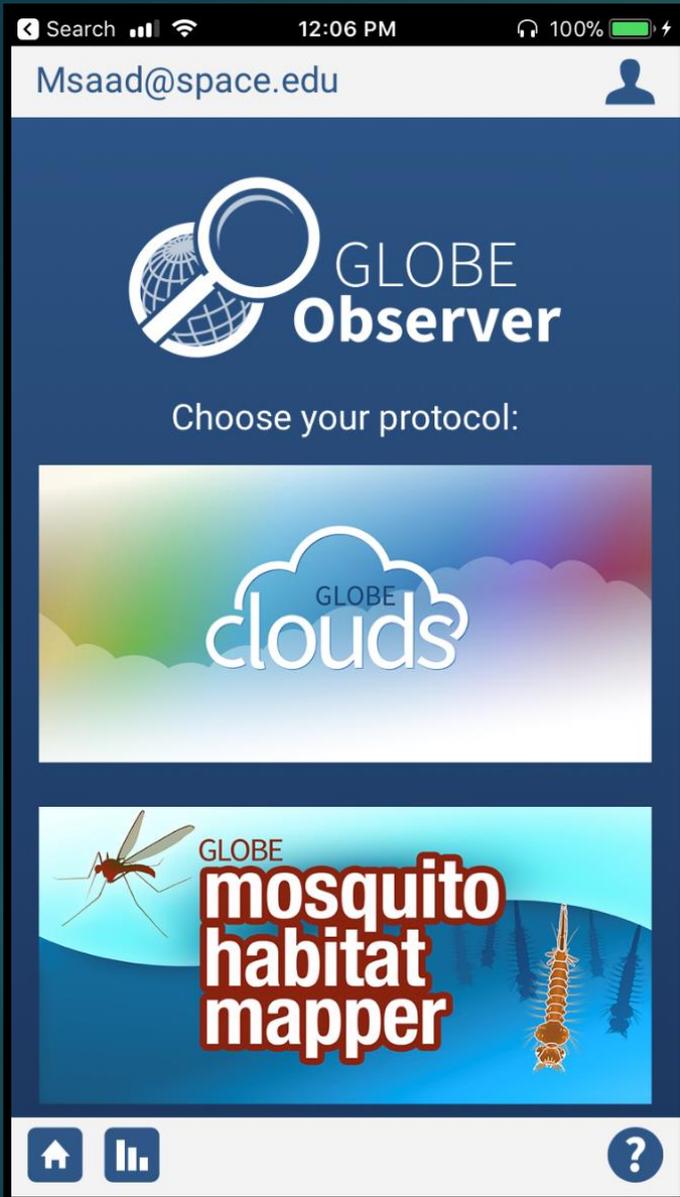


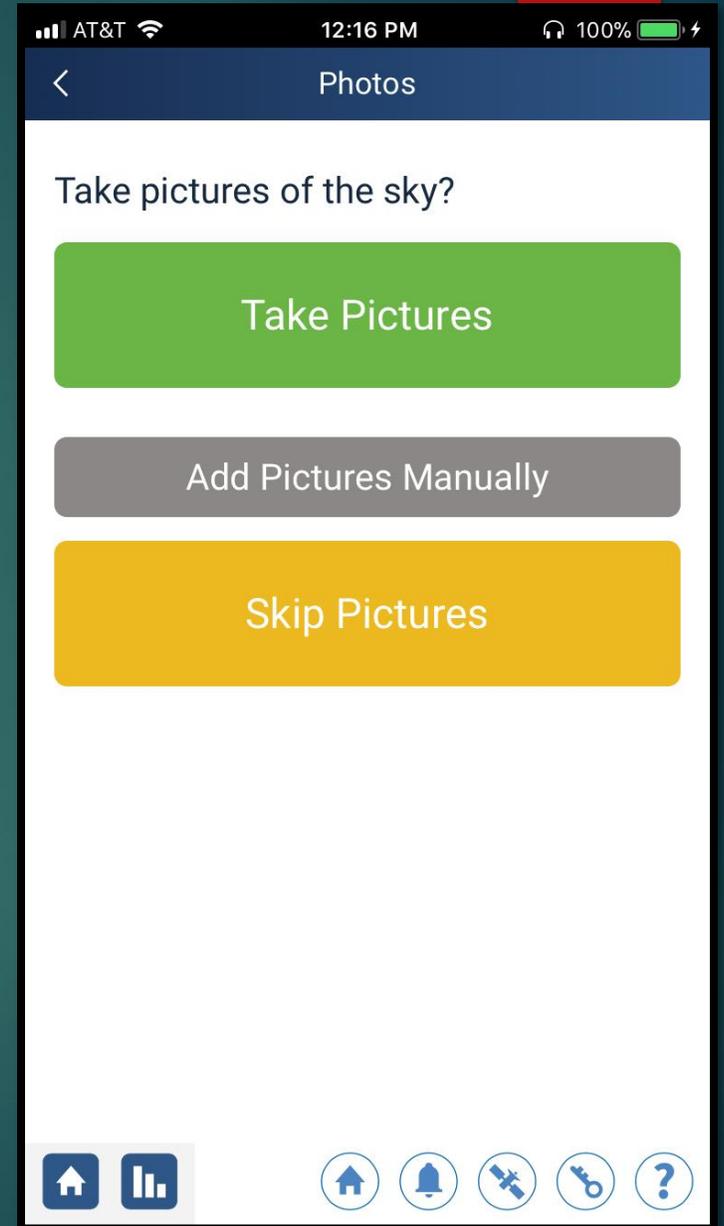
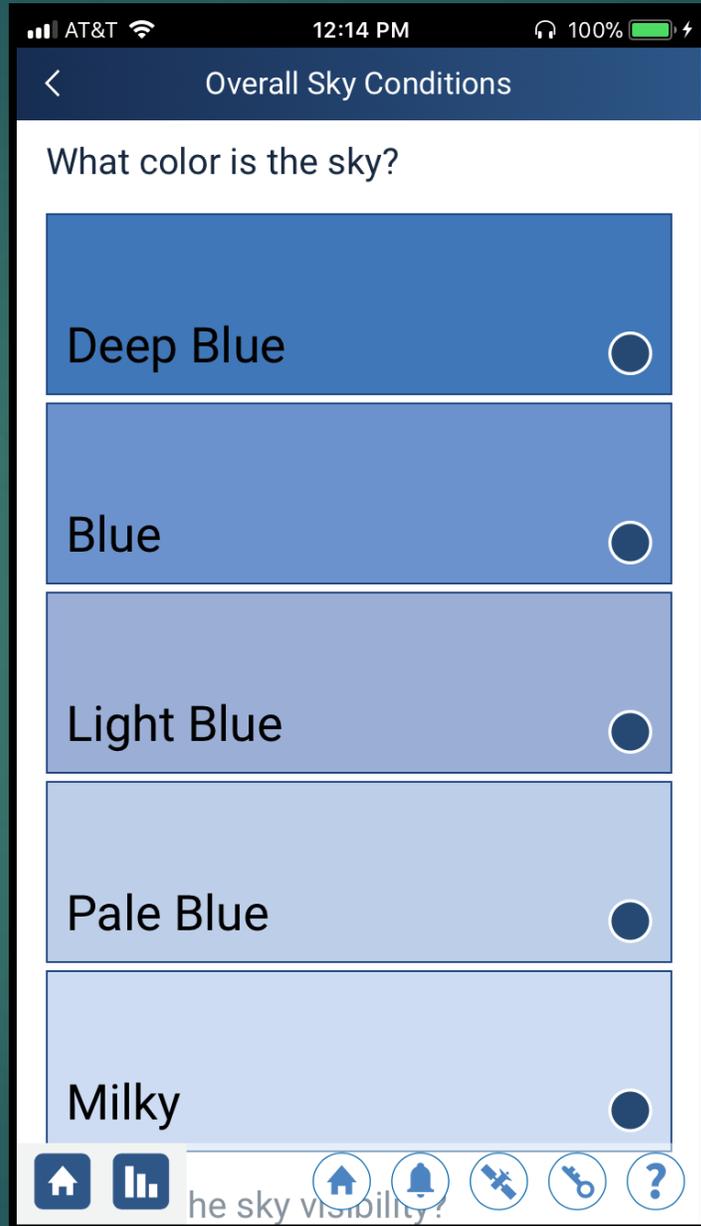
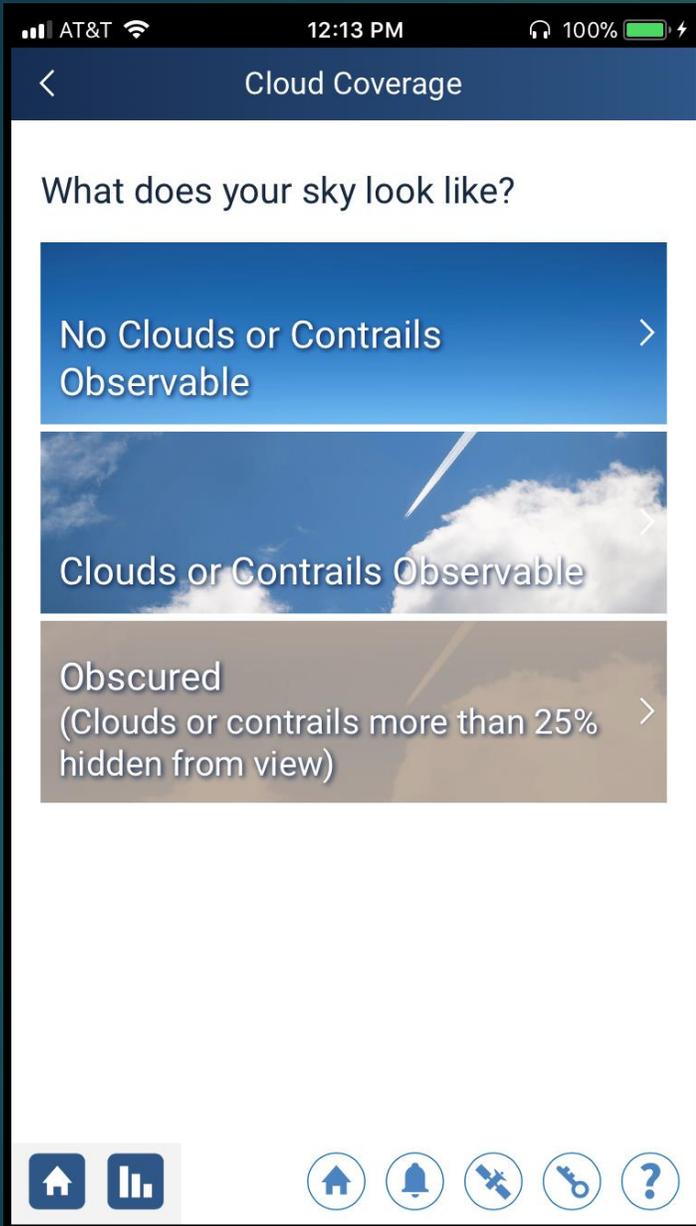
**GLOBE Observer Eclipse - Air Temperature Data
by Sites around Casper, WY**



**GLOBE Observer Eclipse - Air Temperature Data from
Charleston, SC on August 21st, 2017**







Student Presentations

Business Meeting

Business Meeting

- Reimbursement information
- Budget Updates
- NIFS
- Visits to Affiliate Institutions
 - Adding Affiliates
- Educator Workshops
- Campus Career Fairs

Reimbursement Assistance

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Business Meeting

- Budget Updates
 - FY 17: base award \$300,000
 - Augmentation award \$270,000
 - Total \$570,000
- Office of Education → Office of STEM Engagement
- Period of Performance ends April 22
- Waiting for official grant renewal
- Cramer, Heitkamp, and Hoeven all supportive of the program

Business Meeting

- Student Fellowships

# of Applicants	FY17	FY16
Summer	11 UND-10, NDSU-1	20 UND-10, NDSU-9, VCSU-1
Fall	16 UND-12, NDSU-3, VCSU-1	10 UND-5, NDSU-3, DSU-1, BSC-1
Spring	6 NDSU-4, UND-2	7 UND-3, NDSU-3, UTTC-1

- Encourage students to apply for research fellowships
- New guidelines on website
- Increasingly competitive
- *Application deadline has been extended*

- Deadlines:
 - Summer – **TBA**
 - Fall – **August 15**
 - Spring – **December 5**

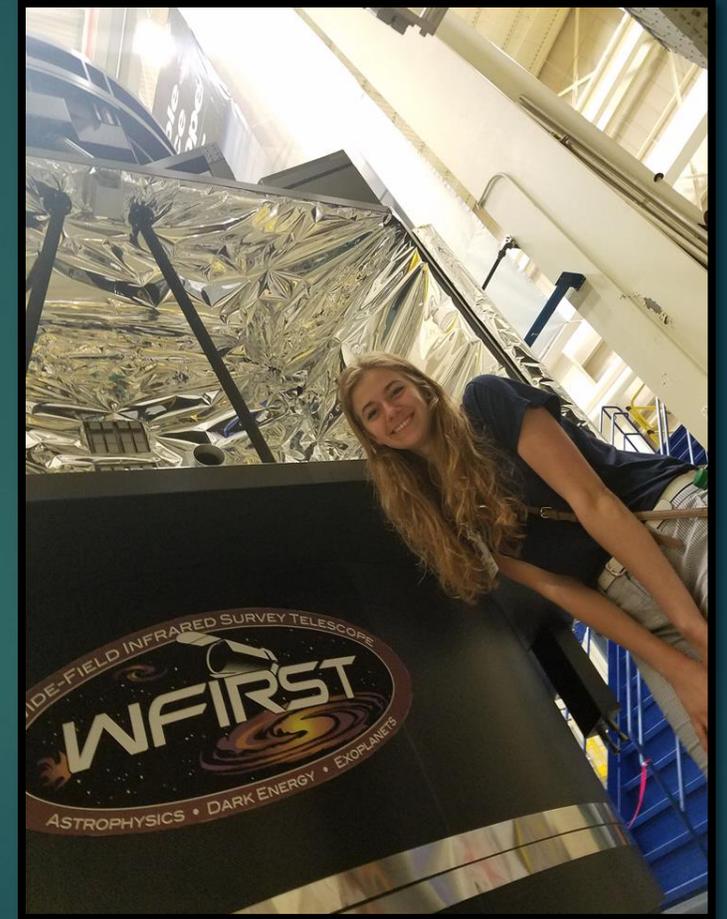
Business Meeting

- **Fellowship Bridge Program**

- Any student from a 2-year or Tribal College who is transferring to a 4-year college
- Encourage all to apply
- First successful transfer in summer of 2017
 - Appropriate faculty mentor was crucial
 - Encourage living/visiting on campus
 - Communication is key, structured outlines
 - Enjoyed the program

Business Meeting

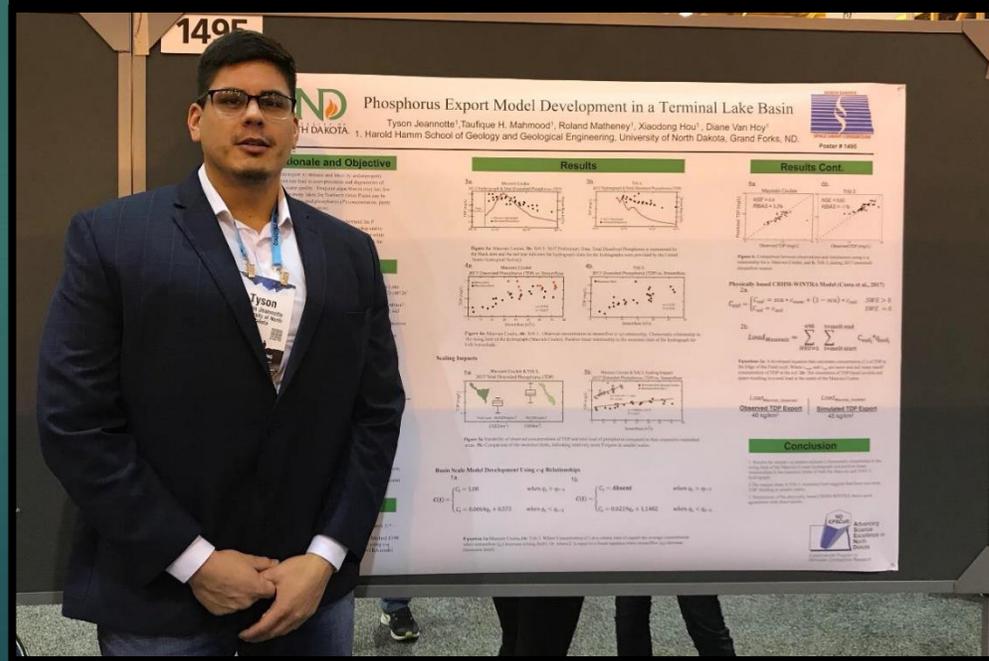
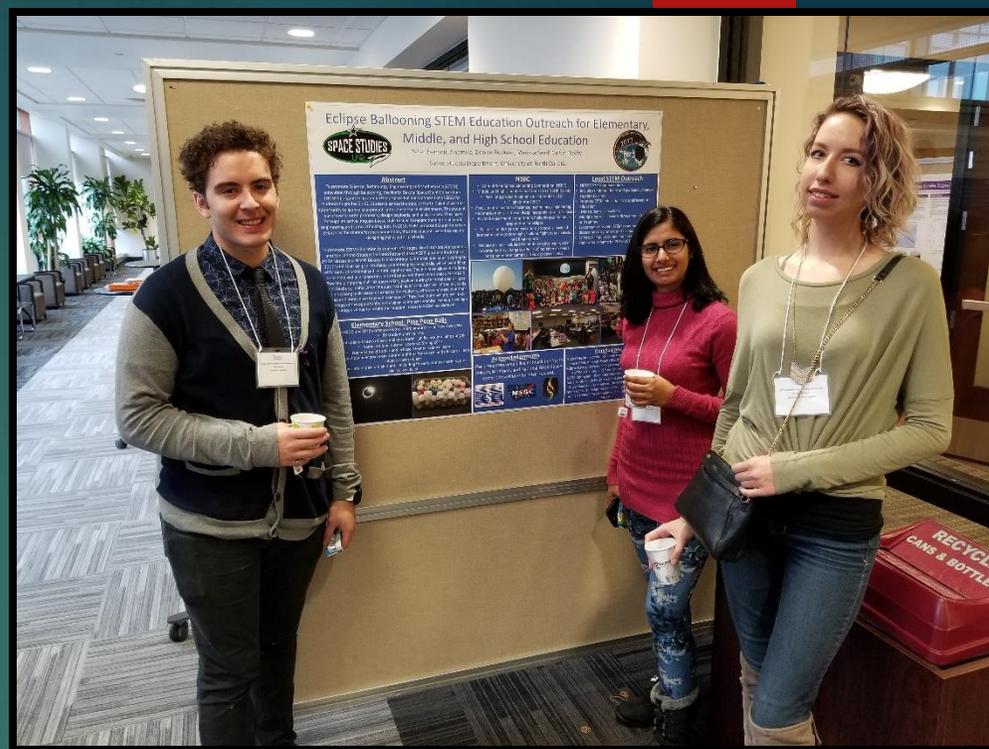
- NASA Competition & HS Teams
 - New application deadline for everyone, **November 6**
 - *Last year - 13 applicants (2 new!)*
 - Highly encourage college teams from outside UND and NDSU
- NASA Internships
 - Encourage students from affiliate institutions to apply
 - \$6500 UG, \$8000 graduate students
 - **2018 ND Summer applicants: 30 total**
 - 2017 ND Summer applicants: 34 total
 - 2016 ND Summer applicants: 25 total



Business Meeting

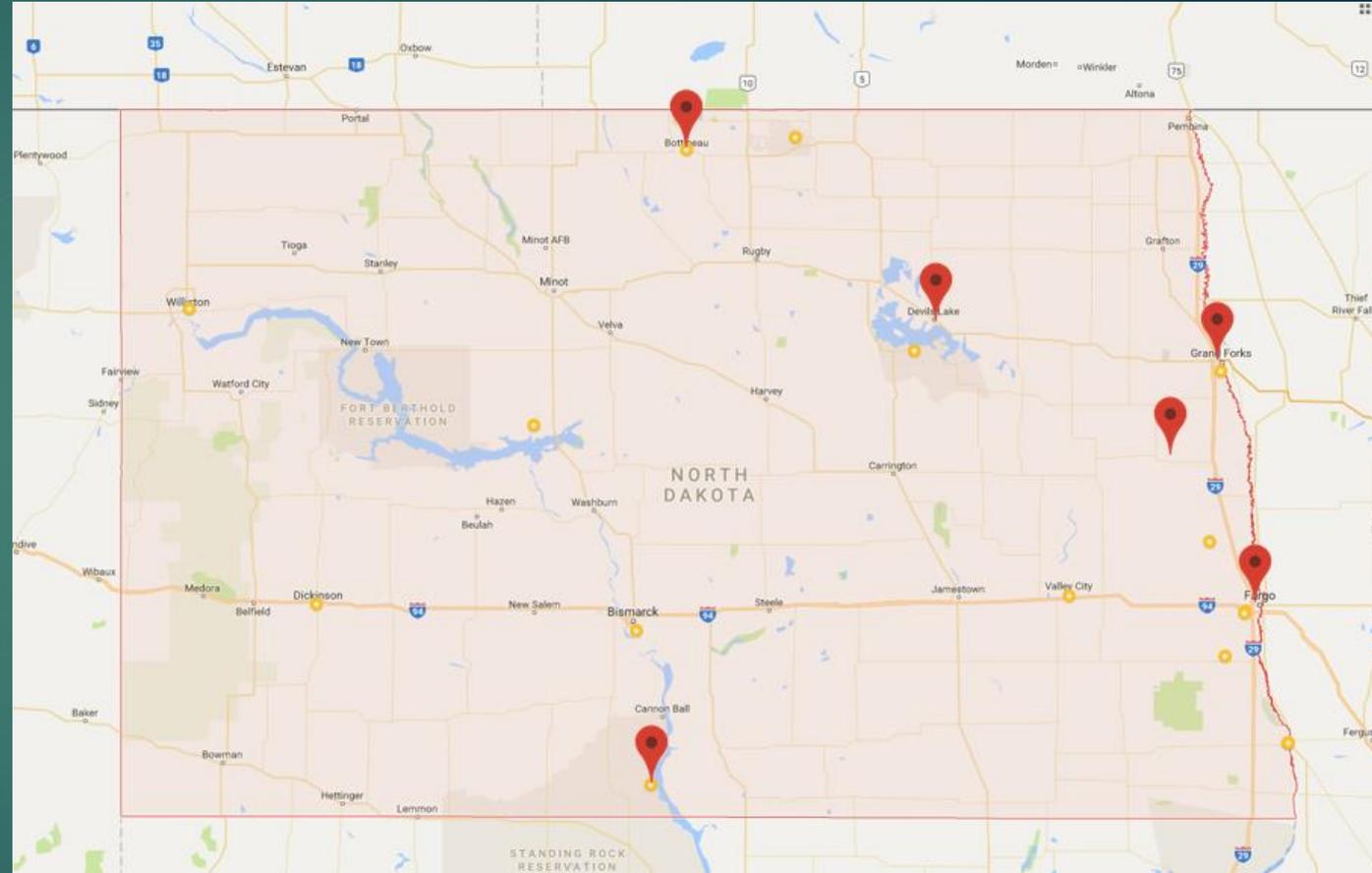
▶ Student Travel Grants

- ▶ Travel to conferences to present research or attend hands-on workshops
- ▶ \$500 awards
- ▶ Rolling applications to change to each semester
- ▶ Previous years' applicants from UND and NDSU
- ▶ Encourage students at affiliate institutions to apply!



STEM Ambassadors

- Students funded to visit and conduct outreach
 - K-12 schools, library events, museums, public outreach events
- ***STEM Education*** majors encouraged!
- Encourage students to apply – we can visit classrooms
- Normally, applications due May 31st. Paused advertising until budget is finalized.



2015-2018

Business Meeting

- **Educator Opportunities**

Internal

- Pre-service and In-service STEM Education
 - Commonly 1-3 hours long
- Upcoming in-service teacher workshop at UTTC in **July 2018**
- Can offer Professional Development credits
- Space Camp for students

External

- Space Camp for Educators
 - Marshall Space Flight Center, Houston Space Center, Kennedy Space Center



Flipped Session Summary

- ▶ Add summary data here Three year grant
 - ▶ From Friday's flipped session



- ▶ More feedback here:
- ▶ https://und.qualtrics.com/jfe/form/SV_bqfXbanh0KYP2bb



Thank you all for coming!

**Special thanks to Bora Suzen and
NDSU for hosting the meeting!!**

**If you would like us to reuse your
lanyard, please pass it in. Thanks!**