

# **ND Space Grant Annual Affiliates Meeting**

**Grand Forks, May 7, 2012**

**Santhosh Seelan**  
**Director, ND NASA EPSCoR**  
**Director, ND Space Grant**  
**Chair, Department of Space Studies, UND**

**Suzette Bieri**  
**Deputy Director, ND Space Grant**



# **Welcome ND Space Grant Affiliates!**

**Williston State College**

**Dakota College at Bottineau**

**Dickinson State University**

**Turtle Mountain Community College**

**Fort Berthold Community College**

**Cankdeska Chikana Community College**

**Minot State University**

**Lake Region State College**

**Bismarck State College**

**Valley City State University**

**United Tribes Technical College**

**Mayville State University**

**Gateway to Science Center**

**ND State College of Science**

**State Historical Society of ND (Heritage Center)**

**NDSU**

**Sitting Bull College**

**Grand Forks Herald**

**UND**



# Agenda

- **8:30am** Continental Breakfast
- **9:00am** Welcome—Dr. Santhosh Seelan, Director of the NDSGC
- **9:05am** Introductions
- **9:15am** Greetings from Aerospace—Dr. Bruce Smith, Dean of the J. D. Odegard School of Aerospace Sciences
- **9:20am** Review of the Past Year—Dr. Santhosh Seelan, Director of the NDSGC
- **9:40am** Kerry Hartman—“The Impact of Oil Development on Land Cover on the Fort Berthold Indian Reservation”
- **9:50am** Jeremy Smith—“Crop Monitoring Using Small Unmanned Aircraft Systems”
- **10:00am** Mijia Yang and Michael Telste—“Hidden Crack/Defect Detection for Airplanes”
- **10:10am** Break



# Agenda Continued...

- **10:40am** Caitlin Nolby—“Introducing Astronomy Education into a High School Physics Curriculum through the Use of the UND Observatory”
- **10:50am** Anoklase Jean Luc Ayitou—“My Experience as an Intern at Goddard Space Flight Center”
- **11:00am** Katrina Jackson—“NDSGC High Altitude Balloon Student Payload Competition”
- **11:10am** Jimmy Kim, Thomas Schanandore and Dallas Brown—“An Intelligent System for Real-Time Stress Alleviation”
- **11:20am** Erik Holland and Danielle Stuckle—Collaboration of the NDSHS and the NDSGC”
- **11:30am** Shaun Prince—“Space Education Integration: From the Classroom to the Laboratory”
- **11:40am** Paul Hardersen--"Undergraduate Astronomy Education Using the UND Observatory”



# Agenda Continued...

- **11:45pm**      **Buffet Lunch**
- **12:15pm**      **Discussion of Future Plans**  
**Scholarships/Fellowships**  
**Summer Faculty Fellowships**  
**Student Travel Funding for Conferences**  
**Space Studies 200**  
**BalloonSat Competition**  
**Testing of the Lunar Spacesuit, Lunar Rover and Lunar Habitation Module in the Badlands**  
**Budget Scenario for 2012 and 2013**  
**Location of the Next Meeting**  
**Reimbursement Information**
- **1:45pm**      **Tour of Aerospace Facilities Part I: Aviation**
- **2:45pm**      **Tour of Aerospace Facilities Part II: Space**



# Purpose of Space Grant

- The NASA Space Grant 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 North Dakota NASA Space Grant Consortium fulfills the Space Grant mission by involving North Dakota faculty, students, and K-12 teachers and students from across the state.
- Work in close coordination with North Dakota NASA EPSCoR to improve the environment for Science, Technology, Engineering and Mathematics (STEM) education in North Dakota



# 2011 Highlights

- Base proposal (\$430,000) for FY 2011 submitted. Received funding from NASA
- Augmentation proposal (\$185,000) for FY 11 submitted and accepted by NASA. Funds yet to be received.
- Annual report for FY 2011 was submitted to NASA in March 2012



# 2011 Highlights continued...

- Aurora released in full color for the first time



# 2011 Highlights continued...

- ND SGC web site updated

**NORTH DAKOTA**  
NASA SPACE GRANT CONSORTIUM

Science Technology Engineering Mathematics

Home About Scholarships Fellowships Research Precollege Application System News and Events

You are here: Home Search: Enter Search... Submit

★ News & Events

- The ND Space Grant annual affiliate meeting will occur in Grand Forks, North Dakota, on Monday, May 7, 2011.
- [The ND Space Grant annual affiliate meeting occurred in Bismark, North Dakota, on Monday, May 9, 2011.](#)

★ Aurora Newsletter

 [Latest Issue](#)  
[Past Issues \(archives\)](#)

Welcome to the North Dakota NASA Space Grant Website! 

Monday, May 07, 2012

 *Student Spotlight*

 **Thomas Kalinoski** - Undergraduate Student  
Research Fellowship Recipient  
NDSU - Biochemistry  
"Chiral Bronsted Acid Catalyzed/Enantioselective Diels-Alder Cycloaddion"

 **Behnjamin Zib** - Graduate Student  
Research Fellowship Recipient  
UND - Atmospheric Science  
"Arctic Climate: Investigating the Major Similarities and Difference in Atmospheric Variables Between Two Re-analysis Data Sets"

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# 2011 Highlights continued...

- Set up for delivery of SpSt 200 through IVN established at UND



# 2011 Highlights continued...

- 100% of the students supported have taken the “next step”
- 14 research fellowships and 95 undergraduate scholarships were awarded

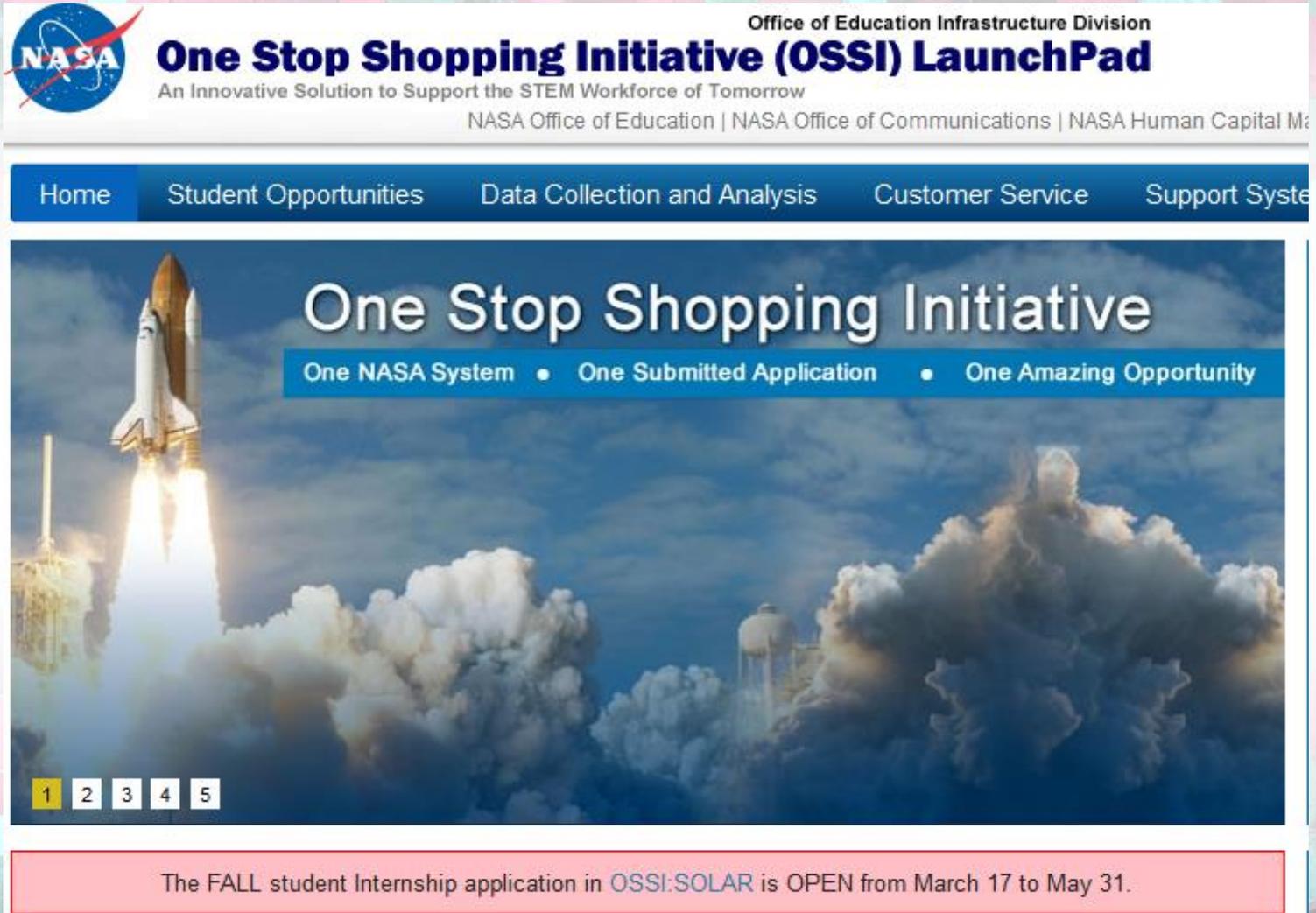
*“The Space Grant scholarship has been a real blessing to me and my family. I don’t have the option of a student loan and full-time work and school can take its toll. Grants like this have allowed me to spend more time on my studies and with my family.” (Palani Luger, Sitting Bull College)*

- Five Research Focus Area awards were given out and three research projects continued from previous year
- Three 1/2 time GRAs and tuition waivers were given out
- Seven summer faculty fellowships were given



# 2011 Highlights continued...

- Six students from ND were supported for internships at NASA



Office of Education Infrastructure Division  
**One Stop Shopping Initiative (OSSI) LaunchPad**  
An Innovative Solution to Support the STEM Workforce of Tomorrow  
NASA Office of Education | NASA Office of Communications | NASA Human Capital Management

Home Student Opportunities Data Collection and Analysis Customer Service Support System

## One Stop Shopping Initiative

One NASA System • One Submitted Application • One Amazing Opportunity

1 2 3 4 5

The FALL student Internship application in OSSI: SOLAR is OPEN from March 17 to May 31.



# 2011 Highlights continued...

- Three First Robotics teams were supported for the regional competition



# 2011 Highlights continued...

- Lunabotics team from ND was supported for the national competition (they won it!!)



# 2011 Highlights continued...

- Undergraduate Student Launch Initiative (USLI) Rocketry team to national competition was supported



# 2011 Highlights continued...

- A high altitude balloon payload competition was organized and four high schools and one four year university participated



# 2011 Highlights continued...

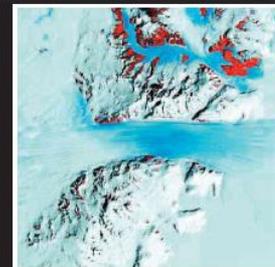
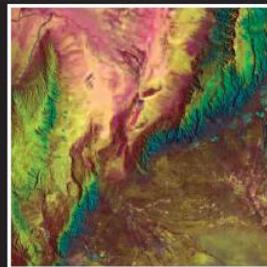
- One Human Powered Vehicle team from NDSU was supported for the national competition



# 2011 Highlights continued...

- “Earth as Art Three” exhibits were brought to Grand Forks and Fort Berthold

## EARTH as art three



From Sunday, June 19 to Saturday, July 16 the public will have an opportunity to look at Earth from a whole new perspective. “Earth As Art Three” will be hanging at the Empire Arts Center during that time. The artists for the “Earth as Art Three” show are the Landsat 5 and Landsat 7 satellites, which orbit approximately 438 miles above the Earth’s surface.

While studying the images these satellites beam down daily, researchers are often struck by the sheer beauty of the scenes. Earth’s geographic attributes can be a surprising source of awe-inspiring art. Instead of paint, the medium for these works of art is light. But the Landsat satellite sensors don’t see light as human eyes do; instead, they see radiant energy reflected from the Earth’s surface in certain wavelengths, or bands, of red, green, blue and infrared light. When these different bands are combined into a single image, remarkable patterns, colors and shapes emerge.

Twenty pieces of Earth art will be on display at the Empire Arts Center from 9:00am-5:00pm Monday through Friday for the duration of the show. Please call ahead to ensure viewing availability, 746-5500. There is no charge for admission.

A reception for the public will be held on Monday, June 20 from 5:00pm-7:00pm at the Empire Arts Center. “Earth as Art Three” is sponsored by the Empire Arts Center, the U.S. Geological Survey, the EROS Data Center and the NASA North Dakota Space Grant Consortium. Space Grant, headquartered at the Department of Space Studies at UND, is a state wide consortium of UND, NDSU, all four year colleges, all two year colleges and all tribal colleges in the state. Its purpose is to support and enhance the space science research and education infrastructure in North Dakota.

For additional information please contact Suzette Rene Bieri at 701-777-4856.



# Highlights Continued...

- Pre-service teacher workshops attended by 152 “soon to be” teachers
- Supported “Travel Trunks/Displays” through the Heritage Center and working on space suit display for Modern Times Gallery in Bismarck



# 2011 Highlights continued...

- Attended annual national and regional meetings of Space Grant. Two students and one faculty member from ND gave presentations



# 2011 Highlights continued...

## Congressional visits



## Discussion on Future Plans - Budget Updates

- 2011 budget was finally approved (augmentation included).
- 2012 budget for NASA Space Grant is cut from \$45.5m to \$38.9m (after a lot of drama!)
- This cut will have to be shared by all states
- 2013 ???
- The good news is, we have the ND State Match @ \$200,000 per year at least



# Discussion on Future Plans

- **Space Studies 200 through IVN**
- **Summer Faculty Fellowships** (IVN 5@\$6,000 and general 5@\$6,000)
- **Scholarships/Fellowships** (none given in spring 12, \$12,500 available for fall 12)
- **Student Travel Funding for Conferences** (total of \$10,000 available)
- **Balloon Payload Competition**
- **RFA** (all \$50,000 distributed for 2011)
- **Testing of the Lunar Spacesuit, Lunar Rover and Lunar Habitation Module in the Badlands**
- **Reimbursement Information**
- **Location of the Next Meeting**



**Thanks!**

