**Minutes**

**National Council of Space Grant Directors’ Fall Meeting**

**Grand Forks, N.D., September 14-16, 2017**

General Session: Day 1, Thursday, September 14, 2017

**Council Business**

1:00 p.m. Welcome – ***Jim Casler*** (ND SGC)

Jim welcomed everyone. He is the chair of the Aerospace Sciences division at University of North Dakota. He introduced the mayor of Grand Forks, who thanked us for coming and stressed the importance of STEM education.

Jim also read a letter from the one congressman from North Dakota, Kevin Cramer. Jim also mentioned that the VP for research and development of UND, Dr. Grant McGimpsey, also welcomed us. ND SGC has 18 affiliates and Jim recognized them. Jim also introduced the NDSGC team, Caitlin Nolby and Marissa Saad, and he thanked them profusely. He also thanked Shirley Campbell from the Foundation. He also thanked Angela Des Jardins for her efforts in organizing the meeting.

1:15 p.m. Intro and Executive Committee Update – ***Stephen Ruffin*** (GA SGC), Council Chair

Steve thanked Jim Casler and the NDSGC team for all of their efforts.

Steve mentioned the SG accomplishments for the year. Most participants in the meeting have not been to North Dakota before. He then showed data on FY2015 activities. Please see slides for details. Over 25,000 educators and 300,000 K-12 students were engaged. 5,000 college students were also engaged. Steve’s mother, who was on the faculty of Southern University, was a participant in NASA educator activities in 1974.

Tracking data shows 45% female and 28% minority participation in SG activities. Very successful retention, with most alumni pursuing STEM careers.

Space Grant was heavily involved with the Eclipse project. Georgia SGC distributed 25,000 viewing glasses. They also packaged educational kits and distributed them to 250,000 students. Steve showed a video of a school that was recipient of viewing glasses.

Steve also talked about his family. His son, who is an actor, played Romeo in Romeo and Juliet, he got married, and then played Juliet in Shakespeare in Love. His daughter graduated from college and is now certified as a nurse. His other son, who graduated engineering at Georgia Tech, is gainfully employed.

Steve then asked new people in the Space Grant family to introduce themselves.

Updates on agenda. This meeting has several new programs, as is described below.

1:25 p.m. Nominating Committee Update – ***Chris Koehler*** (CO SGC), Nominating Committee Chair

Chris described how the committee duties are spread out nationwide and discussed the vacancies on the boards and committees. Please see his presentation for details. Voting for the vacancies will take place at 4:20 pm. Chris then asked for floor nominations.

1:35 p.m. Space Grant Forum Introduction – ***Eric Day*** (DC SGC)

Eric gave a PowerPoint presentation on the proposed forum. The need for such a forum was discussed in Spring 2017. Please see slides for more details on this web-based forum. There are forum topics and sub-topics. Polls can be conducted. You can view posts of the day. Several search features. Register using the web site [national.spacegrant.org/forums](http://national.spacegrant.org/forums). Please register by September 30.

**Engaging with NASA**

1:45 p.m. ***Mike Kincaid***, Acting Associate Administrator for Education – NASA Updates and Introduction of the Friday Morning Interactive Session Topics

Steve Ruffin introduced Ms. Patrick and Mr. Kincaid. Mr. Kincaid discussed the three big programs in NASA OE which are SG, EPSCOR and MUREP. Ms. Patrick manages the MUREP program. She has worked at JSC as well as in community organizations. She is a member of the National Society of Black Engineers.

Mr. Kincaid is the Acting Associate Administrator for Education at HQ. Steve mentioned that, upon his appointment, Mr. Kincaid immediately learned about the details of Space Grant. He chairs the NASA Education Task Force. Mr. Kincaid joined NASA in 1987. He has been involved with several activities at NASA, including NASA Visitor Centers.

A new method of posing questions to Mr. Kincaid was introduced at the meeting. [www.jsf.cnf.io](http://www.jsf.cnf.io) is the site for questions and answers. Go to that site and post your questions, so Mr. Kincaid can first address the most commonly asked ones.

Mr. Kincaid showed pictures of Space Grant and of his family. Serving as acting associate administrator is his third one-year rotation.

Don James (previous AA for Education) ordered a BSA (Business System Analysis) to improve education. A lot of interesting issues emerged.

Please see Mr. Kincaid’s presentation for the slide between NASA Education activities and the Mission Directorates. We have not done as good a job on how the different education activities complement each other.

BSA identified four concerns. Governance, program management, grant management, outreach.

Mr. Kincaid also described how these issues are being addressed. Please see slides for details. A draft for Vision and Mission is being prepared. There will be opportunities for the public and for students to contribute. Build a diverse future STEM force, develop authentic learning experiences. Strengthen public understanding by enabling powerful connections. See slides for the fiscal climate. Congress currently is in a continuing resolution for funding the federal budget.

Where we are going? BSA is driving a new approach. Eclipse was a very good example of collaboration. Investment in NASA mission content coupled with learning experts. Mr. Kincaid listed how BSA is driving a new approach and potential STEM initiatives for 2019. See slides for details. Teachers in Space: Joe Acaba and Ricky Arnold. Mr. Kincaid wants to leverage this opportunity for more learning. He gave details of education activities in ISS. See slides for details.

www.nasa.gov/education/onstation is the web site. Mr. Kincaid also described partnerships and how we can we get involved. In-flight education downlink, STEM-on-Station, join NASA Express Message for new resources and opportunities. [www.nasa.gov/education/express](http://www.nasa.gov/education/express)

New OSSI launch page at [intern.nasa.gov](http://intern.nasa.gov)

Agency communication priorities include Earth Right Now, ISS, Mars, Technology Drives Exploration, Aeronautics, Solar System and Beyond - We’re Out There.

Level 1 activities for FY17: SpaceX mission to ISS (without crew), Cassini, Astronaut Selection, Solar eclipse. Is Space Grant aligned or engaged? What can we do to be more engaged? Mission-driven strategic engagement.

2:30 p.m. ***Joeletta Patrick***, Minority University Research and Education Program (MUREP) Manager – The State of MUREP, FY2018 and Beyond

How can MUREP and Space Grant work together? Not the topic of today’s presentation, but Ms. Patrick would like to hear from us.

Mission of MUREP: enhance the research and technology capabilities of minority serving institutions by providing authentic learning experiences related to NASA missions to contribute to a diverse future STEM workforce.

For the first ten years of her NASA career she did not have a mentor. There were no minorities and people who were not minorities were not inclined to mentor her.

Ms. Patrick described the necessity of diversifying the STEM workforce. Minorities still very underrepresented in STEM careers. See slides for statistical details.

MUREP established to increase NASA’s responsiveness. Please see slides for types of colleges and MUREP office breakdown. Ms. Patrick described improvements to MUREP. She did not like the old way of doing business. New MUREP engagement involves Mission Directorates. From there to student opportunities, MSI partnerships, collaborations with MD, and K-12 engagement. See slides for rest of the breakdown. Ms. Patrick then showed a slide outlining collaboration. Please see slides for details. She very candidly described what improvements are needed to make MUREP more effective.

Q&A session (for both presenters):

Potential modification of OEPM. They have spent considerable resources to modify it. Different approach in FY2018. Development of a much simpler system. The team that is improving OSSI is also working on OEPM.

How can SG work more closely with MUREP? Current system is not what we would like to have. Better relationships and better organization are needed.

How can SG and EPSCOR work better together? Mr. Kincaid is looking for feedback from us.

What is the greatest challenge facing NASA Education? No easy answer to that. Dealing with several issues at the same time.

SEAP came into being in 2014. What will happen to it? SEAP basically was a merging of different programs.

Will OE tax SG funds? They are taking a hard look at how education funds are being spent. Less than 10% does not get sent back. This number is being evaluated.

What will the future reorganization of NASA Education look like? We are dealing with a new administration. Education means a lot of different things to different people. Yes, we are doing more about STEM engagement.

Suggestions for better communication. Mr. Kincaid is looking for feedback from us.

2:55 - 3:15 p.m. **Refreshment Break and Networking**

**Interactive Workshop: Space Grant Diversity Plans**

3:15 p.m. ***Brian Chad Starks*** (DE SGC and BCS and Associates Consulting Firm)

Mr. Starks began with a discussion of diversity, what it looks like, and what it takes to achieve it. He then presented a SWOT analysis. He discussed how weaknesses are an opportunity for growth. SWOT analysis is for respect and also for identity.

There are blank sheets of paper on the tables. Please write your comments on both issues. Each table gets a topic. After 45 minutes, participants in different tables began to outline the issues they identified. The report associated with this activity will highlight these comments.

**Council Business**

4:15 p.m. Open mic/Announcements

Special guest announced by Jim Casler: Lt. Governor Bret Sanford of North Dakota. Mr. Sanford thanked us for inviting him and for the governor’s office to learn more about Space Grant. He talked about the contribution of North Dakota SGC to the state and to STEM education at all levels. He was very impressed with eclipse-related SG activities.

Also, a greeting from Senator Ray Holmberg was announced. A staffer read his gracious message discussing the importance of STEM education and thanking Space Grant.

4:20 p.m. Council Elections – ***Chris Koehler*** (CO SGC), Nominating Committee Chair

Ballots were cast for three positions on the Foundation Board. Jed Marquart (OH), Shawna McBride (WY), and Joe Orr (UT) were elected.

4:30 - 6:30 p.m. **Student Poster Session, Eclipse Fair, and Reception**

6:30 p.m. **Adjourn**

**General Session: Day 2, Friday, September 15, 2017**

8:30 a.m. Announcements and Updates

Angela Des Jardins (MT SGC) opened the meeting and discussed the interactive session that will follow. She explained the rationale behind the interactive sessions and described how Mr. Mike Kincaid will also be involved with the working groups.

Mike Kincaid stated that he appreciated the interest from us and he liked our candor in discussing issues and how we can do things differently, how we can leverage our resources. He wants to hear from Space Grant and what Space Grant is looking for. What are our shared needs? What does Space Grant need from NASA? What can Space Grant offer NASA? Let us sit back and discuss what we can do differently.

Chris Koehler explained how the interactive session will work. The flipped meeting is a good idea but there is way too much data that is generated. The format of this interactive session is like the game Candy Land. 30 min discussion and 20 min at each table to distill the ideas to 3-5 distinct concepts. Then, the ideas are presented to Mr. Kincaid. There is voting by the attendees regarding which ideas are most preferred.

**NASA Education Listening and Feedback Session**

8:35 a.m. ***Mike Kincaid*** – Motivation for Feedback Session

8:45 a.m. Round table discussions, five tables on each of three topics: 1) What does Space Grant want from NASA? 2) What are the NASA-SG shared needs? 3) What can Space Grant offer NASA?

9:15 a.m. Each table summarized feedback

9:35 a.m. Re-form whole group

9:45 a.m. Discussion session – three 15-minute panels, one for each topic – moderated by ***Chris Koehler***, CO SGC

10:30 a.m. Summary, survey and voting

Report for this activity will be made available from the coordinators of the project.

10:45 a.m. **Refreshment Break and Networking**

**Mission Directorate/Center Working Groups**

11:05 a.m. Mission Directorate Working Group Breakouts

11:40 a.m. Mission Directorate Working Group Chair Reports

**Aeronautics Research**

Haim Baruh (NJ) and Mary Sandy (VA) reported. Helicopter readiness workshop, sponsored by CT and NC, was announced and a proposal from Mary Sandy was presented to create faculty fellowships in aeronautics in conjunction with the Aeronautics Mission Directorate.

**Human Exploration and Operations**

Jeff Hoffman (MA) reported. NASA has more CubeSat launch activities than there are CubeSats. Lots of analog activities, such as microgravity, hands-on exploration opportunities. The group would like to see more NASA-sponsored analog activities. They will be taking this up with the HE Mission Directorate. Also some issues with OSSI activities. Would like to help evolve them.

**Science**

Tom Durkin (SD) reported. The working group discussed new opportunities that the working group can develop. Getting NASA representatives to come to college career fairs.  What can we do to help our students work for NASA or aerospace industry? STEM integration in sciences. The working group will develop a list of NASA SMD-related educational opportunities (e.g., design challenges, student competitions, and capstone project opportunities) for university/precollege students and discuss with Kristen Erickson about which should be promoted among consortia to increase participation and help meet the shared needs of NASA and Space Grant. Also how can we train K-12 teachers to talk to their students about NASA projects?

**Space Technology**

Mason Peck (NY) reported. Create a survey if your university wants to collaborate with NASA tell them what NASA’s divisions you wish to work with. The database would match affiliates and NASA divisions.

12:00 a.m. - 1 p.m. **Lunch with Eclipse Ballooning Project Videos and Results Summary**

Chris Koehler made a special presentation of a Space Grant award to Angela Des Jardins for her phenomenal effort during the Eclipse. Standing ovation followed.

**NASA collaborations**

1:00 p.m. ***Al Conde***, NASA Deputy Chief Technologist – Aligning with NASA Mission Priorities

Steve introduced the speaker. He is the strategic integration lead. Has been at NASA since 1990. He has worked in several capacities. Before joining NASA, he worked in the aerospace industry. He has a degree in aerospace engineering from Georgia Tech.

Outline: What OCT does, technology focus areas, overview of effort to align and prioritize agency technology. How this technology aligns with Space Grant and educational activities. He began with describing OCT and where it fits in the NASA hierarchy. Advises NASA administrator, advocates for technology programs.

Products and services of OCT: strategy, roadmaps, priorities, several technology areas at NASA (please see slides for details). NASA is taking a hard look at the roadmaps. Capability strategies will help inform people as to where the agency is heading.

He is working on the integration initiative. How to align NASA investments across mission directorates. Stronger coupling between technology users and developers. “Notional Strawman” Strategic Capability Mapping Flow is a chart used at NASA to analyze strategic capability leads, outcomes, development and technology investment. He showed the chart for Mars. Please see slides for more details.

Technology work at NASA has a budget of about $2.3 million.

**NASA Space Grant Program Updates Open Discussion Session**

1:30 p.m. ***Lenell Allen,*** Director, Aerospace Research and Career Development (ARCD),and NASA Headquarters Space Grant Staff

Steve introduced Dr. Allen. She began with introducing her staff and also personnel from centers. Erica Alston is new to the family. Jeppie Compton, Joeletta Patrick, Dave Kankam and others were also introduced.

The BSA will affect how business is done at Space Grant. Increased grants management oversight. Actions needed to address persistent Grant close out timeliness and undisbursed balance issues.

Maximum balances that need to be drawn: 75%. Various period of performance end dates. NCE should be submitted no earlier than 30 days and no later than 10 days.

Evaluation update. Preliminary interim report by late 3rd quarter 2017. Please update your websites by Oct. 15, 2017.

New five-year base award solicitation expected to be released 4th quarter 2018. FY 2018 budget is under CR until December 8, 2018.

New directors: Alabama (Dale Thomas), Minnesota (Demoz Gebre-Egzibher), Wyoming (Shawna McBride), DC (Nathan Hershman)

The next presentations were given by staff at OE.

Erica Alston: Solicitation overview. Additional one year funding. She described funding levels.

Sonya Greene: NIFS minimum must be met.

Mike Cherry: Proposal evaluation criteria. Deadlines and other criteria, as described in the solicitation.

Frank McDonald: Emphasis on college programs, administration costs should not be too high, there should be sufficient evidence of meetings of the advisory committee. Evaluation plan should mention all five project types. Verification of NIFS requirements.

Sonya Greene: FAQs. Guam is part of HI SGC, and the US Virgin Islands is part of South Carolina SGC.

Revision of cost share amounts from initial distribution of the solicitation. Can we spend FY2017 funds through 2018-2019? Please spend during the proper year. No NCE needed because the FY2018 award is an extension. Question regarding citizenship requirements. A non-NIFS award is not required to be to a US national.

Mike Cherry: Unrecovered indirect costs may count as cost share. Indicate on NSPIRES that a DMP is not necessary. Any peer-reviewed publication should go through the paper management system. See presentation for more details. If you cannot spend 75% of your funds by the renewal date, explain why in your proposal.

**Finding Matching (and Other) Funds Panel Discussion (Ballrooms 1-2-3)**

3:00 p.m. ***Mary Sandy (VA SGC), Kevin Crosby and Christine Thompson Bolz (WI SGC), Greg Guzik (LA SGC), Angela Des Jardins (MT SGC),*** Moderated by ***Mitchell K. Hobish***, National Space Grant Foundation Executive Director

The session began with a presentation about the foundation. Philippe Geubelle gave an introduction and introduced Mitch Hobish. According to Philippe, the Foundation is “Lean, Mean, and Green.” The staff salaries are very small. He introduced Shirley Campbell and Mark Fisher.

Efficient shared resources, management of contracts, management of expenditures, discretionary funds, investment management, open to discuss new services. Low overhead, fast response time, long-term history with NASA and SGC. Hence, the Foundation represents a unique national resource.

Growing revenues. Foundation went through a transition period.

Revenues includes XHAB, as well as meeting services. Current conversation includes optimizing fees for services rendered and supporting growth, including investment management. No decisions have been made so far, currently in consultation phase. Soliciting feedback.

Mitch took over and invited the panelists to take the stage.

Mary Sandy discussed possible match sources.

Best model is state budget line item, funding from state agencies for grants or projects.

Affiliates can provide match for all awards. In-kind contributions for time spent, signed by donor.

Office space, indirect cost recovery, waived indirect costs all may count as match.

If you run a conference and your university donates space and that may count as match. Office space may also count as match. Please refer to the Contribution Certificate form in Mary’s presentation. [Mary sent both the Contribution Certificate form and her PPT to everyone after the meeting via email on September 18, 2017.] Give affiliates a report on how much funding from your consortium has been spent on their students.

Angela Des Jardins (MT). SMD is looking for future opportunities with SGC. Discussions going on regarding how we can leverage funds. Angela also used the Foundation to do expenditures, especially for small contracts. She recommends using Foundation for leveraging sources.

Kevin Crosby (WI). Three key partners. Economic partners, government (good connections, help with developing internships), industry.

Christine Thompson Bolz (WI). Consider who the stakeholders are. Look at NASA, government, companies, organizations. She developed a lot of contacts through them. Encourages SGs to develop more networks.

Greg Guzik (LA). Louisiana is in a special position. He stressed strategic plans, of which there are lots in Louisiana, especially in coastal issues. There should be programs in your states that should support you. They successfully demonstrate state’s needs. Look into state support.

Discussion as to what counts as match. AZ has some institutions that cannot produce match. How can we help them? One potential source is unrecovered indirect costs.

Mitch closed the meeting by thanking panelists.

3:40 p.m. **Yoga, Refreshment Break, and Networking**

4:00 p.m. Open-Mic/Announcements

If you have signed up for the tour you will meet at door No 6. Reception at 6:30 pm.

4:05 p.m. **Adjourn for Work Break, Networking, or Optional UND Tour**

**Banquet and invited speaker Stephen Sandford**

6:30 p.m. Networking, dinner

7:50 p.m. Speaker introduction by ***Mary Sandy***, Virginia SGC

8:00 p.m. ***Stephen Sandford,*** author of *The Gravity Well: America’s Next, Greatest Mission*

**General Session: Day 3, Saturday, September 16, 2017**

9:00 a.m. Announcements and Updates

Minnesota Space Grant announced the Space Grant Midwest High-Power Rocketry Competition. This year, student teams are challenged to actively control the roll of their rockets, pointing (the camera side of) it in different directions during coast to apogee.

Chris Koehler (CO) announced the 2018 Rock-On and Rock-Sat activities.

Christine Thomson Bolz (WI) announced the First Nations Launch.

**Council Business**

9:10 a.m. Secretary and Treasurer’s Report – ***Haim Baruh*** (NJ SGC), Council Secretary and

***Majid Jaridi*** (WV SGC), Council Treasurer

The minutes and treasurer’s report were presented. Both were accepted by voice vote.

9:20 a.m. Preview of the Fall 2018 National Meeting in Stowe, VT – ***Darren Hitt*** (VT SGC)

The Vermont Space Grant Consortium has been working very hard organizing this meeting. Don’t miss this meeting, which will be held September 13-15, 2018 in Stowe, Vt. One way to get there is to fly to Burlington and to rent a car.

**Space Grant Highlights**

9:30 a.m. ***Kevin Kilty*,** University of Wyoming – Partnering with Space Grant to Strengthen Engineering Senior Design

This project aims to support engineering senior design projects, which are required under ABET. The program supports 25 projects each year. Examples of supported projects include wheelchairs, robots on soft surfaces, welding rod feeder, and microgravity projects. One student found an abandoned wind tunnel and used Space Grant resources to renovate it and use it for testing on CubeSats.

9:50 a.m. ***Greg Guzik*,** LA SGC and HASP - NASA High Altitude Student Platform (HASP) 2017 Results and 2018 Opportunity

Greg described the High Altitude Ballooning Project (HASP). This project launches large balloons that can carry multiple student payloads. So far, 1,100 students have been involved and 110 payloads have been launched by HASP. Success rate of student projects is 89%. Greg showed a slide of the integration process of the project. The last launch spent 14 hours in the Stratosphere. Greg also showed a video of the launch and how the earth looks from the high-altitude balloon.

10:05 a.m. ***Luke Flynn*,** HI SGC – Status of University CubeSats

Luke described how demand for small spacecraft has increased dramatically. Over 5,000 CubeSats are planned to be launched in the near future, creating all sorts of ramifications, including economical, logistical, and legal. Expected expenditures are $1.5 billion on small satellites, including manufacture and launch. A modest CubeSat might cost over $10,000 to build with average launch costs around $50,000-70,000. There will be a small space satellite conference August 14-15, 2018. A company from New Zealand, Rocket LAB, launches small satellites.

10:20 a.m. **Refreshment Break and Networking**

**SG Regional Breakouts**

10:45 a.m. Space Grant Regional Breakout Sessions (Breakout rooms)

11:30 a.m. Regional Highlights

The regional highlights primarily included discussions about the frequency and schedule of regional meetings, which will be held in Fall of 2019. The regional breakouts also discussed the issue of having designated vs program states, as well as the process by which a consortium can move from one status to another.

11:50 a.m. Meeting Conclusion with Recap of Key Discussions, Key Decisions, Upcoming Events, and Outstanding Actions

Everyone thanked our colleagues at the North Dakota Space Grant Consortium for their tremendous work, warmth, and hospitality.

12:00 p.m. **Adjourn**