

National Council of Space Grant Directors' Fall Meeting

Stowe, VT

September 13-15, 2018

Day 1, Thursday, September 13, 2019

Executive Committee Meeting

8:00 Executive Committee Meeting – Part I

9:00 Executive Committee Meeting – Part II

10:00 Executive Committee Meeting – Part III

National Space Grant Foundation Board Meeting

11:00 NSGF Board Meeting

General Session: Day 1

1:00 Welcome – *Darren Hitt* (VT SGC), Meeting Host

Darren welcomed us and recommended that we take advantage of the amenities of the Stowflake Resort. He profusely thanked Deb Fraser, Program Coordinator for Vermont SGC, for her hard work. He also thanked the Stowflake Resort for their accommodations. He also thanked Angela Des Jardins and Steve Ruffin for all their help. Also, Shirley Campbell and Mark Fisher, as well as Cass Runyon for her work on the poster session. He also thanked the student helpers.

Council Business

1:10 Intro and Executive Committee Update – *Angela Des Jardins* (MT SGC), Council Chair
Angela thanked Darren and Vermont SGC for their hard work. She asked to keep North Carolina and South Carolina in our thoughts for their safety during the hurricane.

Angela then asked Steve Ruffin to come to the podium and she gave him a plaque on behalf of SG directors. She made several remarks in Steve's honor and she quoted words of praise by Space Grant directors. Steve thanked Angela and the Council for their warm words and wished us a great meeting.

Angela then talked about the goals of the meeting. Passion leading into progress, creating a positive culture, to maximize our time together as we spend a lot of resources to get to meetings. We need to create opportunities for small groups to get together and share ideas. Gentle veering and steering the SG community to reach our goals.

Updates from ExComm include:

- Behind the scenes communication with NASA leadership (overhead charges by NASA OE, multi-year solicitation).
- Inviting states to apply to host the 2020 Fall meeting.
- Apollo 50th anniversary, report by Pete Schultz (Cass Runyon couldn't be here).
- Preparation for the 30th anniversary of Space Grant.
- Changing the way we do regions and regional meetings. To be discussed at the regional breakouts. Maybe two regions, east and west.
- There is a new mission directorate working group: Communications

- This year there will be walking discussions as a new activity. Taking advantage of our in-person meeting time and spend time together (unfortunately, due to the length of the Friday sessions, the walking discussions were cancelled).

- Please return the name tags so we won't get new ones for the next meeting.

New people were introduced. Mark Moldwin is the new director at Michigan. Also new program manager in Michigan is Brenda Vyletel. New Mexico SGC also has a new director, Paulo Oemig. New director Tomas Gonzales-Torres in Iowa. New manager in Arizona is Michelle Coe.

1:30 Secretary and Treasurer's Reports – *Haim Baruh* (NJ SGC), Council Secretary and *Majid Jaridi* (WV SGC), Council Treasurer

Haim and Majid gave their reports. Income source of ExComm is the 4.5% fee from conference proceedings. Majid also thanked Susan Brew, AZ SGC program manager who is retiring, for her lengthy and excellent service.

1:40 Nominating Committee Update – *Chris Koehler* (CO SGC), Nominating Committee Chair
Chris mentioned the vacancies and states participating in committee and leadership duties. There will be elections for two members of the Foundation and four members of the Alliance. He showed a sample ballot and asked for floor nominations. There was one: Philippe Geubelle for the Foundation. Ballots were distributed to the states. Mary Sandy asked why there were no female nominations. Chris answered that all the female directors already have a committee or leadership duty. We have 100% participation of female directors in leadership positions.

Take Home Series: Performance Assessment and Evaluation

1:50 Space Grant Consortia Performance Trend Data Report, *Rick Gilmore* – Education Programs Specialist and Evaluation Manager (NASA) and *Dr. Catherine Graves* – Lead Evaluation Specialist (Paragon TEC)

Mr. Gilmore works out of Glenn. He discussed performance assessment, significant awards affiliates, publications, student and educator participants, flip session overview. He then discussed the legislative directives (please see slides for details).

- Development process (please see slides), review past performance, benchmarking, finalized candidate performance measures. They have completed the first two steps and they are now working on the third step. Please see slides for a flowchart of strategy.
- Space Grant produces the vast majority of OEPM student data.
- Catherine Graves talked about significant student awards. See slides for statistics.
- Last year, 16.3% of SG awards were for African American students. For all OE this value was 17.6%. There were 7,409 total awards made at NASA OE, of which 4,686 were Space Grant awards.
- For Hispanic students, 14.5% for SG and 15.8 for OE overall.
- Gender statistics: 39.5% female, 36.3% OE overall.
- Next, data on affiliates. Please see slides for details. Data on publications and presentations, were discussed next, followed by data on students. Large increase in K-12 participation. They did not know the reason why. Also, large increase in number of educators. OEPM is open for data entry.

Q&A. Transgender students. Currently the question is not being asked.

Are we allowed to use race and gender in selection process or just encourage participation? Use your solicitation as guidance.

For more information, please send email to HQ-paim-oeis-oed@mail.nasa.gov

Flip session overview. Evaluation Technical Assistance Planning. Goal is to get SG input on institution and affiliate evaluation questions and on technical evaluation needs. See slides for key questions.

Council Business

2:50 Council elections – *Chris Koehler* (CO SGC), Nominating Committee Chair
Ballots were distributed by the Nominating Committee and then collected.

3:00 **Refreshment Break and Networking**

Highlights

3:20 Small State, Small Satellites – *Dr. Ryan McDevitt*, CEO of Benchmark Space Systems (sponsored by VT SGC)

Darren Hitt introduced the speaker. The speaker's research was supported by Vermont Space Grant. He was identified as a top innovator and small business developer. Dr. McDevitt began by discussing how his path evolved from a master's student to Ph.D. to lecturer to business owner. Dr. McDevitt's initial research was an EPSCoR project on MEMS-manufactured thrusters. He researched microfluidic devices, which was followed by rapid prototyping and testing. He was involved with 3D printing and he 3D-printed a thruster.

His educational background let Dr. McDevitt become a researcher, mentor, and adviser. Upon graduation, he went into technology transfer and manufacturing. This led to the formation of his business, Benchmark Space Systems. He currently has five full-time employees and he currently is looking for more, especially people with a background in small satellite propulsion in the range of 3 - 200 kg satellites. He showed pictures of his products. He wants his products operating on the ISS. Expected first launch of his test hardware will take place in 2019.

3:45 ISU Center for space Entrepreneurship and Commerce at Florida Institute of Technology - *Andy Aldrin* (sponsored by the Space Grant Council and NM SGC)

Paulo Oemig, director of NM SGC, introduced the speaker. Mr. Aldrin has had a successful career and he has a lengthy resume.

Mr. Aldrin began by stating that we are trying to institutionalize serendipity. He began by giving examples on getting more people engaged. He gave an example of a middle school student group building a CubeSat.

He discussed the history of Space commercialization. Initial commercial entities went bankrupt. Atlas and Delta rocket companies were reorganized after bankruptcy.

This year about \$3 billion is being spent on startups. There are critics of this effort of commercialization. In his view, there is a tremendous opportunity for commercialization and it is up to us to train the generation of personnel who can be involved with such projects. It is hard to be at the right place at the right time.

Mr. Aldrin discussed the new Space revolutionaries who are using their massive wealth to be leaders in space development. But, we cannot count on these visionaries forever. We need the

resources and personnel. The new leaders have to understand more than the engineering. They need to be incredible communicators. See slides for a comprehensive list of desired qualities for leadership in space, and a list of the contributions of visionaries of space development from around the world.

You can build a small thruster or CubeSat in your garage, but you will not build a sizable rocket. People have to figure out how to build big businesses that specialize in space.

His organization is creating a team (see slides) of companies, universities, and organizations to this end. Please see slides for the timeline of activities. A six-week course on commercial and entrepreneurial space studies is being developed.

4:10 NASA Apollo 50th Anniversary Forum – *Cass Runyon* (SC SGC) and *Pete Schultz* (RI SGC)

Cass Runyon could not make the meeting because of Hurricane Florence. Peter Schultz began with his interactions with Apollo 13 astronauts.

Peter said that every jurisdiction has its Apollo legacy. SG is uniquely positioned to highlight these connections. He gave a list of Regional Planetary Image Facilities. Each facility has a treasure of information.

One of the planned activities is partnering with museums to identify local experts of Apollo missions. Another is to provide content for museums and other organizations, develop talking points. Also, to talk about benefits of Apollo to science and cultural technology. To identify and highlight Apollo alumni. To recognize that planetary exploration may not have happened without Apollo. Work with NASA Centers.

Please see slides for a more complete list and for a list of common objectives. Compile, identify and record, engage local new sources, host Apollo countdowns at your institutions. 3D printing of Apollo memorabilia.

Celebrations actually start in December commemorating the launch of Apollo 8. Also keep in mind that 1972 was the last year when we sent humans to the moon.

Mike Kincaid: let us use this anniversary to connect to kids. Let's use the vast SG resources to get people and organizations together. Let's look at what is already there and make use of these resources. If you are going to request lunar samples do so ASAP.

Collaborations and Partnerships Breakout Session

4:30 Three-minute “speed talks” in Pinnacle Room then move to breakout rooms

Goal: deeper dive into topics, opportunities to collaborate, best practices. Find your topics of interest, smaller groups for discussion.

4:50 Breakout Sessions

- Citizen CATE 2017 Solar Eclipse Project Results and Prospects for 2024 - *Michael Pierce*, Citizen CATE, University of Wyoming

Project to engage mostly high school students during the 2017 solar eclipse. Last total eclipse nationwide was 39 years ago, when a lot of the technology in use today was not around. The 2024 eclipse goes south-north in the eastern United States.

- Space Education Webinars and Digital Learning Badges for Educators and Students - *Araceli Ortiz*, Executive Director, LBJ Institute for STEM Education & Research

The speaker is affiliated with Texas State University and with MUREP. He discussed how we should be reaching out better to students. National objective is to reach as many educators as possible. The LBJ Institute created a badging system that reaches educators. Encourage your teachers to take the online courses and receive their micro-badges.

- Mission: Commercial Crew and Swarmathon – *Gloria Murphy, Rachel Power and Theresa Martinez*, KSC education

Developed at JPL, solar powered, origami-inspired project whose technology readiness is level 5 or 6. Please see slides for more details.

- Mobile Astronomy Resource System (MARS): Louisiana Space Grant's Signature Outreach and Informal Education Program - *Anthony Ficklin*, (LA SGC)

Goals of this program is to reach to communities in Louisiana that do not have regular access to space activities. To publicize and to support LA Space Grant's other activities and efforts.

- NASA JSC and TSGC programs join forces to help students design a tool for use on the ISS – *Trinesha Dixon*, JSC Internships Manager and *Tim Urban* (TX SGC)

How working together we enhance student experiences. Texas Design Challenge and also MicroG Next.

5:30 **Adjourn**

General Session: Day 2, Friday, September 14, 2019

7:30 Hot Breakfast

8:30 Announcements and Updates

Angela announced the election results. Kevin Crosby and Tim Swindle were elected to the Foundation Board and Greg Guzik, Jaydeep Mukherjee, Dale Thomas and Tim Urban were elected to the Alliance Board.

Group picture will be taken at lunchtime.

Alliance general meeting will be held after the general meeting.

NASA Office of STEM Engagement Leadership

8:40 Part I – Presentations

- *Mike Kincaid*, Associate Administrator for Education

Associate Administrator Kincaid began by thanking us for holding the meeting and he thanked Vermont SGC for hosting the meeting. As usual, he came to our meeting with a stuffed animal given to him by his daughter. He has enjoyed being AA for Education. He showed a list of key updates.

He thinks the NASA Administrator is awesome and he is not saying this lightly. Mr. Kincaid gave a summary of his interactions with Administrator Bridenstine.

NASA Vision: to immerse the public in NASA's work and to enhance STEM literacy (please look at slides for details). NASA is involved with mission-driven strategic engagement. He showed a slide on the NASA contributions to the STEM ecosystem and the STEM engagement roadmap.

There now is a new architecture for enabling student opportunities and contributions. And, a reorganization of the OSE.

A five-year strategic plan is being developed at the federal level for STEM education.

Please see slides for key accomplishments in FY2018.

YES: Year of Education on Station. Eight STEMonstrations are already posted online, six more in production. New internship web site about to go live. It will be a redesigned web site with enhanced search capabilities. Space STEM forum.

Mr. Kincaid discussed the STEM Engagement budget.

Mr. Kincaid gave a summary of Space Grant, EPSCoR, and MUREP accomplishments. MUREP has a refocused portfolio. In EPSCoR, coordination with other EPSCoR agencies nationwide is being discussed. New NEXTGen STEM changes include proof of concept pilot activities, revamped approach for solicitations, and sunseting SEAP activities that no longer are in alignment with new approach to STEM Engagement.

He then discussed the approach to the multi-year solicitation.

OSE is spending 107% of its budget. Inequity in designated vs non-designated levels of funding. Current funding structure is \$36.29 M. Mr. Kincaid gave a history of SGC designations. His thinking is that not having a competition to become designated in 14 years is unfair. He gave scenarios about possible funding levels. He showed statistics about how much states spend on administrative costs, average 23% for administration and 7% for indirect costs.

Mr. Kincaid showed possible funding models being considered; equal funding, same as before, competitive, population based, or graduation model. He showed what states budgets would be under the different scenarios.

OSE has been encouraged to make competitive awards. One idea is to give each state \$600K and spend \$2,407 K as 3 awards at \$800 K each. Please see slides for possible funding models.

A lively discussion followed. Joeletta Patrick said that all components, SGC as well as OSP are taking a cut to get back into the box. She said the consequences of not doing so would be dire. Mr. Kincaid took questions from the audience using the online system.

- **Joeletta Patrick**, Space Grant Program Manager (Acting) and MUREP Program Manager

Ms. Patrick described her duties as director of MUREP and interim director of Space Grant. She has been at this for eight months and she has enjoyed working with us. She likes the second word in the term “civil servant.”

She introduced the three new Space Grant directors: Iowa, Michigan, and New Mexico.

Two types of specialists in SG network: Space Grant specialists provide connections to Center capabilities, review solicitations and annual performance documentation. Also perform site visits. NIF specialists work with fellowships.

Please see slides for a list of the team at NASA Centers and HQ. Contacts at centers based on geographical locations. Please see slides.

- **Erica Alston**, ARCD Programmatic Support (and also **Trinesha Dixon and Mike Cherry**)

Ms. Alston said she is very proud of working in the Space Grant program. She is appreciative of what Space Grant does and its significance.

Fifth year extension solicitation is out. Major changes involve period of performance and student award values. Significant awards threshold has been reduced to \$3,000.

Please see slides for the status of the evaluation process.

For space law, six proposals were received. Nebraska was selected.

Sonya Greene talked about IPA update. Susie Johnson (ID) and Colleen Fava (LA) have been selected as fellows. Tentative start date is October 2018. Deliverables include a year in review for SG and communication plan for ARCD for both internal and external audiences.

Trinesha Dixon discussed SREB Sponsorship. Pilot partnership between SG and MUREP to attend a conference.

Mike Cherry discussed data calls and OEPM. Two data calls last year. There is a sizable difference between the submitted statistics. There have been issues with data accuracy.

FY2018 data call due January 19, 2019. The data call will cover Fall 2017, Spring 2018, and Summer 2018. Data call coming for 2018 White House MSI Funding Report.

Frank McDonald gave the status of the USIP program status. Of the 39 projects, six have flown. They expect 31 to be ready by the end of the project. Please see slides for status of the project and a list of participating states.

Internships update: Stipend has been increased. See slides for details. A new portal is under development. Once in place in November 2018, students can apply for future years, as well. See slides for transition process timeline for the new system.

Continue with Q&A with Mike Kincaid and Joeletta Patrick.

Q. Why change funding model if current model works well? Because we can do better and, if you are a program state, you may find it unfair that you do not have a chance to become designated.

Q. Why have competitive awards? We want to try what works best. We want to develop a better competitive model.

Q. About voting your preferences: You will be able to see the results of the voting after you vote. We have a few months to think about the funding model. OSE is open to suggestions on how the funding model should work. This issue will be discussed further in the flipped session.

Mr. Kincaid closed by thanking us for putting up with the substantial amount of changes that have been taking place in the Space Grant program.

10:40 Student Poster Session (posters up all day) and Refreshment Break

NASA Office of STEM Engagement Leadership, continued

11:20 Part II - Flipped Meeting discussions, session led by **Chris Koehler** (CO SGC)

Minutes will be provided at a later date

TOPICS:

- **Apollo 50th Anniversary – sharing ideas**
- **Evaluation technical assistance planning feedback**
- **Upcoming multi-year solicitation feedback**

12:20 **Pick up lunch food**

12:40 **Lunch Speaker:** Legacy of Apollo: Meeting Challenges and Finding New Perspectives - *Jeff Taylor*, University of Hawaii (sponsored by HI SGC)

Group picture was taken after the talk.

Formal Higher Education Highlights

1:30 NASA Preparation for Academia - *Tomas Gonzalez-Torres* (IA SGC)

Angela introduced the speaker, who is the incoming director of Iowa Space Grant. He was a flight director at NASA before coming to Iowa State in 2016. He was asked to teach a senior design course. He looked at problems he encountered when he was a flight director. He recommended to look for mishaps, find ways to fix them, and to make sure that the problem is not encountered again.

One example of problem solving dealt with the Hubble telescope. Different orbit, different altitude. You can't get to the Hubble from ISS. They developed a procedure to deal with the issues. Please see slides for details. They developed the list and added to it based on their experiences and mistakes.

He talked about his experience at the Royal Society, seeing Newton's handwriting and meeting Steven Hawking.

1:45 The CU Space Show - Breaking the mold for the large lecture classroom – *Chris Koehler* (CO SGC)

Angela introduced the speaker. Chris developed a new course he developed at the University of Colorado. In 2015 he was asked to develop a Space Minor and to teach the required course for the minor.

Goals of the course: various aspects of space, create connections, involvement. See slides for details.

Chris was very impressed with a talk he saw from Julius Dasch a number of years ago and he also wanted to effectively deal with a large, crowded classroom. He wanted it to be fun and he wanted it to be live. Senses, stories, costumes, different lectures, lectures that will make the students be comfortable and be a part of the class. The course is disguised as a show. See slides for class structure and new and unique methods Chris incorporated. He showed pictures of classroom settings and costumes he wears. He showed clips from the video segments he shows in class. Each segment is 10 minutes. Last segment of the class is about the future.

Pathway prime directives: see slide for complete text. Teaching evaluations show an over 90% satisfaction rate.

Working Groups

2:00 Working Group overview (Pinnacle)

This session has been shortened to make up for lost time. Working group reports due at 3:40. There now is a new working group, Communications.

2:10 Working Group Breakouts, followed by break and reports

- **Aeronautics Research**

Michaela Lucas (NE) reported. She reviewed the history of the working group and the proposal for faculty fellowships that Mary and Haim submitted in Fall 2017. Unfortunately, such a

fellowship is not a priority for NASA and the working group will concentrate on other projects. Also discussed at the working group breakout were the readiness program in Connecticut and MSI flight academy program in Virginia. Connecticut is transitioning its helicopter program to a quadcopter program.

- **Human Exploration and Operations**

Dale Thomas (AL) reported. The working group discussed unpaid internships, how to work with SpaceHab, and wearable technology. Texas Space Grant is sponsoring a design challenge (please look at their web site). Two-way communication with SG consortia and HEOMD.

- **Science**

Tom Durkin (SD) reported. The working group discussed SMD-related education programs. For example, NH supported students to go to Goddard and meet with researchers. Texas sent students to the SEEM Program, and also to the Robotics Mining Program. A discussion followed regarding what the states were doing in honor of the 50th anniversary. They also discussed responding to NASA challenge and planning with local museums.

- **Space Technology**

Mason Peck (NY) reported. How best to combine and take advantage of the expertise of universities in ST. What is unique about SG so we can better engage with STMD? The ST fellowship is very attractive to students. Please encourage your students to apply. The working group also discussed whom to invite from STMD to the Spring 2019 meeting.

- **Communication (NEW)**

Susie Johnson (ID) and Colleen Fava (LA) reported jointly. 32 people attended the meeting. A lot of great ideas. Training for new directors and new coordinators. How do we communicate with NASA and vice versa?

3:00 **Refreshment Break and Networking**

Space Grant Foundation

3:50 *Philippe Geubelle*, National Space Grant Foundation President (IL SGC)

Angela invited Philippe to give a report on the Foundation. Mitch Hobish, the previous executive of the Foundation, has left and a search was opened. Several excellent candidates. Five finalists were selected. The list was then reduced to two and, after several interviews, a director has been selected. He could not be at the meeting but he has been very involved. His name is Kevin D Freese. Mr. Freese served as an Air Force Officer, mechanical engineer, extensive involvement in entrepreneurship. Also involved with philanthropy.

Philippe listed names of the Foundation Board members and also described the mission statement of the Foundation: to promote and provide students with transformational STEM educational and research opportunities; to support public engagement in areas related to NASA's missions and SG consortia; and raise funds from companies, from other philanthropic organizations and from donors to support STEM. Also, to monitor and grow endowments, provide services to NASA Centers and to SG consortia.

Q. Can Foundation help with individual foundations of SG consortia? A. I am sure Kevin will be happy to discuss that with you. Chris Koehler thanked Philippe for his lengthy service as chair of the Foundation.

4:20 Open-Mic/Announcements

Angela would like to open a discussion on the structure of the regional meetings.

Jay Staker (IA SGC) informed us about the AHAC conference on high altitude ballooning, to be held 26-27 October. Abstracts due end of September.

Hisham Alnajjar (CT SGC) described the successful quadcopter program in CT. The program is based on a similar program in Minnesota. They are transitioning their helicopter program into a quadcopter workshop, which is offered to faculty and students. Faculty would be trained and establish a program at their institutions.

James Flaten (MN SGC) said that Minnesota will sponsor a high-powered rocket competition. He showed a rocket launch by community college students. They will be flying more rockets in May 2019, in a competition. Please look at flyer for details and encourage your colleagues to participate.

David Berger (NASA Armstrong) informed us that the new MIRO solicitation is open on NSPIRES. Lead proposers need to be an MSI but a four-year institution also needs to be involved. Proposing institution can work with SG for public education.

4:30 Adjourn

Meeting was adjourned at around 6 p.m. There was a lengthy discussion about the future of Space Grant. Because of the length of the meeting, the walking discussions will be held at a future Space Grant meeting.

6:00 Reception

General Session: Day 3, Saturday, September 15, 2019

8:00 Hot Breakfast

9:00 Announcements and Updates

Angela called the meeting to order and thanked John Kosmatka for leading the lively discussion on Friday afternoon.

Cass Runyon is doing fine in Charleston, SC, surviving the hurricane. She is also volunteering with relief efforts.

All attendees were invited to sign a farewell card for Susan Brew (AZ) who is retiring.

SG Regional Breakouts

9:10 Charge to regions (2019 Regional meetings; Mid-Atlantic and Northeast discuss combining)

Angela asked us to discuss connections between states and NASA centers, realignment of regional groups, and a possible merger of Northeastern and Mid-Atlantic groups, partly because it is difficult for NASA personnel to attend all regional meetings.

Some discussion followed. Questions were raised on the intent of the regional meetings. The general consensus is that regional meetings are opportunities for affiliates to showcase their research. There was a suggestion to hold the regional meetings a day after the national meeting, so as to minimize travel time and costs. There also was a suggestion to organize regional around themes.

9:20 Regional Breakout Sessions followed by highlights.

- **Great Midwestern**

The Great Midwestern group had a lengthy discussion about the purpose of having a regional meeting

- **Mid-Atlantic & Northeastern**

The two regions met jointly. There was no meeting of the minds and the groups separated and proceeded to hold their own separate meetings.

The Mid-Atlantic region will have its regional meeting in Charleston, West Virginia.

The Northeastern region will have its meeting in Rhode Island. They discussed joining efforts for the 50th anniversary of the Moon landing.

- **Southeastern**

The Southeastern region did not want to lose its regional structure. Their regional meeting will be held in Nashville, Tn.

- **Western**

The Western region would like to have regional meetings every year and to not have national meetings in the Fall. The 2019 regional meeting will be held in Big Sky, Montana.

11:05 Meeting Conclusion with Recap of Key Discussions, Key Decisions, Upcoming Events, and Outstanding Actions

Joeletta Patrick stressed that the focus of national meetings is NASA and the focus of regional meetings should be students. She wants us to continue feeding her office with information and activities of our consortia and our students.

There were suggestions (Luke Flynn and Dale Thomas) for having fewer meetings and more webinars to bring the Space Grant community together.

Angela mentioned that the request for proposals for hosting the Fall 2020 national meeting would be distributed soon.

11:15 **Adjourn Space Grant meeting** (non-EPSCoR states please take conversations to the Atrium so the EPSCoR meeting can commence)

Everyone in attendance profusely thanked the Vermont Space Grant team, Darren Hitt, Debra Fraser, and all other staff members and volunteers for a very well-run meeting and for Vermont SG's hospitality.

Respectfully submitted,
Haim Baruh, Secretary
February 27, 2019