

**National Council of Space Grant Directors Fall Meeting
Portland, Oregon
October 22–24, 2009**

Minutes submitted by Ed Duke, Feb. 22, 2010

Thursday, October 22, 2009

1. Welcome – ***Jack Higginbotham***, Fall Meeting Host and Director Oregon Space Grant Consortium

2. Space Grant Introductions – ***Chris Koehler***, National Council Chair and Director Colorado Space Grant Consortium

http://national.spacegrant.org/meetings/presentations/2009_Fall_National/Ex_Comm_Fall_2009_Update.pdf

Chris Koehler acknowledged the loss of two members of the Space Grant family during 2009: Bill Hiscock (MT) and Paul Lam (OH).

3. Executive Committee Update – ***Chris Koehler***, Chair

http://national.spacegrant.org/meetings/presentations/2009_Fall_National/Ex_Comm_Fall_2009_Update.pdf

Chris Koehler introduced new Executive Committee members (Aileen Yingst, WI; Alec Gallimore, MI; and Ed Duke, SD) and reviewed ongoing activities of the Executive Committee. These include monthly teleconferences, the Transition Meeting (July 22, 2009, in Washington, DC), a survey for input into the 2010-2014 program announcement, the Mission Directorates Working Groups, electronic newsletters, telephone calls to Directors from the Chair, and the establishment of a Meeting Agenda Committee.

4. Secretary's Report – ***Ed Duke***, Secretary and Director South Dakota Space Grant Consortium

Minutes of the Spring 2009 (DC) and Fall 2008 (Atlanta) Council Meetings were introduced, but not approved at this time.

5. Treasurer's Report – ***Peter Sukanek***, Treasurer and Director Mississippi Space Grant Consortium

Peter Sukanek summarized balances in the National Space Grant Foundation accounts as of the end of June 2009 (table on following page). Between Nov. 30, 2008, and June 30, 2009, the balance in the Endowment decreased from \$6,350.61 to \$4,390.46, and the balance in the Expendable account decreased from \$20,892.35 to \$18,731.93.

Treasurer's Report

ON DEPOSIT WITH NSGF

	ACTIVITY	PREVIOUS BALANCE (as of 30 Nov 08)	CURRENT AMOUNT (as of 14 Jul 09)
Endowment		\$6,350.61	
Income	Interest/Gifts		\$132.88
	Change in Market Value		(\$2,093.03)
	Other		
Total Endowment			\$4,390.46*
Expendable		\$20,892.35	
Income	Interest/Gifts		\$31.83
	Plaque		(\$96.60)
	Meeting Expenses		(\$123.08)
	Speakers' Travel		(\$972.57)
	Scholarship Donation		(\$1,000)
Total Expendable			\$18,731.93

*As of 31 Dec 08

6. Nominating Committee Update and Elections – **Bill Byrd**, Committee Chair and Director Iowa Space Grant Consortium
Wally Fowler (TX) and Philippe Geubelle (IL) were elected to the National Space Grant Foundation Board of Directors.
7. Lunar CRater Observation and Sensing Satellite (LCROSS) – **Peter Schultz**, Director Rhode Island Space Grant Consortium
One of several science presentations by Space Grant Directors at the invitation of the Meeting Agenda Committee.
8. Sailing the Solar System: Plasma Drives and Student Zeal – **Robert Winglee**, Director Washington Space Grant Consortium
One of several science presentations by Space Grant Directors at the invitation of the Meeting Agenda Committee.
9. Roving Mars: 2,000+ days into a 90-day mission – **Aileen Yingst**, Director Wisconsin Space Grant Consortium
http://national.spacegrant.org/meetings/presentations/2009_Fall_National/PortlandOR_SG_Mars.pdf
One of several science presentations by Space Grant Directors at the invitation of the Meeting Agenda Committee.
10. Program Update – **Diane DeTroye**, National Space Grant Program Director
http://national.spacegrant.org/meetings/presentations/2009_Fall_National/2009FallNationalMeeting.pdf
New staff at NASA Headquarters include Latecia Durham, Space Grant/EPSCoR Program Analyst and Coordinator, and Luis Rubelo, NASA EPSCoR Project Manager.

The presentation addressed National STEM Education Priorities, NASA Education Priorities, the recently completed 20th Year Evaluation, and the upcoming 2010 Budget Solicitation.

A. National STEM Education Priorities (the Role of NASA)

Obama Administration Priorities – The President’s goal is to “*Educate the next generation with 21st century knowledge and skills while creating a world-class workforce.*” In support of that goal, the following are especially relevant to Space Grant:

- NASA’s ability to inspire a Nation
- Quantity and quality of Math and Science teachers
- Students prepared for STEM related careers
- Educational opportunities for women and minorities
- Fellowships and interdisciplinary graduate programs
- Supporting future entrepreneurs
- Scientific innovation

Congressional Priorities – “*It is the sense of Congress that NASA's educational programs are important sources of inspiration and hands-on learning for the next generation of engineers and scientists and should be supported.*” Important Congressional priorities include:

- Competitive Grants (Global Climate Change Education, K-12, Public Engagement through museums, science centers, planetaria) [Congress directs a portion of the Space Grant appropriation to these special grant programs]
- Evaluation to justify the use of Federal funds [Space Grant is the largest program in the Office of Education and its performance is closely scrutinized]
- Collaboration of Federal agencies (avoiding duplication of effort, sharing best practices) [Congress is supportive of NASA education programs but wants to be sure that they doesn’t duplicate other federal programs]

Chief Administrator Bolden’s Priorities – Administrator Bolden is passionate about education. Deputy Administrator Laurie Garver will demand accountability in Space Grant programs. Among Administrator Bolden’s priorities are the following:

- Build on our investment in the International Space Station
- Accelerate development of our next generation launch systems to enable expansion of human exploration
- Enhance NASA's capability to study Earth's environment, lead space science to new achievements
- Continue cutting-edge aeronautics research
- Support the innovation of American entrepreneurs
- Inspire a rising generation of boys and girls to seek careers in science, technology, engineering and math

With specific regard to STEM education, Administrator Bolden has communicated to Assistant Administrator for Education Joyce Winterton that “*Our challenge from the*

President is to emphasize STEM education and reinvigorate inspiration.” Areas of focus should include:

- Inspire students and help them believe in themselves
- Professional development for educators
- Performance metrics to justify investments
- Diversity including females and geographic reach

Diane DeTroye stated that her office would seek opportunities to connect Administrator Bolden with Space Grant consortia as he travels around the country.

B. NASA Education Priorities

Diane DeTroye summarized the NASA Education Pipeline: *Informal STEM Education → K-12 STEM Education → Higher Education STEM undergraduate students → Higher Education STEM graduate students*. She emphasized that the primary role of Space Grant is in undergraduate and graduate Higher Education. She reviewed the Office of Education Outcomes and Objectives emphasizing that Space Grant focuses on Outcome 1 (Higher Education) and that Space Grant activities such as Educator Professional Development (Outcome 2) must quantitatively demonstrate impact.

DeTroye reviewed the Performance Assessment Rating Tool (PART) measures for Higher Education, K-12 Education, and Informal Education:

Higher Education PART Measures

- Number of underrepresented and underserved students participating in NASA education programs.
- Percentage of student participants employed by NASA, aerospace contractors, universities, & other educational institutions.
- Percentage of undergraduate students who move on to Higher Education advanced education in NASA-related disciplines.
- Ratio of funds leveraged by NASA funding support.
- Number of new or revised courses targeted at the STEM skills needed by NASA that are developed with NASA support.
- Number of institutions served in designated EPSCoR states.

K-12 Education PART Measures

- Percentage of elementary and secondary educators who either obtain NASA content-based education resources or participate in short-duration NASA education activities and use NASA resources in their classroom instruction.
- Number of elementary and secondary student participants in NASA instructional and enrichment activities.
- Percentage of elementary and secondary educators who participate in NASA training programs who use NASA resources in their classroom instruction.
- Percentage of students expressing interest in science, technology, engineering, and math (STEM) careers following their involvement in NASA elementary and secondary education programs.

- Cost per participant of programs in elementary and secondary programs.

Informal Education PART Measures

- Percentage of Museums and science centers that participate in NASA networks and that use NASA resources in programs and exhibits.
- Number of museums and science centers across the country that actively engage the public in major NASA Informal Education events.
- Dollar invested per number of page views for NASA Education website.

DeTroye highlighted aspects of the FY2010 Program and budget request. For Higher Education/STEM Education these include:

- Space Grant 5-year awards
- Community College partnerships
- Student launch opportunities

The FY2010 budget for the Office of Education is \$126.1 million; of that total, Space Grant is \$28.43 million (23%) and EPSCoR is \$9.95 million (8%).

DeTroye summarized Office of Education strategies to meet national STEM challenges:

- Focus on NASA science, aerospace, exploration missions
- Increasing use of education technologies (*video conferences, web, videos, pod, and vodcasts*)
- Expert advice on major investment decisions: target audiences, communications, implementation, etc. (*National Research Council study, professional organizations, launch forums, focus groups*)
- Engaging the Nation in exploration (*museums, student launch opportunities, internships and fellowships*)
- Focused effort to ensure diversity of participants
- Innovations in STEM Education
- Operating Effectiveness and Efficiency
 - Performance Management and data-driven decision making
 - Evaluation for impact
 - Competitive acquisitions
 - Partnerships with Federal agencies
 - Sound business and management practices

She also reviewed Office of Education strategies for interagency collaborations and partnerships:

- NASA collaborates and partners with other agencies to jointly focus on management, regulatory, and operational education programming issues impacting federal agencies.
- Interagency participants identify, propose, and provide mutual support in implementing solutions to common issues impacting efficiency and effectiveness.
- NASA collaborations and partnerships include:
 - *Federal Interagency Committee on Education* (Chaired by Dept. of Ed.)

- *Academic Competitiveness Council* (collaboration on development of STEM evaluation measures)
- *National Science and Technology Council* (NSTC) Subcommittee on Education and Workforce Development
- *NSTC Subcommittee on Innovation and Competitiveness*
- *Federal Evaluators Informal Association*
- Working groups related to data collection, privacy issues, PART reporting, other issues

DeTroye announced winners of the Steckler/Space Grant solicitation: AZ (2), CA, CT, FL, ID, MA, MT, NV, NY (2), NM, OH, PA, TX (2), VA, and WI.

C. 20th Year Evaluation

Katie Pruzan, NASA Senior Program Associate, Valador, Inc. (NASA Headquarters), presented results of the 20th Year Evaluation.

Program Performance and Results

- The Fellowship/Scholarship component is very strong
- Management was highly rated in high performing consortia
- Workforce development is a hallmark of the program
- Awards to underrepresented minority and female students indicate a strength of the program
- There is room for improvement in terms of meaningful engagement of minority serving institutions

Network Participation and Responsiveness

- Responsiveness to NASA HQ requests are a strength
- Improvement is needed in terms of the quality and timeliness of annual data reporting

Affiliate Opinion Survey

- “Impact” was the most highly rate scale among respondents
- “Impact” is most strongly related to “Leadership” category
- There is no statistically significant difference between the “Impact” ratings for minority and non-minority institution types

Consortia received one of four evaluation results: Pass (second most cases), Pass with Weakness (most cases), Pass with Deficiency (third most cases), or Serious Deficiency (fewest cases). Only relative numbers of states in each category were given.

She summarized the results in stating “*Space Grant demonstrates success in terms of workforce development through student awards, hands-on activities, course development, publications, and retention in STEM disciplines.*” Consortia that performed well in the evaluation demonstrated “*Strong leadership, communication, management, and the clear articulation of goals, objectives, measures, and results.*”

D. 2010 Budget Solicitation

DeTroye announced that the 2010 budget solicitation would be issued soon, and that there would be 60 days to respond. Highlights of the new solicitation include:

- “Authentic”, hands-on Student Experiences
 - Active participation in science and engineering disciplines
 - Engaged in NASA, NASA-related industry, with NASA PIs
- Topical areas of interest (from Administrator Bolden)
 - Aeronautics research
 - Environmental Science and Global Climate Change
- Geographic Diversity
 - as well as racial, ethnic, and gender diversity
- Community College involvement (including Technical Schools – Obama Administration emphasis)
- Innovation – new ways of executing state programs
- Programmatic rigor and evaluation -- Goals, SMART Objectives, targets and metrics, formative and summative evaluation
 - Justify your investments

Before closing, Diane DeTroye announced the following Upcoming Events and Activities:

- Ares 1-X Education Launch Forum – October 27, 2009
- NASA Education Summit – November 2, 2009
- NASA Industry-Education Forum – tentatively December 3, 2009
- Summer of Science – 2010 (Joyce Winterton, Administrator Bolden, and Secretary of Education Arne Duncan are working on this; Bolden would like to see one million students in hands-on activities during summer 2010)

Friday, October 23, 2009

11. National Space Grant Foundation (NSGF) Update – **Wally Fowler**, Chair and Director Texas Space Grant Consortium and **Mark Fischer**, Executive Director NSGF
http://national.spacegrant.org/meetings/presentations/2009_Fall_National/NSGF_NtlMeeting.pdf

Mark Fischer reviewed the personnel, support services, and activities of the NSGF. The following opportunities were discussed in detail:

- Pathevo Education/Career Exploration Software
 - Requires Space Grant funding, but provides matching in the range of 1.5 : 1 to 9 : 1
 - Already implemented in IA, MD, TX, and WV
- Virginia Aerospace Science and Technology Scholars
 - Interactive on-line NASA-based curriculum geared toward High School Juniors
 - Modeled after Texas Aerospace Scholars at NASA/JSC
 - NSGF and Virginia Space Grant Consortium will help export this model to other consortia

- One-Stop-Shop for NASA Internships and Fellowships
 - Envision management via a Broker-Facilitator; hope to have open solicitation in September 2010

In addition, the NSGF provides technical assistance for the CMIS Working Group, the International Electric Propulsion Conference (MI), the NASA International Year of Astronomy (NASA HQ-SMD), ESMD/Space Grant Projects (KSC), Systems Engineering Curriculum (TX, JSC), the Space Grant 20th Year Evaluation, and the AESP Implementation Mini-Grant program.

A range of support services are currently in use by 31 of the Space Grant consortia. These include workshop registration, website design and hosting, online fellowship applications (12 states), assistance with faculty and student stipend delivery (3 states), longitudinal tracking (24 states), and a proposal submission and review system (9 states).

12. Microbe Hunting In and Beneath Antarctic Ice – **Chris Fritsen**, Director Nevada Space Grant Consortium

http://national.spacegrant.org/meetings/presentations/2009_Fall_National/Fritsen_Portland.pdf

One of several science presentations by Space Grant Directors at the invitation of the Meeting Agenda Committee.

13. Making Space Science More Accessible – **Jobi Cook & Cynthia Hall**, Sponsored by **Chris Brown**, Director North Carolina Space Grant Consortium and **Mitch Colgan**, Director South Carolina Space Grant

http://national.spacegrant.org/meetings/presentations/2009_Fall_National/MeetingTheNeeds.pdf

The presentation described a joint initiative by the North Carolina and South Carolina Space Grants to make Space Science more accessible to persons with disabilities. An important educator and NASA approved resource for anyone working with persons with disabilities is:

http://nasa.gov/audience/foreducators/topnav/materials/listbytype/Space_Science_Is_for_Everyone.html

14. Open Mic – Topics and announcements from the floor (5 minutes each)

Janice Riley (Owen Software) answered questions on the NSGF-Pathevo program.

Deborah Murray (Virginia Space Grant Consortium) gave a brief description of the Langley Aerospace Research Summer Scholars (LARSS) Program.

http://national.spacegrant.org/meetings/presentations/2009_Fall_National/LARSSPres.pdf In the period 2006–2009, 37 Space Grants sponsored 122 students in the program.

Brad Bailey (NASA Ames Academy) summarized the NASA Academy Program.

http://national.spacegrant.org/meetings/presentations/2009_Fall_National/Academy_Briefing.pdf There are five academies (ARC, GRC, and three at MSFC). Space Grants

provide input in selection of applicants, provide financial sponsorship (\$5000 per participant), and provide assistance in connecting with Minority-Serving Institutions.

15. Plasma Propulsion for Space Travel – **Alec Gallimore**, Director Michigan Space Grant Consortium

http://national.spacegrant.org/meetings/presentations/2009_Fall_National/SpaceGrantEP_Gallimore.pdf

One of several science presentations by Space Grant Directors at the invitation of the Meeting Agenda Committee.

16. Montana Space Grant: E/PO lead for the new IRIS NASA SMEX Mission – **Angela Des Jardins**, Interim Director Montana Space Grant Consortium

http://national.spacegrant.org/meetings/presentations/2009_Fall_National/IRIS.pdf

Prime contractor for the Interface Region Imaging Spectrometer is Lockheed Martin. The EP/O activity will fund four teams beginning in 2011. Priority will be given to Minority-Serving Institutions and teams with limited prior aerospace activity. Promotion of the program through the Space Grant network will begin in fall 2010.

17. ZERO Robotics: an opportunity for students to use the ISS SPHERES experiment – **Jeff Hoffman**, Director Massachusetts Space Grant Consortium

http://national.spacegrant.org/meetings/presentations/2009_Fall_National/Zero_Robotics.pdf

Three mini-satellites are currently in zero-G on the International Space Station. ZERO Robotics is a program open to High School students and Undergraduates. The program currently involves NASA, DARPA, MIT, and industry partners, and there are plans to involve Space Grants in the near future. The next steps in the program are:

- Proposal preparation and submission (May–September 2010)
- Algorithm development (September–October 2010)
- Hardware test (competition)
- ISS hardware testing and demonstration on ISS

There will be more information on the program at the Spring Directors Meeting.

18. Mission Directorate Working Group Breakout Sessions and Summaries

The Mission Directorate Working Groups were formed as a result of the recommendation of Alan Ladwig (Obama Transition Team) that Space Grant should be more involved at the Mission Directorate level of NASA. MDWG Chairs provided the following summaries and recommendations:

Aeronautics: Chair, **Scott Tarry** (Director, NE)

Stephen Ruffin (new Director, GA) will serve as co-chair. Group recommendations and comments included:

- Space Grant should reestablish faculty opportunities at NASA Centers

- Space Grant should establish student opportunities at Centers, e.g., interdisciplinary competitions that involve students from Community Colleges and MSIs

Space Operations: Chair, **Tom Filburn** (Director, CT)

Group recommendations and comments included:

- Need to take advantage of the International Space Station, because this is the most important focus in SOMD
- There may be opportunities with NIH regarding bioscience on ISS (Mike Wiskerchen comment)
- Space Grant should establish contact with the new ISS specialist (Jeff Hoffman comment)
- Space Grant should be attentive to commercial firms that are developing lift capabilities
- Space communications is also an important area, and there may be student/faculty competition in this area next year

Science: Chair, **Paul Hardersen** (Director, ND)

Group recommendations and comments included:

- Space Grant should make a determined effort to match students with missions
- Space Grant should solicit information from missions regarding their student and faculty needs
- Prefer a model of student-faculty teams
- There is a great diversity in the types of projects, and whether connections are at the level of a NASA PI or at the level of a NASA Center
- The Working Group hopes to implement pilot projects in the next year

Exploration: Chair, **Wally Fowler** (Director, TX)

Group recommendations and comments included:

- Engineering design projects with KSC were cited as current examples of collaboration with ESMD
- Space Grant fellowship/scholarship students might serve as NASA outreach ambassadors
- Over 100 senior design projects are currently listed on the ESMD website
- New ESMD student opportunities include papers for design and research, and the Lunabotics competition
- There should be more collaboration and leveraging with ARMD

19. Weeklong Helicopter Training for Undergraduate Students – **Al Gates**, sponsored by **Tom Filburn**, Director Connecticut Space Grant Consortium

http://national.spacegrant.org/meetings/presentations/2009_Fall_National/HelicopterSeminar.pdf

Al Gates described this week-long student opportunity which covers helicopter basics and remote control and design of UAV helicopters. Students must have completed their freshman year of college. Cost is \$250 per student and 20-30 students can be

accommodated. The program runs Aug. 1–6, 2010, at Central Connecticut State University.

20. ESMD Space Grant Project presented by **Gloria Murphy**, ESMD Space Grant Project Manager and ESMD Senior Engineering Design Course presented by **Dr. Stephen Whitmore**, Utah State University ESMD Talk
http://national.spacegrant.org/meetings/presentations/2009_Fall_National/ESMD.pdf
http://national.spacegrant.org/meetings/presentations/2009_Fall_National/USU.pdf

Gloria Murphy described changes in the Space Grant ESMD Program that will be included in the next solicitation.

- For Space Grant Consortia the total budget is \$600K per year
 - Anticipate 15–25 grants, which will be 3 year grants
 - Proposals due Jan. 2010
 - Competitive, new grants, awarded through KSC (not augmentations)
- For Faculty Fellowships there is an additions \$150K budgeted
 - Anticipate 5 contracts
 - Proposals due Dec. 14, 2009
- For Course Development there is an additional \$55K budgeted
 - Anticipate 1 contract
 - Proposals due Dec. 14, 2009

Stephen (Tony) Whitmore presented information on development of a senior engineering design course on “Design and Testing of a Demonstration Prototype for Lunar or Planetary Surface Landing Research Vehicle (*LPSRV*).” More than 22 students were involved. There will be a Faculty Workshop in July 2010 at KSC to help other consortia implement this course.

21. Student Ballooning and the High Altitude Student Platform (HASP) – **Greg Guzik**, sponsored by **John Wefel**, Director Louisiana Space Grant Consortium
http://national.spacegrant.org/meetings/presentations/2009_Fall_National/HASP.pdf

Greg Guzik described the High Altitude Student Platform balloon program operated by the Louisiana Space Grant Consortium in cooperation with NASA’s Balloon Program Office.

- HASP provides the flight platform; Space Grants provide project funding
- Proposals due Dec. 18, 2009
- Launch from Fort Sumner, NM, around Sept. 1, 2010
- Flight at altitude of 35-40 km for 15+ hours
- Generally 12 student built payloads per flight
- There have been four flights to date; 17 institutions from 11 states

22. Satellite Tool Kit: A Great Tool for Space Grant Student at a Great Price (Donated!) – **Wes Bradley**, sponsored by **Chris Koehler**, Director Colorado Space Grant Consortium

Wes Bradley is a former COSGC student now working for Analytical Graphics Inc. He described their Satellite Tool Kit (STK) product. It has a variety of applications in research and education, e.g., teaching orbital mechanics. Bradley announced a special opportunity offering STK to Space Grant Consortia at no cost and opportunities to provide matching funds.

23. Open Mic – Topics and announcements from the floor (5 minutes each)

Dave Rosage and **Blanche Meeson** discussed 2010 Internships at GSFC.

http://national.spacegrant.org/meetings/presentations/2009_Fall_National/GSFC.pdf

- Examples of last year's projects are at <http://education.gsfc.nasa.gov/opportunities>
- Focus on Recruitment and then Retention of highly qualified students, especially minorities, women, students with disabilities
- Timeline for Summer 2010 internships:
 - Nov. 20 – application open for students
 - Feb. 7 – applications close for students
 - Mar. 15 – students notified
 - Apr. 30 – decisions complete, process closed
- Required Space Grant support is ~\$7000 per student (housing and stipend)

24. Wide-field Infrared Survey Explorer (WISE): A new storehouse of knowledge about the Solar System, Milky Way, and Universe – **Jed Hancock**, sponsored by **Doran Baker** and **Dwayne Westenskow** Co-Directors Rocky Mountain Space Grant Consortium

http://national.spacegrant.org/meetings/presentations/2009_Fall_National/WISE_SpaceGrant.pdf

Jed Hancock described the Wide-field Infrared Survey Explorer (WISE). The mission is a precursor to the James Webb Space Telescope. Launch of WISE is planned for December 2009 with a 10 year plan of operation.

25. The Penn State Astrobiology Research Center: Probing "Unusual" Microorganisms of the Earth – **Chris House**, Director Pennsylvania Space Grant Consortium

http://national.spacegrant.org/meetings/presentations/2009_Fall_National/Chris_House_Presentation.pdf

Chris House described the Penn State Astrobiology Research Center project on Probing "Unusual" Microorganisms of the Earth. There have been approximately 50 graduates of the program, and three of those are employed at GSFC.

26. A Tribute to Bill Hiscock

Angela Des Jardins (MT) and members of the audience shared their memories of Bill Hiscock, who passed away on April 21, 2009.

27. Consortium Coordination Session – NASA HQ, Directors, and Coordinators
http://national.spacegrant.org/meetings/presentations/2009_Fall_National/2009FallNationalMeeting.pdf

Diane DeTroye and **Katie Pruzan** reviewed the following:

- Longitudinal Tracking results
- 2008 Data Reporting
- Office of Education Performance Measurement System
- Space Grant policy clarifications from recent survey
- NASA One-Stop Shopping Initiative

1. Longitudinal Tracking

Data for 2006 through 2008 show overall retention in STEM fields of 92.7% and total STEM employment at 1,102. Information on relevant OMB data reporting requirements can be accessed at www.expectmore.gov.

2. 2008 Data Reporting

Significant discrepancies were noted in FY2008 data reporting. The greatest area of concern is in the PART Measure covering total number of participants in Fellowship/Scholarship, Higher Education, and Research Infrastructure. The data show a decrease from 61,942 (FY2006) to 32,461 (FY2007) and finally 21,503 (FY2008).

Discussion: Comments from the audience suggested (1) the definition of significant student involvement narrowed over the three-year period, and (2) the CMIS system often resulted in double- or triple-counting of students.

3. Office of Education Performance Measurement System

The new OEPM reporting system (CMIS replacement) will be phased between fall 2009 and spring 2010. The CMIS Working Group meets after this meeting (Oct. 22, 2009). Until the new system is fully implemented, consortia should continue to collect their FY2009 data following past practices.

4. Space Grant policy and clarifications from recent survey

- Reporting – The OEPM system should allow streamlined reporting; BUT, accurate reporting is critical
- Definition of a citizen – citizens only, not permanent residents, foreign nationals, or resident aliens
- Definition of an affiliate – “an organization that contributes to the achievement of the consortium objectives; participation in the consortium programs and projects; affiliates may contribute or participate at different levels”
- Definition of equipment – “tangible nonexpendable personal property including exempt property charged directly to the award having a useful life of more than one year and an acquisition cost of \$5,000 or more per unit or coherent system”; cannot

piece larger systems together from smaller components costing less than \$5,000 (refer to NASA Grant and Cooperative Agreement Handbook http://prod.nais.nasa.gov/pub/pub_library/grcover.htm)

- Cost-sharing – “Unrecovered indirect costs may be included as part of cost sharing or matching only with the prior approval of the cognizant NASA grant officer”; these arrangement should be in the original proposal budget and not introduced “after the fact”
- Direct versus indirect participants – Management and the CMIS Working Group are developing clear definitions

5. NASA One-Stop Shopping Initiative (OSSI)

The overall goals of OSSI are to enhance NASA STEM workforce development processes, to improve the “branding” of NASA internship and fellowship opportunities, and to promote efficiency. Important features will include:

- one electronic web-based application for students seeking opportunities at NASA
- standardized student eligibility requirements and selection processes
- expand access for Minority-Serving Institutions
- provide feedback to students regarding applications

Discussion on Consortium Coordination Session:

Q: Will OSSI include Space Grant Fellowship/Scholarship students? (Shehata)

A: Not at this point.

Q: The drop in participant numbers between FY2006 and FY2008 might be related to changes in program guidance over that period. (Fritsen)

A: Diane did not think such changes occurred during the period.

Comment: OSSI must address the issue of timing for internship selection relative to when consortia know what their summer budget will be. It might be useful if industry partners are included in OSSI at some future point. (Caldwell)

Saturday, October 24, 2009

28. Spring 2010 National Meeting Update – ***Richard Berendzen***, Director District of Columbia Space Grant Consortium

http://national.spacegrant.org/meetings/presentations/2009_Fall_National/2010NationalMeetingDC.pdf

The Spring 2010 Directors Meeting will be at the Fairfax at Embassy Row, Washington, DC, March 4–6, 2010.

29. Fall 2010 National Meeting Update – ***Terry Shehata***, Director Maine Space Grant Consortium

The Fall 2010 Directors Meeting will be at the Portland Holiday Inn at the Bay, Portland, ME, Oct. 14–16, 2010.

30. Institute for Broadening Participation: Strategies for Increasing Diversity in STEM – **Sandy Thomas** and **Ashanti (Pyrtle) Johnson**, sponsored by **Alec Gallimore**, Michigan Space Grant Consortium

http://national.spacegrant.org/meetings/presentations/2009_Fall_National/IncreaseParticipationAndDiversityInSTEM.pdf

The Institute for Broadening Participation (IBP) has the following mission:

- To make education and careers in science more accessible to students, particularly underrepresented minorities
- To support faculty and administrators as they work to include students from a variety of backgrounds in their programs
- To foster an on-going exchange of ideas and resources between individuals and institutions who are working to navigate their future in the STEM fields

Underrepresented minorities are 31% of the US population of 20-24 year olds, but make up generally less than 10% of the STEM population in BS, MS, PhD, Post-docs, and Faculty.

IBP offers programs for recruitment, retention, and evaluation. They offer several approaches including different outreach methods, a URM student directory with over 30,000 entries, and assistance with outreach for summer Research Experiences for Undergraduates.

31. NASA University Student Launch Initiative for a Senior Design Capstone Course at Utah State University – **Shannon Eilers**, sponsored by **Doran Baker** and **Dwayne Westenskow** Co-Directors Rocky Mountain Space Rocky Mountain Space Grant Consortium

Shannon Eilers described a successful senior design course at Utah State University. A team of ~26 students (3 female) took part, culminating in competing at the University Student Launch Initiative at Marshall Space Flight center.

32. RockOn 2010 – **Chris Koehler** and **Mary Sandy**, Directors Colorado and Virginia Space Grant Consortia

http://national.spacegrant.org/meetings/presentations/2009_Fall_National/DC_RockOn_Update.pdf

Chris Koehler described the success of the RockOn 2008 and 2009 Workshops. RockOn 2010 will be June 19–24 at the NASA Wallops Flight Facility. The registration fee is \$1699. In the future, 5-6 RockSat payload canisters will be available at a cost of \$12,000 per 20 pound canister, and Wallops plans to use a larger rocket, capable of reaching 140 km.

33. Student Space Programs Lab: Training the Next Generation for the Space Industry – **Sven Bilen**, sponsored by **Chris House**, Director Pennsylvania Space Grant Consortium
http://national.spacegrant.org/meetings/presentations/2009_Fall_National/SSPL.pdf

The Student Space Programs Lab develops a variety of space hardware projects: cubesats, nanosats, sounding rockets, high altitude balloons, and microgravity flights. SSPL uses the annual CanSat Competition as an on-ramp course for first-year students. SSPL is integrated with the curriculum in other ways including senior design and a Space Systems Engineering Certificate program.

34. Nanosatellite Projects for Teaching and Research – **Mason Peck**, sponsored by **Yervant Terizan**, Director New York Space Grant Consortium

Mason Peck described nanosats in research and education at Cornell. A nanosat student conference is planned for Feb. 18, 2010, at Brown University.

35. Space Grant funded Internship Opportunities at United Technologies Corp. – **Steve Tongue**, sponsored by **Thomas Filburn**, Director Connecticut Space Grant Consortium

Steve Tongue described internship opportunities at United Technologies.

36. Space Grant Internship Workgroup Update – **Barrett Caldwell**, Chair and Director Indiana Space Grant Consortium
http://national.spacegrant.org/meetings/presentations/2009_Fall_National/SGIWG.pdf

The Space Grant Internship Working Group was formed in February 2008 in order to study issues concerning Space Grant consortia and the NASA internship process. The group met with Diane DeTroye at the Fall Directors Meeting in Atlanta, and has continued to examine the issues since then.

For 2009 the Group defined the following tasks:

1. Identify Space Grant needs for providing effective internship matching information to students;
2. Provide information guidance to students to improve their internship applications;
3. Describe elements of logistic support that can help improve Space Grant efficiency in placing interns and maximizing their productivity;
4. Provide feedback as requested by NASA regarding operational and institutional sustainability of a mature, multi-program internship matching program.

The Group continues work on collecting input from Space Grant consortia and NASA Centers, and examining opportunities that will develop with NASA's One-Stop Shopping Initiative.

Adjourn at 12:04 pm