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**National Space Grant Director's Meeting  
October 28-31, 2007  
Las Cruces, NM**

A. National Council of Space Grant Directors, William Garrard (MN) Chair,  
Monday, Oct 29, 8:30 AM – 5:00 PM

1. Overview and Opportunities of the Innovative Partnerships Program ([ipp.nasa.gov](http://ipp.nasa.gov))  
Doug Comstock, Director, [doug.comstock@nasa.gov](mailto:doug.comstock@nasa.gov)

- IPP does partnerships among: Industry, Academia and Government.
- IPP is seeking to add value to NASA's Mission Directorates and their programs and projects, through technology development and infusion to meet mission needs.
- IPP seeks leveraged funding to address these technology barriers via cost-shared, joint-development partnerships.
- IPP seeks to transfer technology developed by NASA for commercial application and other benefits to the Nation
- IPP seeks increased participation from new sources of innovation for addressing NASA's technology challenges.
- Program Elements: technology infusion, innovation incubator, partnership development
- SBIR/STTR 3-phase program: Feasibility Study, Technology Development, Technology Infusion/Commercialization Stage
- The NASA 50th Anniversary Essay Competition is intended for middle and junior high school students under the age of 15 during the 2007-2008 academic year. First prize includes a \$5,000 college scholarship and 4 VIP trips to the Kennedy Space Center in Florida to watch the STS-125 shuttle launch. For more information, visit: [http://www.nasa.gov/audience/foreducators/5-8/features/F\\_Essay\\_Competition.html](http://www.nasa.gov/audience/foreducators/5-8/features/F_Essay_Competition.html)

2. Diane DeTroye, Manager, Space Grant and EPSCoR Programs

- NASA 50<sup>th</sup> Anniversary coming up
- Policy Clarification: "faculty receiving direct support ... must be U.S. citizens"
  - Generally means a direct exchange of funds to an individual for their benefit (e.g. stipend, salary, travel)
  - Does not extend to funds that are incidental or ancillary to the individual (e.g. student support)
- SG funds should not be used to compensate for reductions of NASA programs/activities (e.g. faculty fellowships, explorer schools). Can keep support to NES at the professional development level. Align with definition of informal education/outreach projects.
- Programmatic Emphasis for 2008 SG Budget Package
  - Continue to demonstrate Outcomes and Results through evidence of success and progress towards goals

- Strive to provide succinct packages
- SG emphasis in on Higher Education
- Appropriate emphasis of investments among Outcome 1-2-3
- Look out for new and enhance the Strategic Partnerships and Collaboration
- Longitudinal tracking indicates that:
  - 7% of NASA students are employed by NASA in 2005 and 2006; 61% and 56% went to STEM industry in 2005 and 2006, respectively.
  - 14% and 7% moved on to advanced degrees in NASA-related disciplines in 2005 and 2006, respectively.
- Space Grant Consortium Development Competition
  - Released October 25; proposals due December 10
  - Need reviewers from Designated Consortia
- ESMD Senior Design Project Development: Deadline for proposals – November 16
- ESMD Summer Faculty: Deadline for applications – January 11
- FY 2008 Budget Call: Interim Call release date TBD; Final Call pending Congressional appropriation
- EPSCoR Research Awards: Target release for November 30; pending Congressional appropriation
- Student Flight Project Surveys: to get a quick snapshot of the current level of these activities in the Network,
- 20<sup>th</sup> Year Evaluation: encompasses FY 2003-2007 grant/CMIS reporting cycles; Concurrent Office of Education 3<sup>rd</sup> Party Evaluation, for both SG and EPSCoR
- SG Involvement in Launch Activities:
  - STS-117: Education Strategy Circles
  - STS-118: Education Pre-Launch Conference -Innovative Strategies for Cultivating the STEM Workforce
  - STS-120: Education Focus Group – Attracting Top Performing Students to STEM Education Programs and Careers
- Goals and Objectives of Space Grant
  - Goal: Contribute to the nation's science enterprise by funding education, research, and public service projects through a national network of university-based Space Grant consortia.
  - Objectives:
    - Establish and maintain a national network of universities.
    - Encourage cooperative programs among universities, aerospace industry, and Federal, state, and local governments.
    - Encourage interdisciplinary education, research, and public service programs related to aerospace.
    - Recruit and train U.S. citizens, especially women, underrepresented minorities, and persons with disabilities.
    - Promote a strong science, mathematics, and technology education base from elementary through secondary levels.

### 3. KSC ESMD, Lesley Garner, ESMD SG Faculty Project Manager

- ESMD SG Faculty Project

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- Spend 5 weeks at a NASA Center: ARC, DFRC, GRC, GSFC, JSC, JPL, KSC, LaRC, MSFC, or SSC
  - Program Dates: June 2 - July 2, 2008
  - \$7500 stipend plus travel allowance (JPL and ARC stipend 8500 due to locality)
  - All Applicants must be US citizens
  - Deadline for application: January 11, 2008
  - For more information on the Project go to <http://education.ksc.nasa.gov/ESMDspacegrant>
  - ESMD Senior Design Course Development Project
    - Purpose: Develop a “packaged” ESMD Senior Design Course that can be implemented into universities
    - Dates: Developed in spring 08, pilot tested 08-09, workshop in 2009
    - Mandatory Requirements: DUNS and CCR, proof of university & NASA POC commitment, adhere to ABET requirements
    - Approved SD Projects: <http://education.ksc.nasa.gov/ESMDspacegrant/index.htm>
    - Deadline: November 28, 2007
  - Faculty and Student Teams (FaST)
    - Teams composed of one faculty and one student; Must be U.S. Citizens
    - Funded by NASA’s SOMD (Space Operations Mission Directorate)
    - Dates: June 2 – August 8, 2008 (10 weeks)
    - Stipends: Faculty \$14K plus \$1.5K for travel; Students: \$5K plus \$1K for travel
    - Teams apply for specific SOMD slots at KSC
    - A description of each slot is on the website: <https://secureworkgroups.grc.nasa.gov/fast>; community password = FAST; Click on “join” then Option “A”.
    - Deadline: February 1, 2008
4. ESMD Space Grant Project Report, Gloria Murphy
- Total number of participants is 1473 (internships, challenge teams, and senior design projects): 18% underrepresented, 24% females
  - Internships: 1110 applicants; 197 awards
  - Senior Design Projects: 744 participants
  - Challenge Teams: 532 participants
5. 2008 NASA Academy Implementation Process: D. Rosage, D. Kankan, F. Six
- The Academies are strengthening their partnerships with SG, SG Foundation, and Alumni Associations
  - There are 4 academies: Ames, Glenn, Goddard, Marshall
  - SG funds \$4K directly to students plus transportation
  - Application will open Nov 15; Deadline Jan 15, for all academies
  - Coordination among all summer internships programs across NASA: not possible for now, not in their hands either
6. Mars Student Programs: 4-student presentation
7. Future SG Meetings

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- Spring 2008: Washington DC, Feb 28- March 1
- Fall 2008: Atlanta GA, Oct 26 - Nov 1
- Fall 2009: Portland, OR

8. SG Internet Telescope Network, Paul Hardersen, ND

- The ITN is a national network of internet observatories for research and education.
- It increases the access to research facilities for non-AURA institutions.
- ND has a 26-inch aperture Newtonian with UBVRI filters.
- It began operations in Aug 2007.
- Current Participants: ND, SD, UT
- Website: [sgitn.space.edu](http://sgitn.space.edu)

9. Homage to Richard Hackney

10. Council's Financial Report, Peter Sukanek (MS), Treasurer

11. Chris Koehler (CO): minutes of Spring 2007 Meeting approved with minor revisions

12. Elections

- Nominations for positions on the three organizations
- NCSG Nominating Committee, one vacancy: Wafel
- NSGF board members, 2 vacancies: Fowler exp 2009; Higgenbaeun exp 2010
- NSGA board of directors, 4 vacancies: Armanios, Teasdale, Hofman, Schultz

13. National Space Grant Alliance Meeting, Yervant Terzian (NY), Chairman of the Board

- We are asking for \$35.6M in FY08.
- \$35.49M proposed by the Senate and \$43M by the House (\$6.34M assigned to administrative costs).
- There is a continuous resolution until Nov 16; there will be another continuous resolution.
- \$590K for designated, \$410K for non-designated consortia; the gap has been narrowing and is expected to fully close in the future; currently there are 17 non-designated and 35 designated
- Teleconference with Joe Danek: The Implementation Group (TIG)
- HQ is receptive to the idea to avoid processing delays by requesting non-budget related required documents by the end of 2007 and work on their evaluation and revision without needing the new budget approval beforehand.
- Second goal: streamline the proposal submission process into 5-year periods not needing yearly proposal submissions, only yearly reports
- 7 states have not received the FY07 award; some states may have not received full funding yet; they were sent to Goddard from HQ, according to HQ.
- Dick Henry (MD): award component to supplement the Core Program Grant on a competitive basis; starting 2009; support programs that involve large populations; support

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diversity; extension awards up to \$500K per year and may extend for multiple years; no restrictions on who can propose; approved in principle.

C. National Council of Space Grant Directors, William Garrard (MN) Chair,  
Tuesday, Oct 30, 8:30 AM – 5:00 PM

1. The Lunar Communication and Information System (LUCIS), COSGC ESMD Industry Intern, Kate Kamera, teamed with MicroSat Systems Inc., 5 students
2. Update from NASA Office of Education, James Stofan, NASA HQ
  - Until Nov 17, we are in a continuous resolution that will go onto another 45-day continuous resolution.
  - Feb-March at the earliest to get authorization to spend
  - New EPSCoR solicitation: late fall early winter
  - HQ misjudged the impact of continuous resolution on funding allocation.
  - Plan to fund during CR period the things that need be.
  - Results of the Office of Education were not demonstrated for OMB
  - SG is lumped into a giant program: NASA Education
  - OMB wants to ensure that funding goes to unique projects, unique content, application to the mission of the agency; eliminate redundancy within the agency, a cohesive portfolio, integrated-coordinated approach; establish a baseline and measure progress, how many are in the pipeline, how they move forward.
  - HQ needs case studies, good stories to tell OMB.
  - NASA 50<sup>th</sup> Anniversary: 2008
  - 7 states will receive Deputy Administrator (Ms. Shannon Dale) visits: WA, NY, FL, MA, IL, OH, CA.
  - NASA was chosen as theme for the Smithsonian Folk-life Festival; it will run from the last week of June to the first of July, along with Texas and the Kingdom of Bhutan, Asia.
  - STS-125: Hubble servicing mission: We will be flying cameras in this mission, to capture the activity; educational resources being developed; IMAX movie, use the imagery in the academia; months to process the images after the shuttle comes back.
  - The Lunar Reconnaissance Orbiter will be launched in Oct 2008 from FL.
  - In Nov 2008, STS-119, will carry 2 educator astronauts: J. Acaba and R. Arnold; chosen because they excelled in the EVA tests.
3. Kamlesh Lulla, Johnson, Chief Scientist, Human Exploration Science Office and Deputy Manager
  - Systems engineering education discovery project (SEED) sponsored by ESMD

- Systems engineering education workshop: disseminate an undergraduate systems engineering curriculum to interested universities operating within SG, discuss effectiveness of the pilot system engineering activities at UTA
  - Date: Aug 2008, Place: JSC, Contacts: [lisa.a.guerra@nasa.gov](mailto:lisa.a.guerra@nasa.gov), [kamlesh.p.lulla@nasa.gov](mailto:kamlesh.p.lulla@nasa.gov)
  - Reduced gravity student flight opportunity program, 87% have SG connection, travel and hardware, one week devoted to SG projects, 4 flight days, each experiment flies twice.
  - SG Internship Program at JSC, contact: [Robert.p.musgrove@nasa.gov](mailto:Robert.p.musgrove@nasa.gov)
4. NASA Undergraduate Student Research Program (USRP), managed by the Virginia Space Grant Consortium, Mary Sandy, VASGC Director
- Brenda Neil: USRP manager
  - VASGC submitted a proposal for the next 5 years
  - JSC is the lead for Program Management
  - There are 3 sessions for 2008
  - Deadlines: for spring, Oct 22; for summer, Jan 31
  - Strong partnership with NSGF for marketing and recruitment
  - Slots available: 75 spring, 150 summer, 75 fall
  - Stipends: \$6K for 10-week in summer; \$9K for 15-week during the semester plus \$600 for travel
  - Langley Aerospace Research Summer Scholars (LARSS) Program: Debbie Murray, LARSS program coordinator; summer, fall and spring; 120+ slots in the summer; 20 slots in fall and spring; \$4.5K for undergrads, \$5K for grads in summer; \$6,750 for undergrads and \$7,500 for grads in fall and spring for 15 weeks; Deadline: feb 1 for summer
  - FAA competition for universities, undergrads and grads, national air transportation systems, individual or teams:  
[http://www.faa.gov/runwaysafety/design\\_competition.htm](http://www.faa.gov/runwaysafety/design_competition.htm)
5. Student Participation Opportunities in NASA's Balloon Program, Magdi Said, Wallops Flight Facility
- High Altitude Student Payload (HASP): balloon-borne research missions
  - HASP is great for suborbital balloon science.
  - Students can develop hardware/software, telemetry, and learn data reduction.
  - It can be employed as a transitional platform or as the ultimate platform.
  - Altitude: 36 km for 20 hrs
  - Serial uplink/downlink, discretized, 28 VDC power, analog downlink, near real time
  - Small 3 kg, large 20 kg payload
  - Integration in Palestine, TX, third week of June
  - Deadline: Dec 18, 2007
  - NASA NRA for low-cost missions to train scientists and engineers

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6. Microgravity Enterprises, Jeff Ganley, educational payloads
  - ACCESS for Education Foundation: a 501(c) 3 nonprofit organization that provides educational and public outreach associated with space research, development and commercialization.
  - ACCESS for Education Foundation will donate payload space on every launch for research, advancing the commercialization of space
  - RocketSat III Payload
  - [www.microgravityenterprises.com](http://www.microgravityenterprises.com)
  - [www.accessforeducation.org](http://www.accessforeducation.org) (under construction)

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7. FASTRACK Suborbital Opportunities, James E. Ball, Spaceport Development Manager, NASA John F. Kennedy Space Center

- FASTRACK is a versatile rack system incorporating standard middeck locker experiment accommodations with self-contained power
- Capacity for two single lockers or one double locker, a subsystem drawer, and experiment apparatus
- Multiple racks can be flown depending on supporting vehicle
- Jointly developed by KSC and Space Florida
- The objective is to provide: compatibility, accessibility, and affordability using versatile rack system
- Horizontal operations feature runway takeoff and recovery
- Offers 2-3 minutes of microgravity, reaching 62 miles or higher
- Pressurized, conditioned air environment 2-3 minutes of microgravity
- Multiple venues for launch
- Plan is to design and produce in 2008 with initial flight testing in 2009 aboard parabolic aircraft
- Space qualification of flight units aboard one or more suborbital vehicles targeted by end of 2010

8. Steps to the ISS National Lab and Beyond, Charles Quincy, KSC, Applied Technology Directorate

- Investigation Progression
  - Drop Tower testing
  - Parabolic flight
  - Sub-orbital flight
  - Highly elliptical flight
  - Orbital sorties
  - Visits to ISS
- Educational Institutions: do TRL 1-2-3

9. National Space Grant Foundation Report, Mark Fisher, Executive Director

- Pathevo is up and running
- Mark brought information on the constraints of Space Grant Fellowships and Scholarship Program, as a follow up from previous discussions

Characteristics

- Provide Education and Training Assistance
- Designed to Increase the Pool of Students in Fields Related to Space
- Institutional Diversity & Geographical Distribution
- Selected by Merit Review
- Limited to 4 Years of Support



- Recipients Must Be US Citizens
- No Dual Federal Awards
- Currently Enrolled Students

Acceptable Academic Progress

- Full Time Enrollment
- GPA Requirements
- Degree Progress
- Academic Standing
- Enrollment in Designated Class(es)

Teaching, Research or Other Duties

- Participation in Research Project
- Outreach Requirements
- Internships
- Employer-Employee Relationship
- Taxable Compensation (employer and employee side)

Creative Alternatives

- Awarded through Non-Profit Organization
- Enrolled in Special Topics Course
- Selection Partially Based Upon Past Activities
- Recommended Report

- Services Offered by NSGF
  - CMIS forms
  - Meeting Registrations
  - Proposal submission/review system
  - Applications system
  - Website redesign
  - Tracking system

10. Aerospace Education Services Project (AESP), William Carlsen, Director, Penn State University

- AESP is a five-year cooperative agreement between Penn State University and NASA, through Langley Research Center.
- AESP provides educational services to K-12 schools and other educational entities.
- Its 18 Education Specialists, who are based at NASA centers, deliver teacher professional development and other educational programming in all 50 states and U.S. territories.
- In 2008, six new Traveling Education Specialists will be added to the AESP workforce.
- Emphasis on pre-service and in-service teacher professional development

- AESP Opportunities for Space Grant Consortia
  - Technical and financial assistance in developing high-quality, sustainable professional development opportunities for teachers in NASA-related content.
  - A mechanism for recruiting teacher participants and systematically collecting meaningful outcome data: Measures of teacher and student learning, changes in instructional practice, recruitment into STEM higher education, etc.
  - New routes for faculty who conduct sponsored research to offer manageable, effective EPO to teachers.
  - Significant school-year follow-up and subsequent, relevant school programming.

#### 11. NASA Goddard's Remote Sensing Earth Science Teacher Program

- Basics of remote sensing, interpretation of satellite imagery, using image analysis software
- Remote control plane, cameras, instruments
- On-site guidance from NASA scientists for 4 weeks
- It's done during the school year
- Phases: mission implementation, mission day, monitor data as is being collected, share mission results
- There are 28 RSESTeP slots for teachers
- It costs about \$1500 to send a teacher to the workshop/training
- Training in July, for one week

#### 12. Chris Koehler, CO, Balloon and Rocket Workshops

- Balloon Workshop
  - July 16-19, 2008
  - Website: [spacegrant.colorado.edu/studentsat](http://spacegrant.colorado.edu/studentsat)
- Sounding Rocket Payload Workshop
  - June 22-27, 2008 in Wallops:
  - Teams build a sounding rocket payload in 3 days from a kit
  - Test and integrate on 4th day
  - Launch and recover on the 5th day
  - Data analysis on day 6 and then celebrate
  - Food and hardware provided with registration
  - Wallops has pledged to cover 75% of their costs (\$232K out of \$307K)
  - Website: [spacegrant.colorado.edu/rockon](http://spacegrant.colorado.edu/rockon)

### 13. NASA EPSCoR Meeting

- Diane DeTroye,
  - Diane Clayton is working until March; she is working as IPA and her term expires.
  - She wants to run a NASA EPSCoR competition every year; looking forward to release the solicitation on Nov 30.
  - The upcoming solicitation features a return to 1:1 required match.
  - The expectation is to give 7-10 awards per year, keeping in mind that the line is drawn at meritorious proposals.
  - She expects to be able to provide a more comfortable solicitation period, unlike in the previous competition.