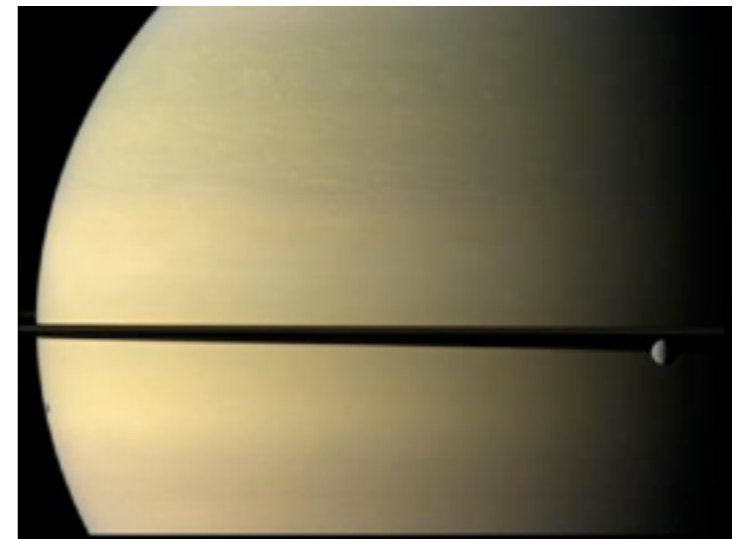


NASA New Jersey Space Grant Consortium 2014 Annual Meeting



National Space Grant Program

- Created by Congress in 1988
- Funding by congressional appropriation
- 52 Consortia (50 states + D.C. + P.R.)
- Each state uses its funding to promote programs in STEM and aerospace
- Primary emphasis on higher education, research and fellowships
- Strong emphasis on diversity
- 25% of NASA's education budget (\$40M in FY 2013)
- The most successful education program in NASA in terms of students supported and STEM pipeline





Goals of New Jersey Space Grant



- To establish a network of universities with interests and capabilities in aeronautics, space science and related STEM fields
- To develop interdisciplinary programs to further space science, aerospace and STEM education
- To foster research and development in New Jersey
- To promote a strong STEM education base from elementary through university levels
- To recruit and train U.S. citizens, especially women and underrepresented minorities, and persons with disabilities



NJSGC Affiliates

- Astronomy Education Center at Raritan Valley Community College
- Bloomfield College
- Essex County College
- Georgian Court University
- Liberty Science Center
- NASA GISS at New York City
- New Jersey City Univ. (minority serving)
- New Jersey Institute of Technology
- Princeton University
- Ramapo College
- Rowan University
- Rutgers University
- Seton Hall University
- Stevens Institute of Technology
- The College of New Jersey
- Union County College



NJSGC Administration

- Haim Baruh, Director
 - Office at Rutgers, spends 20% of time [often more] on NJSGC
- Joseph S. Miles, Program Coordinator
 - Spends half his time with NJSGC, other half as faculty member at Stevens, office located at Stevens
- Aiesha F. Long, Project Coordinator
 - Spends half her time with NJSGC, other half at Rutgers Engineering Dean's office
- Leora Wenger, Webmaster (works from home)



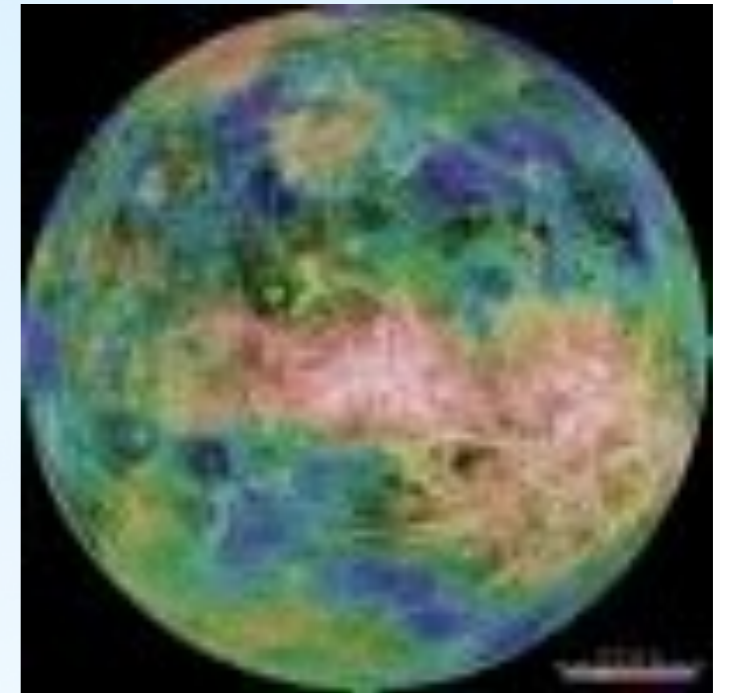
NASA Educational Outcomes

- **Outcome 1:** Contribute to the development of the STEM workforce in disciplines needed to achieve NASA's strategic goals
- **Outcome 2:** Attract and retain students in STEM disciplines through a progression of educational opportunities for students, teachers, and faculty
- **Outcome 3:** Build strategic partnerships and linkages between STEM formal and informal education providers that promote STEM literacy and awareness of NASA's mission
- **NASA requires** that Space Grant consortia fund primarily Outcome 1 programs



New Jersey Space Grant Consortium Programs

- Programs in five main areas
 - Research infrastructure (Outcome 1)
 - Higher education (Outcomes 1 and 2)
 - Fellowships (Outcome 1)
 - Pre-college (Outcome 2)
 - Informal education (Outcome 3)
- NASA requires all NJSGC programs to have a 100% match, except fellowship programs
- U.S. citizenship (required by NASA) for all monetary award recipients
- NJSGC budget for FY 2013 is \$430,000, plus we are using \$50K of unspent funds from previous years for a total budget of \$480,000





New Jersey Space Grant Consortium Research Programs

- Industry-University Research program (discontinued since 2011, but one award remains)
- Clustered research programs at universities (programs at Rowan, TCNJ, NJIT-Ramapo, Seton Hall)
- RiSE program: summer research for minority students (run by Graduate School at Rutgers)
- Community college research program (new initiative to promote science education and research)
- Travel support for students to attend conferences (\$400 per participant)



New Jersey Space Grant Consortium Higher Education Programs

Name	Awards	Description
Co-op in Industry	1-2	\$6,000-8,000 per student doing the co-op
Course Development	1	\$4,000 per new course for salaries and supplies
Design Projects	8	Up to \$600 per project.
College Bridge Programs	2	Attracting (female and minority) high school students to STEM. Programs at Rutgers, Georgian Court, and Liberty Science Center.
Summer Development	3	At NJ universities, primarily with EOF offices
New York City Research Initiative	3	Groups of college and high school students work together on research projects during summer. Director retired - uncertain future
RockOn-RockSat	1-2	Students build sounding rocket payloads which are launched into 75 mile altitudes.



NASA and New Jersey Space Grant Consortium Fellowship Programs

Type	Stipend	Awards	Details
Undergraduate Summer Research	\$4,000	9 - 10	10 weeks of research at a NJ university or research center. Statewide competition
Academic Year	\$2,000	24	Year long research in student's academic institution. Students selected by NJS GC campus representative
Graduate	\$7,500	3	Student must be a graduate student (new or entering grad school). This fellowship requires match
NASA Academy	\$5,000-6,000	0 - 1	Summer research at a NASA center or NASA Academy. (academyapp.nasa.gov) None is being awarded this year. NASA wants us to support centers
NASA Internship and Fellowship Programs	from NASA		NASA internships and fellowships (except NASA Academy) managed by a single web site: One Stop Shopping Initiative (intern.nasa.gov)

The total amount allocated for fellowships is determined by NASA (25% of overall budget).



Other New Jersey Space Grant Consortium Programs

- **Pre-College**

K-12 science teacher training (In service, as well as pre-service teachers)

We have supported programs at Raritan Valley CC, Rutgers, and Hanover High School

- **Informal Education**

For the general public

Primarily planetarium support

Currently supporting Raritan Valley CC and Rowan





Diversity and Reporting Mandates

- NJSGC is mandated to spend its student support in a proportion that reflects the diversity of New Jersey higher education students
 - 14% African American, 14% Hispanics, <1% Native American
- We need track of all students who receive major awards (>\$2,000 or >180 hours)
 - NASA wants not only gender and racial diversity, they also want geographic diversity, as well as programs for the disabled (we currently have no programs for the disabled)
 - We are keeping statistics on congressional districts of students to inform elected representatives



NJSGC Diversity Statistics

Year	Minority	Target	Female	Target
FY2009	36.6%	29%	33.3%	45%
FY2010	24.4	29	35.6	45
FY2011	23.8	29	42.5	45
FY2012	32.3	29	45.2	45

Statistics are for students who received stipends

NASA threatens to cut off funding if diversity targets are not met



Budget Issues

- Two types of consortia in national program:
 - 35 Designated states (higher funding - 575K)
 - 17 Program states (lower funding - 430K)
 - N.J. is a program state - One of our top priorities is to become a designated state
 - No competitions for promoting program states to designated status. We requested that there should be competitions
- FY 2013 funding \$40M for the Space Grant program (\$430K for N.J. plus competition awards)



Budget Issues

- For the last 10 years, Space Grant has been funded by Congress at a level higher than the president's request
- In FY 2012, Congress changed language of the Space Grant budget (at request of NASA and contrary to the wishes of the states)
- Now, they use part of the Space Grant budget to fund competitions.
- Starting in 2014, NASA Education budget may go down significantly



NJSGC Yearly Budget Summary

	FY 2009	2010	2011	2012	2013	2014
Base award	430K	430K	430K	430K	430K	430K
Augmentation (congressional)	160	230	185	None	None	None
Competition	Was not held	185	None was run	Did not win	Just announced	?
NJSGC Surplus Funds	0	0	0	50	50	
Totals	590K	845K	615K	480K	480K	
National Space Grant Budget	39M	45.6M	42M	40M	40M	40M



FY 2013 Budget Summary

Program Name	Base	Surplus	Total	Percent
Fellowships	110,000	0	110,000	22.9%
Research	66,000	9,000	75,000	15.6%
Higher Education	74,000	19,000	93,000	19.4%
Pre-College	17,000	13,000	30,000	6.3%
Informal Education	4,600	0	4,600	1.0%
Operating Expenses	110,900	0	110,900	23.1%
Overhead (27%)	47,500	9,000	56,500	11.8%
Total	\$430,000	\$50,000	\$480,000	



NJSGC Budget Status

- FY 2009 budget completed and closed
 - This is how we became aware of the match issues
- In 2010 the new 5-year budget cycle began (2010-2014)
- We have spent around 90% of the 2010 budget and 80% of 2011 and 75% of 2012
- Please see attached sheet for 2013 budget allocations



Match Requirements

- Every NJSGC program (except fellowships) requires match - at least one-to-one
- After closing FY2009 account, we became aware of match certification requirements by Rutgers
- Rutgers much stricter than other universities
- Match requirement is treated like cost share
- Cost share can be actual dollars or in-kind



NJSGC Match Procedures

Activity	Match Description	\$\$	In-kind
Programmatic elements	Each program individually matched	Yes	Yes
Administrative expenses	Affiliate representative participation letter	No	Yes
Overhead	Reduction of overhead rate: 54% to 27%	Yes	No

All NJSGC programs except fellowships must have match



Match Certification

- NJSGC has become stricter in requesting match and in getting match certification letters - before and AFTER the award is completed
- To make up for match that was promised and not delivered (and for faculty who do not send us their affiliate effort certification), we need more than one-to-one match in our programmatic elements
- New procedures: At least 100% programmatic match, also match from supervisory activities of faculty involved
- If NJSGC funding is a fraction of your program budget, your entire budget can count as match



NJSGC Activities in the Past Year

- **New Initiative - imposed by Education Office**
 - New director of Space Grant (Dr. Lenell Allen) comes from a Community college background.
 - We are required to be more involved with community colleges
 - Where will the additional funding come?
 - We visited Union County College, Raritan Valley CC, and Brookdale CC and made presentations
- **RFP issued by NASA for a grant for community college recruitment and retention of STEM activities**
 - We are working with comment colleges to prepare the proposal. Requires concurrence of all affiliates



NJSGC Activities in the Past Year

- Submitted successful reports to NASA and received forward funding for 2014-2015
 - Proposal we submitted in 2013 for a competition was denied based on a technicality
 - We sent a request to NASA to receive the funding that we were not given in 2006, 2007, and 2008
 - We sent a request to NASA to seek designated status (for increased funding and better recognition from NASA)
- Involved in national Space Grant network (executive council secretary, aeronautics subcommittee chair)
- Visited congressional offices in D.C.
- Unfortunately, no progress with Sea Grant and with the FAA



NJSGC Activities in the Past Year

- Attended all national conferences (Charleston, S.C., D.C.).
No regional conference last year
- Established contact with Princeton Plasma Physics Lab
- Summer fellowship conference and poster session held in August 2013, where all summer fellows made presentations
 - Will do same this year
- All fellowship awards made
 - Summer fellowship awards made (36 applicants, 10 awards)
 - No NASA Academy allocations (shifted to summer award) this year
 - All academic year and graduate fellowships given out



Future Activities and Challenges

- Expansion involving community colleges
 - Affiliate structure
 - Funding for community colleges - what type of programs, what level of funding
- The five-year performance period ends August 2015
 - We will have to write a new proposal with new budget breakdown
 - Carefully evaluating activities and expenses in view of the new realities of lower budgets and community college involvement
 - Developing new programs and discarding ineffective programs
 - NJSGC office needs your input



Future Activities and Challenges

- We need to develop an advisory board and also reach out to more universities
- Maintaining enthusiasm level of affiliates
- Reevaluation of our priorities



Thank You

- We are **ALWAYS** open to new ideas
- Space grant is moving fast and also changing, statewide as well as nationwide
- We should adapt to the times and be proactive
- Thank you for your support