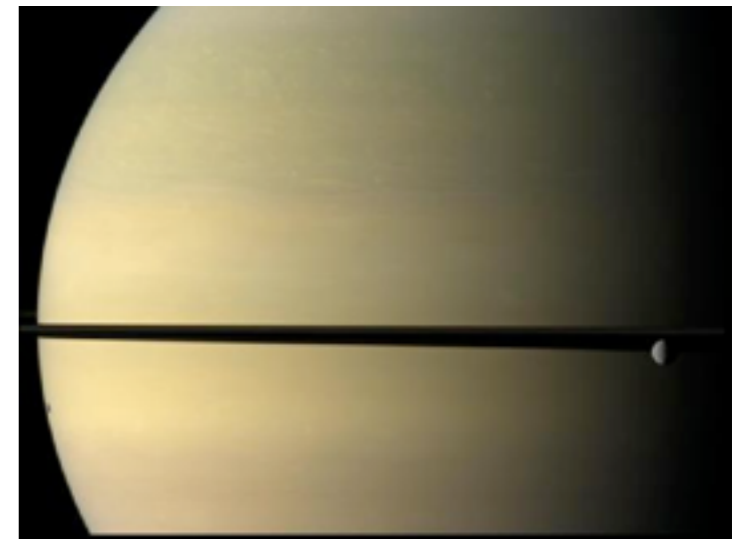


NASA New Jersey Space Grant Consortium 2015 Annual Meeting



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
- Over 25% of NASA's education budget
- 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
- Medgar Evers Coll. (NYC)
- 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



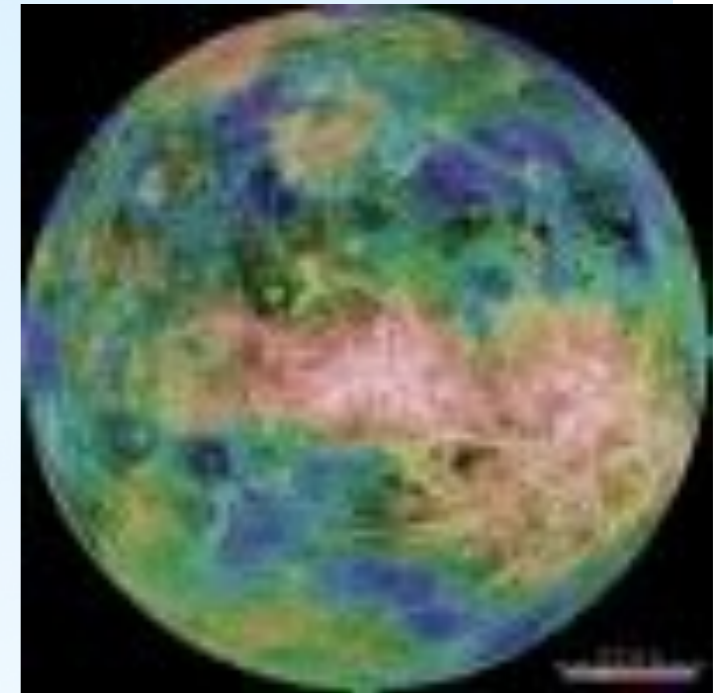
NJSGC Administration

- 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, Consultant
 - Recently took a full-time position at Rutgers Engineering Dean's office. Helps voluntarily and also as a consultant.
- Leora Wenger, Webmaster (works from home)



New Jersey Space Grant Consortium Programs

- Programs in five main areas
 - Primary Programs
 - Research infrastructure
 - Higher education
 - Fellowships and NASA Internships
 - Secondary Programs
 - Pre-college
 - Informal education
- NASA requires all NJSGC programs to have a 100% match, except fellowship programs
- U.S. citizenship (required by NASA) for all monetary award recipients





New Jersey Space Grant Consortium Research Programs

- 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 - we are working with RVCC - looking for more)
- Discontinued programs include:
 - Travel support for students to attend conferences
 - University-Industry Research (\$25K for junior faculty)



New Jersey Space Grant Consortium Higher Education Programs

Name	Awards	Description
Co-op or Internships 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. Match situation unclear - uncertain future
RockOn-RockSat	1	Students build sounding rocket payloads which are launched into 75 mile altitudes.



NASA and New Jersey Space Grant Consortium Fellowship and NASA Internship Programs

Type	Stipend	No.	Details
Undergraduate Summer Research	\$4,000	7-8	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	2-3	Student must be a graduate student (new or entering grad school). This fellowship requires match
NASA Internships	\$6,000	3	NASA now requires us to support interns at NASA centers. We are only supporting undergraduate students, as graduate stipends are very high.
Other NASA Opportunities	from NASA		NASA-funded internships and fellowships 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 math and science teacher training (in service, as well as pre-service teachers)

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

Collaborative effort this year with Orange Township schools

- **Informal Education**

For the general public

Primarily planetarium support

We have supported Liberty Science Center, 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 >160 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 (for students who receive stipends)

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
FY2013	31.6	29	44.3	45

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 has been held in 12 year. We have repeatedly requested that there should be competitions
- FY 2014 funding \$40M for the Space Grant program (\$430K for N.J. plus competition award of \$500K)



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 2016, NASA Education budget may go down significantly



NJSGC Yearly Budget Summary (in thousands)

Year	2009	2010	2011	2012	2013	2014	2015	2016
Base award	430	430	430	430	430	430	430	300
Augment by congress	160	230	185	None	None	None	None	?
Competition	None	185	None	Did not win	None	500	TBA	?
Totals	590	845	615	430	430	930		
National Space Grant	39M	45.6 M	42M	40M	40M	40M	40M	24M



FY 2014 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

- 5-year budget cycle (2010-2014) ends this summer
- 3-year bridge period, while the Space Grant Program gets evaluated
- Estimated NJ funding for those three years: \$430K, \$300K, \$300K
- We wrote the proposal asked of us (for those three years) and it was accepted
- National Space Grant office at NASA HQ has begun charging an overhead on the budget given to them. Yearly awards will be smaller in the future



NJSGC Budget Status

- At end of summer 2015, we will have a substantial surplus
- We received a one-year no cost extension till August 2016. We hope to receive a second NCE until August 2017
- Please see attached sheet for 2014 budget allocations
- New competitive funding opportunity (with SG funds): University Student Instrumentation Project. Details should be announced shortly
- We will discuss the community college grant of \$500K shortly



Match Requirements

- Every NJSGC program (except fellowships) requires match - at least one-to-one
- 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
Student stipends	Each program individually matched	Yes	No
Administrative expenses	Affiliate representative participation letter	No	Yes
Overhead (indirect cost)	Reduction of overhead rate: 53% to 26.5%	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 - by NASA Education Office
- Support of Community Colleges
 - We successfully submitted a proposal to the Community College initiative. \$500K funding
 - We are working with six community colleges - Atlantic Cape, Bergen, Brookdale, Middlesex, Union, Essex
 - Also with Rowan and with Rutgers
 - Please see attached sheet for program and expenditure status
 - No match required for this grant



NJSGC Activities in the Past Year

- Submitted successful reports to NASA and received forward funding for 2014-2017
 - Sent a request to NASA to receive the funding that we were not given in 2006, 2007, and 2008 - NO RESPONSE
 - Sent a request to NASA to seek designated status (for increased funding and recognition) - NO RESPONSE
- Involved in national Space Grant network (executive council secretary, aeronautics subcommittee chair)
- Visited congressional offices in D.C.
- Still no progress with Sea Grant and with the FAA.



NJSGC Activities in the Past Year

- Attended a regional (Va.) and one national conference (DC)
- Begun a collaborative effort with Orange Township School system for teacher professional development
- Summer fellowship conference and poster session held in August 2014, where all summer fellows made presentations
 - Will do same this year
- Most fellowship awards made
 - Summer fellowship awards made (24 applicants, 7 awards)
 - Two NASA Internships (at NASA centers)
 - All academic year and one graduate fellowships given out



Future Activities and Challenges

- Expansion involving community colleges
 - NASA wants us to do so
 - Affiliate structure - what can we do with reduced funding
 - It has been difficult finding match from community colleges
- The five-year performance period ends August 2015
 - We will soon begin a lengthy review process
 - Each state will be reviewed, as well as the national program
 - Most likely, we will need even more data from you - please cooperate



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
- Major evaluation of Space Grant Programs coming up soon



Thank You

- We are **ALWAYS** open to new ideas
- Space grant is moving and also changing, statewide as well as nationwide
- We should adapt to the times and be proactive
- Affiliates that participate in NJSGC receive more funding
- Thank you for your support