Outline

• Space Grant NASA Center Points of Contact
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  – Graduate Education CoSTEM Interagency Working Group
  – NASA Lines of Business
  – Space Grant Objectives
  – CoSTEM Priority Areas
• Future Solicitations
• Fiscal Climate
• National Evaluation
• Space Grant Messaging
What’s New at NASA?

- EarthNow
- OSIRIS-REx
- ORION EFT-1

Artistic concept of OSIRIS-REx – nasa.gov

NASA’s EARTH NOW apps for iPhone – nasa.gov

Artistic concept of ORION capsule in orbit – nasa.gov
Graduate Education
CoSTEM Interagency Working Group

• One Stop Shopping Portal – Graduate Fellowships
• Develop common metrics with automated tracking mechanisms.
• Work with outside stakeholders (i.e. universities, professional associations).
• Bring students funded by different agencies together (i.e. AAAS meeting).
• Co-Leads – Dr. Lenell Allen and Dr. Lisa Wills
**NASA Education Lines of Business**

- **STEM Engagement**
  - Activities utilizes NASA-unique resources and include STEM Challenges, STEM Public Education events, and STEM Experiential Learning Opportunities

- **Educator Professional Development**
  - Increases and educators (in-service, preservice, informal) confidence and enthusiasm in delivering STEM materials

- **Institutional Engagement**
  - Builds the capacity of formal and informal education institutions to participate in NASA’s mission

- **NASA Internships, Fellowships and Scholarships (NIFS)**
  - Motivate students to pursue careers in STEM and improve the retention of students in STEM disciplines

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**NASA Space Grant Objectives**

- Establish and maintain a national network of universities with interests and capabilities in aeronautics, outer space and related fields

- Encourage cooperative programs among universities, aerospace industry, and federal, state and local governments

- Encourage interdisciplinary training, research and public service programs related to aerospace

- Recruit and train U.S. citizens, especially women, underrepresented minorities, and persons with disabilities, for careers in aerospace science and technology

- Promote a strong science, mathematics, and technology education base from elementary-secondary levels

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**Co-STEM Priority Areas**

- **Improve STEM Instruction**
  - Prepare 100,000 new K-12 STEM Teachers by 2020

- **Increase and Sustain Youth and Public Engagement in STEM**
  - Support a 50% increase in U.S. youth authentic STEM Experience prior to completing high school

- **Enhance STEM Experience of Undergraduate Students**
  - Graduate 1 Million additional students in STEM fields over the next 10 years

- **Better Serve Groups Historically Under-represented in STEM**
  - Increase the # of underrepresented minorities graduates in STEM degrees in the next 10 years

- **Design Graduate Education for Tomorrow’s STEM Workforce**
  - Provide graduate trained STEM professionals with basic and applied research expertise
FY2012 Lines of Business Funding

Approximate Breakdown of Space Grant FY2012 Funding Towards Lines of Business

- STEM Engagement: 31%
- Institutional Engagement: 17%
- Educator Professional Development: 7%
- NIFS: 45%
### STEM Engagement

<table>
<thead>
<tr>
<th># of Project Partners</th>
<th># of Publications</th>
<th># of Papers Presented</th>
<th># of Proposals Funded</th>
<th># of Patents Granted</th>
<th># of Tech Transfers</th>
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<tbody>
<tr>
<td>211</td>
<td>971</td>
<td>629</td>
<td>187</td>
<td>1</td>
<td>9</td>
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- **244 Public Education Activities**
- **649 Pre-College Project Activities**
- **687 Higher Education Project Activities**
- **New/Revised Higher Education STEM Courses**
  - **166 New Courses**
  - **222 Revised Courses**
## Educator Professional Development

<table>
<thead>
<tr>
<th>Participant Type</th>
<th>Direct Interaction</th>
<th>Indirect Interaction</th>
<th>Unique Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary School Teachers</td>
<td>10,451</td>
<td>13,435</td>
<td>14,798</td>
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<tr>
<td>Middle School Teachers</td>
<td>11,962</td>
<td>24,939</td>
<td>10,220</td>
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<tr>
<td>High School Teachers</td>
<td>5,769</td>
<td>8,516</td>
<td>5,231</td>
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<tr>
<td>Pre-Service Teachers</td>
<td>1,702</td>
<td>3,557</td>
<td>1,204</td>
</tr>
<tr>
<td>Higher Education Faculty</td>
<td>2,999</td>
<td>3,120</td>
<td>2,192</td>
</tr>
</tbody>
</table>
Institutional Engagement

*Functionality to determine Minority Serving Institutions in OEPM is currently in the development phase
NASA Internships, Fellowships and Scholarships

Space Grant Student Internships FY2012

• 518 Internships Awarded through Space Grant
  - 191 Internships at NASA Centers
• Approximately $2.1M Awarded as Internship Awards
• 100+ Fields of Study (122 Unknown Student Majors)
FY2012 Space Grant STEM Graduates: By Gender

FY2012 Longitudinally Tracked STEM Graduates: By Gender
(Source: Student Data Table B)

N = 5,172 Students

*“Significant” Awards = ≥ $5,000 or ≥ 160 hours
Space Grant Graduate Fellowships

• 533 Fellowships awarded in FY2012
  - 42 Underrepresented Minority Students

*1 Student with Undisclosed Gender
Space Grant Graduate Fellowships

FY2012 Space Grant Fellowships Expenditure

- Fellowships, $6,142,577 (15%)
- Non-Fellowships, $33,857,423 (85%)

FY2012 Space Grant Budget = $40,000,000

Highlights

- 376 Students Pursuing Masters or Doctorates
  - 90+ Different Fields of Study being Pursued
  - (157 Students Unknown)

- Consortium with Highest Number of Awarded Fellowships:
  - Massachusetts 50
  - Virginia 38
  - New Mexico 23
  - California 17
  - Pennsylvania 17
  - Puerto Rico 17
Fiscal Climate

• Budget – FY 2014 Funding Levels:
  – NASA Office of Education: $116.6m
  – Space Grant: $40m
  – EPSCoR: $18m

• FY 2015 Budget

Courtesy of MA Space Grant
Future Solicitations

• FY14 Omnibus Bill Language
  “Any Space Grant funds available in excess of the amount needed to fulfill base awards shall be made available to all consortia on a competitive basis.”

• Competitive Targeted Community College and Technical Schools Opportunity
  – Expected Release Date on NSPIRES – March 7, 2014
  – Cooperative Agreement (2-Year Period of Performance)

• Base Awards (Space Grant Community Input)
  – Expected Release Date on NSPIRES – August, 2014
  – Grants (2-Year Period of Performance)
National Evaluation

• External, Third-Party Evaluation
• More from Dr. Patricia Shaffer - Consortium Coordination!

Courtesy of DE Space Grant
Budgets & Procurement

• Number of Solicitations (since 2010)
  – Base Awards
  – Congressionally-Directed Augmentation (2)
  – Consortium Development Competition
  – Innovative Pilot in STEM

• More from LaTeicia Durham, Theresa Stanley and Carla Hubbard – Consortium Coordination!
Annual Performance Documents (APD’s)

• More from Dr. Warfield Teague – Consortium Coordination!
Space Grant Messaging

• Ongoing Communications Efforts
• Anticipated Coordination with Center PoC
• More from Sasha Korobov – Consortium Coordination!
  – Website
  – Twitter
  – NASA Express
  – WAR Report

Courtesy of CA Space Grant
Kudos

Leland Melvin

Jim Stofan
Thank You!!