# 2014 Great Midwestern Regional Space Grant Consortia Meeting
## Hosted by: Iowa Space Grant Consortium
## Des Moines, Iowa

*NASA Space Grant Program Update*

*Lenell Allen, Ph.D.*
*Program Manager*
*September 19-20,2014*

# Overview

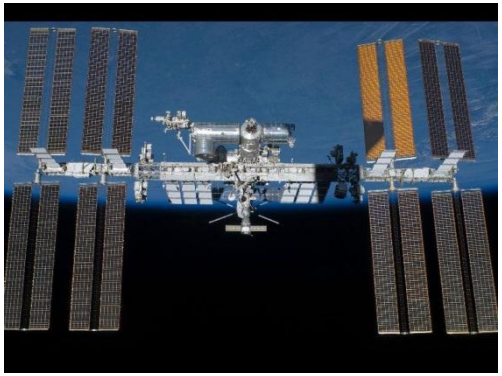
- Introduction of the new Office of Education Associate Administrator
- What's New at NASA?
- NASA's and Office of Education (OE) Vision
- NASA's Strategic Objective 2.4 – Advance the Nation's STEM Education and Workforce Pipeline
- Aerospace Research and Career Development (ARCD) Vision
- Strategies to Advance the Nation's STEM Education and Workforce Pipeline
- Alignment of Space Grant Program Objectives with NASA's Lines of Business (LOBs)
- Space Grant 2013 Office of Education Performance Measurement (OEPM) Data
- 2014 Space Grant Community Colleges Solicitation Update
- On the Horizon
- Fiscal Climate
- Space Grant National Evaluation Update

# Donald G. James – NASA Office of Education Associate Administrator

- Donald G. James was appointed NASA's Associate Administrator for the Office of Education, effective Sept. 8, 2014.
- Prior to his appointment, James was the director of the Strategic Communications and Education Directorate at NASA's Ames Research Center in Mountain View, California.
- James began his NASA career in 1982 as a Presidential Management Intern at the Goddard Space Flight Center in Greenbelt, Maryland. In 2002-2003 he was the senior advisor and executive officer for the NASA Education Enterprise at NASA Headquarters.
- James received an undergraduate degree in international relations from the University of Southern California in Los Angeles and a Master of Arts degree in economic development and public administration from the American University in Washington. He has participated in numerous executive development education programs at Cambridge University in England and Harvard University in Cambridge, Massachusetts.

# What's New at NASA?

- **Boeing and Space Exploration Technologies (SpaceX) Selected to Return Astronaut Launches to American Soil**



BOEING

SPACEX

*"Today, with the selection of Boeing and SpaceX to be the first American companies to launch our astronauts to the International Space Station, NASA has set the stage for what promises to be the most ambitious and exciting chapter in the history of human space flight…. Our destiny is set. Our course is laid out before us. And we are following it. We hope the American people will be inspired to join us on this next great, ambitious leg of humanity's journey farther into our solar system than ever before."*

***Charlie Bolden***
***September 16, 2014***

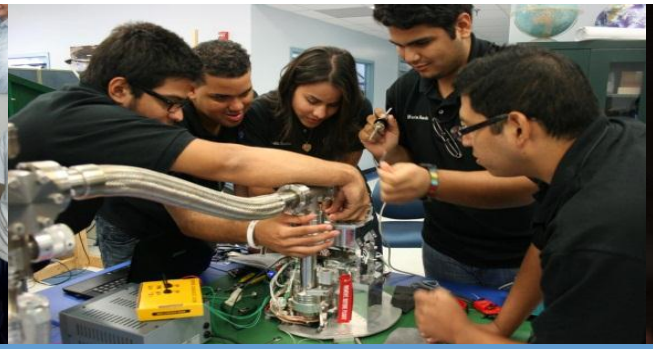
# NASA's and Office of Education Vision
# NASA's Strategic Goal 2 and Objective 2.4

**NASA's Vision:** ***To reach for new heights and reveal the unknown so that what we do and learn will benefit all mankind.***

**NASA's Office of Education Vision:** ***To advance STEM education using NASA's unique capabilities*.**

**NASA's Strategic Goal 2:** ***Advance understanding of Earth and develop technologies to improve the quality of life on our home planet.***

**Objective 2.4:** ***Advance the Nation's STEM education and workforce pipeline by working collaboratively with other agencies to engage students, teachers, and faculty in NASA's missions and unique assets.***



# Aerospace Research and Career Development (ARCD) Vision

- Maximize the impact of Space Grant and Experimental Program to Stimulate Competitive Research (EPSCoR) Programs
  - ***Maximize*** *- To increase to the greatest possible amount or degree, to use (something) in a way that will get the best result.*

- Moving Forward….
  - *Implement NASA's and Office of Education Visions and Goals*

**NASA Education Vision:** ***To advance STEM education using NASA's unique capabilities***

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# Strategies to Advance the Nation's STEM Education and Workforce Pipeline

**Objective 2.4:** ***Advance the Nation's STEM education and workforce pipeline by working collaboratively with other agencies to engage students, teachers, and faculty in NASA's missions and unique assets.***

- Utilize Existing Institutional Resources
  - *Comprehensive Holistic Strategies*
  - *Involvement of Student Affairs, Admissions, Financial Aid and Enrollment Management Professional Staff*

**NASA Education Vision:** ***To advance STEM education using NASA's unique capabilities***

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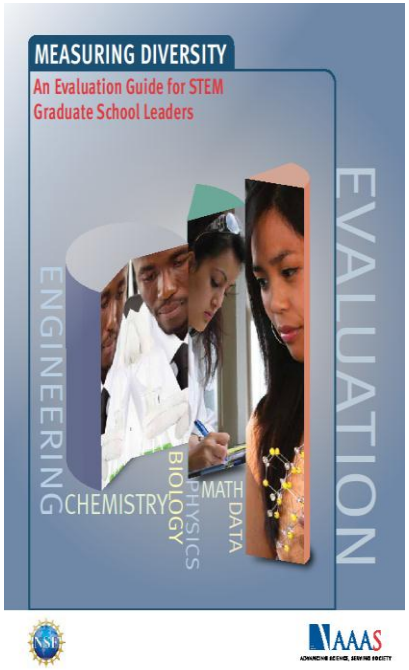
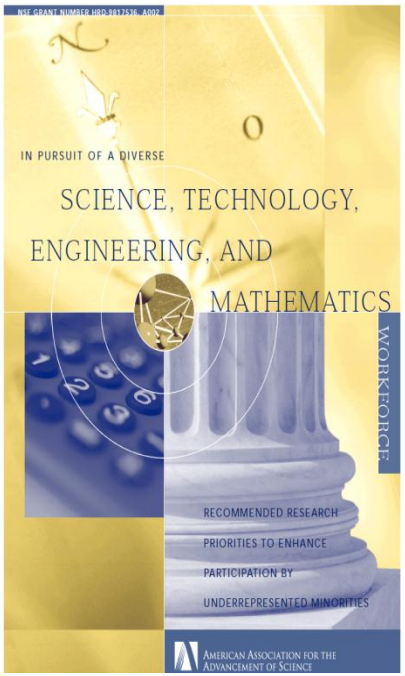
# Strategies to Advance the Nation's STEM Education and Workforce Pipeline

| Level | STEM Recruitment/Retention Strategies |
|---|---|
| Undergraduate | •PreCollege Summer Institutes/Live-In Weekends<br>•Competitive Scholarship Packages<br>•Early Warning Systems for "Gate Keeper" Courses<br>•Intrusive Advising, Mentoring, Tutoring<br>•Internships/Co-Ops/Research Experiences for Undergraduates |
| Graduate | •Proactive Recruitment of Space Grant Students<br>•Comprehensive Fellowships/RAs & TAs (3rd/4th Yrs.)<br>Graduate Transitional Program/Acclimation to Research Lab<br>•Annual Department Reviews/Early Warning Systems<br>•Peer and Faculty Mentoring<br>•Travel Grants, Workshops on Grant Writing, Patents |
| Faculty | •Proactive Recruitment of Space Grant Graduates/Post-Docs<br>•Faculty Mentoring/Nobel Laureates/MacArthur Fellows<br>•Portable Start-Up Packages (Lab Supplies, Travel, etc.)<br>•Release Time for Research/Publications/Curriculum<br>•Workshops on Grant Writing, Promotion & Tenure |

# STEM Recruitment/Retention and Evaluation Best Practices Resources






**American Association for the Advancement of Science (AAAS) AGEP Website:**

http://www.nsfagep.org

# Alignment of Space Grant Objectives with NASA Lines of Business (LOBs)

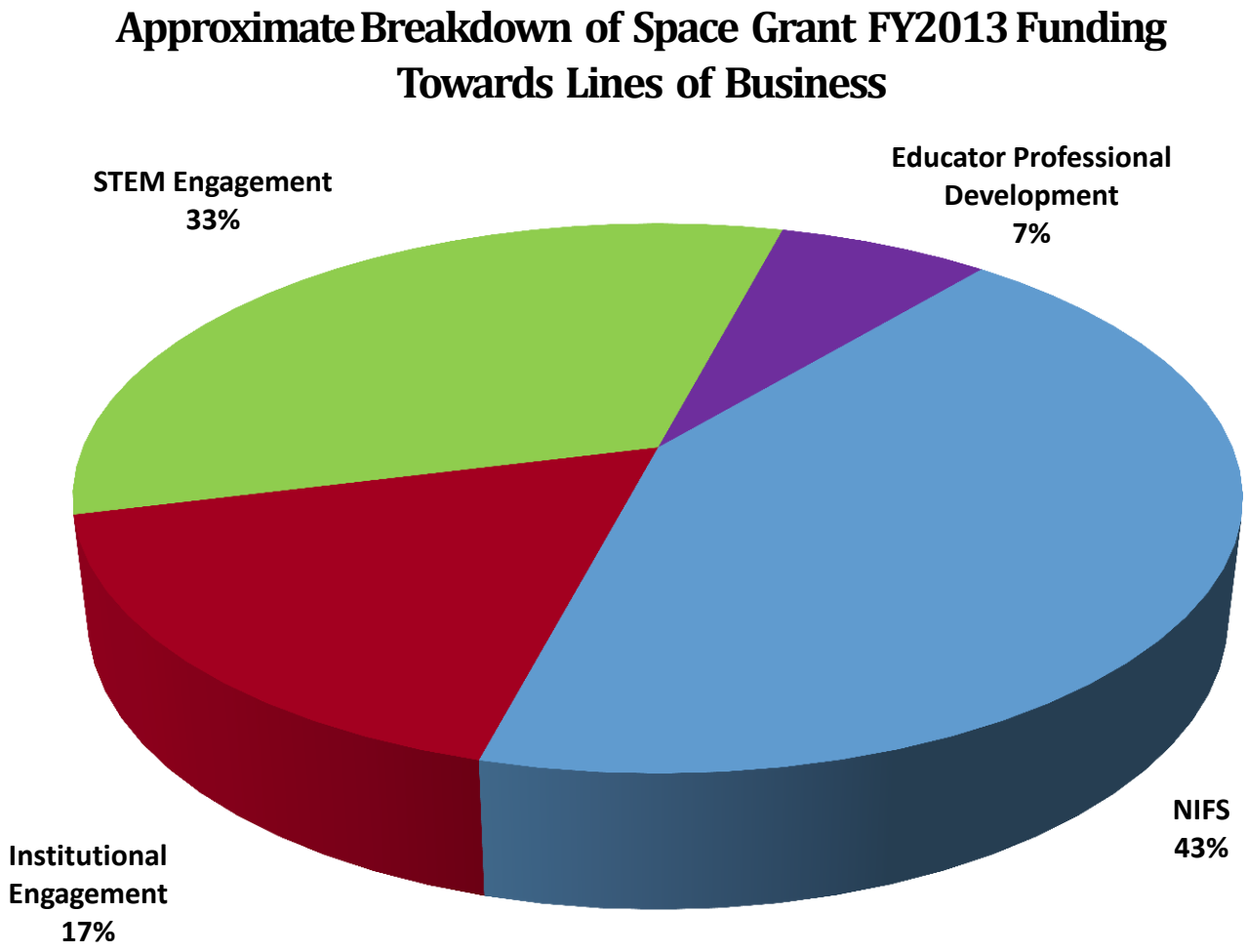
## NASA Education Lines of Business (LOBs)

- STEM Engagement
- Educator Professional Development
- Institutional Engagement
- NASA Internships, Fellowships and Scholarships (NIFS)

## 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 underrepresented minorities, women and persons with disabilities, for careers in aerospace science and technology
- Promote a strong science, mathematics, and technology education base from elementary - secondary levels

# FY2013 Lines of Business Funding



# STEM Engagement

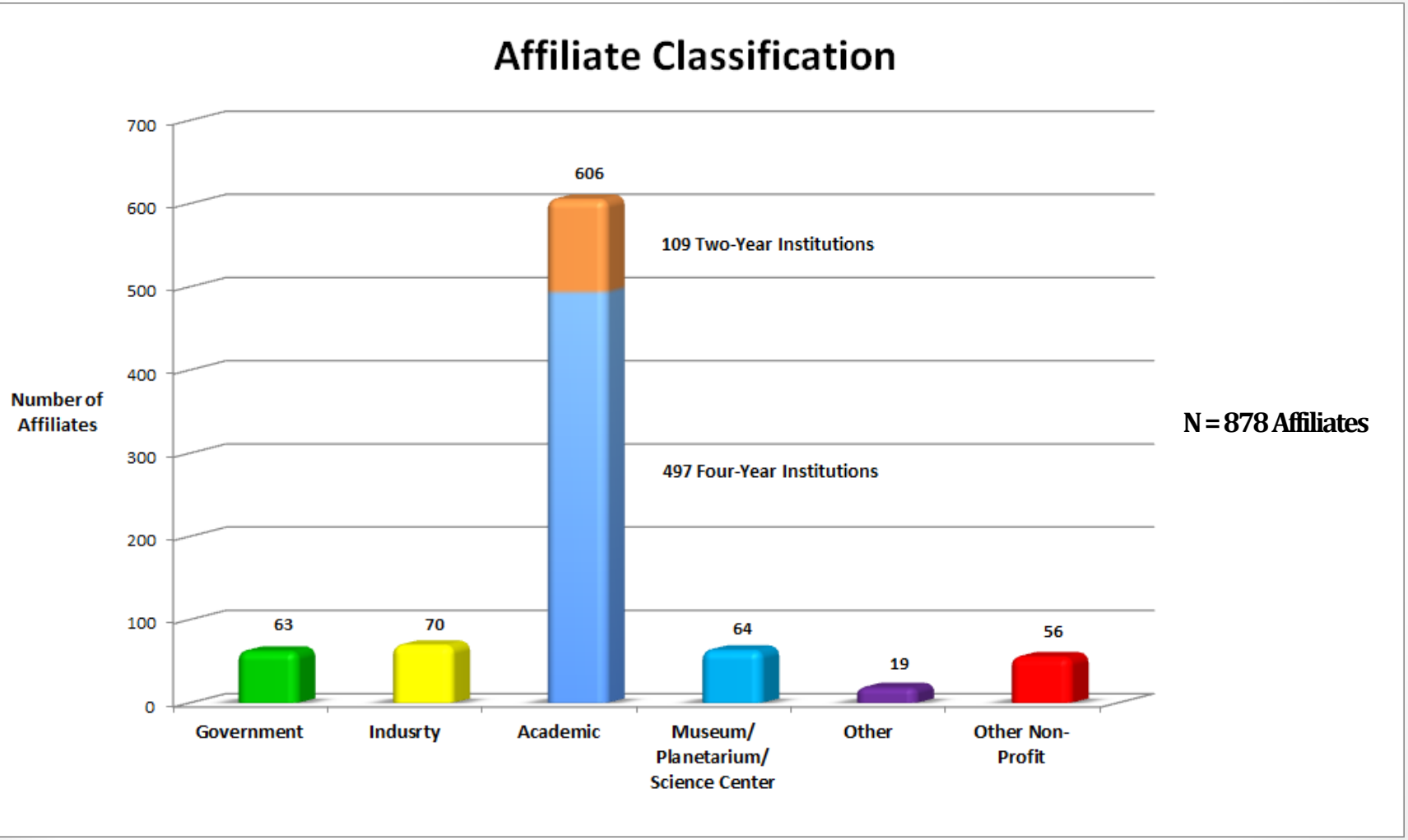
| # of Project Partners | # of Publications | # of Papers Presented | # of Proposals Funded | # of Patents Granted | # of Tech Transfers |
|---|---|---|---|---|---|
| 142 | 761 | 636 | 172 | 1 | 5 |

- 136 Public Education Activities
- 260 Pre-College Project Activities
- 423 Higher Education Project Activities
- New/Revised Higher Education STEM Courses
  - 37 New Courses
  - 85 Revised Courses

# Educator Professional Development

| Participant Type | Direct Interaction | Indirect Interaction | Unique Participants |
|---|---|---|---|
| Elementary School Teachers | 3,876 | 11,265 | 3,293 |
| Middle School Teachers | 7,006 | 7,853 | 6,061 |
| High School Teachers | 3,275 | 5,694 | 2,396 |
| Pre-Service Teachers | 1,699 | 775 | 1,351 |
| Higher Education Faculty | 4,305 | 2,613 | 3,112 |

# Institutional Engagement




N = 878 Affiliates

*Functionality to determine Minority Serving Institutions in OEPM is currently in the development phase

# NASA Internships, Fellowships, Scholarships

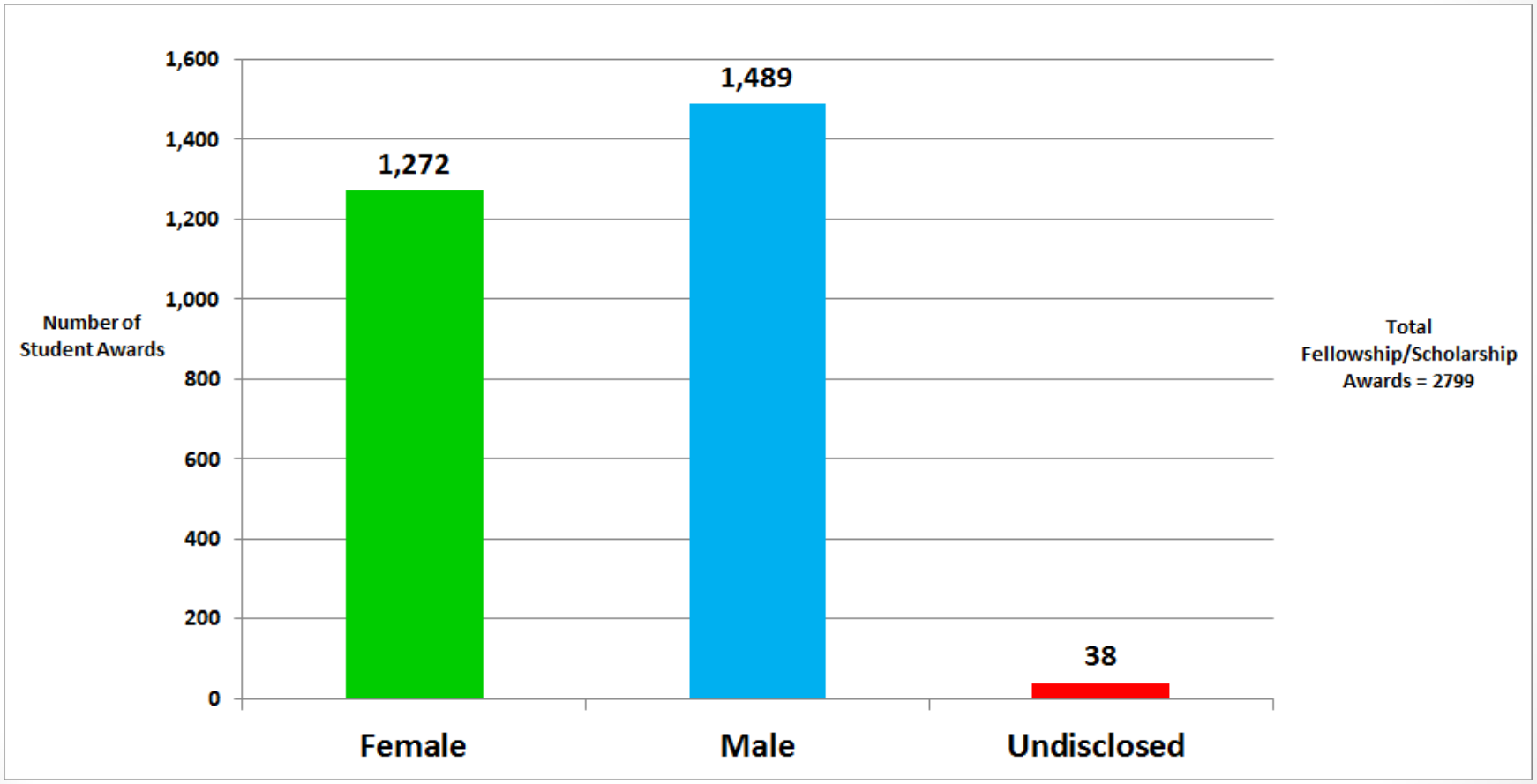
## Space Grant Student Internships FY2013

- 445 Internships Awarded through Space Grant

  - 126 Internships at NASA Centers

- Approximately $3.7M Awarded as Internship Awards

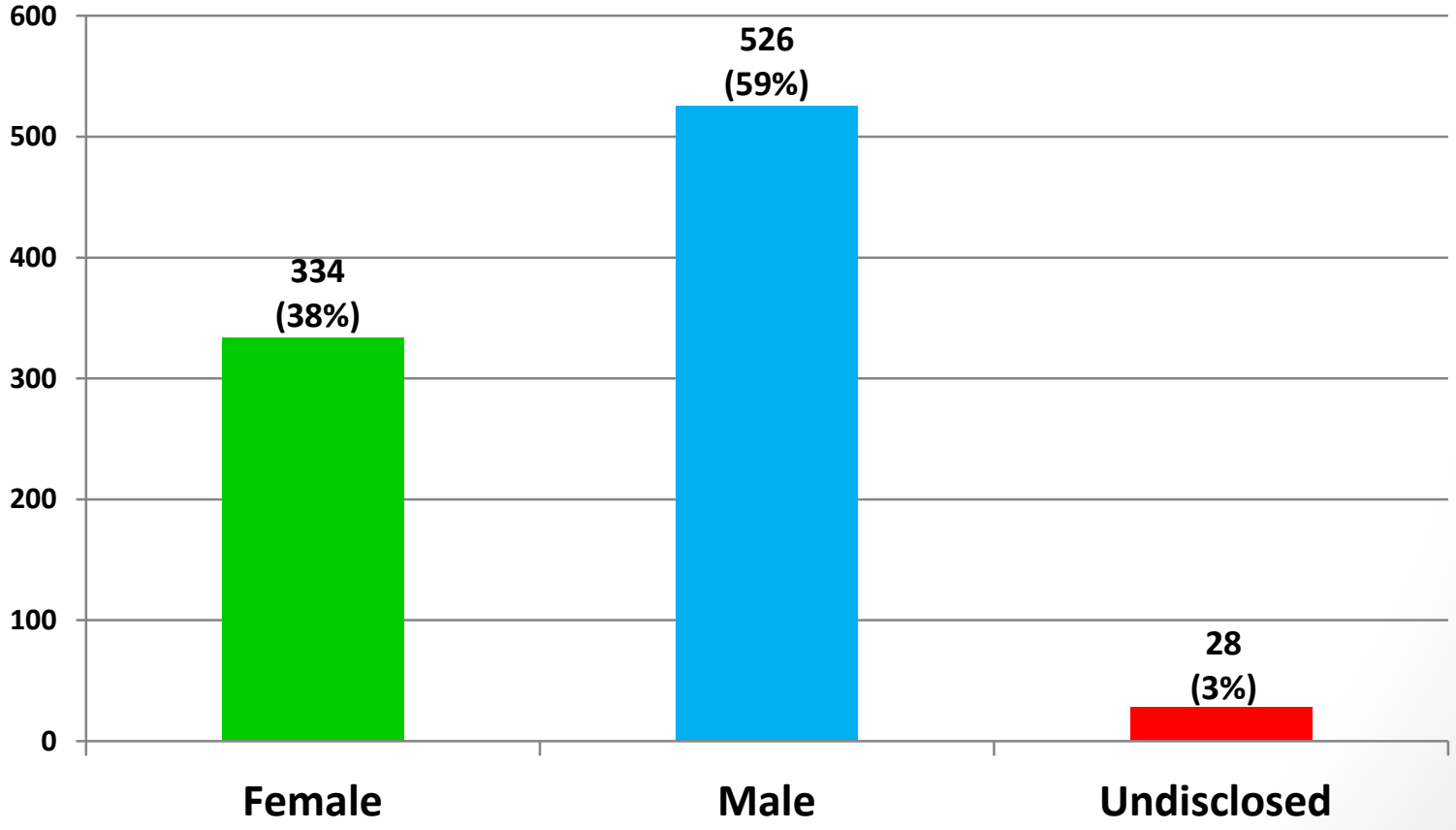
# Space Grant Fellowships/Scholarships: FY2013



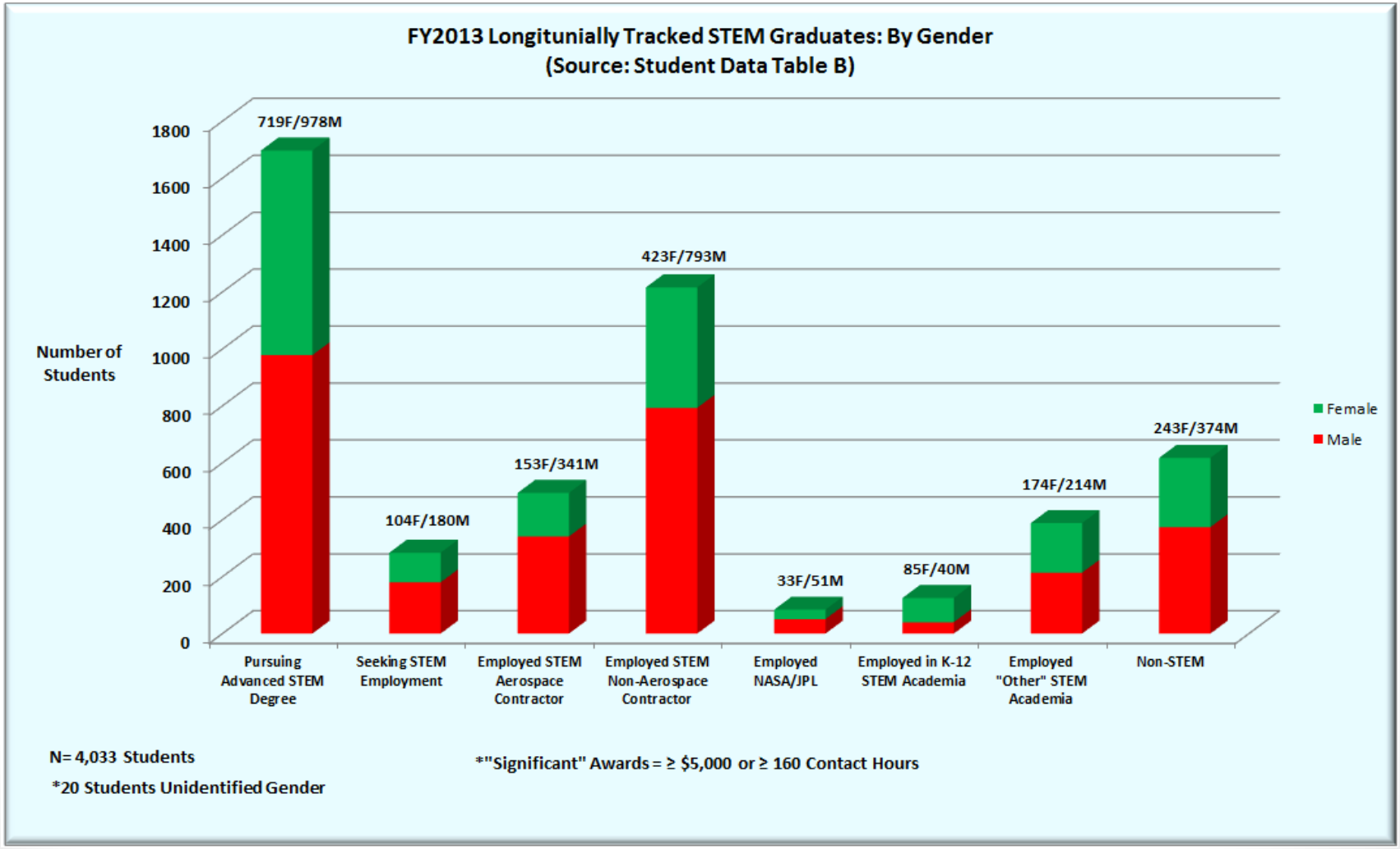
# Space Grant Graduate Fellowships

- 888 Fellowships awarded in FY2013

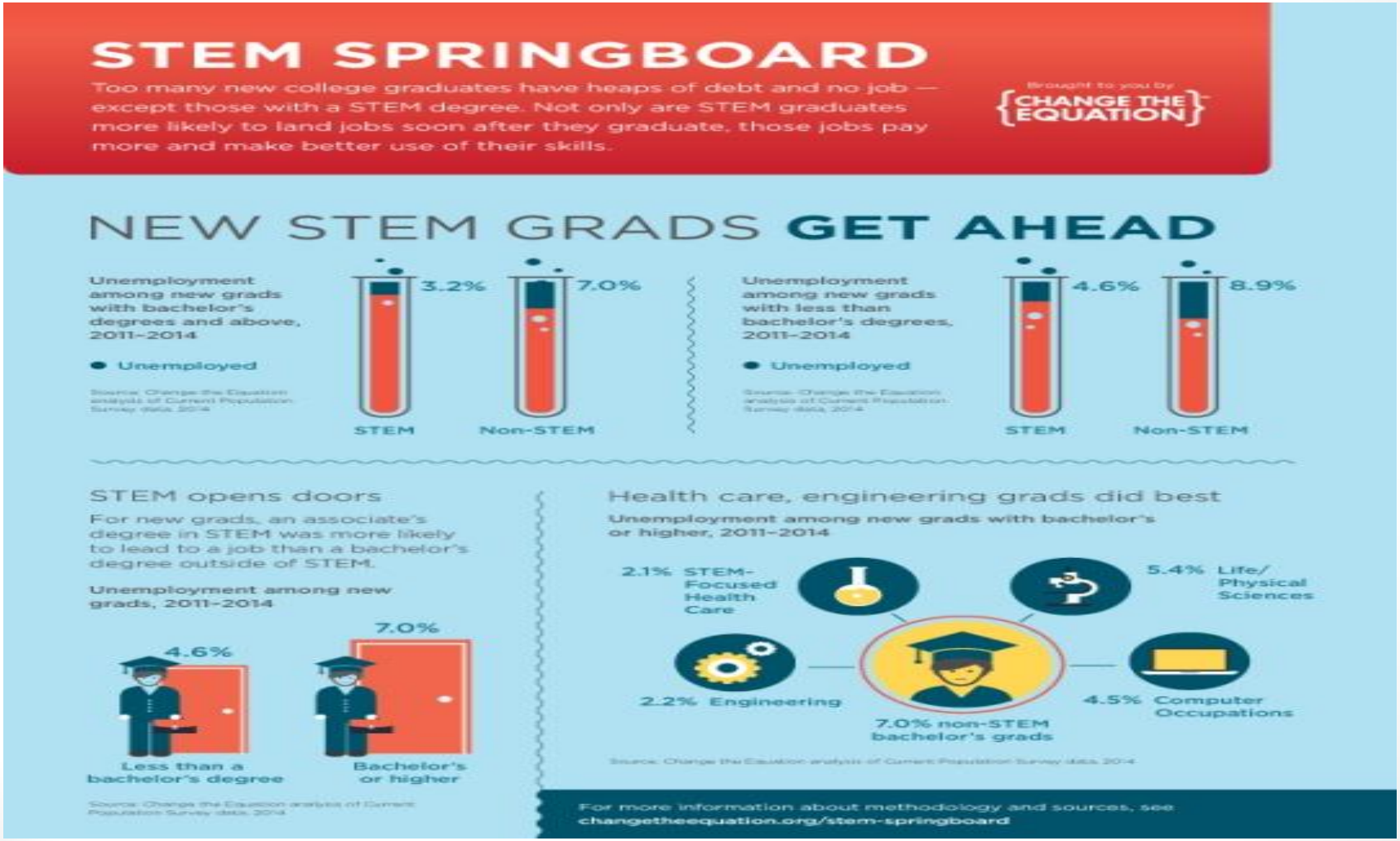
  - 167 Underrepresented Minority Students



# FY2013 Space Grant STEM Graduates: By Gender



# Change The Equation's Analysis of Census Bureau STEM Data




http://changetheequation.org/stem-springboard#overlay-context

# Change The Equation's Analysis of Census Bureau STEM Data

http://changetheequation.org/stem-springboard#overlay-context

# 2014 Community Colleges & Technical Schools Solicitation Update

- **35 Awards**
- **$17.3M**
- Winning proposals outlined ways to attract and retain more students from community and technical colleges in STEM curricula, develop stronger collaborations to increase student access to NASA's STEM education content, and increase the number of students who advance from an associate to a bachelor's degree.

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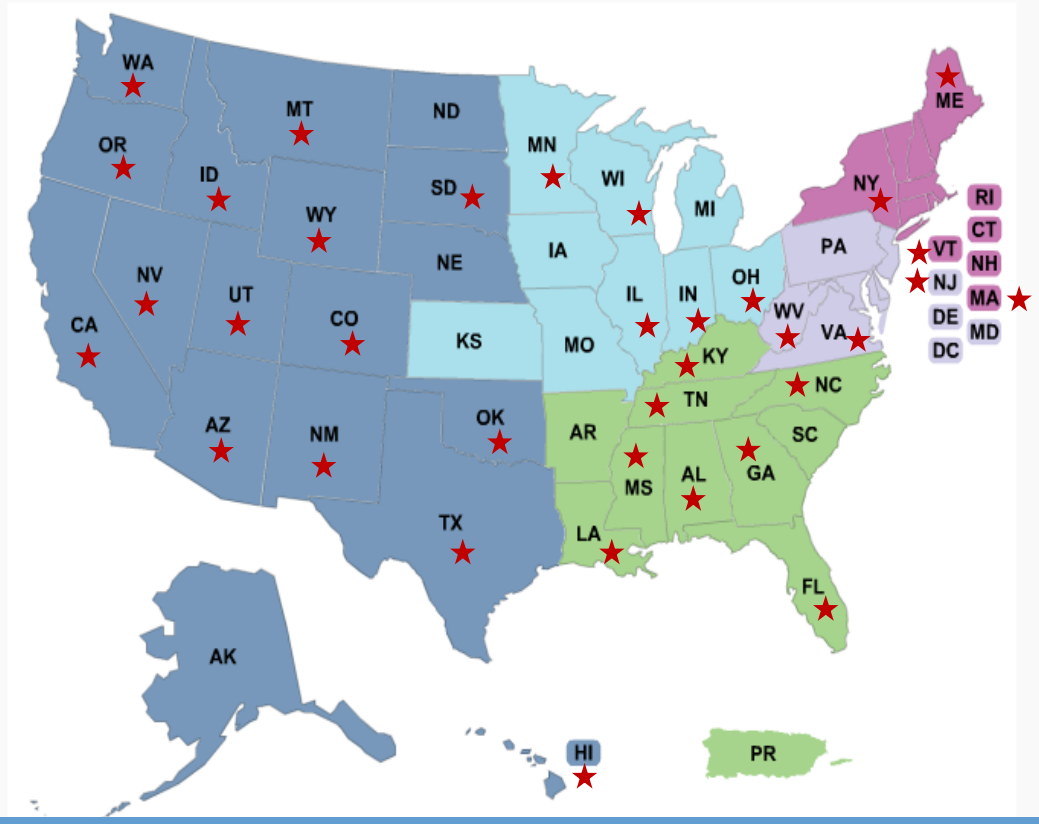
# 2014 Community Colleges & Technical Schools Geographical Award Distribution




| Space Grant Regions |
| --- |
| Great Midwestern Region |
| Mid-Atlantic Region |
| Northeast Region |
| Southeastern Region |
| Western Region |

★ 35 CC/TS Awards

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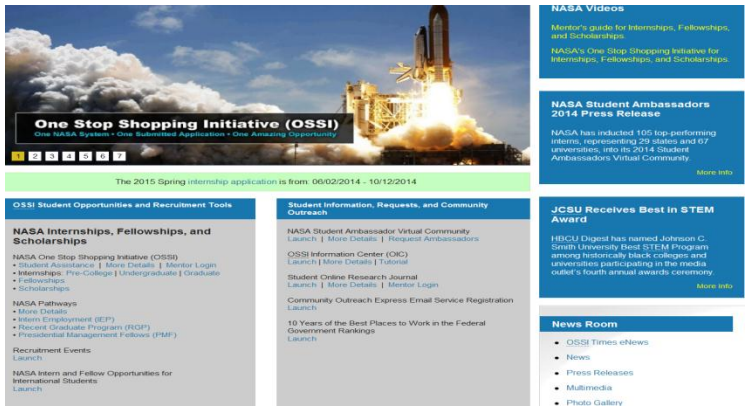
# On The Horizon




- The **2015 Spring internship** application period is open until **October 12, 2014**.
- The **2015 Summer** internship application period is anticipated to open on **November 1, 2014**.

- **CubeSAT Launch Solicitation - Human Exploration and Operations Mission Directorate (HEOMD)**
  - Proposals Due - Wednesday, November 26, 2014
  - Jason Crusan (POC)

  **http://www.nasa.gov/directorates/heo/home/CubeSats_initiative.html**

- **Space Grant "Base Award" Solicitation**
  - Anticipated Release Date – First Quarter of FY2015

# The FY 2015 Budget

- FY2015 President's Budget Request:
  - Office of Education: $88.9M
  - Space Grant: $24M
  - EPSCoR: $9M
- FY2014 Enacted Budget:
  - Office of Education: $116.6M
  - Space Grant: $40M
  - EPSCoR: $18M

# Space Grant National Evaluation Update

- Space Grant (SG) Evaluation Planning begins Fall 2014
  - Community consultation on:
    - Evaluation questions
    - Existing data sources
    - Past SG evaluation methods
  - Data quality assessment during the fall and winter

# Contact Information: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