2014 Consortium Meeting

California Space Grant Consortium

John Kosmatka, Director
Tehseen Lazzouni, Assistant Director
Becky Howard, Program Coordinator

Presented at:
NASA Ames Research Center
March 28, 2014
### Program Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00</td>
<td>Welcome and Introductions</td>
<td>John Kosmatka</td>
</tr>
<tr>
<td>10:15</td>
<td>NASA Education / NASA Ames Update</td>
<td>Brenda Collins</td>
</tr>
<tr>
<td>10:45</td>
<td>State of the Consortium</td>
<td>John Kosmatka</td>
</tr>
<tr>
<td>11:15</td>
<td>Consortium-Wide Highlights</td>
<td>Tehseen Lazzouni</td>
</tr>
<tr>
<td>11:45</td>
<td>Break</td>
<td></td>
</tr>
</tbody>
</table>

### Project Presentations

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00</td>
<td>PreCollege: Underrepresented STEM</td>
<td>Lily Gossage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cal Poly Pomona</td>
</tr>
<tr>
<td>12:30</td>
<td>Higher Ed: NASA KSC Internships</td>
<td>J. Yee &amp; B. Oakes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stanford</td>
</tr>
<tr>
<td>12:45</td>
<td>Higher Ed: Rockets &amp; CubeSats</td>
<td>Lynn Cominsky</td>
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<tr>
<td></td>
<td></td>
<td>Sonoma State</td>
</tr>
<tr>
<td>1:00</td>
<td>Lunch and Open Mic Session</td>
<td></td>
</tr>
</tbody>
</table>
Program Schedule

**Project Presentations**

2:00  *Research: Environmental Remote Sensing*  
Susan Ustin & Pia van Benthem  
UC Davis

2:15  *Research: Unmanned Aerial Systems*  
Ram Nunna & Greg Kriehn  
Fresno State

2:30  *Student Poster Session*

3:30  *Technical WorkShop: Arduino Build*  
Tim Wheeler  
UCSD / Stanford

4:30  *Meeting Summary & Future Plans*

5:00  Adjourn
Participants

Affiliates and Partners:
- Brian Kruse, Greg Schultz, Linda Shore
- Lily Gossage
- Ram Nunna, Gregory Kriehn
- Jose Hernandez
- Matthew Ringle (for Periklis Papadopoulos)
- Lynn Cominsky
- Patricia Dobson, Laura Peticolas, Bryan Mendez
- Susan Ustin, Pia van Benthem
- Enrico Ramirez-Ruiz
- Astronomical Society of the Pacific
- Cal Poly, Pomona
- CSU Fresno
- Napa Valley College
- San Jose State University
- Sonoma State University
- UC Berkeley
- UC Davis
- UC Santa Cruz

NASA Personnel:
- Brenda Collins, Division Chief
- Maria Lopez
- Brenden Sanborn
- Thomas Clausen
- Vytas Sunspiral, Senior Robotics Researcher
- NASA Ames Office Of Education
- Higher Education Program Specialist
- Formal Education Program Manager
- Precollege Officer
- NASA-Ames Dyn Tensegrity Robotics Lab

Students (several presenting posters):
- Gregory Dzhezyan, Christopher Livingston, Jonathan Meza, Gonzalo Leyva, Joshua Wenzel
- Timothy Shea
- Fernando Romero
- Benjamin Oakes, Jonathan Yee, Eric Gutierrez, Tim Wheeler
- Katherine Acord, Spencer Mathews, Johana Ramirez-Zapien
- CSU Fresno
- CSU Sacramento
- Napa Valley College
- Stanford University
- UC Davis

CaSGC HQ Personnel:
- John Kosmatka and Tehseen Lazzouni
2014 Consortium Meeting
California Space Grant Consortium

“State of the Consortium”

John Kosmatka, Director

Presented at:
NASA Ames Research Center
March 28, 2014
State of the Consortium

- NASA National Space Grant Program
- California Space Grant Consortium
- Space Grant Congressional Meetings
- 2014 National Space Grant Directors Meeting
- Budget Realities
- California Suggestions for Competitive Awards
- FY-2014 NASA CAN RFP
- Future Objectives
State of the Consortium

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NASA National Space Grant Program

- Develop and train a high-tech workforce to sustain a robust U.S. science and space exploration program
- Over 1,000 affiliates in the 52 Space Grant Consortia
- Capitalize on 1:1 match
- Undergraduates (91% have STEM jobs)
  - Nearly 25% minorities
  - Nearly 40% women
State of the Consortium

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28 Affiliate Institutions

- **Lead Institution:**
  - UCSD: University of California, San Diego

- **Affiliate Members:**
  - APU: Azusa Pacific University
  - ASP: Astronomical Society of the Pacific
  - CIT: California Institute of Technology
  - CPP: California State Polytechnic University, Pomona
  - CPS: California State Polytechnic University, San Luis Obispo
  - CSUF: California State University, Fresno
  - CSULA: California State University, Los Angeles
  - CSULB: California State University, Long Beach
  - CSUS: California State University, Sacramento
  - CSUSB: California State University, San Bernardino
  - PC: Pomona College
  - SCU: Santa Clara University
  - SDCC: San Diego City College
  - SDSC: San Diego Supercomputer Center
  - SDSU: San Diego State University
  - SJSU: San Jose State University
  - SSU: Sonoma State University
  - SU: Stanford University
  - UCB: University of California, Berkeley
  - UCD: University of California, Davis
  - UCI: University of California, Irvine
  - UCLA: University of California, Los Angeles
  - UCR: University of California, Riverside
  - UCSB: University of California, Santa Barbara
  - USC: University of California, Santa Cruz
  - USD: University of Southern California

12 Community College Partners

- CC: Citrus College
- CaC: Cabrillo College
- CCSF: City College of San Francisco
- COD: College of the Desert
- CSM: College of San Mateo
- GC: Gavilan College
- HC: Hartnell College
- LACC: Los Angeles City College
- MSAC: Mt. San Antonio College
- NVC: Napa Valley College
- SBCC: Santa Barbara City College
- SC: Southwestern College

3 NASA Center Partners

- AMES: NASA Ames Research Center
- DRYDEN: NASA Dryden Flight Research Center
- JPL: NASA/Jet Propulsion Laboratory
California Space Grant Consortium: Vision & Mission

**Vision:**
To Inspire & Educate the next generation of aerospace scientists, engineers, and managers.

**Mission:**
To Serve as a crosscutting and integration agent in California to bring NASA aerospace-related content and expertise to the educational community and general public.
California Space Grant Consortium: Program Goals

- Diversity & Inclusion
- Quality Scholarships & Fellowships
- Research Infrastructure
- Higher Education Interdisciplinary Hands-On Projects
- Precollege Programs
- Informal Education & Public Outreach
Program Goals:
1) Diversity & Inclusion

Promote diversity and inclusion in all programs and activities by encouraging participation by underrepresented minority and female students and faculty. Each academic year:

- Provide a percentage of awards to underrepresented minority and female students that is consistent with diversity targets established by NASA.
- Undertake at least three collaborative programs with a non-member minority serving institution.
- Conduct at least one outreach event in partnership with a non-member minority serving institution to promote programs and opportunities to students and faculty.

The diversity targets are currently 41% for awards to minority students, based on National Center for Education Statistics data for California (2011), and 40% for awards to female students, based on NASA guidance.
Program Goals:
2) Quality Scholarships & Fellowships

Conduct quality scholarship and fellowship programs including STEM (Science, Technology, Engineering, and Math) research awards for community college, undergraduate and graduate students to broaden and deepen students’ knowledge and prepare them for advanced STEM opportunities. Each academic year:

- **Award undergraduate, graduate, and community college students with scholarships and fellowships.** Students will be competitively selected by a review panel.

- **Award at least the minimum funding amount required by NASA (currently $150,000 from baseline and $55,000 from augmentation funds) to at least 75 students,**

- **Provide a percentage of fellowship/scholarship awards to under-represented minority and female students that is consistent with diversity targets established by NASA.**
Program Goals:
2) Quality Scholarships & Fellowships

GOAL 2, CONTINUED:

• **Longitudinally** track 100% of all students receiving significant awards to identify their next step in academia or the workforce. Significant awards are those equal to or greater than $5,000 or 160 contact hours, cumulatively.

• At least 90% of students completing their education and receiving significant awards will be employed by NASA, an aerospace contractor, higher education or other educational institutions.

• At least 50% of undergraduate students receiving significant support from CaSGC will move on to advanced education in NASA-related disciplines.
Program Goals:

3) Research Infrastructure

Undertake programs that foster research capabilities at our affiliate institutions and serve as a catalyst for linking university researchers to NASA and other opportunities. Each academic year:

- Support at least three interdisciplinary student research infrastructure projects in partnership with CaSGC affiliate institutions.
- Involve at least 15 students in research infrastructure projects in partnership with CaSGC affiliate institutions.
- Provide a percentage of research infrastructure awards to under-represented minority and female students that is consistent with diversity targets established by NASA.
Program Goals:

4) Higher Education Interdisciplinary Hands-On Projects

Offer quality interdisciplinary hands-on higher education programs in partnership with our affiliate institutions to prepare students for STEM employment. Each academic year:

- Provide paid internships for at least six students at California NASA Centers and at least one student at an industry partner.

- Conduct at least five hands-on interdisciplinary higher education projects in partnership with CaSGC affiliate institutions.

- Involve at least 75 students in hands-on interdisciplinary higher education projects in partnership with CaSGC affiliate institutions.
Program Goals:

4) Higher Education Interdisciplinary Hands-On Projects

GOAL 4, CONTINUED:

Each academic year:

• Involve students from underrepresented backgrounds in hands-on higher education projects at a level consistent with diversity targets\(^1\) established by NASA.

• At least 70\% of Minority Serving Institution (MSI) affiliates will be involved in our higher education programs. Currently there are 7 MSI affiliates.

• Each academic year, at least two new or revised courses targeted at the STEM skills needed by NASA will be developed with CaSGC support.
Program Goals:
5) Pre-College Opportunities

Provide quality precollege educational opportunities including professional development for pre-service and in-service educators and student-focused programs for students throughout the precollege pipeline. Each year:

• **Provide professional development in STEM using NASA resources to at least 40 teachers.**

• **Reach over 200 precollege students** by conducting student-focused programs and activities promoting participation in STEM and related careers.

• **At least 75% of precollege educators participating in two or more days of professional development will use NASA resources in their classroom following the workshop.**

• **At least 60% of precollege educators receiving NASA resources or participating in CaSGC-led short duration activities will use NASA resources in their classroom.**
Conduct Informal Science Education programs in partnership with formal and informal education members and partners. Each academic year:

- Utilize material developed in CaSGC’s other program elements to inspire and engage the general public at science-related events and university open houses.
- Sponsor at least one program with the Reuben H. Fleet Space Center, the San Diego Air & Space Museum, and/or the California Science Center.
- Consider other appropriate informal science education opportunities as funding and partnerships permit.

Program Goals:

6) Public Outreach
State of the Consortium

- NASA National Space Grant Program
- California Space Grant Consortium
- Space Grant Congressional Meetings
- 2014 National Space Grant Directors Meeting
- Budget Realities
- California Suggestions for Competitive Awards
- FY-2014 NASA CAN RFP
- Future Objectives
CA Space Grant Program Congressional Meetings
Wednesday 2/26/14 – Thursday 2/27/14

- 24 (1/2 hour) meetings with Congressional Staff
  - Sen. Barbara Boxer
  - Sen. Dianne Feinstein
  - Dem Leader Nancy Pelosi
  - Senate CJS Approps: Allen Cutler
  - Rep. Xavier Becerra
  - Rep. Ken Calvert
  - Rep. John Campbell
  - Rep. Lois Capps
  - Rep. Tony Cardenas
  - Rep. Susan Davis
  - Rep. Mike Honda
  - Rep. Dianne C. Watson
  - Rep. Duncan D. Hunter
  - Rep. Darrell Issa
  - Rep. Zoe Lofgren
  - Rep. Alan Lowenthal
  - Rep. Tom McClintock
  - Rep. George Miller
  - Rep. Scott Peters
  - Rep. Dana Rohrabacher
  - Rep Adam Schiff
  - Rep Jackie Speier
  - Rep. Juan Vargas
  - Rep. David Valadao

- 32 folder drop-offs
- Discuss California and your district activities
- Everyone is supportive of STEM and NASA Space Grant
- They want to visit your programs.
CA Space Grant Program Congressional Meetings
Wednesday 2/26/14 – Thursday 2/27/14

California Space Grant in the 22nd District

California Space Grant has been supporting students from the Lyles College of Engineering at CSU Fresno in an Unmanned Aerial Vehicle (UAV) project. This interdisciplinary group of students has gained tremendous hands-on design experience in electronics, embedded systems, software engineering, and electro-mechanical systems integration preparing them for high-tech careers in aerospace engineering.

California Space Grant has also supported CSU Fresno undergraduate students mentoring elementary students in the development of robots for a robotics competition. This mentoring is taking place at Lowell Elementary, a school located in a disadvantaged neighborhood. The project has inspired and engaged the elementary students in Science and Engineering while giving the college students the experience of leading a team and sharing their science and engineering knowledge.

In addition to these higher education and elementary education projects, the California Space Grant has supported a high school Summer Engineering Experience (SEE) to increase gender diversity and introduce the students to the many areas of engineering.

These three projects are directly related to meeting our nation’s critical need for a strong, diverse, and competitive STEM workforce for the 21st century.

CALIFORNIA SPACE GRANT CONSORTIUM
In the 14th District

In 2013 the California Space Grant Consortium provided Pre-Service and In-Service Professional Development in Astronomy with affiliate Astronomical Society of the Pacific (ASP) and community college partners Hartnell College and the College of San Mateo. The workshop, developed by the ASP and funded by the California Space Grant to impart techniques for engaging students with diverse cultural backgrounds, is entitled “Multicultural Astronomy in the Classroom.” This workshop explores activities and resources about the astronomical heritage of cultures from around the world and gave participating teachers techniques for engaging students with diverse cultural backgrounds while also supporting the broader goals of new teaching standards. Teachers were from districts throughout Santa Cruz and Monterey Counties, areas with large numbers of students from backgrounds traditionally underrepresented in STEM. Upon completion of these workshops the teachers implement the new techniques in their classrooms to engage and inspire their students in the Sciences and Engineering.

Feedback received from the teacher participants included:

“Pleasant, fun, and informative. Descriptive and activity based. A must do workshop for any teacher integrating astronomy into the classroom.”

“Great overview of how to integrate astronomy/Space science using an integrated curriculum approach.”

“Very information-rich institute that placed careful and strategic emphasis on depth of understanding.”

“This was a fantastic PDI. Having been to many NASA workshops (NEW and Teacher’s Space), the Exploratorium and Next Step Institutes, I would say that this PDI ranks as one of my best science PD experiences. I thank you for the opportunity and the in-depth workshop. I feel well prepared and excited for a PD in my regional area.”

Pre-Service teachers attending related California Space Grant-funded workshops by the ASP gave the following feedback:

“I used to think that science was too challenging for many young kids and that many of them found it uninteresting; but now I know that it’s really fun and lots of kids love it!”

“I used to think that astronomy was all facts and images; but now I know it’s awesomely possible to have it hands-on.”

“I used to think the solar system was best learned through reading and visuals and that’s how I was taught in school; now I know it’s best learned by engagement by student doing hands-on, first hand learning.”

Funded by the California Space Grant: Multicultural workshop at the College of San Mateo (CSM)
(Photos courtesy Andy Kreyche, Hartnell College)
State of the Consortium

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Highlights of
2014 National Space Grant Directors Meeting
Washington, DC, Feb 27 – March 1

Dr. Roosevelt Johnson, Acting Associate Administrator for NASA Education

• Space Grant is a family
• Space Grant very important to the NASA Office of Education
• Commitment to increased communication, transparency, and responsiveness
• Important to share Space Grant accomplishments with those at higher levels at NASA: “If you don’t advocate for Space Grant you’ll be out-advocated by someone else.”
• Would like to see more promotion of Space Grant on social media
• “If you’re not having fun doing this, you’re not doing it right.”
Highlights of
2014 National Space Grant Directors Meeting
Washington, DC, Feb 27 – March 1

Dr. Lenell Allen, Director, Aerospace Research & Career Development, NASA Office of Education

• FY14 Omnibus Bill Language - “Any Space Grant funds available in excess of the amount needed to fulfill base awards ($28M) shall be made available to all consortia on a competitive basis.”
• Annual Performance Document (California’s is due 6/25/14)
• National Evaluation: May-July 2015

• Future solicitations
  Competitive Targeted Community College and Technical Schools Opportunity (RFP, March 2014)
State of the Consortium

- NASA National Space Grant Program
- California Space Grant Consortium
- Space Grant Congressional Meetings
- 2014 National Space Grant Directors Meeting

Budget Realities

- California Suggestions for Competitive Awards
- FY-2014 NASA CAN RFP
- Future Objectives
Budget Realities

Space Grant Funding – President’s Request and Enacted Amount

NASA HQ
Competitive Awards (2 yr)

California must compete, cautiously

Each state is being asked to do more. Funding is cut by 27% (to 2005 levels)

- Baseline Awards: $28M
- Competitive Awards: $12M
- FY14 Budget: $575K/yr
- FY10 Budget: $790K/yr
- FY05 Baseline: $28M

Fiscal Year

- FY96
- FY97
- FY98
- FY99
- FY00
- FY01
- FY02
- FY03
- FY04
- FY05
- FY06
- FY07
- FY08
- FY09
- FY10
- FY11
- FY12
- FY13
- FY14

California Space Grant Consortium
Budget Realities

- In year 4 of 5 year program. Year 5: 8/26/2014 to 8/26/2015
- Congress is requiring an External Evaluation of Program
- Expected Solicitation for next 2-year award in 8/2014.
- NASA warns that no new base awards until the review process is complete.
- NASA is cautioning that we may need “no-cost extensions” on current 5-year award to tide us over before new 5-year award.
Baseline Funding Activities

**University Efforts**

- **457** Higher Education Direct Participants
- **205** Fellowship & Scholarship Recipients
- **38** Higher Education Projects Conducted
- **12** Higher Education Courses Created or Revised to Teach STEM Skills

**Focus areas**

- Aerospace Engineering
- Astronautics
- Chemical Engineering
- CubeSat Development
- Dynamic Tensegrity Robotics
- Earth System Science
- Environmental Science
- Geophysics
- High Endurance Green Aircraft Design
- Materials Science
- Nanotechnology
- Near Space Ballooning
- Photovoltaics
- Remote Sensing
- Rocket Engine Development
- Satellite Operations
- Space Physics
- and more...

**Pre-College Efforts**

Program Participants **This Year:**

- **296** Precollege Students
- **56** In-Service Educators
- **34** Pre-Service Educators
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FY-2014 NASA Cooperative Agreement Notice (CAN) RFP: Competitive Opportunity for Partnerships with Community Colleges and Technical Schools

The intent is to directly support:

• **Enhance STEM Experience of Undergraduate Students:** NASA goal to graduate one million students with degrees in STEM fields over the next 10 years and, understanding that students from various backgrounds may comprise high enrollment in community colleges and technical schools

• **Better Serve Groups Historically Underrepresented in STEM Fields:** Increase the number of students from underrepresented groups and improve women’s participation in areas of STEM

  • attract/retain more community college students into STEM-based programs
  • increase educators’ ability to deliver NASA STEM content
  • create strategic relationships with NASA Centers & industry
  • build capability to incorporate NASA STEM content into its curricula
  • increase students that complete their Associate’s degree and take a STEM job or transfer to a four-year university

Release Date: 3-20-2014
Notice of Intent Due: 4-14-2014
Proposals Due: 5-28-2014
FY-2014 NASA Cooperative Agreement Notice (CAN) RFP: Competitive Opportunity for Partnerships with Community Colleges and Technical Schools

Requirements:

• **One Proposal per Consortium**
• Direct (financial and hands-on) support for community college faculty and undergraduate students enrolled in a STEM degree program
• Four-year institutions may engage via bridge programs or other collaborative efforts, the focus and intent is to provide direct support to community colleges.
• No graduate student support leading to education degrees is allowed
• U.S. citizens only
• Target; minimum 41% diversity and 40% female participation

Program Elements for Students:

• Scholarships
• Internships at NASA Centers or STEM Industry
• Bridge to four year institutions
• Summer hands-on opportunities and workshops
• Design Challenges, New Courses

2-year ($250K/yr) $500K max
Scholarships: $200K min
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Future Objectives
Future Objectives
(Doing More with Less)

California is severely challenged with limited funds and large needs.

- Commit to NASA HQ Competitive RFPs where we can *fairly compete*
- Increase External Funding Opportunities (State of California Workforce Development, Commercial Launch Vehicle Initiatives, UAV Commercialization Opportunities, Other STEM supporters)
- Focus on “Multiplier Effect” Reaching out to unfunded students.
- Make sure we hit our diversity targets (41% diversity, 40% women)
- Spend money where we can make a difference.
- Provide “pathways” to success
- Balance “outreach with innovative research”
- Conduct mentored team research projects with STEM goals for retention
- Develop On-Line STEM coursework for CC and rural colleges
- Consider industry affiliates to create a workforce training partnership
QUESTIONS ??
2014 Consortium Meeting
California Space Grant Consortium

“Consortium-Wide Highlights”

Tehseen Lazzouni, Assistant Director

Presented at:
NASA Ames Research Center
March 28, 2014
**Consortiumwide Accomplishments & CaSGC Headquarters Activities**

**Outcome 1: Contribute to the development of the STEM workforce in disciplines needed to achieve NASA's strategic goals.**

<table>
<thead>
<tr>
<th>Program Element</th>
<th>Number of Direct Funded Students</th>
<th>Number of Direct Participants (Funded &amp; Non-Funded Students)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellowships &amp; Scholarships</td>
<td>74</td>
<td>135</td>
</tr>
<tr>
<td>Higher Education</td>
<td>116</td>
<td>292</td>
</tr>
<tr>
<td>Research Infrastructure</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td><strong>TOTAL OUTCOME 1</strong></td>
<td><strong>205 students</strong></td>
<td><strong>457 students</strong></td>
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</table>
Consortiumwide Accomplishments & CaSGC Headquarters Activities

**Outcome 1**

Fernando Romero—Napa Valley College Student at Sonoma State University

SDSU: Undergraduate researchers continuing research during the school year.

USC Graduate Student Research in ‘Re-inventing Space’.

Stanford: Samira Motiwala @ JPL

UC: Paula Adhikari @ JPL

UCI: Radiocarbon Analysis on Arctic Methane and Carbon Dioxide Emissions & Sources

UCLA’s Prof. Chris Russell (second from left) with asteroid Vesta (Dawn Mission).
Consortiumwide Accomplishments & CaSGC Headquarters Activities

**Outcome 1**

SSU: Analyzing Ocean Water

UCSB: Asteroid Mitigation Project

Azusa Pacific: Student Researchers and Faculty

UCSD: IDEA Center Research Scholarships
Consortiumwide Accomplishments & CaSGC Headquarters Activities

**Outcome 1**

Mentoring Chain with Professors, Graduate & Undergraduate University Students, Community College Students

UC Davis Space_ED Rocket Team in Huntsville, Alabama after their successful rocket launch

Cal Poly Pomona USLI

CSU Fresno: UAS Project

UCLA Hosting LACC Student Visit

LACC Arduino Project
Consortiumwide Accomplishments & CaSGC Headquarters Activities

Outcome 1

- Cal Poly Pomona: Autonomous Takeoff & Landing Team
- USC: Lunar Lander Lab
- UC Riverside: UAV Research
- CSU Long Beach P-17 LOX/ethanol rocket project
- UCSD: Near Space Balloon Project
Outcome 2: Attract and retain students in STEM disciplines through a progression of educational opportunities for students, teachers, and faculty.

<table>
<thead>
<tr>
<th>Program Element</th>
<th>Number of Precollege Students</th>
<th>Number of Pre-Service Educators</th>
<th>Number of In-Service Educators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precollege</td>
<td>296</td>
<td>34</td>
<td>56</td>
</tr>
<tr>
<td>TOTAL OUTCOME 2</td>
<td>296 students</td>
<td>34 Pre-Service Educators</td>
<td>56 In-Service Educators</td>
</tr>
</tbody>
</table>
Consortiumwide Accomplishments & CaSGC Headquarters Activities

**Outcome 2**

- **CSU Long Beach**: Summer 2013 “My Daughter is an Engineer” (middle school girls + parents) and “Engineering Girls—It Takes A Village” (homeless girls).
- **ASP**: Multicultural Astronomy at College of San Mateo.
- **ASP**: Multicultural Astronomy at College of San Mateo.
- **CSU Fresno**: SEE—Summer Engineering Experience.
- **CaSGC HQ**: Distance Learning Project—Roller Coaster Physics.
- **SSU: SHIP Interns (Sonoma State)**.
- **CSU Long Beach**: Summer 2013 “My Daughter is an Engineer” (middle school girls + parents) and “Engineering Girls—It Takes A Village” (homeless girls).
- **ASP**: Multicultural Astronomy at College of San Mateo.
- **ASP**: Multicultural Astronomy at College of San Mateo.
- **SSU: SHIP Interns (Sonoma State)**.
## Consortiumwide Accomplishments & CaSGC Headquarters Activities

**Outcome 3: Build strategic partnerships and linkages between STEM formal and informal education providers that promote STEM literacy and awareness of NASA’s mission.**

<table>
<thead>
<tr>
<th>Campus</th>
<th>Activity</th>
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<tbody>
<tr>
<td>CaSGC HQ with Reuben H. Fleet Science Center</td>
<td>Distance Learning Magnets Activity</td>
</tr>
<tr>
<td>Citrus College</td>
<td>Middle School Outreach</td>
</tr>
<tr>
<td>UC Davis</td>
<td>University Open House</td>
</tr>
<tr>
<td>UC Los Angeles</td>
<td>Astronomy Day</td>
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<tr>
<td>UC Riverside</td>
<td>Bourns Space Science and Engineering Day</td>
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<tr>
<td>UC San Diego</td>
<td>San Diego Science Festival, UCSD Triton Day, San Diego Air &amp; Space Museum Space Day</td>
</tr>
</tbody>
</table>
Outcome 3

UCR: Bourns Space Science & Engineering Day with SWE

UC Davis Open House visitors engage in the State Landsat Mosaic Puzzle

UCSD: San Diego Science Festival EXPO Day
CaSGC Headquarters Activities

New Addition to Our Space Grant Family: Becky Howard!
CaSGC Headquarters Activities

Current Fiscal Year is FY2013

Year 4 of our 5 Year Grant

Dates: August 26, 2013 through August 25, 2014
CaSGC Headquarters Activities

http://casgc.ucsd.edu/?page_id=2446

California Space Grant Consortium

Terms and Conditions / Online Reporting

Terms and Conditions for Awards:
- Click here for 2013-2014 Terms and Conditions

Solicitations for 2013-2014:
- MESA Community College Laboratory Research Experience
- STEM Pipeline Program
- Workforce Development Program

Links to Online Reporting:
1. Awardee Form (required) – Each student involved in your project(s) receiving Space Grant or matching funds must fill out an awardee form. It is the PI’s responsibility to ensure students complete this form. After directing students to the online form, PIs should send the CaSGC program office a list of the students awarded and we will check whether or not the online form has been completed for those students.

https://www.surveymonkey.com/s/Awardee_Form

View PDF

2. NASA Education Core Data Form (required) – Use this form to report project success stories and data on publications, patents, and proposals. All affiliates who received Space Grant funds this year

Links to Online Reporting:
- 2013-2014 STEM Pipeline Proposals for Review
- 2013-2014 Workforce Development Proposals for Review
- Affiliate Portal
- Links to 2011 Congressional District One-Pagers
- STEM Pipeline 2010-2011 Art and Visualization Program
- Cal Poly Pomona Aerospace Vehicle Laboratory STEM Pipeline Project
- CSUS Outreach to Girls and Minorities for Excellence in Engineering and Computing Science
- Enhancing University
CaSGC Headquarters Activities

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California Space Grant Consortium Awardee Form 2013

1. Student Information:
   - Last Name
   - First Name
   - Middle Initial
   - Student ID #

2. Name of College or University:

3. Year in College:

4. Project Name:

5. Name of Faculty Advisor for This Project:

6. GPA:
CaSGC Headquarters Activities
# CaSGC Headquarters Activities
## FY2010

## TABLE A.2. ALL DIRECT Funded Students (Subset of Direct Participants in A.1)

<table>
<thead>
<tr>
<th>FY2010 Student Award Summary</th>
<th>Number of Students</th>
<th>Number of Awards to Female Students</th>
<th>Number of Awards to Male Students</th>
<th>Number of Awards to Underrepresented Minority Students</th>
<th>Number of Undergraduate Awards</th>
<th>Number of Graduate Awards (Masters and PhD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellowship/Scholarship</td>
<td>127</td>
<td>30</td>
<td>97</td>
<td>35</td>
<td>104</td>
<td>23</td>
</tr>
<tr>
<td>Higher Education</td>
<td>65</td>
<td>27</td>
<td>38</td>
<td>9</td>
<td>51</td>
<td>14</td>
</tr>
<tr>
<td>Research Infrastructure</td>
<td>11</td>
<td>7</td>
<td>4</td>
<td>1</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total Awards</strong></td>
<td><strong>203</strong></td>
<td><strong>64</strong></td>
<td><strong>139</strong></td>
<td><strong>45</strong></td>
<td><strong>161</strong></td>
<td><strong>42</strong></td>
</tr>
</tbody>
</table>

Calculates Automatically

Total Funded Students

Total for both columns = Total Funded Students

Subset of Total Funded Students

Total for both columns = Total Funded Students

### Summary Data (Calculates Automatically)

<table>
<thead>
<tr>
<th>Total Number of Awards</th>
<th>Percentage of Awards to Female Students</th>
<th>Percentage of Awards to Male Students</th>
<th>Percentage of Awards to Underrepresented Minority Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>203</td>
<td>31.5%</td>
<td>68.5%</td>
<td>22.2%</td>
</tr>
</tbody>
</table>
# CaSGC Headquarters Activities FY2012

## TABLE A.2. ALL DIRECT Funded Students (Subset of Direct Participants in A.1)

<table>
<thead>
<tr>
<th>FY2012 Student Award Summary</th>
<th>Number of Students</th>
<th>Number of Awards to Female Students</th>
<th>Number of Awards to Male Students</th>
<th>Number of Awards to Underrepresented Minority Students</th>
<th>Number of Undergraduate Awards</th>
<th>Number of Graduate Awards (Masters and PhD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellowship/ Scholarship</td>
<td>74</td>
<td>40</td>
<td>34</td>
<td>30</td>
<td>60</td>
<td>14</td>
</tr>
<tr>
<td>Higher Education</td>
<td>116</td>
<td>36</td>
<td>80</td>
<td>45</td>
<td>110</td>
<td>6</td>
</tr>
<tr>
<td>Research Infrastructure</td>
<td>15</td>
<td>3</td>
<td>12</td>
<td>2</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Total Awards</td>
<td>205</td>
<td>79</td>
<td>126</td>
<td>77</td>
<td>175</td>
<td>30</td>
</tr>
</tbody>
</table>

Calculates Automatically

Total Funded Students

Total for both columns = Total Funded Students

Subset of Total Funded Students

Total for both columns = Total Funded Students

## Summary Data (Calculates Automatically)

<table>
<thead>
<tr>
<th>Total Number of Awards</th>
<th>Percentage of Awards to Female Students</th>
<th>Percentage of Awards to Male Students</th>
<th>Percentage of Awards to Underrepresented Minority Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>205</td>
<td>38.5%</td>
<td>61.5%</td>
<td>37.6%</td>
</tr>
</tbody>
</table>
CaSGC Headquarters Activities

Next Cycle of Reporting:

• Starts in April 2014!

• NASA needs our finalized data in mid-May

• Will collect data for activities conducted since the last reporting cycle.

• Your cooperation and timely submissions are important and much appreciated!
CaSGC Headquarters Activities

Implementing 2013-2014 Programs:

• New Program: MESA Community College Laboratory Research Program—Awarded to Santa Ana College for “Climate Impact Assessment Using Satellite Observations” with Chapman University.

• Announcement of the Following Awards to be Made Early April:
  • Undergraduate Research Opportunity Program
  • Workforce Development Program
  • STEM Pipeline Program
  • Rocket Team Competition (New Program)
CaSGC Headquarters Activities

Gearing up for 2014-2015 Programs:

• August 2014:
  • Announcements for Workforce
  • Announcements for STEM Pipeline

• October 2014:
  • Announcement for MESA Community College Lab Experience
  • Announcement for UROP
CaSGC Headquarters Activities

Opportunities:

**Faculty or Graduate Students: RockOn Workshop, June 21 – 26, 2014, Wallops Flight Facility, VA.**
Opportunities, continued:

**Faculty:** JPL Summer Faculty Research Program, 10-week session, $13,500 fellowship. Apply by 4/1/14: [http://jsfrp.jpl.nasa.gov](http://jsfrp.jpl.nasa.gov).

**Students:** NASA/JPL Computer Science Paid Internships—ongoing need for students with great Computer Science skills and a minimum 3.0 GPA (U.S. Citizens/Permanent Residents). Students may email their resume and unofficial transcript to: education@jpl.nasa.gov.
Opportunities, continued:

**Higher Education Institutions**: 2014 EONS Educator Professional Development Solicitation, Pre-proposal workshop is 4/2/14. Please see RFP on the NSPIRES website (select “Open Solicitations”):


**K-12 Students and Educators**: A number of learning and experiential opportunities. Please see the NASA Education Express Email. To subscribe please visit:

http://www.nasa.gov/education/express.
CaSGC Headquarters Activities

Student Feedback
QUESTIONS ??