Wyoming NASA Space Grant
Fall 2016 Board Meeting
Welcome, Lunch, and Introductions

KEEP CALM AND HAVE LUNCH
Changes and New People

• Megan Candelaria
  – Mathematics faculty at LCCC – Albany County Campus
  – Still helping with K-12 STEM outreach programs

• Samantha Ogden
  – UW Planetarium and Space Grant Outreach Coordinator
Changes and New People

• Suki Smaglik – Informal education affiliate

• Central Wyoming College – new representatives:
  – Jacki Klancher and Mike Bostick

• Eastern Wyoming College – new representative:
  – Peggy Knittel
NASA and Space Grant Updates
National and Regional Meetings

• Fall 2016 Western Regional Mtg – Bend, OR
  – Sept 30 – Oct 1, 2016

• Spring 2017 National Mtg – Washington, DC
  – March 2 – 4, 2017

• Fall 2017 National Mtg – Grand Forks, ND
  – September 2017
Evaluation and New Awards

• Space Grant External Evaluation
  – Expected to be completed in Spring 2017
  – Results shared at the Spring National Meeting

• Solicitation for New Space Grant Awards
  – Expected in summer 2017
  – Awards to be given in Spring 2018
  – All Space Grant on same timeline
  – Details and award periods uncertain
NASA – New Administration in 2017

• Tuesday, November 8
NASA – New Administration in 2017

Lori Garver – Former NASA Deputy Administrator
NASA Space Grant Budget

- Congress passed a Continuing Resolution for FY 2017
  - NASA Space Grant - $40M ($570,000 for WY)
  - Same as FY 2016
CC STEM Scholarships

• 2016-2017 Funding $32,500

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<th>College</th>
<th>FTE</th>
<th>% of FTE</th>
<th>2016 Awards</th>
<th>Diff 15-16</th>
<th>2015 Awards</th>
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<td>Central</td>
<td>927</td>
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<td>$2,600</td>
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<td>LCCC</td>
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STEM Connections

• STEM Oregon
  – http://stemoregon.org/
  – http://www.oit.edu/strategic-partnerships/stem-partnership/community-connections

• Nepris: Connecting Industry Professionals to K-12 Classrooms
  – https://www.nepris.com/
  – States/communities can develop their own networks
  – Oregon Connections: https://oregonconnections.nepris.com/
Micro-G Next
(Micro-g Neutral Buoyancy Experiment Design Team)

– Undergraduate students design, build, and test a tool or device that addresses an authentic, current space exploration challenge

– Test it at the NASA Johnson Space Center Neutral Buoyancy Laboratory (NBL)

– https://microgravityuniversity.jsc.nasa.gov/theProgram/micro-g-next/index.cfm
Summer Internships

• NASA Center Internships
  – Applications open October 18 – March 2
  – OSSI online application system

• Blue Origin Internships
  – Applications due January 31
  – $9K + housing for 10 weeks
• Space Grant Supported 9 students
  • Physics
  • Chemistry
  • Astronomy
  • Microbiology
  • Civil Engineering
  • Mechanical Engineering
  • Computer Science
  • Math
• Two students returned for a second year!
• One student participated on the Casper College campus
• Partnership with Astronomy and Chemistry
  • Cohort of 23 students total
• Mentors matched ahead of time
  • Based on student research interest
• Students were paid a monthly summer stipend
  • Housing was provided
Extra-Curricular Activities

- Community Building Events
  - Day hikes
  - Weekly lunches/dinners
  - Student led: sand volleyball, movie marathons, camping trips, other
Extra-Curricular Activities

Camping Trip and Black Thunder Visit
Extra-Curricular Activities
NREL Visit

NREL Visit

COLORADO ROCKIES

Wyoming Space Grant Consortium
Spring 2017
Laramie, WY
Summer 2017
Year Three
(one-year no-cost extension)
• Hoping to support 2-4 students
• Possibly focus on students interested in returning for a second year experience.
• Students would still be a part of the large astronomy/chemistry cohort
Astronomy Teaching Summit Update:
Suki Smaglik

• San Francisco, CA in Summer 2016
National Summit – Astro 101

Aug 1-3, 2016  San Francisco City College, Chinatown Campus

Aug 7-9, 2017  Florida Gulf Coast University, Ft. Myers
National Summit – Astro 101

ASTRO101 SUMMIT
KEYNOTE SPEAKERS

Carl Wieman
Stanford, Nobel Laureate

Vera Margoniner
Sacramento State
College Outstanding Teaching Award

Stephanie Slater
CAPER
APS Woman Physicist of the Month

Andrew Fraknoi
Foothill College
CA Prof of the Year

Also Paul Hewitt, Emeritus Professor of Physics
National Summit – Astro 101

National Astronomy Teaching Summit

Product Details

Proceedings of the 2016 National Astronomy Teaching Summit

By Timothy Slater, Sharon Schleigh

Digital media products such as Amazon MP3s, Amazon Instant Videos, and Kindle content can only be purchased on Amazon.com.

Product Description

Held in 2016 at the City College of San Francisco, The National Astronomy Teaching Summit brings together dedicated astronomy and planetary sciences educators to share innovative teaching techniques and successful instructional strategies that increase students’ engagement, achievement, and motivation. Designed primarily for college professors teaching the introductory astronomy survey course—ASTRO 101—the summit proceedings includes information from formal presentations, interactive workshops, and round-table discussions all designed around astronomy teaching innovations. Astronomy educators and outreach educators from all levels participated and the conference was organized by a respected program committee.

Product Details

- Published on: 2016-08-09
- Released on: 2016-08-09
- Format: Kindle eBook
National Summit – Astro 101

National Astronomy Teaching Summit’s Pinnacle Professor Award
for distinguished service to astronomy education

At the National Astronomy Teaching Summit, an individual is often honored for their widely recognized success in establishing a long-standing reputation for providing distinguished service advancing the profession of astronomy education that positively impacts and widely influences the field. The National Astronomy Teaching Summit’s Pinnacle Professor Award is the highest honor given at a Summit meeting.

A subcommittee of each year’s National Astronomy Teaching Summit - Scientific Organizing Program Committee judges the received nominations. A complete nomination requires: (i) the name, affiliation, and full contact information of the nominee, (ii) the name, affiliation, and full contact information of the submitting nominator(s), (iii) a short, suggested 25-word citation, (iv) an extended paragraph of 150-250 words explaining why this individual should receive the award, (v) and at least one additional letter of support for the nomination from students or colleagues, not exceeding five additional letters. Self-nominations are not accepted.

Nominations are accepted as attachments by email to ASTR0101Awards@CAPERteam.com each year during between 45 and 120 days before the start of the Summit. Nominations do not carry over from year to year, and nominations must be resubmitted each year. The Summit reserves the right not to make any awards.

Checklist for Nominations:

- [ ] name, affiliation, and full contact information of the nominee
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- [ ] a short, suggested 25-word citation
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National Astronomy Teaching Summit’s Ascent Award
Recognizing excellence in teaching astronomy & space science

At the National Astronomy Teaching Summit, an individual is often honored for their widely recognized excellence in teaching astronomy & space science. Effective models of innovative teaching are vitally important in increasing the quantity and quality of astronomy & space science education, and this award honors, recognizes and documents distinguished success in the field.

A subcommittee of each year’s National Astronomy Teaching Summit - Scientific Organizing Program Committee judges the received nominations. A complete nomination requires: (i) the name, affiliation, and full contact information of the nominee, (ii) the name, affiliation, and full contact information of the submitting nominator(s), (iii) a short, suggested 25-word citation, (iv) an extended paragraph of 150-250 words explaining why this individual should receive the award, (v) and at least one additional letter of support for the nomination from students or colleagues, not exceeding five additional letters. Self-nominations are accepted.

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Upcoming Events

• Wyoming Math and Science Teacher Conference – Casper College
  – October 17-18

• Wyoming Afterschool Alliance Conference – Little America - Cheyenne
  – October 17-18
Upcoming Events

• Wyoming Citizen Science Conference
  – December 1-2 in Lander, WY
  – http://www.wyobiodiversity.org/programs/wcsc/
Upcoming Events & Eclipse News

• Project Astro Teacher Workshop
  – October 28-29
2017 Total Eclipse News

- NASA ROSES Grant – Interdisciplinary Science for the Eclipse
  - Research and Citizen Science projects
  - Letter of Intent: DUE October 27
  - Proposals: DUE November 30
  - 1 year award of $50-100K
  - NASA will make ~12 awards
2017 Total Eclipse News

• 2017 Space Grant Balloon Teams
  – Using STREAM for live video – each team will have their own STREAM page: http://stre.am/eclipse
  – Eclipse page on Wyoming Space Grant website
  – Teams from WY, AZ, MT, and CO launching in WY
Citizen CATE Experiment telescope locations – Mike Pierce, CoPI – 2500 miles, 60 telescopes, 90 minutes of eclipse totality

NASA Space Grant Balloon Launches – live streaming of eclipse video across the US from near space on NASA TV
2017 Total Solar Eclipse: CATE Experiment

• *Citizen Continental-America Telescopic Eclipse Experiment*

• Citizen science project aimed at high school and undergraduate students

• 90-min video of the eclipse by telescopes along the path

• Reveals Sun’s outer corona
2017 Total Eclipse News

- Brochure
- Postcard
- Glasses
- T-shirts
- Webpage
- Activities
- UW Alumni Events
2017 Total Eclipse News

• Dr. Andrew Young: Eclipse Education of Wyoming Initiative (EEWIN)
  – Part 1: Lunar Motion Exhibit at The Science Zone
  – Part 2: Science and Engineering Heirloom Packages
2017 Total Eclipse News

• Eddington Experiment
  – Arthur Eddington confirms Einstein’s Theory of General Relativity during May 1919 eclipse
  – Toby Dittrich – Portland Community College

- Gravitational lensing occurs when the light from a distant object is bent around a massive object in between it and the observer
- The massive body distorts the spacetime (represented as the yellow grid) making the distant object look distorted
TIME FOR A BREAK
Scholarships, Internships, Fellowships, and Grants
Community College Awards

- Community College STEM Scholarships
  - 48 total awards
    - 28 women (58%)
    - CC – 13, CWC – 6, LCCC – 12, NWC – 3, NWCCD – 7
    - WWCC – 7
Community College Awards

• CC Transfer Scholarships (up to $4,000)
  – 7 students
  – 5 women (71%)
  – NWCCD (Sheridan & Gillette), LCCC, WWCC

• CC REU Summer Fellowships ($4,500 + room and board and travel)
  – 8 students – NASA
  – 7 students – CHEM
  – 5 women
  – EWC, LCCC, NWC, CC, ID, CO, CA
NASA Internships

• NASA Internships – Summer 2016 ($6,500 for UGs, $8,500 for Grads)
  – 2 UG students at Johnson Space Center
    • Both women in engineering
  – 1 grad student at the Jet Propulsion Lab
Engineering Senior Design Projects

• NASA Microgravity Project
• NASA Robo-Ops
• NASA Ice Drill
• Novel Wheelchair Design
• E-Baja
• Backpack Water Filter
Research Fellowships

• Undergraduate Research Fellowships ($5,000)
  – 12 awards (6 women)

• Graduate Research Fellowships (PhD - $20,000; MS - $15,000 + tuition/fees/health ins)
  – 8 awards (3 women)
Faculty Grants

• Faculty Research Initiation Grants ($20,000)
  – 5 awards (2 women)

• Faculty Education Enhancement Grants ($10,000)
  – 4 awards (2 women)
  – Casper College – 2 awards
  – Central Wyoming College – 2 awards
Travel Awards

• Travel grants for scientific conferences ($250)
  – 25 travel grants
New Things on the Horizon
Wyoming NASA Space Grant Website Redesign

- [http://jessicap.com/space/](http://jessicap.com/space/) (password = space)
New Logos

WYOMING NASA SPACE GRANT CONSORTIUM

WYOMING NASA SPACE GRANT CONSORTIUM
Online Applications for All Awards?

• Need to update application forms

• May go to all online forms....

• What do people think?
Ideas for Engaging American Indian Students

• First Nations Launch - Wisconsin Space Grant
  – Rocket launch competition for Tribal College students or AISES (American Indian Science and Engineering Society) chapters
  – Engage AISES student groups at UW or CWC
  – Send a person to the launch to observe
  – https://spacegrant.carthage.edu/first-nations-launch/
Ideas for Engaging American Indian Students

• Dr. Ed Galindo - Idaho Space Grant
  – Submitted an NSF Includes Grant
  – Partnering opportunities for a high-altitude balloon project
Ideas for Engaging American Indian Students

• Wind River Reservation and K-12 School Districts
  – Develop K-12 program
  – Affiliate representative

• Other ideas? Other ideas for engaging other underrepresented students and faculty?
Odds and Ends

• Tentative Date for Spring 2017 Meeting at UW: **Friday, April 28, 2017**

• Fall 2018 Meeting at WWCC?

• Travel reimbursements

• Let us know if your contact info has changed
Thank you for Coming!