| TIME          | Session A: Earth and Environmental Science/Engineering | Session B: Exploration Systems Engineering: Biological, Materials, Optical and Electrical | Session C: Topics in Math, Physics and Chemistry | Session D: Aerospace Technology  
               | Moderator: Barron Orr  
               | Moderator: Gene Giacomelli  
               | Moderator: Hilary Hartnett  
               | Moderator: Thomas Sharp  
               | Associate Director, UA/NASA Space Grant  
               | Controlled Environment  
               | School of Earth and Space Exploration, Arizona State University  
               | Associate Director, ASU/NASA Space Grant  
               | Agricultural Center, University of Arizona  
               | University  
               | Room: Arizona  
               | Room: Canyon  
               | Room: Desert  
               | Room: University  
               | 8:00 – 8:25 a.m. WELCOME AND INTRODUCTION: GRAND BALLROOM  
               | Thomas Sharp, Associate Director, ASU/NASA Space Grant, Arizona State University  
               | 8:25 – 8:40 ROOM SETUP  
               | 8:40 – 8:50  
               | [A1] Mobile Application Of Climate And Health Modeling  
               | Sonia Sen  
               | [A2] A 4500-year-long Record From South San Juan Mountain Productivity And Temperature: Lake Sediment Cores Of Blue Lake  
                   Jesse Martinez  
               | 8:50 – 9:00  
                   Jason Dikes  
                   Clayton Jacobs  
               | [C1] Tunneling Properties Of Superconducting Tunnel Junctions  
                   Patrick Murray  
               | [D1] Finite Element Analysis Of Plasticity- And Roughness- Induced Fatigue Crack Closures  
                   Erik Booker  
               | 9:00 – 9:10  
               | [A3] Numerical Simulation Of A Heavy Local Rain Event In Southern Switzerland  
                   Justin Singleton  
               | [B3] Dual Layer Stimulus Responsive Hydrogels  
                   Jacqueline Sanchez  
                   Daniel Simmons  
               | [D2] Smarter Testing Using Approximate Dynamic Programming For Space Systems  
                   Stephanie Zawada  
               | 9:10 – 9:20  
               | [A4] North American Monsoon Experiment Analysis  
                   Christian Mihuc  
               | [B4] Interfacial Chemistries To Improve Matrix Fiber Adhesion In High Temperature Polymer Matrix Composites  
                   Jessica Gardin  
               | [C3] Organic Thiol Passivation Of Gallium Arsenide  
                   Luke Yarnall  
                   Michelle Walker  
               | 9:20 – 9:30  
               | [A5] Using High Resolution Satellite Phenology To Identify Grassland Response To Wildfire During Different Climate Periods  
                   Michelle Coe  
               | [B5] Atom Beam Detector For Atomic Polarizability Measurements  
                   Adam DeBolt  
               | [C4] A New Graceful Labeling For Pendant Graphs  
                   Alessandra Graf  
               | [D4] Implementing Remote Procedure Calls For Spacecraft Command And Control  
                   Amanda Duron  
               | [D5] EagleSat, Embry-Riddle Cube Satellite / Project Manager Presentation  
                   Michael Matyas II |
<table>
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<tr>
<th>Time</th>
<th>Session A: Earth and Environmental Science/Engineering (cont.)</th>
<th>Session B: Exploration Systems Engineering: Biological, Materials, Optical and Electrical (cont.)</th>
<th>Session C: Topics in Math, Physics and Chemistry (cont.)</th>
<th>Session E: ASCEND &amp; HASP Science, Pima Community College (cont.)</th>
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| 9:30 – 9:40  | Complex Response Of Grassland Soil Moisture To Extreme Precipitation Patterns  
John Hottenstein | Evaluating LEDs As Supplemental Lighting Source For Lunar Greenhouse Prototype  
Caitlyn Hall | Controlled Morphology Of Nano-Thin Film Silicon Integrated With Environmentally Responsive Hydrogels  
Eric Stevens | ERAU CubeSat 1: [High Voltage Solar Panels]  
Darin Baker |
| 9:40 – 9:50  | The Impact Of Invasive Plant Species On Carbon Storage And Reservoirs  
Carly Farr | Synthesis Of Temperature-Responsive Polystyrene-Gold Core-Shell Nanoparticles Via One-Step Pickering Emulsion Polymerization  
Thao Ngo | Evaluation Of Reverse Draw Solute Flux Through Commercially Available Membranes In Forward Osmosis Processes  
Kaitlin Johnson | ERAU CubeSat 2: Electrical Power System  
Kevin Jordan |
| 9:50 – 10:00 | The Effects Of Satellite And Terrain Scale On Modeled Soil Erosion Estimates In A Desert Environment  
Philip Sparks | An Empirical Analysis Of The Steckler Lunar Greenhouse Phase II Development  
Marianna Yanes | Synthesis And Development Of Bio-Nanoparticles For Diagnostic And Drug Delivery  
Stella Shin | Nanosecond Pulse Plasma Discharges For Aerodynamic Flow Control  
Tianna Stefano |

**MORNING BREAK: PRICKLY PEAR**

Session A: Earth and Environmental Science/Engineering (cont.)
Moderator: Netra Chhetri
Geography and Consortium for Science Policy and Outcomes, Arizona State University
Room: Arizona

Session B: Exploration Systems Engineering: Biological, Materials, Optical and Electrical (cont.)
Session G: Education and Public Outreach
Moderator: Paul Geissler
Astrogeology, US Geological Survey
Room: Canyon

Session C: Topics in Math, Physics and Chemistry (cont.)
Session F: Planetary Science
Session H: Astronomy & Space Physics
Moderator: Nadine Barlow
Associate Director, NAU/NASA Space Grant
Physics and Astronomy, Northern Arizona University
Room: Desert

10:20 – 10:30  
Characterization Of Land Cover Using SPOT Satellite Imagery And Terrain Variables In Rivas, Nicaragua  
Bo Stevens

Understanding The Regenerative Potential Of Adipose And Cord Tissue Derived Mesenchymal Stem Cells For Long-Term Space Travel  
Jorge Alvarez

ERAU ASCEND  
Mo Sabliny
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<th>Time</th>
<th>Session</th>
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<th>Speaker</th>
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<tr>
<td>10:30 – 10:40</td>
<td>Fire Disturbance Effects On Native&lt;br&gt;Thistle Circium Arizonica And Non-Native Invasive Thistle C. Vulgare&lt;br&gt;Chelsea Sayer</td>
<td>Electromyographic Decoding For The Generalized Neural Control Of&lt;br&gt;Robots&lt;br&gt;Alison Gibson</td>
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<td>Assessment Of Structurally-Controlled Diagenesis Associated With Martian Impact Craters&lt;br&gt;Spencer Harris</td>
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<td>SMCC ASCEND Project 1: Microprocessor And Computer Programs&lt;br&gt;Francesca Johnson</td>
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<td>SMCC ASCEND Project 2: Payload Sensors And Camera&lt;br&gt;David Allen</td>
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<tr>
<td>10:40 – 10:50</td>
<td>Prediction And Analysis Of Surface Fluxes In A Forest Environment&lt;br&gt;Laura Schisler</td>
<td>Optimization Of Nanotextured Surfaces For The Adhesion Of&lt;br&gt;Endothelial Cells&lt;br&gt;Daniel Martin</td>
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<td>Wadsleyite In SAH 350: Indicator Of Post-Shock Thermal History?&lt;br&gt;Sam Jacobs</td>
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<td>SMCC ASCEND Project 3: Post Flight Data&lt;br&gt;Angelo Delluomo</td>
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<td>10:50 – 11:00</td>
<td>Understanding Short-lived Explosive Volcanic Eruptions: Laboratory&lt;br&gt;Experiments Of Highly-unsteady Short-lived&lt;br&gt;Volcanic Events&lt;br&gt;Robert Dekoschak</td>
<td>DC Characterization And Irradiation Of High Voltage SOI MESFETs For&lt;br&gt;Space Electronics&lt;br&gt;Jason Kam</td>
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<td>Identification Of Absorption Characteristics Of Oxygen Ice For&lt;br&gt;Comparison To Icy Celestial Bodies&lt;br&gt;Weston Maughan</td>
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<td>SMCC ASCEND Project 4: Payload Housing/Enclosure&lt;br&gt;Jose Villeges</td>
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<td>SMCC ASCEND Project 5: Etching, Drilling, And Soldering Circuit Boards&lt;br&gt;Daniel Flowers</td>
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<td>11:00 – 11:10</td>
<td>Volcanic History Of Colton Crater, San Francisco Volcanic Field, Northern Arizona&lt;br&gt;Maria Hayden</td>
<td>Computational Investigation Of The Effects Of Nano-grain Properties On&lt;br&gt;Strength And Toughness&lt;br&gt;Sabrina Ball</td>
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<td>Compositional And Microtextural Analysis Of Basaltic Pyroclastic&lt;br&gt;Feedstock Materials Used For The 2010 ISRU Field Tests, Mauna Kea, Hawaii&lt;br&gt;Nicole Marin</td>
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<td>SMCC ASCEND Project 6: Radio Communication With Payload&lt;br&gt;Shawnna Pinkney</td>
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<td>11:10 – 11:20</td>
<td>Investigating The Effects Of Hormones On Strawberry Seed Germination&lt;br&gt;Erica Hernandez</td>
<td>An Automated Test System For Terahertz Receiver Characterization&lt;br&gt;Linda Kuenzi</td>
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<td>Impact Crater Analysis In 0-50S 180-270E Region Of The Moon&lt;br&gt;Austin Gundy</td>
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<td>SMCC ASCEND Project 7: Real-time GPS Data&lt;br&gt;Jeremy Russoe</td>
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<td>11:20 – 11:30</td>
<td>UA Homecoming 1: Conducting An Environmental Life Cycle Assessment Of Homecoming Leah Edwards</td>
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<td>Utilizing A Workbench Structure To Maintain OSIRIS-REx Scheduling Martin Lopez</td>
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<td>Error Analysis Of Narrow Angle Camera Digital Elevation Models Relative To Lunar Orbiter Laser Altimeter Pye Pye Zaw</td>
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<td>UA ASCEND: 2012 UASEDS ASCEND! Experiments Danny Pagano Robert Shely Amanda Urquiza Andrew McGuckin Ryan Stelzer Brooke Williams Kate Li</td>
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<td>11:30 – 11:40</td>
<td>UA Homecoming 2: The Environmental Impacts Of Homecoming 2012 Celeste Belletire</td>
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<td>Multiple Wavelength Digital Holography Luke Contreras</td>
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<td>OSIRIS-REx Ground-Based Software System Design Nathanial Hendler</td>
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<td>GCC ASCEND: Initial Design and 2nd Semester Enhancements Justin Jackson Michael Carlson Mireya Ochoa Ashley Brawley</td>
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<td>11:40 – 11:50</td>
<td>Functional Materials For Sustainable Energy Technologies Zahra Hussaini</td>
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<td>After School Science Clubs For Middle School Students Mariela Resendez</td>
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<td>Calibration And Evaluation Of Next Generation Dichroic Elements Justin Haxton</td>
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<td>Pima CC ASCEND: Payload 1 Eric Nelson Zachary Anderson</td>
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<td>11:50– 12:00</td>
<td>Relating ANAMMOX Nitrite Inhibition Recovery To Metabolic Energy Levels Andrew Swartwout</td>
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<td>Business Science Journalism Ashley Grove</td>
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<td>Supernova Events And Gravitational Waves Kevin Loew</td>
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<td>ASU ASCEND 1: Overview Jack Lightholder</td>
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<td>12:00 – 12:10</td>
<td>Comparative Policy Analysis: Water Management In Mesa, Arizona And Hermosillo, Sonora Rud Moe</td>
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<td>Communication Between Scientists And The Media Maria DiCosola</td>
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<td>Creation Of A Web-Based Cometary Image Enhancement Facility Michael Patrick Martin</td>
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<td>ASU ASCEND 2: Aerodynamic Payload Survey And Communication Christina Findley</td>
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<td>12:10 – 12:20</td>
<td>Microbial Bioavailability Of Dissolved Organic Carbon In The Colorado River Marissa Raleigh</td>
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<td>Gender Typicality And Academic Performance During A Science Task: Comparing Same-Sex And Mixed-Sex Dyads Tammy Kwong</td>
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<td>Mid-Infrared Variability And Color In Young Stellar Objects Stephanie Wood</td>
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<td>Hatchling II: Embry-Riddle Aeronautical University's HASP 2013 Payload Zach Henney</td>
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<td>12:20 – 1:20</td>
<td>LUNCH: PRICKLY PEAR &amp; VALLEY</td>
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<th>Session A: Earth and Environmental Science/Engineering (cont.)</th>
<th>Session G: Education and Public Outreach (cont.)</th>
<th>Session H: Astronomy &amp; Space Physics (cont.)</th>
<th>Session I: Aeronautics</th>
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<tr>
<td>1:20 – 1:30</td>
<td>Exchanging Gases Between Algae And Biogas In A Life-Support System</td>
<td>ASU 3D IMAGINE 1: Overview</td>
<td>The Size And Structure Of The Broad Line Region In NGC 4051</td>
<td>High Speed Mixing Layers Excited By Thermal Perturbations</td>
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<td>Vivianna Gamez Molina</td>
<td>Eric Hasper</td>
<td>Emily Heaton</td>
<td>Brian Franz</td>
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<td>Robert Jones</td>
<td>Leanne Harris</td>
<td>Emily Berkson</td>
<td>Devin Jensen</td>
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<td>Austin Wardall</td>
<td>Ashleigh Gonzales</td>
<td>Sarah Easterbrook</td>
<td>Skylar Sanders</td>
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<td>1:50 – 2:00</td>
<td>The Potential Application Of TIO2-Ag-Hap Nanoparticles For Water Treatment In Space</td>
<td>Increasing Internal Stakeholder Consensus About A University Science Center’s Outreach Policies And Procedures</td>
<td>Matter-driven Oscillations Of High-energy Neutrinos In Stellar Jets</td>
<td>Development Of Reusable Rocket-Payload System For Vibration Monitoring</td>
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<td>Irene Liang</td>
<td>Ashleigh Gonzales</td>
<td>Dan Quach</td>
<td>Jeffrey Uhlorn</td>
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<td>Jon Weiser</td>
<td>Amber Lovett</td>
<td>Kristopher Theodoreau</td>
<td>Ricky Astrain</td>
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| 2:10 – 2:20 | [A26] Gene Level Responses Of Hot Spring Microbial Communities To Nutrient Limitation  
Christie Sabin |
|-------------|-------------------------------------------------|
Brenna Goth |
|             | [H10] Elemental Abundances In Nearby Planet Host Stars  
Santhi Priya Challa |
|             | [I6] ASU SDSL 2: Microsatellite Hardware And Software Systems  
Todd Cunningham |

Auni Kundu |
|-------------|-------------------------------------------------|
|             | [G11] Science Literacy Among Undergraduate Students  
Jenna Llull |
|             | [H11] A Survey For Infall In Perseus Starless Cores  
Amanda Walker-LaFollette |
|             | [I7] ASU Daedalus Astronautics 1: Overview  
Gaines Gibson |

Daming Chen |
|-------------|-------------------------------------------------|
|             | [G12] Wind For Schools  
Susanna Hamilton |
|             | [H12] Outflow Jets In RCrA  
Margaret Blumm |
|             | [I8] ASU Daedalus Astronautics 2: Crawford Strand Burner  
Deyzi Ixtabalan |

| 2:40 – 2:50 | [A29] ASU Robotics 1: Overview  
Matthew Plank |
|-------------|-------------------------------------------------|
Sylvia Bargellini |
|             | [H13] Supergiant Effective Temperatures  
Arlyn Palmer |
|             | [I9] ASU Daedalus Astronautics 3: Design Analysis Of A Crawford Strand Burner  
Ruby Gomez |

| 2:50 – 3:00 | [A30] ASU Robotics 2: Static Waterproofing Of Thrusters Through Magnetic Coupling  
Jonathon Houda |
|-------------|-------------------------------------------------|
Kent Wagner |
|             | [H14] Ultrasonic Measurements Of The Young's Modulus Of Optical Coatings  
Elaine Rhoades |

| 3:00 – 3:10 | [A31] ASU Robotics 3: Submersible Magneto Coupled Claw  
Erick Yanez |
|-------------|-------------------------------------------------|
Aurelia Acquati |
|             | [H15] Searching For High Inclination Kuiper Belt Objects Using Archival Data From Hubble Space Telescope  
Heidi Somsel |

Ernest Peyketewa, Jr. |
|-------------|-------------------------------------------------|
|             | [H16] Embry-Riddle Cyclotron  
Kelsey O'Connor |

| 3:20-3:40 | JOIN US FOR REFRESHMENTS: PRICKLY PEAR |