Saturday, April 17, 2010, Kuiper Space Sciences Building, The University of Arizona

8:30-8:50 a.m. WELCOME AND INTRODUCTION: Room 308

Michael J. Drake, Director, Arizona Space Grant Consortium
Barron J. Orr, Associate Director, UA/NASA Space Grant Program

TIME	**Session D:** **NASA Technology in Education** **Moderator: Barron Orr** **Session A:** **ASCEND** **Moderator: T. Frank, SMCC** **Room 308**	**Session B:** **Astronomy & Space Physics** **Moderator: D. Trilling, NAU** **Room 309**	**Session C:** **Aeronautics** **Moderator: R. Madler, ERAU** **Room 312**	**Session A3:** **Aerospace Technology** **Moderator: T. Sharp, ASU** **Room 330**
9:00-9:10	[D-1] *Rosalie Thornton* Assessing the Impact of an Interactive "GPS Mission" Game on Physical Activity (Part 1)	[B-1] *Stevie Dunn* Stellar Densities in the Southern Pinwheel Galaxy	[C-1] *Justin DeStories* Aircraft Design, Construction, and Flight Engineer	[A3-1] *Michael Veto* The Space Grant Robotics Team
9:10-9:20	[D-2] *Jenna Larsen* Assessing the Impact of an Interactive "GPS Mission" Game on Physical Activity (Part 2)	[B-2] *Kendra Kellogg* A Census of Young Binary Stars and their Properties	[C-2] *Jason DeStories* Aircraft Construction, and Flight Engineer	[A3-2] *Emily McBryan* Underwater Robotics team
9:20-9:30	[D-3] *Joy Davies* An Indirect Approach to Promoting STEM Education	[B-3] *Kamber Schwarz* Searching for Molecular Outflows from Low Luminosity Protostars	[C-3] *Anthony Meyer* ynamically Scaled Flight Research	[A3-3] *Amy Kaczmarowski* Motive System for ROAR
9:30-9:40	[D-4] *Rebecca Reed* Using fitness devices and Global Positioning System (GPS) technology in measuring energy expenditure and distance walked over flat and incline surfaces	[B-4] *Kimberly Ward-Duong* Detecting Exoplanets and Exomoons with the Lutz 0.5-meter Telescope	[C-4] *Ted Hench* Software System Subdivisions for Autonomous Flight	[A3-4] *Krystal Mike* Mechanical Design of ROAR

9:40-9:50	[A1-1] *John Phillip Abril II & Steve Torres* SMCC ASCEND! Introduction and Payload Construction and Sensors	[B-5] *John Zanassi* Extra-Solar Planetary Transits	[C-5] *Kyle Wright* CFD Study of Ring Wing Vortex	[A3-5] *Peter Renslow* Aerospike & Conventional Bell-Shaped Nozzles: A Numerical Comparison of High-Powered Sounding Rocket Flight Profiles
9:50-10:00	[A1-2] *Jose Diaz & Daniel Gomez* SMCC ASCEND! Program Introduction and Team One Payload	[B-6] *Zachary Thompson* Visible Wavelength Spectroscopy in Methane-Argon Ices	[C-6] *Kenneth Toro* An investigation of bounding flight for UAVs	[A3-6] *Matt Summers* Analytical and Empirical Characterization of Hybrid Rocket Swirl Injection
10:00-10:10	[A1-3] *Matt Hert, Rochella Robinson & Ashley Tabaha* SMCC ASCEND! Team Two and Circuit Board Construction	[B-7] *Andrew Fiedler* A Spitzer Mid-Infrared Survey of Brightest Cluster Galaxies		[A3-7] *Hannah Thoreson* Stability in High-Powered Sounding Rockets
10:10-10:30	**Morning Break**			
TIME	**Session A1: ASCEND (continues) Moderator: J. Crabtree, ERAU** **Session A2: High Altitude Student Platform (HASP) Moderator: TBA**	**Session B: Astronomy and Space Physics (continues) Moderator: D. Trilling, NAU** **Session F: Education and Public Outreach Moderator: TBA**	**E: Earth and Environmental Science/Enineering Moderator: G. Casady, UA**	**A3: Session A3: Aerospace Technology (continued) Moderator: TBA** **G: Exploration Systems Engineering: Biological, Materials, Optical and Electrical Moderator: TBA**
10:30-10:40	[A1-4] *Andy Gee and Christopher Martinez* ASCEND! Launch March 27, 2010: Pima Community College Team	[B-8] *Jeffery Ahern* Analysis of Image Quality	[E-1] *Riaz Hedayati* Assessment of Spatial Metrics to Determine Rangeland Degradation	[A3-8] *Wesley Chu* Implementation of the Winner-Take-All Circuit for Self-testing System in Space Applications
10:40-10:50	[A1-5] *Chris Pecora and James Gardner* ASCEND! Launch March 27, 2010: Pima Community College Team	[B-9] *Michael Stefferson* Methods in Shear Measurements	[E-2] *Phillip McFarland* Soil Moisture Sensing	[A3-9] *Jessica Avitia* Thermal Shroud

10:50-11:00	[A1-6] *Tiara Cottam and Andrew Dotson* UA ASCEND! High Altitude Imaging and Solar Spectroscopy	[F-1] *Otto Ross* The ABC's of Science Writing	[E-3] *Karla Montemayor* Desalination Using Looped Ion Exchange	[A3-10] *Michael Lyons* Implementing Quality Procedures for a Human-Rated Vacuum Chamber
11:00-11:10	[A1-7] *Geimi DeLarge* ERAU ASCEND! Project Overview	[F-2] *Moheeb Zara* Web Design	[E-4] *Selisa Rollins* Acquisition and Analysis of MODIS Satellite Data	[A3-11] *Evan Olson* System Identification of an Autonomous Underwater Vehicle
11:10-11:20	[A1-8] *Noah Stokely* ERAU ASCEND! Payload Dynamic Data Acquisition	[F-3] *Jenny Hastings* Computer Gaming as a Tool for Chemistry Education	[E-5] *Beth Schreck* Complex cinder cone eruptive sequence at O'Neill Crater, San Francisco Volcanic Field, Arizona	[A3-12] *Cristina Contreras* Structures of Liquid Crystal Polymers
11:20-11:30	[A1-9] *Mary Begay* ERAU ASCEND! Solar Cells	[F-4] *Tasha Riddels* Saving Space Preserving and Promoting Historic NASA Documents and Images in the USGS Astrogeology Branch	[E-6] *Chris Pruden* Modeling winter annuals as a function of climate using the satellite-based Enhanced Vegetation Index	[A3-13] *Garland Speight* Development of Heater Cart for Radiator Testing
11:30-11:40	[A1-10] *Kyle Montgomery* ASU ASCEND! High Altitude Balloon Experiments	[F-5] *Eric Betz* Science journalism in the 21st century	[E-7] *Denise Garcia* Analysis of Metadata Compliance of Local, State, and Federal Spatial Data Sources	[A3-14] *Vishal Doshi* Cubesat Attitude Control
11:40-11:50	[A1-11] *Ruben Gameros* ASU ASCEND! Payload Structure	[F-6] *Robert Wagner* Lunar Reconnaissance Orbiter: NAC Slide image viewer	[E-8] *Katheryn Landau* Remotely sensed monitoring of vegetation phenological response to precipitation in the Santa Catalina Mountains	[A3-15] *Elijah Brown* NAVSPASUR Detection System
11:50-12:00	[A1-12] *Kevin Martinez* ASU ASCEND! Payload Body Design	[F-7] *Martha Mosqueda* The UA Space Grant Student Advisory Committee	[E-9] *Daniel Whitley* Cleaning Up the Water Supply: Using Photolysis to Destroy Trace Waterborne Contaminants	[A3-16] *Anthomy Adame* Optimized Catalyst Preparation for Polymer Electrolyte Membrane Fuel Cells

12:00-12:10	[A1-13] *Sam Dodge* ASU ASCEND! Electronics System	[F-8] *Adriana Riggs* The UA Space Grant Student Advisory Committee	[E-10] *Ashley Schmeltzer* Mapping Cultural Activities Linked to Nature to Demonstrate the Global Impact of Phenological Shifts and Climate Change	[A3-17] *Angelo Charbonnier* Beamforming Hydrophone Array
12:10-12:20	[A1-14] *Ricardo Gutierrez* ASU ASCEND! Payload Sensors	[F-9] *Ian Friedman* Science Journalism and Business Development	[E-11] *Maxwell Justice* A Sensitivity Analysis on the Assimilation of Soil Moisture States into the DSSAT Crop Model for the Purposes of Yield Prediction in the Presence of Imperfect Information	[G-1] *Jared Bartell* Analysis of the Effects of Treadmill Training on Locomotor Function in Spinal Cord Injured Rats
12:20-1:40	**Lunch Break Student Union North Ballroom**			
TIME	**Session I: Topics in Math, Physics and Chemistry** **Moderator: Anthony Pitucco, PCC** **Session A2: High Altitude Student Platform (HASP)** **Moderator: TBA**	**Session F: Education and Public Outreach (continued)** **Session H: Planetary Science** **Moderator: Nadine Barlow, NAU**	**E: Earth and Environmental Science/Engineering (continued)** **Moderator: TBA**	**G: Exploration Systems Engineering: Biological, Materials, Optical and Electrical (continued)** **Moderator: TBA**
1:40-1:50	[I-1] *Devon Powell* Stick-slip Actuation of Pico-Liter Sessile Drops	[F-10] *Jennifer McNeil* Understanding of geologic time principles conducted at the Trail of Time, Grand Canyon National Park	[E-12] *Paul Rheinheimer* Characteristics of Wind-Blown Dust of Arizona Mine Tailings	[G-2] *Alexander Miles* Modeling the Effects of Convection on Directional Solidification
1:50-2:00	[I-2] *Michael Christiansen* Nanowires and Heterostructures	[H-1] *Stephanie Craig* The Lunar Reconnaissance Orbiter	[E-13] *Kyle Rine* Mining Operations Effects on Air Quality	[G-3] *Bryan LaBore* Identifying genes that confer resistance to ultraviolet radiation in the unicellular alga Chlamydomonas
2:10-2:20	[I-3] *Rhondale Tso* Testing General Relativity with Gravitational Lensing	[H2] *Jessica Kaminski* Development and Construction of Proto-flight instruments for the Investigation of Mars	[E-14] *Luis Huizar* Sustainability of the Upper San Pedro River due to Climate and Population Variability	[G-4] *Nathan Cernetic* Fabrication of Self-Shunted Ti_xN Barrier Josephson Junctions

2:20-2:30	[I-4] *Kirsten Davis* Newton's Method for Partial Differential Equations (I)	[H-3] *Colleen Watling* The Geologic History of Mars	[E-15] *Lauren Puglisi* Biogeochemistry of Tempe Town Lake	[G-5] *Christine Kuhlman* Hardware Accelerator for Efficient Error-Correcting Codes
2:30-2:40	[I-5] *Ryan McPeck* Newton's Method for Partial Differential Equations (II)	[H-4] *Kayla Iacovino* H2O-CO2 solubility in basanite: Applications to volatile sources and degassing behavior at Erebus volcano, Antarctica	[E-16] *Alexander Miramontez* Simulation of Water Distribution	[G-6] *Kenneth Geshell* Detection of Escherichia coli in lettuce samples
2:40-2:50	[I-6] *Charles Katerba* Hadamard Matrices, their Constructions, and Generalizations	[H-5] *Sean Marshall* Converting THEMIS VIS to Albedo	[E-17] *Joseph Murray* Measuring fluxes of Mo, U and Re in Ocean Island Submarine Groundwater Discharge	[G-7] *David Oleksy* Transient Radiation Effects Behavioral Modeling
2:50-3:00	[I-7] *Daniel Sanchez* Internship with the UA Kukolich Group	[H-6] *Leon Manfredi* Inferred wind directions around Home Plate, Mars as suggested by aeolian features	[E-18] *James Lownsbury* Carbon Dioxide Emissions Implications in Hydrofluorocarbons are Regulated	[G-8] *Jon Englert* Novel method of surface activation for electroless metal plating
3:00-3:10	[A2-1] *Seth Guberman* ERAU Hatchling I BalloonSat for HASP	[H-7] *Arturo Martinez* LROC vs MINI-RF	[E-19] *Gregory Strang* Development of a Portable Near Infrared Spectrometer	[G-9] *Rashida Villacorta* Battery Research Project
3:10-3:20	[A2-2] *Peter Saliba* PCC HASP: Developing a Sensor to Measure the Intensity of Sunlight	[H-8] *Colin Ho* Thermal Emission Imaging System Image Atmospheric Corrections		[G-10] *Gregory Phelps* Effects of laser linewidth on the back-action cooling of optomechanical resonators.
3:20-3:30	[A2-3] *Amy Gladwin* PCC HASP: Research and Development for Extreme Temperature Insulation	[H-9] *Riley Trickey* Shock Metamorphism in Chondritic Meteorites RC106 and Acfer 040		[G-11] *Kyle Stephens* Solar Concentrator Efficiency Analysis
3:30-3:40	[A2-4] *Peter Kozak* PCC Calibration of digital temperature sensors in dynamic and steady-state systems	[H-10] *Sam Coleman* Age Estimate for Martian Dunes Based on Possible Impact Feature		[G-12] *Ramon Munoz* Nanoarchitectured Solar Cells
3:40-4:00	**Refreshments in the Atrium**			