

# Workforce Development in Idaho....

NASA IDAHO SPACE GRANT CONSORTIUM

## Idaho Balloon RISE

*(Research Involving Student Engineers & Educators)*

In the Summer of 2002, a graduate student (*now ISGC fellow*) attended the first Boulder balloon workshop in order to help Idaho begin its own balloon launch program. Starting in Fall 2002, students from the University of Idaho were recruited to begin developing this program. Faculty from Electrical and Computer Engineering and the Biological Sciences, and students from Mechanical and Electrical Engineering, Physics and Education, began to form the Idaho Balloon RISE program (*Research Involving Student Engineers and Educators*). Paul Verhage of Boise, Idaho and Bill Hiscock, Director of the Montana Space Grant, were key players in helping Idaho get off the ground at its first launch on April 5, 2003. By July 2003, the program had been incorporated into a summer camp for junior high school students (Idaho QUEST) designed to encourage them to pursue a college career.



## Launches

**April 5, 2003 – Endicott, WA – 94,000 ft**

*Flew camera, internal and external temperature sensors, bacterial experiment, GPS equipment*

**June 12, 2003 – Washtucna, WA – 98,000 ft**

*Flew camera, internal/external temperature sensors, GPS equipment*

**July 24, 2003 – Washtucna, WA – 88,000 ft**

*Flew capsules created during Idaho QUEST program by junior high school students*



## The Future

- Host a workshop at Boise State and Idaho State to help establish programs across the state
- Expand program to include more students and student experiments via proposal
- Begin a competition for High School Students that corresponds with the UI Engineering Expo

# NASA Internships

*Jet Propulsion Laboratory, Summer 2003*

In the Spring of 2003, four Idaho students were selected to intern at the Jet Propulsion Laboratory in the Summer of 2003. Their work under researchers at JPL has proved extremely valuable. All of the students are still in contact with their mentor(s) at JPL, one was able to co-author of a publication with JPL researchers, and one obtained research materials from JPL recently in order to begin a senior design project based upon work completed at JPL.

## Students

### Christie Chatterley

*Idaho State University, Mechanical Engineering, ISGC Scholar*

Project – Analysis of Mars Rover Energy Balance

Mentor – Dr. George Siebes



### Erica Lively

*University of Idaho, Electrical Engineering, ISGC Scholar*

Project – Cassini Information Management System Statistics:  
A General Study of the Time Ordered Listing and SPASS Requests

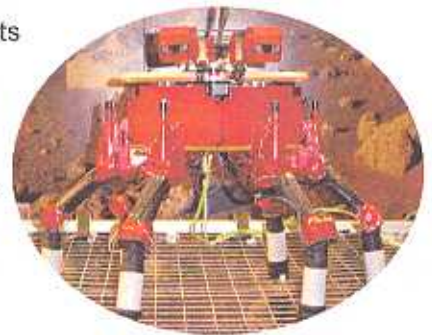
Mentor – Dr. Theresa Anderson

### Ben Pollard

*University of Idaho, Electrical Engineering, ISGC Scholar*

Project – Satellite-Induced Wave Structure in Saturn's Rings: A Search for  
and Analysis of Wavelike Features in Voyager RSS and PPS  
Occultation Data

Mentors – Drs. Linda Spilker and Stuart Pilorz



### Matt Shewmaker

*University of Idaho, Mechanical Engineering, Idaho Balloon RISE student lead*

Project – Packbot: Assembling, Testing and Verifying the Design of an Urbie Rover Hybrid

Mentor – Dr. Eric Baumgartner

## ISGC Leadership Program

*Introduction to Electrical and Computer Engineering Course, Piloted Fall 2003*

The ISGC Leadership Program is designed to provide an avenue for students to learn about issues that will help them succeed in the workplace. At present, the program is being tested in the Introduction to Electrical and Computer Engineering Course, which has a Fall 2003 enrollment of 90 students. Breaking the students up into design teams, and the use of student mentors (3 female, 5 male) has already been initiated. A series of lectures/discussions are currently under development, and will be integrated throughout the curriculum to help the students build the skills they will need.

The program specifics were developed during the 2003 Junior Engineering, Math and Science Workshop with high school students, and appeared to be very successful. Students reported a greater understanding about how classroom learning and their design project techniques were related to future career opportunities and situations.

