

# PURDUE UNIVERSITY SEDS UPDATE

The PU-SEDS chapter is starting off strong this academic year with involvement in various technical projects, educational outreach programs, and meetings with speakers. For more information concerning the Purdue University SEDS email: [seds@ecn.purdue.edu](mailto:seds@ecn.purdue.edu)

## Pratt and Whitney Grant

In September, the PU-SEDS received over \$7000 in funding from Pratt and Whitney for various activities and projects that our organization is working on. Among these are funding for the SEM project, a computer, and the Educational Outreach activities.

## Meetings and Talks

Over the course of the semester, PU-SEDS was visited by many speakers who provided stimulating talks at organizational meetings. These included:

- Dr. Ephraim Fischbach, Professor of Physics at Purdue University, spoke to the Purdue SEDS on the topic of general relativity and cosmology. The talk was very interesting and it was a great way to start off the new year!
- Jim McAdams came to speak to the PU-SEDS about the NEAR program and asteroid impacts.
- Astronauts Don Williams and Gary Payton came to Purdue for the first Fall Space Day and spoke to a crowd of 150 about the future of space exploration, science, and engineering. These speaker were a big hit with the crowd!
- Former PU-SEDS president Jon Sims spoke about the NASA Academy program in which he was a participant. Dr. Longuski, a professor of aeronautical & astronautical engineering, spoke about the latest updates on the Galileo Project to Jupiter.

## Fall Space Day

Three Purdue organizations (PU-SEDS, AIAA, and PESCE) helped to put together

the first annual Fall Space Day, which took place on Saturday, November 9th. The event consisted of 150 3-12th grade students from surrounding areas coming to Purdue's campus for a day of space-related learning and activities. Some of the activities that students participated in were orbital mechanics, building a space station, and hydroponics. There was also a talk hosted by guest speakers Don Williams and Gary Payton.

## Educational Outreach

The PU-SEDS Educational Outreach group is planning on making visits to four area schools this year to give lessons about space and space exploration to the students. In addition, they are also planning to coordinate a middle school rocket launch.

- Balloon/Satellite Project: There is a project group in the PU-SEDS that is working on the design of a high altitude balloon and experiments that might accompany the balloon. In addition, there is a project underway for the design of a tether satellite.
- Space Experiment Module (SEM): The first SEM from Purdue SEDS was launched in November on board the Space Shuttle Columbia, STS-80. Results will probably be available next semester. SEM-2 is almost underway, with a set of experiments including a seed experiment, artificial gravity, crystal growth, and a slosh experiment.
- New Planning Officer: Our planning officer for the fall semester, Klaasjan van Gelder (aka Lief to those of us who know him) will be graduating in December. So, at the last meeting of the semester, on November 19th, a new planning officer was elected to assume that position's duties for the spring semester. The lucky new planning officer is Emanuel Setiawan.

— Compiled by Matt Lowry,  
PU-SEDS National Representative



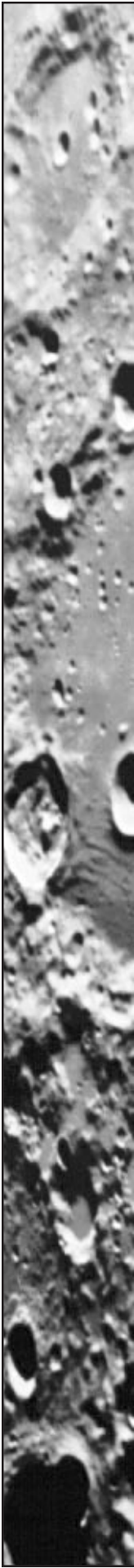
**STUDENTS  
FOR THE  
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OF SPACE**

**UNITED  
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**PAGE 1**



# HELP BEGIN SPACE SETTLEMENT IN '97

*A message from Charles E. Miller, President ProSpace - The Citizens' Space Lobby*

On March 9th more than 100 U.S. citizens will deliver a Citizens' Space Agenda to the leaders of our nation in Washington, D.C. This is your invitation to join those dedicated Americans - to open the space frontier for everyone - and to begin the large-scale settlement of space.

A growing number of Americans are joining this annual campaign to change our national space agenda. It began with relatively humble beginnings in March of 1995, when 9 citizens (or "Friends of the Frontier") briefed 52 congressional offices. One result of that first week's activity was the creation of a new \$25 million budget for Reusable Launch Vehicle technology development in a year of large congressional budget cuts. That first campaign was worth \$3 million for each citizen who donated just one week of their time.

Then in March of 1996, in the second year of the campaign, the effort began to grow. This time 40 "Friends of the Frontier" briefed 203 congressional offices on "Cheap Access to Space" and commercial space legislation. For the first time, the U.S. Senate was a priority and we briefed 85 of 100 U.S. Senate offices and held a breakfast sponsored by Sen. Dianne Feinstein (D, CA). The entire U.S. Congress knew that the prospace public was in town, and it affected space policy for the rest of the year.

As one example, early talk of cutting the rapidly growing X-33 RLV program died. This revolutionary technology demonstration program, which was making its first big budget request, received full funding while reductions were applied to less important parts of the NASA budget.

Then in the Fall of 1996, the "Friends of the Frontier" led the effort to push H.R. 3936, the Commercial Space Promotion Act of 1996, through the U.S. Senate, long considered the black hole for space legislation. In what looked like an impossible task at the start, this bill came within two votes in the Senate of passing the United States Congress.

Never before have such a small number of dedicated citizens had such an impact on the space policy of the United States of America.

So much has happened in the last few months! We have discovered evidence of ancient life on Mars, water on the South pole of the Moon, and have launched the X-33 RLV program. Therefore in March of 1997, ProSpace and the "Friends of the Frontier" will ask our elected leaders for what we really want - to begin the large-scale settlement of space.

You are invited to join the "Friends of the Frontier" during the week of March 9-14, 1997 in this revolution in the making. Send your request to participate in the "1997 March Storm" by email to "SpFrontier@aol.com."

Get involved now by joining citizens from across the country, in the most daring, most enjoyable, activist campaign of the year. This ProSpace campaign is being joined by members from a broad range of space groups, including the Space Frontier Foundation, Aerospace States Association, Space Transportation Association, Space Studies Institute, Space Access Society, Student Space Awareness, and Students for the Exploration and Development of Space.

For more information on ProSpace - The Citizens' Space Lobby - visit [www.space-frontier.org/](http://www.space-frontier.org/) ProSpace or contact [SpFrontier@aol.com](mailto:SpFrontier@aol.com).

**Editors Note:** We are encouraging SEDS members who have the capability to attend this event and help provide a student presence at this increasingly popular annual event. Chapter members in the Washington D.C. area are especially encouraged to make a showing. We will publish new information that becomes available in the next issue, or on SEDS-L.

# NASA ACADEMY '97 SUMMER PROGRAM

NASA Academy is a unique summer institute of higher learning whose goal is to help guide future leaders of our Space Program by giving them a glimpse of how our whole system works. The Academy gives selected students a working knowledge of NASA and its programs through interactive sessions with leaders within government, industry, and academia and research in NASA's laboratories. The students will discover how NASA and its field centers operate, understand the NASA link to the private sector, gain experience in a world-class laboratory, participate in a team environment where people work together to accomplish common goals, and build professional bonds among our future leaders.

The Academy consists of competitively selected university level students from all 50 states, the District of Columbia, and Puerto Rico. Students work on research projects at a specific NASA field center under the direction of some of the most innovative scientists and engineers working for NASA. Students also participate in seminars and discussions with government and business leaders and managers on space related topics.

## Student eligibility:

1. Enrolled as a junior, senior or early graduate level program (as of May 31, 1997)
2. Maintaining a B average (minimum)
3. Majoring in science (physics, chemistry, biology, etc.), math, engineering, computer science or other areas of interest to the space program
4. Be a US citizen or permanent resident (as of May 31, 1997)

The NASA Academy program is co-sponsored by the National Space Grant College and Fellowship program and participating NASA Centers. Space Grant Consortium offices from the individual student's State provide a stipend to selected students of between \$3000 and \$4000, as well as round trip transportation to the participating NASA Center. Housing and local transportation are paid by NASA. All meals provided at Goddard and some meals provided at Marshall.

## ADMISSIONS PROCESS

You must first contact the Space Grant Consortium office in your state. To do this, call (202) 358-1531 or access the Space Grant home page at:

[http://deimos.ucsd.edu/space\\_grant/NASAspacegrant.html](http://deimos.ucsd.edu/space_grant/NASAspacegrant.html)

A electronic version of the Goddard NASA Academy application is available via FTP from: [university.gsfc.nasa.gov](http://university.gsfc.nasa.gov). Login as anonymous and use your email address as the password. The application is also in the PUBLIC directory. DEADLINE FOR FILING WITH LOCAL SPACE GRANT OFFICE IS JANUARY 31, 1997!

## ADDITIONAL NASA ACADEMY PROGRAMS

Information on programs can be received from: Ames: Dr. Doug O'Handley, (415) 604-3525, [ohandley@mail.arc.nasa.gov](mailto:ohandley@mail.arc.nasa.gov) Dryden: Dr. Dominick Andrisani, (317) 494-5135, [andrisan@ecn.purdue.edu](mailto:andrisan@ecn.purdue.edu) Marshall: Dr. J.M. Wersinger, [wersinger@physics.auburn.edu](mailto:wersinger@physics.auburn.edu), (205) 544-9699.

## ADVERTISEMENT

### Views of the Solar System CD-ROM

by Calvin J. Hamilton

The Solar System is a click of the mouse away with this new hypertext-formatted Mac/Windows CD-ROM from the

National Science Teachers Association. *Views of the Solar System* is an extraordinary collection of images, animations, facts, and history that will take you on an exciting journey through space. Soar over the cratered terrain of Venus, explore Jupiter, or experience the first human lunar

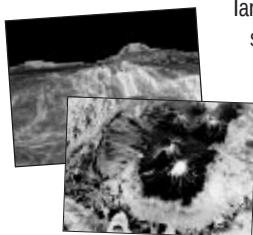
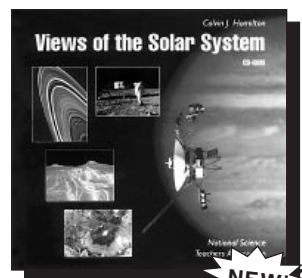
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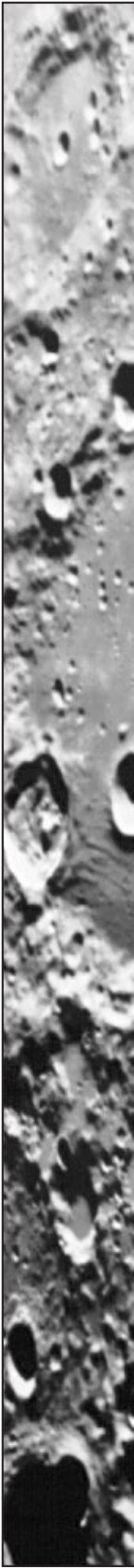
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# IRELAND SEDS

"SPACE IS JUST ANOTHER PLACE"

"It was the tenth of October when the University of Limerick first heard of SEDS. I displayed this slogan at the University fair day. Almost lost amongst the 50 or so other societies was this one slogan. At first people just passed and leaned their head to one side slightly, sometimes even with a squint in their eye. But after a while they began to return, intrigued by the concept. By the end of the day I had met enough people to form a committee and to begin informing people directly about SEDS. The result was phenomenal."

There has been an incredible level of interest in SEDS in Ireland. The above is from an article that appeared in the November issue of the "Home Planet" - the newsletter of Ireland-SEDS. It captures the enthusiasm with which SEDS has been greeted by school and university students all over the country.

Formed on the campus of Trinity College in February '96, Ireland-SEDS is a society that believes that "space is just another place" - like so many others. A place where people can live and work just as they do on Earth. We are committed to showing the general public that space is there to be explored and developed for the benefit of all humankind.

One of our main challenges as a national chapter is meeting the demand for information about SEDS and turning the interest expressed into new members and chapters. In an attempt to support existing chapters and to encourage new ones to take flight, we are planning events for later in the year which we can "take on the road" - stopping off at the various universities around Ireland. We are also working closely with other national SEDS groups, SEDS-USA and UK-SEDS on subjects like publications and even projects.

Ireland-SEDS is becoming increasingly involved in technical projects. Soon after formation we linked up with a local Dublin high school, where students were undertaking work on a liquid fueled rocket project. The project attracted a lot of media attention because it was the first amateur rocket project in the country.

While the rocketry projects continue at the secondary school level, the university

branches in Trinity and Limerick have adopted a more ambitious long term project. Preliminary studies and negotiations have begun for Ireland-SEDS to undertake a Get Away Special project to fly early in the next century. Space Technology Ireland, who have designed and built instruments for Giotto, SOHO, the ill-fated Mars 96 mission and others, have offered to assist us in the construction and testing phases of the project.

Over the course of the year we will be focusing on these projects—hand in hand with chapter expansion—transforming the society in to one that people in Ireland can identify with. 1997 promises to be an excellent year for SEDS, not just in Ireland, but worldwide. With SEDSAT due to be launched in July and with the release of Carl Sagan's film "First Contact" it is a time when we should all be proud to be part of SEDS.

## LEGO-MANIA AT UM-SEDS

The University of Michigan SEDS group has started a unique tradition that I think all SEDS groups could build off of when brainstorming activities. On December 2nd they held their first Lego spaceship building contest. They held the event in the atrium of one of the engineering buildings on campus where many students traverse throughout the day. Students attempted to build a spaceship out of 950 Legos in 30 minute time slots. Each ship was captured with a Polaroid camera to be judged later by a Professor of the Aerospace Department for creativity as well as feasibility. They had over 30 participants enter the contest and received great publicity within the college of engineering. Four prizes were awarded consisting of different Lego sets. UM-SEDS has been asked to host this event again during University of Michigan's engineering week celebration due to its great success.

Please let me know what your society's activities are so we can spread the word of these great creative projects!

— Amber Thweatt, Chapter Affairs

# NASA ASTROBIOLOGY ACADEMY

The NASA Astrobiology Academy is a unique summer institute of higher learning whose goal is to help guide future leaders of the U.S. Space Program by giving them a glimpse of how the whole system works. The success of the Space Program results from the interaction of government, academia, and the private sector, each playing a critical and different role in the 35 year old civil program. Responsibilities overlap, leaders migrate from one sector to another and interdependence changes with each new administration.

## **The NASA Ames Research Center**

The Ames Research Center (ARC), specializes in revealing new knowledge about the universe, planetary systems, and life and in creating new technologies that enable exciting new ventures in aeronautics and space exploration. Ames is unique in having world class ground, airborne, and space flight research capabilities in aeronautics, astrophysics, earth sciences, exobiology, fluid dynamics, gravitational biology, thermal protection technology, computational chemistry, planetary atmospheres, space laboratories, information sciences, and spacecraft life support.

Ames is the only NASA center to support all NASA Strategic Enterprises and acts as technical bridge to transfer skill, knowledge and technologies among the NASA Enterprises. This multidisciplinary synergy has created the world's only capability for the comprehensive study of Astrobiology — life's origin, evolution, distribution in the universe and destiny, from the protection of our planet to the evolution of terrestrial life into space.

Ames is the lead NASA Center for Astrobiology and is also the lead NASA Center for understanding the effects of gravity on living things. Ames plays a major role in understanding the origin, evolution, and distribution of stars, planets, and life in the universe. One important activity is Ames' unique research in atmosphere and ecosystems science in support of Mission to Planet Earth and the protection of the global environment. In space technologies Ames is also the lead center in providing the thermal protection systems that are critical for future access to space and planetary atmospheric entry vehicles.

It is in the spirit of shared discovery and the synthesis of diverse talents that Ames offers the Astrobiology Academy. Students will contribute to every aspect of successful multidisciplinary research on Earth, in the air, and in space, from the formulation of an idea to the procurement of goods and services necessary to develop it, through the management, marketing, and manufacturing necessary to turn concept into reality.

## **The Astrobiology Academy**

One goal of the Academy is to provide insight into all of the elements that make the NASA missions possible, while at the same time assigning the student to one of our best researchers to contribute towards one of our missions. Each student will be hand picked by a series of gates — panels, interviews, etc., starting with their own State Space Grant Consortium who has selected and agreed to sponsor them. The Ames researchers have been selected through a highly competitive process for selecting only the best, the brightest, and the most innovative. The “match” between student (Research Associate) and researcher (Principal Investigator) will be done by mutual selection.

About 50% of the working time and most of the social time of the students will be spent as a “group” or “team” in plenary sessions. This time will be devoted to exchange of ideas, on forays into the highest level of decision making, prioritizing, planning and executing our space missions. This will be done by interviews with leaders and motivators of the space program. The other 50% of the working time will be spent in the laboratory of the selected Principal Investigator working on the technical project.

## **The Astrobiology Academy Experience**

This summer about 10 students interested in life, space, or Earth sciences, space technology, or space engineering coming from all over the U.S. will be selected for the 10 week session to share a unique experience resulting from their own ingenuity and free spirit. Our goal is to ‘guide’, not instruct.

Teaching and learning are not the same. Teaching is the orthodoxy of our universities and colleges; learning is the “ah-ha!” process of finding out and understanding. That is our objective: to foster curiosity, to spirit endeavor, and to inspire leadership.



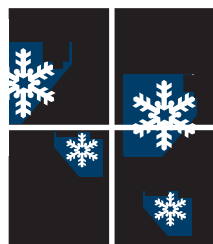
# SUMMER JOB OPPORTUNITY - NRAO

In the summer of 1997, a number of research assistantships at various National Radio Astronomy Observatory (NRAO) sites will be available to qualified astronomy, physics, electrical engineering, and computer science students. NRAO facilities are located in Tucson, AZ; Socorro, NM; Charlottesville, VA; and Green Bank, WV. Application forms are due by 20 January 1997 and are available on the World Wide Web at <http://www.cv.nrao.edu/html/headquarters/summer-students.html>

or by contacting: Summer Student Program Director NRAO 520 Edgemont Road Charlottesville VA 22903-2475, (804) 296-0225

## ADVERTISING

Does your organization have a product or service that SEDS members might be interested in? A great way to get the word out is to place an advertisement in the NOVA. Please contact [birgit@sed.s.org](mailto:birgit@sed.s.org) for further information.



### IN THE NEXT ISSUE:

- SEDS National Conference information
- 1997 Space Calendar

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Mail requests for chapter and individual membership information to the SEDS National Headquarters.



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