

Fall Issue

December 1, 2006



Letter from the Chair

Hi! My name is Elizabeth Bozek and I am a junior majoring in Aerospace Engineering at the University of Illinois at Urbana-Champaign. I am honored and excited to serve as Chair for the 2006-2007 term. I am confident that this will be the most productive and dynamic year that SEDS has yet to experience. All of our Directors are already hard at work developing their projects. The major goals for the organization this year are to fundraise heavily to increase SEDS conference attendance, produce more national projects and expand our organization's presence in academia and the professional world. Our board plans on making the name SEDS more well known by offering more awards, keeping in close contact with the individual chapters and publishing more proposals and research papers. I encourage everyone to keep in touch and stay involved nationally as our talent and inspirations stems from what individuals bring to the SEDS. Enjoy this issue of NOVA and if you have any suggestions or comments, feel free to contact me at any time.

To the Stars

Elizabeth Bozek

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Space Vision 2006

Students for the Exploration and Development of Space



A view on Space Vision 2006

Darrell Cain

President, MITSEDS

Three years and counting, three schools, one purpose...

Out of the select few conferences I attend each year, Spacevision is the one I look forward to the most. The SEDS National Conference is one of the few places I get to meet with fellow students and discuss what we want to do in the space community.

At other conferences the chances of running into fellow students are small, I will often run into only a couple interested individuals who are of college age. The SEDS conference is radically different.

To illustrate my point, within two hours of arriving at the Orlando International Airport I ran into UA (University of Arizona) SEDS contingent at the airport's bus stop (I had met each of them at various conferences in the past). We then figured the quickest route through the mass transit system to UCF, talked about space events and hung out for a couple of hours. This happened purely by chance. I knew that UA SEDS would be arriving in the airport after I did, but I was primarily waiting for the rest of the MIT students attending the conference to arrive.

While the speakers at the SEDS conferences are incredibly inspirational (Bob Richards, Peter Diamandis, Rick Tumilson, Jeff Feige, George Whitesides, Loretta Hidalgo to name a couple more names than a few) the real focus of a SEDS national conference is to put together an agenda for the upcoming year. Every student who attends the conference has to find some way to pay their way to the location, and as a result those who do make it are those students who are eager and capable of creating new ideas and projects in the space community

Orlando, Florida, USA
November 9 - 12, 2006

The first day of Spacevision involved various speakers from various organizations in the space community (Space Frontier Foundation, ISU, X PRIZE, NSS, AAS, Lockheed and others). Bob Richards started the day with a talk about the start of SEDS and the enormous potential students have in the real world. He was followed by Rick Tumilson, an absolutely amazing speaker, who talked about some of the various projects he has been involved with in the previous years and about the future of the industry.

I'm not going to go through all of the speakers at the conference, but sufficient to say they were inspirational. The day wrapped up with a banquet where Dr. Diamandis spoke on the X PRIZE, Rocket Racing League and his experience with SEDS back when it was first started.

The second day involved the part of the conference I really look forward to, the workshops. Part of the reasons SEDS has national gatherings every year is so that the members can come together and define the projects and goals SEDS will pursue in the upcoming year. The day started with National elections, but quickly moved into various discussions about topics including Council of Chapters, National Projects and Educational Outreach.

As always, it was saddening to leave at the end of the conference. Fortunately we had accomplished what we had come to do, create a direction for the club for the next year.

-Darrell Cain was one of the organizers for Spacevision 2004, is MIT SEDS current president and hasn't missed a SEDS national conference yet.



The traditional SEDS thumbs up photo.

"SOMEWHERE,
SOMETHING
CREDIBLE IS
WAITING TO BE
OWN." -C. SAGAN

la, USA
2, 2006

SpaceNews

SEDS gets its new Executive Board members.



From left.

Emily Hardegee-Ulman(), Elizabeth Bozek (Chair), Carissa Walker (Secretary), Joshua Nelson (Dir of Special Projects), Daniel Anderson (Dir of External Affairs), Brian Young (Dir. of Educational Outreach), James Welch (Dir. of Chapter Expansion), Ryan McLinko (Vice Chair, Webmaster).

Not in the picture: Damion Lucas (Dir. of Chapter Affairs), John Evans, (Dir. of Finance), Rohan Ramadas (Director of High School Affairs)



NASA wants permanent moon base

Diana Hawkins-Cox, CNN

NASA's plans for returning people to the moon -- an objective called for by President Bush in 2004 -- includes establishing a permanent outpost that would be used to prepare for a manned trip to Mars. The moon base would be at either the north or south pole of the moon, NASA Deputy Administrator Shana Dale said during a news conference Monday at the Johnson Space Center in Houston.

Increased sunlight at the poles would allow better use of solar energy to power the outpost, she said. NASA's lunar architecture team decided it would be better to establish a base than to conduct individual missions to the moon, as in the Apollo program of the 1960s and 1970s, she said. Team scientists believe astronauts could use the moon's natural re

sources to maintain the outpost, and could use the base to prepare for the trip to Mars, an objective also set forth by Bush.

Sorties to other locations on the moon could also be carried out from the outpost, Dale said.

Deputy Associate Administrator Doug Cooke said one promising location is the Shackleton Crater at the south pole.

In addition to having an area that is almost permanently sunlit, it is adjacent to a permanently dark area that might yield water ice.

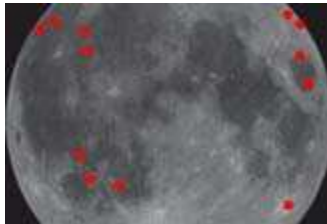
NASA Associate Administrator Scott Horowitz said the goal is to conduct the first manned missions to the moon by 2020, starting with short stays by four-person crews that would establish the outpost.

He estimated that perhaps by 2024 there might be a continual presence on the surface, with crews rotating in and out, as is done with the international space station.

Before the manned missions, NASA plans a series of robotic missions. The first of these, using the lunar reconnaissance orbiter, is scheduled for 2008.

The orbiter is designed to create high-resolution maps, look for good landing sites and search for water ice and other resources. NASA said an important component of the moon mission will be international participation.

The space agency will reach out to other nations to determine how they would like to take part.



Potential danger: Moon hit by more space rocks than thought.

Courtesy: Space.com

1st December 2006.

Potentially dangerous small space rocks are smashing into the Moon a lot more often than was expected, according to an ongoing NASA study. "We've now seen 11 and possibly 12 lunar impacts since we started monitoring the Moon one year ago," said Bill Cooke, head of NASA's Meteoroid Environment Office. "That's about four times more hits than our computer models predicted." If further study proves the pace to be accurate, it could figure into plans for putting people on the Moon, according to a NASA statement issued today.

A collision with a spacesuit or a habitation module, even from a small object, could be fatal.

Most meteoroids that enter Earth's atmosphere burn up harmlessly. The bulk of shooting stars are caused by stuff no bigger than sand grains and a few pea-sized objects. But even something as big as a basketball will usually burn up, in a spectacular fireball, before hitting Earth's surface.

The Moon, with no atmosphere, sees it all rain down.

Cooke and colleagues spotted a very bright lunar impact last December. They documented two impacts during last month's Leonid meteor shower.

"The flashes we saw were caused by Leonid meteoroids 2 to 3 inches (5 to 8 cm) in diameter," Cooke said today in a NASA statement. They hit with energies equal to 150 to 300 pounds of TNT.

Leonid meteors, leftover chunks from a comet, are particularly dangerous because they move against the path of our own orbit around the Sun, so we hit them head-on at greater speed than much other debris. This results in a greater release of energy at impact.

"We need to spend more time watching the Moon," Cooke said. "With more data, we can draw stronger conclusions about the impact rate."

Conference Opportunities

1) 45th AAS Goddard Memorial Symposium

Date: March 20-21, 2007

Location: Adelphi, Maryland (University of Maryland University College)

Website: <http://www.astronautical.org/>

For Info: 703-866-0020

Discounts:

2) Yuri's Night World Space Party

Date: April 12, 2007

Location: Your Hometown! Register your party today!

Website: <http://www.yurnight.net>

For info, contact Loretta Hidalgo at loretta@yurnight.net

Discounts: no charge for attendance

3) NSS International Space Development Conference

Date: May 24-28, 2007

Location: Dallas, Texas

Website: <http://isdcs.nss.org/2006/>

For Info: (202) 429-1600

Discounts:

4) Space Frontier Foundation's NewSpace Conference (Former Return to the Moon Conference)

Date: July 18-21, 2007

Location: Washington DC

Website: <http://www.space-frontier.org/Projects/Moon>

For Info: jkrukin@spacefrontierfoundation.org

Discounts:

5) Mars Society Conference

Date: August 30-September 2, 2007

Location: Los Angeles, CA (University of California)

Website: <http://www.marssociety.org/convention/2006/>

For Info: MarsSocInfo@aol.com

Discounts:

6) X Prize Cup

Date: mid-October, 2007

Location: Las Cruces, New Mexico

Website: <http://www.xpcup.com/index.cfm>

For Info: (323) 957-0729

Discounts: Volunteer Opportunities Available = free admission

7) Pro Space's March Storm

Date: March 3-7, 2007

Location: Washington DC

Website: <http://www.prospace.org/>

For Info: fjohnson@arachnerd.com

Discounts:

8) IEEE Aerospace Conference

Date: March 3-10, 2007

Location: Big Sky, MT

Website: <http://www.aeroconf.org/>

For Info: david.f.woerner@jpl.nasa.gov

Discounts:

E-mail Ryan McLinko at mclinkor@mit.edu if you have any questions.

Please send comments on the newsletter to Arka Dhar (arkadhar@mit.edu) or Brian Zollman (bzwingzero@gmail.com).

Student for the Exploration and Development of Space

