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From the Chair

Hi Everyone! I hope you enjoy this month's issue of NOVA. SEDS has been hard at work. One of our latest accomplishments has been adding a "Conferences" page to our national website. What is so important about space conferences for it to deserve a page? With any national, chapter-based organization, members forget that they are part of a huge community of people with similar goals and dreams.

SEDS may be the only space-related organization at your school. You may think that you are isolated in your thoughts about how students can develop space. But never fear! Your chapter is not alone! With over 40 national and international chapters, SEDS provides support for students almost anywhere.

However, conferences, especially our own national conferences, are great opportunities to meet, support and collaborate with other like-minded students. Conferences are essential for making lifelong business contacts and friends. At conferences,

students bounce ideas off of each other in that special, personal way that cannot be achieved online or on the phone. Aside from connecting with your fellow SEDS members, conferences allow you to network with professionals in the space industry that you would probably never otherwise get to meet. Who knows? Maybe a one-on-one conversation would land you an internship or funding for your technical project. Great minds tend to convene at space conferences and it is important that any of us who are serious about influencing the space industry meet with today's innovators.

So, check out our new conferences page. Plan a trip with your chapter. Some of the conferences are even during spring and summer break. Most have student discounts on admission and lodging. Then inform nationals that you will be attending a conference and we will meet you there!

From the Editor's Desk

As a new era of space exploration dawns with SEDS at the forefront, let us take a moment and reflect on those who gave their lives to further our dream. Forty years ago last week, three men on a training exercise lost their lives due to a set of unfortunate coincidences. They were testing out the systems aboard the *Apollo 1* spacecraft at the same time a pressure test was being carried out using pure oxygen. A wayward spark from somewhere in the craft ignited the oxygen, killing those aboard. Virgil "Gus" Grissom, Edward H. White II, and Roger B. Chaffee, you will never be forgotten.



Twenty-one years ago last week as well another group of brave astronauts lost their lives in an explosion 73 seconds into the final flight of *Challenger*. A failure of an o-ring in one of the solid rocket boosters caused by the cold Florida temperatures created a jet that eventually bore through the external fuel tank causing a catastrophic failure. Francis "Dick" Scobee, Michael J. Smith, Judith A. Resnik, Ellison S. Onizuka, Ronald E. McNair, Gregory B. Jarvis, and S. Christa McAuliffe, you will never be forgotten.

Four years ago today, the most recent assemblage of astronauts perished when Columbia broke up during reentry. A breach in the wing, likely caused during liftoff by a shard of foam from the external fuel tank, caused the extreme pressure and temperature of reentry to shear off the wing, destabilizing and destroying the craft. Rick D. Husband, William C. McCool, Kalpana Chawla, David Brown, Laurel Clark, and Ilan Ramon, you will never be forgotten.



"We will never forget them, nor the last time we saw them, this morning, as they prepared for their journey and waved goodbye and 'slipped the surly bonds of Earth' to 'touch the face of God.'"

Ronald Regan — on the *Challenger* Disaster Jan. 28, 1986

Space News



XCOR AEROSPACE BEGINS TEST FIRING OF METHANE ROCKET ENGINE

MOJAVE, CA. JANUARY 16, 2007

XCOR Aerospace announced a series of successful test firings of its new 7,500 pound thrust rocket engine. The tests were conducted as part of a \$3.3 million subcontract XCOR has with Alliant Techsystems (NYSE: ATK). The tests support NASA's advanced development

program to obtain liquid methane rocket engine technology for future space applications. Six short-duration test fires have been completed.

The engine, designated 5M15, uses liquid methane and liquid oxygen as propellants. XCOR and ATK are developing the initial workhorse version of the 7,500 lbf LOX/methane engine for NASA. This regeneratively-cooled version of the rocket engine will also be built and tested in 2007 as part of the contract. ATK will use the workhorse engine as a basis for the design of the prototype version of the engine that will be closer to flight weight.

"This was a great first firing," said XCOR CEO Jeff Greason. "Everything worked incredibly well. The crew put in long days and nights to get the engine and new test stand ready for today, and the results were outstanding. I could not have expected it to come out any better."

The first version of this rocket engine uses a heat-sink throat without any cooling system. Tests on this first version of the engine will characterize engine performance. The results will be used to determine the appropriate length of the rocket engine chamber for the flight-weight version.

ATK is a \$3.4 billion advanced weapon and space systems company employing approximately 15,000 people in 21 states. News and information can be found on the Internet at www.atk.com

XCOR Aerospace is a California corporation located in Mojave, California. The company is in the business of developing and producing safe, reliable and reusable rocket engines, rocket propulsion systems, and rocket powered vehicles.

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

2. YURI'S NIGHT WORLD SPACE PARTY

Date: April 12, 2007

Location: Your Hometown!

Register your party today!

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

For info, contact Loretta Hidalgo at

loretta@yurisnight.net

Discounts: no charge for attendance

3. NSS INTERNATIONAL SPACE DEVELOPMENT CONFERENCE

Date: May 24-28, 2007

Location: Dallas, Texas

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

For Info: (202) 429-1600

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: krukin@spacefrontierfoundation.org

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

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

Volunteers get 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

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

E-MAIL RYAN MCLINKO AT MCLINKOR@MIT.EDU IF YOU HAVE ANY QUESTIONS.

Please send comments on the newsletter to publications@seds.org.

Students For the Exploration and Development of Space

