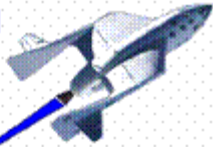


# Aviation Exploring Post 107

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Aerospace Education And  
Youth Development

Somerset Air Service, Inc.  
**SMQ**



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Somerset Airport @ George Walker Field – SMQ  
P.O. Box 197, Bedminster, NJ 07921- 0197  
"A Field of Dreams"

Aviation Exploring Post 107 has taken off and is on an exciting journey in aerospace. Our journey is documented in our [AEP107 FLIGHT LOGS](#). Our experiences, activities, member information are recorded and published to our membership, alumni, recruits, partners and friends of AEP107, generally on a weekly basis. The AEP107 Flight Logs are also posted on [www.aep107.org](http://www.aep107.org).

Please send all FLIGHT LOG information / updates to: [chairman@aep107.org](mailto:chairman@aep107.org)

**YOUTH PROTECTION NOTES:** The AEP107 Flight Log does not publish the last names of Aviation Explorers ages 17 and under.

The AEP107 Flight Logs are distributed individually via Bcc.

## PROGRAM CALENDAR [Return to Contents](#)

### NOVEMBER 2005

|     |    |      |   |        |            |
|-----|----|------|---|--------|------------|
| THU | 3  | 7 PM | <b>Business Meeting @ 7:30 PM</b>       |        | SMQ Office |
| THU | 10 | 7 PM | <b>Career Development @ 7:30 PM</b>     |        | SMQ Office |
| THU | 17 | 7 PM | <b>Aerospace Presentation @ 7:30 PM</b> | Ian    | SMQ Office |
| THU | 24 | 7 PM | <b>THANKSGIVING</b>                     | FAMILY |            |

### UP & COMING EVENTS TO SCHEDULE:

**AEP107 6<sup>th</sup> ANNUAL DINNER @ 94<sup>th</sup> Bomb Group Restaurant**  
THU, DEC 28, 6:00 to 9:00 PM, Essex County Airport, Fairfield, NJ

**CIGAR BOX SOARING CONTEST @ 4H Facility**  
SAT, APR 8, 2006, 310 Milltown Road, Bridgewater, NJ  
This contest is open to the NJ aerospace community.

**Raritan Valley District, BSA - Aviation Merit Badge Program @ Central Jersey Regional Airport**  
SAT, MAY 6, 2006, Hillsborough, NJ

**EAA AirVenture 2006 @ Oshkosh Airport**  
SUN, JUL 23 through SAT, JUL 29, 2006, Oshkosh, WI

**AEP107 NOTE:** We have an open invitation for members of our Partner Programs to travel and stay with us at AirVenture 2006. Travel and dormitory room costs are approximately \$450 for Sun, JUL23 through Sat, JUL29.

## AEP107 ACTIVITIES [Return To Contents](#)

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Laser Tag, Bridgewater Sports Arena (BSA), THU, OCT27, 7PM @ Bridgewater Sports Arena



Future Space Troopers

The games began, the AEP107 Space Troopers took the fight to the enemy and took their lumps at the hands of Gargantuan!!!

From Left: Ian, Keith, Nick, and Hank

**Halloween Party**, Somerset Air Service, Inc., SAT, OCT29, 7PM @ SMQ Office

The goulies were at the Somerset Airport office led by Father Time. The goulies were fearsome, the food was great and we had a monster mash.

Apologies: We could not publish all of the pictures and still publish the Flight Log.





## **PARTNER PROGRAMS** [Return To Contents](#)

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**EAA Chapter 643:** <http://www.eaa643.org>

**Chapter Meeting:** Third Monday of each month.

**EAA Chapter 1333:** <http://www.friendsofcentraljerseyairport.org>

**Fly For Fun, Inc. @ Somerset Airport:** <http://members.aol.com/soaratsomerset/index.html>

**We Do Glider Rides** - You and a certified pilot will be towed aloft in a glider. Your pilot will release from the towline. Remaining near the airport, the pilot will allow you to take the controls for a time if you wish, or just relax and go along for the ride. Continuing lessons are available for those who wish to pursue the sport of soaring.

**Fly for Fun, Inc. – Operations:** <http://groups.yahoo.com/group/somersetsoaring/files/>

**Hawk Valley Soaring Club:** <http://www.geocities.com/hvsoaring>

**Raritan Valley District, PPC, BSA:** <http://www.ppbsa.org>

**Somerset Air Service, Inc.:** <http://www.somersetairport.com>

**Somerset County 4- H Club:** <http://somerset.rce.rutgers.edu>

4- H Space & Astronomy Club: <http://www.geocities.com/sc4hastro>

Broken Props Model Airplanes

Somerset Sentinels Rocket Club

**Somerset Signal Senders, Inc.:** <http://www.somersetsignalsenders.org>

**Club Meeting:** Last Wednesday of each month

## **AEROSPACE NEWS** [Return To Contents](#)

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AEROSPACE NEWS provides an insight to the aerospace industry for your use as you identify your Career Goal and start your Career Development. The following information is representative of the aerospace news available to you.

### **PERSONAL / BUSINESS DEVELOPMENT** [Return To Contents](#)

**Young Money Magazine:** <http://www.youngmoney.com>

**SCORE:** <http://www.scorechapter14.org> - SCORE "Counselors to America's Small Business" is the best source of free and confidential small business advice to help you build your business—from idea to start-up to success.

**Soaring Safety Foundation “Wing Runner Online Course”:**

<http://www.soaringsafety.org/school/wingrunner/toc.htm>

### **Aerospace: NEWS SOURCES** [Return To Contents](#)

**Aviation International News:** <http://www.ainonline.com/index.html>

**NJDOT, Division of Aeronautics:** <http://www.state.nj.us/transportation/commuter/aviation>

**New Scientist Space:** <http://www.newscientistspace.com/home.ns>

**SPACE.com:** <http://www.space.com>

### **Aerospace: THE FUTURE** [Return To Contents](#)

**Joint Planning & Development Office:** [http://www.jpdo.aero/site\\_content/index.html](http://www.jpdo.aero/site_content/index.html)

**National Consortium for Aviation Mobility (NCAM) – SATS:** <http://ncam-sats.org/>

**NASA- Small Aircraft Transportation System (SATS):** <http://sats.larc.nasa.gov>

**Access 5:** [http://www.access5.aero/site\\_content/index.html](http://www.access5.aero/site_content/index.html)

**The Mars Foundation:** <http://www.marshome.org>

**Space Future:** <http://www.spacefuture.com/home.shtml>

### **Space Elevator**

**Space Elevator 2010:** <http://www.elevator2010.org>

**Space Elevator Reference:** <http://www.spaceelevator.com/>

**LiftPort Group Inc.:** <http://www.liftport.com/index.php>

## **AEROSPACE: News** [Return To Contents](#)

**For aerospace industry, 2005 keeps looking up**, Posted on Sun, Oct. 23, 2005

<http://www.kansas.com/mld/kansas/business/12972574.htm>

The aerospace and defense industry is on pace to have its best year in terms of orders and deliveries in more than a decade, the Aerospace Industries Association said recently.

New orders and shipments for aircraft and parts are up significantly in the first half of the year, the trade group said.

Those statistics, along with employment increases during the same time, spur confidence that it will continue through the year, AIA's president John Douglass said in a statement.

Total aerospace industry employment is up for the first half of the year. The industry added 11,100 jobs since the end of 2004.

**Airbus A 380 to rely on Indian chip** 

**THE TIMES OF INDIA** Sunday, October 23, 2005 09:38:57 am PTI

<http://timesofindia.indiatimes.com/articleshow/1272016.cms>

NEW DELHI: When the world's largest passenger jet, Airbus A 380, takes to the skies in 2007, it would rely on an Indian chip to communicate with ground controllers.

Believe it or not, a version of **the same chip would find a place in Airbus' trans- Atlantic rival Boeing's 787 Dreamliner**, the latest flying machine coming out from the US aerospace firm.

"Co-developed and verified" by Indian IT major, HCL Technologies, this chip would be integrated into the system data acquisition computer of the aircraft, a top company official has said.

**ISS Astronauts Settle in for Six Months in Orbit**

[http://www.space.com/missionlaunches/051021\\_exp12\\_profiles.html](http://www.space.com/missionlaunches/051021_exp12_profiles.html)

By **Tariq Malik**, Staff Writer, posted: 21 October 2005, 8:12 p.m. ET

Two astronauts finished their second week in charge of the International Space Station (ISS) Friday while preparing to conduct orbital repairs and their mission's first spacewalk.

ISS [Expedition 12](#) commander Bill McArthur and flight engineer Valery Tokarev are now well into their six-month mission aboard the space station, though time seems to have flown for the veteran astronauts.

"It's hard to believe that 20 days have already passed," McArthur told students in Germany Thursday during a question and answer session from space. "It seems like such a short time for us."

McArthur and Tokarev [launched](#) into space late Sept. 30 EDT and [docked](#) at the ISS on Oct. 3 with U.S. space tourist [Gregory Olsen](#). They took command of the orbital laboratory late Oct. 10, after the station's previous crew – [Expedition 11](#) commander Sergei Krikalev and flight engineer John Phillips – [left](#) the ISS with Olsen.

**Rolls-Royce guns for Indian aerospace boom**

*Company seeks to drive growth in the country through service units in future*

PRAGYA SINGH, Posted online: Tuesday, October 25, 2005 at 0040 hours IST

[http://www.indianexpress.com/full\\_story.php?content\\_id=80697](http://www.indianexpress.com/full_story.php?content_id=80697)

**LONDON, OCTOBER 24:** Ambitious plans announced lately by low-cost Indian carriers have got global aircraft engine manufacturers all worked up. The latest is a \$600 million contract to supply 100 of the high-economy V2500 engines made by International Aero Engines (IAE) to IndiGo, a budget domestic airline still in the works.

UK's Rolls-Royce Plc, a lead partner in the four-member IAE consortium, is already talking about campaigning more intensively for a greater share in India's fast-growing civil aviation market.

"The market is growing 20 per cent a year in India, much more than the world average of 6-8 per cent. There is a lot of potential and we are keen to realize that," says Mark Tyack, customer business director for West and South Asia with Rolls-Royce plc.

**House Approves Aerospace Workforce Legislation**

<http://biz.yahoo.com/prnews/051026/dcw028.html?v=32>

Wednesday October 26, 10:40 am ET

ARLINGTON, Va., Oct. 26 /PRNewswire/ -- The U.S. House of Representatives passed an AIA-supported bill to create a federal inter-agency task force on aerospace workforce revitalization Tuesday, a major step to addressing a looming critical shortage of engineers and other workers in the industry.

Reps. Vern Ehlers (R-Mich.) and Ellen Tauscher (D-Calif.) introduced the measure (HR 758) earlier this year, and it cleared the House by a unanimous vote.

The bill charges 11 executive branch agencies, including NASA and the Defense and Homeland Security departments, to identify new aerospace workforce opportunities through a variety of scholarship, training, and recruitment programs in partnership with the private sector and state governments.

Each year, the task force, under the leadership of the Labor Department, would report to Congress on the status of federal policies designed to advance human capital development in the areas of science, engineering, technology, and mathematics, as well as vocational trades.

### **First Internet- built student satellite successfully launched**

**Date Released:** Thursday, October 27, 2005

Source: [European Space Agency](#)

SSETI Express, a low Earth orbit spacecraft designed and built by European university students under the supervision of ESA's Education Department, was successfully launched this morning at 08:52 CEST from the Plesetsk Cosmodrome on a Russian Kosmos 3M launcher. At 10:29 CEST this morning, the ground control centre at the University in Aalborg (DK) received the first signals from the satellite.

### **Electronic Flight Bag**

Boeing – Flight Operations, <http://www.boeing.com/commercial/flightops/efb.html>

Jeppesen: <http://www.jeppesen.com>

The Electronic Flight Bag brings the technological advances of computer information delivery and management to the airplane flight deck for the first time, providing integrated solutions for managing information in the air and on the ground.

A Complete Range of Solutions – The EFB is a software and data services solution designed for multiple hardware platforms. The EFB offers airlines advanced information management and delivers more accurate performance calculations, creating significant savings of time and money while increasing safety and streamlining the management of flight information.

**Boeing now has 295 orders and commitments from 24 customers for the 787.**

## **AEROSPACE: The Future** [Return To Contents](#)

Researchers compete to develop space tools for NASA, By **Paul Sakuma, AP**

[http://www.usatoday.com/tech/science/space/2005-10-23-nasa-competition\\_x.htm](http://www.usatoday.com/tech/science/space/2005-10-23-nasa-competition_x.htm)

USA Today, MOUNTAIN VIEW, Calif. (AP) — High-tech teams gathered this weekend to put far-out concepts for reaching space to the test. The competition at the NASA Ames Research Center invited teams to take their best shot at creating the world's first "space elevator" — originally conceived by Arthur C. Clarke in his 1978 novel, *The Fountains of Paradise*.

The idea is to develop a tough, lightweight rope, or "tether," that would stretch from the earth to a satellite more than 62,000 miles in space, then send a robotic "climber," powered by light beams and capable of carrying humans and cargo, up the tether.

It's a goal NASA hopes to accomplish by 2020. This weekend, though, the goals were slightly more modest.

Ten teams, vying for \$100,000 in prizes, were competing in two competitions — one, to test the strongest tether; the other, to test the best light-powered robot for climbing up a 200-foot tether.

"This is our first time out," said Marc Schwager, spokesman for the Spaceward Foundation, a non-profit dedicated to space science and technology education that teamed up with NASA to host the challenge.

"This is much more like Kitty Hawk than Kennedy."

This weekend's competition was the first in a series of "Centennial Challenges" hosted by NASA to encourage aerospace engineers around the nation to help fill new space needs with new technologies.

During Saturday's first round of competition, only four out of seven teams competed in the climbing challenge, and only one — a team from the University of British Columbia — successfully sent a robot up the tether, Schwager said.

All seven teams would have another opportunity to test their robots Sunday, with many adjustments likely to be made overnight. "Everyone's got a lot of work to do," Schwager said.

And even if teams pull off a successful climb, their robots must travel at a minimum speed of one meter per second to be eligible for the \$50,000 grand prize, he added. If not, the prize money rolls over to next year's competition.

Four teams were expected to compete in the strongest tether challenge late Saturday, using a material called carbon nanotube that was first developed in Japan in 1990.

"These are insanely strong materials. They're strong enough so that a nanotube the size of a human hair could pick up a human," Schwager said.

**[Sunny Future For Nanocrystal Solar Cells](#)** (October 23, 2005) — Researchers with Berkeley Lab and the University of California, Berkeley, have developed the first ultra- thin solar cells comprised entirely of inorganic nanocrystals and spin- cast from solution. These dual nanocrystal solar cells are as cheap and easy to make as solar cells made from organic polymers and offer the added advantage of being stable in air because they contain no organic materials.

#### **News from a space phantom**

<http://www.spaceref.com/news/viewpr.html?pid=18098>

"A phantom, which was outside the International Space Station (ISS) for a year and a half, is now inside with the ISS crew. However, this is no ghost story but a serious set of scientific experiments to monitor radiation levels inside and outside the ISS. This Phantom is part of the ESA Matroshka experiment facility that was installed on the outside of the ISS on 27 February 2004 to measure radiation doses that astronauts experience during EVA activities."

#### **Quantum Awarded Contract to Develop Aerospace Hydrogen and Oxygen Storage Systems**

<http://www.prnewswire.com/cgi-bin/stories.pl?ACCT=104&STORY=/www/story/10-24-2005/0004192789&EDATE=>

IRVINE, Calif., Oct. 24 /PRNewswire- FirstCall/ -- Quantum Fuel Systems Technologies Worldwide, Inc. (Nasdaq: [QTWW](#)), today announced that it has been awarded a contract by Lockheed- Martin to develop a hydrogen and oxygen fuel storage module for a regenerative power supply system for space exploration.

Utilizing its expertise in ultra- lightweight all- composite gaseous fuel storage, Quantum will develop a unique storage module with higher system weight efficiency than it has demonstrated in the past for Lockheed Martin. Additionally, the storage system will be designed to withstand the extreme conditions experienced on lunar surfaces.

"This program will push the boundaries of storage technologies and advance Quantum's core technology," said Alan P. Niedzwiecki, President and CEO of Quantum. "Quantum will develop ultra- lightweight hydrogen and oxygen tanks well suited to meet the extreme temperature and light weight performance requirements of this program. Meeting these extreme requirements also has the potential to advance our current technologies for hydrogen vehicle commercialization, where temperature and weight considerations are also significant."

**[Creating A Better Transmission System For Deep- space Applications](#)** (October 25, 2005) — A new technique, based on a principle known as a phased array, could improve deep- space missions like asteroid research and remote spacecraft operations by changing the way signals are sent from Earth. The net result could be significantly lowered costs for space communications, more data from science spacecraft, and an increase in planetary and deep- space research that requires remote signals.

**PICTURES OF THE WEEK** [Return To Contents](#)

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The University of British Columbia entry makes its way skyward during NASA's first Centennial Challenge competition, which challenged competitors to build robots capable of climbing a ribbon using beamed energy. Credit: R. Gilbertson.









