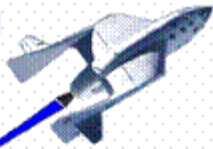


Aviation Exploring Post 107

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Aerospace Education And
Youth Development

Somerset Air Service, Inc.
SMQ



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Aviation Exploring is "Learning for Life" sponsored by:
Somerset Air Service, Inc.
Somerset Airport @ George Walker Field – SMQ
P.O. Box 197, Bedminster, NJ 07921-0197
"A Field of Dreams"
<http://www.somersetair.com>

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.

Please send all FLIGHT LOG information / updates to: 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	1 0	7 PM	Somerset Air Service @ 7:30 PM Aircraft Maintenance Shop	David Leo	Meet At SMQ Office
THU	1 7	7 PM	Aircraft Design & Engineering @ 7:30 PM	Ian	SMQ Office
THU	2 4		THANKSGIVING	FAMILY	

UP & COMING EVENTS TO SCHEDULE:

AEP107 6th ANNUAL DINNER @, 94th 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 NJaerospace 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](#)

Business Meeting @ 7:30 PM, THU, NOV3, 7:30 PM, SMQ Office

Summary/notes of the meeting:

Flowers by airport signs-are near one sign, nobody volunteered to plant near the other sign.

Airplane wash-none this year (weather too cold)

Cigar Box Soaring Contest - no volunteers for adult adviser or youth leader

Build Season

Gentle Lady-finish building

Ascent-repair

Soarstar-replace speed control

RVCC possibility for building location

Fund Raising Somerset, Solberg, Central New Jersey, Sky Manor Airports

Ask airport owners first:

- o Sky Manor-Doug Nelson
- o Solberg - Mrs. Ricks?
- o Central Jersey - Mr. Teel
- o Somerset - Nick?

Hangar Cleanup-Spring time, spring cleanup assistance(sweeping, moving boxes/things, etc)

Snow Removal

- o Tie downs
- o Small areas near airport
- o Signs (ads) needed
- o \$7- <35ft in front of hangar\$
- o \$10- <55ft in front of hangar\$
- o Schedule? (we'll come if there's more than two inches and the snow stopped)

Wash and Polish Airplanes @ Sky Manor (Doug Nelson is asking the mechanic at Sky Manor)

Check out money percentages (how much to Exploring Miles, how much to AEP107)

Decorate SMQ for the Holiday Season using SMQ decorations as a "thank you"

Aerospace Presentation -who?

Career Development meeting next THU, NOV10 @ SMQ Maintenance Hanger

Membership papers-Next meeting, please bring the papers required for membership, as one member is now 14

Nick

AEP107 NOTE: Dan Walker and Ellen Parker have both said that it would be very nice if we were to set up the holiday decorations. We need to work with Pam.

PARTNER PROGRAMS [Return To Contents](#)

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](#)

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
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
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](#)

First Giant Magellan Telescope Mirror Casting is Perfect

PRESS RELEASE

Date Released: Saturday, October 29, 2005

Source: [University of Arizona](#)

<http://www.spaceref.com/news/viewpr.html?pid=18145>

The University of Arizona Steward Observatory Mirror Lab's casting of the first mirror for the Giant Magellan Telescope (GMT) "appears to be essentially perfect," UA Steward Observatory Director Peter Strittmatter said after astronomers got their first look at the glass last Friday.

"We're very happy to see this one come out looking so gorgeous," Mirror Lab Technical Director J. Roger Angel said. "We'll see more once the mold is removed, but so far, looking through the front surface, it looks great."

News wire

http://links.cygusb2b.com/rmgo.asp?tid=201928&eid=28319&sb_id=96878,96878

Deeply concerned about the lesson of a near-collision on the runway at JFK International Airport this past July, air traffic controllers from JFK, LaGuardia and Newark Airports will today urge the Federal Aviation Administration to immediately install a state-of-the-art airport surface radar system that the National Transportation Safety Board says is an improvement over the airports' current system. The controllers -- who serve as representatives of the National Air Traffic Controllers Association (NATCA) -- will outline how the failure to install sufficient ground radar equipment that works in all weather conditions at the three major N.Y. airports is a danger sign and evidence that the FAA is not taking technology and modernization issues seriously.

"Recently, New York's air traffic controllers have become increasingly worried about the FAA's unwillingness to install the most modern and effective ground radar equipment," said Phil Barbarello, NATCA's Eastern regional vice president. "The NTSB has made runway incursions one of its top safety priorities, and has stated that the FAA lacks, and needs to acquire without further delay, effective means to prevent runway incursions and improve runway safety. In New York, this is a safety issue that needs to be addressed before a tragedy occurs."

Popularity of small regional jets wanes, Bombardier halts production

Regional jets with 50 seats have fallen out of favor with airlines, causing demand for the planes to drop. Many passengers disliked the planes' small cabins. Manufacturer **Bombardier** last week said it would halt production. Airlines used the planes on routes where the number of travelers could not support large jets. [USA TODAY](#) (11/1)

Proposal would give foreign investors more say over airline operations

A White House proposal would give foreign investors in U.S. airlines more control over how the carriers are operated. The proposed changes could attract more foreign investment in U.S. carriers and allow U.S. and foreign carriers to be managed jointly. Restrictions capping the amount of voting stock a foreign investor can purchase would remain in place. The transportation secretary can adopt the proposal after a 60-day public comment period. [The Wall Street Journal](#) (subscription required) (11/3), [The New York Times](#) (free registration) (11/3), [The Washington Post](#) (free registration) (11/3)

LMI Aerospace inks \$170 million deal with Gulfstream

St. Louis Business Journal - 3:41 PM CST Wednesday

http://stlouis.bizjournals.com/stlouis/stories/2005/10/31/daily50.html?jst=b_In_hl

[LMI Aerospace Inc.](#) said Wednesday it signed a tentative \$170 million, five-year deal with [Gulfstream Aerospace Corp.](#) for aircraft parts.

Under the agreement, LMI Aerospace would manufacture wing and fuselage components and kits for the Gulfstream G450, G500 and G550, and provide parts currently sold on a purchase-order basis. The contract is expected to be complete by Dec. 31.

Savannah, Ga.-based Gulfstream, a General Dynamics subsidiary, is LMI's largest customer. The contract is expected to give LMI about 80 percent of its total expected revenue for 2006.

St. Louis-based LMI Aerospace Inc. (Nasdaq: LMIA) manufactures and supplies parts to the aerospace and technology industries.

NASA Names New Shuttle a Priority

<http://www.nytimes.com/aponline/science/AP-NASA.html>

By THE ASSOCIATED PRESS, Published: November 5, 2005, Filed at 5:47 p.m. ET

WASHINGTON (AP) -- NASA's top priorities are a replacement for the space shuttle and completing the international space station, and some other programs are being cut or deferred to concentrate the agency's resources, NASA Administrator Michael D. Griffin said Thursday.

"NASA cannot afford to do everything on its plate today," he told the House Science Committee. Funding priorities required the agency to cancel several programs that "we either did not need or did not need right now," Griffin said.

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

U.S. Military Wants to Own the Weather

By [Leonard David](#), Senior Space Writer, posted: 31 October 2005, 06:24 am ET

http://www.space.com/scienceastronomy/051031_mystery_monday.html

The one-two hurricane punch from [Katrina](#) and Wilma along with predictions of [more severe weather](#) in the future has scientists pondering ways to save lives, protect property and possibly even control the weather.

While efforts to tame storms have so far been [clouded by failure](#), some researchers aren't willing to give up the fight. And even if changing the weather proves overly challenging, residents and disaster officials can do a better job planning and reacting.

In fact, military officials and weather modification experts could be on the verge of joining forces to better gauge, react to, and possibly nullify future hostile forces churned out by Mother Nature.

DARPA WANTS MACH 2, UNEVEN FLYING WING, DEFENCETECH.ORG

http://www.defensetech.org/archives/cat_planes_copters_blimps.html

October 21, 2005 07:09 AM |

Back in the 1940's, scientists suggested that a plane with uneven, or oblique, wings might be the best shape for supersonic travel. Sixty years later, no one has been able to make a working, Mach-speed model. Now, the Pentagon's fringe-science arm, Darpa, not only wants to take a whack at the decades-old problem -- the agency is looking for a plane that's one giant, cockeyed wing.

[Oblique wings](#), in theory, provide more lift and less drag than standard aircrafts. But engineers haven't figured out how to build a plane that could handle the "aerodynamic control, aero-structural design, and propulsion integration" that come with the asymmetric approach, Darpa says. There's not even enough "data to date to assess the feasibility" for a supersonic oblique flying wing [OFW] design, the agency notes.

In its new "[Switchblade](#)" program, Darpa is aiming to "demonstrate the feasibility and controllability of a supersonic, tailless, variable sweep OFW concept; validate the design methods and control approaches for the design; and facilitate consideration of an OFW platform in the design of potential future operational aircraft."

Superconducting Magnet Attracts Molecular Research

Brandeis University, Date: 2005-11-02

<http://www.sciencedaily.com/releases/2005/11/051102174108.htm>

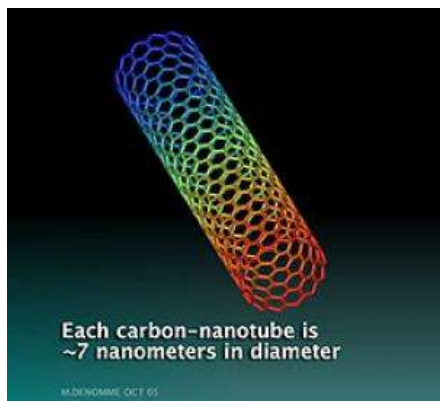
One of the newest -- and unequivocally the coolest -- pieces of real estate on the Brandeis campus is a facility containing a state-of-the-art superconducting magnet for use in researching biological macromolecules such as [DNA](#), RNA, enzymes and other [proteins](#).

The installation of the gleaming 800 MHz German-made Bruker magnet was recently completed in a specially built facility on South Street. Weighing in at roughly seven and a half tons, the magnetic resonance (MR) [spectrometer](#) was funded by a \$2 million grant from the National Institutes of Health (NIH) in a stiff competition among [research](#) universities. Since 2001, the NIH has funded only three such magnets nationwide, said professor of chemistry Tom Pochapsky, who spearheaded a group effort to bring the magnet to Brandeis.

"It's a testament to Brandeis' strength in this area that the magnet is located on our campus and under our stewardship," noted Pochapsky.

Brought in by crane and located at a site protected from large metal objects and radio frequency interference, the superconducting behemoth was actually energized with about the same amount of power consumed by a big stereo, Pochapsky explained.

Carbon Nanotube Membranes Allow Super-fast Fluid Flow
<http://www.sciencedaily.com/releases/2005/11/051104085644.htm>



Membranes composed of manmade carbon nanotubes permit a fluid flow nearly 10,000 to 100,000 times faster than conventional fluid flow theory would predict because of the nanotubes' nearly friction-free surface, researchers at the University of Kentucky report in the Nov. 3 issue of Nature.

In their study, Mainak Majumder, Nitin Chopra and Bruce J. Hinds of UK's Chemical and Materials Engineering Department, and Rodney Andrews of UK's Center for Applied [Energy](#) Research found the flow dynamics of carbon nanotube (CNT) membranes with pores measuring 7 nanometers in diameter permit a fluid flow exceeded the flows predicted by conventional hydrodynamic predictions.

In their study "Enhanced Flow in Carbon Nanotubes," the researchers note an "aligned CNT membrane has fast transit approaching the extraordinary speed of biological channels. The membrane fabrication is scalable to large areas, allowing for industrially useful chemical separations.

"(E)ach side of the membrane can be independently functionalized. These advantages make the aligned CNT membrane a promising large-area platform to mimic [protein](#) channels for sophisticated chemical separations, trans-dermal drug delivery and selective chemical sensing," the researchers say.

Electronic Paper Moves From Sci - Fi to Marketplace

<http://www.nytimes.com/reuters/technology/tech-column-pluggedin.html>

By REUTERS, Published: November 4, 2005, Filed at 1:31 p.m. ET

AMSTERDAM (Reuters) - In Neal Stephenson's sci-fi novel "The Diamond Age," a young girl's companion is a book with amazing qualities -- it talks, and the words magically change with the story.

A decade after Stephenson's book was published, what was once labeled science fiction is finding its way to the real-world market.

"Electronic paper" is a display technology that makes possible flexible or even rollable displays which, unlike current computer screens, can be read in bright sunlight.

But, much like when [LCD](#) displays came to the market, consumers are first likely to see the technology in clocks and watches. The popular example of an electronic newspaper that automatically updates itself wirelessly is still years away.

A number of companies are currently working on such displays -- LG.Philips LCD (034220.KS) and Massachusetts-based E Ink announced last month that they have developed a prototype 10-inch display, and Fujitsu (6702.T) showed a color display in July.

OBLIQUE FLYING WING



SUPERSONIC CRUISE CONFIGURATION

