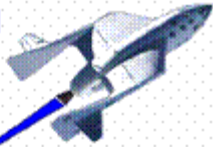


Aviation Exploring Post 107

CONTENT S

Aerospace Education And
Youth Development

Somerset Air Service, Inc.
SMQ



FLIGHT LOG

MARCH 2007

- [Program Calendar](#)
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- [Aerospace: The Future Picture\(s\) of the Month](#)

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"

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, on a monthly basis. The AEP107 Flight Logs are also posted on our website: 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](#) (activities scheduled to date)

APRIL 2007

| | | | | | |
|------------|---------------|--------------------------------------|---|------|------------|
| THU | 5 | 7:30 PM | Business Meeting: 7:30 PM | Nick | SMQ Office |
| THU | 12 | 7:30 PM | Aerospace Presentation | | SMQ Office |
| THU | 19 | 7:30 PM | Aerospace Presentation | | SMQ Office |
| THU FRI | 26 - 27 | THU 1:00 PM FRI 8:00 PM | NASA Goddard Space Flight Center Tour Possible Agenda: <ul style="list-style-type: none"> ➔ Science on a Sphere Presentation ➔ Possible Education or University Programs Office presentation of available internship programs. ➔ Guided Tour of some/all of the following: Engineering Integration and Test Facilities ➔ Hubble Space Telescope Simulator; Thermal Blanket Lab; NASCOM Operations Facility | Tom | |

UP AND COMING EVENTS [Return to Contents](#)

Raritan Valley District, BSA – Aviation Merit Badge Event - 2007

SAT, MAY5, 2007, 7:30 AM to 3:00 PM at the Sky Manor Airport, Pittstown, NJ
The RV-AMB Registration Package has been distributed, and the event publicized. Thank you All!

Raritan Valley District, BSA – Space Exploration Merit Badge Event - 2007

SAT, JU14, 2007, 7:30 AM to 2:00 PM, North Branch Park, Milltown Rd, Bridgewater

EAA AirVenture Oshkosh, JUL 23 - 29, 2007

3 Months 3 Weeks to EAA AirVenture Oshkosh 2007!

May 3, 2007 - Initial Registration: \$100.00

May 31, 2007 – Balance Due

NOTE: 2006 AirVenture Trip cost \$421.27. Each year is different due to variable costs (airfare).

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CLASSIFIEDS [Return to Contents](#)



AEP107 INVITES NEW MEMBERS

Aviation Exploring Post 107 always welcomes new members! We are coed, ages 14 through 20 and focused on "Aerospace Education and Youth Development". We have a very active aerospace program that networks our members within the aerospace community. For additional information, please contact: Tom Teel, 908 581 6876, chairman@aep107.org, www.aep107.org .

Somerset Soaring Ventures, Inc. <http://www.somersetsoaring.com>

AEP107 Members – Volunteer Wing Walkers

If you wish to be a Volunteer Wing Walker for FFF, Inc., please contact Jay Hahola at the glider line on **SAT, 12 PM** weather permitting. Jay would like to meet you personally.

AEROSPACE PROGRAM ACTIVITIES [Return to Contents](#)

Joe Tapp, EAA Vintage Chapter 7, March 8, 2007



Joe shared his skills as a vintage aircraft builder/rebuilder with our Aviation Explorers. We were busy splicing, connecting and soldering aircraft electric wiring. We had a lot fun, learned some stuff and plan to ask Joe back to share his many skills.

Joe has invited our Explorers to meet at his workshop called the garage/barn. This should be fun.

AEROSPACE – THE FUTURE, Tom Teel, March 23, 2007

The AEP107 Aerospace – The Future program engages our Aviation Explorers and parents to investigate emerging aerospace markets to support their post-secondary education career plans. At our meeting we discussed emerging technology and which market segments to start a career. AEP107 has a large amount of information regarding aerospace technologies that is available to our Explorers for school work and career planning.

AEP107 GROUND SCHOOL ONE - FINAL REVIEW



AEP107 GROUND SCHOOL - ONE, FINAL REVIEW
BRYAN, IAN, KEITH - DUFFEE/RICKS - NICK, BRIAN

March 29, 2007, SMQ Office

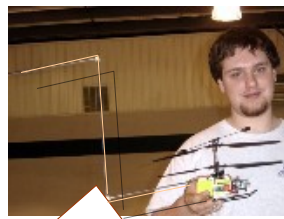
Five of our members (age 17) are working toward their Private Pilots Certificate. AEP107 has supplemented their flight school training with our ground school. Duffee Ricks, Ian's dad, has been our ground school instructor.

From Left: Bryan, Ian, Keith, Nick, Brian

We wish our young eagles the best as they take wing.

4H / AEP107 INDOOR FLYING EVENT, March 30, 4H Facility

If it small, flies and looks like an airplane, we fly it at our 4H / AEP107 Indoor Flight Event.



From Left:

Alex, 4H Model Airplane Club

Gene Sellars & Justine, Wound Up

Ian, Helicopter Mod to rescue models stuck in the rafters.

James Alaggio, AEP107 Alumni

Note the extension from the aft end.
Ian's Rescue helicopter worked very

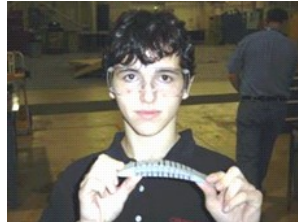
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AEP107 MEMBER NEWS

Nick Asch, President, AEP107

Nick announced that he will be attending the Embry-Riddle Aerospace Engineering, 5 Year Masters Program in the fall. Nick is also working toward his Private Pilot Certificate, graduating high school from his junior year, and will remain a member of our Aviation Exploring Post until he is 20 years old. We all wish Nick the best!!

Congratulations, Best Wishes, and Advice for Nick May be sent to: chairman@aep107.org



Embry-Riddle NASA Langley FAA Technical Somerset Springs

AEP107 ALUMNI NEWS



James Alaggio, Regional Vice President

The Hobby Quest, Central NJ

james@thehobbyquest.com / 732.310.7873

<http://www.thehobbyquest.com>

Aerospace Enrichment Programs: Grades K through 8

The building and flying of model airplanes has been a popular hobby since the days of the Wright brothers and even before. In The Hobby

Quest: Aviation Club, we will build planes from scratch, not starter kits or pre-assembled parts. Each child learns to read plans, work with rulers, and make necessary calculations and to distinguish between different hobby tools.

James is asking his graduating 8th grade students in the Somerset County area to contact Aviation Exploring Post 107 so they may continue developing their interests in aerospace. Now this is a wonderful Alumnus.

AEROSPACE NEWS [Return to Contents](#)

FORBES: Market Scan

BA Down on 'Open-Skies' Worries

Chris Noon, 03.05.07, 7:28 AM ET, LONDON -

Shares of **British Airways** tumbled 6.3%, to 498.25 pence (\$9.69), on the London Stock Exchange on Monday morning after the **United States and the European Union agreed late on Friday on an "open-skies" deal** that will end restrictions on airlines and airports on flights between the two regions.

If ratified, this agreement would open up the trans-Atlantic market equally to all airlines, meaning that any European or U.S. airline can fly any route between any city in Europe and any airport across the pond. The deal would expose BA to new competition at London's Heathrow airport.

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Rolls-Royce RR300 to power new Robinson helicopter, 02 March 2007

Orlando, FL: Rolls-Royce, a world-leading provider of power systems and services, will supply a new turboshaft engine to power Robinson Helicopter Company's new R66 rotorcraft; it was announced today at Heli Expo.

The new RR300 engine represents a major step forward in the helicopter industry by providing 300 shaft horsepower at takeoff, excellent hot and high performance and outstanding value. The RR300 makes Rolls-Royce turbine power available in the lower SHP range.

The new R66 model, a five-seater, is Robinson Helicopter Company's first venture into gas turbine-powered rotorcraft and will complement the company's existing line of piston-powered aircraft.

Ray Bethell, Multiple Kite World Champion, Promo Video

http://www.kitelife.com/videos/demo/bethell_promo.htm

LEFT: Kite Bug

FROM: Jim Vigani, Somerset Signal Senders, Inc.

A nice collection of pictures from Reno '07:

<http://photografik.net/reno/>

FROM: Raymond A. Jajko, Somerset Signal Senders, Inc.

IBM to Showcase Optical Chipset



Techtree.com - 22 minutes ago

At the 2007 Optical Fiber Conference, IBM researchers will showcase a prototype optical transceiver chipset that they claim allows people to download movies or share online data eight times faster than what current technologies allow.

BE Aerospace Inc. (NASDAQ:[BEAV](#)) is a leading provider of aircraft cabin interior products for both commercial aircraft and business jets. Offerings include aircraft cabin seating, lighting, emergency oxygen systems, refrigeration equipment, galley structures, storage equipment and aerospace fasteners. The company also provides cabin interior design, reconfiguration and passenger-to-freighter conversion services. B/E sells its products to most major airlines and to manufacturers of aviation equipment.

Boeing Announces C-17 Line May End in mid-2009

Stops Procurement of Long-lead Parts

(WebWire) 3/5/2007 10:56:56 AM, T. LOUIS, March 02, 2007

Due to the lack of U.S. government and new international orders for the C-17 military cargo aircraft, The Boeing Company [NYSE: BA] is stopping procurement of parts for any new C-17s not under contract or firmly committed. This move is the first step in an orderly shut down of the production supply chain, should no further orders be received from the U.S. government or international customers. Without further aircraft orders, significant workforce reductions will begin in early 2008 as the production line heads toward complete shutdown in mid-2009.

FAA Reauthorization Bill Sent to Congress, AIN Alerts

With a disclaimer that the move does not indicate endorsement, Democratic and Republican leaders of the House Committee on Transportation and Infrastructure officially introduced the Bush Administration's plan for reauthorizing the FAA. Committee chairman James Oberstar (D-Minn.) and aviation subcommittee chairman Jerry Costello (D-Ill.) stressed that the action was performed as a courtesy to the White House and should not be construed as a blanket endorsement of the proposal. "The bill has been introduced at the request of the Secretary of Transportation," said Oberstar. "Protocol dictates that we honor this request, even if we disagree with the proposed legislation in part or in total." Oberstar, considered the most knowledgeable member of Congress on aviation matters, has long opposed user fees for general aviation, which are sprinkled liberally throughout the President's proposal.

Brain Maps Online

Wednesday, February 28, 2007, 12:00:00 AM

Digital atlases of the brains of humans, monkeys, dogs, cats, mice, birds and other animals have been created and posted online by researchers at the UC Davis Center for Neuroscience.

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Safety Improved in All Aviation Segments Last Year

The [number of accidents](#) in all segments of civil aviation last year was less than in 2005, according to the NTSB, with general aviation having the lowest number of accidents in 40 years of record keeping. Major airlines continued to have the lowest accident rates in civil aviation. Last year, on-demand Part 135 operators had 54 accidents, down almost 20 percent from 2005, with 10 of those accidents resulting in 16 fatalities. The number of air-taxi accidents has been decreasing steadily over the past 10 years, while the hours flown by these air carriers have steadily increased. In 2006, commuter operators experienced only three accidents, one of them fatal, resulting in two fatalities. The decline in the number of GA accidents was due in part to a steady decrease in the amount of flight activity. Since 1990, GA hours flown have declined 20 percent, and as a consequence, the GA accident rate has stayed relatively stable in that period, averaging approximately 7.5 accidents per 100,000 flight hours.

Dreamlifter Wrapping Up Certification

By Lee Ann Tegtmeier/Overhaul & Maintenance

Boeing is wrapping up certification on the 747-400 Dreamlifter, an aircraft Evergreen Aviation Technologies is modifying to transport major composite structures of the 787, said Mike Bair, Boeing vice president and general manager of the 787 program.

The 747-400 Dreamlifter can transport parts now between partners because route proving and parts carrying are part of the certification program, said Bair.

Sikorsky Aircraft Finalizes Acquisition of PZL Mielec

Mar. 16, 2007, - http://www.sikorsky.com/details/0,9602,CLI1_DIV69_ETI2434,00.html

MIELEC, Poland - Sikorsky Aircraft Corp. today closed on its acquisition of aircraft maker PZL Mielec from the Polish government. Sikorsky Aircraft is a subsidiary of United Technologies Corp. (NYSE:UTX), of Hartford, Conn., USA.

"This is a major step toward establishing the foundation for our European operations," said Jeffrey Pino, Sikorsky's president. "Mielec will be a key component of Sikorsky's long-range global strategy to meet worldwide demand for its products and services. This acquisition draws upon Poland's great aerospace heritage and expertise and unites two pioneering aerospace companies into an even stronger world-class aircraft manufacturer and service provider."

Embraer Plans New Business Jets

Watch for Embraer to announce "around NBAA Convention [September] time" one or maybe two new business jets—what it is calling a "mid-light" jet and a "midsize" jet. The new aircraft are aimed at the market segment between the company's Phenom 300, a light jet scheduled to enter service in 2009, and the super-midsize Legacy 600, of which 100 have been delivered since shipments began in 2000. Meanwhile, in addition to the Phenom. 300, Embraer continues its development of the Phenom 100 very light jet, scheduled to enter service next year, and the Lineage 1000, an "ultra-large business jet" version of the E190 jetliner.

N.C. Recruiters Target More Aviation Jobs

Jonathan B. Cox, The News & Observer

<http://www.amtonline.com/article/article.jsp?siteSection=1&id=3700>

North Carolina is trying to live up to its tag line: First in flight.

Recruiters are stepping up efforts to attract plane builders, engine makers and parts manufacturers to the state that claims the birthplace of aviation. Their goal is to win industry jobs that pay double the average weekly wage in North Carolina.



AEROSPACE – THE FUTURE [Return to Contents](#)

Manchester physicists pioneer new super-thin technology, 01 Mar 2007

Researchers have used the world's thinnest material to create a new type of technology, which could be used to make super-fast electronic components and speed up the development of drugs.

Physicists at The University of Manchester and The Max-Planck Institute in Germany have created a new kind of a membrane that is only one atom thick.

It's believed this super-small structure can be used to sieve gases, make ultra-fast electronic switches and image individual molecules with unprecedented accuracy.

CESAR could hail cheaper and greener small aircraft

A £280,000 grant to engineers at the University of Manchester could help spark the development of cheaper, lighter and greener small passenger aircraft.

A team from the Power Conversion Group at the University will use the money to investigate how current mechanical and hydraulic systems on small aircraft - such as private jets and those used for short flights - can be improved using more advanced electrical engineering.

The research forms part of the Cost Effective Small Aircraft (CESAR) project, which involves 35 commercial and academic organisations right across the European Union.

China Aims To Produce Jumbo Jets By 2020

FORBES Market Scan, [Shu-Ching Jean Chen](#), 03.13.07, 12:54 AM ET, Hong Kong

Now that it has lofted astronauts into space, it seems natural that China would want to make its own large aircraft as well.

State media announced this week that the Chinese aviation industry aims to produce its own large aircraft by the year 2020. "We could not produce big aircraft in the past because of [a lack of] experience, economic power and technological infrastructure," said Liu Daxiang, deputy director of China Aviation Industry Corporation I, or AVIC I. "Now we have the basic foundations in all three."

Development and Testing of a Radial Halbach Magnetic Bearing

20070006849 NASA Glenn Research Center, Cleveland, OH, United States

Eichenberg, Dennis J.; Gallo, Christopher A.; Thompson, William K.; December 2006; In English; Original contains black and white illustrations

Contract(s)/Grant(s): WBS 561581.02.08.03.06.04

Report No.(s): NASA/TM-2006-214477; E-15769; No Copyright; Avail.: CASI: [A03](#), Hardcopy

Avail Online: <http://hdl.handle.net/2060/20070006849>,

The NASA John H. Glenn Research Center has developed and tested a revolutionary Radial Halbach Magnetic Bearing. **The objective of this work is to develop a viable non-contact magnetic bearing utilizing Halbach arrays for all-electric flight, and many other applications.** This concept will help reduce harmful emissions, reduce the Nation's dependence on fossil fuels and mitigate many of the concerns and limitations encountered in conventional axial bearings such as bearing wear, leaks, seals and friction loss. The Radial Halbach Magnetic Bearing is inherently stable and requires no active feedback control system or superconductivity as required in many magnetic bearing designs. The Radial Halbach Magnetic Bearing is useful for very high speed applications including turbines, instrumentation, medical applications, manufacturing equipment, and space power systems such as flywheels.

[Fuel Prospecting on the Moon](#), March 13, 2007, 10:49:00 PM

[Stone Aerospace Announces Formation of a Company to Establish a Commercial Refueling Station in Low Earth Orbit \(LEO\)](#)

"On March 10, 2007, at the Technology, Entertainment and Design (TED) Conference in Monterey, California, Dr. Bill Stone presented a briefing entitled "Pushing the Limits of Exploration on Earth and in Space" to over 900 attendees. In the briefing, Stone announced his intent to be the first explorer to lead an industrial team to the moon to explore for water and other fuels, and, if found in sufficient quantity, process the fuels on the moon, then transfer them to a low Earth orbit (LEO) refueling station. The commercial enterprise will provide a variety of fuels and life support

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compounds, such as water, liquid oxygen, liquid hydrogen, gaseous oxygen and hydrogen, and potentially nitrogen and methane at market prices to space farers on a first come, first serve basis."

[Laser-Powered Midair Missile Defense Takes Aim](#), Wednesday, March 07, 2007, 12:00:00 AM
The Guardian antimissile system, finally ready to be mounted on the fuselage of commercial jets, locks on to a missile headed straight for a plane and drags it off-course with infrared lasers like a tractor beam-in five seconds.

[Business & Technology | Boeing, Airbus warned on rivals | Seattle Times Newspaper](#)

Today, March 14, 2007, 15 hours ago

PHOENIX -- The most influential man in the global commercial-aviation business said Tuesday that Boeing and Airbus should expect serious competition to emerge from China, Russia and Japan starting in about 15 years.

[Xerox Inkless Printer](#), Thursday, March 01, 2007, 11:44:45 AM

Xerox is developing a new printing technology which does not require ink of any kind. The new technology includes reusable paper which can be printed and erased dozens of times and has the potential to revolutionize printing. Although the technology is still in the early stages of development, it has the potential to cut printing costs and reduce office paper usage dramatically. New details on this upcoming technology are revealed here for the first time.

PICTURE(S) OF THE MONTH [Return to Contents](#)

PERSONAL AIR VEHICLE (PAV) FEATURES ARE:



Comparative Aircraft Flight Efficiency (CAFÉ):
http://cafefoundation.org/v2/main_home.php

- 150-200 mph car that flies above gridlock without traffic delays
- Quiet, safe, comfortable and reliable
- Simplified operation akin to driving a car
- As affordable as travel by car or airliner
- Near all-weather, on-demand travel enabled by synthetic vision
- Highly fuel efficient and able to use alternative fuels
- Up to 800 mile range
- Short runway use--Walk to grandma's from small residential airfields

"TRANSITION" PAV DESIGN