

Aviation Exploring Post 107

FLIGHT LOG SEPTEMBER 2009

Personal and Aerospace
Career 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
 “A Field of Dreams”
 P.O. Pox 1007, Bedminster, NJ 07921
 908 722 2444 / info@somersetairport.com /
<http://www.somersetairport.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, on a monthly basis.

Please send all FLIGHT LOG information / updates to the Editor: ftfeel@optonline.net.

YOUTH PROTECTION NOTES:

- ➔ AEP107 Flight Logs do not publish the last names of Aviation Explorers ages 17 and under.
- ➔ AEP107 Flight Logs are distributed individually via Bcc:

WHAT IS EXPLORING? <http://www.youtube.com/watch?v=GXLGEMwngSg>

WHAT IS AVIATION EXPLORING? <http://www.youtube.com/watch?v=xZHUI-ZhI8w>

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

AEP107 - OCTOBER 2009

THU	1	7:00 PM ¹	Business Meeting ➔ Aerospace Program Planning	Brian	SMQ Office
SUN	4	Meet at SMQ	Rotorfest – Shultz Airshows @ PA www.helicoptermuseum.org	Douglas	PA
THU	8	7:00 PM ¹	Mark George Career: Mil, Heli Pilot- PA State Police Discuss: Aviation Management, Marywood University Aviation Program Aerospace Presentation		SMQ Office

1. 7:00 PM Meet & Greet, 7:30 PM Presentation

AEP107 PROGRAM (under development)

- ➔ Agusta-Westlake Helicopter Mfg. Visit
- ➔ AEP Annual Dinner 2009, WED, DEC 30, 2009
- ➔ Raritan Valley District, BSA- Aviation Merit Badge Event 2010, SAT, MAY 1
- ➔ **AirVenture July – August 2010** <http://www.airventure.org/>

This calendar is a service of New Jersey Aviation Education Council (NJAE) www.njaviation.com

DATE	EVENT	CONTACT
Oct 13 – 14	Somerset, NJ, NJ Science Teachers Convention Doubletree Hotel Conference Center Davidson Avenue	Mark Lamb (609) 581-8862

The information is not guaranteed. It is wise to confirm dates as some events are canceled without notice. Please send all event information by the 14th of each month to either of the two addresses listed below. If you would like to receive this calendar by e-mail, please e-mail Aeromary@gmail.com. Thank you.

[750 Student Teams Wanted For World's Largest Rocket Competition](#)

September 04, 2009, Team America Rocketry Challenge Registration Is Open Registration for the world's largest rocket competition, the Team America Rocketry Challenge, is now open for 750 student teams in grades 7-12 from any U.S. school, home school or non-profit youth organization. Registration for the 2010 spring contest is open now through November 30.

SUPPORT GENERAL AVIATION AND THE DEVELOPMENT OF EAGLES NEST AIRPORT - 31E

Stafford Forge Road, West Creek, New Jersey, NJ - Submitted by Mary Sullivan

- **SATURDAY OCT 10th (Rain Date Oct 11th), FROM 10:00-1:00**
- AIRCRAFT FLY IN & COMMUNITY
- INTRODUCTION TO EAGLES NEST AIRPORT
- Enjoy Complimentary Food and Camaraderie
- Experience Many Types of Aircraft & Pilots
- Experience the Airport and the educational, recreational and economic dimension it adds to our Community
- Watch Eagles Nest Airport Being Developed

EAA CHAPTER CALANDER OF EVENTS:

<http://www.eaa.org/calendar/Default.aspx>

Old Rhinebeck Aerodrome: Show Schedule

http://www.olderhinebeck.org/index.php?option=com_jcalpro&view=calendar&Itemid=156

CLASSIFIEDS [Return to Contents](#)

AEP107 INVITES NEW MEMBERS TO JOIN, www.aep107.org, Aviation Exploring Post 107 always welcomes new members! We are coed, ages 14 through 20 and focused on "Personal and Aerospace Career 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, ftteel@optonline.net

SOMERSET SOARING VENTURES, INC. <http://www.somersetsoaring.com>, AEP107 Members, if you wish to be a volunteer Wing Walker for FFF, Inc. please contacts Jay Hahola at the glider line on **SAT, 11:00 AM** weather permitting. Jay would like to meet you personally.

AEP107 MEMBER AND ALUMNI NEWS [Return to Contents](#)

AEP107 Members & Alumni, please keep in touch with the AEP107 Flight Log. We would love to share your **program activities**. Please send program reports and pictures for our news letter to Tom Teel / ftteel@optonline.net.

AEROSPACE PROGRAM – COMPLETED ACTIVITIES [Return to Contents](#)

All's Green In Oshkosh, Sun, 06 Sep '09



<http://www.aero-news.net/index.cfm?contentBlockId=24e13838-f455-40ed-9373-5ff255a70857>

AirVenture 2009 'Puts Back' Nearly 6 Tons Of Recyclables

Attendees at EAA AirVenture Oshkosh 2009 **gave a big boost to the planet and to area Aviation**

Explorer Posts this summer, as they placed nearly six tons of aluminum and plastic in recycling containers on the grounds during the weeklong event.

NJ Aerospace Youth Partners Forms

Morristown, NJ – A group of interested leaders who work with the future of the Aerospace Industry and Avocations gathered for an inaugural meeting on September 8, 2009. Created by Tom Teel, of Aviation Exploring Post 107, this group hopes to gather together like-minded participants to foster and develop a love for all things aviation & space. By working together the group synergistically develops events that benefit a wider audience than they can do on their own and brings together tweens & teens who share a common interest. Currently, participating organizations include Aviation Exploring Post 107, based out of Somerset Airport in Bedminster, Aviation Exploring Post 523 based out of Morristown Municipal Airport, Aviation Exploring Post 7 based out of Lincoln Park Airport and the 4-H Broken Props R/C Club based in Bridgewater.

Right off the bat the groups opened meetings to one another: AEP107 is hosting an FAA DPE who's background includes helicopter flying for the PA State Police and teaching at Merrywood University, AEP 7 is sponsoring an event with an aviation attorney and all the groups hope to attend RotorFest this weekend in West Chester, PA.

Any group looking to join forces or any interested individual should contact Tom Teel at 908 581 6876 / ftteel@optonline.net.

NJ Aerospace Youth Partners



Nancy Ahlers Christian AEP7 Douglas Teel AEP107 Marshall Heyward 4H¹ Darren Large AEP523
 Linda Burton Ricks AEP107 Kathy Brino AEP7 Ken Pomplun 4H¹ Rosemary Rizzo AEP523 Jenifer Volz²
 Tom Teel AEP107

1. 4H Broken Props Model Airplane Club
2. Patriots Path Council, BSA, Exploring Support

FedEx Visit, Morristown Municipal Airport



Greetings –
 Special thanks to Darren Large (AEP523) for setting up last night's meeting and our presenters Dan & Pat. What an interesting evening combing over a Global Express, learning more about aerodynamics, hydraulics, electrical systems and safety, safety, safety! Nice job all around.
 Linda Ricks, AEP107, Advisor

NOTE: AEP's 523 & 107 are Aerospace Youth Partners

PERSONAL & AEROSPACE CAREER DEVELOPMENT

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PERSONAL DEVELOPMENT / CAREER ASSESSMENT / CAREER IDENTIFICATION / CAREER DEVELOPMENT / CAREER DEVELOPMENT SUPPORT

FOR ADITIONAL INFORMATION CONTACT: TOM TEEL tfteel@optonline.net

PUBLICATIONS WORTH LOOKING AT [Return to Contents](#)

Coed 14 through 20 readers of this Flight Log please send me your aerospace publications worth looking at:

SMITHSONIAN NATONAL AIR AND SPACE MUSEUM <http://www.nasm.si.edu>

AIR & SPACE MAGAZINE WWW.AirSpaceMag.com

AvSCHOLARS™ – Student Gateway to Aviation™ <http://www.avscholars.com>

- NOTE: This is an excellent Aerospace Career Development Website.

NASA TV <http://www.nasa.gov/multimedia/nasatv/index.html>

PLANE CRASH AT THE BEACH

[YOU_DONT_SEE_THIS EVERY_DAY.mpg](#)

= Submitted by Steve Pronko, AEP107 Parent

EYE CANDY FOR AVIATORS:

[EyeCandyforAviators.pps](#)

Warbirds event at the Mercer County R/C Club:

<http://www.photoshow.com/watch/xK4dS2rF>

= Submitted by , Somerset Signal Senders

AMA District II (NJ) website:

http://www.amadistrictii.org/amajoom/index.php?option=com_content&view=frontpage&Itemid=1

Aviation hobbyist shares love of airplanes with son

http://www.smartbrief.com/news/aopa/storyDetails.jsp?issueid=1B4214B9-A69C-4260-B50C-B2B59B802907©id=72CBE948-386D-4570-8749-670E0ED63071&brief=aopa&sb_code=rss&&campaign=rss

AVIATION EBRIEF | 09/01/2009

Aviation hobbyist David Roberts shares his passion for building airplane models with his 14-year-old son Tommy, who said he is interested in becoming a pilot. The Georgia resident has built miniature airplanes for 23 years and now flies the planes with his son, a freshman in high school. "These are magnificent military aircraft from around the world, and they fly with beautiful scale precision," said Roberts. *Forsyth County News (Cumming, Ga.)* (08/30)

National Aviation Explorer Scholarships (10/\$3,000 to \$10,000)

The National Aviation Exploring Committee awards individual scholarships between \$3,000 and \$10,000 annually to aviation Explorers pursuing a career in the aviation industry. The intent of these scholarships is to identify and reward those individuals who best exemplify the qualities that lead to success in the aviation industry. Type of aviation Explorer scholarships: degree leading to an aviation profession, avionics repair program, recreational or pilot certificate, maintenance aircraft repair program, and aviation management program to include design, engineering, airport management, etc.

GE Aviation to expand SC operations, add 100 jobs

September 01, 2009 General Electric Co.'s aviation business says it will expand operations in South Carolina and add 100 jobs by 2013.

Students spread wings in youth aviation training program

http://www.smartbrief.com/news/aopa/storyDetails.jsp?issueid=68A8B240-3A39-4207-96EC-5B9343F6571D©id=BDA4B2EA-36FC-49C0-B2AF-622A736804F0&brief=aopa&sb_code=rss&&campaign=rss

AVIATION EBRIEF | 09/02/2009

Students who aren't yet old enough to drive cars spent their summers learning to fly airplanes at Young Aviators Inc., in Racine, Wis. The nonprofit program hosts the summer aviation program for youth and allowed 13- to 18-year-olds to fly up to 120 miles per hour and land in small aircraft. *Journal Times (Racine, Wis.)*

Girls With Wings Scholarship

September 06, 2009, Girls With Wings is devoted to introducing young women to role models in aviation-related occupations and it's currently seeking scholarship applicants to show their motivation, inspirations and future plans in essay form. The scholarship winner must not yet have received her private pilot's license, must be female, and will be sent a check to be used toward flying lessons at the flight school of her choice. Last year's winner, then-20-year-old Amy Blechman, a student studying aviation management with a pro-pilot minor, wrote a winning essay of less than 800 words. This year's winner will get a flight training boost of up to \$1000 made up of donations matched (up to \$150) by "K. Jones," according to the Girls With Wings Web site. There are some requirements for the winner, who will be notified Dec. 1, 2009.

New college students explore careers in aviation

http://www.smartbrief.com/news/aopa/storyDetails.jsp?issueid=A71C9BEE-1C9A-4351-9C7D-A9148F5059A9©id=463EEDDB-F60A-4E23-9074-6651FB7DE94F&brief=aopa&sb_code=rss&&campaign=rss

AVIATION EBRIEF | 09/10/2009

Students starting out at Birmingham Southern College without a declared major had a hands-on introduction to opportunities in the field of aviation Aug. 31 at Shelby County Airport in Alabaster, Ala. The airport and members of the Shelby County Aviation Association (SCAA) hosted an event for incoming freshman, and AOPA provided SCAA members with information to inform the students about careers in aviation. [Read more](#)

4 Aviation High students are aerospace scholars

<http://www.highlinetimes.com/2009/09/20/news/4-aviation-high-students-are-aerospace-scholars>

September 21, 2009

Four Aviation High students are graduates of the 2009 Washington Aerospace Scholars (WAS) summer residency hosted by The Museum of Flight in Tukwila. WAS is a competitive educational program for high school juniors from across Washington state.

To qualify for the residency program, they spent six months studying a NASA-designed, distance-learning curriculum via the Internet.

Based on their academic performance on the distance-learning lessons, they were selected to attend one of the four residencies hosted at Tukwila's flight museum.

Oklahoma Aeronautics Commission approves education funding

http://okc.biz/article/09-24-2009/Oklahoma_Aeronautics_Commission_approves_education_funding.aspx

9.24.2009, Students battle with each other during a recent FIRST Robotics competition. Photo provided The Oklahoma Aeronautics Commission announced Sept. 24 it has approved another round of funding totaling more than \$100,000 for several programs.

The agency continues to promote courses in science, technology, engineering and math (STEM), as well as careers in aviation and aerospace among Oklahoma's youth.

Aerospace club looks to blast into the future

<http://media.www.thespartandaily.com/media/storage/paper852/news/2009/09/28/News/Aerospace.Club.Looks.To.Blast.Into.The.Future-3785448.shtml>, [Husain Sumra](#), 9/28/09, The foundation of America's aerospace industry could be launching from SJSU.

Abraham Rademacher, president of the SJSU chapter of the American Institute of Aeronautics and Astronautics, said the club is helping aerospace engineering students to network and to grow as engineers.

Rademacher said joining the club can help students develop as an engineer.

"The ideas start to flow," Rademacher said.

He said clubs allow like-minded people to come together and talk about their ideas.

Critics fear brain drain in aerospace

By Thomas L. Day - tday@macon.com

<http://www.macon.com/197/story/860468.html>

A Pentagon official charged with overseeing acquisitions raised a few eyebrows this month during an interview about recent Pentagon spending cuts.

"It's not about jobs," Ashton Carter, undersecretary of defense for acquisitions, told Defense News magazine. "It's about certain kinds of jobs, very rare kinds of skills that are not easily replicated in the commercial world, and if allowed to erode, would be difficult to rebuild."

Carter's comments were immediately seized on by critics of his boss, Secretary of Defense Robert Gates.

"There really is a looming crisis in the work force," Fred Downey, vice president for national security for the Aerospace Industries Association, the aerospace industry's mouthpiece in Washington, D.C.

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Eclipse Reopens Doors

<http://www.koat.com/news/20674951/detail.html>

September 1, 2009

ALBUQUERQUE, N.M. -- It's back to business for Eclipse Aviation, with a new name and a new plan.

Eclipse Aerospace opened its doors Tuesday.

"We're open. We closed on the transaction as of today and we're ready to get started as Eclipse Aerospace," said Mason Holland Jr. of the newly restructured firm.

What started with entrepreneur Holland trying to get his deposit back on an Eclipse 500 jet, ended with him in the pilot's seat of the revived \$40 million company.

"Unlimited Excitement" in FAA Aviation News

<http://www.faa.gov/news/updates/?newsId=59460>

September 1 – Each year, Reno, Nevada, known as the "Biggest Little City in the World," becomes even more recognized for the National Championship Air Races & Air Show, an annual September event dating back to 1964. From those early years, the National Championship Air Races & Air Show — this year September 16–20 — is **the** event in air racing. Each year, the races host some 150 racers and more than 200,000 spectators.

Lockheed Martin Air Traffic Management Automation System For Republic Of Kazakhstan Achieves Full Operation

September 01, 2009 Rockville, Md., September 1st, 2009 -- A SkyLineif' automated air traffic management (ATM) system supplied by Lockheed Martin [NYSE: LMT] has gone into full operation at the Aktobe Area Control Center (ACC) and three remote towers in Kazakhstan.

Solberg Airport Beats Eminent Domain In Court ... So Far

<http://www.aero-news.net/index.cfm?ContentBlockID=a5e14429-c3e1-4bfc-ba48-ae0629f6efbf>

<http://www.solbergairport.com>

Wed, 02 Sep '09, Case Not Fully Resolved, Must Go To Open Trial

Solberg Airport has won a significant battle against Readington Township's attempt to take land in the airport's safety zone by eminent domain, a move some say would destroy the airport. Opponents of the move, including an organization called "Aeroblue", say the eminent domain claim is being used to prevent federal and state approved transportation improvements intended to protect public safety and improve interstate commerce.

Boeing Hangs GENx-2B Engines on the 747-8 Freighter



<http://boeing.mediaroom.com/index.php?s=43&item=820>

These images are available for editorial use by news media.

EVERETT, Wash., Sept. 2 /PRNewswire-FirstCall/ -- Boeing (NYSE: BA) continues to make progress on the assembly of the [747-8 Freighter](#), as mechanics completed the installation of the new GENx-2B engines on airplane No. 1 in final assembly at the factory in Everett, Wash.

Evergreen International Aviation



<http://www.evergreenaviation.com/index.html>

Evergreen International Aviation realizes new aerial firefighting challenges call for a new and improved aircraft. In response to this urgent problem, Evergreen International Aviation has combined its years of aerial firefighting expertise with its experience as an owner/operator of Boeing 747 aircraft to develop the nation's next generation firefighting and aerial application platform—the Evergreen Supertanker.

The Evergreen Supertanker's drop capabilities, effectiveness, safety standards and operational flexibility are revolutionary. With guidance from appropriate agencies, Evergreen will assist state,

federal and worldwide experts to redefine how fires are fought and emergency management missions are performed.



[Fixed-up Hubble telescope spots distant stardust](#)

Reuters - [Maggie Fox](#) - 10 hours ago

WASHINGTON (Reuters) - The freshly repaired and outfitted Hubble Space Telescope has spotted a new butterfly-shaped galaxy and wisps of stardust containing the elements of life being recycled into new galaxies.

[NASA considers ISS Bigelow module](#)

September 09, 2009, NASA is considering attaching a Bigelow Aerospace inflatable module to the International Space Station, in a return to a concept over a decade old.

[AgustaWestland looks to take full control of BA609 civil tiltrotor programme](#)

September 21, 2009, Italian rotorcraft maker AgustaWestland hopes to acquire control of the BA609 civil tiltrotor programme it shares with Bell Helicopter, in order to speed...

[Hinton Youngest Reno Champion](#)

September 21, 2009, Steve Hinton Jr. put the highly modified P-51 Strega through its paces at the 2008 Pylon Racing Seminar at Reno Stead Airport in November 2008. The 22-year-old pilot went on to win the Gold Unlimited race at the National Championship Air Races, which wrapped up Sunday. Steve Hinton Jr., 22, became the youngest pilot to win the top prize at the National Championship Air Races in Reno Sunday. Hinton flew the highly-modified P-51 Strega to victory in the Breitling Gold Unlimited Race at an average speed of 491.822 mph in a time of 8:10.357, almost 13 seconds ahead of John Penney in Rare Bear, an F8F Bearcat.

[Popular Science - Military, Aviation & Space](#)

[Take an Orbital Vacation on a Surplus Soviet Military Spacecraft](#), Jeremy Hsu



September 11, 2009, only \$35 million to ride 1970s technology into orbit

Space tourists with deep pockets and dreams of recapturing Cold War nostalgia need look no further than Excalibur Almaz. The new company is asking \$35 million for a weeklong stay aboard a Soviet-era military spacecraft.

Excalibur Almaz - <http://excaliburalmaz.com/SP1/index.php>

[Congress Recognizes National Aerospace Day on Sept. 16](#)

ARLINGTON, Va., Sept. 16 /PRNewswire-USNewswire/ -- The U.S. Senate and House of Representatives have passed resolutions recognizing Sept. 16 as National Aerospace Day.

"The recognition from the Congress that the aerospace and defense industry is a key contributor to our nation's economy and national security sends a powerful message to thousands of our workers across the nation," said Marion Blakey, President and CEO of the Aerospace Industries Association (AIA).

Research and Markets: Opportunities for Composites in the Global Aerospace Market 2009 through to 2028

<http://www.reuters.com/article/pressRelease/idUS137857+17-Sep-2009+BW20090917>

DUBLIN, Sep 17, 2009, Research and Markets, http://www.researchandmarkets.com/research/439890/opportunities_for has announced the addition of the "Opportunities for Composites in the Global Aerospace Market 2009-2028" report to their offering.

On December 17, 1903, Orville Wright piloted the first powered airplane 20 feet above a sandy beach in North Carolina. That flight lasted all of 12 seconds and covered 120 feet. More than 100 years later, aircraft manufacturers today are fabricating aircraft that can carry hundreds of passengers thousands of miles to destinations throughout the globe. The aerospace market has experienced significant growth during the last 5 years and **is expected to reach \$301 billion in 2018** with a global growth rate of 5.1% for the next ten years. The critical success factor for aerospace market is the increasing demand in developing countries; in addition, the author believes the most successful companies will be those that can develop application-specific, customer-focused solutions and have the ability to help their customers achieve long-term business objectives, such as increasing efficiency and lowering costs with expanded lifetime of the aircraft.

[Airbus Predicts Industry Will Need 25,000 New Aircraft Over 20 Years](#)

September 20, 2009, Expects Air Traffic To Double In Same Period Growing passenger volume **will require more efficient, higher-capacity aircraft in all size categories over the coming 20 years**, according to Airbus' latest Global Market Forecast - which expects airline traffic worldwide to more than double between 2009 and 2028.

[Small business owners save time by becoming own pilots](#)

September 29, 2009, With airports more crowded than ever, some small business owners find that becoming their own pilot allows them to save time

AEROSPACE TECHNOLOGY NEWS [Return to Contents](#)

Websites worth visiting:

NASA - TechGate Wire: http://technologygateway.nasa.gov/TechGate_Wire.html

C-5 Galaxy <http://www.lockheedmartin.com/products/c5/>



FOR IMMEDIATE RELEASE

http://www.thebutterflyllc.com/press/2009/pr_ssc_02_24_09.pdf

VIDEO: <http://www.aero-tv.net/?videoid=ef3f856e-3ef1-4be4-ba11-ae5c86766d6a>

The Butterfly, L. L. C, Press Release: 02/20/09

"The first production Super Sky Cycle has taken to the air and to the highway", said Valorie White, Executive Vice President of The Butterfly, L. L. C. On February 20th the maiden flight of the first production Super Sky Cycle was a great success. The flying motorcycle was also registered as a homebuilt motorcycle on November 10th.



[ISS's New Reactor Uses Sound Waves to To Form Materials Attainable Only In Space](#)

Friday, September 04, 2009, Adrian Covert

This dodecahedron-shaped device currently on board the International Space Station may resemble a landmine, but in fact it serves quite an opposite purpose: within, scientist Jacques Guigne hopes to use sound waves to cleanly manipulate a brew of ingredients into custom materials that can only be made in the unique conditions of space.

[Who's Killing the Electric Plane?](#)

September 09, 2009, U.S. Aviation designers are hampered by federal rules restricting the use of battery-powered aircraft. Here is a look at a few electric planes that, under current FAA rules, are unavailable to sport pilots.

[A WATER-POWERED JETPACK](#)

The Jetlev-Flyer propels itself using a torrent of water



By Rena Marie Pacella Posted 07.30.2009

Up, Up and Away: Controlled with a throttle on the handgrip, Raymond Li's Jetlev-Flyer (shown here operated by Steven J. Grey, one of Li's official demonstrators) can provide up to two hours of continuous flight. Courtesy D.G. Hubbard

When Raymond Li decided to build a jetpack propelled by water instead of rocket fuel, most of his friends thought he had gone crazy. Worse, engineers told him it would be impossible to manage the water's mass and thrust to keep it stable in the air.

Li, however, figured that if he attached a hose to his pack, and put the engine and water pump in a separate vessel that dragged behind him, he could seriously reduce his weight, and therefore the amount of thrust needed to stay aloft. In theory, a stiff hose filled with heavy, pressurized water would also add drag to stabilize the jetpack for better forward flight control

[Aluminium nutating engine in combustion tests](#)



Figure 1. Single-disk nutating engine cross section.

By Rob Coppinger DATE: 11/09/09, SOURCE: Flight International

<http://www.flightglobal.com/articles/2009/09/11/331644/aluminium-nutating-engine-in-combustion-tests.html>

Tests using heavy fuel are under way for an aluminium nutating engine that could deliver the power density that the US military requires from its internal combustion power plants.

A nutating engine uses a disk that "wobbles" inside a housing so that its edge pitches up and down, creating voids that increase and decrease in volume. The wobble is known as nutation and effectively each disk takes the place of four pistons as each disk has four voids.

[Honeywell's "very odd" Boeing 757](#)



http://images.google.com/imgres?imgurl=http://2.bp.blogspot.com/_ugWk-rnkqXM/SVoSO2_iRVI/AAAAAAADfM/6Sr4afHzaqQ/s400/Honeywell%2BBoeing%2B757.jpg&imgrefurl=http://www.bangaloreaviation.com/2008/12/honeywells-very-odd-boeing-757.html&usq=_D1EGlxWddPRDhswd2_T6_29NuS8=&h=266&w=400&sz=18&hl=en&st art=28&um=1&tbnid=aSKmtGINnG8w9M:&tbnh=82&tbnw=124&prev=/images%3Fq%3Dodd%2Baviation%26ndsp%3D20%26hl%3Den%26rls%3Dcom.microsoft:en-us%26rlz%3D1I7ADBF_en%26sa%3DN%26start%3D20%26um%3D1

Dec 30, 2008

Honeywell did a test flight of this very odd looking Boeing 757.

The small engine attached to the front part of the fuselage is being developed for regional jets and private commercial jets.

See all the pictures [here](#) from Cupps at Flightglobal Airspace.

Thanks to Jon at FlightBlogger for the tip. Incidentally, Jon has done a very interesting [analysis](#) which compares the impact of fuel prices on the operating costs of the Boeing 777 and the Airbus A330. It is definitely worth a read.

[New Findings Could Help Hybrid, Electric Cars Keep Their Cool](#)

September 23, 2009, Understanding precisely how fluid boils in tiny "microchannels" has led to formulas and models that will help engineers design systems to cool high-power electronics in electric and hybrid cars, aircraft, computers and other devices.

[U.S. Army Plans to Send Giant Spy Blimp to Afghanistan](#)

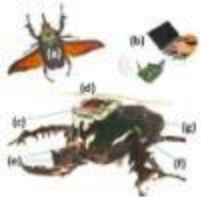
September 23, 2009, Anna Maria Jakubek



Next time you're in Afghanistan, make sure to keep an eye out for the U.S. Army's Space and Missile Defense Command's giant blimp-like surveillance airship.

The Long Endurance Multi-Intelligence Vehicle (LEMV), as it's called, will be 250 feet long, autonomous, and able to float at up to 20,000 feet for an impressive three weeks at a time. As for its surveillance capabilities, a 40-foot-long stretch behind the cockpit will house a selection of spy gear, including a motion sensor and radar.

Video: DARPA's Remote-Controlled Cyborg Beetle Takes Flight



POPULAR SCIENCE, September 24, 2009, A new paper explains how they built the zombie insect. In January, researchers from the University of California, Berkeley, told a stunned conference audience that they had managed to create a remote-controlled cyborg beetle by attaching a computer chip to the brain of a giant insect. Now, the paper explaining how they did it has been published in the journal *Frontiers In Neuroscience*, and they have released a video of the cyber-bug in action.

Textile antenna promises futuristic communications



September 28, 2009, With a simple press on his shirt insignia, the captain of the Enterprise could send and receive messages. Now, thanks to the efforts of a supported by ESA, this futuristic communication may not be limited to fiction.

Star Ship
Finnish company

Video: Lockheed's Amazing Monocopter Drone Takes Flight

September 28, 2009, **Drones based on maple seed pods might act as portable scouts for soldiers**

Drones have become big business for today's military, whether they come in the form of Hellfire-spitting Reapers and Predators or [large airships](#) that can hover over battlefields. Then, there's this small monocopter that flies like a maple seed pod.

The SAMARAI system from Lockheed Martin takes its name from the samara seedlings that fly off of trees. Original plans called for a seed pod-sized drone that could somehow send back stable streaming video and deliver a 2-gram payload. Funding for the system supposedly dropped out after a phase 1 DARPA contract, but now here's this recent video of a larger test prototype with a 30-inch wing span.

ISS Could Get its Own Electron-Beam Fabrication 3-D Printer

September 29, 2009, Clay Dillow, Every good futuristic sci-fi narrative has its version: *Star Trek* had the replicator that produced Picard's piping hot Earl Grey from what appeared to be thin air, and *Forbidden Planet* had Robbie the Robot, who generated entire luncheons from the chemical lab in his nether regions. But NASA scientists have come many real-world steps closer to creating something from nothing, via a process called electron beam freeform fabrication, and a version of the technology will soon be going to the International Space Station for testing.

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TODAY (2009) | **YOUR FUTURE** (2015-2020)

Spaceport America (2009) | Terrafugia Roadable Airplane (2009) | Moon Garden 2012 (2012) | USAF 2018 Bomber (2015) | SKYLON (HYPERSONIC) (2020)

14 | 20 | 25

If you are 14 years old in **2009**, You will be 25 years old in **2020**. Aviation Exploring supports your plans to be a member of **AEROSPACE - THE FUTURE**. Fly Safe

- Terrafugia: <http://www.terrafugia.com/>
- USAF 2018 Bomber: <http://www.popsci.com/node/30794>
- SKYLON: <http://www.cosmosmagazine.com/news/2586/skylon-space-shuttle-just-ten-years-away>
- Paragon Space Development Corporation (Moon Garden): <http://www.paragonsdc.com>

RESEARCH ORGANIZATIONS

- DARPA: <http://www.darpa.mil/index.html>
- Lockheed Martin – Skunk Works: <http://www.lockheedmartin.com/aeronautics/skunkworks/index.html>

Boeing Company-Phantom Works

http://www.boeing.com/ids/phantom_works/index.html

DARPA Wants Morphing Helicopter Blades By Yesterday

<http://www.popsci.com/military-aviation-amp-space/feed>



August 31, 2009, Future whirlybirds may change their rotor blades to suit the mission

Helicopters won't transform into [rampaging Decepticons](#) anytime soon, but near-future rotor blades could actively change shape on the fly.

Military lab DARPA has [put out a call](#) for rotor blades that could boost payloads by 30 percent and range by 40 percent, as well as reduce sound by 50 percent and vibration by 90 percent compared to the usual fixed rotor blades.

The agency envisions helicopter

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