



HIGH MACH

Serving the World's Premier Flight Simulation Test Complex



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AEDC test team researches possible changes to C-5M Super Galaxy wings

By Philip Lorenz III
ATA Public Affairs

A recent landmark aerodynamic test on a scale model of the C-5M Super Galaxy in Arnold Engineering Development Complex's (AEDC) 16-foot transonic wind tunnel (16T) was all about efficiency and the bottom line.

Jack O'Banion, Lockheed Martin's director of air mobility improvements and derivatives, said the high cost of fuel is the driving force behind the recent test.

"There's something on the order of 2.5 billion gallons [of aviation fuel] a year that the Air Force has to secure," said O'Banion. "The largest consumer of jet fuels is air mobility, and jet fuel in itself represents about 84 percent of the Air Force's total energy cost. The kinds of savings we're talking about with regard to equipping C-5s with efficiency improving devices like winglets is reducing the fuel burn of a C-5 by something on the order of 166 gallons per hour.

"That's a significant improvement in fuel flow, particularly as we see the spot price of jet fuel heading upwards to \$4 a gallon and probably higher in the future."

The over-arching goal of the recent test was to validate the computational fluid dynamics predicted drag reduction effects of winglets on the C-5M, the Air Force's most current version of the aircraft.

David Yoder, an ATA Flight Systems Branch project engineer for the recent C-5M test, said Lockheed Martin and AFRL, the test's sponsor, specifically chose AEDC's 16T facility for this entry.

"AEDC is the place they wanted to test because the size of the tunnel allows them to use an existing 4.04-percent wind tunnel model, which is a large enough scale to give them high-fidelity results," he said. "The model is mounted on an internal strain gage balance which is used to measure the aerodynamic force and moments. The balance is mounted to a sting which supports the model in the tunnel, and the sting is mounted to a pitch and roll mechanism."

Marvin Sellers, a senior engineer with ATA's Flight Systems Testing group, said the customer, Lockheed Martin Corp., came to AEDC with two objectives. The primary focus was on acquiring a drag in-



Marvin Sellers, a senior engineer with ATA's Flight Systems Testing group, applies the base layer of Pressure Sensitive Paint (PSP) on a scale model of the Air Force's C-5M Super Galaxy in AEDC's 16-foot transonic wind tunnel prior to aerodynamic testing to validate two winglets with the goal of reducing drag, improving fuel efficiency and lowering operating costs. (Photo by Rick Goodfriend)

crement from the addition of a winglet to the existing wings with the goal of improving the aircraft's aerodynamic efficiency and lower fuel consumption.

A winglet is a short, near-vertical projection on an aircraft's wing tip that reduces drag and improves fuel efficiency.

"Two different [sets of] winglets were tested to determine the one that provides the best [aerodynamic] improvement," Sellers said. "They also desired to acquire

the loads acting on the winglets for structural analysis and investigate the impact of the winglets on aileron stability and control."

Sellers spoke about his role in the testing on the C-5M model, which is approximately 10 feet long with a nine-foot wing span, tip-to-tip.

"The model was designed as a pressure

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AEDC awarded for Air Force Organizational Excellence

By Raquel March
ATA Public Affairs

Arnold Engineering Development Complex (AEDC) is the recipient of the Air Force Organizational Excellence Award (AFOEA) for exceptionally meritorious service accomplished Jan. 1, 2010 – Dec. 31, 2011.

"The AFOEA recognizes the achievements and accomplishments of Air Force organizations and is awarded through a comprehensive vetting process," said Col. Raymond Toth, AEDC's commander. "Being recognized with this award is an exceptional accomplishment and is a testament to how well teamwork pays off."

AEDC organizations who share this award include AEDC divisions, Tunnel 9 at White Oak, Md. and the National Full-Scale Aerodynamic Complex at Moffett Field, Calif.

During the award period AEDC is cited for operating the world's largest, most advanced complex of aerospace test facilities to support engineering analyses, technical research evaluations, system development, and operational programs for the Air Force and Department of Defense.

Additionally the complex conducted a rigorous evaluation of multiple engine variants for the F-35 Joint Strike Fighter, validated rocket motor readiness for the Minuteman ballistic missile fleet, and performed critical store separation tests for the F-16 Fighting Falcon, F/A-18 Superhornet, and the B-52 Stratofortress aircraft.

During the award period AEDC was also recognized for conducting initial testing on the Missile Defense Agency's Airborne Infra-Red sensor, characterizing that system's capabilities in a simulated altitude environment.

The complex's quality of life improvements for its Airmen, civilian and contractors were also a part of the award recognition.

Toth said "I am very proud of the concerted efforts of team AEDC.

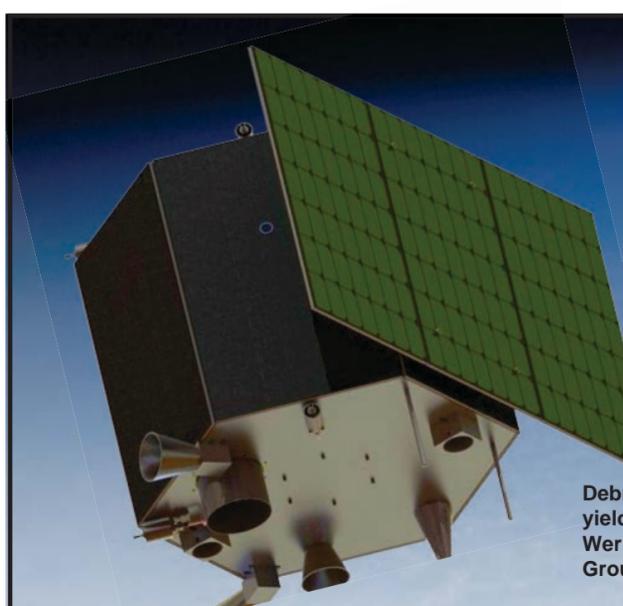
All of Team AEDC – military, civil servant, and contractor – can take credit for making this award possible."

The efforts of Team AEDC were also recognized by Gen. Janet C. Wolfenbarger, commander of Air Force Materiel Command, when she said, "This award recognizes the exceptional work our Airmen do each and every day and is a testament to their high-spirited teamwork."

The secretary of the Air Force authorized this award on Aug. 26, 1969.



This award is an AFOEA ribbon with a narrow blue center stripe, flanked by a thin white stripe, a wide red stripe, a thin white stripe, edged with a narrow blue stripe. The Air Force Organizational Excellence Award recognizes the achievements and accomplishments of U.S. Air Force organizations or activities. It is awarded to Air Force internal organizations that are entities within larger organizations. A bronze "V" device is worn on the ribbon to denote award for combat or direct combat support actions. (U.S. Air Force graphic, AFNEWS/PAND)



NASA and AEDC plans for satellite demolition

DebrisSat is built to be busted up and designed to yield new data on on-orbit collisions. (Image by Mark Werremeyer/University of Florida Space Systems Group)

Work is under way to create a spacecraft that won't be rocketed into outer space but will be purposely destroyed on the ground.

NASA and the Air Force's Space and Missile Systems Center are co-sponsors of DebrisSat. The NASA Orbital Debris Program Office at the Johnson Space Center in Houston is leading the effort.

Rick Rushing, who is the Air Force lead for Ballistics Range and Aerothermal Material test capabilities at Arnold Engineering Development Complex (AEDC), said, "NASA contacted us because a similar test was conducted in [AEDC's] G-Range in 1992, in which an OSCAR

Navigational satellite was impacted to provide data for satellite breakup models."

Asked why the data from this test is important to NASA, Rushing replied, "An increase in space debris is an issue that will only grow worse with time and will cause an increased risk to DOD space systems."

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HIGH MACH

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Core Values

- Integrity first
- Service before self
- Excellence in all we do



Vision

"ATA will be a trusted partner in delivering best value warfighter support and assert stewardship to AEDC"

Core Values

- Be accountable for our own actions
- Ensure the safety of individuals and equipment
- Demonstrate the highest integrity and ethical standards
- Communicate clearly and openly
- Deliver professional and technical excellence
- Nurture, enable and treat people fairly
- Align with customer goals and objectives
 - Use disciplined and innovative processes
- Continually improve in all that we do

Air Force leaders issue Veterans Day message

WASHINGTON (AFNS) – Secretary of the Air Force Michael Donley, Air Force Chief of Staff Gen. Mark A. Welsh III and Chief Master Sgt. Roy send the following Veterans Day message to the Airmen of the U.S. Air Force:

"Our Air Force's success is founded in the sacrifice of generations who served before. This Veterans Day, we honor and thank more than 22

million American veterans, including four million veterans of the United States Air Force.

"Every veteran, past and present, has a story. Some served in wartime, others during moments of peace; many were volunteers, others were called; some served a matter of days, while others gave their life's work to the profession of arms. All deserve our deepest gratitude.

"The men and wom-

en of our Armed Forces fought for and some gave their lives to secure the freedoms we enjoy today. For their sacrifice in service to America, our nation owes a debt of appreciation that can never be repaid. Our veterans' families also deserve our collective thanks - their support makes the service of their loved ones possible, and their presence strengthens every man and woman in uniform.

"Standing on the shoul-

ders of veterans past, today's Airmen - YOU - continue to reach beyond what was once thought possible to discover and employ innovative airpower solutions for America. Every day you answer the nation's call, whether in the skies or combat theaters abroad, in space or cyberspace, on the ground delivering relief and hope to families in need, or here at home protecting America's airspace. Your continued commitment

to defend and preserve the cause of freedom will ensure that future generations continue to enjoy the liberties we cherish today.

"For all you have given to America and to its great Air Force, and for your service yet to come, you have earned our Nation's thanks. On this Veterans Day, take time to thank those in your families, communities and workplaces who have served America and defended her ideals."

'Freedom is free' because of the nation's Veterans

Commentary By Tech. Sgt. Mike Andriacco
U.S. Air Forces Central Command Public Affairs

SOUTHWEST ASIA (AFNS) – Both of my grandfathers and my uncle were veterans. And until the day he died, my dad's father had a yellow ribbon magnet on the back of his car that read "Freedom isn't Free." After he passed away and I bought the car from my father and uncle, I kept the magnet there, firmly believing in the message.

I'm not so sure I do anymore. A few months ago I was participating in a professional forum with some peers when I came to a realization. For the vast majority of people who enjoy its benefits, freedom is free; it's supported by donations and, in return, the primary donors earn the title "Veteran."

Our nation's veterans have donated their time, many for 20 years or more, their sweat, their skills, some of their rights, and, for those who made the ultimate sacrifice, their futures.

But the donations aren't limited to those who wear the uniform. Their families make donations too. Children donate their first steps, their first home run or dance recital, high school gradu-

ation, even their births so their parents may serve the ideals of something greater than themselves.

Husbands and wives donate restful nights, a two-parent household, the ability to call their loved one just to say hello. Parents donate their ability to keep their child safe when he or she gets on a plane bound for a war zone. The list of donations is endless and, just like

other worthy causes, every little bit helps.

Veterans Day is a time to stop and reflect on the donations that allow us to enjoy our freedoms today. For the majority of Americans, freedom is free for one reason: someone else made the donation, freely and willingly. The veterans' cemeteries are full of donors who have earned my gratitude for their part in securing the freedom my family and I enjoy.

A donation is something freely given with nothing

asked in return. That's what makes the donations of our nation's veterans so special.

I am proud to see people using their freedoms - freedom of speech, their right to assemble, and their freedom to elect their leaders. It doesn't matter who they vote for, if they gather in support of a cause I believe in (or not), or say something I don't agree with. It's enough to know they value the donation of others enough to avoid letting it go to waste.

I'm going to reflect on

the many donations my grandfathers and uncle made, and I'm going to be grateful. I'm going to think about the donation I first made 15 years ago to support my family's freedoms. And I'm going to seek out a young Airman at the start of his career and make sure I thank him for his donation, because he's going to make sure that some day, when my children face the decision to donate or not, they have the freedom to choose.



General precautions to keep antiterrorism awareness up

Commentary By Michael Mann
AEDC Installation Antiterrorism Specialist

In light of recent world events, and to keep overall antiterrorism awareness up, the "*High Mach*" will run a series on antiterrorism, beginning with this article. Take the time to read and employ these tips to increase your security.

This article will address general security precautions and further articles will address specific security concerns (e.g., travel security, suspicious activity).

General Precautions:

- Do not volunteer personal information.
- Be cautious of conversations in public places and on the telephone.
- Do not have rank or duty title in commercial phone books.
- Avoid (when feasible/possible) wearing military uniforms or other identifiable clothing while traveling off the installation. If possible, remove military headgear and cover uni-

form when traveling in a vehicle. If a uniform is required, consider changing at the office.

- Vary routes and times when going to and from work, taking children to school, shopping, etc. Be unpredictable and avoid establishing routines.
- Look for unfamiliar objects or activities when traveling by vehicle, especially during early morning or late at night.
- Avoid isolated areas, side streets, civil disturbances, and demonstrations.
- Consider removing family name from home or vehicle.
- Know where your family members are at all times and encourage them to check in by telephone.
- Verify all deliveries and repairs through proper credentials or other documents.
- Contact the agency or company they claim to represent for additional

- verification.
- Be alert for unidentified vehicles or personnel and exercise caution with strangers.
- Know your neighborhood & neighbors.
- Keep all outside doors and accessible windows closed and locked.
- Keep car and house keys separate and maintain accountability.
- Conduct frequent checks of your vehicles to ensure they are in good working order and there are no anomalies.
- Never leave young children at home unattended.
- Examine mail for suspicious letters or parcels.
- Familiarize children with police and fire stations and teach them emergency procedures and telephone numbers.
- Advise children to avoid isolated areas, to travel and play in groups, never talk to or go anywhere with strangers and to keep family members informed of their whereabouts.

- When making travel reservations, do not use rank or position and if possible use military air
- When in a restaurant, locate emergency exits upon entering, chose a table with greatest field of view, avoid business conversation near other patrons, and do not reveal after-dinner plans.
- Stress the importance of security and the seriousness of the threat to the

- whole family.
- Be alert to your surroundings and report suspicious personnel or activities to local authorities.
- Remember to trust your instincts!

Remember, antiterrorism and force protection is EVERYONE'S job.

The Arnold Engineering Development Complex Antiterrorism Officer is Dan Hawkins, 454-5504.

Action Line

Team AEDC

I believe in free and open communications with our Team AEDC employees, and that's why we have the Action Line available. People can use the Action Line to clear up rumors, ask questions, suggest ideas on improvements, enter complaints or get other issues off their chests. They can access the Action Line in one of three ways: via the AEDC intranet home page, Action Line boxes at the base cafeterias and by calling 454-6000.

Although the Action Line is always available, the best and fastest way to get things resolved is by using your chain of command or by contacting the organization directly involved. I encourage everyone to go that route first, then if the situation isn't made right, give us a chance.

Col. Raymond Toth
AEDC Commander

Smoking Policy

1. The following revised AEDC smoking policy is effective immediately. Smoking is permitted solely in designated areas identified by a plastic "smoke genie." This receptacle is for the sole purpose of cigarette butt disposal. If there is no receptacle, you cannot smoke in that area. It is the responsibility of all smokers to clean up the area surrounding the receptacles for any cigarette butts on the ground. Smoking in government-owned vehicles is strictly prohibited. Personnel are allowed to smoke in their personal vehicles at any time. In case of inclement or cold weather, employees are encouraged to use their personal vehicles if a sheltered designated smoking area is not available nearby. Smoking areas will be held to the absolute minimum and will be located in low traffic, low visibility areas away from points of building ingress/egress and air intakes. A map of all authorized smoking areas is available on the AEDC web portal at [https://ilpapro.arnold.af.millPORTALimages/Smoking area map.pdf](https://ilpapro.arnold.af.millPORTALimages/Smoking%20area%20map.pdf). Smoking near a facility in an area not designated on the map is prohibited and any smoking receptacles located in areas not shown on the map will be removed. All "smoking permitted" and "no smoking" signs will be removed unless specifically required by OSHA.

The fact a person smokes has no bearing on the number of breaks they may take. Breaks should be taken in accordance with the company/agency personnel policies that apply to all employees.

Regarding use of smokeless tobacco, containers of tobacco waste product, including sealed containers, must not be left unattended or disposed of in trash receptacles. Users of smokeless tobacco must flush tobacco waste down the toilet. Smokeless is strictly prohibited in conference room meetings and other areas, e.g. PMEL, where Air Force regulations specifically prohibit.

Due to the nature, appearance, and safety concerns of electronic cigarettes (also known as "e-cigs"), they are considered to be in the same category of tobacco products whose use is governed by Air Force Instruction (AFI) 40-102, Tobacco Use in the Air Force. Therefore, all rules stated above for tobacco products apply to electronic cigarettes.

2. Supervisors at every level will ensure this policy is followed. Disciplinary action is appropriate for repeated violations.
3. Updates to this policy will be made in the future to further align with Air Force guidelines.
4. This letter supersedes previous letter dated 28 October 2006, subject as above.

NASA plans for a satellite demolition test at AEDC

By Leonard David
SPACE.com

DebrisSat is a 110-pound (50 kilograms) satellite that's a double for a modern low-Earth orbit spacecraft in terms of its components, materials used, and fabrication procedures. But once fabricated and tested, DebrisSat is doomed.

The spacecraft will be the target of a future hypervelocity impact experiment to examine the physical characteristics of debris created when two satellites collide.

NASA and the Air Force's Space and Missile Systems Center are co-sponsors of DebrisSat. The NASA Orbital Debris Program Office at the Johnson Space Center in Houston is leading the effort.

Impact risk assessments

Data gleaned from demolishing DebrisSat will be valuable in the short- and long-term, said J.C. Liou of NASA's Orbital Debris Program Office.

"Collision fragments are expected to dominate the future orbital debris environment," Liou told Space.com.

Therefore, he said, a high-fidelity breakup model describing the outcome of a satellite collision - in terms of the fragment size, mass, area-to-mass ratio, shape, and composition distributions - is needed for reliable short- and long-term impact risk assessments.

Those appraisals deal with debris as small as one millimeter for critical space assets and for good orbital debris environment definition, Liou said. Some of the distributions for "large" fragments can be obtained from the U.S. Space Surveillance Network

(SSN) observations. But the SSN data are limited to 10-centimeter (4 inches) and larger objects. "Laboratory-based experiments are necessary to collect data for smaller debris," he said.

As a modern satellite target, obliterating DebrisSat is expected to improve the NASA standard satellite breakup model.

Laboratory-based impact tests

Liou pointed out that the Department of Defense (DOD) and NASA have conducted quite a few laboratory-based impact tests in the past. One of the key experiments supporting the development of the NASA and DOD satellite breakup models was called SOCIT, short for Satellite Orbital debris Characterization Impact Test series.

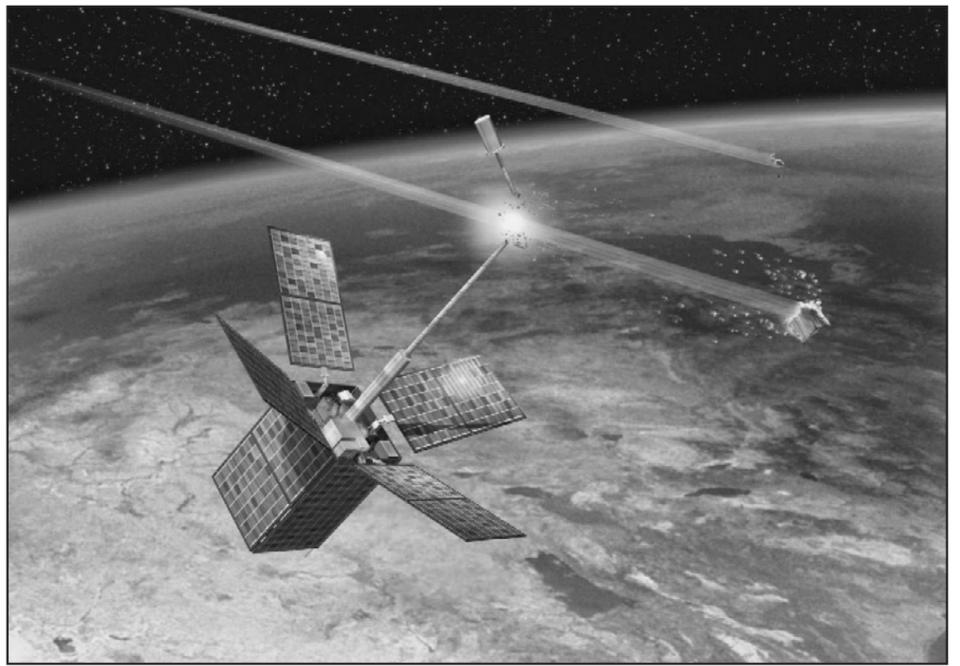
In one SOCIT ground experiment in 1992, the target was a flight-ready U.S. Navy Transit satellite built in the 1960s. But that was then, and this is now. Present day satellites incorporate many different technologies and materials than spacecraft designed more than 40 years ago.

"As new materials and new construction techniques are developed for modern satellites, there is a need to conduct additional laboratory-based tests and use the new data to further enhance the breakup models," Liou said.

Integrity of the destructive outcome

A University of Florida team is designing and fabricating DebrisSat for its eventual demise.

To put DebrisSat together, a wide-ranging study was done of past low-Earth orbit satellite designs and missions within the last 15 years for spacecraft rang-



Orbital debris meets operational satellite. The build-up of human-created orbital debris has reached a critical point. (CREDIT: CNES)

ing from one kilogram to 5,000 kilograms (2.2 pounds to 11,023 pounds).

This study identified modern trends in hardware, material, and construction practices utilized in recent LEO missions. While DebrisSat is an engineering model, specific attention is being placed on the quality, type and quantity of the materials used in its fabrication to ensure the integrity of the destructive outcome.

With the exception of software, all other aspects of the satellite's design, fabrication, and assembly integration and testing will be as rigorous as that of an actual flight vehicle, according to officials involved in the DebrisSat effort.

DebrisSat is now slated to undergo a hypervelocity impact test in early 2014, said Norman

Fitz-Coy, associate professor in the Department of Mechanical and Aerospace Engineering and director of the Space Systems Group at the University of Florida, which is in Gainesville. He is leading the university's DebrisSat team.

Labor intensive exercise

A hypervelocity impact test is one in which the amount of energy experienced during a typical impact between two orbiting satellites is replicated, Fitz-Coy told Space.com. The test will be performed at the Air Force's Arnold Engineering Development Complex in Tennessee.

Once busted up, how much work is involved in piecing together just how the satellite reacted to the impact?

"We are not actually gluing the

satellite back together," Fitz-Coy said. "Rather we are characterizing - size, shape, etc. - of the fragments resulting from the impact. This is a labor-intensive exercise."

NASA's Liou said that after the hypervelocity test, the University of Florida experts will collect fragments down to roughly 0.08 inches (2 millimeters) in size. That's about as long as a nickel is thick.

The dimensions of the resulting fragments will then be measured individually. That data will be delivered to NASA and the Air Force Space and Missile Systems Center.

The NASA Orbital Debris Program Office will lead the effort to analyze the data and use the information to enhance the satellite breakup model, Liou said.

ATA offers personnel an opportunity to support Hurricane Sandy Relief

By Raquel March
ATA Public Affairs

Aerospace Testing Alliance (ATA) is offering its employees an opportunity to convert accrued vacation into a cash donation to the local chapter of the American Red Cross.

Through this program, employees may donate accrued vacation in increments of one, four or eight hours.

The vacation hours will be converted to a cash value based on the individual employee's hourly rate of pay.

At the end of November, an ATA employee group will present a single contribution to the local chapter of the Red Cross on behalf of our employees.

The Red Cross chapter will allocate these resources to the

areas of greatest need.

The IRS has recently issued a notice that employee donations in exchange for vacation will not be treated as taxable income to the employee.

As such, employees are not allowed to claim the donation as a charitable contribution deduction for tax purposes.

The leave donation is limited to accrued vacation only and does not include accrued sick leave, comp time or other forms of leave.

If you wish to participate in this program, please complete a leave donation form and send to Cynthia Northcutt at mail stop 1205 no later than Tuesday, Nov. 27.

For more information contact Northcutt at 454-5875.

Safeguarding personally identifiable information

By LaKisha Deon

100th Communications Squadron Knowledge Operations

RAF MILDENHALL, England - PII (personally identifiable information) is unique information that links, relates to or identifies a specific individual, such as a social security number, place and date of birth, home phone number or medical information. This information can be used to trace an individual's identity or is traceable to other personal information.

As part of the responsibility to safeguard PII, the 100th Communications Squadron Knowledge Operations office offers the following suggestions of ways to initiate PII protection plans at work, social and home environments:

Collect the minimal amount of information necessary

Look through forms that your customers are required to fill out and ask yourself, "Is it necessary to have PII information here if the same information is accessible in other secured areas?"

Secure storage devices in a safe environment

Data storage involving large sums of personal information should be limited to personnel who have a need to know.

Do not store PII on websites or social media outlets

As convenient as the Internet may be, it is not secure nor is it a recommended place to store PII. Websites and social media outlets are vulnerable to criminals and their activities. Low-impacting PII such as home addresses, telephone numbers and other demographic information can be connected to high-impacting PII such as financial, personnel and medical information.

Use smart measures when emailing

For emails containing PII material, email securely by encrypting and marking emails "For Official Use Only."

Tunnel 9 volunteers help with cleanup after Super Storm Sandy

Dan Marren, the Arnold Engineering Development Complex's Tunnel 9 director, helps homeowner Ed Chase (left) and his son, Todd, clean up Ed's house in South Bethany, Del., following Super Storm Sandy, which flooded the first floor of his home.



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model, but has been modified to accept a balance," he said. "To eliminate the need to refurbish the more than 1,000 pressure taps and decrease the impact on drag of adding approximately one dozen pressure modules, the customer has elected to use Pressure Sensitive Paint (PSP) to acquire full model surface pressure data and activate only 58 pressure taps on the wing surface.

"The PSP will also provide integrated pressure loads on the winglets as well as distributed pressure load on the wings," said Sellers.

The paint is applied to the model in two layers, a white undercoat and the PSP layer. The white undercoat provides a uniform reflective surface for the PSP layer. The illumination source excites the PSP layer, which fluoresces with intensity inversely proportional to the surface pressure on the model.

Chuck Hybart, Lockheed Martin's product development senior manager for air mobility improvements and derivatives, said the approach to the recent test has been a fully collaborative process between Lockheed, Air Force Research Laboratory and AEDC. He credited AEDC's test team with helping to steer

the group to a more efficient approach to the project.

"We actually changed the approach that we were going to use for measuring the pressures on the model because of some of the capability that you have in the tunnel," Hybart said.

When asked why Lockheed Martin chose AEDC as the site for the recent C-5 test, O'Banion said, "In particular [when] doing wind tunnel testing on an aircraft the size of the C-5, [it] takes a specific set of tunnels and specific capabilities that are very rare in the world, and fortunately your facility has those capabilities. When we're doing testing particularly for fuels savings and fine tuning of aerodynamic phenomena, the ability to test at a representative Reynolds number is a tremendous asset in being able to do this work accurately and fortunately, you bring those capabilities."

With platforms like the C-5 and testing facilities like AEDC, O'Banion sees the potential for future work in the years ahead.

"We hope this is just the start of a series of refinements for the C-5...if we're able to validate the results and the business case is so compelling to the Air Force that we'll be able to do this and

perhaps other improvements to the aircraft," O'Banion said. "There's more performance that can be unlocked in the C-5, and the service life of the airframe means they'll be in the inventory for several decades to come.

"I think there's a lot of potential still here for the C-5 ahead and, with your help, we ought to be able to unlock that for both the warfighter and the taxpayer."

The C-5 Galaxy, a heavy-logistic transport plane with an unrefueled range of more than 6,000 miles with 261,000 pounds of weight, played a significant role providing transportation for the military buildup in the Middle East prior to the start of the Persian Gulf War.

The plane, which is one of the largest in the world, has played a significant role in supporting Operation Desert Storm, Operation Iraqi Freedom and Operation Enduring Freedom.

A combination of C-17 Globemaster IIIs and C-5s flew more than 11,400 sorties during the buildup to Operation Iraqi Freedom. Even though the C-5s flew approximately 900 fewer sorties than the Globemasters, the larger aircraft hauled about 11,500 more tons and 5,300 more passengers.

Top AF engineers help clear the flood waters

JOINT BASE MCGUIRE-DIX-LAKEHURST, N.J. (AFNS) – A team of nearly 50 Air Force civil engineers from duty locations across the country pulled together to form the 331st Air Expeditionary Group this week, to pump flood waters affecting New York coastal communities following Hurricane Sandy.

The 331st AEG assembled here Saturday, Nov. 3, with engineers from Hurlburt Field, Fla.; Joint Base Andrews, Md.; Joint Base Langley-Eustis, Va.; Mountain Home Air Force Base, Idaho; and Ellsworth AFB, S.D.; led by a command team from Nellis AFB, Nev. The team received additional equipment contributed by Offutt AFB, Neb., and Holloman AFB, N.M. and staged out of Joint Base McGuire-Dix-Lakehurst facilities to support relief operations.

"The whole Joint Base McGuire-Dix-Lakehurst community has been extremely responsive and helpful in facilitating our support mission currently taking place in the New

York City area where flood waters have devastated communities," said Col. Darren Bishop, 331st AEG commander and the 99th Mission Support Group commander from Nellis AFB. "The Resource Control Center equipped us with extra cots and sleeping bags for forward deployment, the 305th Air Mobility Wing gave us hangar space to stage assets, the 87th Civil Engineer Squadron gave us trailer hitches and fixed office heat for us, the Logistics Readiness Squadron cut emergency fuel keys for us, and the list goes on and on."

According to Bishop, the 331st AEG is part of a joint service mission supplying forces to "Task Force Pump" to ensure Department of Defense pumping assets are pooled and utilized effectively and efficiently to support relief efforts. The task force has partnered with the New York Fire Department to determine the priority in which locations should receive pumping support to remove flood waters from

those critical areas.

"This team is a combination of Red Horse and Prime BEEF engineers from several locations, and we were all eager to respond and help out in any way we can to provide relief to these communities that have lost so much during this disaster," said Capt. Eric Rosenlof, officer-in-charge of the 331st AEG engineers sent to Fort Hamilton, N.Y., originally assigned to the 823rd Red Horse Squadron out of Hurlburt Field, Fla.

The 331st AEG split up into several teams in order to provide pump support in various locations at once. The first team arrived at the Rockaway, N.Y., Wastewater Treatment Facility and learned quickly how important their mission was going to be.

"We were told that we need to help clear water from one tank to another so that each tank can be cleaned of sludge and debris, one at a time," said Staff Sgt. Paul Clayborn, originally of the 823rd Red Horse Squadron from Hurlburt Field, Fla. "Each of the



Members of the 331st Air Expeditionary Group, a unit comprised of civil engineers from five different duty locations across the U.S., unload large hoses used to pump water from homes devastated by flood water left behind by Hurricane Sandy. The 331st AEG staged personnel and equipment at Joint Base McGuire-Dix-Lakehurst, N.J. during their support operations. (U.S. Air Force photo/Capt. Sybil Taunton)

four tanks being cleared holds 500,000 gallons of water and blockages in these tanks forces sewage water back into the bay, so we need to help get them cleared out as soon as possible."

Another team removed water from a parking lot down the road in Rockaway, then made their way to Breezy Point to help families clear flood waters from their homes.

"Breezy Point is one of many hard hit areas and is still without power and

water as most of the homes are badly damaged or destroyed," said Master Sgt. Steven Rector, team lead originally of the 366th CES from Mountain Home AFB, Idaho. "Our team helped local residents pump out driveways and submerged areas so residents could salvage and recover personal property."

Eleven miles away, the next team arrived in Coney Island to pump water from basements ravaged by the storm, while a fourth team cleared water from a park-

ing garage in Brooklyn.

"Local residents have tried for the last week to pump the parking garage out with little success," said Tech.Sgt. James Duhon, team lead originally of the 633rd CES from Langley, Va. "Our team had it pumped half way down in the first couple hours before identifying a water main break inside the garage keeping it from being emptied. The water break was isolated and shut-off and pumping operations resumed."

AEDC Visitor Center closes for the holidays

By Raquel March
ATA Public Affairs

The Arnold Engineering Development Complex (AEDC) Visitor Center will change hours of operation during the upcoming holiday season.

Beginning Nov. 22-25, the Visitor Center will close in observance of the Thanksgiving holiday.

The Visitor Center will also close Dec. 22 – Jan. 1 in

observance of the Christmas holiday.

AEDC's Visitor Center provides services to AEDC personnel, military, retirees and other base visitors.

The Visitor Center has two main functions for military identification (ID) services and base entry services.

The military ID service provides common access cards (CACs) to active duty members and members of

reserve components within all branches.

They also provide CACs for civil servants, contractors, retirees and eligible family members.

Base entry services involve providing vetting and identification for all employees and visitors for the base mission area, the Arnold Lakeside Center patrons and the Arnold Community Council members.



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Mental health & substance abuse	Centerstone	(931) 461-1300
Unplanned pregnancy	Crisis Pregnancy Assistance Center	(931) 728-6440
Suicide prevention	National Suicide Prevention Lifeline	(800) 273-8255
Sexual assault & victim advocacy	Sexual Assault Response Coordinator	(931) 581-7494
Crime victim advocacy	Victim Witness Assistance Program	(931) 454-4657

AF safety chief shares vision for future AF safety

KIRTLAND AIR FORCE BASE, N.M. (AFNS) – With two months in the seat as Air Force Chief of Safety, Maj. Gen. Margaret H. Woodward doesn't need a palm reader to glimpse the future.

"It is absolutely essential that safety is embraced as a core value in preserving combat capability," Woodward said.

The Air Force's success in reducing mishaps over the past 10 years has leveled off, while the cost of losing a single Air Force

asset has grown exponentially. "It's time to take our mishap efforts to the next level," Woodward said, "and that will be driven by a proactive safety approach.

"We've always practiced active safety by managing known risks and hazards," Woodward said. "Now, we're transforming Air Force safety by studying leading indicators of mishaps, while continuing to investigate trailing indicators identified by safety investigations and applying trending data."

Woodward noted that the transformation will take a concerted effort at all levels. "That's exactly why a safety culture must be embedded as a core value at every level.

"Our work as Airmen is inherently risky, but we pay attention to those risks and mitigate the risks as much as possible," Woodward said. "We've done such a good job at reducing mishaps that we've made it look easy. It never gets easy; we have to keep looking for ways to further reduce risks by identifying

those mishap precursors before the next mishap."

Though on-duty risk mitigation has improved, Woodward points to the need for a stronger safety culture to influence sound risk management during off-duty hours, when the majority of active duty mishaps occur.

Woodward has served more than nine years as a commander – a third of her career – and served twice in combat. "Losing an Airman to something preventable is the most tragic thing," she said, "and I

hope to do everything I can in this job to prevent other commanders from having to experience that.

"Sometimes Airmen take unnecessary risks and make mistakes, particularly during off-duty hours," she said. "We can't protect Airmen against bad choices, but we'll continue to use new methods to train, educate and influence them so they have the knowledge and ability to make good decisions based on risk management.

"Safety is about pre-

serving combat capabilities," she said. "If we don't think in those terms every day – on and off duty – we're not doing our job."

Woodward is a command pilot with more than 3,800 flying hours in trainers, tankers and cargo aircraft. As the Air Force Chief of Safety, she's responsible for oversight of development, execution and evaluation of all Air Force aviation, ground, weapons, space and system mishap prevention, and nuclear surety programs and policies.

'Airman' magazine enters digital era with digital version

FORT GEORGE G. MEADE, Md. (AFNS) – A year after publishing the final print edition of Airman magazine, the Air Force is unveiling a new digital version of the service's official magazine specifically geared for tablet devices.

"Built specifically for Apple and Android tablet users, this new format gives readers all the in-depth feature stories and spectacular photos they've come to expect from Airman magazine and adds layers of multimedia content and interactivity only available through new publishing techniques," said Preston Keres, Airman editor-in-chief. "We are very excited to release this first new issue, and begin a new era for telling the Airman's story."

In addition to stunning photography, compelling copy, great video, interactive content and design, Keres said the staff is proud that they are able to bring back the monthly publishing schedule.

For the past year, the Airman editorial staff and design team have posted original content to the Airman website at <http://airman.dodlive.mil>, which will remain current after the launch of the new tablet magazine. The website will continue as the home of Airman and will feature extra and exclusive staff-produced content, as well as strong feature stories, images and multimedia from the field.

The website, however, was never meant to replace the printed magazine.

Budget efficiencies in 2011 led to the elimination of the printing budgets for all flagship service magazines. At that time,

the Airman editorial staff and design team were reduced to only one full-time employee each, during a BRAC move that consolidated most flagship service products at the Defense Media Activity here.

One veteran designer, Luke Borland, made the move from San Antonio to Fort Meade and became the chief of the Airman design team. His enthusiasm for the new technologies just coming onto the scene were critical to developing a plan and building a team that could exploit new tools and processes to bring Airman readers the same kinds of stories in new and exciting ways.

"Loss of the printed magazine was a little sad, but not unexpected, and in some ways a pleasant change," he said. "While some people may miss having the paper in their hands, these new tablet platforms still allow you to hold something, have the same feel, but get so much more out of the product."

In rebuilding, Borland and his team spent a great deal of time getting a broader understanding of digital design tools to get the most from new multimedia content, learning about publishing to the different digital magazine stores and finding that there are still some limitations.

"There are things we want to do that just are not possible yet with the current publishing tools. But what we have been able to do so far is amazing," said Borland. "We want to push the technology to its maximum potential and give our readers that immersive experience."

One thing Borland said

he wants Airman readers to know, whether they started reading 50 years ago or yesterday, is that in this new era, the magazine will remain the same trusted source it has always been. "We're still telling the stories of everyday Airmen and Air Force heroes. It's a deeper form of the magazine, it's the added layers to the presentation that just make it a richer experience for the reader, but it holds true to the integrity of Airman."

While Borland and the design team worked on the technical side to get ready for digital publishing, the creative staff was also working hard to capture stories in new ways and develop ideas that would lend themselves to the new format. To head up the editorial staff, Keres, a former multimedia instructor at the Defense Information School and former staff photographer at the Washington Post, was selected specifically for his vision and ability to inspire great storytelling. He was named editor-in-chief in April.

"From the beginning, Airman has always focused on people, cool aircraft and unique missions of the Air Force. Our staff strives to find better ways to tell those important stories," he said. "With the new technologies available today, we can tell those stories in a much better way. This new interactive digital format makes storytelling fun. We can push the boundaries of what people have previously thought of as a magazine. Reading Airman is now a personal experience and the reader feels engaged with the subject."

One of the most impor-

tant technological advances Keres brought to the Airman team was non-narrative video storytelling using digital single lens reflex, or DSLR cameras. Until recently, most digital cameras used by professional photographers shot individual still frames. Now some of them give the reporters and photographers the capability to capture high definition video in the field. In this smaller package, and with the same lenses used to shoot breath-taking still frames, Airman photojournalists have quickly learned new ways to draw readers into the story.

"The great thing about

the new platform is the crispness, vividness and life of the imagery," said six-time Military Photographer of the Year, and Airman senior photojournalist Master Sgt. Jeremy Lock. "Anyone who is a fan of photography, and especially Air Force photography, will notice huge differences in the way these tablet devices are able to showcase visual content."

The new magazine was previewed over the last couple of weeks, with many readers already downloading it from their app stores. Early adopters and those who follow Air Force and Airman social media out-

lets were given download links. The staff also sought the opinions of some Air Force and media industry leaders before today's publication date.

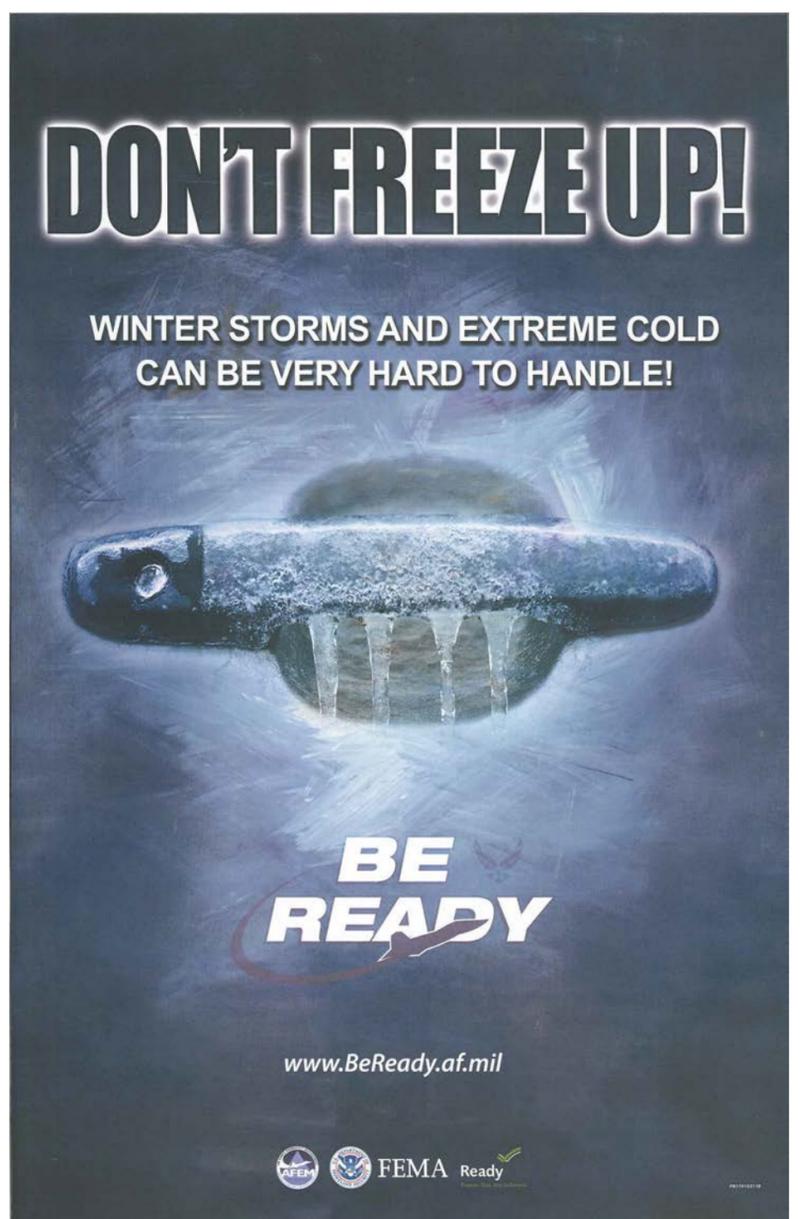
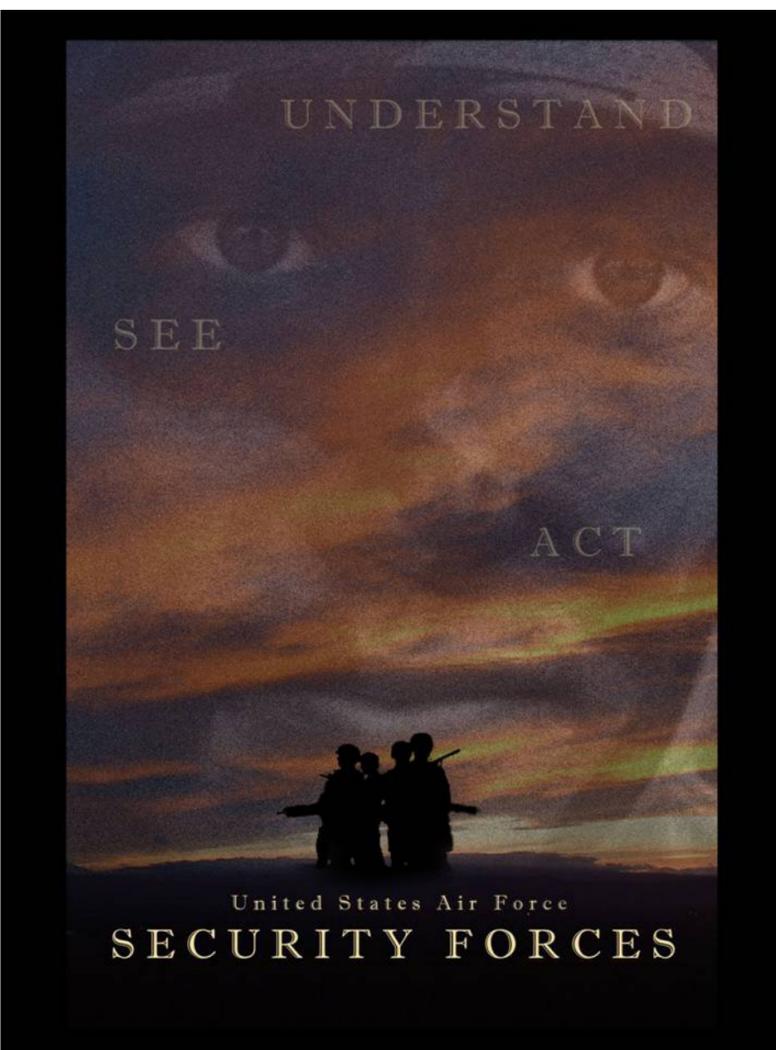
"Airman magazine now as an app -- what a fantastic way to read these stories and showcase the amazing photography by Air Force photojournalists," said Linda D. Epstein, McClatchy Tribune Photo Service senior photo editor.

"I love how the magazine comes to me on the iPad -- I can read it whenever I want to. I used to glance at the site in my

See AIRMAN, page 15



(U.S. Air Force Graphic/Luke Borland)



AEDC employee on a mission in Panama

By Raquel March
ATA Public Affairs

It doesn't matter for one Arnold Engineering Development Complex (AEDC) team member that there are approximately 1,800 miles between AEDC and Panama because he has the capacity to contribute his work ethic to the AEDC mission as well as a medical evangelism mission in Panama.

Steve Macon, an AEDC fire department crew chief and emergency medical technician, recently returned from Valle del Risco in the Bocas Del Toro Province of Central America where he and 38 others assisted with the Latin American Missions (LAM).

"LAM is part of Forrest Park Church of Christ out of Valdosta, Ga.," Macon said. "People went from the Church of Christ from all over the United States. I went to serve others and to assist with a medical clinic in the remote area."

The main reason we go is [based on] Mark 16:15. It says 'go into all the world and preach the gospel to all creation.'"

You're not going to listen to the gospel if you're hungry, if you're cold, you don't have a place to sleep or have a need."

In the bible you can see where the physical needs were taken care of before the spiritual needs. I can tell you how much I care, but you don't know how

much I care until I show you."

Macon and three others who represented the Owl Hollow Church of Christ in Winchester, Tenn., began their extended travels on a Saturday morning, from Nashville to Miami then to Panama by plane.

Then they journeyed by bus overnight from Panama City to Valle del Risco and arrived there at approximately 10 a.m. Sunday morning through mountainous terrain and narrow roads.

The mission group remained in Valle del Risco for five days. Three and half of those days they operated a medical clinic for those in need.

The first and last days there were used to set up the clinic and to break down the clinic.

The clinic provided free medicine, medical exams, eye exams and glasses.

They treated 844 patients, filled 3,277 prescriptions and performed 250 eye exams during their time at the clinic.

"We have a house in Panama next to a preaching school and children's home where we store all of our medical equipment and supplies which were shipped ahead of us. It will be available for the next mission group that arrives in that location," Macon said.

The mission group loaded a truck with the needed medical supplies for the

bus trip to Valle del Risco.

Macon also carried a 50 pound bag of medical supplies with him separate from the truck. The medical supplies contain items like antibiotics, ibuprofen and Tylenol.

He experienced caring for many patients in extremely long lines where interpreters were available to assist.

"I was responsible for registration of patients and filling prescriptions," Macon said. "I would give the patients prescriptions to the pharmacist and he would check it to make sure what I chose was correct."

An interpreter would instruct each patient after the pharmacist's checks were complete.

"One family traveled three days to get there [to the clinic] to get medical attention," Macon said.

Macon remembered that a pregnant woman with labor pains walked two hours through the mountains to the clinic for care, although there was a hospital approximately two blocks away from the clinic.

"The local people were very appreciative of the clinic," Macon said. "They didn't have the money to buy medicine or to see a doctor."

The coordinator of the program chooses the mission locations based on the economic status of the region and need.

Many of the residents in



Steve Macon (far right), an AEDC fire department crew chief and emergency medical technician, assists with registering patients waiting for medical care during a medical and evangelism mission trip in Valle del Risco in the Bocas Del Toro Province of Central America. (Photo provided by Steve Macon)

Valle del Risco aren't able to receive treatments they need to stay healthy.

Although electricity wasn't available in many parts of the clinic, the mission group was able to provide care and received meals - one prepared over lava rocks.

"They cooked spaghetti on top of lava rocks that had a fire built around it," Macon said. "I believe they cooked 13 pounds of spaghetti for us to eat that day and you waste nothing. If you have leftovers, it is made into something for the next meal."

Macon also recalled peanut butter and jelly sandwiches and oatmeal being offered for the meals.

The climate, consisting of high temperatures and rain, was at times uncomfortable for the LAM

group. Air conditioning wasn't available and when it rained the facilities became very dark.

The conditions never deterred the volunteers. Their mission of spreading the gospel was provided to approximately 50 homes each day.

The LAM group's long days began with breakfast and a mission briefing and devotion then mission work. Their days ended with a gospel meeting for all to attend.

Macon said they would have the morning devotion meeting spoken in Spanish and there would be an English translator for the mission workers.

Macon plans to continue his mission participation in the upcoming year, possibly in Alabama.

Funding is a consider-

ation when participating in a mission trip. Macon funded his trip with donations from his church congregation and by cleaning gutters and cutting grass and asking for the payments to be made to his church toward "Steve's mission trip."

He said he was able to help someone with their work and in-turn they would help someone in need with their donation, "Individuals can make a difference in people's lives by doing the same as I did."

Macon added, "Once you go on a mission trip like this you will never be the same."

The Owl Hollow Church of Christ Mission Fund also assisted with funding.

Macon has worked at AEDC for 26 years and resides in Winchester.



Macon prepares a prescription of antibiotics for a patient at the medical clinic in Valle del Risco in the Bocas Del Toro Province of Central America during a mission trip. (Photo provided by Steve Macon)



Panamanian volunteers load a truck with medical supplies for an overnight trip to the medical clinic at Valle del Risco. (Photo provided by Steve Macon)

New vehicular device saves money Air Force-wide

JOINT BASE SAN ANTONIO-RANDOLPH, Texas (AFNS) – All government-owned and general service administration vehicles at Joint Base San Antonio-Randolph, Texas, are scheduled to receive an automotive information module, or AIM2.

AIM2 is a device that collects real-time data that will help fleet managers avoid wasting fuels and stop emissions release.

GOVs and GSA vehicles at Lackland and Fort Sam Houston are slated to have the systems installed later this calendar year.

The devices will add to an Air Force-wide savings of \$8.6 million, said Master Sgt. Alejandro Correa, Air Force vehicle energy fleet manager. AIM2 also eliminates the need for vehicle identification link keys, which are used to track how much fuel a vehicle takes in during every

refueling session.

The removal of VIL keys from the refueling process and the addition of systems that track how much fuel is used by each vehicle will lead to a more accurate reading of fuel consumption per vehicle, Billy Hampton, 902nd Logistics Readiness Squadron vehicle management flight chief, said.

"Radio frequency components connected to the AIM2 provides vehicle data and error codes, straight from the vehicle's electronic control module to the fuel management unit at the military gas station," Hampton said.

AIM2 interfaces directly with a vehicle's on-board diagnostics computer, so the vehicle

management and analysis team can print out instant reports with diagnostic codes for more efficient car repairs.

The modules, wires connected to a gas cap ring and circuit board, are used at Joint Base Charleston, S.C.; Joint Base McGuire-Dix-Lakehurst, N.J.; and Eglin AFB, Fla., as part of the Air Force's transi-

tion to becoming cost-conscious with resources, said Jim Muir, one of the contractors hired to install the new devices in the 396 GOVs and GSA vehicles.

The contractors will remain on the base until December, but will provide AIM2 training to vehicle maintenance members for future installation in new vehicles.



ATA
Aerospace Testing Alliance
Profile

Intern at-a-glance



Ben Dolmovich

University: *University of Tennessee*

Major: *Aerospace Engineering*

ATA Organization: *Propulsion Wind Tunnel Store Separation*

Hometown: *Signal Mountain, Tenn.*

Outlook: *"It's been an unbelievable experience. Not only have I taken part in testing and its processes, but I've been placed into a role where I get an opportunity to do real work that directly impacts the test."*



New LED fixtures light the way

PETERSON AIR FORCE BASE, Colo. (AFNS) – For close to two years, almost half of the street lights and parking lot lights on Peterson AFB have been disabled in an effort to cut energy costs. This past summer, the lights started coming back on in anticipation of new light-emitting diode fixtures being purchased.

According to Jim Jacobsen, 21st Civil Engineer Squadron energy manager, in late 2007 Air Force Space Command (AFSPC) put together a cross-functional team to conduct market research, identify requirements, and develop specifications and an implementation strategy. The team's goal was to reduce energy and reduce maintenance while matching or improving existing illumination and visibility.

In 2008, Peterson became one of two preliminary testing sites for a variety of LED and other high-efficiency lighting fixtures along roadways and in parking lots, to replace existing high-intensity discharge lights.

A variety of fixtures were installed at multiple locations for a little more than a year and according to Jacobsen, they performed well.

"They conducted tests and evaluations of many different models, to see what the pattern was like, to see what the white light quality was and how long they lasted," Jacobsen said.

They performed so well, in fact, that Air Force Space Command approved a command-wide purchase and the installation of the LED lights.

The pilot project results proved that energy could be saved and maintenance reduced allowing all the lights on Peterson AFB to be turned back on. With the study complete and support from the Air Force Civil Engineer Center, AFSPC initiated a command-wide program to replace all the fixtures. Included in the procurement is the U.S. Air Force Academy and 14 other locations.

Fox Theriault, AFSPC energy analyst and LED project manager, said a bulk purchase of about 6,400 LED fixtures for 15 installations will be made using \$6.4 million of Energy Focus Funds from the AFCEC.

Across AFSPC, and including the U.S. Air Force Academy, Colo., savings from the lights will be \$388,000 annually with an additional \$618,000 annually in operations and maintenance costs, Theriault said.

"Testing, market research, and industry clearly indicate that this emerging technology is ready for full implementation with enormous payback," he said.

According to Theriault, LED fixtures typically have a 60,000 to 80,000 hour life expectancy, which is three to four times the life expectancy of the old high-intensity discharge (HID) style fixtures. The new fixtures will use approximately 60 percent less electricity than HID lights, but one of the greatest savings will be in the reduced maintenance. The new LED fixtures are virtually maintenance free and come with a 10-year warranty.

The 21st Space Wing is installing a total of 1,540 fixtures at six installations, costing approximately \$152,000. Across the wing, total energy cost savings is expected to be \$162,000 with additional savings in operation and maintenance of \$140,000 a year.

Upfront, the cost of the LED lights is more expensive, but within three or four years, the lights will have paid for themselves.

According to Jacobsen, once the lights are installed, they will all be illuminated to ensure proper function of the lights and replacements will be made where necessary.

"Once all of the lights have been (tested) and any required warranty replacements have been completed we will again look at de-lamping opportunities to garner additional savings," he said.

Edwards F-35A completes AIM-120 AMRAAM internal weapons release

EDWARDS AIR FORCE BASE, Calif. – An F-35A test aircraft, flown by U.S. Air Force Maj. Matthew Phillips, recently completed the first aerial weapons release of an AIM-120 AMRAAM (Advanced Medium-Range Air-to-Air Missile) from a conventional takeoff and landing (CTOL) aircraft.

The aircraft, known as AF-1, jettisoned the instrumented AIM-120 over the China Lake test range from an internal weapons bay. This was the second in-flight weapons release

in three days for AF-1 as it completed the release of a 2,000 pound GBU-31 BLU-109 Joint Direct Attack Munition (JDAM).

The F-35A 5th Generation fighter is designed to carry a payload of up to 18,000 pounds using 10 weapon stations.

The F-35A features four internal weapon stations located in two weapon bays to maximum stealth capability.

The CTOL aircraft can also utilize an additional three weapon stations per wing if required.

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Through Airmen's Eyes: Minot missileer fights for more

BARKSDALE AIR FORCE BASE, La. (AFNS) – As a previous Global Strike Challenge competitor, Minot Air Force Base, N.D., missileer 1st Lt. Shawn Burnside is no stranger to facing challenges. However, this year brought a challenge the 91st Missile Wing member wasn't expecting to face – cancer.

During the 2011 competition, which recognizes the "best of the best" among Air Force Global Strike Command's bomber, missile, helicopter, maintenance and security forces personnel, Burnside and his crew partner represented Minot's 740th Missile Squadron as they competed for the distinction of "best missile crew" in the Command.

"The first year I competed, my crew partner and I were very capable. We managed to achieve second place, which was great, but I guess it just wasn't enough," the lieutenant said. "I wanted more. I wanted to be on top. I wanted to be that number one guy."

Burnside said he felt like being a competitor in Global Strike Challenge 2011 earned him and his crew partner a certain amount of respect.

"One of the things you find missileers respect the most is proficiency and capability," he said. "I liked having that capability, and I never really realized what it afforded me until after comp was done. Being able help my fellow crew members work through things they hadn't seen before, and being able to explain concepts that were a little more in-depth and better the crew force as a whole, was by far the most rewarding of all the benefits we got."

That desire to better the missile crew community and the chance to be named the top crew in AFGSC drove Burnside to compete for a spot on the team again this year. Competitors in every category are only allowed two months to train before they compete. For the missile crews, training includes a week of in-depth classroom study followed by seven weeks of training in the Missile Personnel Trainers, usually six days a week.

In addition to the intense training, the crews still had an alert load requirement to fill. Between training and real world requirements, Burnside said, the team was lucky when they got one day off a week.

It was during that first week of training that Burnside's life would change forever.

"We started training roughly around the 17th of July, around the 20th or 21st of that month I had my yearly physical health assessment," Burnside said. "During my PHA, the flight doc was checking my neck. I happen to have a long, relatively bad family history of thyroid problems, never cancer, but thyroid issues in general, so it's always something they checked."

During the exam, the physician found a lump in Burnside's neck, and had another doctor come in to verify that there was a growth there. At the time, Burnside was told not to be overly concerned, because thyroid nodules are fairly common. In fact, he said his research showed that only five percent of thyroid nodules are ever cancerous.

"My personality is always plan for the worst, hope for the best," he said. "As soon as I heard there was a nodule, I immediately started making plans in my head, saying 'if it is cancer, here's what I'm going to do, if it's not, great, but it's not going to really have an impact, I can handle that when it comes.'"

Burnside said he decided, even before he knew if the nodule was cancerous or not, that he did not want to drop out of the competition, so he continued to train. However, while his doctors were not overly concerned about the nodule, they wanted to be safe and sent the 28-year-old lieutenant to have the lump biopsied.

"Three days later I get a call from the flight doc saying 'hey, your results are in,'" Burnside said. "You could just tell from the tone of her voice and how she approached the subject that the results were not positive."

Burnside was told that while the results of the first biopsy did not confirm a finding of cancer, there was enough cause for concern in some of the cellular growth that it was highly likely cancer was elsewhere in the nodule.

The samples were sent to the Mayo clinic for further examination, and the Mayo clinic initially came back saying the nodule was benign.

While all of this was going on, Burnside was still training for Global Strike Challenge, and said he never considered dropping out. The big question: would his doctors allow him to compete?

"It was largely going to hinge on what the doctor had to say," Burnside said. "If it was time-sensitive and had to be done right away or (training) would have extreme adverse effects, that was really the only way I would consider dropping out of the competition."

Still, training for Global Strike Challenge was not without its difficulties. Training usually ran from 5 p.m. to 5 a.m., and the lieutenant said he endured a lot of fatigue trying to balance training with his medical appointments.

"I had to work in doctor's appointments around our training," he said. "I would try to get my doctor's appointments around 2 p.m., so I could get up earlier, go to my appointment and then go to training."

Burnside said he was relieved - but he still faced surgery.

"The surgeon I was working with made the call to go perform surgery regardless, simply because the nodule was quite sizable," he said.

The initial surgery was performed Oct. 3, and an initial look at a cross section of the nodule showed no signs of cancer. However, when the samples were sent to the Mayo clinic this time, the clinic came back with bad news. Not only did they see signs of cancer, they saw signs of multiple cancers in the thyroid.

Just three days after the initial surgery, Burnside was told he needed to have the rest of his thyroid removed, and was quickly scheduled for a complete thyroidectomy. He was then referred to a radio oncologist, who laid out a plan of radiation treatments.

For several weeks, Burnside was put on a strict no-salt diet, which essentially depletes the body of its stores of iodine in order to allow for better results during a full-body radioactive iodine scan or treatment.

"That was the hardest part for me," he said.

Burnside credits his girlfriend of 10 months with keeping him on the diet, and encouraging him throughout his ordeal. He also thanks his family and friends, including his Air Force family, with helping him stay optimistic.

"Being in a community like the Air Force, would have been a lot harder if I had been in everything else," he said. "When you talk about the Air Force yes, it's a career, but it's also a lifestyle, it's a family. You really see that when one person in that family hits adversity, because people will step up left and right providing whatever it is you can't provide for yourself."

Once Burnside had recovered from his surgery and completed several weeks of the no-salt diet, it was time to start treatment with his first radiation

dose. However, that first treatment was scheduled right during the middle of the Global Strike Challenge symposium and score-posting event.

Burnside asked his doctors to move up his first radiation dose by a week and delay his full body scan until after the Global Strike Challenge symposium and score-posting event so he could travel with his team and participate.

"It was important for me to be there in person because there was a chance we did well, and I knew I would regret it if we did do well and I wasn't there to be a part of it," he said.

At first his doctors resisted, but Burnside eventually won them over after confirming that pushing back treatment, or changing his diet for a few days, would not negatively impact his treatment.

Burnside traveled with his 91st Missile Wing teammates to Shreveport, La., Nov. 5. After months of training, competing, and dealing with physically and mentally challenging medical treatments, it all came down to the Global Strike Challenge 2012 score posting on the night of Nov. 7.

"I was extremely nervous, but also excited," he said.

When the scores for best ICBM crew were announced, Burnside and his crew partner took fourth place out of nine teams. While Burnside said the sting of his loss left him reeling, the night ended well for him and his teammates. At the end of the night, when the Blanchard Trophy for the Best Missile Wing in Air Force Global Strike Command was named, the honor went to the 91st Missile Wing at Minot AFB.

"I was very excited it is by far the biggest honor in missiles to win the Blanchard," he said.

Now that the competition is over and the scores are in, Burnside must move on to his next challenge. The team returned home on Nov. 9, and will receive a radiation treatment regimen soon.

One of the biggest downsides of the radiation treatment is that he must avoid human contact for 10 days.

"Because you're carrying the radiation around with you; it's not like chemo, it's not like they give

it to you and it's flushed from your system; you're radioactive the entire time," he said. "We had to find a place to kennel our dogs, we had to find a place for my girlfriend to live for 10 days, and the first day I can have human contact, again because we pushed it back, will be Thanksgiving."

This Thanksgiving, Burnside will have a lot to be thankful for. But, after all he has been through in the past four months, would he choose to compete again?

"Absolutely. No question about it," he said. "If I had to make the same decision again, I would in a heartbeat without a second thought. This last year has proven I still have plenty more to learn and room to grow."

"There is still more I can do to master this weapon system and further better myself and my wing by doing so. On the other hand, it seems selfish to return for yet a third time as a competitor. There is always a time when one must pass the torch on to the next generation," he said. "So I guess in short yes and no. Who knows what the next year will bring?"

Original member of the Tuskegee Airmen dies

TUSKEGEE, Ala. (AFNS) – Retired Lt. Col. Herbert Carter, 93, one of the original Tuskegee Airmen, died Nov. 8 at East Alabama Medical Center in Opelika, Ala., according to Tuskegee Mayor Johnny Ford.

Carter was a member of the original cadre of the 99th Fighter Squadron, the first black aviators in the U.S. military.

Born on September 27, 1919, in Amory, Miss., Carter enrolled at Tuskegee

Institute, Ala., with plans to become a veterinarian.

"I wanted to be a pilot for a completely different reason than the Air Corps," said Carter in October. "At Tuskegee, I was majoring in animal science. My plan was to finish and take veterinary medicine. I would get my private license, go out to Texas, and practice my veterinary medicine, flying from ranch to ranch tending the animals. I did not know that the Air Corps was going to bite me."

In the 1940s, African-Americans were prohibited to serve in combat areas of the Army Air Corps. Solely based on their race, they were deemed unfit both physically and mentally to fly. This, however, intrigued Carter.

"That was not only an insult, that was a dare," said Carter. "It was the fact that we had been told that we did not have the smarts or the ability to operate something as complicated as an aircraft."

Taking the dare, Carter obtained his private flying license while enrolled in Tuskegee Institute. Then, he applied for a newly formed program in which the U.S. Army Air Corps would train black men to become pilots.

Upon earning his pilot wings, Carter was sent overseas as the engineering officer with the original 99th Fighter Squadron.

By the war's end, the all-black 332nd Fighter Group had never lost an allied bomber aircraft to enemy

air action in 200 escort missions and Carter himself flew 77 combat missions and 200 tactical air-ground Allied support missions over North Africa; Sicily and Italy, crash-landing only once.

Despite the stresses of military life, Carter remained with the newly formed Air Force even after the war ended.

"The pleasure that I got out of flying with the Air Corps made me volunteer for regular service, and I

stayed in for 27 years," he said.

He retired as a lieutenant colonel in 1969 and became associate dean for student services at Tuskegee University and served in several other important capacities during his time there.

With their contribution to the war effort, Carter and his fellow Tuskegee Airmen shattered the widely held myth that blacks were not capable of serving their country in the arena of flight.

AIRMAN from page 7

who follow Air Force and Airman social media outlets were given download links. The staff also sought the opinions of some Air Force and media industry leaders before today's publication date.

"Airman magazine now as an app - what a fantastic way to read these stories and showcase the amazing photography by Air Force photojournalists," said Linda D. Epstein, McClatchy Tribune Photo Service senior photo editor.

"I love how the magazine comes to me on the iPad - I can read it whenever I want to. I used to glance at the site in my browser but with the new platform, it has drawn me in to read it from cover to cover," added Epstein.

In the November 2012

issue, the cover story is "Donning History," which features two Air Force veterans and their expansive collections of vintage Air Force uniforms. Accompanying the story are a multimedia presentation and photo gallery that show Airmen wearing many of these uniforms from our Air Force past. There are other major features, including "Medics in Mayhem," which covers military medical personnel training in a civilian trauma unit; "Outside the Wire," about TACP Airmen who live somewhere in between the Air Force and the Army; and "Refueling the Field," about a KC-135 unit which acts as a flying gas station giving the fleet additional range.

To complement this

month's features, the staff has updated "Around the Air Force," a standard favorite that shows the great work Airmen are doing around the world and added new departments like "Through Airmen's Eyes," where Airmen tell their own stories and "Airman Visuals," which showcases the Air Force through imagery.

"For me personally, it was an honor to be able to take Airman from the respected printed magazine it was to bring it into the new world of digital publishing and maintain the quality look and feel," Borland said, "to give the readers new ways to interact, make the content leap off the page and continue to tell the Air Force story in a much better way than we were

able to do in the past."

Airman tells the story of the United States Air Force through images and written stories about the people, missions and equipment that define the nation's youngest service. The magazine was first published in August 1957, and continued as a printed magazine in various sizes, formats and printing schedules until the final edition, the September-October issue of 2011.

Airman is free and available now for download in the Apple iTunes newsstand at <http://bit.ly/TK559c> and as a standalone app in the Google Play store at <http://bit.ly/WE3FTX>.

For information about the tablet edition of Airman, visit the website at <http://airman.dodlive.mil/>.



Arnold Golf Course
454-GOLF, 454-FOOD

Check us out on Facebook! Arnold
AFB Services Golf Course



Arnold Golf Course merchandise sale will be held the month of December. Do your Christmas shopping with special discounts ranging from 5 to 30 percent off. Pick out your merchandise then come to the counter and roll a die to determine your discount. You must pay for the merchandise immediately after rolling. Roll a 1 for 5 percent off, 2 for 10 percent off, 3 for 15, 4 for 20, 5 for 25 or 6 for 30 percent off. No double discounts and Members First Plus discount does not apply in conjunction with this offer.

Arnold Lakeside Center
454-3350

Check us out on Facebook! Arnold
AFB Services Arnold Lakeside Center
and Arnold AFB Services Information,
Tickets and Travel

Arnold Lakeside Center is hosting a **Thanksgiving Day Brunch Buffet Nov. 22** from 10:30 a.m. to 1:30 p.m. Cost is \$16.95 for members, \$18.95 for non members, \$8.95 for children age 4-12 and free for ages three and under.

The menu will include scrambled eggs, bacon, sausage, French toast, roast turkey, glazed ham, dressing, green bean casserole, candied yams, mashed potatoes, turkey gravy, cranberry sauce, rolls, pumpkin and pecan pie.

Reservations are required for this event and may be made by calling 454-3350.



Books Are Fun returns to Café 100 for a book fair from 9:30 a.m. – 3 p.m., Dec. 4. Discounted selections include paperbacks, best sellers, educational, reference, cookbooks, children's items, gift selections and more. Save up to 70 percent off retail prices.



Jewelry Fair returns to Café 100 Dec 14. Arnold Lakeside Center welcomes back Pretty Discoveries for a jewelry fair in the A&E building, Café 100, from 8 a.m. to 2 p.m. All jewelry prices are below \$20 and they also carry belts and handbags.

Café 100 new menu additions:

- Barbecue special is now every Wednesday. Order pulled pork barbecue sandwich, slaw, choice of potato salad or chips and drink (soda/tea) for \$6. Quantities are limited.

- Baked Potato has been added to the menu for \$5 and comes with butter, sour cream, green onions, cheddar cheese plus one topping of your choice. Additional toppings are .50 cents each. Choose from any topping on the line.

- Pumpkin Spice Latte is available, for a limited time, \$2.50 tall, \$2.75 grande and \$3.00 venti.

See **BRIEFS**, page H3

Outdoor Rec heads to Gatlinburg for Ski Trip



Come with Outdoor Rec as we hit the slopes in beautiful Gatlinburg Dec. 14-16.

Enjoy a relaxing weekend in the winter snow as we head to Ober Gatlinburg for two days of skiing.

We will leave Friday at 8 a.m. and once everyone is settled into their rooms we will hit the slopes.

Ski times on Friday are 3-10 p.m. and 8 a.m. – 5 p.m. on Saturday. We will depart on Sunday at 8 a.m. The cost is

\$300 per person and is for all ages. Sign up deadline is Nov. 30. Cancellations are nonrefundable starting Dec. 1.

There must be a minimum of seven to take the trip and no more than 14. Call 454-6084 to sign up.

ALC's New Year's Eve Casino Night

Arnold Lakeside Center will ring in the New Year with a free Casino Night on New Year's Eve, Dec. 31.

This event is for ages 18 and older and gets underway at 6 p.m.

Gaming will be from 7-10 p.m. and includes craps, roulette, blackjack and wheel of fortune.

Participants are given play money to try their hand at these games to increase their dollars which will then be used at a prize auction beginning at 10:15 p.m.

An auctioneer will take bids on items to include a one night stay at the Renaissance in Nashville, a one night stay at the Courtyard by Marriott in Nashville, two nights stay at the Rocky Waters Motor Inn in Gatlinburg, two nights stay at the Hampton Inn in Gatlinburg, two person

See **CASINO**, page H2



Children's Christmas Party returns Dec. 2 to AEDC

The annual Children's Christmas Party will be held from 1 – 5 p.m., Dec. 2 at the Arnold Lakeside Center (ALC) for ages 12 and under.

This event is free and open to all AEDC employees (active duty military, civil service, contractors), National Guard, Reserves, retirees and their immediate families (includes grandchildren, nieces and nephews).

The annual Tree Lighting Ceremony will be held in conjunction with this event and will begin when Santa arrives to help flip the switch.

Santa is scheduled to arrive at 2 p.m. by boat along with some of his friends. Santa and Mrs. Claus, along with their elves, will be in the Winter Wonderland tent to visit with the children immediately following the tree lighting ceremony.

Some of Santa's elves will also be in the Winter Wonderland tent to give out filled stockings to children ages 12 and under. It is important to sign up by Nov. 27 so the elves bring enough.

There will be inflatable jump houses and slides, Shriner's Tin Lizzie show,

petting zoo (2-4 p.m.), temporary tattoos, letter writing to Santa, rock climbing wall and more.

In addition to the various activities, hot dogs, hamburgers, chips and drinks will be available.

Santa and Mrs. Claus will have a number of special guests again this year. You may see Buddy the Elf, Frosty the Snowman or Rudolph just to name a few.

A special Santa Hotline, 454-SNTA (7682), has been set up for children to leave a message for Santa. This number may also be used by parents to register children for the event.

Simply press 1 to leave a message or 2 to be transferred to sign up. Be sure to specify how many children and how many adults will be attending along with affiliation (active duty, DOD, ATA, guard, reserve or retiree) and a phone number.

Parking will be at UTSI with shuttle service to and from the ALC, beginning at 12:45 p.m.

Security will be assisting to ensure successful traffic flow and limited delays of party attendees.

Chattanooga Trip for Ruby Red Christmas Dec. 8

It's a Ruby Red Christmas at Chattanooga's Ruby Falls.

Join Outdoor Rec for a trip to enjoy a specialized Christmas tour of the cave with live music at the waterfall and in the Cavern Castle lobby.

There will also be fresh fallen snow, horse drawn carriage rides, crafts and more.

After the falls tour, visit the North Pole Workshop for festive crafts and activities.

North Pole Workshop kids' activities include arts and crafts with Mrs. Claus. Make your own ornament, gingerbread house or snowflake photo frame.

Holiday treats include cookie decorating and Santa "Pucker Powder" art (like sand art, but with candy!).

We will be leaving Outdoor Rec at 2 p.m. and return by 10:30 p.m.

Cost is \$40 for those over age 12 and \$30 for age 12 and under.

Sign up by Nov. 23 by calling 454-6084. Remember to bring your camera and extra money for drinks and souvenirs.

Dodgeball Tournament at the Fitness Center Dec. 11-13

The Fitness Center will hold a single elimination Dodgeball Tournament Dec. 11-13 from 4:30-6:30 p.m. each day.

Teams will be made up of 6-10 players with six players competing on a side and the others available as substitutes.

Play will follow National Amateur

Dodgeball Association rules and may be found at www.dodgeballusa.com or requested from the Fitness Center.

The object of the game is to eliminate all opposing players by getting them "out". This may be done by hitting an opposing player with a "live" thrown ball below the

shoulders or catching a "live" ball thrown by your opponent before it touches the ground.

A "live" ball is one that has been thrown and has not touched anything, including the floor, another ball, another player, official or other item outside of the playing field.



Horizon is a Services Division publication designed to inform our customers of events and specials in Services Division activities. All program dates, times and prices are subject to change. Services Division mailing address is at 100 Kindel Drive, Suite C321, Arnold AFB, Tenn. 37389-3321

Services information written and provided by Tanya Bryan

This Services supplement is published by *The Tullahoma News*, a private firm in no way connected with the U.S. Air Force, under exclusive written contract with Aerospace Testing Alliance (ATA). This supplement is an authorized publication for members of the U.S. military services. Contents of this supplement are not necessarily the views of, or endorsed by, the U.S. Government, the Department of Defense, the Department of the Air Force or ATA. Services is an exclusive area available to all AEDC personnel, active duty, retired military, National Guard, Reserve military and others as approved by the commander. Services activities include Wingo Inn (lodging), Arnold Lakeside Center (Club, Community Center, Information, Tickets & Travel (ITT), Barber Shop, Café 100), Outdoor Rec (Marina, FamCamp, Crockett Cove, Dogwood Ridge), Golf Course and Fitness Center. Those mentioned above are eligible to use any Services activity during regular operating hours unless it is specified as a "members only" event. Membership is a personal choice. However, only members are entitled to discounts and other benefits associated with membership.

Services Division Phone Numbers

Area code 931 DSN 340
 Services Chief – 454-7779
 Services Deputy – 454-5915
 Community Services Flight Chief – 454-4062
 Complex Manager – 454-3367
 Arnold Lakeside Center (ALC) – 454-3350
 Arnold Lakeside Center catering – 454-3350
 Hap's Pizza – 454-5555

Café 100 – 454-5885
 Membership Information – 454-3367
 Information, Tickets & Travel – 454-3303
 Barber Shop – 454-6987
 Gossick Leadership Center – 454-4003
 Human Resources – 454-5481
 Marketing & Sponsorship – 454-3128
 Recycling – 454-6068

Wingo Inn – 454-3051
 Fitness Center (FC) – 454-6440
 Golf Course (GC) – 454-GOLF (4653)
 Mulligan's Coffee Bar and Grill - 454-FOOD (3663)
 Outdoor Recreation (ODR) – 454-6084
 includes Marina, FamCamp,
 Crockett Cove &
 Dogwood Ridge

December 2012

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
New Year's Eve Casino Night at ALC 30	Café 100, Barber Shop & GC Closed FC Open 8 a.m. – 1 p.m., no classes ALC New Year's Eve free Casino Night , 6 p.m. – 1 a.m., dining room open entire time with full menu available, age 18+ 31	Sign up by Nov. 23 for ODR's Ruby Red Christmas trip Dec. 8				ODR Paintball , 9:30 a.m., ages 10+, \$35, sign up 454-6084 1
Children's Christmas Party , 1-5 p.m., ALC, age 12 and under receive filled stocking, indoor/outdoor activities, hamburgers & hot dogs, sign up by Nov. 27, 454-SNTA 2	FC Boot Camp 6 a.m. FC Cycling Class 11 a.m. FC Yoga 11 a.m. 3	ALC AEDC Woman's Club 9:30 a.m. ALC Book Fair 9:30 a.m. – 3 p.m. Café 100 FC Cycling Class 11 a.m. FC Interval Class 3:30 p.m. 4	FC Boot Camp 6 a.m. ALC Café 100 BBQ Special \$6 FC Yoga 11 a.m. 5	FC Cycling Class 11 a.m. FC Interval Class 3:30 p.m. ALC Dinner & Movie Night "ParaNorman" PG dinner 5-8 p.m. movie 6:30 p.m. 6	ODR Deck the Doors competition winners announced at DoD Holiday Party FC Boot Camp 6 a.m. FC Yoga 11 a.m. ALC Chicken Cordon Bleu , \$10.95 member, \$12.95 non. 5-9 p.m. ALC First Friday Jam 6 p.m. 7	ODR Paintball , 9:30 a.m., ages 10+, \$35, sign up 454-6084 ODR Ruby Red Christmas , \$40/\$30, sign up by Nov. 23, 454-6084 8
Golf Course merchandise sale all month! 9	FC Boot Camp 6 a.m. FC Cycling Class 11 a.m. FC Yoga 11 a.m. 10	FC Cycling Class 11 a.m. FC Interval Class 3:30 p.m. FC Dodgeball Tournament 4:30-6:30 p.m. 11	FC Boot Camp 6 a.m. FC Bench Press Competition 8 a.m. – 4 p.m. ALC Café 100 BBQ Special \$6 FC Yoga 11 a.m. FC Dodgeball Tournament 4:30-6:30 p.m. 12	FC Cycling Class 11 a.m. FC Interval Class 3:30 p.m. FC Dodgeball Tournament 4:30-6:30 p.m. ALC Dinner & Movie Night "Ice Age: Continental Drift" PG dinner 5-8 p.m. movie 6:30 p.m. 13	ODR Ski Trip , 8 a.m. return Sun. 1 p.m., \$300, sign up by Nov. 30, 454-6084 ALC Jewelry Fair 8 a.m. – 2 p.m. Café 100 FC Boot Camp 6 a.m. FC Yoga 11 a.m. ALC Prime Rib for Two , \$29.95 member, \$31.95 non, 5-9 p.m. 14	ODR Paintball Tournament , 10 a.m., ages 10+, \$55/team, sign up 454-6084 15
16	FC Deadline to sign up for Single Round Robin Basketball FC Boot Camp 6 a.m. FC Cycling Class 11 a.m. FC Yoga 11 a.m. 17	FC Cycling Class 11 a.m. FC Interval Class 3:30 p.m. 18	FC Boot Camp 6 a.m. ALC Café 100 BBQ Special \$6 FC Yoga 11 a.m. 19	FC Cycling Class 11 a.m. FC Interval Class 3:30 p.m. ALC Dinner & Movie Night "The Odd Life of Timothy Green" PG dinner 5-8 p.m. movie 6:30 p.m. 20	FC Boot Camp 6 a.m. FC Yoga 11 a.m. ALC Shrimp Alfredo , \$9.95 member, \$11.95 non, 5-9 p.m. 21	ALC Closed ODR Paintball , 9:30 a.m., ages 10+, \$35, sign up 454-6084 22
23	ALC, Café 100, Barber Shop & GC Closed FC Open 8 a.m. – 1 p.m., no classes 24	All Services activities Closed Happy Holidays 25	ALC & Barber Shop Closed FC Open 8 a.m. – 1 p.m., no classes 26	ALC & Barber Shop Closed FC Open 8 a.m. – 1 p.m., no classes 27	ALC & Barber Shop Closed FC Open 8 a.m. – 1 p.m., no classes 28	ALC Closed FC Open 8 a.m. – 1 p.m. ODR Paintball , 9:30 a.m., ages 10+, \$35, sign up 454-6084 29

Hours of operation

Arnold Lakeside Center: Catering/Management offices by appointment. Cashier: Monday through Friday, 9 a.m.-4 p.m. Dinner: full menu available Thursday, 5-8 p.m.; Friday and Saturday, 5-9 p.m. Main Bar: Thursday, 5-8 p.m.; Friday, 4-10 p.m. and Saturday, 5-10 p.m. Social Hour: Friday, 4-6 p.m. Movie Night: Thursday, 6:30 p.m. *Closed Nov. 22 after Thanksgiving Day Brunch Buffet through Nov. 24; Closed Dec. 22-30*
Information, Tickets & Travel (ITT): Tuesday through Friday, 10 a.m. – 3 p.m. *Closed Nov. 22 after Thanksgiving Day Lunch Buffet through Nov. 23; Closed Dec. 22-30*
Café 100: Monday through Friday, 6:30 a.m. – 1:30 p.m. *Closed Nov. 22, 23, Dec. 24, 25, 31 and Jan. 1*
Barber Shop: by appointment – Monday, Tuesday, Thursday & Friday, 8 a.m. – 4 p.m. *Closed Nov. 22-23 and Dec. 24-Jan. 2*
GLC (office located at Arnold Lakeside Center): Monday through Friday, 7 a.m. – 3:30 p.m. May vary depending on bookings. *Closed Nov. 22, Dec. 25 and Jan. 1*
Outdoor Rec: Tuesday through Saturday, 10 a.m. – 5 p.m. *Closed Nov. 22, Dec. 25 and Jan. 1*
Fitness Center: Monday-Friday, 5 a.m.-7:30 p.m.; Saturday, 8 a.m.-1 p.m.; Sunday Closed. *Nov. 21, 8 a.m. – 1 p.m. no classes; Nov. 22 Closed; Nov. 23, 8 a.m. – 1 p.m. no classes; Dec. 24, 8 a.m. – 1 p.m. no classes; Dec. 25 Closed; Dec. 26-29, 31 and Jan. 1, 8 a.m. – 1 p.m. no classes*
Arnold Golf Course: Pro Shop & Driving Range, 8 a.m. – dusk. Driving Range open 24 hours with pre-purchased key card. Mulligan's Coffee Bar & Grill, Monday through Friday, 10:30 a.m. – 2 p.m.; Saturday and Sunday, 8 a.m. – 2 p.m. *Closed Nov. 22, Dec. 24, 25, 31 and Jan. 1*
Recycling: Monday through Friday, 7 a.m. – 4 p.m. *Closed Nov. 22, Dec. 25 and Jan. 1*
Wingo Inn: Monday through Friday, 7 a.m. – 6 p.m.; Saturday and Sunday, 8 a.m. – 4 p.m. *Closed Dec. 25*
Nonappropriated Funds Human Resources: Monday through Friday, 7:30 a.m. – 4 p.m. *Closed Nov. 22, Dec. 25 and Jan. 1*

BX/Commissary customer eligibility

AEDC government civilian and AEDC contractor employees have access to the following limited items at the base exchange (BX): consumable items including toiletries and over-the-counter pharmaceuticals, food items such as candy, chips, little meal items, hot dogs and soft drinks. Alcohol and cigarettes are not included as consumable items. However, only active duty and retired uniformed services personnel and their dependents are eligible to use the base commissary next to the BX. The commissary hours of operation: Tuesday, Wednesday and Friday 9 a.m.-5:30 p.m., Thursday 9 a.m.-6:30 p.m. and Saturday 8 a.m.-4:30 p.m. The BX hours of operation: Tuesday through Friday 9 a.m.-5:30 p.m., and Saturday 8 a.m.-4:30 p.m. For more information contact Christopher Floden, BX manager, at (931) 454-7153 or Jeff Lillard, Commissary manager, at (931) 454-3545.

AAFES Dividends

Dividends generated from the Army and Air Force Exchange Service (AAFES) overall earnings are a major contributor to Services nonappropriated fund (NAF) construction and renovation projects as well as equipment purchases. Services would like to thank all AAFES customers for their support. Dividends received for October 2012 totaled \$5,380.14.

Chili Cookoff results

prizes sponsored by Ascend Federal Credit Union

- People's Choice - \$50 plus 1/2 of voting sales: Crazy Kettle (Leo Marple)
- Most Unusual Ingredient - \$50: Chili-ology (Ben Weaver, Marcus Conner, Taylor Swanson)
- Best Decorated Booth - \$50: Turbine Smokin Tallow (Mike Dent, Josh Hartman, Patty Stiggins)
- Best Tasting Runner Up - \$150: Here Comes Chili Boo-Boo (Jenny Conry)
- Best Tasting - \$200: Turbine Smokin Tallow (Mike Dent, Josh Hartman, Patty Stiggins)

Congratulations and thank you to all who participated. No federal endorsement of sponsor intended.

CASINO from H1

four wheeling expedition, floral arrangement, candle holders, lamp, knives, gift certificates for Western Sirloin, Clayton's Shoes, The Cooks Market, Stan McNabb plus many more items.

There will be a wide variety of items to bid on with your winnings.

Then, as midnight nears, watch the New



York City ball drop countdown on the big screen and raise a champagne toast.

The dining room will be open from 6 p.m. – 1 a.m. with full menu available.

BRIEFS from H1

Arnold Lakeside Center 454-3350

First Friday Jam will be Dec. 7 beginning at 6 p.m. Come to play, listen, dance and enjoy. Join in with the band to play an instrument or sing. Or take over and do your own performance.

Friday dining room specials, 5-9 p.m.:

Dec. 7: Chicken Cordon Bleu, \$10.95 member, \$12.95 non.

Dec. 14: Prime Rib for Two, \$29.95 member, \$31.95 non.

Dec. 21: Shrimp Alfredo, \$9.95 member, \$11.95 non.

Dec. 28: Closed
Specials are subject to change so please call ahead for reservations and to ensure availability.

Last Friday Trivia Contest

will not be held in December due to the ALC being closed, but will return in January. Trivia starts at 6:30 p.m. with questions in random categories. Teams may have up to four people. No cell phones are permitted during the event. Anyone using a phone while a question is underway will be disqualified. There are eight rounds with three questions per round. Each round teams have two, four and six points to wager before the question. Only one points value may be used per question. For example, if you wager four points on the first question then you must choose either two or six points for the next question. Whichever value is left must be used for the final question in that round. After the eighth round, teams may wager up to their total points earned for the final question. Prizes are awarded for top finishers.

Fitness Center 454-6440

Check us out on Facebook! Arnold AFB Services Fitness Center

Bench Press Competition will be held Dec. 12 between 8 a.m. and 4 p.m. Each participant will get three attempts to lift their maximum, setting their own weight as they go. A judge will determine a clean lift. There will be separate categories for men and women. Winners will be the man and woman who press the highest percentage of their bodyweight. Call to sign up.

The Cool 100 Walk/Run Incentive Program concludes in December. Be sure to turn in your miles. Participants had from October through the end of December to log their miles using the

track located behind the A&E building, the trail behind the Fitness Center, a treadmill in the Fitness Center facilities or at home to reach 100 miles. All who complete the program will receive a t-shirt.

Single Round Robin Basketball is coming in January. Get your teams together and sign up by Dec. 17. Games will be played at 5:30 and 6:30 p.m., Tuesdays and Thursdays. Ages 18 and older are eligible to sign up. Rosters are due Dec. 17 but players may be added to the roster mid way through the session. A limited number of off-base players may be added in order to provide a more competitive experience. The team with the most wins will be named champion and team members will receive a t-shirt. Complete rules and by-laws are available from the Fitness Center.

Outdoor Rec (ODR) 454-6084

Check us out on Facebook! Arnold AFB Services Outdoor Recreation

Paintball continues with regular play every Saturday except third Saturday which is tournament day. Paintball is for ages 10 and older and ages 10-17 must have a parent permission form. Remember to wear appropriate clothing – long pants, a long-sleeved shirt and closed-toe shoes.

Regular Saturday play is every weekend from 9:30 a.m. to 2:30 p.m. except third Saturday due to monthly tournaments. Those interested need to call and sign up at least a day ahead of time to ensure equipment availability. When the day arrives, simply meet at the paintball field and get play underway with the direction of an Outdoor Rec (ODR) staff member. Cost is \$35 per person with equipment provided and includes 500 paintballs and a tank of air. It is \$20 per person for those with their own equipment and that also comes with 500 paintballs. All paintballs used must be purchased from ODR for \$13 per bag of 500 or \$45 for a box of 2,000.

Monthly tournaments are on the third Saturday beginning at 10 a.m. Teams of four play double elimination to test your skills until the best team arises. Prior to the tournament there will be a 25-minute warm up field time with team on team play. There must be at least one team member above age 18 and there must be at least eight teams to hold the tournament. ODR has 20 paintball guns available on a first come first served basis. Indicate at time of registration if you will be using

your own equipment or need to reserve equipment. Cost to enter the tournament is \$55 per team and includes a bag of 500 balls and air for the day for each team member. The winning team will receive a free day of paintball (regular Saturday play) for all four team members valid for one year and includes equipment, field fee, air for the day and bag of 500 balls. Sign up deadline for the tournament will be the Tuesday prior and late registration and cancellation fees will be applied the Wednesday prior.

Call 454-6084 for more information about the paintball program or to sign up for these events.

Wingo Inn 454-3051

Check us out on Facebook! Arnold AFB Services Wingo Inn

Reservations for Wingo Inn can be made 120 days in advance. Room rates start at \$53.25 per night. Please call 454-3051 for reservations.

Lodging rates in-

creased. After four years without a rate increase, Air Force lodging rates have gone up, Air Force Personnel Center Officials said. The increase is necessary to ensure Air Force Lodging rates cover current operating and capital improvement costs, said Maj. Gen. A.J. Stewart, AFPC commander. The \$39 nightly room rate for a visiting quarters room is now \$53.25 and DV suites have gone from \$48.25 to \$66.75. Increased rates will fund costs for operations, room renovations and construction, Stewart said. As the Air Force works to improve business processes, implement efficiencies and maintain lodging operations in a constrained budget environment, other adjustments may be necessary, according to Col. Thomas Joyce, director, AFPC Services Directorate.

"We are committed to keeping room rates as low as possible while providing clean, comfortable, quality facilities," he said. "This is part of our commitment to caring for Airmen and we take that obligation very seriously. However, we must be

Deck the Doors Contest deadline approaching

Outdoor Recreation is conducting the Deck the Doors competition where squadrons, offices or groups may enter and decorate their office door with a holiday theme or message. All wanting to enter must call to indicate they are participating by Nov. 21. Remember to give your building number and location of the door. Doors used for this event must remain functional if they were prior to decora-

tion. Decorations on the door will be the only part judged. Any additional work on walls, etc. will not be judged with the door. Doors must be decorated by close of business Nov. 28. On Nov. 29 Outdoor Recreation staff will take pictures or come by with judges to view every door entered. Selections will be made for first, second and third place. Prizes will be a group function with Services

valued at \$300 for 1st place, \$200 for 2nd place and \$100 for 3rd place. These are for a one-time event with no carry over but may combine several activities within Services. For example, you may choose to play paintball and have lunch or go on a boat ride and have dinner, play golf and have lunch or any combination. The winners will be announced at the DOD Holiday Party on Dec. 7.

Check us out on Facebook! Arnold AFB Services Gossick Leadership Center

Office located at Arnold Lakeside Center

AEDC Woman's Club 393-2552

The AEDC Woman's Club will meet at 9:30 a.m., Dec. 4 at the Arnold Lakeside Center beginning with a meeting, program and followed with lunch.

The program will be a holiday bake sale and Christmas music by Kathy Martin. Kathy has a wonderful voice and also plays guitar. She writes much of the music that she performs. Reservations must be made in advance. Call or email Liz Jolliffe at 393-2552 or jajolliffe@aol.com.

This is a private organization which is not part of the Department of Defense or any of its components and it has no governmental status.

December Movie Schedule

Movie nights are Thursdays with movie start time of 6:30 p.m. and dinner available from 5-8 p.m.

Dec. 6 – "ParaNorman," rated PG (1 hr. 32 min) starring voices of Kodi Smit-McPhee, Anna Kendrick and Christopher Mintz-Plasse. A misunderstood boy takes on ghosts, zombies and grown-ups to save his town from a centuries old curse.

Dec. 13 – "Ice Age: Continental Drift," rated PG (1 hr. 28 min.) starring voices of Ray Romano, Denis Leary and John Leguizamo. Manny, Diego, and Sid embark upon another adventure after their continent is set adrift. Using an iceberg as a ship, they encounter sea creatures and battle pirates as they explore a new world.

Dec. 20 – "The Odd Life of Timothy Green," PG (1 hr. 45 min.) starring Jennifer Garner, Joel Edgerton and CJ Adams. A childless couple bury a box in their backyard, containing all of their wishes for an infant. Soon, a child is born, though Timothy Green is not all that he appears.

Dec. 27 - Closed

Dec. 6



Dec. 13



Dec. 20



The Green Scene

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The Services insert to the High Mach is designed to inform our customers of events and specials in Services activities. All program dates, times and prices are subject to change.



Thank You from *The Green Team*
Robbie Evans (manager), Doug Richards, Matt Gluck
931-454-6068



