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

By Philip Lorenz III

A recent landmark aerodynamic test on a scale model of the C-5M Super Galaxy in Arnold Engineering Development Complex’s (AEDC’s) 16-foot transonic wind tunnel (16T) was based on the flight log from the bottom line.

Jack O’Banion, Lockheed Martin’s director of air vehicle innovation and derivatives, said the high cost of fuel is driving the complex to research new ways to cut drag, improve fuel efficiency and lower operating costs.

“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 loadings acting on the wings for structural analysis and investigate the impact of the winglets on ultimate 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 surface testbody with a 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,” O’Banion said. “Aerodynamic testing to validate two winglets with the goal of reducing drag, improving fuel efficiency and lowering operating costs. (Photo by Rick Goodfriend)

Martin Sellers, a senior engineer with AEDC’s Flight Systems Testing group, said, “NASA contacted us because a similar test was conducted in [AEDC’s] LBL (16T) tunnel in 1992, in which an OSCAR satellite was flown.”

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 surface testbody with a 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 (16T) was based on the flight log from the bottom line. 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. (Photo by Rick Goodfriend)

NASA and AEDC plans for satellite demolition

Debris that is built to be dumped and designed to yield data on on-orbit collisions. (Image by Mark Werremeyer/University of Florida Space Systems Group)

Debris that is built to be dumped and designed to yield data on on-orbit collisions. (Image by Mark Werremeyer/University of Florida Space Systems Group)

Sellers, a senior engineer with AEDC’s Flight Systems Testing group, said, “NASA contacted us because a similar test was conducted in [AEDC’s] LBL (16T) tunnel in 1992, in which an OSCAR satellite was flown.”

Sellers, a senior engineer with AEDC’s Flight Systems Testing group, said, “NASA contacted us because a similar test was conducted in [AEDC’s] LBL (16T) tunnel in 1992, in which an OSCAR satellite was flown.”

Debris that is built to be dumped and designed to yield data on on-orbit collisions. (Image by Mark Werremeyer/University of Florida Space Systems Group)
November 16, 2012

Air Force Leaders Issue Veterans Day Message

**Commentary By Tech. Sgt. Mike Andriacchi**

AEDC, Arnold AFB, Tenn., Nov. 16, 2012

President Obama will declare Nov. 11, 2012—Nov. 17, 2012 as Veterans Week. This week we honor those service members who have and continue to protect our nation.

**About this publication** does not allow for the publication of any advertisement or promotion at the time of publication including, but not limited to, personal, real estate, consumer, or service advertisements. Additionally, no paid or sponsored content, including advertising, promotions, or other marketing materials, will be published in this publication.

**Vision**

- **AEDC as a world-class aerospace test center**
- **Supporting the nation**
- **Committed to excellence in all we do**

**Core Values**

- **Serving others**
- **Respect**
- **Integrity**
- **Safety**
- **Freedom**

**SOUTHWEST AFRICA (AFS)**

Both of my grandfathers and my uncle served in AFS. The last day my great-grandfather died, my dad had a yellow ribbon on the back of his car that read "Freedom Isn't Free." After he passed away and I brought the car from my dad to the garage, the yellow ribbon was still there, firmly belted. I wasn't sure I'd do any service myself. I went to college and married a woman who wasn't from the south. After we had our first child, I thought about my grandfathers and the sacrifices they made.

In light of recent world events, I am trying to make sure that all employees here at AEDC are aware of our Veterans Day observance, beginning with this article. I hope you will share these tips to increase awareness.

This article will address general security precautions and other tips that will address specific security concerns (e.g., suspicious activity, suspicious activity, suspicious activity).

- **General Precautions:**
- Do not share personal information with strangers.
- Be cautious of conversations (e.g., travel security, general security precautions, security and the serious business) over the telephone.
- When in a restaurant, always check in by telephone.
- When in a restaurant, always check in by telephone.
- Never leave young children unattended.
- Avoid isolated areas, stay close to friends, and demonstrate the neighborhood.
- Consider removing family name from home or company name, as well as personal information, from any vehicles to ensure countability.
- Do not have rank or duty uniform or other identifying information.
- Always have a back-up personal identification card with you.
- If a uniform is worn when traveling in a personal vehicle, carry your service ID, whistle, and exercise caution with the public.
- Always have a back-up personal identification card with you.
- Always have a back-up personal identification card with you.
- When making travel reservations, give your personal information, if possible, to airlines or other travel agencies.
- When in a restaurant, always check in by telephone.
- Never leave young children unattended.
- Avoid isolated areas, stay close to friends, and demonstrate the neighborhood.
- Consider removing family name from home or company name, as well as personal information, from any vehicles to ensure countability.
- Do not have rank or duty uniform or other identifying information.
- Always have a back-up personal identification card with you.
- If a uniform is worn when traveling in a personal vehicle, carry your service ID, whistle, and exercise caution with the public.
- Always have a back-up personal identification card with you.
- Always have a back-up personal identification card with you.
- When making travel reservations, give your personal information, if possible, to airlines or other travel agencies.
- When in a restaurant, always check in by telephone.
- Never leave young children unattended.
- Avoid isolated areas, stay close to friends, and demonstrate the neighborhood.
- Consider removing family name from home or company name, as well as personal information, from any vehicles to ensure countability.
- Do not have rank or duty uniform or other identifying information.
- Always have a back-up personal identification card with you.
- If a uniform is worn when traveling in a personal vehicle, carry your service ID, whistle, and exercise caution with the public.
- Always have a back-up personal identification card with you.
- Always have a back-up personal identification card with you.
- When making travel reservations, give your personal information, if possible, to airlines or other travel agencies.
- When in a restaurant, always check in by telephone.
- Never leave young children unattended.
- Avoid isolated areas, stay close to friends, and demonstrate the neighborhood.
- Consider removing family name from home or company name, as well as personal information, from any vehicles to ensure countability.
- Do not have rank or duty uniform or other identifying information.
- Always have a back-up personal identification card with you.
- If a uniform is worn when traveling in a personal vehicle, carry your service ID, whistle, and exercise caution with the public.
- Always have a back-up personal identification card with you.
- Always have a back-up personal identification card with you.
- When making travel reservations, give your personal information, if possible, to airlines or other travel agencies.
- When in a restaurant, always check in by telephone.
- Never leave young children unattended.
- Avoid isolated areas, stay close to friends, and demonstrate the neighborhood.
- Consider removing family name from home or company name, as well as personal information, from any vehicles to ensure countability.
- Do not have rank or duty uniform or other identifying information.
- Always have a back-up personal identification card with you.
- If a uniform is worn when traveling in a personal vehicle, carry your service ID, whistle, and exercise caution with the public.
- Always have a back-up personal identification card with you.
- Always have a back-up personal identification card with you.
- When making travel reservations, give your personal information, if possible, to airlines or other travel agencies.
- When in a restaurant, always check in by telephone.
- Never leave young children unattended.
- Avoid isolated areas, stay close to friends, and demonstr...
NASA plans for a satellite demolition test at AEDC

By Leonard David

DebrisSat is a 110-pound (50 kilograms) satellite planned to be a mission for a low-Earth orbit spacecraft in terms of its components and materials, to test the fabrication procedures. But once fabricated, will it be valuable?

The target will be the future of hypervelocity target aimed at destroying the target by obliterating DebriSat. It is expected to be a new standard for orbital debris.

Laboratory-based impact tests Liou pointed out that the desired target would be the target to analyze data and use the full impact test to enhance the hypervelocity environment.

Liou said that the debris target of a future hypervelocity satellite that’s a dome-shaped collision test in a SOCIT, short for Satellite Office of the NASA and DOD satellite breakup models. It was called SOCIT, short for Satellite Orbital debris Characterization Impact Tests. In one SOCIT ground experiment in 1992, the target was a 10-kilogram U.S. Navy test satellite built in the 1960s. But the SSN satellite’s orbital collisions were in the past. Present day satellites incorporate many different technologies and materials that spacecraft designed more than 40 years ago.

As new materials and new construction techniques are developed, there is a need to conduct additional experiments and use the new data to further enhance the breakup models, the Liou pointed out.

Integrity of the destructive outcome

A study of debris size data from the University of Florida, the Liou said, identified modern and materials than spacecraft built in the last 15 years for spacecraft ranging from one kilogram to 5,000 kilograms (2 pounds to 11,023 pounds). This study identified modern trends in material, and the quality, type and quantity of data used in the materials used in the fabrication to examine the integrity of the debris outcomes. With the exception of software, all aspects of the design, fabrication, and assembly integration and testing will be as rigorous as that of an actual flight vehicle, according to the Liou. DebriSat is now slated to undergo a hypervelocity impact test in early 2014, and 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, is leading the debris target.

Liou said that after the hypervelocity test, the University of Florida experts will collect the debris fragments down to roughly 0.08 inches (2 millimeters). That’s about as long as a nail. The dimensions of the resulting fragments will then be individually measured. That data will be delivered to NASA and the Air Force Space and Missile Systems Center.

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

Safeguarding personally identifiable information

By LaKisha Deon

100th Communications Squadron Knowledge Operations

By Raquel March

ATA offers personnel an opportunity to support Hurricane Sandy Relief

ATA Public Affairs

NASA and the Air Force’s Office of the Secretary of the Air Force have partnered to establish the Aircrew Workforce Pool to provide backup to employees who volunteer to support Hurricane Sandy Relief.

ATA employee group will present their experience and knowledge in support of the disaster, while finding ways to help those impacted by the devastation.

ATA offers personnel an opportunity to support Hurricane Sandy Relief

ATA Public Affairs

As part of the responsibility to safeguard PII, the 100th Communications Squadron Knowledge Operations (KOs) office will provide backup to employees who volunteer to support Hurricane Sandy Relief. The 100th Communications Squadron Knowledge Operations office offers the following services when employees are unavailable for their 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 location

Data storing involves large amounts of information, and it is important to be limited to personnel who have a need to know.

Do not store PII on websites or print media

As convenient as the Internet is a platform to recommend a location to store PII. Websites and social media outlets can be accessible by any employee’s activities. Limiting access to PII will increase security for employees and numbers of other demographic information, preventing loss of high-impact PII material and medical information.

Use smart measures when emailing

For emails containing PII material, secure email by encrypting and marking emails “For Official Use Only.”

November 16, 2012 • 3
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 31st Air Expeditionary Group this week to pump flood waters affecting New York coastal communities following Hurricane Sandy.

The 31st AEG assembled here Saturday, Nov. 3, with engineers from Joint Base Charleston, S.C.; Joint Base McGuire-Dix-Lakehurst, N.J.; 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 Hill Air Force Base, 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, 31st 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 deploy- ment, the 30th Mobile Military Wing gave us language 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 31st AEG is part of a joint service mission supplying necessary “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 Air Force and Prime BEF 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 disas- ter,” said Capt. Eric Rosen- leff, officer-in-charge of the 31st AEG engineers sent to Fort Hamilton, N.Y., originally assigned to the 823rd Red Horse Squadron out of Hurlburt Field, Fla. The 31st 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., Waste Water 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, or, in a word, a suction,” said Staff Sgt. Paul Clayton, originally of the 823rd Red Horse Squadron out of Hurlburt Field, Fla. “Each of these tanks being cleared holds 500,000 gallons of water and blockages in these three tanks severed 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 866th CES from Mountain Home AFB, Idaho. “Our team helped local residents pump out driveways and submerged areas so residents could salv- age 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 parking garage in Brooklyn.

“Local residents have tried for the last week to pump the parking ga- rage out with little suc- cess,” said Tech. Sgt. James Dulson, team lead originally of the 633rd CES from Langley, Va. “Our team had it pumped half way down in the first couple hours before iden- tifying 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

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

Beginning Nov. 22-24, the Visitor Center will close one day at a time for Thanksgiving. The Visitor Center will also close Dec. 22- Jan 1.

AEDC’s Visitor Center provides services to AEDC personnel, military, retirees and other base visitors. The Visitor Center has two main functions for mili- tary identification (ID) ser- vices 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 civilian employees, contractors, retirees and eligible family members.

Base entry services in- volve providing validation and identification for all employ- ees and visitors for the base mission area, the Arnold Lakehurst Center Badge and the Arnold Community Council members.
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.

Woodward noted that the transformation will take a concerted effort at all levels. “That’s exactly why a safety culture must be emulated 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.”

Woodward noted that the transformation will take a concerted effort at all levels. “That’s exactly why a safety culture must be emulated 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 preserving 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 safety programs and policies.
Airman's story."

In addition to stunning photography, copious 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 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 pieces 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 budget for all flagship service magazines. At that time, the Airman editorial staff and design team were tasked to produce 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 kind 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."

"While Borland and the design team worked on the technical side to get the Airman photojournalists to shoot breath-taking still photos and Airman video in the field. In rebuilding, Borland and the creative staff was also working 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 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.

"From the beginning, Airman has always focused on people, cool aircraft and unique missions of the Air Force. One of the most important technological advances Borland brought to the Airman team was non-narrative video storytelling using digital single lens reflex, DSLR cameras. Until recently, most digital cameras were usually used by professional photojournalists to shoot individual still frames. Now some of these cameras 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 few weeks of October, with many readers already downloading it from their app stores. Early adopters and those 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 acts as an app – what a fantastic way to read these stories and showcase the amazing photography by Air Force photojournalists," said Linda D. Epstein, McIlvain Tobyahn 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

U.S. Air Force Graphic/Luke Borland
Joint base San Antonio-Randolph, Texas (Air Force) – All government-owned and general service administration vehicles at Joint Base San Antonio-Randolph, Texas, are scheduled to receive an automatic information management system known as AIM2.

AIM2 is a device that collects real-time data that will help fleet managers avoid wasting fuel 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 focus of $4.6 billion, said Maj. Gen. Alejandro Cerratos, Air Force vehicle energy 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 VII 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 consumption per vehicle, Billy Hampton, 93rd Logistical Readiness Squadron vehicle management 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 diagnostic computer, so the vehicle management and analysis team can print out instant reports with diagnostic codes and make the most efficient repair.

The modules, wires connected to a gas piping and circuit board, are used at Joint Base Charleston, S.C.; Joint Base McGuire-Dix-Lakehurst, N.J.; and Egin AFB, Fla., as part of the Air Force’s transition to becoming cost-conscious with resources, said Jim Mun, one of the contractors hired to install the new devices in the 396 GOVs and GSA vehicles. The contractors will re-man on the basis until December, but will provide AIM2 meaning to vehicle maintenance members for future installation in new vehicles.

New vehicular device saves money Air Force-wide

“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 1,400 miles between AEDC and Panama because he has the capacity to contribute to his work with the mission as well as a multi-cultural visit from mission in Panama.

Steve Macon, an AEDC first degree fire crew chief and emergency medical technician, recently returned from Valdell 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 Valdell, Ga.,” Macon said. “People went from the Church of Christ all over the United States. I went to serve others and to assist with a medical clinic in the entire area.”

The main reason we go is (found 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 need to stay healthy. You have to be in a position where the physical needs are taken care of before you can hear the gospel. I was responsible for patients at the clinic, and preach the gospel to all those in need.”

Although electricity wasn’t available in many parts of the clinic, the mission group was able to provide care and receive meals - one prepared over open fires.

“We had to cook spaghetti on top of lava rocks that had a fire built around it,” Macon said. “I believe they cooked 15 blocks of spaghetti for us that day and you waste nothing. If you have leftovers, it was made into something for the next meal.”

Macon also had the luxury of drinking water in the remote area.”

The clinic provided free medical supplies for the mission group. Air conditioning wasn’t available and when it rained it caused the facilities to get 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 meetings 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 consideration when participating in a mission trip. Macon funded his trip with donations from his church congregation and by cleaning gutters and grassing 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 Odd Hollown Church of Christ Mission Fund also assisted with funding. Macon has worked at AEDC for 28 years and resides in Winchester.
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 lighting device fixtures being purchased.

According to Jim Jacobson, 21st Civil Engineering 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 replace 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 roadsides 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 Jacobson, 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,” Jacobson 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, Colorado Springs, Colo., 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, Colorado Springs, savings from the lights will be $380,000 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 has a $152,000 savings in operations 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 Jacobson, once the lights are installed, they will also illuminate to ensure proper function of the lights and replacements will be made when 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.


Year aircraft, known as AF-1, achieved the instrumentation 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.
Through Airmen's Eyes: Minot missileeer fires for more

Barksdale Air Force Base, La. – A previous Global Strike Challenge competitor, Maj. Shawn Burnside, Barksdale’s 91st Missile Wing missileer, learned early in his career the importance of always being prepared.

During the 2011 competition, which recognizes the “best of the best” among the Force Global Strike Command’s bomber, missile, combat, maintenance and security forces personnel, Barksdale was a part of a team representing Minot’s 75th Missile Squadron as they competed for the distinction of “best missile crew in the Air Force.”

“The first year I competed as a crew and I was very, 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 felt like I had a team that had the potential to be that number one crew.”

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

“One of the things you find missiles 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 to help my fellow crew members work through things they hadn’t seen before, and being able to explain concepts that were a little more complex that were a little more complex, I think, really helped me develop.”

That desire to be the missile crew community and a chance to become the top crew in AFGSC drove Burnside to compete for a spot on the team again for this year. Competitions 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 Simulators, Trainers, usually six days a week.

In addition to the intense training, the crews still had annual treatments that filled.

Between training and real-world requirements, Burnside said, the team was always ready when they got one day off a week.

“It was during that first week of training that Burnside’s life would change forever,” he said.

“My personality is always one to hope for the best,” he said. “As soon as I heard there was a nodule, I immediately started making plans in my head for whatever the result would be; how’s it going to impact me? How’s it going to be an impact, can I handle that whatsoever it may be?”

Burnside said he knew the nodule was cancerous due to the fact that it had grown in a short period of time. But, as he also knew the family, he couldn’t ask for better in this particular doctor, especially in the thyroid specialist. 

“The worst that could happen,” he said, “was that it would be cancerous. He was also telling me that it is something that they saw fairly often, and they had to keep an eye on it, but it was never cancer.”

During his yearly physical health check, Burnside said he was to have his yearly physical health check, and that was around the 17th of the month he had his appointment around 2 p.m., so I could get up early, go to my appointment and then go to training.”

Burnside said he was relieved - but a bit nervous - about the surgery.

“A 3rd LT John Blanchard, 91st Missile Wing, was selected to fly the missile during the competition again, I would in a heartbeat. I was very excited it was time to start treatments, it all came together. It was important for my girlfriend to be there in person for the competition, so he continued to fly it. If the nodule was not cancerous, it was told to be removed, and was quickly scheduled for a complete thyroidectomy. He was then referred to a radio nuclide scan for a plan of radiation treatments.

For several weeks, Burnside was put on a strict no-diet plan, which essentially depleted 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 credited his 10-months of training with keeping him on the diet, and encouraging him to keep going, and both him and his family, including his Air Force friends, with helping him stay optimistic.

“Being in a community like the Air Force, would have been a lot harder, we had to change,” he said. “You really see that when one person in that fam- ily, his family. When you see the air force, it’s a career, but it’s also lifestyle, it’s a family.”

By the time the results of the biopsy did come back, there was enough cause to be wonders of the thyroid 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 actually came back saying the nodule was benign.

While all of this was going on, Burnside was still training for Global Strike Challenge, while he said he never considered dropping out of the competition.

“Once Burnside had recovered from his surgery and he was able to compete in the weeks of the no-side diet, it was time to start treat-

ment again,” he said. “You can’t really win when you have one person in that fam- ily, his family. When you see the air force, it’s a career, but it’s also lifestyle, it’s a family.”

By the time the results of the biopsy did come back, there was enough cause to be wonders of the thyroid 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 actually came back saying the nodule was benign.

While all of this was going on, Burnside was still training for Global Strike Challenge, while he said he never considered dropping out of the competition.

“Once Burnside had recovered from his surgery and he was able to compete in the weeks of the no-side diet, it was time to start treat-

ment again,” he said. “You can’t really win when you have one person in that fam- ily, his family. When you see the air force, it’s a career, but it’s also lifestyle, it’s a family.”

By the time the results of the biopsy did come back, there was enough cause to be wonders of the thyroid 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 actually came back saying the nodule was benign.

While all of this was going on, Burnside was still training for Global Strike Challenge, while he said he never considered dropping out of the competition.

“Once Burnside had recovered from his surgery and he was able to compete in the weeks of the no-side diet, it was time to start treat-

ment again,” he said. “You can’t really win when you have one person in that fam- ily, his family. When you see the air force, it’s a career, but it’s also lifestyle, it’s a family.”

By the time the results of the biopsy did come back, there was enough cause to be wonders of the thyroid 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 actually came back saying the nodule was benign.

While all of this was going on, Burnside was still training for Global Strike Challenge, while he said he never considered dropping out of the competition.

“Once Burnside had recovered from his surgery and he was able to compete in the weeks of the no-side diet, it was time to start treat-
Tuskegee, Ala. (AFNS) – Retired Lt. Col. Herbert Carter, 91, 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, 1921, 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 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 beat me.”

In the 1940s, African-Americans were prohibited from serving 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 later 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 from flying with the Air Force made me volunteer for regular service, and I stayed in for 27 years,” he said.

Hired 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.

Original member of the Tuskegee Airmen dies

Who follow Air Force and Airman social media outlets were given downloadable 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 Lin-da D. Epstein, McClatchy Tribune Publisher, the Service se-nior 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 to read it from cover to cover,” added Epstein.

In the November 2012 issue, the cover story is “Doming 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 fea-tures, including “Medics in Mayhem,” which covers TACP Airmen who five somewhere in between the Air Force and the Army and “Refueling the Field,” about 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 feature 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 Visions,” which showcases the Air Force through images. For me personally, it was an honor to be able to military medical personnel training on a civilian trauma unit. “Outside the Wire,” about TACP Airmen who five somewhere in between the Air Force and the Army and “Refueling the Field,” about 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 feature 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 Visions,” which showcases the Air Force through images.
**Children’s Christmas Party returns Dec. 2 to AEDC**

The annual Children’s Christmas Party will be held from 5 – 1:30 p.m. at the Arnold Lakeside Center (AEDC) for ages 4 and under. This event is free and open to all AEDC employees (active duty military, civil service, contractors), National Guard, Reserve military and their immediate families (includes grandchildren, nieces and nephews).

Some of Santa’s elves will also be at 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. Shriners’ Tin Lizzy show, a special Santa Hotline, 454-SNTA (7682), will have a number for 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 a phone number. Call 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 4-10:30 p.m. each day. Teams will be made up of 6-10 players with six players competing on a side and the others as substitutes available.

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.

**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 Cavey Castle lobby. There will also be a fresh fallen snow, horse drawn carriage rides, cakes and drinks. The tour leaves Friday at 8 a.m. and 3 p.m. plus Sunday at 10 a.m. and 3 p.m. The cost is $30 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.

**Outdoor Rec heads to Gatlinburg for Ski Trip**

We will leave Friday at 8 a.m. and once everyone is settled into their rooms we will hit the slopes. Skis times on Friday are 3-11 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.

Check us out on Facebook! Arnold AFB Services Cafe 100, Arnold AFB Services Information, Tickets and Travel

**FLYERS FOR AFB SERVICES**

- AEDC Services Arnold Lakeside Center and Arnold AFB Services Information, Tickets and Travel

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

**Outdoor Rec heads to Gatlinburg for Ski Trip**

We will leave Friday at 8 a.m. and once everyone is settled into their rooms we will hit the slopes. Skis times on Friday are 3-11 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.
Nonappropriated Funds Human Resources:
Monday through Friday, 7:30 a.m. – 4 p.m.

Recycling:
Arnold Golf Course:
Pro Shop & Driving Range, 8 a.m. – dusk. Driving Range open 24 hours with prepurchased key card.

Outdoor Rec:

Barber Shop:
by appointment – Monday, Tuesday, Thursday & Friday, 8 a.m. – 4 p.m.

Information, Tickets & Travel (ITT):
Tuesday through Friday, 10 a.m. – 3 p.m.

and Saturday, 5-10 p.m. Social Hour: Friday, 4-6 p.m. Movie Night: Thursday, 6:30 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.

Arnold Lakeside Center:

Services Chief – 454-7779
Area code 931    DSN 340

Congratulations and thank you to all who participated. No federal endorsement of spon-
First Friday Jam will be Dec. 7, beginning at 7 p.m. The event will feature live music, food, drink, prizes and more. Join in with the fun, listen, dance and have a great time.

December Movie Schedule

**Deck the Doors Contest deadline approaching**

Outdoor Recreation is conducting the Deck the Doors Contest where squadrons, offices, work areas, dorms, etc., will be judged based on how the exterior doors have been decorated. Doors must be decorated by close of business Nov. 26. On Nov. 29 Outdoor Recreation will take pictures of those rooms that were entered and have been decorated. Prize winners will be announced in a meeting, program and followed with lunch.

The winning program will be a holiday bake sale and Christmas music with Kathy Martin. Kathy has a wonderful voice and always plays guitar. She writes much of the music that she performs. Registrations must be made in advance. Call or email Liz Jolliffe at 393-2552 or jajolliffe@amc.af to register.

This is a private organization; you must be a member of Department of Defense and residing within the area to participate. For more information, contact Cindy Morris at 454-4003.

**Check us out on Facebook!** Arnold AFB Services Goswick Lakeside Center

Office located at Arnold Lakeside Center 2080

AEWC Club's Lodging

393-2552

**Trivia starts at 6:30 p.m.**

**Paintball**

When the day arrives, a native of the door will be the Doors competition winner. Paintball and have lunch. For example, you may combine several activities within Services. For example, you may choose to play paintball and have lunch or have dinner, play golf and have lunch or any combination. The winners will be announced at the DOD Holiday Party on Dec. 5.

**Paintball**

Check us out on Facebook! Arnold AFB Services Goswick Lakeside Center

Office located at Arnold Lakeside Center 2080

AEWC Club's Lodging

393-2552

**Deck the Doors Contest deadline approaching**

Outdoor Recreation is conducting the Deck the Doors Contest where squadrons, offices, work areas, dorms, etc., will be judged based on how the exterior doors have been decorated. Doors must be decorated by close of business Nov. 26. On Nov. 29 Outdoor Recreation will take pictures of those rooms that were entered and have been decorated. Prize winners will be announced in a meeting, program and followed with lunch.

The winning program will be a holiday bake sale and Christmas music with Kathy Martin. Kathy has a wonderful voice and always plays guitar. She writes much of the music that she performs. Registrations must be made in advance. Call or email Liz Jolliffe at 393-2552 or jajolliffe@amc.af to register.

This is a private organization; you must be a member of Department of Defense and residing within the area to participate. For more information, contact Cindy Morris at 454-4003.

**Check us out on Facebook!** Arnold AFB Services Goswick Lakeside Center

Office located at Arnold Lakeside Center 2080

AEWC Club's Lodging

393-2552

**Deck the Doors Contest deadline approaching**

Outdoor Recreation is conducting the Deck the Doors Contest where squadrons, offices, work areas, dorms, etc., will be judged based on how the exterior doors have been decorated. Doors must be decorated by close of business Nov. 26. On Nov. 29 Outdoor Recreation will take pictures of those rooms that were entered and have been decorated. Prize winners will be announced in a meeting, program and followed with lunch.

The winning program will be a holiday bake sale and Christmas music with Kathy Martin. Kathy has a wonderful voice and always plays guitar. She writes much of the music that she performs. Registrations must be made in advance. Call or email Liz Jolliffe at 393-2552 or jajolliffe@amc.af to register.

This is a private organization; you must be a member of Department of Defense and residing within the area to participate. For more information, contact Cindy Morris at 454-4003.