A collaboration between AEDC and graduate students at the University of Tennessee Space Institute (UTSI) resulted in the most recent of three cryo-contamination experiments at AEDC’s small ultra high vacuum (UHV) chamber. Researchers at both organizations are calling the joint venture a success.

The researchers used a laser to study detection and possible mitigation of ice build-up on components in the UHV chamber. Similar to frost on a windshield, cryo-contamination inside space chambers is a real problem. The cryo-deposits cause the chamber optics to degrade and result in other problems for the chamber’s mechanical components.

Dr. Terence Mullen, an assistant professor at UTSI and a principal investigator, said the research went extremely well.

“We’ve had issues with the deposition process that include ATA, Air Force civilians and UTSI personnel working side by side on the project at various times, and I think it’s gone extremely smoothly,” he said. “It has allowed us to take some ideas that we’ve had at UTSI and use the UHV chamber over on base to allow us to test some of these capabilities in an environment and for applications that are of interest to the Air Force.”

The initial results that we got from the optical detection system basically confirmed what we got in the second test, and we had a new laser in our optical setup that provides us higher resolution, so it gives us more details of what we’re measuring. Things look very consistent so far even though we haven’t completed our analysis, but initially things look very good.”

Dr. Howard Lowry, an ATA Technology and Analysis Branch Technical Fellow who oversees the experiment, agreed.

“They have actual data that will give us information on the deposition versus time — how much water vapor is accumulating versus time,” he said. “The real detail has yet to be pulled out of all the data, but just right away we’ve learned something. We hope to contribute to the literature that as well. I think it’s definitely a success.”

Dr. Lowry said good data were obtained from the first two tests, but the recent one, completed Jan. 18, was even more sophisticated. 

“In the previous tests we had trouble getting the deposition rate we were trying to get the contamination on as cold as we wanted, but we did get some data,” he said. “This test we worked to obtain better cooling to those areas and we got them down another 8 degrees.”

By Shawn Jacobs

AEDC and UTSI cryo-contamination research heralded a success

Area Chamber of Commerce CEO receives Air Force community service award

By Philip Lawrence III

Secretary of the Air Force Michael Donley and Air Force Chief of Staff Norton Schwartz recently presented Walter Wood, Arnold Community Council member and Shelbyville-Bedford County Chamber of Commerce corporate executive officer, with the Air Force Distinguished Public Service Award.

The occasion for the presentation was the competition, see the story on page 8. (Photo by Jacqueline Cowan)

Secretary of the Air Force Michael Donley and Air Force Chief of Staff Norton Schwartz present Walter Wood, Arnold Community Council member and Shelbyville-Bedford County Chamber corporate executive officer, with the Air Force Distinguished Public Service Award. (U.S. Air Force photo/Scott M. Ash)

Fellows nominations due March 23

AEDC is currently accepting nominations for the 2012 Fellows Program with submissions due no later than March 23.

Established in 1989, the Fellows program recognizes AEDC individuals who have made substantial and exceptionally distinguished technical contributions to the nation’s aerospace ground testing capability at AEDC.

Since the inception of the program, AEDC has bestowed the center’s highest honor to a grand total of 72 individuals (Fellows, Lifetime Achievement Fellows and Honorary Fellows). AEDC Fellows nominations may be submitted by any present or former AEDC government or operating contractor/subcontractor personnel assigned or previously assigned to AEDC. The nomination must be submitted by any present or former AEDC government or operating contractor/subcontractor employee.

AEDC Lifetime Achievement Fellows are reserved for exceptional candidates and are not necessarily selected each year. All current or retired military, civilian and operating contractor/subcontractor personnel assigned or previously assigned to AEDC can be considered candidates for selection as an AEDC Fellow. Candidates qualified for consideration as an AEDC Fellow must personally have made sustained, notable contributions in aerospace ground testing at AEDC. AEDC Lifetime Achievement Fellow nominations may be submitted by any present or former AEDC government or operating contractor/subcontractor employee.

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AEDC Honorary Fellows are reserved for consideration as an AEDC Fellow in any area relevant to the AEDC mission. Only AEDC Fellows may submit a nomination for an AEDC Honorary Fellow. AEDC Honorary Fellows are reserved for exceptional candidates and are not necessarily selected each year. Candidates qualified for consideration as an AEDC Honorary Fellow must have made sustained, notable contributions in aerospace ground testing at AEDC. AEDC Honorary Fellow nominations may be submitted by any present or former AEDC government or operating contractor/subcontractor employee.

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AEDC operates nuclear test facilities, research and development activities, and test and evaluation programs to ensure the safety and reliability of U.S. nuclear forces and to provide the nation’s aerospace ground testing capability at AEDC. AEDC is currently accepting nominations for the 2012 Fellows Program with submissions due no later than March 23.

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FUNDAMENTALS FOR SUCCESSFUL MENTORING

By Shirley News Force Development/Travel Management

WASHINGTON—A classroom-sized, designed, launched, relaunched and paired a part of many managers for over 25 years. My purpose is to be frank at this point I have some pretty strong biases about the way we train and execute mentoring programs and a pretty strong bias about the many ways we acquiesce for so many. They almost seemed to drop out of sight and for, there but for some of them. My own personal philosophy about how to construct a mentoring relationship is rooted in these exceptional successes.

What do you talk about?

A mentor works in this mentoring relationship typically about the strengths and weaknesses of leadership, role-modelling damaging behavioral patterns, addressing gaps in leadership and management skills, or making the position/challenge of responsibility. Our people can be accomplished with a mentor either internal or external internally, and externally, I prefer. I often say that a mentor is the only person you can have in a mentoring relationship. If engaging in politics seems distasteful, then think in terms of influences with the organization, dealing with difficult situations, maintaining integrity and ethical behavior, mentoring relationship as a way to deal with people fairly, and have a reputation for accountability, can do something great, as I have seen an opportunity to deal with us.

At the Tullahoma office is located at 100 Kindel Drive, Tullahoma, Tenn. 37389-2212. Editorial and distribution offices are located at 9600 Air University Avenue, Suite 300, Washington, D.C. 20333-0171. The Tullahoma office is published by Kathy Gattis, ATA Public Affairs, 7020 Courthouse Road, Suite 405, Alexandria, VA 22302. Questions about subscriptions or content should be directed to (931) 455-4545.

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First female TSU president speaks at African-American History Month event

By Philip Loria III

In observance of African-American History Month, AEDC featured TSU Engineer Dr. Portia Shields, Tennessee State University’s (TSU) first female president, as the guest speaker for the event luncheon at the Arnold Lakeside Club Feb. 16.

This year’s theme was “Black Women in American Culture and History.”

For Reginald Floyd, an AEDC Air Force Public Affairs Agency Branch airpropulsion engineer, Dr. Shields’ presentation resonated on several levels.

“She did a very good job of speaking to the topic of the day, as well as black history in general,” he said. “Her thoughts on the importance of maintaining quality and ready force, that accountability is the number one issue right now.”

Floyd, who invited Dr. Shields to speak at the luncheon at AEDC, said, “I am a proud 2010 graduate of Tennessee State University, where I received my Bachelors’ degree in Mechanical Engineering.”

Before her presentation, Dr. Shields spoke about the gender gap in upper education.

“More black women are graduating from college than ever before; more are going,” she said. “Yet, the new strategic environment demands that we meet the expectations for our and her daughters. They limited her TV watching and required her to first do homework when she came home from school. They also required her to do chores and they offered her constructive role models as well as breadwinners, and also large roles in her family’s development.”

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Arnold is on the forefront, Dr. Shields said, “This year’s theme is a celebration of the contributions to the nation.”}

Dr. Shields added that it is important that we continue to share that information and understand where you come from and continue to share that information with your family, generation after generation.

“The next testing is really critical,” he said. “You detect the problem, and then the second step is to find out how to prevent it or slow it down.”

“We have some other work that we need to start working on, so we want to get ahead and get this one done and move to the next thing on the list,” he said. “Hopefully, we can continue with this work relationship with UT. We’re under an agreement for just the fiscal year right now, and we’re trying to keep that going. It’s useful and I’m sure we can get money to continue that work.”

Moeller said he, too, was looking forward to further collaborations. “I’ve learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have learned a lot [and] we have 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WRIGHT-PATTERSON AIR FORCE BASE, Ohio (AFNS) – Officials at the Aeronautical Systems Center here issued a Military Flight Release (MFR) that will allow the F-35A Lightning II fighter to begin initial operations at Eglin Air Force Base, Fla. This decision was reached after an airworthiness board conducted an assessment that evaluated potential risks and the corresponding mitigation actions to conduct unmonitored flights.

Flying the Air Force variant of the joint strike fighter will increase pilot and maintainer familiarity with the aircraft, exercise the logistics infrastructure and continue to develop aircraft maturity.

These initial F-35A flights will be limited, scripted, conducted within the restrictions and stipulations of the MFR and flown by qualified pilots, officials said. “The Air Force, Joint Strike Fighter Program Office and other stakeholders have painstakingly followed established risk acceptance and mitigation processes to ensure the F-35A is ready,” said Gen. Donald Hoffman, the commander of Air Force Materiel Command, the parent organization of ASC.

The assessment was conducted with airworthiness engineering subject matter experts within ASC and was fully coordinated with the F-35 Joint Strike Fighter Program Office, Air Education and Training Command and other expert participants. The Air Force is confident the aircraft is ready to fly in a safe and efficient manner, Hoffman said. (Courtesy of 88th Air Base Wing Public Affairs.)
AEDC’s Crawford Parrish aims high

By Philip Larrea III

Aerospace Testing Alliance

Crawford Parrish has always aimed high, both literally and figuratively. “I wanted to learn to fly the airplane and to rocket at 600 miles per hour!” he said from the time he was five years old. It was at this young age that he dreamed of being a fighter pilot and science throughout secondary school. Parrish graduated from University of North Carolina at Chapel Hill with a bachelor’s degree in chemistry. He joined the Air Force and served as a weapons systems officer or WSO (pronounced wise) on the F-111 Aardvark, a long-range fighter and tactical strike aircraft. “Flying 500 feet above the ground at 600 miles per hour is fun,” he said. “I have seen the world from a second per second is a challenge.” A WSO works closely with the pilot to ensure and maintain crew efficiency, situational awareness and mission effectiveness. If the pilot is too busy leading the commander, the WSO has the additional responsibility to communicate the pilot's intentions. A WSO is generally a young officer, said Parrish Sr., a buyer for Boeing's purchasing department. He took it upon himself to fill in the gaps. During summer break my dad taught us to read and write Greek, which arrives early, early training. At the time, I did not appreciate his efforts to teach us to do more than what was required, but I have since come to understand why he did it, and I am thankful.”

Around two years later, the family moved to Florida, where Parrish Sr. served as a weapons systems officer on the space shuttle. During Lenten studies for the services do business, he said. “I came to work for the Air Force because I care about the nation. Modernization will not wait and remains essential as it is in this new generation, high-impact systems that work. The Air Force can continue to provide the capabilities on which the nation relies, he said.

Our systems are growing older and new technologies are being fielded in regions of critical interest, he said. “More and more I find myself curious about history, more about why things happened as opposed to a very basic timeline of when things happened,” Parrish Jr. said. “I can thank my dad for that, for he has never would give me a simple answer.”

He always explained to me the circumstances leading up to an event, more than one potential perspective on it. He told me the circumstances leading up to an event, more than one potential perspective on it. "I spent a year working with the crew of the space shuttle, where the verge carried us to create more jobs in the world. It is one thing completely different," said Parrish Sr. "I have always found it to be supportive and helpful; I feel he is in my heart to his service to our Lord." Another member of the congregation, Linda Love, who works at AEDC’s Technical Library, shares a story of Parrish Sr. "He is very knowledgeable about the Bible and all things Episcopalian," Love said. "It is his role as an assistant priest, mostly in the service, but sometimes in helping parishioners who have a need, like sick or death. He also teaches adult Christian education and has also done special lectures and studies we have had in the past, Lenten studies for example."

With both his children grown, married and raising their own families, Parrish Sr. still aims high. He enjoys reading science fiction, historical and scientific non-fiction and mysteries in his spare time. His interest in the past has particularly resonated with his son. "More and more I find myself curious about history, more about why things happened as opposed to a very basic timeline of when things happened," Parrish Jr. said. "I can thank my dad for that, for he has never would give me a simple answer."

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When Crawford Parrish Sr., AEDC’s acquisition program manager and a verger at St. Barnabas Church in Tullahoma, confer with his wife Fran, before an evening service. (Photo provided)

Crawford Parrish Sr., AEDC’s acquisition program manager and a verger at St. Barnabas Church in Tullahoma, confer with his wife Fran, before an evening service. (Photo provided)
Some students chose to focus on its maximum sustained height. amount of time it took to reach the height it traveled to and the in the weight of their payload, on an equation that factored on material that we thought we could use, if one of us came up with a mate- was looking at material ideas, and solutions. them to come up with creative budget to work with and flimsy to give the students a shoestring went in the boxes. The idea was was in charge of picking what engineer in AEDC's analysis group, given to work with. just a few of the items they were pencils and pipe cleaners were more like the leftovers found in Aedes AEDC engineers and looked at half a meter the materials the 42 students worked with were chosen by Nissa Smith, an aerospace en- gineer in AEDC's analysis group, was in charge of picking what want in the boxes. The idea was to give the students a shooting budget to work with and flimsy materials that would challenge them to come up with creative solutions. was a group of us that won a lot of material ideas, and if one of us came up with a mate- rial that we thought we could use, we stuck it in there.” Smith said. The students were scored on an equation that factored in the weight of their payload, the size it needed to be and the amount of time it took to reach its maximum sustained height. Some students chose to focus on different factors in order to score more points. Huntland High School senior Ethan Scott said he enjoyed building his team’s elevator and the teamwork aspect, but he was more focused on getting his team’s elevator to work. It failed during the test portion of the competition, but that didn’t diminish his spirit. “I’ve learned to accept failure and laugh about it,” he said. Moore County High School junior Dakota Bateman said he felt the pressure of coming up with a design and then trying to execute it with the materials within the two-hour time limit. He and his partner worked down to the wire. Despite the pressure of work- ing with the materials they were given, Bateman says he enjoyed working with his hands – part of the reason he’s already planning on a career in engineering. “I like everything to be exact,” he said. "In reading and English, it’s all opinionated. In math, it’s the same thing for everybody. Absolute.” Not all of the designs carried out their objective, but Smith said exposing students to a side of engineering they may not always see at the high school level was the most important part of the competition. Most people think engineer- ing is just really complicated and boring, and by having fun things like this to do, they can realize that it’s not just sitting at a desk and coming up with equations and calculations,” she said. “You can actually think and do fun projects.” Moore County High School physics and chemistry teacher Deep Price said that’s why he brings students to the competition and has every year for sev- eral years. He said he sometimes chooses students for the compe- tition who aren’t necessarily interested in engineering, but he believes they should be exposed to it as a career possibility. “The one thing I’ve noticed over the years is it makes it kind of cool to be smart,” Price said. “I think they feel like they’re repres- enting that crowd when they come in here.” AEDC Commander Col. Mi- chael Brewer was one of the judges for student presentations. When all of the teams had turned in their devices, he spoke to them and encouraged them to pursue a career in engineering because of its ability to have an impact on a large number of people. “We all drove here in a car or bus,” Brewer said. “We call have phones at work and televisions. And everything that makes our life as comfortable as it is was developed by scientists and engi- neers and mathematicians. It’s the engineers and scientists who – no kidding – will reshape and change the world.” The top three teams were awarded Amazon Kindle e-read- ing devices. Haena Lee and Tyler Burns from Webb School came in first place, Webb’s Tianyuen Wang and Dongwon Choi came in second place and Moore County High School students Erica Lim-baugh and Sarah Raby placed third. The competition and other National Engineers Week activi- ties were sponsored by the Tul- ishaa chapter of the Tennessee Society of Professional Engineers (TSPE), the Highland Rim chap- ter of the American Society of Mechanical Engineers (ASME), the local Tennessee chapter of International Test and Evaluation Association (ITEA) and the Ten- nessee section of the American Institute of Aeronautics and As- tractorics (AIAA).

Students put skills to the test during design competition
Engineer-for-a-Day

Photos by Rick Goodfriend

Maynard Schewe, ATA instrument technician, talks about his role at AEDC to Eric Nelin and Trevor Summers from Tullahoma High School.

From left, Cole Johnson, Grundy County High School, Dylan Pew from Franklin County High School and Jon-Luc Roberts from Grundy County High School listen as Dusty Vaughn, ATA project engineer at APTU, explains the contour and throat size of the 16.63 area ratio (AR) nozzle sitting on the floor. Vaughn also described the test process to the students, explaining how simulated flight test true temperatures and true pressures are achieved when the nozzle is installed on the Combustion Air Heater (CAH).

Gene Klingermsmith, AEDC Navy test project manager, uses the turbine engine as an example to explain the feature of the large turbine engine test cell C-1 for military engines in the Aeropropulsion System Test Facility.

Local area high school students ask Carrie Reinhardt, technology project manager for AEDC’s Test Technology Branch, and other career panel discussion members questions about their work during the 2012 Engineer-for-a-Day event.

Jacob Cashion, a mechanical design engineer with ATA’s Test System Design branch, explains the roll gear drive mechanism to (from right) Maxwell Richards, Jacob Cashion, a mechanical design engineer with ATA’s Test System Design branch, and Sidney Durant, Sewanee St. Andrews High School.
Marine Corps squadron gives F-35B an official rollout

By Chrisya Cuttica


“These Marines are part of the cutting edge of marine aviation,” said Gen. Joseph Dunford, Assistant Commandant of the Marine Corps and presiding officer for the service’s historic event. “The ability to combine supersonic flight and radar-evading stealth with the duct-take off and vertical landing capability needed aboard an amphibious warship is among the greatest innovations the aviation community, much less Marine aviation has ever known. Combined with the Navy’s F-35C carrier variant of the aircraft, the aircraft gives the nation the double number of capital ships capable of operating a 5th generation, multi-role fighter.”

All three variants of the joint strike fighter will be based at the 332nd Fighter Wing where each service will train maintainers and pilots at the F-35-Academic Training Center and fly aircraft from operational squadrons. A total of 59 aircraft will be stationed at Eglin in the future. Currently the wing has six F-35As and three F-35Bs.

District 1 Congressman Jeff Miller called the F-35 the “workhorse of joint and allied forces for decades to come” during his speech commending the synergy of Eglin’s units at the historic ceremony. Echoing the advancement in technology during the last century, Robert Stevens, Chairman and Chief Executive Officer of Lockheed Martin, said industry partners pledge to be just as faithful to the mission as their military counterparts are to the mission.

“VMAFAT-501 is on the forefront of one of the most significant transition periods Marine aviation has ever known, certainly one of the most important in a long time, maybe since the introduction of the helicopter,” said Dunford.

“Exciting” was the one word the squadron’s commander repeated.

“We understand how critical the jet is, a significant asset for our country,” said Marine Lt. Col. David Berke. “It’s a significant jump in technology and change in how we operate. We are breaking new ground, training and learning as much as we can.” Since October 2009, each service’s best in their aviation community have worked alongside contracted logistic support to provide a quality training environment for U.S. and allied forces’ pilots and maintainers at their collocated facilities in the 33rd FW.

Distinguished visitors, civic leaders and Eglin military family attending the historic ceremony were left with a sense of how important the F-35 program is to the nation’s defense. They also had an opportunity to see the jet for themselves.

By Chrisya Cuttica

E D W A R D S A I R F O R C E B A S E, C a l i f. – Flying off into the sunset has new meaning for the 461st Flight Test Squadron. Reaching another milestone in the test program, the Joint Strike Fighter Integrated Test Force completed the first F-35B Lightning II night flight Jan. 18.

Taking off just before sunset, the aircraft flew test points in both twilight and darkness.

“We did a sequence of approaches to the runway, including touch-and-go approaches, to make sure everything was safe to use at night,” said Lt. Col. Pete Vitt, 461 FLTS director of operations.

“We did an evaluation to check the extensiveness of the cockpit lighting, the exterior lighting and the landing and taxi lights were adequate and safe for the F-35 at night.”

Little difference existed in the preparation for day and night flights; however, lighting conditions at night are closely considered, as well as sunset timing, moonrise and phase, and variables such as amount of cloud cover.

Although the actual test took place in January, initial testing to get the plane in the air at night began long before that.

“We did an internal cockpit lighting evaluation in spring 2010,” said Rachel McMillan, 773rd Test Squadron human factors engineer. “This examined the aircraft for any internal glare, reflections, anything that would be distracting and any light sources that could lead to visual illusions for the pilot.”

The testing discovered that the software on the aircraft did not allow for a dimmable console, which is vital to optimal lighting configurations during night flight, added McMillan. To achieve optimal cockpit lighting at night means to eliminate distracting glares and any light sources that could lead to visual illusions for the pilot.

“We found a lighting problem with our taxi landing light and a software problem,” said Capt. Jeff Nervom, 461 FLTS flight test engineer. “Before we could fly at full capability at night, we had to write an amendment to a test plan in order to allocate some build-up test points to fly night in the build-up fashion.”

Mark Ward, Lockheed Martin test pilot, waits to take off in AF-6 to pilot the F-35A’s first-ever night flight Jan. 18, 2012, at Edwards Air Force Base, Calif. The 461st Flight Test Squadron and the Joint Strike Fighter Integrated Test Force flew the test at sunset and flew into the night. (Courtesy photo)
A U.S. Air Force C-130J Super Hercules, assigned to the 37th Air Lift Squadron at Ramstein Air Base, Germany, conducts a mass airdrop of paratroopers from the U.S. Army’s 173rd Airborne Brigade Combat Team, out of Vicenza, Italy, Feb. 10. More than 300 paratroopers were dropped to commemorate 70 years of combat airlift abilities for the 37th AS. (U.S. Air Force photo/Airman 1st Class Holly Cook)

WASHINGTON (AFNS) – Investment in space programs was a priority in this year’s Air Force budget, according to Undersecretary of the Air Force Erin Conaton.

Air Force leaders sought to sustain and modernize the capabilities that enable the military to be effective on the battlefield, she said. As the Air Force went into the current budget cycle, she said, Air Force leaders were committed to aligning the service with the new DOD strategic guidance released Jan. 5, which included protecting programs in the budget that support main Air Force mission areas such as space.

“You use space highlighted in a variety of parts of the (DOD) strategy as critical to the full variety of missions that we take on, from the counterterrorism fight on the low end to the anti-access, area-denial challenge on the high end.”

Conaton said that key capabilities such as missile warning, satellite communications, launch and space situational awareness were protected in this year’s budget to ensure continued support to warfighters and space operations around the globe.

Addressing the reduction in overall funding levels for the fiscal 2013 space program budget over last year, the undersecretary explained that this was due to four reasons.

“First, a lot of our programs have moved out of the developmental phase and are in production at this point,” Conaton said.

“Second, our partners in the ITF and this night flying project really touched most of those folks,” said McKinnon.

“We have over 800 people in the ITF and this night flying project really touched most of those folks,” said McKinnon.

“Part of the procedure here [at Edwards] is to release capabilities to the warfighter,” said Newcamp.

“We fight wars under all conditions and we need to deliver those capabilities to the warfighter,”

“Future night testing includes aerial refueling evaluations to ensure that the F-35’s lighting characteristics are compatible with various tankers,”

“We have aerial refueling on both the KC-10 and KC-135,” said Vitt. “There are also some test points that are specifically designed to be done at night with various mission systems on the aircraft.”

The NSF ITT overcame these unique technical challenges by taking the time to adjust testing in order to deliver an optimal product.

“We had night flying in our test plans but, not necessarily in this fashion, this was kind of our variation of slow down and looking at this [the lighting issue] a little closer prior to jumping into night flying,” said McKinnon.

“We have aerial refueling on both the KC-10 and KC-135,” said Vitt. “There are also some test points that are specifically designed to be done at night with various mission systems on the aircraft.”

“Second, our partners in Congress were incredibly generous in helping to robust the Wideband Global Satcom communications program, which we needed to fund additional satellites in that program this year,”

Third, Congress decided to terminate the Defense Weather Satellite System program, so funding for that was no longer needed in the fiscal 2013 budget, Conaton said.

And lastly, she said, the Air Force had to make some hard budget decisions on what areas could be scaled back or cut from the space program.

“When we looked at things like the Satellite Modernization Initiative line … we had to take some reductions there,” she said. “The department also decided to go a different path in terms of how we deal with operationally responsive space and to no longer use a stand-alone ORS program.”

Conaton also addressed the Air Force’s acquisition strategy for space.

“We continue with our Efficient Space Procurement program, which includes what we called (Evolutionary Acquisition for Space Efficiency) last year,” she said. “In both cases we invested in research and development, and a modified funding profile through advanced appropriations over multiple years.”

She said the other area that the Air Force is spending a lot of time on right now is launch, which has become increasingly expensive.

“The Department of the Air Force, along with our partners in the (National Reconnaissance Office) and in NASA, are committed to finding a way to get the best deal for the taxpayer, recognizing that launch continues to be at the core of what we do in the space business,” Conaton said.
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Activity, and Arnold Golf Course 
Information. Tickets and Travel

First Friday Jam
March 2 starting at 6 p.m. at
Chippewa Ship
Come to play, listen, dance
March 2 starting at 6 p.m.

March 2:
5:30-8p.m. RSVP by 2 p.m.
($4.95 age 12 and under).
Michigan Avenue

5:30-8p.m. Monday through Fri-
days

Golf Course:
454-7076

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Mulligan’s Coffee Bar
& Grill

Weekly Happy Hour
Monday through Friday
3:30-6:30 p.m.

March 9: Fried chicken
$9.95 member, $11.95 nonmem-
ber. $31.95 nonmember.

March 23: Spaghetti &
mash, $9.95 member, $11.95 non-
member.

March 30: Fried catfish
$11.95 member, $13.95 non-
member.

Sat. Sept. 25 to 33 for

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Erik’s tiny son, Erik,
the title celebrates life,
acho." The date celebrates the
3 a.m. at Mulligan’s Coffee Bar.

3:30-6:30 p.m. Monday through 
Friday, and 11 a.m. to 2 p.m. Sat.

Polo shirt, white pants, white

March 23:
5:30-8p.m. Monday through Fri-
days

March 16:
5:30-8p.m. Thursday

March 22:
5:30-8p.m. Wednesday

March 19:
5:30-8p.m. Thursday

March 11:
5:30-8p.m. Tuesday

March 17:
5:30-8p.m. Monday

March 24:
5:30-8p.m. Sunday

March 31:
5:30-8p.m. Monday

Fitness Center:
Monday-Friday 5 a.m.
Saturday and Sunday 8 a.m.

Arnold Golf Course:
Monday-Friday 4:30 p.m.
Saturday and Sunday 5:00 p.m.

Outdoors

Mulligan’s Coffee Bar & Grill

Weekly Happy Hour
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3:30-6:30 p.m.

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Arnold Golf Course

Check us out on Face-
book®! Arnold Golf Course

First Friday Jam
March 2 starting at 6 p.m. at
Chippewa Ship
Come to play, listen, dance
March 2 starting at 6 p.m.
Check us out on Face- book! Wingo Inn

All Air Force astronauts will be trained in the CCT. The CCT is a flight training environment for lectures and demonstrations, as well as exhibitions of the exhibit. This exhibit will provide a unique experience for visitors. These 60-seat "gallery classrooms" will allow museum staff to facilitate new science, technology, engineering, and math experiences, while guest scientists and engineers from Air Force organizations, the aerospace industry, and area colleges and universities will be invited to share their expertise. Multimedia presentations will introduce students to air and space missions and the men and women responsible for their execution.