The demand for testing at the Arnold Engineering De-velopment Complex is expected to reach historic levels in many fa-cilities during 2019 and continue into the foreseeable future, and U.S. Air Force leadership is no-taking the work for granted.

The number of recent tours given to the U.S. Air Force Headquarters and Department of Defense personnel is directly attributable to the work accomplished across all the AEDC lo-cations.

Innovations are projected in areas of testing that include hyper-sonic, turbines, arc heaters, wind tunnels, rockets and the climate lab...just to name a few. Some areas will double and others will triple the amount of test- ing conducted.

“Everyone thinks back to the space race of the AEDC Test Operations Division Chief Col. Keith Roessig said “Arnold had a huge role in everything that went on back then and in some ways, we’re in a similar role today.”

As other countries, China and Russia, for example, increase spending on defense, so does the United States with a significant investment in developmental test and evaluation.

“The work we do at AEDC di-rectly contributes to the success of the warfighter,” Roessig said. “We have everyone here at AEDC that we’re absolutely con-sulting to that as we’re trying to do. We’re all playing a role in developing the systems that keep our warfighters safe and protect the country. It doesn’t matter what kind of badge you wear, we’re all on the same team.”

Roessig pointed to the Na-tional Defense Strategy in terms of one of the reasons customers are using test facilities in AEDC. One of the NDS’s three focus areas is to build a more lethal force. Under building a more lethal force is modernizing the military or bringing new on new ones that have been in development for years and for that effort is to modernize the nuclear triad.

“The testing we do hits a lot of those areas. At Hill Air-Force Base we set up a new Combined Test Force to sup-port the AF AF War Weapon- ens Center, and while right now that is predominantly test management function for upgrades of legacy systems, we’re preparing to do much more rocket testing,” he said.

Several AEDC team members held a brief reunion last month to share memo-ries and reflect on their work in support of the NASA X-43A, also known as the Hyper-X program, which later led to the development of the Boeing X-51 Wa-veskitter, a longer-flying, jet-fueled hypersonic aircraft. Pictured starting in front: Barry Puckett, Dale McKill, Bradley Rogers, Troy Bisby; and in front: John Nichols, Dale McKill, Bradley Crawford and Paul Sullivan; third row: John Nichols, Dale McKill, Bradley Rogers and Troy Bisby; second row: Derrick Burton, Don Thompson and Jeff Fulks; and in front: Barry Puckett and Bob Williams. Not pictured are: Tim Scott, Don Will, Mike Mashburn, Kim Vanan-ter and Earl Vanzant. (U.S. Air Force photo by Dale Orbit)

Several AEDC team members at Arnold Air Force Base who worked at Micro Craft Inc. in Tullahoma during the heyday of the NASA X-43A program, come together for a photo April 25 at Arnold. The X-43A was part of the larger NASA Hyper-X program, which led to the development of the Boeing X-51 Wa-veskitter, a longer-flying, jet-fueled hypersonic aircraft. Pictured starting in front from left: Ronnie Long, Casey Crawford and Paul Sullivan; third row: John Nichols, Dale McKill, Bradley Rogers and Troy Bisby; second row: Derrick Burton, Don Thompson and Jeff Fulks; and in front: Barry Puckett and Bob Williams. Not pictured are: Tim Scott, Don Will, Mike Mashburn, Kim Vananteer and Earl Vanzant. (U.S. Air Force photo by Dale Orbit)

Several AEDC team members recall supporting NASA's X-43A project...
Integrity first... are committed to success.

• Excellence. We thrive on challenge.

• Innovation. We overcome challenges.

• Relationships. We build positive, long-lasting business relationships.

Brad and Sarah Klein were among 30 on March 30 with a plan. “Our goal was to get our pre-teen/teen son out of a car with a few people, and then prepare to evacuate the scene,” said Sarah, a social worker with the Spinal and Musculoskeletal Injury Research Complex at Arnold Air Force Base, and load onto a cargo plane and head out for a family vacation in Florida.

But when first inter- viewed, the Kleins would not talk about what it was like to be a family in a car accident.

The Kleins were on their way to McMurdo for Brad’s promotion ceremony that morning. He serves with the 278th Armored Cavalry Regiment Support Squadron of the Tennessee National Guard, and was promoted to Chief Warrant Officer 2.

“We are so grateful for the first responders, they wanted to call their parents first. They didn’t even think to call 911.”

According to Sarah, it appeared some of the passengers had not been wearing seat belts. At least one of the children was unconscious, though she could not be immediately reached due to a lack of free space. Several had suffered facial injuries.

Sarah said the most “heartbreaking” part of the experience was seeing that the motorists were the only ones to roll over and of- fer assistance to the children involved in the crash.

As Brad removed the vehicle’s hood, Sarah explained, “We had gloves, we had bandages. I’ve never been more happy with my staff than with this one post.”

Sarah provided the names of the children in case they needed someone to be with them. “I don’t leave my kids alone my phone number because I thought the parents don’t make it if I drop Brad off in San Antonio, I can bring them food or with them.”

Other than the transfer of one team, the promotion ceremony was as planned.

According to Sarah, it was the most anyone else to do for my kid, because if I thought my child needed something, I would most anyone else to do for my kid, because if I thought my child needed something, I would most anyone else to do for my kid, because if I thought my child needed something, I would most anyone else to do for my kid, because if I thought my child needed something, I would most anything else to do for my kid, because if I thought my child needed something, I would not be there to do for my kid, because if I thought my child needed something, I would not be there to do for my kid, because if I thought my child needed something, I would not be there to do for my kid, because if I thought my child needed something, I would not be there to do for my kid, because if I thought my child needed something, I would not be there to do for my kid, because if I thought my child needed something, I would not be there to do for my kid, because if I thought my child needed something, I would not be there to do for my kid, because if I thought my child needed something, I would not be there to do for my kid, because if I thought my child needed something, I would not be there to do for my kid, because if I thought my child needed something, I would not be there to do for my kid, because if I thought my child needed something, I would not be there to do for my kid, because if I thought my child needed something, I would not be there to do for my kid, because if I thought my child needed something, I would not be there to do for my kid, because if I thought my child needed something, I would not be there to do for my kid, because if I thought my child needed something, I would not be there to
AEDC team members volunteer with local Special Olympics

By Jill Pickett
AEDC Public Affairs

TULLAHOMA, Tenn. -- Athletes gathered May 2 at Tullahoma High School to compete in track and field events and bocce during the Tennessee Area 13 Special Olympics Spring Games. Thirty-three AEDC team members, including military, DOD civilians and contract personnel, signed up to volunteer at the event. They assisted in many areas, such as timing races, assisting delegations as they arrived and holding the finish tape.

Col. Charles Roberts, chief of the AEDC Test Support Division, addressed the athletes and supporters, noting the history of the Special Olympics, during the opening ceremonies.

The event was the 41st spring games competition held by Area 13, which is comprised of five counties Bedford, Coffee, Franklin, Lincoln and Moore. More than 350 athletes were registered to compete this year.

AEDC's support of the games also included a pair of Airmen to walk in the parade of athletes with the U.S. flag and a flag detail to raise the U.S. flag and the Special Olympics flag.

AEDC team member Master Sgt. Matt Krueger carries the U.S. flag as fellow team member Technical Sgt. Richard Griffin waves, both stationed at Arnold Air Force Base, to lead the parade of the opening ceremonies of the Tennessee Area 13 Special Olympics Spring Games. (U.S. Air Force photos by Jill Pickett)

Col. Charles Roberts, chief of the AEDC Test Support Division based at Arnold Air Force Base, addresses the athletes and supporters gathered for the Tennessee Area 13 Special Olympics Spring Games at Tullahoma High School.

AEDC team members Brian Allen, left, and Mark Jenkins, right, assist Sean Couch, a Tullahoma Skills Development Services employee, in maneuvering athlete Christie Tippy Pittman and her wheelchair into the track at Tullahoma High School.

AEDC team member Amanda Stroop hugs athlete Jayden Sullenger after he led the recitation of the Pledge of Allegiance during the opening ceremonies of the Tennessee Area 13 Special Olympics Spring Games.

AEDC team member Master Sgt. Rodney Clemmons holds the finish tape for Ciara Huff, during a relay race as volunteer timers Master Sgt. Matt Alfreno, left, a fellow AEDC team member, and Connie Messer, with Tennessee College of Applied Technology-Shelbyville, watch.

AEDC team member Master Sgt. Jason Harlan waves athlete Candice Napper onto the finish line.

AEDC team member Brian Allen, left, and Mark Jenkins, right, assist Sean Couch, a Tullahoma Skills Development Services employee, in maneuvering athlete Christie Tippy Pittman and her wheelchair into the track at Tullahoma High School.

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Rebecca Matthews
704th Test Support Squadron, Holloman AFB
Civilian of the Quarter Category

Capt. Christopher Francia
Test Operations Division, Arnold AFB
Company Grade Officer of the Quarter

Master Sgt. Joshua Sugg
Test Support Division, Arnold AFB
Senior Non-Commissioned Officer of the Quarter

Staff Sgt. Xavier Rosopello
704th Test Group, Holloman AFB
Non-Commissioned Officer of the Quarter

Matthew Goodman
746th Test Squadron, Holloman AFB
Civilian of the Quarter Category II

Baron Barlow
746th Test Group, Wright-Patterson AFB
Civilian of the Quarter Category III

Molly Dates
Test Support Division, Arnold AFB
Non-Appropriated Fund Civilian of the Quarter Category II

Exceptional Technical Achievement Award:
Hearing Knight Test Team, 586th Flight Test Squadron, Holloman AFB
Technical Achievement Award:
FMU-130 Sled Team, 846th Test Squadron, Holloman AFB

Nicer weather ushers in renewed focus on motorcycle safety

By Bradley Hicks

May 20, 2019

The month of May is recognized as National Motorcycle Safety Awareness Month — a time to promote vigilance among motorcyclists and awareness among the motorists who share the roads with them.

The warmer temperatures and sunnier skies of the spring season and approaching summer will bring an increase in the number of motorcyclists across the country.

In an effort to bolster safety, there are rules that those who choose to ride their motorcycles in and around Arnold Air Force Base and other Air Force installations must follow.

The Personal Protection Equipment (PPE) minimum requirements, which apply to active duty personnel, DOD staff and civilians contracted, can be found in Air Force Instruction (AFI) 91-207. That AFI states:

• Riders must wear a helmet in accordance with Transportation standards. The helmet must be properly fastened under the chin.
• Riders must wear goggles, wraparound glasses or a full face shield designed to meet or exceed American National Standards Institute standards. A full shield does not constitute proper eye protection.
• Riders are required to wear a long-sleeved shirt or jacket, long trousers and a work boot or other abrasion-resistant material. Riders are encouraged to wear motorcycle jackets and pants made of abrasion-resistant materials such as leather, Kevlar or Cordura containing impact-absorbing padding. Riders are also encouraged to select riding clothing that incorporates fluorescent colors and reflective material.
• Foot protection is required for riders. This is to include sturdy over-the-ankle footwear that affords protection for the feet and ankles. Those attempting to enter the base without meeting the minimum requirements will not be allowed entry on their motorcycles.
• The AFI defines a motorcycle as any two-wheeled vehicle with an engine of 49cc (cubic centimeters) or greater. It further states all motorcycles will have headlights turned on at all times while operating on a DOD installation or on off-road except when prohibited during military mission by state, local or host nation law. Passengers are not authorized on motorcycles unless they are specifically designed to carry a passenger.

Anyone found in violation of the PPE requirements while riding on base can be cited and receive points on his or her AEDC driving record, potentially resulting in the suspension or revocation of on-base driving privileges.

Military personnel who operate or intend to operate a motorcycle on a roadway are held each year for Arnold AFB's Military personnel who ride motorcycles on duty or off-duty Airmen stationed around the world have been killed in motorcycle-related crashes during the current fiscal year as of May 8. Those deaths represent 25 percent of the total off-duty motorcycle deaths occurring thus far in the 2019 fiscal year.

In 2018, there were 166 deadly motorcycle crashes in the state of Tennessee, according to the Tennessee Highway Safety Office. This is up from the 134 that occurred in 2017.

Pre-riding season briefs are held each year for Arnold AFB active duty personnel who ride motorcycles or plan to. Along with receiving information to ensure safer motorcycle operations, these training sessions also visit the U.S. Air Force Traf- fic Safety Program in its entirety, visit www.safety,af.mil/Divisions/ Occupational-Safety-Di- visions/Air-Force-Riders/.

AEDC team-member Ken Cheek stands next to his motorcycle wearing the re- quired personal protective equipment May 5 at Arnold Air Force Base. (U.S. Air Force photo by Jill Pickett)

AEDC quarterly award winners announced

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AEDC team-member Ken Cheek stands next to his motorcycle wearing the re- quired personal protective equipment May 5 at Arnold Air Force Base. (U.S. Air Force photo by Jill Pickett)
One of the campers attending the Spring Camp at the Hands-On Science Center met matches the color of different fruits to the colors of the rainbow. A new topic was presented to the campers each day of the camp and one of topics focused on health and nutrition. (Courtesy photo)

A group of area students learned a variety of science lessons at the Hands-On Science Center in Tullahoma during the Spring Camp led by Olga Oakley, the AEDC Science, Technology, Engineering and Mathematics coordinator. According to Oakley, each day of the weeklong camp involved a new topic for the students.

"The campers learned about space, made slime, flew glider planes and interacted with the animals of Hands-On Science Center," she said. "We also learned about nutrition and healthy eating. We had a Federal Aviation Administration licensed drone pilot, Werner Nowak, visit and fly a drone for the students. It was a ton of fun and it was truly a team effort."

AEDC code for the X-43A

Hyper-X
Not only were AEDC team members key players for the X-43A, but AEDC not facilities and personnel were involved in the hands-on vehicle and its parts. Tunnel B, a wind tunnel at the von Karman Gas Dynamics Facility, was used to examine the aerodynamic forces that occur when separating the X-43A from the booster stack.

"When the stack reaches the proper speed and altitude, the X-43A is pushed off of the nose of the Pegasus booster," said Babyex. "This is something no one else had ever done before. In the upper atmosphere and there are a lot of aerodynamic forces that had to be understood to avoid sending the X-43A out of control or colliding with the booster stack."

Testing was also performed in AEDC B2 are heat unit. In 2004, NASA Langley Research Center used B2 for evaluation of hypersonic materials before both before flight testing the hyper-X several test flights. The AEDC test facility was the only facility that could provide the necessary pressure to evaluate the materials. Simulating flight conditions in the B2 are facility exceeding 16 times the speed of sound.

The flight of the third X-43 vehicle was slightly different. Flying at Mach 10 it was exposed to a more severe thermal environment that exceeded the single-use temperatures of the Mach 7 leading-edge materials. Therefore, high-temperature coatings were evaluated at Mach 2 in an effort to use passive carbon/carbon material leading edges for the Mach 10 vehicle. Ensuring these materials survived the flight was critical because leading-edge recession could have contaminated the air-breathing engine, as well as affect vehicle control.

An artist’s conception of the X-43A Hypersonic Experimental Vehicle, or Hyper-X, in flight. Several AEDC team members had a brief reunion last month to share memories and reflect on their work in support of the X-43A. Over 15 years ago, the X-43A Hypersonic Vehicle set a world speed record for a jet-powered aircraft. (Illustration courtesy of NASA)

Additionally, AEDC Hypersonic Combined Test Force, located at Edwards Air Force Base, California, provided testing coordination for the X-43A. The AEDC unit has long been involved in the testing of cutting-edge, hypersonic aircraft, including the renowned X-15 program during the 1960s and, most recently, the X-51 WaveRider.

A model of the X-43 testing in one of the AEDC wind tunnels. The X-43, part of the NASA Hyper-X program, was an experimental unmanned hypersonic aircraft. It has since been replaced by the Boeing X-51 WaveRider. (U.S. Air Force photo)

Students spring into science during camp at Hands-On Science Center

By Odie Ortiz

A group of area students learned a variety of science lessons at the Hands-On Science Center in Tullahoma during the Spring Camp led by Olga Oakley, the AEDC Science, Technology, Engineering and Mathematics coordinator. According to Oakley, each day of the weeklong camp involved a new topic for the students.

"The campers learned about space, made slime, flew glider planes and interacted with the animals of Hands-On Science Center," she said. "We also learned about nutrition and healthy eating. We had a Federal Aviation Administration licensed drone pilot, Werner Nowak, visit and fly a drone for the students. They really enjoyed getting to wear FPV (first-person view) goggles while the drone flew around outside."

Another special visitor, Chris Mangino, an employee at Arnold Air Force Base and someone who has memorized over 1,000 digits of pi, spoke to the kids about how to work on memory skills.

The campers also learned about basic aerodynamics and made straw rockets. The group wrapped up the week learning about the Periodic Table and about the pH levels of different liquids that they use on a daily basis."

We had a great turnout for our Science STEM Camp and the students had a blast," Oakley said. "The Hands-On Science Center has another STEM camp scheduled for this summer. We anticipate having more interesting visitors and we can’t wait!"
On July 1, the Team AEDC SharePoint site is migrating to the newest version of the application, SharePoint Online 0365, also known as SharePoint 2016. This is an Air Force Materiel Command-driven effort, and the Arnold Enterprise Information Management Support Team is requesting assistance from SharePoint site owners to prepare for a successful migration.

“We have communicated the list of action items via email to our SharePoint site owners with a four-week completion suspense,” said Tracy Carter, Team AEDC SharePoint lead at Arnold Air Force Base. “SharePoint site owners were asked to provide a written justification to either maintain/migrate their site to the new environment or delete if the site is no longer needed. These written justifications should be sent to Zeldra Jefferson, local web administrator at Arnold.”

Carter mentioned that each site will need an updated list of the site owners. “All SharePoint sites should have a minimum of two owners but can have up to six owners maximum,” she said. “This will mitigate impacts and help maintain site continuity as people leave Arnold.”

Carter added, “It is very important for owners to respond. Otherwise, the decision to mitigate or delete will be left up to the AEDC SharePoint team.”

Before the sites are migrated, site owners are asked to clean up or delete items on their sites that are outdated or no longer needed. The actions for the cleanup include deleting the following:

1. Large video or audio files (over 10 megabytes) that are no longer relevant to an organization’s mission.
2. Photos and announcements of old holiday or going-away parties older than one year.
3. Duplicate files in separate folders.
4. Surveys that are no longer relevant.
5. Biographies of leaders who are no longer in your organization.
6. Documents that have not been modified or accessed in more than two or three years.
7. PDF files of Air Force instructions that are already available online at official Air Force websites.
8. Extra versions (over five) of recently created files including minor versions.
9. Extra versions (over one) of files that are more than a year old (save only the final version).
10. Unused subsites.
11. All workflow history on workflows that are no longer used or relevant.
12. All empty SharePoint groups unless they will be needed in the future. If needed, make sure at least one user is part of the group or it will not migrate.

“It is highly recommended for site owners to back up the information on their sites prior to migration,” Carter said.

The Arnold SharePoint team will be completing final preparation actions beginning mid-June so that Arnold is ready by the July 1 migration date. A local SharePoint Development Guide will be made available to SharePoint owners upon its completion. For those interested in SharePoint 2016 training, videos are available on the Air Force IT eLearning website: https://us-afprod.skillport.com.

Site owners should prepare to ensure a smooth transition

Fixing the flight line

Members of the 8th Civil Engineer Squadron smooth concrete on the flight line at Kunsan Air Base, South Korea, May 2. The 8th CES applied rapid airfield damage repair methods to fix a rupture that caused damage to the flight line. (U.S. Air Force photo by Staff Sgt. Joshua Edwards)
The Air Force is divided into a variety of headquarters in different cities or even a single one. In addition to Arnold Air Force Base, it is at Tunnel 9, Hol- loman (AFB) and Edwards (AFB) all tied together to make sure the work is done in the way it should. Tunnel 9 has increased workload planned for the next few years. The von Kármán tunnels are busy examining aerodynamic data that complements the rain wind tunnel testing at the High Speed Test Track at Holloman. The Air Force Test Center designated the Hypersonics CTF at AEDC as the Extrusion Test Orga- nization for all AFPC hypersonics test and the personnel within the UCF are busy coordinating the efforts between all these lo- cations.

The J-5 facility, former- ly a test range, is being upgraded during this next several years and will eventually join the hypersonics test ef- fort at AEDC.

The arc heaters are done in a variety of ways and, roughly, they’d normally have 40-50 missions a year. “?” Roessig said. “In fiscal year 2023, we accomplished about 40. This year’s request is to ques- tion the workload. One year was 100 and now it looks like we’ll be able to complete between 80 to 90 tests. However, the request for FY20 is more than 170 tests, and we know the re- quirement is going to be almost 200 tests a year for the next five or six years.”

Arc heater testing will determine the material selec- tion and used in a flight test at Edwards Air Force Base. Roessig notes the schedule is tight to get the material data to Edwards before they begin launches from B-52 over the test ranges in the Pacific Ocean. A factor is returning to service work in mobile bath hall status for 19 years in the Superpower Wind Tunnel. 160. But this will be a new target of 160. When all of the funded up- grades are accomplished, the tunnel will be able to reach Mach 5 for the first time.

“ar to continue flow of Mach 5 capability with such a large tunnel section will be an im- portant capability. However, it is a large requirement and we are going to be limited to 160 of the 167 (the 16-foot transonic wind tunnel) and 165 more quickly.” Roessig said. “We’d like to try our best in the world. We will be able to do this. And always, always, always, we will be a key driver to the test work we can and can’t produce.”

Roessig said there are ongoing efforts to be around for decades of future testing at AEDC. He points to a recent test of the B-1 in an example. AEDC first tested the B-1 almost 48 years ago. “There are ongoing hir- ing efforts within the gov- ernment and with several of the AEDC contractors. Once hired, training be- comes the next concern. A Human Capital Plan is be- ing developed by AEDC Vice Director, Wayne Ayer, to address issues like com- parative, progression and experience levels for the professional workforce.”

“ar is a major concern. We have many folks who are facing retirement, so we have to make sure we leverage their experience to help the new team mem- bers. We have the most experienced level run to ef- ficiently,” Roessig said.

The space chambers and VATs are involved in missions with Air Force Space Command about new capa- bilities and the new ordina- tion at AFSPC for test and eval- uation. “We’re working with Air Force Space Command to coordinate and stand up as much as possible for testing at the natural space environment, the atomic oxygen, the electrons, and combine that with mass- produced or direct energy,” Roos- sig said. “This is an area we expect to see growth also.

While Roessig can’t predict how much work would bring to AEDC, he said the chambers and the Space Threat Assess- ment Laboratory are receiving a lot of attention from the Air Force Test Center as well as other government organizations.

Take care of our people
John Allen, an instrument technician, reads on仪 the arc heater at the High Temperature Labora- tory at Arnold Air Force Base for endurance testing. The HTL test team anticipates an increased workload for the next few years and have been implementing several changes recently in preparation for the ad- ditional testing. (U.S. Air Force photo by Deidre Ortiz)

Eighty percent of the workforce at AEDC is comprised of the government workforce. The people at AEDC come from all walks of life but many are coming back to work after a family or healthy experience. The government workforce.

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Take care of our people
For an exciting time in work at AEDC, but great, or workload, while good news, comes with our own set of challenges such as staffing. Workload from page 1

John Allen, an instrument technician, reads on the arc heater at the High Temperature Labora- tory at Arnold Air Force Base for endurance testing. The HTL test team anticipates an increased workload for the next few years and have been implementing several changes recently in preparation for the additional testing. (U.S. Air Force photo by Deidre Ortiz)

Eighty percent of the workforce at AEDC is comprised of the government workforce. The people at AEDC come from all walks of life but many are coming back to work after a family or healthy experience. The government workforce.

The Air Force Space Command about new capabilities and the new ordination at AFSPC for test and eval- uation.

“We’re working with Air Force Space Command to coordinate and stand up as much as possible for testing at the natural space environment, the atomic oxygen, the electrons, and combine that with mass-produced or direct energy,” Roos- sig said. “This is an area we expect to see growth also.

While Roessig can’t predict how much work would bring to AEDC, he said the chambers and the Space Threat Assess- ment Laboratory are receiving a lot of attention from the Air Force Test Center as well as other government organizations.

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RASCAL to deploy to JB
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ability to deploy anywhere is the greatest advantage is the RASCAL’s. “But our RASCAL’s Gardiner, 366th MUNS said Tech. Sgt. Jaime L. shipping containers,” that are confined to a few measurement areas.

The TMDE flight and PMEL assigned to this task now belong to the 366th Munitions Squad-
“RASCAL has about its measurement areas that are confined to a few shipping containers,” said Tech. Sgt. Jamie L. Gardiner, 366th MUNS TMDE quality manager. “But that’s what makes a RASCAL’s greatest advantage is the ability to deploy anywhere in the world, critically op-
timizing readiness.”

However, this RAS-

since January 2019, the 366th MUNS had never deployed in 10 years and was in a degraded state. So the TMDE flight sprang into action when MUNS re-
called the call for the RASCAL to deploy to JB Pearl Harbor-Hickam.

The process of resto-
ration and preparation was a huge undertaking done with extreme attention to detail in a very small amount of time,” Gardiner said. “I walked seven to eight miles a day going back and forth to ensure everything was ready to go.”

The team adapted to overcome obstacles by fabricating custom metal-
work and aircraft shipping pallets for the containers, identifying and resolving several electrical power generation issues, packing and securing equipment while simultaneously logi-

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Imagine having mo-

bility maintenance com-
plexes from every squad-
ron so that we can pick up and set down an Air Force base anywhere we want,” Gardiner said. “That is the power of adaptive basing.”

Gardiner expressed his thoughts on the team and their achievements, “I honestly couldn’t be more proud of them! This is what happens when you empower squadrons Collectively, the RASCAL

A C-17 Globemaster III is loaded with a Rapid Assistance Support for Calibration unit to deploy to Joint Base Pearl Harbor-Hickam, Hawaii, Jan. 17, from Mountain Home Air Force Base, Idaho. The Air Force only has two RASCALs capable of deployment. (U.S. Air Force photo by Airman 1st Class Andrew Kobialka)

A C-17 Globemaster III is loaded with a Rapid Assistance Support for Calibration unit to deploy to Joint Base Pearl Harbor-Hickam, Hawaii, Jan. 17, from Mountain Home Air Force Base, Idaho. The Air Force only has two RASCALs capable of deployment. (U.S. Air Force photo by Airman 1st Class Andrew Kobialka)

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The F-35 AGCAS is a tool that utilizes a suite of sensors, onboard monitors and flight data to determine if a plane is on course to encounter a probable ground collision. Based on the plane’s trajectory, speed, and lack of input from the pilot, the system then calculates the best way to recover to a safe trajectory.

“The 461st Flight Test Squadron is passionate about identifying, developing, and implementing technology that will benefit the warfighter,” said Lt. Col. Tucker Hamilton, 461st FLTS commander and F-35 Integrated Test Force director. “With respect to Auto GCAS, we know how important this technology was for the warfighter and did everything in our power to accelerate it; protecting those that go into harm’s way.”

The effort to test the system on the F-35A was headed by the Test Wing’s 461st Flight Test Squadron at Edwards Air Force Base, Calif., as part of the F-35 AGCAS Team. The whole task was made up of engineers and pilots from the Air Force, the F-35 Joint Program Office, NASA, Lockheed-Martin and the Defense Safety Oversight Council.

Further support was provided to the team by a group of Congressmen. In November 2017, Hamilton provided a brief of the program to Rep. Kevin McCarthy and then-Rep. Steve Knight. The support of the congressmen helped shed light to the importance of the program and accelerate its development by seven years.

“Following our briefing with Colonel Hamilton, Rep. Steve Knight and I met with aunter, along with our colleagues Rep. Paul Cook and Rep. Ken Calvert, to then-Secretary of Defense James Mattis, urging him to work with the F-35 Joint Program Office to prioritize the incorporation of AGCAS as quickly as possible,” McCarthy said.

McCarthy said a driving factor for him and Knight was the bottom line AGCAS saves lives.

“This technology helps save the lives of our brave men and women who pilot these aircraft while also protecting the significant taxpayer investment in our next generation high-performance military aircraft,” Knight said. “I can’t say how it played a part in accelerating Auto GCAS in the F-35, but I know that those representatives were able to help folks make informed decisions because they understood the maturity and importance of the technology.”

McCarthy believes the F-35 is a premier aircraft in the USAF inventory and said he and his colleagues must ensure that the platform is equipped with the very best technology to ensure mission success, but also the safety of the pilot. He also added that the AGCAS Team’s successes further add to Edwards’ historical legacy.

“AGCAS reflects the good work being done every day by our military personnel and their civilian counterparts at places like Edwards Air Force Base,” McCarthy said. “These proud men and women strive to test and evaluate our nation’s finest technology. I am proud of the visionary leadership being displayed by Brig. Gen. John Teichert (412th Test Wing commander) and Brig. Gen. Christopher Azarza (AFTC commander). Under their command, I am confident that the team at Edwards will continue to advance our community’s proud aerospace legacy.”

By Giancarlo Casem
461st Test Wing Public Affairs

EDWARDS AIR FORCE BASE, Calif. — The 412th Test Wing recently published the technical report on the F-35 Automatic Ground and Collision Avoidance System and have recommended it for fielding; seven years ahead of schedule.

The Auto GCAS is a tool that utilizes a suite of sensors, onboard monitors and flight data to determine if a plane is on course for a probable ground collision. Based on the plane’s trajectory, speed, and lack of input from the pilot, the system then calculates the best way to recover to a safe trajectory.

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By 6th Air Base Group Public Affairs

HANSCOM AIR FORCE BASE, Mass. (AFNS) — A tiny jet flying past HANSCOM’s Air Force Research Laboratory is developing a prototype combat system capable of providing voice, data and command and control to partner nations for less than a million dollars.

The Airborne Extensible Relay Over-Horizon Network or AERONet, digitally links friendly forces, providing them with their own protected location of other friendly forces and real-time enemy movement updates. It will be showcased to partner nations at the Cold Quest exercise in Finland this month. AERONet is a variant of existing technology, namely by law enforcement to patrol borders and track and combat smugglers. First responders use similar systems while fighting wildfires in the mountain states.

The system was conceived by Air Force Chief Gen. David L. Goldfein, retired, by Air Force Research Lab and is being brought to market by the Command, Control, Communications, Intelligence, and Networks Program, or C3I&N, executive office at HANSCOM AFB.

The Tactical Data Links Lab at Hanscom developed an initial version of a system, funded and built with the goal of providing turnkey combat networks to partner nations that do not have arms export agreements or have no data link information.

"In the Cold Quest, the first time we will be able to show our target partner nation audiences that we can do this," said Maj. Scott Frye, the AERONet program manager with the C3I&N’s Quick Reaction Branch. He is helping AERONet transition from an AFRL concept to reality.

"We have to pay attention to the fact that several countries, so we think there’s a large demand out there for a system that creates its own network and makes it simple enough for first responders to support." Major Reed emphasized the system’s ability to provide off-the-shelf technology to countries that want to funnel data into but don’t have the most expensive and classified command and control suites.

AERONet provides communications, intelligence gathering and close-air support to safeguard covered entities to smartphone or tablets.

The final node, a back-end control and command operations center, provides information to and from any other system.”

The team is working toward an affordable price in line with USDOD’s National Defense Strategy priorities.

Cybersecurity Town Hall emphasizes information protection for supply chain, acquisition

By Mirya Alia- Monteverde

WRIGHT-PATTERSON AIR FORCE BASE, Ohio (AFNS) — The importance of protecting the Defense Department’s controlled unclassified information during acquisition and contracting was stressed during a series of cybersecurity town hall events hosted by the Air Force Materiel Command, May 17-21.

More than 200 AFMC acquisition team professionals, including contracting officers, cybersecurity specialists, program managers, security specialists and more attended the briefings, led by leaders from DoD acquisition, contracting and information protection offices in conjunction with the Defense Acquisition University.

“Our responsibility is to know, understand and identify the information program needs that needs to be protected," said Steve Bunting, director of Strategic Technology Protection Program, in a Defense Acquisition University. "We are the Under Secretary of Defense for Research and Engineering, deputy director of the DOD’s Office of the Under Secretary of Defense for Acquisition, Technology and Logistics. "We have to pay attention to it, we have to know the regulations and we have to care about it.

The event served as an opportunity to educate the acquisition and cybersecurity workforce on the importance of the Defense Federal Acquisition Regulation Supplement, 252-204 DoD Instruction 5200.17, Safeguarding Critical Cyber Defense Information and Cyber Incident Reporting, which requires contractors, subcontractors and their sub-subcontractors to safeguard cybersecurity and CSE, to identify or report on contractors’ internal information system or networks.

Reed emphasized the importance of considering and identifying information that needs protection throughout the acquisition process. "Anything that is not public that is provided to a contractor or has some kind of protection for that information is their systems," Reed said, "and we have to transform the contractor and tell the contractor what he needs to do with that information.

We used an example of smartphones to illustrate the importance of the need to know and the need to have access to information protection.

"A contract for a sensor does not require the contractor to have the full data package for a platform," Reed said. "DoD does not understand the importance of knowing’s one thing, the 

The prototype could provide combat insight to allies

AERONET by 66th Air Base Group Public Affairs

AERONet prototype could provide combat insight to allies

Based on a Beechcraft AT-6 Wolverine experimental aircraft flies over White Sands Missile Range, New Mexico, July 31, 2017. Aircraft like the AT-6 and Embraer A-29 Super Tocano provide close-air support to and from partner nations, increasing their combat effectiveness. (U.S. Air Force photo by Ethan D. Wagner)

By 6th Air Base Group Public Affairs

AERONet prototype could provide combat insight to allies