



The Dryden XPRESS

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November 2013

SLS system evaluated

NASA has completed the first tests with an F/A-18 research jet to evaluate the autonomous flight control system for the agency's Space Launch System (SLS) rocket.

The system, called the Adaptive Augmenting Controller, will allow SLS to respond to vehicle and environmental variations such as winds or vehicle flexibility after it blasts off the launch pad and heads toward space. This is the first time a flight control system for a NASA rocket is being designed to adjust autonomously to unexpected conditions during actual flight rather than pre-flight predictions. This ability to make real-time adjustments to the autopilot provides enhanced performance and increased safety for the crew.

The tests were flown Nov. 14-15 at Dryden. During the flights, more than 40 tests were conducted using SLS-like trajectories. The system was evaluated in different scenarios for up to 70 seconds at a time to match the rocket's dynamics for the majority of its flight from liftoff to solid rocket booster separation.

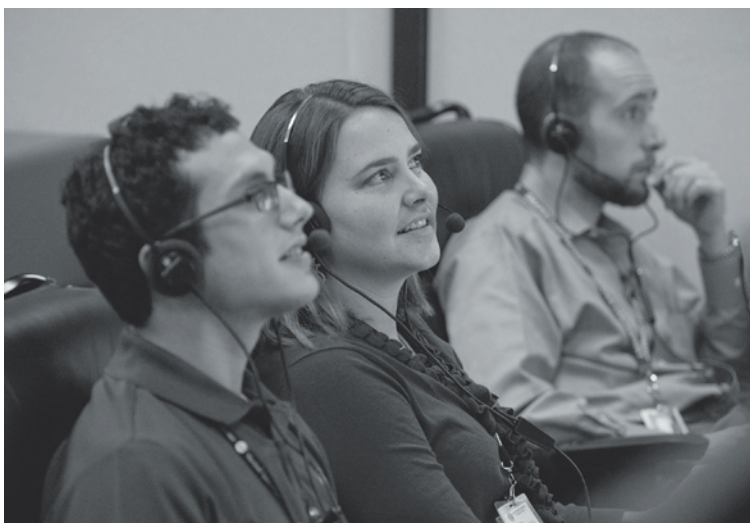
"By flying a high-performance F/A-18 jet in a manner similar to our rocket, we're able to simulate SLS's flight conditions and improve our software," said Tannen VanZwieten, SLS flight controls working group lead. "The innovative system that we are testing at Dryden is advancing flight control technology by adding an adaptive element which



ED13-0362-84

NASA/Jim Ross

An F/A-18 research jet simulated various flight conditions that NASA's Space Launch System may experience as it makes its way from the launch pad to space.



ED13-0362-53

NASA/Tom Tschida

Eric Gilligan, Tannen VanZwieten and Jeb Orr observe the F/A-18 flight from a Dryden control room.

is new for launch vehicles. We're using this technology to expand the capabilities of the SLS a bit more than what is possible with a traditional design."

During the flight, NASA simulated both normal and abnormal flight conditions, such as sloshing propellant, and identified key aircraft vibrational characteristics. The flight test data will be used to refine software for SLS and plans for future F/A-18 flights that will run through the end of the year.

"This is an example of how advanced rocket technology can be checked out in flight without having to be launched into space," said John Carter, project manager for the flight tests at Dryden. "Doing this work on the F/A-18 test bed allows for low-cost, quick-schedule tests that can be repeated many times in order to gain confidence in the advanced controls technology, providing some unique testing advantages for this type of control system validation."

This flight control system will be ready for the first flight test of the SLS, scheduled for 2017. That flight will feature a 70-metric-ton (77-ton) lift capacity configuration and carry an uncrewed Orion spacecraft beyond low-Earth orbit to test the performance of the integrated system. As the

Evaluation, page 8

Employees honor their own

Dryden Center Director Award

For steady leadership of the NAMIS Tiger Team during the Stand Down and DFRC Return to Flight activity.



His tireless dedication to correcting discrepancies to aircraft maintenance documentation will serve the Flight Operations Directorate at the Dryden Flight Research Center and NASA for years to come.

Robert Garcia, NASA

Milton O. Thompson Award

Recognizing her lifelong dedication to the NACA and NASA as a computer, an engineer and a volunteer in the History Office.

Betty Love, NASA Retired

Pride in NASA (PIN) Awards

Given in recognition of an employee's example, set through their words and deeds, of what pride is within NASA Dryden.

Cam Martin, NASA

Lincoln Pardue, SCSC

Debbie Phillips, ARCATA

Kevin Rohrer, NASA

Can-Do Attitude

Recognizes employees who regularly "get the job done" with a positive attitude.

Mike Frederick, NASA

Jonathan Pickrel, NASA

Alexander Stuber, NASA

(presented posthumously)

Engineer/Scientist/Pilot

Recognizes an employee who applies fundamental principles, develops and tests new technologies or performs other outstanding contributions in their field.

Matthew Berry, NASA

Russell Franz, NASA



ED13-0352-07

NASA/Tom Tschida

Betty Love receives the Milton O. Thompson Award from Center Director David McBride.

Facilities Personnel

Recognizes an employee for significant work toward meeting the center's facilities goals and objectives.

Gemma Flores, NASA

Jin Oh, NASA

Rising Star

Recognizes an employee who makes critical contributions to Dryden's mission at an early stage in their career.

John Ruhf, NASA

Erin Waggoner, NASA

Safety

Recognizes employees who have made Dryden a safer place to work through their primary, collateral or significant voluntary efforts.

Donald Adams, MECX, LP

Mission Impossible

Recognizes an employee who succeeds using innovation and hard work despite difficult or challenging circumstances.

David Berger, NASA

Mentor

Recognizes an employee who demonstrates outstanding performance in mentoring new and established employees.

Al Bowers, NASA

Student

Recognizes a student participating in Dryden's sponsored student program who shows exceptional initiative, cooperation, excellence and exemplary performance during their term at Dryden.

Andrew Burrell, NASA

Anthony Popelar, NASA

Supervisor/Manager/Leader

Recognizes outstanding leadership and/or management qualities that deliver exceptional results.

C J Bixby, NASA

Jonathan Brown, NASA

Kevin Rohrer, NASA

Technician/Mechanic

Recognizes an employee who exhibits technical expertise, significant performance,

enthusiasm, determination and dedication to Dryden in a technical support area.

Monte Cook, NASA

Jeffrey Howell, NASA

Mission Support:

Administrative

Recognizes significant contributions in administrative or secretarial support.

Denise Cope, NASA

Mission Support:

Administrative Professional

Recognizes employees who perform exemplary professional administrative work.

Joanne Trippiedi, TYBRIN

Mission Support: Education/ Outreach/Volunteer

Recognizes an employee who epitomizes the true spirit of outreach through enthusiasm and dedication; for those individuals who give back to Dryden and our communities through volunteerism and selfless giving.

Erika Fedorko, NASA

David Voracek, NASA

Mission Support: Financial/ Resources

Recognizes an employee performing exemplary financial or resources-management work.

Susan Moreno, NASA

Mission Support: Information Technology

Recognizes significant IT support contributions by an employee who is enthusiastic, creative, quick, and successful at creating solutions for customers.

Greg Coggins, NASA

John Lockwood, SAIC

Mission Support: Other Support Services

Recognition, page 8



ED13-0353-20

NASA/Tom Tschida

Dryden main campus and DAOF locations had dual chili and costume contests and a bake sale Oct. 31.

Scary good fun

Dryden employees had a scary good time at the annual Halloween chili cook-off, costume contest and bake sale.

There were 17 chili participants at Dryden and 15 at the DAOF.

The event raised a combined \$2,025 from the sales of tickets and baked goods at Dryden and the DAOF. The proceeds from the event go to the Dryden Exchange.

Chili Contest Winners

People's Choice:

Shiver Me Timbers and a Yo-Ho-Ho Chili by Code S

Da Bomb Chili by Zaheer Ali

Judge's Choice:

Boudreaux's Burning Brew Chili by Donald Sears

After Burner Chili by Mike Thomson

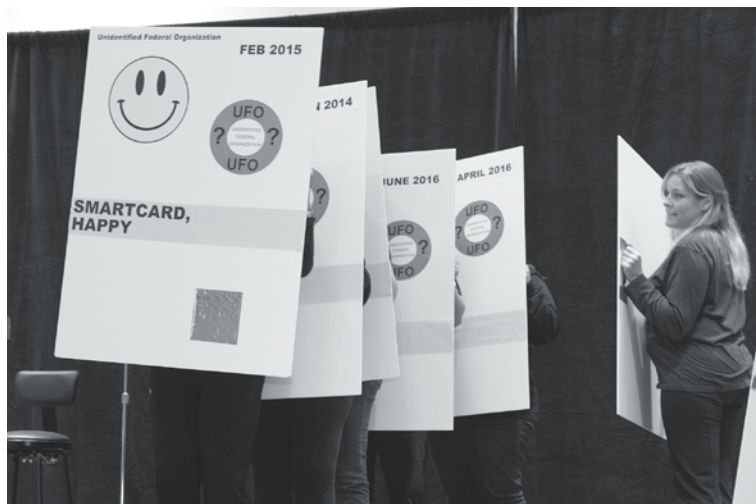
Costume Contest Winners:

Mini-Me Winners

Richard Wong (DAOF) Michelle Haupt (Dryden)

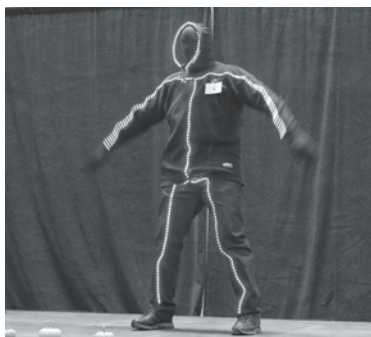
Individual Costume Winners

Michael Buttigieg (Scariest) and Anthony Canada (Funniest)



ED13-0353-22

NASA/Tom Tschida



ED13-0353-38

NASA/Tom Tschida

Above, Code M tried a humorous approach to have Dryden employees think about how they are using their smartcards. Monica Hoffman is seen at right.

At left, Anthony Canada wins for funniest costume as a stick figure.

News at NASA

MAVEN is off to Mars

NASA's Mars Atmosphere and Volatile Evolution (MAVEN) mission began with a smooth countdown and flawless launch from Cape Canaveral Air Force Station's Space Launch Complex 41. The United Launch Alliance Atlas V rocket carrying the 5,400-pound spacecraft lifted off Nov. 18. MAVEN's solar arrays deployed and are producing power.

"We're currently about 14,000 miles away from Earth and heading out to the Red Planet right now," said MAVEN Project Manager David Mitchell of NASA's Goddard Space Flight Center.

MAVEN Principal Investigator Bruce Jakosky joined Mitchell in praising the mission team for its drive and commitment. NASA Goddard in Greenbelt, Md., manages the project and provided two of the science instruments for the mission. Lockheed Martin built the spacecraft and is responsible for mission operations.

The University of California at Berkeley's Space Sciences Laboratory provided science instruments for the mission. NASA's Jet Propulsion Laboratory in Pasadena, Calif., provides navigation support, Deep Space Network support, and Electra telecommunications relay hardware and operations. Jakosky is with the Laboratory for Atmospheric and Space Physics at the University of Colorado at Boulder.

Jakosky added that while the launch is a big milestone, MAVEN must get to Mars and complete a check-out period before it can finally begin collecting science data. It will take the spacecraft 10 months to reach the Red Planet, with arrival scheduled for Sept. 22, 2014.

"Safe travels, MAVEN," Mitchell said. "We're with you all the way."

Some like it hot

C-20 images Japanese, Hawaiian volcanoes

By Beth Hagenauer

Dryden Public Affairs

NASA's C-20A Earth science aircraft carrying a specialized synthetic aperture radar system has wrapped up a short mission to image Japanese volcanoes. From a staging base at Yokota Air Base near Tokyo, three science flights were flown between Nov. 9 and 14 to gather data on Japanese island volcanoes.

The aircraft carries the Uninhabited Aerial Vehicle Synthetic Aperture Radar (UAVSAR) developed by NASA's Jet Propulsion Laboratory. The radar provides a measurement system that complements satellite-based observations by allowing frequent revisits and imaging of active volcanoes to better understand their deformation prior to, during or after a volcanic eruption.

The three data-collection flights, totaling 18 hours in the air, repeated previous paths flown



Courtesy of US Air Force/A1C Desiree Economides

NASA's C-20A lands at Yokota Air Base, Japan, in 2012. Yokota was a deployment base for 2012 and 2013 science missions to image Japan's active volcanoes using a high-tech synthetic aperture radar system developed by NASA's Jet Propulsion Laboratory.

Oct. 5 through 8, 2012. The imagery taken this month will be compared to those previously taken to determine if the surfaces of the volcanoes have changed shape, as

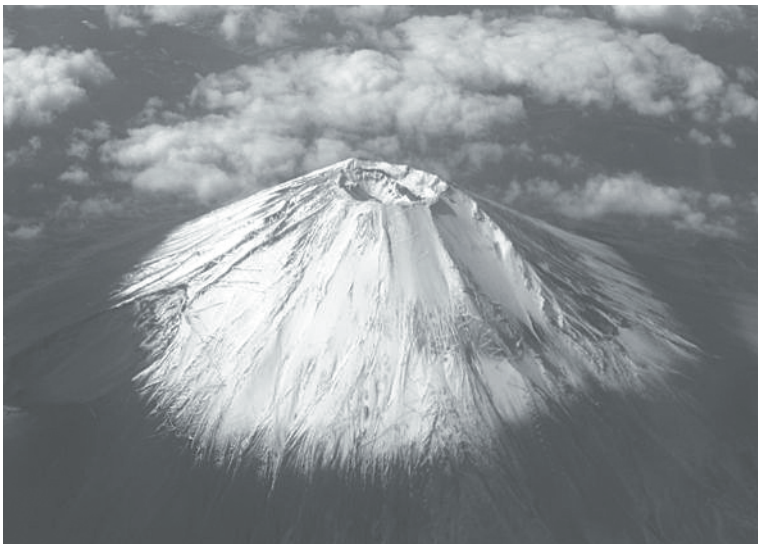
this may be a sign of renewed volcanic activity that could pose a hazard to populations living in the surrounding area.

Some of the more prominent

volcanoes covered included (from south to north): Kirishima, Aso, Fuji, Asama, Usu and Tokachi-dake. Mission officials noted that the cooperation of the Japan Aerospace Exploration Agency (JAXA) – Japan's space agency – was crucial to the success of these radar-imaging flights.

NASA's C-20A – the military designation for the Gulfstream III aircraft – features a high-precision autopilot designed and developed by Dryden engineers. The Precision Platform Autopilot guides the aircraft using a kinematic differential Global Positioning System developed by JPL in concert with the aircraft's inertial navigation system to enable it to fly repeat paths to an accuracy of 15 feet or less. With the precision autopilot engaged, the synthetic aperture radar is able to acquire repeat-pass data that can measure land-surface changes within millimeters.

Volcanoes page 8



NASA/John McGrath

Mt. Fuji was one of the Japanese volcanoes imaged by JPL's UAVSAR, carried aboard a NASA C-20A, during a mission to collect data that may show changes in the volcano's shape that could be an indication of new volcanic activity.



NASA/John McGrath

NASA's C-20A refueled at Wake Island, a U.S. territory in the Pacific Ocean, en route to and from Japan for a mission to radar image active volcanoes to better understand their deformation prior to, during or after a volcanic eruption.

CITC is certified silver

It is Dryden's first recognized LEED building

By Jay Levine

X-Press editor

Dryden needed a larger and more efficient information technology space and now the center has one that also is recognized as an environmentally sustainable building.

Located on Edwards Air Force Base in California's Mojave Desert, the \$8.8 million construction project doubled the size of the 28-year-old Data Analysis Facility. The result is a combined more than 44,000-square-foot building referred to as the Consolidated Information Technology Center, or CITC.

The CITC was recently certified to the Leadership in Energy and Environmental Design, or LEED standard at the Silver level. The CITC became Dryden's first LEED certified building in October. NASA requires all of its major new buildings to be LEED Silver certified or higher.

The LEED standard allows for certification at the Silver, Gold, and Platinum levels. The designation recognizes the sustainability of the construction as determined by the U.S. Green Building Council's LEED standard for new construction.

The CITC was occupied in August 2012. Key features that contributed to the silver designation included making Dryden's flight research mission more sustainable by reducing long-term costs of facility operation, minimizing natural environment impacts, and designing work spaces to maximize productivity, said Dan Mullen, Dryden energy manager.

Included in that sustainability equation is a 20 percent more energy efficient building compared to standard construction, Mullen explained. The building was also designed to use 50 percent less water for building processes and landscaping compared to a



ED11-0287-07

NASA/TonyLandis

The CITC was recently recognized as Dryden's first certified environmentally sustainable building. Below is a look at the new space for the center's servers.

facility using standard design and construction practices.

Other elements included the recycling of 89 percent of demolition and construction debris to avoid using landfills and incinerators, he said. In addition, 20 percent of the construction materials were recycled and 75 percent of the project area was restored to simulate natural habitat for a total of 22,000 square feet of vegetated open space.

Construction materials such as adhesives, sealants, paints, coatings, carpet and wood products were selected to maintain better indoor air quality and reduce impact to the environment, Mullen said.

The primary driver for the CITC construction project was to provide a more reliable data center, replacing nearly three decades old heating, ventilation, air conditioning, or HVAC, and electrical infrastructure.

Dryden's new data center also is categorized as a Tier 3 facility, which means that maintenance activities on electrical and HVAC equipment can occur without requiring any shutdown of data

to consolidate several smaller data centers into a single new facility that in its first year of operation has demonstrated uptime in excess of 99.9 percent."

The CITC transition, however, is not yet complete. There is ongoing effort to renovate vacated areas of the old data center and enable additional consolidation of personnel and IT equipment. The reduced and consolidated physical footprint of IT storage, staging and office space is energy efficient and environmentally responsible, Freuding said.

Southwestern Dakotah Inc. of Tucson, Ariz., built the CITC. Development One Inc. architectural firm of Santa Ana, Calif., designed the CITC and the new Facility Support Center. T. Simons Construction of Nipomo, Calif., continues to work under a \$650,000 contract to complete the renovation work in the old half of the building, said Gemma Flores, project manager for the CITC construction and the recently completed Facility Support Center.

The Facility Support Center is an entirely new 38,000 square foot building expected to meet the LEED Platinum standard. Occupancy of that \$11.2 million effort is expected in 2014.

center computing. Half of the uninterrupted power supplies and HVAC systems supporting the data center can be shut down completely for maintenance, with the data center continuing to operate at full capacity.

"The energy-efficient Tier-3 CITC infrastructure has allowed Dryden to reduce information technology operations and maintenance costs while increasing delivered value to the Dryden community," said Dryden's Chief Information Officer Larry Freuding. "We have been able



ED13-0352-07

NASA/Tom Tschida

SOFIA science studies selected

By Nick Veronico

Ames Public Affairs

NASA, the German Aerospace Center (DLR), the SOFIA Science Center, and the German SOFIA Institute (DSI) have announced the selection of 51 investigations to study the universe using the Stratospheric Observatory for Infrared Astronomy (SOFIA). SOFIA, a joint program between NASA and the DLR, is set to begin its second full cycle of science flights from February through December 2014.

The SOFIA observatory is a substantially modified 747SP aircraft that carries a telescope with an effective diameter of 100 inches (2.5 meters) to altitudes above 39,000 feet (12 km), beyond the obscuring layer of water vapor in Earth's atmosphere.



ED13-0353-22

NASA/Tom Tschida

The above image was taken during SOFIA's deployment to New Zealand earlier this year. A new slate of science was recently approved that is scheduled to begin in February.

"More than 1,000 hours of observing time were requested, three times the amount available, evidence of SOFIA's desirability to astronomers," said SOFIA Science Missions Operations Director Erick Young in announcing the awards of observing time. "The approved projects make good use of the observatory's capabilities to study objects ranging from Earth's solar system neighbors to galaxies hundreds of millions of light years away."

As of Nov. 5, the SOFIA has conducted 23 of 30 planned Cycle 1 science flights, including nine flights during a Southern Hemisphere deployment to New Zealand from its base at the Dryden Aircraft

Science page 8

Researchers publish tech papers

Dryden researchers have recorded the results of research at Dryden in technical publications. The publications are listed by the month they were released.

October 2013

Ethan Bauman, Joe Hernandez and John C. Ruhf co-authored "An overview of NASA's Subsonic Research Aircraft Testbed (SCRAT)," NASA/TM-2013-216595.

September 2013

Daniel S. Jones, Trong T. Bui, and Joseph H. Ruf collaborated on the, "Proposed Flight Research of a Dual-Bell Rocket Nozzle Using the NASA F-15 Airplane," NASA/TM-2013-216590.

Kurt J. Kloessel and Casie M. Clark co-authored, "Preliminary MIPCC-Enhanced F-4 and F-15 Performance Characteristics for a First-Stage Reusable Launch Vehicle," presented at the AIAA Space 2013 Conference and

Exposition, San Diego, Calif., Sept. 10-12, 2013.

Peter M. Suh and Dimitri N. Mavris collaborated on, "Modal Filtering for Control of Flexible Aircraft," NASA/TM-2013-216597.

August 2013

Aliyah N. Ali and Jerry L. Borrer co-authored, "Analysis and Results from a Flush Airdata Sensing System in Close Proximity to Firing Rocket Nozzles," a meeting paper presented at the AIAA Atmospheric Flight Mechanics Conference, Boston, Mass., Aug. 19-22, 2013.

Ethan Baumann, Joe Hernandez and John C. Ruhf collaborated on, "An Overview of NASA's Subsonic Research Aircraft Testbed (SCRAT)," a meeting paper presented at the AIAA Atmospheric Flight Mechanics Conference.

Nelson A. Brown and Jacob

Schaefer co-authored "Peak-Seeking Optimization of Trim for Reduced Fuel Consumption: Flight-Test Results," a meeting paper presented at the AIAA Guidance, Navigation, and Control Conference, Boston, Aug. 19-22, 2013.

Stephen B. Cumming, Larry J. Cliatt II, Michael A. Frederick and Mark S. Smith collaborated on, "Aerodynamic and Acoustic Flight Test Results for the Stratospheric Observatory for Infrared Astronomy," a meeting paper presented at the AIAA Modeling and Simulation Technologies Conference, Boston, Aug. 19-22, 2013.

Jacob Schaefer and Nelson A. Brown co-authored, "Peak-Seeking Optimization of Trim for Reduced Fuel Consumption: Architecture and Performance Predictions," a meeting paper presented at the AIAA Guidance, Navigation, and Control Conference.

Peter M. Suh, Alexander W. Chin and Dimitri N. Mavris collaborated on, "Virtual Deformation Control of the X-56A Model with Simulated Fiber Optic Sensors," a meeting paper presented at the AIAA Atmospheric Flight Mechanics Conference.

July 2013

Daniel S. Jones, Trong T. Bui and Joseph H. Ruf, co-authored "Proposed Flight Research of a Dual-Bell Rocket Nozzle Using the NASA F-15 Airplane," AIAA-2013-3954, presented at the 49th AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit, San Jose, Calif., July 15-17, 2013.

Clinton W. St. John and Michael A. Frederick collaborated on, "Flight Test Results of an Axisymmetric Channeled Centerbody Supersonic Inlet at Off-Design Conditions," AIAA-2013-3680, presented at the 49th AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit.

Dryden employee, retirees pass

Johnson, Dryden software engineer, dies at 53

Laurance Dean Johnson III, a Dryden software engineer died Aug. 4, 2013. He was 53.

Mr. Johnson was a Dryden employee for eight years and generated flight software for a variety of programs such as the Autonomous Airborne Refueling Demonstrator, the Uninhabited Aerial Vehicle Synthetic Aperture Radar and the Stratospheric Observatory for Infrared Astronomy aircraft. In addition, he provided software support for other Dryden projects including the F-18 Iron Bird Test Bench upgrade and the Autonomous Ground Collision Avoidance System integration project.

Mr. Johnson worked 27 years supporting a variety of flight research and test activities in the Antelope Valley. He worked for Northrop Grumman for 16 years supporting the B-1B program as an avionics engineer as well as provided algorithms and software to support the B-2 instrumentation and analysis at Palmdale and Edwards.

Former Dryden technician “Ski” Markey passes at 92

Former Dryden technician Stanley “Ski” Markey died recently at the age of 92. Markey had worked at the center for 28 years from 1952 until his retirement in 1980.

During the later years of his career, Markey served as an inspector on the construction of the space shuttle Mate-DeMate Device. With John McTigue, Markey developed the overland route for transporting most of the space shuttles from their final assembly factory at Air Force Plant 42 in Palmdale through Lancaster and Edwards Air Force Base to Dryden.

Markey was a Marine Corps veteran of World War II, and worked as a facilities manager at the former Marine Corps Air Station at Mojave prior to joining the NACA High-Speed Flight Station that became Dryden.

Allen, former aircraft mechanic, dies at 74

Robert Eugene Allen Sr., a former Dryden aircraft mechanic, died July 22. He was 74.

He was a Dryden aircraft mechanic for 38 years and worked on a number of historic aircraft such as the X-15. He was a 1957 graduate of Boron High School.

Former Dryden manager Barnicki passes at 77

Roger Joseph Barnicki, a former Dryden manager, died Sept. 25. He was 77.

Following graduation from the West Technical Institute in Cleveland, he entered the apprentice program at the National Advisory Committee for Aeronautics Lewis Laboratory (now known as the Lewis Research Center), also in Cleveland. In 1955 he transferred to the NACA High Speed Research Station (now Dryden).

Mr. Barnicki had a number of positions including director of life support

Gordo is laid to rest



Submitted photo

The remains of retired NASA astronaut and Dryden research pilot C. Gordon “Gordo” Fullerton were laid to rest Nov. 15 during a formal burial ceremony with full military honors at Arlington National Cemetery in Arlington, Va., near the nation’s capital. About 150 friends, family members and former associates of Fullerton attended the ceremony at Arlington to show their respects. Among attendees were 16 present or former NASA astronauts, including NASA administrator Charlie Bolden. Dryden center director David McBride and former center director Ken Szalai also attended.

systems, Dryden community officer, and during the initial space shuttle launches served as Dryden protocol officer.

He served on the initial planning committee for the Lancaster Walk of Honor, which recognizes a number of Dryden personnel.

Purcell, former maintenance manager passes

Willy James Purcell, a former fire protection systems maintenance manager, died Aug. 13. He was 60.

Mr. Purcell worked at Dryden as a contractor for EDG from 1991-2000. He left Dryden in 2000 for the Edwards Fire Department, where he accepted a job as a fire inspector.

Former instrumentation engineer Brush dies at 76

Robert Brush, a former Dryden instrumentation engineer, died March 15, 2013. He was 76.

Mr. Brush began working at Dryden – then known as the NASA Flight Research Center – on June 1, 1961 as a data system instrument engineer. During more than a decade of work, Mr. Brush worked on projects such as the YF-12, the X-15 No. 2 and the XB-70.

On the X-15 No. 2, Mr. Brush was the senior instrument engineer. In the early 1970s he also worked on the triple supersonic YF-12, an aircraft in the Blackbird family that also included the SR-71. He left Dryden in the 1970s to work for the Department of Transportation testing railroad cars on a test track in Colorado.

Science... from page 6

Operations Facility.

The newly announced observing period, known as Cycle 2, contains 47 science flights grouped into multi-week observing campaigns spread through an 11-month span. The Cycle 2 science flights include approximately 350 research flight hours, about 200 hours of which have been awarded to guest investigators whose proposals to do research using SOFIA were evaluated by either a U.S. or a German-chartered peer review panel.

In addition to the science flights planned for Cycle 2, the SOFIA program will undertake commissioning observations needed to make two more of the observatory's seven first-generation scientific instruments ready for use by guest investigators. Those instruments, the EXES (Echelon-Cross-Echelle Spectrograph), a high-resolution mid-infrared spectrograph, and the FIFI LS (Field Imaging Far-Infrared Line Spectrometer), will be available

to researchers on a limited basis.

"In the past year, SOFIA has become a first-class asset to the world scientific community," said Pam Marcum, NASA SOFIA project scientist. "This SOFIA Cycle 2 announcement marks an important step in our progress toward routine operations. Infrared studies from these observations will enhance our knowledge of the life cycles of stars, how planets form, the chemistry of the interstellar medium, and much more."

SOFIA is a joint project of NASA and the German Aerospace Center (DLR). Dryden manages the program. NASA Ames Research Center at Moffett Field, Calif., manages the SOFIA science and mission operations in cooperation with the Universities Space Research Association (USRA) headquartered in Columbia, Md., and the German SOFIA Institute (DSI) at the University of Stuttgart.

Volcanoes... from page 4

The aircraft departed its home base at the Dryden Aircraft Operations Facility Nov. 6., landing at Lihue International Airport in Kauai, Hawaii, and Wake Island Airport before arriving at Yokota. On the return trip to California, the aircraft traveled through Wake Island and Kona International Airport, Hawaii. During the short Hawaiian stopover, the mission

crew conducted follow-up radar imaging of Hawaiian volcanoes Kilauea and Mauna Loa to measure patterns of inflation and deflation.

The aircraft flew 53.7 hours during the 13-day deployment and data was collected on 100 percent of the planned science lines before the C-20A and its crew returned to Palmdale Nov. 18.



ED13-0362-47

NASA/Tom Tschida

Dryden researcher Marty Brenner monitors Fly-By-Feel sensors during a November Launch Vehicle Adaptive Controls flight on a Dryden F/A-18.

Evaluation... from page 1

SLS evolves, it will provide an unprecedented lift capability of 130-metric-tons (143 tons) to enable missions even farther into our solar system to places such as an asteroid and Mars.

Recognition... from page 2

Recognizes an employee performing exemplary support services in an enthusiastic manner.
Susan McIntosh, SCSC
Terry Riley, SCSC

Create Your Own Award
"The Good Samaritan" Award
Stacey Hendy, ARCATA

"Esprit de Corps" Award
Andrea Basham, NASA

Unsung Hero
Recognizes employees who make critical contributions to the Dryden Mission in a behind-the-scenes role.
David Amejka, NASA
Tracey Pardue, ARCATA
Matthew Reaves, NASA

Teamwork
Recognizes a high-performing team that collaborates to successfully achieve common goals.
Ikhana DB-110 Test Team
Kay & Associates
Support Aircraft NAMIS Review Team

The X-Press is published the first Friday of each month for civil servants, contractors and retirees of the Dryden Flight Research Center.

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