



The Dryden XPRESS

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Snow study resumes

By Beth Hagenaur

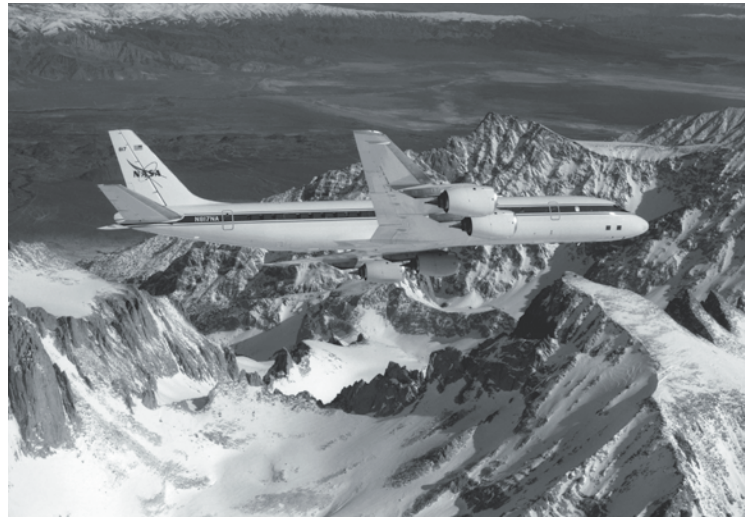
Dryden Public Affairs

NASA's DC-8 flying laboratory resumed flying Jan. 26 in NASA's Global Precipitation Measurement Cold-season Precipitation Experiment, or GCPEX, snow study.

The goal of the more than six-hour night flight was to collect precipitation bands over the Environment Centre for Atmospheric Research Experiments, or CARE, located in Egbert, Ontario, Canada. About 35 passes were made over the CARE site in inclement weather, with freezing rain and strong winds forcing the flight crew to change the flight patterns to increase data collection.

The GCPEX field experiment will help scientists match measurements of snow in the air and on the ground with the satellite's measurements.

"We are looking at the precipitation and the physics of precipitation, such as snowflake types, sizes, shapes, numbers and water content," said Walter Petersen, the GPM ground



EC98 44444-007

NASA Photo by Carla Thomas

After a couple of days off due to weather conditions and media outreach, NASA's DC-8 flying lab is continuing flights in NASA's GCPEX snow study.

validation scientist at NASA's Wallops Flight Facility in Virginia. "These properties affect both how we interpret and improve our measurements."

The Airborne Precipitation Radar-2, or APR-2, developed by NASA's Jet Propulsion

Laboratory and the Conical Scanning Millimeter-wave Imaging Radiometer, or CoSMIR, developed by NASA's Goddard Space Flight Center were operated during the first science flight Jan. 19. As a small low-pressure system moved across the area, the DC-8 flew an

orbiting pattern over the CARE site. A Cessna Citation operated by the University of North Dakota joined the aerial orbit that included repeated spiral descents and climbs. Sites around CARE are heavily instrumented to collect snow and water measurements.

In addition to the CARE ground network of snow gauges, sensors and measurements from aircraft, advanced ground radars will scan the entire air column from the clouds to the Earth's surface.

Among scientists aboard a second science flight Jan. 21 was Gail Skofronick-Jackson, GPM deputy project scientist at NASA Goddard in Greenbelt, Md.

"We took a short flight to measure surface information over our GCPEX field campaign region. It is important to know what our surface 'looks like' with our instruments for clear-air conditions because we can 'subtract' the surface signal when

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Gulfstream III deployment is complete

By Beth Hagenauer

Dryden Public Affairs

NASA's Gulfstream III environmental research aircraft returned to the Dryden Aircraft Operations Facility Jan. 14 following an eight-day deployment to Hawaii. Five flights totaling more than 31 hours allowed scientists to collect radar imaging data about volcanoes

intended to help scientists better understand processes occurring under Earth's surface.

The airborne study was conducted from an altitude of 40,000 feet using the Uninhabited Aerial Vehicle Synthetic Aperture Radar, or UAVSAR, developed by

See Deployment, page 8



NASA Photo by Troy Asher

Although lava is not flowing from the Halema'uma'u Crater, smoke and steam continue to rise into the air above the caldera. Lava flows from Kilauea's east rift zone, the most active part of Kilauea, as it has since 1983.

Passion led Meyer to long career

By Jay Levine

X-Press Editor

When Robert R. “Bob” Meyer Jr. talks to students about careers, he tells them to follow their passions, match those with the skills they have and look for opportunities. In addition, he tells them that their attitude determines their altitude, or how far they will get along their career path.

That’s sage advice that Meyer has lived by. It has served him well, as he retired from Dryden on Feb. 3, just a few days after the 40th anniversary of his arrival at the center as a cooperative education student.

Meyer retired as manager of the Stratospheric Observatory for Infrared Astronomy, or SOFIA, program, but that only reveals a small sample



ED10 0298-10

NASA Photo by Tom Tschida

Bob Meyer, program manager of NASA's Stratospheric Observatory for Infrared Astronomy, highlights some of the technical features of the German-built infrared telescope mounted inside the SOFIA 747SP.

of a career that has included a number of groundbreaking projects and administrative positions at Dryden.

As manager of the SOFIA program, to which he was appointed in 2006, he was responsible for overall development and preparation for operational service of the observatory, which features a German-built 2.5-meter, or 98-inch, infrared telescope mounted in a highly modified Boeing 747SP aircraft. To succeed, he had to navigate the program through a gauntlet of costs, politics, delays and technical challenges at the start.

As acting deputy center director, Meyer was looking at the SOFIA as a potential fit for Dryden's capa-

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Vechil helped to make Dryden safer

By Jay Levine

X-Press Editor

How to be safe and secure and what it takes to be so are always changing and it takes vigilance to stay focused on maintaining high standards.

Emergency manager Jack Vechil retired Feb. 1 after more than 15 years in safety and security positions at Dryden. Vechil knows more than a thing or two about safety, as prior to coming to Dryden he served in the U.S. Navy on vessels that may have carried a major safety concern – nuclear weapons.

While most of the safety and security threats here are not as intense as his previous work place, one value that he brought with him from his Navy career is that people can be enabled to be a vital part of their own safety.

For example, on the ships where Vechil served, everyone was responsible for safety. Considering some of the ship's cargo, it was a topic that had crewmembers attention, he added. He served 12 years active duty and 19 years in the reserves. He retired as a master chief petty officer, an E-9



ED08 0183-04

NASA Photo by Tom Tschida

Jack Vechil and Leah Carreno were preparing for the center's involvement in a Southern California disaster preparedness exercise at the Dryden Emergency Operations Center in 2008.

Navy designation that signifies his management, leadership and team building skills.

Those skills were on display immediately when Vechil came to work here. His contributions to Dryden have included placement of the emergency white Conex boxes with a blue stripe around the center, the establishment of an Emergency Operations Center and

improving the center's emergency communications by moving from satellite radios to satellite phones.

“It was a challenging job and lots of fun,” he said.

Shortly after Vechil came to Dryden in 1996 he saw a problem with distribution of supplies if there was a disaster on base and people at Dryden needed them.

“Supplies need to be where

people need them,” Vechil said.

Then safety chief Tom Ambrose agreed to purchase the Conex boxes, which essentially are locker boxes that contain disaster preparedness equipment and supplies. The Conex boxes are spread over the center to provide immediate supplies of water and medical essentials in the event of an emergency.

Some examples of the kinds of events that change safety and security include when emergency management moved from the center's safety organization to Protective Services after the Sept. 11, 2001, terrorist attacks, he said. Another example is new construction methods and materials that might change safety procedures and requirements. People's thinking has to change with the new methods to avoid complacency and avoid accidents, he said.

Human nature is to become comfortable and complacent, even when it comes to safety and security. An example of that is how the East Coast NASA centers annually practice in case a hurricane, tornado

See Vechil, page 6

Crossfield Drive unveiled

Brig. Gen. Robert C. Nolan II, commander of the Air Force Flight Test Center at Edwards Air Force Base, and base dignitaries dedicated a street to honor legendary pilot A. Scott Crossfield Jan. 18.

The former Crest Drive was renamed Crossfield Drive at its intersection with Doolittle Parkway near the base housing area.

As a NACA test pilot Crossfield became the first pilot to reach Mach 2 – twice the speed of sound – in the Douglas D-558-II rocket plane on Nov. 20, 1953. He flew more rocket-powered flights in the X-1 and D-558-II – 87 in all – during a five-year stint as a research pilot at the NACA's High-Speed Flight Station – now Dryden – at Edwards from 1950 through 1955.

Crossfield later helped design the cockpit of the famed X-15 rocket plane while employed by North American Aviation in the late 1950s and flew the first 14 developmental demonstration flight tests of the craft before it was turned over to the Air Force and NASA for the joint X-15 hypersonic flight research program.

Retired Dryden research pilot Edward Schneider in two presentations, one at Dryden, detailed Crossfield's contributions to the advancement of aeronautics and flight research, calling Crossfield “a humble man whose accomplishments spoke volumes.”



ED12 0027-34

NASA photo by Tony Landis

Above, Air Force Flight Test Center commander Brig. Gen. Robert Nolan II and base officials unveil the Crossfield Drive street sign Jan. 18. Below, Ed Schneider talks about A. Scott Crossfield's accomplishments.



ED12 0027-64

NASA photo by Tony Landis

New messaging system begins this month

A new tool that provides messages for individual NASA employees, called the Human Resources Messaging System, or HRMES, is premiering in February.

HRMES is intended to permit the NASA Shared Services Center to send Human Resources-related messages via e-mail and postings to the Human Resources Portal.

Messaging examples include: notices to employees approaching significant anniversary dates as it applies to retirement options; notices to employees on benefit changes

affecting their specific health benefit coverage; and annual messages normally sent to NASA employees.

Initially, HRMES provides the NSSC the ability to write, review, approve and distribute messages to targeted audiences based upon personnel data currently contained and updated in the NASA Organizational Profile System, or NOPS, database. The messages can be sent once, or scheduled to automatically deploy to an updated list selected by the message author.

The HRMES deployment

includes three phases:

Phase I – Establishes the capability for NSSC HR specialists to draft messages, set audience filters, assign appropriate review/approval officials, and send messages to NASA employees on a one-time or automated basis once the final approval is documented in HRMES.

Phase II – Allows for additional message categories and filters to support other NSSC HR activities.

Phase III - Allows centers access to write, review, approve and send

messages to targeted audiences within the author's center.

Some of the HRMES key features include:

Ability to send messages to targeted audiences; electronically creates e-mail address lists; delivers and archives messages; provides two ways to receive messages; and reminders to employees directly affected by specific HR changes.

The new HRMES system will soon be available at: https://hr.nasa.gov/portal/server.pt/community/human_resources_portal_home

News at NASA

Strain set to leave GSFC

Robert Strain, who has served as center director at NASA's Goddard Space Flight Center in Greenbelt, Md., since August 2008, announced his plans to leave the agency on March 4, 2012. Strain has accepted a senior executive position in private industry.

Strain had a critical role in the new alignment and planning for the James Webb Space Telescope, NASA's next-generation space observatory. Also during his tenure, several Goddard-managed missions, including the Lunar Reconnaissance Orbiter, the Solar Dynamics Observatory, and the Suomi NPP mission were successfully launched.

Strain provided essential oversight for the final space shuttle servicing mission to the Hubble Space Telescope during STS-125 in May 2009.

Prior to joining NASA, Strain was the head of the Space Department at the Johns Hopkins University Applied Physics Lab in Laurel, Md.

Art of the ER-2

By Beth Hagenauer
Dryden Public Affairs

NASA's ER-2 Earth Resources aircraft No. 809 hasn't taken to the air since June. The aircraft sits in the vast Dryden Aircraft Operations Facility hangar in Palmdale, literally in pieces, preparing for the day it will be ready to return to the skies.

As NASA ER-2 project manager Robert Navarro said, "The maintenance crew basically took the plane apart."

The aircraft, which has amassed 4,633 flight hours since it was built in 1989, is undergoing what is called modified periodic maintenance. A team of Dryden aircraft mechanics and technicians has removed the tail, the nose, the wings' upper skins and placed the plane on jacks – all to ensure the structural soundness and airworthiness of the 22-year old airframe. NASA and Computer Sciences Corp. personnel are completing the inspection and repair work in-house.

NASA operates two ER-2s that undergo routine inspections based on number of flight hours flown. The inspections vary in degrees of complexity. It has been about 10 years since ER-2 No. 809 has been inspected in this amount of detail. Technicians are looking for corrosion, checking for leaks in the fuel tanks and removing wiring from previous science projects that is no longer needed. In addition, some older wiring is being replaced by Teflon-coated wiring to ensure flight viability long into the future.

A number of improvements are planned for the airframe and this inspection offers the opportunity to incorporate upgrades as simple as changing to a new type of screw. More complex activities include cutting and removing pieces of metal to be replaced by new, stronger brackets.

Although the wings were not removed, the wing root where the wings attach to the fuselage is being thoroughly inspected. The upper halves of the wing skins were removed for examination of the fuel lines and tanks and replacement of sealant.

Dryden ER-2 pilots are looking forward to putting ER-2 No. 809 through a functional flight check in the spring. Scientists will again begin loading the aircraft with instruments that are carried aboard to altitudes of up to 70,000 feet, so high that the pilot can see the curvature of the Earth, for a variety of environmental science and satellite instrument verification missions.

The ER-2s are two of a suite of NASA Airborne Science Program research aircraft Dryden operates. The other aircraft include a DC-8 flying laboratory, a Gulfstream III and two remotely operated Global Hawks.



ED11 0321-32

NASA Photo by Tom Tschida

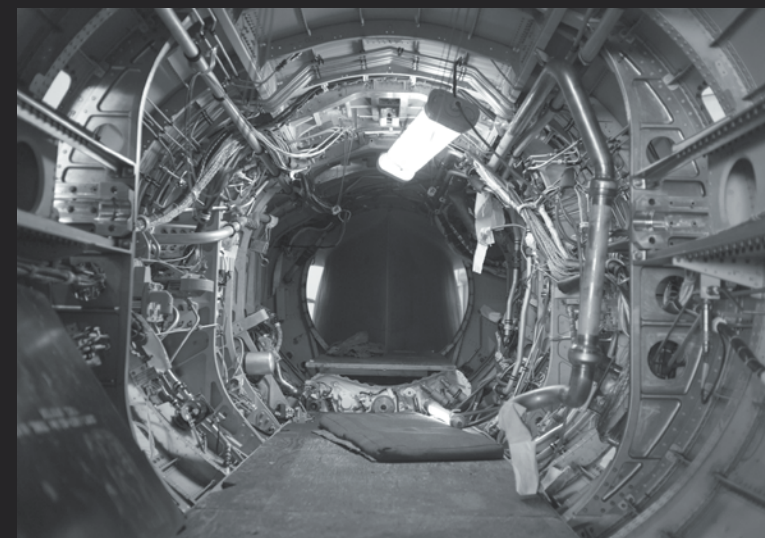


ED11 0321-10

NASA Photo by Tom Tschida

Above, twin air inlets on each side of the fuselage of a NASA ER-2 converge at the engine's front fan.

At left, the forward fuselage of NASA ER-2 No. 809 is missing its nose, canopy and instrumentation that were removed during major maintenance and inspection.



ED11 0321-34

NASA Photo by Tom Tschida

The rear fuselage of NASA's ER-2 No. 809, the area that holds the engine's exhaust pipe, resembles an aluminum cave in this front-to-back view.



ED11 0321-64

NASA Photo by Tom Tschida

The ER-2 is in pieces, but will resume flight later this year.



ED11 0321-48

NASA Photo by Tom Tschida

With the pilot's seat out, the photographer stood inside the cockpit for this unique perspective.



ED11 0321-42

NASA Photo by Tom Tschida

Wiring access is gained with the panel removed.

Nichols recalls Trek, meeting with King

By Jay Levine
X-Press Editor

Nichelle Nichols has warped to many worlds as Lt. Uhura in the Star Trek television show of the 1960s.

However, her real-life adventures have taken her to where no one has gone before in advocacy for NASA and helping to inspire – and encourage – women and multicultural astronaut candidates to apply. Her influence led to NASA choosing astronauts such as Mae Jemison, who became the first black woman in space, and current NASA Administrator Charlie Bolden.

Nichols spoke about some of her experiences – including a meeting with civil rights leader Martin Luther King – during a tour of Dryden Jan. 10. She also toured the Dryden Aircraft Operations Facility in Palmdale.

Following her first year on the television series she told Star Trek creator Gene Roddenberry that she was resigning from her role as Uhura and she intended to return to her first love – Broadway. Roddenberry asked Nichols to reconsider over the weekend.

Fate intervened. While speaking at a National Association for the Advancement of Colored People, or NAACP event, civil rights leader



ED12 0013-25

NASA Photo by Tom Tschida

Nichelle Nichols talks with some of her fans after her presentation at Dryden.

Martin Luther King asked to meet Nichols. She was told her biggest fan wanted to meet her and Nichols was astonished to find out it was King.

King, who would have been 83 Jan. 15, was passionate about the importance of Nichols' role on Star Trek. When she told him of her plan to leave the show, King told her Star Trek had value to the future, as it showed people of many nations and cultures working together side by side. Star Trek showed a future where people were judged solely on the content of their character and not by their differences – such

a world as King envisioned in his famous "I Have a Dream" speech delivered in 1963.

Nichols went to Roddenberry to rescind her resignation and he shed a tear at her retelling of her conversation with King. Roddenberry told Nichols that he was happy that people were seeing what he was trying to achieve with the Star Trek series.

Dryden Center Director David McBride said in his introductory remarks that he was one of those inspired by the original Star Trek.

"I was influenced watching Star Trek growing up and I think in

a big way that led to my career in science and technology. I think the crew of the Enterprise inspired all of us and Lt. Uhura was a part of that special crew," McBride said.

McBride also spoke about the inspiration the series provided to people seeking careers in science, technology, engineering and mathematics to develop some of the high-tech items seen on the show.

"We are seeing things like electronic readers and wireless communicators. The first place we saw that was on the bridge of the Enterprise and Lt. Uhura was in charge of it (communications)," McBride said.

Since her days as Lt. Uhura, she has been an advocate for NASA's missions: "That's what our tax dollars do. These missions show what mankind can dream of, mankind can do," she said.

Nichols said she feels an obligation – and joy – to support human spaceflight and space probes to study the universe.

"NASA belongs to me. We have not only the opportunity, but the duty to keep the space program viable where no man or woman has gone before," she said.

She considers one of her greatest

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Vechil... from page 2

or other natural disaster strikes. On the West Coast, however, NASA conducts annual disaster drills, but they are not as intense as they should be, Vechil said. Why? There are fewer major earthquakes, building codes in the U.S. are more stringent than other countries and there is no designated earthquake season, he said. For those reasons, disasters are not on the top of people's minds on the West Coast until they are in one.

That thinking extends to Dryden employees, he said. Although Dryden is well prepared for an emergency, Vechil said he is concerned that people are not as prepared at home

if an earthquake hits. Even during the Great Shakeout exercise in 2008 the emergency was understated in terms of how bad it could be.

Vechil recommends for people in the more remote desert areas of Los Angeles and Kern counties to be prepared with enough food and water for seven days, as immediate help and supplies will be sent to more populous areas.

People need to be prepared to be safe at home, but also to think about security issues, such as not allowing bushes to give potential burglars cover to get in the house, make sure the lighting is good and the doors are locked, he said.

In that way, Vechil said Dryden's Safety Days could be used to educate employees on issues close to home like the establishment and upkeep of a family emergency plan.

Another change in safety and security during Vechil's career here is the establishment of an Emergency Operations Center, a place where disaster planning and recovery could begin in the case of a major event.

At a management meeting at Stennis Space Center, Vechil first received stacks of documents about the requirements for NASA centers in an emergency. Vechil requested a meeting with Dryden

senior management to discuss the implications of the requirements. An oversight committee was created and the Emergency Operations Center was prepared in Building 4850.

The new challenge, especially with Vechil's departure, is to simplify the Emergency Operations Center and streamline training needed to run it in an emergency, he added.

Vechil's thoughts are now turning to the clear, blue waters of Lake Havasu. Born and raised in Bakersfield, Vechil and his wife, Cindy, plan to raise their daughter Caitlyn with a view of the lake from the family's new home in Lake Havasu City, Ariz.

Meyer... from page 2

bilities. It also was an opportunity to diversify the center's portfolio of work. At the time, aeronautics, which was projected to decrease, accounted for about 70 percent of Dryden's work.

The SOFIA program was in trouble and had lost the confidence of NASA Headquarters, the science community, the German partners and others, he said. There was doubt that the flying observatory would ever capture the first image using the German telescope that was delivered and in the plane, but not close to flying.

Meyer organized a Dryden risk assessment team that looked at a list of the threats to the program, starting with how to develop confidence that the aircraft would take flight and deliver on the promise of ground breaking infrared astronomy observations. As part of the analysis, Dryden's Brad Neal was detailed to L-3 Communications in Waco, Texas, where the aircraft was undergoing modernization.

A proposal was developed to conduct the program and steps were laid out as to how to get to the first science flights. An independent review concluded Dryden could do the work and the SOFIA program management became the center's responsibility and he was asked to lead it, Meyer said.

Accurate schedules and making milestones would be the first steps to reestablishing confidence in the program. Networking with NASA partners at Ames Research Center, NASA Headquarters, the German partners and the science community was another key goal.

When the aircraft arrived at Dryden in 2007, Meyer organized a ceremony that marked a new start for the program and helped reaffirm support. People were also able to see the aircraft and that it was indeed flying.

Technically, the program was realigned and contracts reworked to ensure that partners were contributing based on their skills and specialties, Meyer said. The biggest techni-



EC96 43525-9

NASA Photo by Tony Landis

Flight engineers Marta Bohn-Meyer and Bob Meyer and pilots Eddie Schneider and Rogers Smith flew the SR-71s in high-speed research experiments. From top to bottom are Smith, Schneider, Meyer and Bohn-Meyer.

cal challenge was the controller that opened and closed the door over the cavity where the telescope is housed in the aft of the aircraft. Dryden engineers who were assigned to fly on the aircraft with contract personnel helped resolve the issues. Dryden is known for its aircraft integration work and this was a problem for which center engineers were ideally suited to resolve, he said.

He didn't hesitate when responding to a question about his best day at work – that was his first flight in the triple-supersonic SR-71 Blackbird aircraft.

His first project at Dryden, as a full time engineer, was researching why the ventral fin ripped away from the YF-12, a variant of the Lockheed A-12 design. He dreamed about what it would be like flying the Blackbird, a path he later pursued.

Later in his career, he and Marta Bohn-Meyer, also hired as a Dryden engineer, found themselves with a unique opportunity. The retirement of Vic Horton and Ray Young left no qualified flight test engineers for supporting Dryden research flights.

Meyer and Bohn-Meyer had been flying in research aircraft such as the F-14, and they had the opportunity to receive pressure suit training to support F-104 flights after Horton and Young retired.

Meyer and Bohn-Meyer, who were husband and wife, flew aerobatic aircraft competitively and were friends with many of the pilots. For those reasons, the transition to flight crew, as additional tasks to their main jobs, went well. In 1994 Meyer was a member of the U.S. Aerobatic Team that represented the United States in the biennial World Aerobatic Championships in Hungary and ultimately flew in three world championships.

When the SR-71, another A-12 variant, came to Dryden in the early 1990s, Meyer and Bohn-Meyer asked then chief pilot Bill Dana if they could be considered for the SR-71 flight test engineer positions and Dana agreed. They served as flight crewmembers with the Dryden SR-71 program until it ended in 1999.

Tragically, Marta Bohn-Meyer, who was Dryden's chief engineer, perished in a 2005 accident in the custom-built aerobatic aircraft they designed.

Prior to his appointment as the SOFIA program manager, Meyer was associate director for Programs from 2004 through 2006. He previously held management positions including acting deputy center director, director of aerospace projects and director of Research Engineering.

Earlier in his career, Meyer served as chief of the Research Engineering Aerodynamics Branch and chief engineer on the F-18 High Angle of Attack research project that produced information to improve maneuverability of future aircraft that use thrust vectoring at high angle of attack.

He also led aerodynamic loads tests on the space shuttle thermal protective tile system prior to the first space shuttle mission, development of a real-time cockpit trajectory

guidance system, and studies of laminar (smooth) air flow involving F-111, F-14 and F-15 aircraft.

From 1972 to 1975, Meyer was a student in the cooperative education program between Purdue University, West Lafayette, Ind., and Dryden. One of his projects was aerodynamic drag reduction study on ground vehicles with Ed Saltzman. Meyer noted the truck studies had a significant impact on long distance trucking fuel efficiency and he saw the results of the effort on aerodynamic trucks as he drove to work.

Meyer graduated from Purdue with a Bachelor of Science in aeronautics and astronautics engineering in 1975. From 1976 to 1978 Meyer was on a two-year temporary assignment at the NASA Langley Research Center, Hampton, Va., as a test engineer in the eight-foot transonic pressure wind tunnel. Meyer carried out wind tunnel investigations of winglets and the Citation III business aircraft under the supervision of famed Langley aerospace engineer Richard Whitcomb.

In 2008, Dryden employees selected Meyer as one of Dryden's most influential driving forces. Nominators described Meyer as "a visionary," as "hard-working and fair" and "a gifted pilot."

Meyer has written or co-authored more than two dozen reports and professional papers.

As he closes the chapter on his work life, he has a rich retirement planned with travel and getting his wrench moving to complete restoration of two 1950s Corvettes and begin work on a third. He also plans to complete the refurbishment of a Beech Staggerwing aircraft.

"I had an awesome career at Dryden and I can't think of any place I would have rather worked!" Meyer said.

While retirement beckons for now, don't be too surprised to see Meyer consulting for Dryden or elsewhere in the aeronautics field because to him it's not just a job, it's a way of life.

Study... from page 1

we are observing falling snow,” said Skofronick-Jackson.

“It’s like trying to weigh your luggage to make sure that it is under 50 pounds so you don’t get charged extra at the airport,” she added. “First you weigh yourself (like

clear-air surfaces), then you weigh yourself holding the luggage (snow falling over the surfaces), finally you subtract the two leaving just the luggage weight (only the falling snow signal).”

During GCPEX the DC-8 is

flying above the clouds while the Citation and a Canadian National Research Council Convair 580 fly through the clouds and measure the microphysical properties of the raindrops and snowflakes inside.

If the opportunity exists during

the mission, now scheduled to end Feb. 29, the DC-8 also will fly over blizzards along the northeastern United States.

For more information about GCPEX, visit: <http://pmm.nasa.gov/GCPEX>

Deployment... from page 1

NASA’s Jet Propulsion Laboratory and mounted in a pod under the aircraft. The study focused on the Kilauea volcano on the Big Island of Hawaii, the state’s most active volcano, although science data flight lines were flown over nearby volcanoes including Mauna Loa, Mauna Kea, Hualalai and Kohala.

NASA research pilot Troy Asher reported that good weather and

the reliability of the aircraft and the radar equipment enabled the research team to accomplish most of their planned science data collection flight lines.

“We had one day off, and used that time to do a little touring on the island to see firsthand some of what we were observing from 40,000 feet,” he added.

The UAVSAR uses a technique

called interferometry that sends pulses of microwave energy from the sensor on the aircraft to the ground to detect and measure very subtle deformations in Earth’s surface. The radar data collected during the mission will be analyzed over the next few weeks to determine if significant ground movement or deformation is occurring in the active volcanic areas.

The UAVSAR’s first data acquisition over this region was in January 2010. Dryden engineers designed the Platform Precision Autopilot, which assisted pilots on this mission to repeat the flight paths over the volcano from May 2011. The two sets of observations successfully imaged the surface deformation caused by the March 2011 fissure eruption in Kilauea’s east rift zone.

Nichols... from page 6

accomplishments helping to open the door for the first women and multi-cultural candidates to become astronauts.

In a speech in Washington, D.C., Nichols criticized NASA for failing to select qualified women and minority candidates for the astronaut corps and she gave some examples of qualified people who had applied but were rejected up to five times. NASA was having their fifth or sixth recruitment, but women and ethnic minorities felt they were disenfranchised and stopped applying, she said.

NASA officials attending her speech responded by inviting

Nichols to NASA Headquarters the next day. They wanted her to assist them in persuading women and people of ethnic backgrounds that NASA was serious about recruiting them. “I said you’ve got to be joking; I didn’t take them seriously,” she said.

John Yardley, who was involved in all NASA’s manned space flights for almost two decades, directed the teams that built the capsules for the initial Mercury and Gemini mission and was a key manager for the development of the space shuttles, assured her it was not a joke.

She accepted the request and she succeeded at attracting excellent

astronaut candidates. As a result, NASA selected five women, three African-American men and an Asian. Two of her better-known recommendations for recruitment were NASA’s current administrator and Jemison.

Bolden flew as pilot or commander on four space shuttle missions and served in a number of NASA positions before his selection as NASA administrator in 2009.

Jemison’s first application to be an astronaut in 1983 was rejected, but after Nichols asked if she still was interested, Jemison applied a second time in 1987 and was chosen. She became the first black

woman in space aboard the shuttle Endeavour in September 1992.

Jemison also has the distinction of being the first real astronaut to have a role in a Star Trek series – she appeared in Star Trek: The Next Generation.

Ivor Dawson, president of the TravelingSpaceMuseum educational organization with which Nichols is involved, facilitated Nichols’ visit to Dryden. The museum provides hands-on science and space-related educational activities to schools.

Nichols’ Uhura inspired. Now her education work encourages people to boldly go and discover their dreams.

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