

NASA Kepler scientist honored by National Academy of Sciences

BY MICHELLE JOHNSON

William Borucki, science principal investigator for NASA's Kepler mission at Ames, is the recipient of the 2013

mission," said John Grunsfeld, associate administrator for the Science Mission Directorate at NASA Headquar-

planets and possible candidates with a wide range of sizes and orbital distances to help scientists better understand our place in the galaxy.

"It has been a privilege to participate in the initial steps in the search for life in our galaxy. I would like to thank all who have worked with me to make this possible," said Borucki.

Borucki earned a master of science degree in physics from the University of Wisconsin at Madison in 1962 and joined Ames as a space scientist that same year. The results of Borucki's early work developing spectroscopic instrumentation to determine the plasma properties of hypervelocity shock waves was used in the design of the heat shields for the Apollo mission. In June, Borucki celebrated 50 years of service at NASA.

The Henry Draper Medal is awarded every four years for an outstanding, recently published contribution to astrophysical research and carries with it an award of \$15,000.

The award will be presented at a ceremony April 28, 2013, during the National Academy of Sciences' 150th annual meeting in Washington.



Henry Draper Medal awarded by the National Academy of Sciences.

Borucki is being honored for his founding concept and visionary leadership during the development of Kepler, which uses transit photometry to determine the frequency and kinds of planets around other stars.

"This is a commendable recognition for Bill Borucki and the Kepler

ters in Washington. "It is well deserved and a tribute both to Bill's dedication and persistence and the fantastic and exciting results from Kepler."

Kepler is the first NASA mission capable of finding Earth-size planets in or near the "habitable zone," the region in a planetary system where liquid water can exist on the surface of an orbiting planet. Kepler is detecting

NASA's Kepler Mission finds abundance of planet candidates

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consistent with what we know about our own planetary neighborhood."

The Kepler space telescope identifies planet candidates by repeatedly measuring the change in brightness of more than 150,000 stars in search of planets that pass in front, or "transit," their host star. At least three transits are required to verify a signal as a potential planet.

Scientists analyzed more than 13,000 transit-like signals to eliminate known spacecraft instrumentation and astrophysical false positives, phenomena that masquerade as planetary candidates, to identify the potential new planets.

Candidates require additional follow-up observations and analyses to be confirmed as planets. At the beginning of 2012, 33 candidates in the Kepler data had been confirmed as

planets. Today, there are 105.

"The analysis of increasingly longer time periods of Kepler data uncovers smaller planets in longer period orbits -- orbital periods similar to Earth's," said Steve Howell, Kepler mission project scientist at Ames. "It is no longer a question of will we find a true Earth analogue, but a question of when."

The complete list of Kepler planet candidates is available in an interactive table at the NASA Exoplanet Archive. The archive is funded by NASA's Exoplanet Exploration Program to collect and make public data to support the search for, and characterization of, exoplanets and their host stars.

Ames manages Kepler's ground system development, mission operations and science data analysis.

NASA's Jet Propulsion Laboratory (JPL) in Pasadena, Calif., managed Kepler mission development. Ball Aerospace and Technologies Corp. in Boulder, Colo., developed the Kepler flight system and supports mission operations with JPL at the Laboratory for Atmospheric and Space Physics at the University of Colorado in Boulder.

The Space Telescope Science Institute in Baltimore archives, hosts and distributes the Kepler science data. Kepler is NASA's 10th Discovery Mission and is funded by NASA's Science Mission Directorate at the agency's headquarters in Washington, D.C.

JPL manages NASA's Exoplanet Exploration Program. The NASA Exoplanet Archive is hosted at the Infrared Processing and Analysis Center at the California Institute of Technology.

Ames honors fallen heroes, unveils Columbia memorabilia

Ames employees honored the astronauts and brave members of the NASA family who gave their lives in the pursuit of space exploration and service to our nation during a Day of Remembrance Ceremony in the Ames Exploration Center on Feb. 1, 2013.

The Exploration Center unveiled an exhibit to pay tribute to NASA Astronaut and STS-107 space shuttle Columbia Mission Specialist, Kalpana Chawla, a friend and colleague to the Ames community during her tenure as an astronaut candidate.

Ames employees heard remarks from Ames Center Director S. Pete Worden, saw a presentation about Chawla by former Ames colleagues, saw a video featuring Columbia and observed a moment of silence.

Across the country, flags at NASA Headquarters in Washington, D.C. and the NASA field centers were flown at half-mast in memory of the colleagues lost in the cause of exploration.

The Columbia memorabilia exhibit features Chawla's personal belongings, items and awards associated with her career at NASA. It will be open to the public through March 25, 2013.

A decade has passed since the loss of the crew of space shuttle Columbia on



The Ames Exploration Center unveiled an exhibit on Feb. 1, 2013 to pay tribute to NASA astronaut and STS-107 space shuttle Columbia Mission Specialist Kalpana Chawla.

Feb. 1, 2003, just minutes before landing. More than 40 years ago, on Jan. 27, 1967, the crew of Apollo 1 perished in a terrible fire. And nearly 30 years ago, on Jan. 28, 1986, the crew of space shuttle Challenger died less than two minutes after launch.

A wreath-laying ceremony at the Space Mirror Memorial at the Kennedy Space Center Visitor Complex, hosted by the Astronauts Memorial Foundation, was broadcast live on NASA Television Feb. 1, 2013.



Employees and invited guests look at the new exhibit unveiled on Feb. 1, 2013, in the Ames Exploration Center during the remembrance ceremony held to honor fallen NASA's fallen heroes.

NASA photos by Eric James

First mobile NASA App shares Agency's 2012 software award

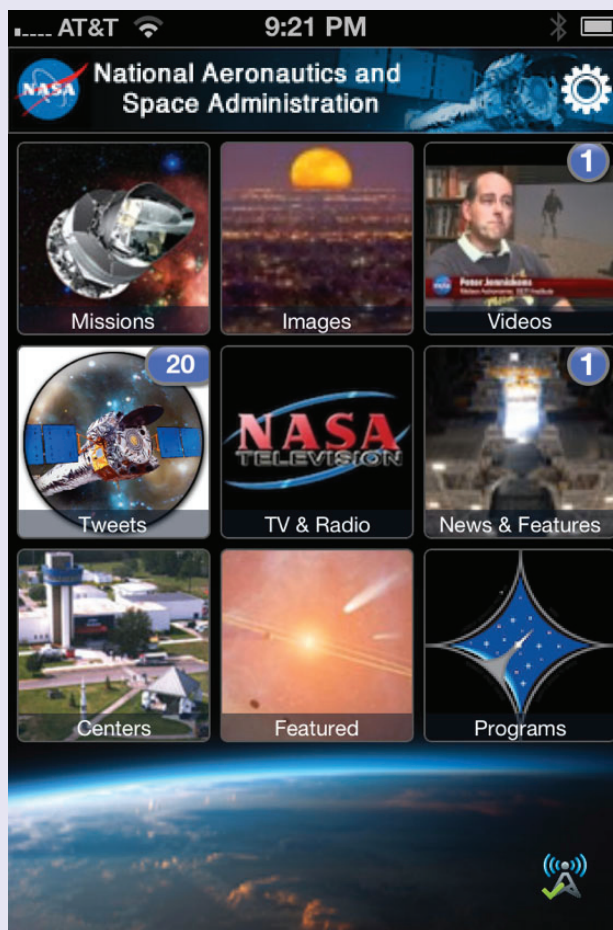
BY JESSICA CULLER

NASA's first mobile application is sharing NASA's 2012 Software of the Year award. The award recognizes innovative software technologies that significantly improve the agency's exploration of space and maximize scientific discovery on Earth.

Software engineers at NASA Ames developed the NASA App, which is available for mobile devices including the iPhone, iPod touch, iPad and Android phones and tablets. The NASA App currently has more than 10.8 million user installations and receives more than three million hits per day on average.

The NASA App gathers the agency's online content, breaking news, image and video collections, news and image feeds, social media accounts, and more in one easy-to-use location that aids public access to science, technology and engineering discoveries. The app's creators are program manager Jerry Colen, software engineer John Freitas and new media specialist Charles Du.

QuakeSim, which shares the 2012 award, was developed at NASA's Jet Propulsion Laboratory in Pasadena, Calif.,



A view of the NASA App home page screen

and is software that models the behavior of earthquake faults to improve earthquake forecasting and our understanding of earthquake processes.

A NASA software advisory panel reviews Software of the Year entries and recommends winners to NASA's Inventions and Contributions Board for confirmation.

Ames previously won the award in 1998 for Center TRACON Automation System (CTAS); in 1999 for Remote Agent: Autonomous Reasoning and Control for Spacecraft and Other Complex Systems; in 2002 for Cart3D; in 2006 for FACET—Future Air Traffic Management (ATM) Concepts Evaluation Tool; in 2007 for The Data-Parallel Line Relaxation (DPLR); in 2009 for NASA World Wind Java (WWj) Software Development Kit (SDK) and Web Mapping Services (WMS) Server; and in 2010 for Kepler Science Operations Center Science Pipeline (Release 6.0).

North American students become virtual explorers on NASA Mars mission

BY SAHAR LEAUPEPE AND RUTH DASSO MARLAIRE

Students from schools across North America recently participated in a real NASA Mars mission, called Icebreaker. They remotely operated from their classrooms a robotic arm that transferred specimen samples into a hopper on a Phoenix-sized mockup spacecraft located in the Antarctic. Designed and built at NASA Ames, the robotic arm and its automation and control software are being tested as part of a mission that drills into the icy subsurface of Mars.

NASA has an education goal to inspire and engage students in Science, Technology, Engineering and Mathematics (STEM) content. To meet that goal, scientists from Ames brought the virtual experience of science exploration into the classroom from the McMurdo Research Station in the Dry Valleys of the Antarctic.



Team members try to stay warm during drill automation testing at the University Valley Mars-analog site.

Photo by Brian Glass

"Involving students is a great way to test our drill. If anyone can break this drill, it's enthusiastic kids operating the controls. There is additional benefit that we might also be inspiring the next generation of space explorers," said Chris McKay, an Ames planetary research scientist and the principal

investigator of the Icebreaker mission.

Scientists temporarily residing in one of the most frigid regions on Earth talked to students in classrooms through a live video feed. Discussions included project descriptions and activity briefings followed by a question and answer session.

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Ames celebrates legacy of Dr. Martin Luther King



NASA photos by Dominic Hart

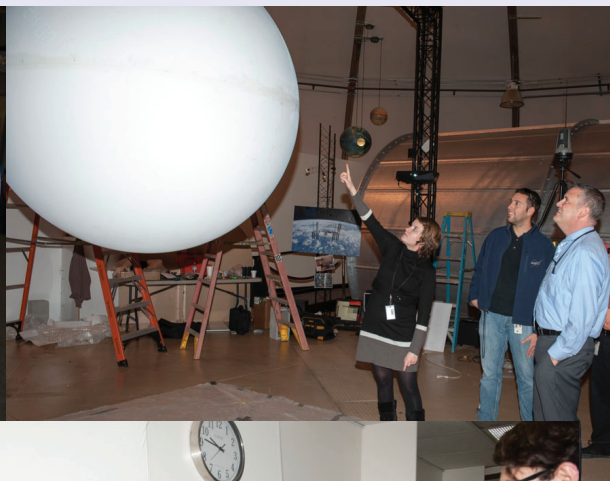
In recognition of the leadership and sacrifice of Dr. Martin Luther King, the Ames African American Advisory Group invited Ames employees to participate in an event at the center on Jan. 16, 2013. Guest speakers this year included (left to right), Reverend Sheila Robinson, Samuel L. Brown and the Honorable Shelyna V. Brown. They participated in a panel discussion about Dr. King and how he influenced their lives. King was a person of service who supported not only African Americans, but all races and cultures. He was a drum major for peace and a strong advocate for diversity.



Stofan engages students at Ames Exploration Encounter



Above photo: NASA Deputy Associate Administrator for Program Integration James Stofan (standing right) paid a visit recently to the NASA Ames Exploration Encounter (AEE). During his visit, Stofan reminded the 5th grade class of Ben Painter Elementary (San Jose, Calif.) that education is the gateway to success. Upper right photo: Institutional Engagement lead Brenden Sanborn (center) and education specialist Cara Dodge (left) showcase the installation of Ames' new 'Science on a Sphere' to James Stofan (right) soon to open at the NASA Ames Visitors Center. Lower right photo: Ames volunteer docent Shareen Singh (center standing), James Stofan (center) and Daniel Likins, Ames Exploration Encounter Operations Manager (far right), oversee student research activities (student sitting at console) in the AEE's model International Space Station module.



NASA photos by Astrid Terlep

Ames leads agency in 'Black Engineer of the Year' awards

by James Schalkwyk

Of the 10 distinguished NASA employees who were recognized in this year's Black Engineer of the Year Awards (BEYA), a staggering eight of them were from Ames Research



NASA photo

Aisha Bowe, aerospace engineer in the Aviation System Division at Ames, received the Special Recognition award at the BEYAs. She is seen here with NASA Administrator Charles Bolden.

Center. The recipients received their awards during a three-day conference Feb. 7-9, 2013 in Washington, D.C.

The Black Engineer of the Year Awards 2013 was hosted by the

Council of Engineering Deans at Historically Black Colleges and Universities, Lockheed Martin Corporation, US Black Engineer & Information Technology magazine and was sponsored by Aerotek. The awards recognize the achievements of African Americans in Science, Technology, Engineering and Math (STEM) and encourage young black Americans to pursue careers in STEM fields.

"At Ames we pride ourselves on our diverse workforce and our inclusive atmosphere," said Center Director S. Pete Worden. "We recognize that diversification is an ongoing process, but it is encouraging to see such a high number of NASA employees winning these significant awards."

The Ames recipients of 2013 Black Engineer of the Year Awards include:

- Diversity Leadership in Government award: Barbara E. Miller, who was recognized for her work as the Director of the Ames Office of Diversity and Equal Opportunity.

- Senior Investigator Award: John W. Hines, former Center Chief Technologist (now retired), who designed, developed, tested and evaluated space systems and managed advanced technology development programs and projects during an

exceptional career at NASA.

- Special Recognition Award: Aisha R. Bowe, aerospace engineer, whose work in Next Generation Air Transportation focuses on developing methods to maintain safe separation of air traffic and optimize fuel consumption within an automated system.

Trailblazer awards:

- Ken Freeman, a project engineer, who successfully implemented information technologies across NASA in varied IT fields for more than 20 years.

- Kevin L. Jones, a computer engineer and NASA IPv6 transition manager, who has been a pioneer in the field of networking at Ames, managed several IT projects for various organizations and is leading NASA's IPv6 implementation efforts.

Modern-day Technology Leaders awards:

- Ousmane N. Diallo, an aerospace research engineer, who focuses on the development of algorithms in support of advanced flight control and air traffic automation.

- Gilena A. Monroe is the Log Aggregation Tool Lead and Agency Vulnerability Assessment and Remediation (AVAR) project manager for the NASA Security Operations Center where she helps meet cyber security needs in the protection of NASA's

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North American students become virtual explorers on NASA Mars mission

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IceBreaker is a rotary-percussive drill that rotates and hammers on its

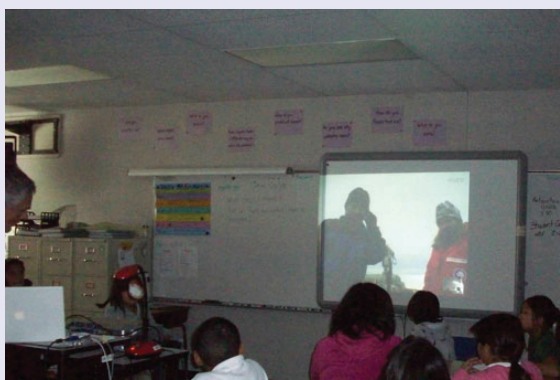


Photo by Brian Glass

Students from Meadows Elementary, San Jose, Calif. participated in the demonstration.

target to deliver samples to the surface for scientific analysis. As part of the

2010 Discovery proposal, scientists thought it was capable of drilling as deep as three feet into ice and frozen soil. However, test demonstrations show it is capable of penetrating up to 15 feet. Once samples have been elevated to the surface by the drilling, the robotic arm transfers the drill specimens to the instrument inlet hoppers on the spacecraft.

The robotic arm and its automation and control software is being tested by NASA Ames for a possible Mars mission in 2018 or 2020. Because Antarctica and Mars share similar environmental conditions, such as dryness and freezing temperatures, it is an ideal testing location for the Icebreaker drill.

Participating schools included California's Jeanne Meadows Elementary School, San Jose; Donlon Elementary School and Valley View Elementary School, Pleasanton; Pathways Charter School, Rohnert Park; Jackson Elementary and Eliot Middle School, Pasadena; Arizona's Verde Valley High School, Flagstaff; Clarkdale-Jerome Jr. High School; Archimedes Academy, New York, N.Y.; and Canada's Colleges Jean-Eudes, Montreal and La Citadelle, Cornwall.

The science activity in early January provided an opportunity for the students, their teachers, and school volunteers to learn about sustaining life on Mars. Students were enthusiastic and awe-inspired by the sophisticated technology.

"It was awesome," said Carlos Granades, a student from Jackson Elementary, Pasadena, Calif. "It makes me feel proud."

Ames celebrates 25th anniversary of landmark wind tunnel

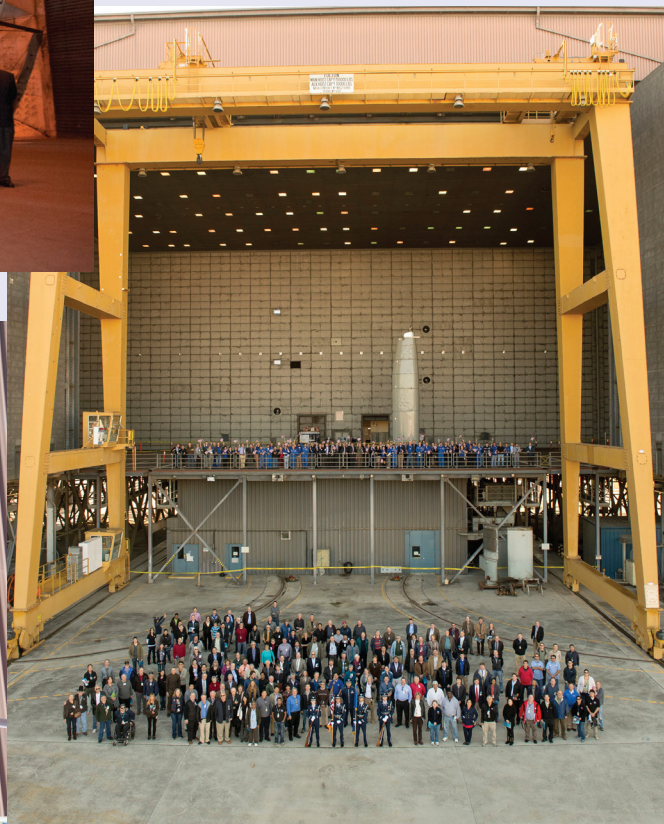
Dec. 11, 2012 marked the 25th anniversary of the dedication of the National Full-Scale Aerodynamics Complex (NFAC) as a national test facility. The anniversary was observed by NASA, the U.S. Air Force and the U.S. Army with a re-dedication ceremony, group photo and open house tours of the 40-foot-by-80-foot wind tunnel test section, the 80-foot-by-120-foot wind tunnel test section, the tiltrotor test rig preparation area in the Building N-246 High Bay B and static aircraft displays of an Army UH-60 Blackhawk and a Marine MV-22 Osprey. Ames employees were invited to participate in the events. In partnership with the California Department of Veteran Affairs, Northern California Veterans Cemetery, Ames decorated the center and the facilities/building associated with the NFAC 25 celebration with more than 1,000 American flags.

NASA photo by Paul Langston



NASA photo by Eric James

NASA photo by Paul Langston



NASA photo by Eric James



NASA photo by Paul Langston

In Memoriam

Former Ames employee Virginia Stalder passes away

After a long and adventurous life, Virginia Hall Stalder, resident of Palo Alto, Calif., passed away peacefully in her sleep Nov. 25, 2012 near her English holly farm in Beavercreek, Ore. at the age of 87.

Born Jan. 20, 1925 in Salisbury, N.C. to Hallie Shaver and John Floyd Hall, she grew up in Salisbury and Woodleaf, attending Salisbury and Woodleaf public schools and Catawba College, where she graduated with a degree in physics.

Upon graduation from Catawba, she was employed by NACA, the predecessor of NASA, at Langley Field, Va. Shortly thereafter, seeking adventure, she transferred to Ames Research Lab at Moffett Field. She advanced to the position of “head computer” before the advent of calculators and main frame computers.

At Ames, she met and married Jackson R. Stalder, an aeronautical research engineer.

She continued to work for various firms on the San Francisco Peninsula, an unusual achievement for women in the 1950s, while raising three children.

In 1964, Virginia and Jackson purchased an English holly farm in Bea-

vercreek, Ore. Jackson passed away in 1968, and Virginia managed and developed Beavercreek Farms – purveyors of fine English holly seasonal gifts – for 48 years. When asked why she was once again making the annual trek to Beavercreek at the age of 87, she replied “to make a few people happy.” She deeply appreciated her holly customers and treasured providing jobs for her loyal and talented seasonal workers.

Although an accomplished career woman and business owner, Virginia described herself as a “country girl at heart.” Nothing pleased her more than a long, slow Sunday drive on back roads. She enjoyed three cross-country road trips with her children and grandchildren during her last years.

She is survived by her three children: Suellen Stalder (James Corrie) of Berkeley, Calif., Barbara Allen (Judson Allen, deceased) of Palo Alto, Calif., and Kenneth R. Stalder (Patricia Nassos) of Redwood City, Calif.; three grandchildren: Suzanne Allen of Portland, Ore., Katherine Stalder of Menlo Park, Calif., and Julia Stalder of Pasadena, Calif.; two nieces: Donna Schulken of Santa Nella, Calif., and



Virginia Hall Stalder

Lisa Simmons of San Mateo, Calif. Additionally, she is survived by numerous loving Shaver and Hall cousins in North Carolina.

Private services were conducted at Beavercreek Farms Nov. 29, 2012.

Planetary scientist Richard E. Young passes on

Richard E. Young, planetary scientist at NASA Ames, passed away unexpectedly on Jan. 16, 2013 while walking near his country home in the Sierra foothills at Dunlap, Calif. He was 69.

Rich had a long and productive career in planetary science. After graduating from UC Berkeley, he came to Ames to work on advanced planetary mission concepts, which inspired him to seek and earn a Ph.D. from UCLA, working with Prof. Gerald (Jerry) Schubert, in 1972.

After a short post-doc at the National Center for Atmospheric Research (NCAR), Rich returned to Ames to work on the Venus atmosphere research project with Jim Pollack, and joined the Theoretical Studies Branch of the Space Science Division in 1976.

During his career, Rich conducted research into a broad variety of topics ranging from interior structural and thermal models of the moon, Mercury, Mars, Uranus and

Neptune, to 3D atmospheric dynamics, to free and forced planetary-scale waves and zonally averaged flows, and the radiative properties of terrestrial volcanic hazes.

He was among the first to develop general circulation models for Venus to try to explain its four-day superrotation – perhaps the most challenging goal for understanding deep planetary atmospheres. He participated in three major planetary missions, including Pioneer Venus, the Venus Vega mission, and the Galileo Jupiter mission for which he served as the entry probe chief scientist.

Later in his career, Rich managed the Planetary Systems Branch for five years. He retired in 2006, but remained active in science by educating the public about the reality and challenge of climate change on Earth. As a human being, Rich was the best. His hearty laugh often echoed around the halls at Ames, and he never had a bad word for anyone. He was an enthusiastic tennis player, poker player and backpacker. He had a soft spot in



Richard E. Young

his heart for animals of all kinds, and in his retirement he volunteered at an animal rescue shelter near his home. He is survived by his wife Cindy, her daughters and grandchildren.

Former associate Code J director remembered

Edward M. Cain passed away Tuesday, Jan. 8, 2013, of heart failure. He died as he "had hoped he would go," in his beautiful home in Los Gatos, attended by loved ones and gently in his sleep.

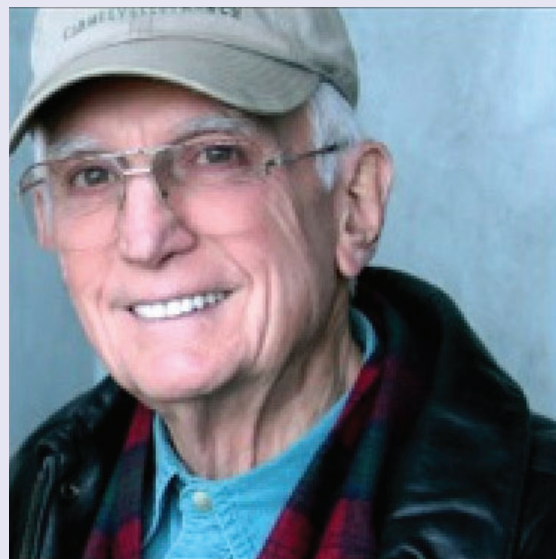
Ed was born in Bethlehem, Pa., in 1937, to Herb and Lilly (Morgens-tern) Smith. He was raised by Lilly and Ed Cain in San Rafael Calif., and attended Drake High School.

Ed created a stunning career as an electrical engineer in civil service, earning a Presidential commendation for his remarkable achievements. He lived in six different countries serving his govern-

ment and finished his career as a director at NASA Ames.

He will be terribly missed and lovingly remembered by his daughter, Christine Cain Weidner and her three girls, Grace, Claire and Kate, as well as his constant companions Barbara Eads and Pamela Davoren.

A service was held Jan. 18, 2013, at The Little Chapel by the Sea in Pacific Grove, Calif., with interment at El Carmelo Cemetery.



Edward M. Cain

Ames' AJAX project supports airborne Earth science campaign

BY RUTH DASSO MARLAIRE

Earth science researchers at NASA Ames are supporting the DISCOVER-AQ mission currently taking place over the San Joaquin Valley, Calif.

Flights are exploring the lower portion of the atmosphere to gather atmospheric data to validate satellite sensor readings that could dramatically improve the understanding of climate change and air pollution.

The NASA Ames AJAX (Alpha Jet Atmospheric eXperiment) project is flying several flights to complement the measurements made by NASA's Lockheed P-3B and Beechcraft 200 King Air as part of the DISCOVER-AQ campaign.

The Alpha Jet is focusing on the northern portion of the San Joaquin Valley, while the two other aircraft are flying over the southern reaches of the Valley. Its measurements of

ozone, carbon dioxide, and methane will extend the measurements being taken by the two other aircraft.

One flight was flown Feb. 3, 2013 in the San Francisco Bay Area, which also included data collecting for the Bay Area Air Quality Management District.

"DISCOVER-AQ will help scientists collect the data needed to improve air-quality observations from space. We are pleased to help extend this work into the northern portion of the Central Valley," said Laura Iraci, project manager for AJAX and research scientist at Ames.



NASA photo by Eric James

The NASA Ames AJAX (Alpha Jet Atmospheric eXperiment) project flew several flights for the DISCOVER-AQ campaign in February. Earth science researchers at Ames are supporting the mission currently taking place over the San Joaquin Valley, Calif.

Ames leads agency in 'Black Engineer of the Year' awards

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technologies and information.

- Ray T. Gilstrap, whose work involves identifying and evaluating emerging computer network technologies for use in NASA missions and scientific research. Now, as acting Chief Technology Officer of IT, he identifies, evaluates and advocates for new technologies that can benefit NASA missions, projects and users.

"Encouragement of minorities in STEM fields is vital to the creation of a diverse and globally competitive workforce," said Aisha Bowe.

"Our recognition as thought leaders at the Black Engineer of the Year awards is not only an incredible honor, it also reinforces NASA and the nation's commitment to inspiring, exciting and encouraging the leaders of tomorrow."

BEYA is the nation's largest gathering of STEM professionals and leaders committed to increasing the percentage of underrepresented communities in the technology workforce. Fewer than 700 people have been the recipients of these prestigious awards and 2013 marks the 27th anniversary of officially recognizing black excellence in STEM fields.

NASA targets water recycling system for rapid development

BY RUTH DASSO MARLAIRE

Water is one of the most crucial provisions an astronaut will need to live and work in space. Whether orbiting Earth, working at a lunar base, or traveling to Mars, astronauts must use and recycle water as efficiently as possible. That's why NASA has targeted its water recycling technology for rapid development.

On the International Space Station, each crewmember is allocated about two liters of water daily. Such conservation means the crew must stretch the ration by collecting, cleaning and reusing wastewater, condensate in the air, and even urine. For future deep space missions, astronauts will need even greater amounts of water.

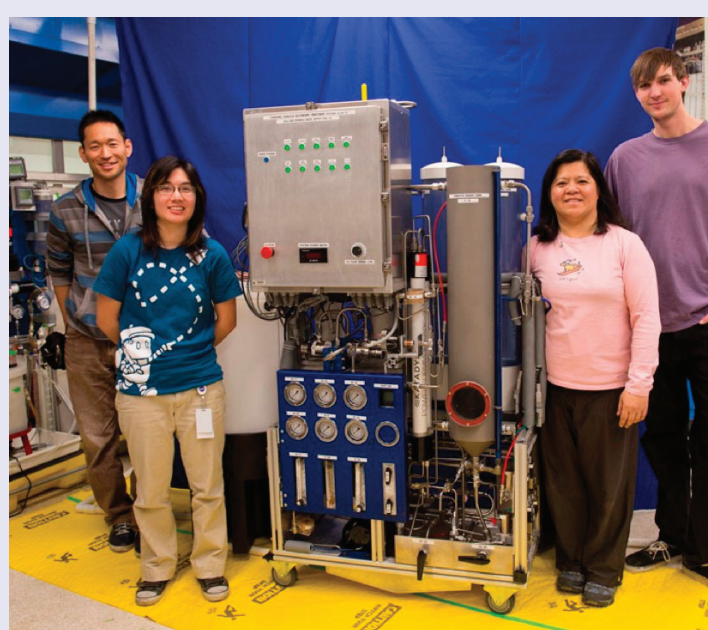
To help them optimize use of this precious commodity, research engineers at Ames are following several different but complementary avenues to develop dependable ways of recycling water.

"We are very excited about the advanced water processor technology development work being done at NASA Ames," said Steve Gaddis, manager for NASA's Game Changing Development Program at the agency's Langley Research Center in Hampton, Va. "We're anticipating a system capable of treating all exploration wastewater -- including hygiene and laundry -- at a recovery rate of greater than 95 percent."

The most recent development of NASA's water recycling system is the Alternative Water Processor currently being developed by NASA's Next Generation Life Support Project, under the Game Changing Development Program. The water processor has a membrane-aerated bioreactor to destroy organic contaminant and a forward osmosis secondary treatment system to remove dissolved solids.

Construction of the first generation Forward Osmosis Secondary Treatment (FOST) system was recently completed at NASA Ames. The system was shipped to NASA's Johnson Space Center in Houston to undergo integrated testing with the membrane-aerated bioreactor, designed by Texas Tech University, Lubbock and constructed by NASA Johnson.

New design concepts continue to drive the evolution of this important technology. Thanks to an agency initiative called "Replacement by Renovation," NASA Ames was able to construct Sustainability Base, one of



Water is a critically important and limited resource, especially for astronauts on space missions. To help them optimize use of this precious commodity, research engineers at Ames are developing dependable ways of recycling water.

NASA photo by Eric James

the greenest buildings in the federal government.

As part of Sustainability Base's design, NASA researchers installed a new forward osmosis water recovery system in the building, this time for use here on Earth. This system, in combination with other water-saving technologies integrated into the building, is reducing water consumption in Sustainability Base by more than 90 percent.

The recently delivered to JSC forward osmosis system is a smaller version of the one in Sustainability Base. It is sized to support a crew of four on

a long-duration space flight mission.

The forward osmosis is NASA's next generation water recycling technology. It will help reduce the cost of human space flight, as it increases its own reliability. This evolving technology also is starting to drive innovation and advancements in the state-of-the-art terrestrial water recycling.

"Inside the water recovery system is an evolving set of technologies with great promise," said Michael Flynn, a research engineer at NASA Ames. "Ultimately, these systems will continue to evolve and become increasingly more complex, integrated and smaller."



NASA photo by Eric James

Grunsfeld visits Ames

NASA's Associate Administrator for Science Dr. John M. Grunsfeld visited Ames on Dec. 11, 2012. This was his first visit to Ames since he assumed his current duties at NASA Headquarters in January 2012. Before coming to Headquarters, Grunsfeld was a member of the agency's astronaut corps, and flew on three Hubble Space Telescope servicing missions. He performed a total of eight spacewalks to service and upgrade the observatory. He logged more than 58 days in space on his shuttle missions, including 58 hours and 30 minutes of spacewalk time. Grunsfeld first flew to space aboard Endeavour in March 1995 on a mission that studied the far ultraviolet spectra of faint astronomical objects using the Astro-2 Observatory. His second flight was aboard Atlantis in January 1997.

Ames Ongoing Monthly Events Calendar

African American Advisory Group (AAAG) Mtg., last Tuesday of each month, 12 - 1 p.m., Bldg. N255 Rm 101C. POC: Rose King, ext. 4-3442.

Moffett Aikido Club, Monday and Wednesday evenings, 6:30 p.m., Bldg. 944. Aikido is a non-competitive, defensive martial art known as the "Way of Harmony." POC: Diane Pereda (650) 575-9070 or Robert Dean (650) 787-1007, email: mfaikido@aol.com

Ames Amateur Radio Club, third Thurs., of each month, 12 noon, N-T28 (across from N-255). POC: George Tucker, at ext. 4-2200.

Ames Bluegrass Club, every Tuesday from 11:30 a.m. to 1 p.m. in Bldg. 944. Players of all instruments and all levels are welcome, but we are particularly interested in experienced players willing to help improve the group's musical skills. POC: Bob Haberle at ext: 4-5494 or email: robert.m.haberle@nasa.gov

Ames Bocce Ball Club, Ames' newest Exchange-sponsored club is seeking members. POC: Mike Lindsay email: michael.c.lindsay@nasa.gov

Ames Bowling League, Homestead Lanes Thursdays at 6 p.m. Need substitute bowlers. Sign up questions: Steve Howard at ext. 4-4884.

Ames Contractor Council Mtg., first Weds. of ea. month, 11 a.m., Bldg. N-200, Committee Room. POC: Herb Finger at ext. 4-6598.

Ames Federal Employees Union (AFEU) Mtg., third Wednesday each month, noon. Bldg. N-204, Rm. 101. Guests welcome. Check for occasional schedule changes at: <http://www.afeu.org>. POC: Paul K. Davis, ext. 4-5916.

Ames Golf Club, Members have the opportunity to play approximately 13 tournaments per year at a variety of 18-hole golf courses in the Bay and Monterey Area. POC: Barry Sullivan: Barry.T.Sullivan@nasa.gov.

Ames Green Team (formerly the Green Ames Working Group) meetings are held the first Tuesday of each month in N237, Room 101, from 10-11 a.m. For information, call Roger Ashbaugh, Ames Environmental Management Division, ext. 4-5660. <http://environmentalmanagement.arc.nasa.gov/reports/eo-13514.html>

The Hispanic Advisory Committee for Excellence (HACE) Mtg., first Thursday of each month, 11:30 a.m. - 12:30 p.m., Bldg. N-255, Rm. 101C. POC: Jeanette Zamora, jeanette.zamora-ortega-1@nasa.gov.

Ames Jazz Band Club, Bldg. 944, 5:30 p.m. - 7 p.m., POC: Ralph Bach, email: ralph.e.bach@nasa.gov

Jetstream Toastmasters, Mondays, 12 p.m. - 1 p.m., Bldg. N-269/Rm.179. POC: Tim Steiger, ext. 4-0195, tim.steiger@nasa.gov. Web: <http://jetstream.freetoasthost.com>

Ames Nimble Knitters Club, every Tuesday at 11:30 a.m., Bldg. N210/Rm 141. POC: Rosalyn Jung, knitfan2@yahoo.com or Diane Alexander at ext. 4-3140. URL: <http://knit.arc.nasa.gov>

Ames Roller Hockey Club, meets daily from noon to 1 p.m. at rink on north end of the 80-foot-by-120-foot wind tunnel. Players should have experience skating and must wear protective equipment.

Ames Safety Committee, third Thursday of each month, 10 a.m. - 11 a.m., Bldg. N-237, Rm. 200. POC: John Livacich, jlivacich@mail.arc.nasa.gov, ext. 4-3243.

Women's Influence Network (WIN), first Wednesday of each month, Bldg. 241 room 237, 11:30 - 12:30 p.m., POC: Elena Serna, elena.serna@nasa.gov

Orphanage Without Borders Mtg., Mondays, Buiding 211, Room 205, 11:30 a.m.-12:30 p.m. The mission of Orphanage Without Borders (OWB) is to improve the lives of children living in orphanages and abandoned children. Our goal is to create a network of organizations that work together to provide children worldwide with the acceptable standards of life such as education, health, hygiene, discipline, affection, responsibility, hope of future, shelter, nutrition, clean water, joy and safety. We aim to apply these standards universally, meaning that they will be independent of the nationality, religion, culture, race, political opinion or social class of the children or orphanage location. For additional information contact Miguel at mvcharcos@orphanagewithoutborders.org or mcharcos@sofia.usra.edu.

Physical Inventory Underway

Ames' annual 100 percent wall-to-wall physical inventory for NASA tagged, bar-coded property is proceeding as scheduled. As a reminder, all controlled equipment documented on a NASA Form 892 "Employee Property Pass/Loan Agreement and Removal Permit" must have their NF 892 up to date. Employees are encouraged to bring in that property for scanning. Property passes are assigned to those people authorized to carry government equipment on and off Ames Research Center. If you have questions, contact Nelson Japlit at ext. 4-3428.

Exchange Information

Information about products, services and opportunities provided to the employee and contractor community by the Ames Exchange Council. Visit our web site at: <http://exchange.arc.nasa.gov>

Beyond Galileo Gift Shop N-235 in the cafeteria, 8 a.m. to 2 p.m., ext. 4-6873

Visitor Center Gift Shop (Exploration Center), Tues-Fri, 10 a.m. to 4 p.m., Sat. - Sun, 12 - 4 p.m., ext. 4-5412

Remember to purchase your baby shower, birthday and holiday gifts at Ames' two gift shops!

Mega Bites Cafeteria N-235, 6 a.m. to 2 p.m., ext. 4-5969/Catering ext. 4-2161

Barcelona Café Bldg. 3, 6:30 a.m. to 2 p.m., ext. 4-4948/Catering ext. 4-4948

See daily menus at: <http://exchange.arc.nasa.gov/cafe/menu.html>

Moffett Field Golf Club with 'Tee minus One' Grill and Sports Bar. Catering available. Call (650) 603-8026. Extended Happy Hour Thursdays, \$5 and \$6 pitchers of beer starting at 4 p.m. to 8:30 p.m.

RV Lots available. Call to reserve a space at (650) 254-1808.

Civilian/Contractors, \$50/mo; military \$25/mo

NASA Lodge (N-19) (650) 603-7100

Where to stay when you're too tired to drive home? What about the lodge?! Two types of rooms: Bldg. 19 (43 rooms), rate: \$65/night (\$5 ea add'l adult); Bldg. 583 A&B (150 rooms), rate: \$55/night (\$5 ea. add'l adult); B547 rate \$60/night (for large groups)

Ames Swim Center (N-109) (650) 603-8025

The swimming pool is now open. Hours of operation are as follows:
Lap swim only:
MWF 10 a.m. - 1 p.m.
MWF 3 p.m. - 6 p.m.
TTH 10 a.m. - 1 p.m.
TTH 4 p.m. - 7 p.m. The pool is heated year round. The pool normally is available for lap swim, pool parties and special events. POC: Ryan Storms, Pool Manager (650) 603-8025. Memberships: single memberships: \$60/yr. Family memberships: \$80/yr. After purchasing a membership, there is an entrance fee: daily entrance fee - \$3/day or lap pass fee - \$50 for 20 uses. Platinum membership - \$380/yr. (no daily fee). Special events: include military training, swim team events, kayak role practice, etc. The cost for special events is \$75/hr, or \$50/hr for military.

Exchange Basketball Gym is now open, Bldg. 2 (650) 603-9717

Hours of operation:
M-F 11 a.m. - 1:30 p.m.
M-F 4 p.m. - 7 p.m.

Chase Park reservations, call ext. 4-4948
NACA Park reservations, call ext. 4-4948

Ames Cat Network

The Ames Cat Network needs help finding homes for cats trapped at Moffett. They range from feral to abandoned/lost pets. They are tested, altered and inoculated. Call Iris at ext. 4-5824 if you or someone you know are interested in fostering or adopting a cat.

Ames emergency announcements

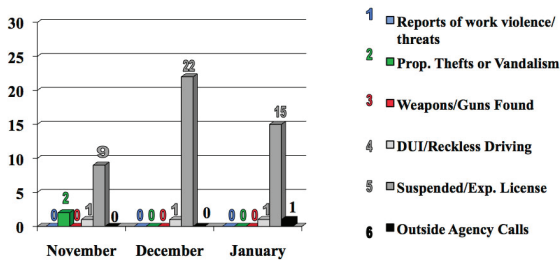
To hear the centerwide status recording, call (650) 604-9999 for information announcements and emergency instructions for Ames employees. You can also listen to 1700 KHz AM radio for the same information.

Protective Services monthly activity

A statistical summary of activities of the Protective Service Division's Security/Law Enforcement and Fire Protection Services units for the month of January 2013 is shown below.

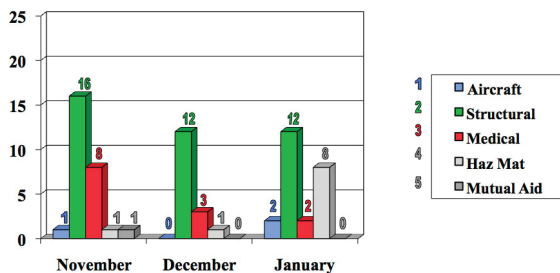
Security/Law Enforcement Activity

Protective Services Office – Activities
Security/Law Enforcement Monthly Activity Report



Fire Protection Activity

Protective Services Office – Activities
Fire Protection Services



Ames completes LADEE testing

BY BUTLER HINE, LADEE PROJECT MANAGER

Engineers at Ames have completed all of the mechanical tests of NASA's Lunar Atmosphere and Dust Environment Explorer (LADEE) spacecraft.

Engineers will next complete preparations to transport the spacecraft back to Ames from the National Technical Systems mechanical testing facility in Santa Clarita, Calif.

LADEE is a robotic mission that will orbit the moon to gather detailed information about the lunar atmosphere, conditions near the surface, and environmental influences on lunar dust.

The mechanical-testing phase simulates the loud shaking conditions LADEE will face during its launch, and includes acoustic, vibration, and shock tests. During the acoustic testing, which took place first, a large horn blasted intense sound at the observatory to simulate the roar of the rocket at launch.

The second test involved shaking the observatory at different frequencies and accelerations on a large platform to simulate the vibration of the

rocket as it climbs to space. The third test simulated the shock that will occur when LADEE separates from the upper stage of the rocket and begins its journey to the moon.

After returning to Ames, LADEE was placed back in a cleanroom. Engineers then replaced some components used during mechanical testing, including mass models of the transponder and two of the Lunar Laser Communication Demonstration modules.

Most of the accelerometers used to record data during the mechanical testing were replaced with temperature sensors to be used during the thermal-vacuum tests, the next major test phase scheduled in the spring.

During thermal-vacuum testing, the spacecraft will be placed inside a heater cage inside a chamber. The atmosphere will be pumped down to create a vacuum and cooled to simulate the environment of space. The heater cage is turned on and off during the testing to simulate the heating of the sun and moon during different phases of the mission.

National Aeronautics and Space Administration

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