National Aeronautics and Space Administration, Ames Research Center, Moffett Field, CA
July 2005

Astrogram

Explore. Discover. Understand.

Hundreds turn out for return-to-flight event at Ames

NASA photos by Dominic Hart

On July 12, Ames employees received free popcorn, as well as sodas, water and NASA items commemorating the space shuttle's return to flight.

Tucked away in 25 of these RTF packets were tickets for a free matinee movie at the Mountain View Century 16 theaters in Mountain View. RTF claim tickets were distributed to the entire Ames community (civil servants and contractors) via the directorates for employees to claim their souvenir bags. Special return-to-flight posters were also distributed.

The IMAX movie 'Space Station' was shown, as well as another feature that included Ames' contributions to return to flight, on July 12 at Ames.

On July 12, Deputy Director Stan Newberry kicked off an Ames community return-to-flight (RTF) event in the Bldg N-201 auditorium. His talk was followed by special advance showings of 'Space Station' (IMAX), which did not officially premier on DVD until July 19.

Space Station, produced by Lockheed Martin with assistance from NASA, provides a "jaw-dropping tour of the next step in space exploration: the International Space Station (ISS). Highlights included the station's on-orbit construction, plus amazing glimpses of crew members as they work, exercise or do routine tasks such as getting a haircut or drinking water."

Free popcorn was also handed out to the attendees at the event. Also shown were short NASA films (including a feature on Ames' contributions to return to flight), RTF displays and posters from the recent workshop on a new entrepreneurial paradigm for the International Space Station.

In addition, in conjunction with the movies, NASA items commemorating return to flight were distributed to employees. These included pins, a ribbon, a green RTF bracelet and photographs.

State Senate hearing held at Ames

NASA photos by Dominic Hart

On July 15, California State Senator Elaine Alquist of San Jose, (left), makes a point about the importance of nanotechnology as an emerging technology in the state's economy. NASA Ames Center Director G. Scott Hubbard, seated at table in center of photo above, gives testimony with other experts before the California State Senate's Select Committee on Emerging Technology and Economic Competitiveness.

Ames' leading man in our efforts for 'Return to Flight'

A deep appreciation for large, unique structures such as cathedrals, coliseums and bridges has helped one engineer lead Ames' efforts toward NASA's return-to-flight mission.

NASA photo by Tom Trower

John Allmen

For the past two-and-a-half years, many researchers, scientists and engineers have focused on one common goal: returning NASA's space shuttle to flight. As the program manager for the return-to-flight efforts at Ames, John Allmen has been deeply involved in ensuring a successful mission.

"I make sure everybody has the resources they need to get their job done. I track progress and help solve any problems that may arise…I am the main contact with Johnson Space Center," Allmen explained.

Allmen grew up in Oxnard, Calif. "It was a rural community of about 50,000 people that primarily deals in agriculture. At least, that is what I remember it as, not sure if it is still like that today," Allmen chuckles.

While growing up, Allmen noticed large unique structures. He was interested in cathedrals, especially large European cathedrals and how they were put together. Through studying places like Notre Dame Cathedral in Paris, that he says "has the most classic flying buttresses" and St. Peter's Dome with its 'hoop-stresses,' Allmen was always in awe and inspired by the people who designed them.

In the early 70s, it was this love of structures that brought Allmen to Cal-Poly in San Luis Obispo, where he received his bachelor's degree in architectural engineering.

"In college, I took a course in structural analysis of cathedrals and Roman aqueducts. The people of that time figured out things by failures that developed a rule of thumb. For example with large flying buttresses, what did or did not fall down. We now know it requires the accurate resolution of forces, but it amazed me how they were able to build these structures without our current technology," Allmen recalled.

After college, he began working for the Army Corps of Engineers in heavy construction. "With them, I was helping them concrete the world." From there, Allmen attended the University of California-Berkeley for his master's degree in structural engineering and structural mechanics.

"I had government reinstatement rights because I was on a year leave of absence to earn my master's. My wife was working at San Jose State and so we didn't want to move back to southern California. We both really liked it here, so I went to work for a structural engineer for three months and then found a job for a civil engineer here at Ames Research Center. In fact, I didn't even know Ames existed before that time."

Allmen began his NASA career in 1974 as a facilities engineer at Ames. He then transferred to NASA Headquarters for a year and a half, and he returned to Ames in 1977 to work on the modifications to the National Full-Scale Aerodynamic Facility (NFAC).

During his tenure at NASA Ames, Allmen has held many titles, ranging from construction manager to project manager for acoustics on the 40-foot-by-80-foot wind tunnel to assistant branch and division chief. In recent years, he has taken on more of the business aspect of various projects. He also has worked in the areas of new business development and developed full cost accounting algorithms for the facility.

When asked what he feels is his proudest professional achievement, Allmen replied: "Completing the rebuilding of the NFAC. I had one of the best construction management groups of people I've ever had working on rebuilding the wind tunnel. There were outstanding people on the rest of the project as well."

When asked about personal achievements, Allmen mentions that the birth and raising of his children are the biggest achievements in his life. Allmen is the proud father of four children: three boys, two of whom are happily married, and one who recently graduated from high school. His daughter, the youngest of the four, will be a senior in high school this fall. He also has two grandchildren.

Allmen is committed to a life of fitness and good health. When he is away from the office, you may find him at the gym or on a 40-to-60-mile road or mountain bike ride. During the winter, he loves to go skiing. "I find eating well and being healthy creates a lot of positive experiences in my life. It helps to have a better attitude about life."

For those who want to lead a healthy and happy lifestyle, Allmen offers these words of encouragement: "One needs to ask themselves: What do you want out of life? How do you want to feel? You might ask, how do you want your clothes to fit? In order to achieve what you want in life, you need to set goals for yourself. A partner can be essential for encouraging one another and having fun together."

If you would sit down with Allmen, you will notice his love for life, family and a fulfilling career. His friends would describe him as a genuinely nice person.

When asked if he could do it all over again, whether he would pick engineering as a career, he replied, "Instead of engineering, I'd probably go into teaching, if it paid as well. I enjoy teaching, but I think I would probably still be an engineer. It's in my blood and in my psyche."

BY JENNIFER KREMER

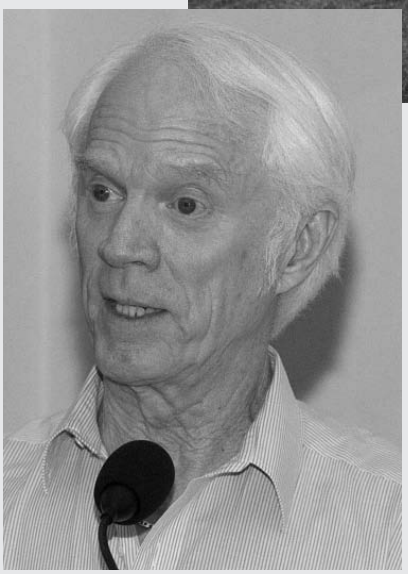
Thousands attend NASA Ames Family Night

Over 5,000 visitors attended the NASA Ames 'Cosmic Impacts' event on July 16, the second installment in its highly successful Family Night Education Series. This was a free, public event. During the evening, more than 1,600 people crowded the theater in the NASA Exploration Center (Bldg. 943A) to hear Scott Sandford, a research astrophysicist at Ames, discuss the latest results from the Deep Impact mission rendezvous with comet Tempel 1. During his presentation, Sandford showed a number of 3D images of comets and asteroids on the Exploration Center's 13-foot-tall screen. Although scheduled to speak from 7 p.m. to 9 p.m., the crowds were so large, Sandford started at 6 p.m. and did not stop until the last visitors left after 10 p.m.

David Morrison, senior scientist at the NASA Astrobiology Institute, presented NASA's efforts to locate and identify near-Earth asteroids that could pose an impact hazard to Earth.

Rusty Schweickart, an Apollo 9 astronaut, presented the B612 Foundation's innovative and exciting plans to demonstrate how impact hazards to the Earth could be addressed by changing the orbit of an asteroid's path. Local amateur astronomers set up their telescopes for the public to view impact craters on the moon and other celestial bodies. The event also featured exhibits and hands-on activities for the entire family.

Ames family nights are sponsored by the NASA Ames Education Office and are designed to engage the community in scientific exploration and to inform the public about NASA research and technology. The next family night will be held in September.



Apollo 9 astronaut Rusty Schweickart at the recent Ames Family Night.

NASA photos by Dominic Hart

2005 Length of service awards recognize Ames employees

NASA Ames Research Center acknowledges and recognizes employees who achieved their length-of-service anniversaries for 25 and above years of service during the period July 1, 2004 to June 30, 2005. The contributions of these employees' many years of service to our country and in helping NASA achieve its many goals are greatly appreciated.

Code D - Office of the Director

25 Years of Service
Alexander Barna Jr.
Estelle P. Condon (Retired)
William R. Van Dalsem

Code A - Office of the Director of Aeronautics

25 Years of Service
Lisa J. Bjarke
Thomas J. Davis
David M. Driver
Donald A. Durston
Lawrence A. Hand
William C. Horne
Francis J. Kmak
Daniel B. Leiser
Douglas L. Lillie
Vincent M. Meglio
Hirokazu Miura
Russell A. Paielli
William Peneff Jr.
Michael S. Reinath
James C. Ross
Robert K. Shipley
Stephen C. Smith

30 Years of Service
David O. Chin
William A. Decker
Nancy S. Dorighi
Leslie A. Jacob (Retired)
Arthur M. Silva

40 Years of Service
Richard J. Exberger (Retired)

Code E - Office of the Director of External Relations and Development Directorate

25 Years of Service
Diane Farrar
Gregory L. Gibbs
Robin M. Orans

30 Years of Service
Jeffrey L. Cross

Code H - Office of the Director of Human Capital Directorate

30 Years of Service
Laura A. Shawnee

Code C - Office of the Chief Financial Officer

25 Years of Service
Anthony G. Madulara
Kevin L. Werner

30 Years of Service
Patricia K. Crooks
Jimmy Y. Fong
Harry Tang (Retired)
Joseph D. Shields

35 Years of Service
Charles L. Jackson (Retired)

Code P - Office of the Director of Project Management and Engineering Directorate

25 Years of Service
Claire E. Barskey (Retired)
John A. Estrada
Michael P. Frediani
John H. Goebel
Michael Guerreiro
Ronald D. Johnson
Peter Kittel
Douglas R. Krause
Frank M. Larsen
Joseph P. Lavelle
Annett M. Randall
Louis J. Salerno
Steven K. Spitzer
David Wong

30 Years of Service
Thomas N. Aiken
David S. Andrews
Anne C. Cortez
Hanna J. Danfoura
Gilbert K. Kojima
Marina D. Laroya-Marquez
Richard T. Piquette
Mark K. Rossi
David J. Van Sickle
Robert Yee

35 Years of Service
Tom M. Wynn
Harry Yee

40 Years of Service
Robert E. Holmes (Retired)
Ramsey K. Melugin
John B. Wallace

Code Q - Office of the Director of Safety, Environmental and Mission Assurance

30 Years of Service
Cyrus G. Chow

35 Years of Service
Gail P. Pfeiffer

Code S - Office of the Director of Science

25 Years of Service
James A. Brass
Michael S. Craig
Christine A. Hlavka
Daniel G. Morgan
Yvonne J. Pendleton
Leonhard Pfister
Bruce W. Webbon

30 Years of Service
Warren J. Gore
Helene A. Hendriks
Steven M. Hing
Daniel R. Kojiro
Jeffrey D. Scargle
David C. Scimeca
Richard E. Young

35 Years of Service
Sylvia A. Cox
Edwin F. Erickson
Donald P. Vandendriesche

Code T - Office of the Director of Exploration Technology

25 Years of Service
Sandra G. Hart
Dochan Kwak
John R. Lehman
Hugh La Master
Gina F. Morello
Michael E. Olsen
Judith M. Orasanu
Dwight T. Sanderfer
Helen M. Yee

30 Years of Service
Susan C. Nelson
Roger W. Remington
Robert P. Trent

35 Years of Service
Randolph L. Kaemmerer

Code J - Office of the Director of Center Operations

25 Years of Service
Charles W. Ady
Audrey A. Guerra
Wende L. Hower
Susan D. Parkhurst
Evelyn A. Warren
Roy A. Williams

30 Years of Service
Lewis S. Braxton III
Sue J. Laurie (Retired)
Dolores M. Morrison
Henry W. Remmers Jr.
Daryl S. Wong

35 Years of Service
Lupe M. Velasquez

40 Years of Service
George E. Tucker

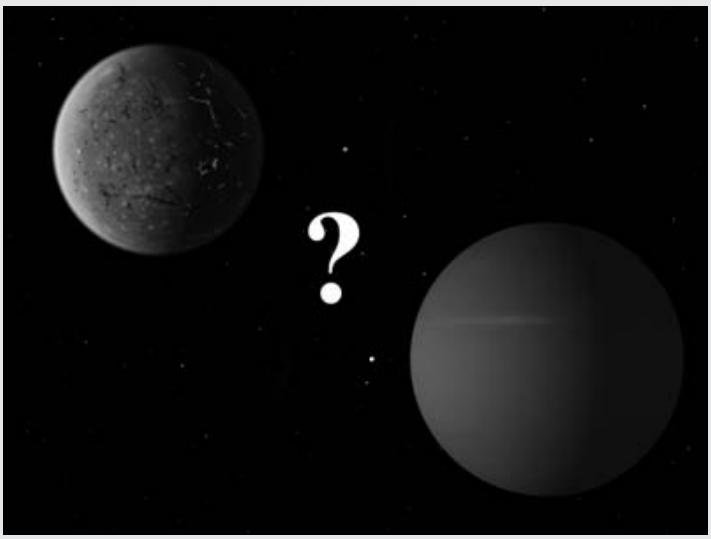
New Ames Child Care Center opens near main gate

The new NASA Ames Child Care Center opened recently. It is located in front of N-201, near the front gate at Moffett Field. For information about the services offered by the Ames Child Care Center, call ext. 4-5100. The center has a capacity of 116 children. The official grand opening will be Aug. 11.

NASA photos by Tom Trower

Team discovers smallest extra-solar planet yet

A team of researchers recently revealed it has discovered the smallest planet yet found orbiting a normal star outside the solar system, thanks to a new computer program developed under the guidance of a NASA astronomer.



Artist conception of two possible realizations of the newly discovered small planet, Gliese 876 d. The planet's mass is about 7.5 times the mass of Earth, halfway between the mass of Earth and that of Uranus. The image in the upper left shows the planet as a giant but basically Earth-like, rocky planet, whereas the one at the lower right shows the planet as a gas/ices-dominated miniature Uranus.

The team studied irregularities in the motion of two known giant extra-solar planets circling the star Gliese 876 and its motion to deduce the presence of a third planet in that system, according to a scientific paper submitted for publication in the Astrophysical Journal. An extra-solar planet is a planet that orbits any star other than the sun.

"The mathematical techniques are very complicated, but suffice it to say the new computer program includes the interactions of the planets with one another, not just their individual interactions with the star," said team member Jack Lissauer, an astronomer at NASA Ames. "Because the interactions of the two biggest planets with each other are so large, this effect needed to be accounted for in order to reveal the existence of the third (smaller) planet," Lissauer noted.

The newly discovered planet is about seven-and-one half times more massive than Earth and may well have twice its radius. One of the two giant planets orbiting Gliese 876 has a mass half that of Jupiter. The other giant planet is more than twice as massive as Jupiter, according to astronomers. The red star is an M-type, which is considerably cooler than the sun and about a third of its mass.

The new computer program uses 'dynamical modeling,' which predicts the motion of planets around a star. This technique accounts for the gravitational tugging of planets on one another.

"This calculation is done on a computer workstation," Lissauer explained. "We did the dynamical modeling at NASA Ames and at the University of California at Santa Cruz (UCSC) supported by a university/NASA Ames consortium agreement," Lissauer added. The California-Carnegie planet search team -- led by Geoffrey Marcy, University of California, Berkeley; and Paul Butler, Carnegie Institution of Washington -- made the observations.

"Eugenio Rivera of UCSC developed the program," Lissauer said. He guided Rivera, who conducted his doctoral thesis research at Ames with Lissauer. "Without this sophisticated computer program, the small, third planet would have taken much longer to discover," Lissauer added.

"We're going to observe this star to see if we can find out more information about its three known planets, and whether there may be more distant planets in that system," Lissauer said. "We are also going to apply these techniques to other stars to attempt to discover planets even more like Earth," he added.

Because the newly discovered planet orbits the star Gliese 876, it has been designated as Gliese 876 d. The star is about 15 light years from Earth. The team is only able to determine the planet's mass, but not its composition, according to Mark Marley of NASA Ames. Marley is not a member of the team, but is one of Lissauer's colleagues.

All known planets smaller than the newly discovered world are solid bodies, and those larger are gaseous.

According to the team, data indicate that the planet very closely orbits the star, as close as 10 stellar radii, which is less than a tenth of Mercury's orbit about the sun. Gliese 876 d zips around its star every two days.

"This discovery whets our collective appetite for discovery of even smaller planets," Marley said. "This extra-solar planet detection gives us confidence that even lower mass, more clearly Earth-like planets await discovery by even more capable ground and space-based techniques," he said.

NASA's Kepler mission, scheduled to launch in June 2008, will be able to detect true Earth analogs – planets not only the size of Earth but at the same distance from their stars as Earth is from the sun.

In addition to Lissauer of NASA Ames, the team includes Marcy, Butler; Eugenio Rivera, Steven Vogt and Gregory Laughlin, University of California, Santa Cruz, Calif.; Debra Fisher, San Francisco State University; and Timothy Brown, National Center for Atmospheric Research, Boulder, Colo. The team's observations were conducted at the Keck Observatory in Hawaii.

BY JOHN BLUCK

Filmmakers awarded for supporting Ames documentary

Filmmakers Geoff Callan (second from left) and Mike Shaw (third from left) are shown receiving awards for supporting a NASA Ames screening of their documentary on the Web at www.pursuitofequality.com from representatives of the Ames LGBT Advisory group. Lupita Armendariz, deputy director of the Diversity and Equal Opportunity Office, which sponsored the LGBT Pride celebration event, looks on.

NASA photo by Jon-Pierre Wiens

Ames Safety Committee helps ensure Ames remains safe

The Ames Safety Committee (ASC), established in July 2004, was the inspiration of former Deputy Center Director G. Allen Flynt. Flynt believed that by working together in safety committees, both contractor and civil servant employees could focus on larger safety concerns affecting the wider Ames community.

The purpose of the ASC is to provide employees with a forum in which to recommend and implement improvements in Ames safety and health programs. Membership is open to civil servants and onsite contractor employees who meet monthly to communicate and exchange ideas and concerns about safety issues at the center. Code QH sponsors the ASC and the committee chair reports to the Executive Safety Committee.

Visit the Web at http://q.arc.nasa.gov/qh/safetycom/AmesSafetyCommittee.php for further information about the ASC.

NASA photo by Tom Trower

Members of the Ames Safety Committee shown here: Top row left to right: Herb Finger, Shelleen Lomas, Don Dains, Marian Yee, Tony Damian and John Livacich. Seated row left to right: Terry Reichert, Chris Henze, Marilynne Borges, Gloria Hermosillo, Ron Lamica, Al Lyon, Michael Schuh, Cheryl Orth and Maria Eloisa Perez.

ENLACE honors outstanding students at Ames

In May, the Hispanic Advisory Committee for Employees' (HACE) Chair Eric Kristich attended and sponsored an ENLACE graduation at Evergreen Valley College in San Jose, where he recognized and rewarded six individuals for their outstanding academic record.

ENLACE graduates Elizabeth Gomez and Francisco Alvarado.

As part of HACE's vision of reaching out to the younger generation of Latinos and promoting the value of math, science and English, HACE was proud to reward these six ENLACE students with scholarships.

To receive a scholarship, each student must have maintained a GPA of 3.0 or higher, must have applied for the scholarship via the ENLACE counselor and submitted an essay on the topic 'Latinos in science and mathematics.' Also, a tough selection process was conducted by the Evergreen Valley College (EVC) faculty and Ames' HACE members to select the deserving students.

NASA photos by Elizabeth Ipong

From left to right: ENLACE graduates Teodolinda Mendoza, Edelia Lopez, Filomena Reyes and HACE chair person Eric Kristich (not pictured, Percilla Ortega).

ENLACE is a program at Evergreen Valley College that has a mission to help Chicano/Latino students increase their educational success. ENLACE provides academic classes, counseling, mentoring and serves underrepresented Chicano/Latino students in San Jose and communities nearby.

What does ENLACE mean? ENLACE is from the Spanish verb enlazar, meaning 'to bind or connect,' 'to bring together' or 'to create community.' Is ENLACE effective? Yes, ENLACE students are highly successful in ENLACE courses and in their core curriculum. ENLACE holds a success rate at 85 percent of their students who graduate.

To participate, students need to make an appointment with the ENLACE counselor. This appointment will determine if the student is eligible based on academic assessment such as placement scores.

BY ERIC KRISTICH

NASA annnounces aerospace systems modeling selection

NASA awarded Science Applications International Corp (SAIC), Albuquerque, N.M. a contract to support aerospace systems modeling and simulation facilities at Ames.

The facilities include, but are not limited to the Crew-Vehicle Systems Research Facility, Vertical Motion Simulator Complex and FutureFlight Central (called the SimLabs).

The SimLabs' primary mission is to provide high-fidelity environments for simulated flight research and to advance state-of-the-art of simulation technology.

The SimLabs also work on air traffic control/management to solve the capacity problems of the nation's airports.

SAIC will be responsible for operation, development, maintenance and modification of the SimLabs; successful preparation and operation of the simulators; collection of research data, as specified in the task order; the continuing operation and upgrade of facilities.

SAIC also will be responsible for development, testing and validation of advanced air traffic management automation tools being developed in the SimLabs.

The total estimated cost plus fee for the base period is $28.9 million. The contract value, including all award terms and fees, is $62.1 million. The base period is five years and there are award term incentives for up to an additional five years. The phase-in begins July 1, 2005, with full contract responsibility starting Aug.1, 2005.

BY MICHAEL MEWHINNEY

DEVELOP interns access ecologicial change in Yosemite

NASA has as one of its missions preparing the next generation of explorers. As part of this mission, students from across the United States are participating in the third year of the DEVELOP internship program at Ames, an Earth science, human capital development effort funded through the Applied Science Program in the Earth-Sun Division at NASA Headquarters.

Mindy Syfert, DEVELOP student intern from the University of Denver, takes a GPS reading in a previously burned area in Yosemite National Park.

In previous years, DEVELOP students have studied the risk of West Nile virus infection in Monterey County, Calif; the spread of an invasive plant species, tall whitetop, on the Pyramid Lake Paiute Reservation in Nevada; the carbon budget of the Fremont-Winema National Forest in Oregon; and the infestation of salt cedar (Tamarisk) in northwestern Nevada.

This summer, a team of DEVELOP interns is assessing ecological change in Yosemite National Park, change which is increasingly important to park managers. Fire has a fundamental role in changing the landscape and affecting an ecosystem. Yosemite's fire history is extensive with numerous lightning-ignited fires occurring every year. The research objective for this project is to assess vegetation change utilizing remote sensing techniques at three post-fire sites where fires burned in the park in 1989, 1990 and 1996.

Multi-temporal Landsat satellite imagery is being used to detect changes in forest regeneration. In addition, fieldwork was conducted at selected sites in the park to document forest stand characteristics. Measurements and estimates were performed by identifying dominant species, measuring tree height, tree diameter, estimating vegetation percent cover and collecting GPS coordinates. Remote sensing methods in conjunction with the fieldwork will evaluate and quantify reforestation at post-fire sites.

Fifteen-meter-resolution ASTER data will be used to better identify change patterns for specific species. The results of this study will be presented to resource managers at Yosemite NP and will aid these managers in fire management decisions.

Cheatgrass (*Bromus tectorum*) is an invasive species commonly found on rangelands, pastures and prairies in the intermountain west. Cheatgrass burns at high temperatures, assisting the spread of range fires throughout the Great Basin region. Germination occurs during the spring and fall, which allows cheatgrass to establish a firm presence in areas burned by wildfires. Many states in the Great Basin region have begun tracking the spread of cheatgrass by means of remote sensing.

A DEVELOP student team at Ames has run an accuracy assessment on Utah State University's predictive coverage maps for 2002 as well as producing a 2005 predictive coverage map using MODIS imagery from 2004 for specific dates. These maps produced by the students in conjunction with field work in Utah will help assess the accuracy of field data collected by the Southwest Regional Gap Analysis Project, a project being run in New Mexico, Idaho and Utah to ascertain extent of cheatgrass infestation in these states.

In the third project, DEVELOP student interns at Ames have worked with the California Integrated Waste Management Board's (CIWMB) Special Waste Division to create a proof-of-concept project investigating the use of high-resolution satellite imagery for locating and mapping waste tire disposal sites. These sites used as test cases are in the Sonoma and San Bernardino regions of California.

Previous methods for locating waste tire disposal sites in California included contracting California Highway Patrol to fly over suspected sites and take photographs, which were georeferenced with a GPS in post processing, a method lacking accuracy. The methodology and/or outputs generated from analysis of the imagery couple with ground truth evaluation of the analysis could reduce the time and capital necessary to manage waste tire sites. These sites, when left unkempt, pose threats of combustion and run the risk of becoming breeding grounds for mosquitoes.

DEVELOP student intern Becky Quinlan from San Francisco State University discusses a waste tire dump site in Lucerne Valley, Calif., with a San Bernardino County Special Waste Division waste tire inspector.

The DEVELOP program prepares the student interns to explore our home planet. The program gives students experience in planning studies, executing those plans, interacting with customers for their products and handing off the results of their studies to their customers and other interested parties.

BY JAY SKILES

AIAA recognizes deputy director for space biology contributions

The American Institute of Aeronautics and Astronautics (AIAA) announced recently that Bonnie Dalton, deputy director, Science Directorate, at Ames is the recipient of the AIAA 2005 Jeffries Aerospace Medicine and Life Sciences Research Award.

Bonnie Dalton

Recognizing the importance to aeronautics and space of scientific endeavors in the field of medicine, the John Jeffries Award was established in 1940 by AIAA to honor the memory of the American physician who made the earliest recorded scientific observations from the air. The award is presented for outstanding research accomplishments in aerospace medicine and space life sciences.

Dalton, an AIAA Associate Fellow, is being recognized for outstanding leadership of groundbreaking flight experiments and payloads in space biology for the past three decades. She was honored at an evening banquet in July during the International Conference on Environmental Systems (ICES), at the ATAHOTEL Villa Pamphili, Via della Nocetta, in Rome, Italy.

Dalton holds advanced degrees in microbiology and management from the University of Montana / Missoula and Golden Gate / San Francisco, respectively. She began her research career at Eaton Pharmaceutical Laboratories, Norwich, NY and joined Ames in 1963.

In 1975, she was appointed operations manager for Viking Mars Ground Laboratories followed by branch chief for science payloads operations (managing seven Spacelab mission activities); division chief for life sciences, SES certification; and deputy director for Science in 2002.

Headquartered in suburban Washington, DC, the AIAA serves over 35,000 members in 65 regional sections and 79 countries. AIAA membership is drawn from all levels of industry, academia, private research organizations and government and focuses on emerging technologies in aviation, space and defense. For more information, visit the Web at www.aiaa.org.

New stained-glass panel pays tribute to STS-107 crew

Located in the lobby of Bldg N-240A is this eye-catching stained glass panel conceived and designed by the Life Sciences Division community to honor the memories of STS-107 Columbia, its crew and the work of the many people involved.

Stained-glass panel, created in memory of the crew of STS-107, hangs in the lobby of Bldg. N-240A.

A number of project people contributed to this design, a young designer, Chad Dememters, helped to transform it, and another artist, Pam Rissman, brought the piece to life.

The panel is about 5 feet tall with symbols from the crew patch in clear glass and a representation of Earth. Seven narrow yellow stripes represent Columbia's crew members and of course there is the shuttle outline.

The memorial stained glass panel is a source of inspiration and reflection for the life sciences community as new experiments are readied for shuttle's return to flight.

BY RUDY AQUILINA

CFC merges two counties

NASA photo by Tom Trower

The Combined Federal Campaign organization recently held a meeting at NASA Ames to merge the Santa Clara/San Benito counties with the greater San Francisco Bay area county chapters. Ames Deputy Center Director Stan Newberry, left, is seen here speaking at the event.

Vertical Gun Range at Ames simulates cosmic collisions

Peter Schultz, professor of geological sciences at Brown University and co-investigator for NASA's Deep Impact mission, travels to the Vertical Gun Range at Ames to simulate cosmic collisions between planets and roving objects such as asteroids.

To conduct his experiments, Schultz fires marble-sized beads, even meteorites; into surfaces ranging from ice and sand to dust and mud.

The projectiles, which travel more than 10 times faster than a speeding bullet, make craters of all shapes and sizes.

Schultz studies the collisions and the craters' sprays of debris, the diameter and depth of depressions to understand the forces that shaped features on planets such as Earth, Mars and Venus as well as satellites such as the moon.

Schultz was interviewed in June while he was at Ames by KGO-AM news radio and KCBS-AM news radio. He discussed how the range was used to conduct tests related to the Deep Impact mission to Comet Tempel 1.

Photo by Peter Schultz, Brown University and AVGR.

The NASA Ames Vertical Gun Range.

Photo by P.H. Schultz, Brown University and Jon-Pierre Wiens, NASA

A projectile hitting a test target that simulated the collision of the Deep Impact spacecraft's impactor with comet Tempel 1. The actual collision was July 4. This simulation was conducted at the Vertical Gun range at Ames.

NASA photo by Jon-Pierre Wiens

Peter Schultz was interviewed in June while he was at Ames by KGO-AM news radio and KCBS-AM news radio. He discussed how the Vertical Gun Range was used to conduct tests related to the Deep Impact mission to Comet Tempel 1.

Chief of Procurement visits Ames

Tom Leudtke addresses the audience during his recent presentation at Ames.

On June 23, the Ames Contractor Council sponsored a question-and-answer session with Tom Leudtke, chief of NASA procurement. Leudtke gave his views on the current and future direction of procurement and answered many questions. Some of the topics covered included contractor access to confidential information, small business, funding, award terms, set fee, enhanced-use leases, update on the NSSC, the Exploration Initiative and commitments to the space station, shuttle operations and CEV.

Events Calendar

Ames Amateur Radio Club, third Thursday of each month, 12 noon, N-T28 (across from N-255). POC: Michael Wright, KG6BFK, at ext. 4-6262.

Ames Ballroom Dance Club. Classes on Tuesdays. Beginning classes meet at 5:15 p.m. Higher-level class meets at 5:50 p.m. Held in Bldg. 944, the Rec. Center. POC: Helen Hwang at helen.hwang@nasa.gov, ext. 4-1368.

Ames Bowling League, Palo Alto Bowl on Tuesday nights. Seeking full-time bowlers and substitutes. Questions to sign up: Mike Liu at ext. 4-1132.

Ames Child Care Center Board of Directors Mtg, every other Thursday (check Web site for meeting dates: http://accc.arc.nasa.gov), 12 noon to 1:30 p.m., N-210, Rm. 205. POC: Cheryl Quinn, ext 4-5793.

Ames Contractor Council Mtg, first Wednesday each month, 11 a.m., N-200, Comm. Rm. POC: Linda McCahon, ext. 4-1891.

Ames Diabetics (AAD), 1st & 3rd Weds, 12 noon to 1 p.m., at Ames Mega Bites, Sun room. Support group discusses news affecting diabetics. POC: Bob Mohlenhoff, ext. 4-2523/e-mail at: bmohlenhoff@mail.arc.nasa.gov.

Ames Federal Employees Union (AFEU) Mtg, third Wednesday of ea. month, 12 p.m. to 1 p.m., Bldg. 221, Rm 104. Guests welcome. Info at: http://www.afeu.org. POC: Marianne Mosher, ext. 4-4055.

Ames Mac Support Group Mtg, third Tuesday of ea. month, 11:30 a.m.to 1 p.m., Bldg. N262, Rm 180. POC: Julie ext. 4-0340.

Ames Model Aircraft Club, flying radio-controlled aircraft at the north end of Parsons Ave. on weekend mornings. POC: Mark Sumich, ext. 4-6193.

Ames Sailing Club Mtg, second Thursday of ea. month (Feb through Nov), from 12:00 p.m. -1:00 p.m. in Bldg. N-262, Rm 100. URL: http://sail.arc.nasa.gov/. POC: Becky Hooey, ext. 4-2399.

Environmental, Health and Safety Information Forum, first Thursday of each month, 8:30 a.m. to 9:30 a.m., Bldg. 221/Rm 155. URL: http://q.arc.nasa.gov/qe/events/EHSseries/ POC: Stacy St. Louis at ext. 4-6810.

The Hispanic Advisory Committee for Excellence HACE Mtg, first Thurs of month in N255 room 101C from 11:45 a.m. to 12:45 p.m. POC: Eric Kristich at ext. 4-5137 and Mark Leon at ext. 4-6498.

Jetstream Toastmasters, Mondays, 12 p.m. to 1 p.m., N-269/Rm.179. POC: Becky Brondos at ext. 4-1959, bbrondos@mail.arc.nasa.gov or Bob Hilton at ext. 4-1500, bhilton@mail.arc.nasa.gov.

Nat'l Association of Retired Federal Employees, (NARFE). Former and current federal employees. Your only contact with Congress. Join to protect your federal retirement. Chptr #50 will then meet on the first Fri. of each month at HomeTown Buffet, 2670 El Camino (at Kiely), S. Clara, 11 a.m. lunch. POC Earl Keener (408) 241-4459 or NARFE 1-800-627-3394.

Native American Advisory Committee Mtg, fourth Tues each month, 12 noon to 1 p.m., Bldg. 19, Rm 1096. POC: Mike Liu at ext. 4-1132.

NASA Quest to study Mars on Earth

As NASA turns its attention to preparing for human travel to the moon and Mars, there are many hurdles to overcome. This fall, the NASA Exploration Systems Mission Directorate and NASA Quest will open the school year with a challenge to students, primarily in grades 5-8, to work with NASA scientists to design solutions to these obstacles.

During October and November, students are invited to join NASA researchers Jennifer Heldmann, William J. Clancey and Chris McKay and other leading scientists as they embark on a Mars analog study at California's Lassen Volcanic National Park. By studying snowfields in the park, scientists hope to learn more about the development and use of technologies needed to help understand and explore the moon and Mars. They also will learn about polar ice caps and the possible life that could exist there.

"Live interactive Webcasts and contact with real NASA scientists on the job provide the opportunity for students to fully experience the thrill of participating in actual research while developing their own solutions to problems NASA is working on," said Mark Leon, education director at NASA Ames. "We hope this experience will inspire and encourage the study of math, science and engineering, as students become a part of the NASA team exploring the universe," he added.

There is no place on Earth exactly like Mars; however, some locations share similar characteristics and are considered as analogs to study Mars. For example, scientists can study the biology, geology and meteorology of places like Lassen Volcanic National Park to learn more about past and present environments on Mars and how to prepare for human and robotic space missions.

This NASA Quest Challenge features Mars analog research being conducted to help develop and test technologies that some day will enable scientists to conduct research on lunar and planetary surfaces. NASA Quest challenges typically span six to eight weeks. The activities are designed around problem-based learning and designed to assist teachers by incorporating the content into their educational standard's requirements.

For information about the NASA Quest Challenge on the Internet, visit: http://quest.nasa.gov/challenges/marsanalog

Safety Data

NASA-Ames Occupational Illness-Injury Data for Calendar Year-to-Date 2005 Jan. 1, 2005 – June 30 2005

	Civil Servants	Contractors
First aid cases	19	10
Lost-time cases	0	4
Recordable cases	3	4
Lost workdays	0	83
Restricted duty days	0	60

Above data is as of 7/19/05. May be subject to slight adjustment in the event of a new case or new information regarding an existing case.

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.

Ames Classifieds

Ads for the next issue should be sent to *astrogram@mail.arc.nasa.gov* and must be resubmitted for each issue. Ads must involve personal needs or items; (no commercial/third-party ads) and will run on a space-available basis only. First-time ads are given priority. Ads must include home phone numbers; Ames extensions and email addresses will be accepted for carpool and lost and found ads only. Due to the volume of material received, we are unable to verify the accuracy of the statements made in the ads. Caveat emptor!

Housing

4 bd/2 ba Sunnyvale house for rent, $2,400/mo., negotiable. Cupertino school district, nice neighborhood. 1,800 sq. ft. hardwood floor, quite back yard. Small pet OK. Avail. July 1. Call (408) 718-9728 for details.

Good sized room in 4 bd/2 ba home, excellent, quiet Mtn View area close to Ames. Washer, dryer, microwave, wired for cable modem. Tidy person and nonsmoker. Easy access to Ames, 85, 237 and 101. $475 and dep. and share utils. Avail. Sept. 1, possibly sooner. Call (650) 964-1900.

Miscellaneous

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

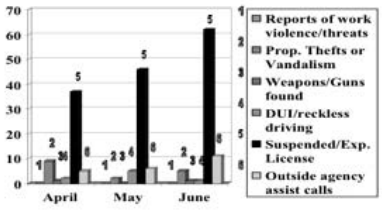
Tennis and swim family club membership for sale. Location is in Santa Clara near Homestead and Lawrence. Details about the club can be viewed on the Web at http://www.konakaiclub.com/. Sandy or Val at (408) 996-9927 or (408) 482-5130. We'll be happy to take you to see the club as guests.

Four Doobie Brothers tickets for the Mountain Winery in Saratoga on Thurs. Sept. 1 at 7:30 p.m. $50 ea. Will also sell them by the pair. Call (408) 269-4101.

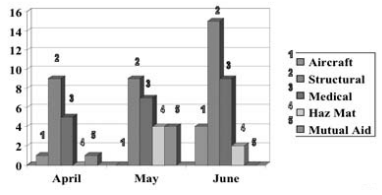
Protective Services monthly activity

A statistical summary of activities of the Protective Services Division's Security/Law Enforcement and Fire Protection Services units for the month of June 2005 is shown below.

Security/Law Enforcement Activity



Fire Protection Activity



Exchange Information

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

Beyond Galileo N-235 (8 a.m. to 2 p.m.) ext. 4-6873

Ask about NASA customized gifts for special occasions.

Mega Bites N-235 (6 a.m. to 2 p.m.) ext. 4-5969

See daily menu at: http://exchange.arc.nasa.gov

Visitor Center Gift Shop N-943 (10 a.m. to 4:00 p.m.) ext. 4-5412

NASA logo merchandise, souvenirs, toys, gifts and educational items.

Tickets, etc...(N-235, 8 a.m. to 2 p.m.) ext. 4-6873

Check web site for discounts to local attractions, http://exchange.arc.nasa.gov and click on tickets.

NASA Lodge (N-19) 603-7100

Open 7 days a week, 7:00 a.m. to 10 p.m. Rates from $40 - $50.

Vacation Opportunities

Lake Tahoe-Squaw Valley Townhse, 3bd/2ba equipped, balcony view, horseback riding, hiking, biking, river rafting, tennis, ice skating and more. Summer rates. Call (650) 968-4155 or e-mail DBMcKellar@aol.com

South Lake Tahoe cottage w/wood fireplace, hot tub. Rates $50 to $130 per night. Call (650) 967-7659 or (650) 704-7732.

Vacation rental, Bass Lake, 4 mls south of Yosemite. 3bd/1.5 ba, TV, VCR, MW, frplc, BBQ, priv. boat dock. Sleeps 8. $1,050/wk. Call (559) 642-3600 or (650) 390-9668.

Big Sur vacation rental, secluded 4bd/2ba house in canyon setting. Fully eqpd kitchen. Access to priv. beach. Tub in patio gdn. Halfway between Carmel and Big Sur. $175/night for 2; $225 for 4 and $250 for more, plus $150 cleaning dep. Call (650) 328-4427.

Tahoe Donner vacation home, 2 bd/2ba. trees, deck. Access to pools, spa, golf, horseback riding, $280 wkend, $650 week. Call (408) 739-9134.

Pine Mountain Lake vacation home. Access to golf, tennis, lake, swimming, horseback riding, walk to beach. Three bedrooms/sleeps 10. $100/night. Call (408) 799-4052 or (831) 623-4054.

Incline Village: Forest Pines, Lake Tahoe condo, 3 bd/2ba, sleeps 8. Fireplace, TV/VCR/DVD, MW, W/D, jacuzzi, sauna, pool. Walk to Lake, close to ski areas. Visit Web page for pictures: http://www.ACruiseStore.com. $120/night low season, $155/night high season (holidays higher) plus $156 cleaning fee and 12% Nevada room tax. Charlie (650) 366-1873.

Disneyland area vacation rental home, 2 bd/1ba. Nearing completion completely remodeled w/new furniture. Sleeps 6 (queen bed, bunk beds, sleeper sofa). Air hockey and football tables. Introductory rate $600/wk, once completed rate will be $1000/wk. Security deposit and $100 cleaning fee required. Call (925) 846-2781.

Ski Park City Utah, NASA Ski Week XIV, Feb 5 - 12, 2005. Space limited. E-mail Steve at e-mail exnasa@sbcglobal.net or call (408) 432-0135.

New York, 5th Ave. One fully furnished bedroom in 24 hour security bldg. overlooking Washington Square Park, $1,000/wk or $3,000/mo. negotiable. Call (650) 349-0238.

Paris/France: Fully furnished studio, 5th Arr, Latin Quarter, Notre Dame and Ile-St. Louis., $1,400/wk. negotiable. Call (650) 349-0238.

Santa Cruz townhouse, 2 bedrooms plus study, 2 baths, decks, totally furnished, 3 blocks from beach, available July, August, September; $1,600 per month. Call (831) 423-5777 (H) or (831) 277-8476 (C).

West Maui vacation at Kahana Falls, across street from beach. Thanksgiving week 19-26 Nov 05, $630/wk. 1bd/2 ba, w/d, fk. For 2 adults, 0 to 2 kids. Call (650) 962-1314 after Aug 7.

Transportation

'00 Chrysler Sebring JX convertible. $8,750 or B/O. Paul (408) 725-8942.

'00 Chevy S-10, 10K miles, mint condition, CD player, camper shell, $12,000 or B/O, Jessica (408) 774-1218.

'00 Gorgeous Monaco La Palma , 29-foot Class A Luxury Motorhome Ford V-10 Super Duty F series chassis, 4 spd ovrdrive, 30K mls, dual pane tinted windows. Corian counters, oak cabinets, 5.5 KW generator, ducted roof ac, powered vent, large Norcold elect/gas refrig., elect/gas hot wtr heater, 20" TV, VCR, CD/AM/FM 4 speakers, satellite dish prep, lighted electric step, rear vision camera, A&E awning, electric brake trailer hookup and 5,000 lb hitch receiver, hydraulic leveling jacks, 1500 watt Trace inverter, stainless wheel covers, convection microwave, rear queen bed, heated mirrors, power driver's seat, deluxe mint condition interior and exterior, all neutral colors, 75 gallon gas/water tanks, plenty of storage space, 2 years left on extended warranty, always dealer maintained.$39,888 (below blue book). Tim Castellano (831) 623-4302 or e-mail tpcastellano@direcway.com

Astrogram deadlines

Submit articles and photographs to astrogram@mail.arc.nasa.gov no later than the 10th of each month. If this date falls on the weekend or a holiday, then the following business day becomes the deadline. If you want a photographer to cover an event you're sponsoring, it's very important that you submit a service request to the Video and Photographic Services Group at least 5 days in advance of the activity. Every effort will be made to accommodate your request whenever it's submitted, but please understand that photographers may not be available for last-minute requests, so best to plan ahead! If you have questions about the Astrogram, contact Astrid Terlep at the aforementioned e-mail address or ext. 4-3347. For more information about photography or video services, contact Ed Schilling at e-mail Edward.M.Schilling@nasa.gov or ext. 4-1307.

NASA Research Park welcomes these new tenants

These new NRP tenants now lease office space in Bldg. 19, signing leases commencing after NASA Research Park's March open house and on line marketing events.

- **BluPoint Global** - An R & D green technology start-up company focused on distributing digital media and eliminating the need for physical inventory, allowing end-users to conveniently acquire any type of media any where, any time while creating no pollution or waste;
- **Honeybee Robotics** - Creates robots, flight subsystems, automated drills and other machines destined for work on Earth, Mars and beyond;
- **InformArt/GaryAir** - Flight instruction, marketing and systems engineering and testing;
- **Intrynsyx** - Software developer, consultant;
- **Norman B. Houge** - Construction engineering, excavating and grading firm located in the South Bay area and collaborating on center-wide facility construction and engineering projects;
- **Ozen Engineering** - Developer and consultant for ANSYS Engineering software, provider of tutorials to engineers on ANSYS software;
- **Pragati Synergetic Technology Inc**. - Developer of knowledge-based software;
- **Western Disaster Center, Inc**. - A nonprofit using applied research and advanced computer, information and communication technologies to save lives and reduce losses from natural, environmental, technological and man-made disasters.

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