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ASTROGRAM

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Worden gives upbeat message about future work for Ames

BY JOHN BLUCK

In an upbeat talk to a crowd that filled the Ames main auditorium, Ames Center Director S. Pete Worden outlined an exciting future at Ames that includes new work in exploration, science and aeronautics -- each about a third of the center's efforts, he said. "I have a gazillion charts to go through," he said.

His wide-ranging presentation about Ames touched on moon exploration, a lunar institute, moon dust research, heat shield work for spacecraft destined for the moon and Mars, a Mars sample "cache box" assignment, rising supercomputer capability, small satellite work with a potential for many missions, increased astrobiology work, growing cooperation among academia, and commercial partners and Ames and much more.

Moon work

The Ames fast-paced Lunar CRater Observation and Sensing Satellite (LCROSS) mission to hit the moon is important because it is, "demonstrating what this center can do on schedule and in budget," Worden declared.

LCROSS, part of NASA's Exploration Systems Mission Directorate's activity, will strike the moon's south polar region, and kick up lunar material to enable scientists to analyze it for water content.

"We're coordinating a worldwide LCROSS moon impact observation campaign (led by Ames planetary scientist Jen Heldmann)," Worden continued.

The LCROSS launch, slated for October 2008, is, Worden said, "on schedule and on budget. We are making a great program."

Speaking about the agency's effort to go back to the moon and travel to Mars and beyond--the Constellation Program--Worden said there is a lot of work to do for Ames. "We have a number of very critical elements. The thermal protection folks are working overtime."

"We have switched material to phenolic impregnated carbon ablator (PICA), a (heat shield) material developed here," Worden noted. His projected slide also listed Ames as leading PICA development and testing both for the Crew Exploration Vehicle, now called Orion, and the Mars Science Laboratory (MSL), which has a planned launch date in fall 2009.

Worden said that Ames' arc jets facility "a unique facility in the world." He added, "We want to upgrade them."

Life Sciences

"We are getting additional life support tasks assigned by Johnson (and Marshall)," Worden said. "This is significant."

NASA photo by Eric James

Ames Center Director S. Pete Worden responds to a question during the recent upbeat talk he gave to the center about the future of Ames.

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NASA Ames to establish nationwide lunar science institute

BY MICHAEL MEWHINNEY

NASA recently announced its intent to establish a new lunar science institute. This effort, with dispersed teams across the nation, will help lead the agency's research activities for future lunar science missions related to NASA's exploration goals.

NASA photo

Named the NASA Lunar Science Institute (NLSI), the effort will be managed from NASA Ames. The center currently manages a similar distributed NASA Astrobiology Institute.

NLSI's operations are expected to begin March 1, 2008. NLSI will augment other, already established lunar science investigations funded by NASA by encouraging the formation of interdisciplinary research teams that are larger than those currently at work in lunar science.

"I am excited about NLSI," said Alan Stern, associate administrator for NASA's Science Mission Directorate, NASA Headquarters, Washington. "As

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On the Inside . . .

Conference held on exploration of moons - Phobos and Deimos

NASA photo by Dominic Hart

Ames Center Director S. Pete Worden speaking at the First International Conference of Photos and Deimos held recently at the center.

The First International Conference on the Exploration of Phobos and Deimos: The Science, Robotic Reconnaissance, and Human Exploration of the Two Moons of Mars was the first international meeting focused on Phobos and Deimos, and on how their exploration relates to that of the moon, Mars and the solar system beyond.

The conference was an open international forum bringing together scientists, engineers, space exploration professionals and students interested in discussing the status and advancement of the exploration of Mars' satellites, and the exploration of Mars itself and other near-Earth objects (NEOs) through them.

The conference was held during a time of renewed interest in the exploration of Phobos and Deimos, with several international spacecraft missions and concept studies underway.

'Return to the Moon Family Night' attracts thousands

BY RACHEL PRUCEY

The moon was high and bright in the clear evening sky on Nov. 17 during 'Return to the Moon Family Night.' NASA Ames was abuzz with an estimated 6,500 attendees, some of whom were outfitted in shiny silver spacesuits or other astronaut apparel to show their NASA spirit.

Volunteer parking attendants equipped with light sabers and event staff guided excited children, families and NASA enthusiasts to the night's various activities and displays. They included presentations by scientists, videos, authentic moon rocks on display, robotic rover demonstrations, telescopes to peer into the night sky and even a virtual playground of kid's activities.

Seating was scarce at presentations by Ames Center Director S. Pete Worden and Ames scientists who are leading the Lunar CRater Observation and Sensing Satellite (LCROSS) mission; including Tony Colaprete, Jennifer Heldmann and Stuart Moses.

Crowds flooded the Shenandoah Parade Ground waiting for a chance to view the night's 'star' and main attraction: the moon. Curiosity shone on people's faces as they learned about NASA's effort to return and discover more about the moon either by talking to knowledgeable staff at fun booths featuring colorful handouts, videos and miniature rovers, or by touching the actual materials used on space shuttles.

NASA photos by Dominic Hart

Participants at the recent Ames 'Return to the Moon Family Night' held at the center got to try science gizmos first hand. Kids got the chance to operate remote-controlled rovers (top photo); to look through telescopes at the moon, Comet Holmes (middle left photo) and other celestial objects (middle photo); and experience other computer-simulated displays (bottom right photo.)

Little hands creatively colored the moon's surface purple and green, while others used remote-controlled, mini rovers to weave through a moon-like obstacle course, or puzzle together artistic renderings of space.

Once again, through the help of event manager Barbara Patterson and all the family night coordinators and volunteers, Ames opened its doors to the community to share NASA's excitement and efforts in cutting-edge science and space exploration. Stay tuned for future family events!

NASA's remotely piloted plane helps battle wildfires

BY JOHN BLUCK

NASA pilots flew the Ikhana unmanned airplane and its instruments that can see through smoke over as many as seven of a dozen Southern California wildfires in late October.

The Ikhana took off from NASA Dryden Flight Research Center, Edwards Air Force Base, Calif., to observe wildfires while flying south for a 10-hour mission. It first observed the fires near Lake Arrrowhead and flew as far south as San Diego County near the Mexican border.

NASA Ames developed the Autonomous Modular Sensor-Wildfire to look through the smoke to see hot spots, flames and temperature differences.

According to Jim Brass of Ames, who flew to Dryden to conduct the Ikhana's mission, the fire images are taken from the Ikhana aircraft and are processed on board. Pilots remotely flew the UAV from NASA Dryden.

"After processing, the images are transmitted through a communications satellite to NASA Ames where the imagery is placed on an Ames Web site. Then the imagery is combined with Google Earth maps," Brass explained.

"We anticipated an event like the wildfire siege in Southern California occurring in October," said the project principal investigator Vince Ambrosia of Ames. "When the call came on Monday from the National Interagency Fire Center, the California Governor's Office of Emergency Services and colleagues within the Incident Command structure on the fires, we were ready to quickly deploy our teams and initiate a mission plan to over fly the fires and provide critical thermal infrared intelligence on the various wildfires," Ambrosia added.

There were team members at various fire camps to assist in the integration of the data and imagery derived from the AMS-WILDFIRE sensor on the NASA Ikhana UAV, while other members of the team were in place at Dryden, NASA Ames, Google and the National Interagency Fire Center.

Last month, Ikhana flights were conducted as part of a series of wildfire imaging demonstration missions being conducted by NASA and the U.S. Forest Service. The flights were part of the Western States Fire Mission to demonstrate improved wildfire imaging and mapping capabilities of the sophisticated imaging sensor and real-time data communications equipment developed at Ames. During the September missions, pilots flew the airplane for earlier missions remotely from NASA Dryden as well.

NASA's Ikhana is a Predator B unmanned aircraft system built by General Atomics Aeronautical Systems and adapted for environmental science and technology research missions. Each flight is being coordinated with the FAA to allow the remotely piloted aircraft to fly within the national airspace while maintaining separation from other aircraft.

Also, a NASA satellite has captured remarkable imaging of the wildfires. To view and download images and for additional information, visit: http://www.nasa.gov/vision/earth/lookingatearth/socal_wildfires_oct07.html

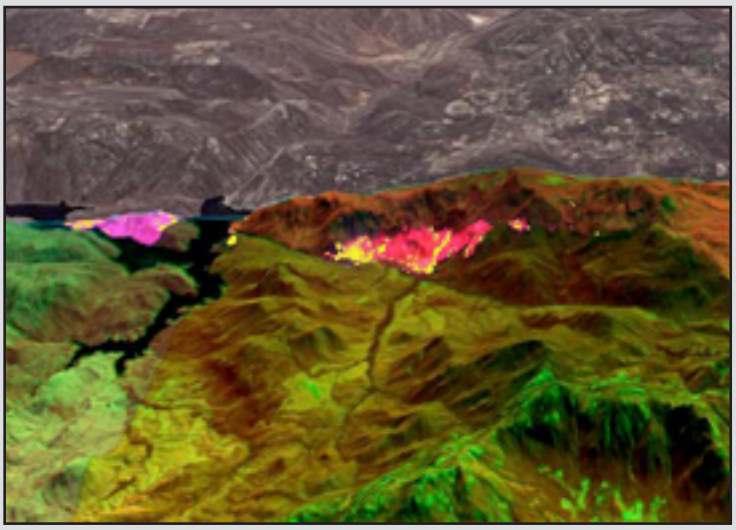


photo by NASA and U.S. Forest Service

Thermal-infrared imaging sensors on NASA's Ikhana remotely piloted research aircraft acquired this image at in the afternoon on Oct. 25 over the Harris Fire in San Diego County in Southern California. The colorized image shows a mosaic of images looking south, draped over the terrain and shown in 3D. The active wildfire fronts are in yellow and red, while hot, previously burned areas are in shades of dark red and purple. Unburned areas are shown in green hues.

Scientists teach audience about Arctic

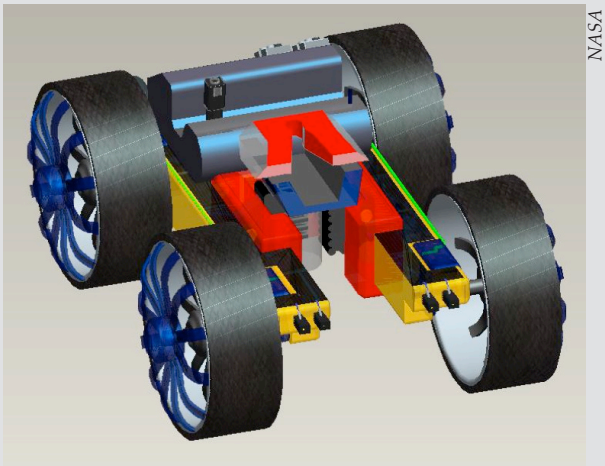
In late October, a team of six scientists and Arctic residents told their personal stories of life and research in polar regions, supported by dramatic high definition video footage, to help the rest of of the audience get a feel for life on the world's icy edges. Photo at right shows a penguin used to help explain Arctic life to the children in the audience. The program, 'POLAR-PALOOZA, Stories from a Changing Planet,' seeks to inspire diverse audiences across America to better appreciate the many ways the rapidly changing Arctic and Antarctic affect the health and functioning of the entire Earth system.

NASA photos by Eric James

NASA 'MULEs' help move large objects on moon

BY JOHN BLUCK

How would you move big things on the moon to construct a lunar base, conduct exploration or later expand a human settlement? A team of Ames engineers suggested that a small vehicle, the "Mobile Utility for Lunar Exploration" (MULE), could move large items about on the moon.



NASA

The "Mobile Utility for Lunar Exploration" (MULE), Is a single utility vehicle type which will move several different lunar surface system elements, perform site preparation and enable mining for in-situ resource utilization.

MULE vehicles could move moon landers, human habitat modules, power stations and cargo containers. As many as four MULEs could work together to reposition objects on the moon, according to the team, 'The Ames Muleskinners.'

"If we are going to operate on the ground, in a new place, we are going to have to have large scale surface mobility, just like we do in large terrestrial plants," said Andy Gonzales, a senior systems engineer at Ames, who led the 'Muleskinners.'

After a challenge from Johnson Space Center (JSC), Houston, in the spring of 2006, several NASA centers proposed designs for a new human lunar lander and related systems. The lander, the 'Lunar Surface Access Module' (LSAM), will carry both crew and cargo to the lunar surface. Gonzales guided the Ames contribution to that effort, which defined options for Lunar Surface Mobility to support the lunar part of the Vision for Space Exploration.

"Ames responded to JSC's challenge by focusing on the problem of moving assets, ranging in mass from six metric tons to the entire 20 metric ton LSAM (lander), across the surface," Gonzales said. "The Ames team showed that such a capability was key to the success of building an outpost since each landing would have to occur at distances from one to two kilometers from the outpost core in order to protect emplaced assets."

The team proved that MULEs are practical and capable of moving the moon landers. According to Gonzales, "Each LSAM (lander), when on the moon, actually would weigh no more than a Hummer weighs on Earth."

After arriving on the moon's surface, the lander either would be unloaded, and one MULE would take the cargo to the lunar outpost; or four cooperating MULEs would haul the lander with its cargo to the outpost, according to Gonzales.

The Ames team updated approaches similar to those used for the original design of the Apollo Lunar Roving Vehicle, and showed that moving items overland within the required mass range is feasible.

"Moving large items on the lunar surface could be done within an acceptable range of mass, volume, power and time limits," Gonzales said. "We really opened some eyes and covered some new ground for NASA," Gonzales said.

In a second phase of its work, the Ames team teamed up with lunar lander design teams from several NASA centers to refine how Lunar Surface Mobility would be achieved with a number of lander designs.

"JSC and the other NASA centers really appreciated our contributions, and it was quite enjoyable working across NASA," Gonzales said.

The NASA centers developed an operations concept using a small number of vehicles.

"The true utility of the MULEs becomes apparent when they are used as single units to move smaller packages, or when outfitted with civil engineering tools to move, dig or drill regolith," Gonzales explained. "Tasks ranging from routine site surveying to large equipment moving, using human, telerobotic and autonomous control will be performed by MULEs."

Engineers later expanded the MULE concept and added it into the Lunar Architecture Team 1 (LAT1) study, in which Ames took part. Ames, Johnson and JPL representatives analyzed as many as six chassis types, included walking vehicles.

"This study, first presented to the public in December 2006, and initially defined the 'Outpost First' approach to carrying out the lunar component of the Vision for Space Exploration. It was especially gratifying to see our work represented in the briefings at the Architecture roll-out," Gonzales said.

During further LAT2 studies in which Ames also took part, the number of chassis under consideration was reduced back to two, including a MULE-like vehicle and a walking vehicle. Another job assigned to this vehicle was to serve as the lower rolling chassis for unpressurized or pressurized human transport rovers.

"The surface mobility products from Ames were well received by our colleagues all across NASA, and was another demonstration of the ability of Ames to play a significant role in implementing the Vision for Space Exploration," Gonzales said. "Opportunities to further develop the MULE are currently being examined," he added.

"An industrial partner could build MULEs and other types of infrastructure equipment and then operate them as a service to NASA," stated Dan Rasky, Ames Space Portal lead.

In addition to Gonzales, the Muleskinners included John Segreto, Code REM; Terry Fong, Code TI; Brian Glass, Code TI; Bob Morris, Code TI; Larry Lemke, Code SS; and Jhony Zavleta, Code SS, KISS Institute. The work was supported and encouraged by Dave Korsmeyer, Code TI; Eugene Tu, Code T; and Laura Doty, Code R.

Worden gives upbeat message about future work for Ames

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According to Worden, funding has been requested from Johnson to work on a suit lock concept. Astronauts would climb in and out of a moon or planetary habitat through a spacesuit airlock, while the spacesuit would remain attached to the outside of the habitat or in other configurations, to result in less transfer of contaminants and dust into the habitat.

"Lunar dust… a lot of work being done there," said Worden. "It's a dirty task, but somebody has to do it," he joked. One of his charts included a "bullet" point, "lunar dust toxicity," and listed the "opening of Ames' Lunar Dust Biomedical Laboratory."

According to Worden, Ames is doing in-flight laboratory analysis for the space station. "For those of you involved in biosciences, the future looks very bright," he said.

Worden said that biosciences at Ames are on the "rebound." Ames developed the payload for an experiment carried on the STS-118 flight for the Streptococcus pneumoniae Expression of Genes in Space (SPEGIS) mission that was examining the virulence of bacteria in space. Worden noted that virulence of bacteria increases in space, and the experiment is to measure "effectiveness of antibiotics in space."

Computer work

Referring to Ames' Constellation-related information technology (IT) efforts, Worden said, " We've . . . developed a system to report problems." Called the Problem Reporting and Corrective Action (PRACA) system, NASA selected it for Constellation-wide baselining, a method used to compare on-going performance with a historic baseline, according to one of Worden's slides.

Worden said Ames information technology is supporting NASA's Exploration Systems Mission Directorate. "We are providing a number of software tools for the International Space Station," he said. One system shows the real time location of solar arrays, he continued, citing recent troubles NASA had with damage to solar cell arrays that astronauts noticed as the arrays unfurled during the STS-120 mission to the space station.

Worden stated that Ames supercomputer systems are "cross-cutting" resources, used for many diverse jobs. He said the supercomputer system is a "key tool."

"We have standby crews ready to provide shuttle analysis," he continued, adding that the center has increased computational resources at Ames. "We will continue to remain in the top rank of supercomputer facilities in the world," he said. Ames will spend as much as $600 million over next 10 years on supercomputing, according to Worden's charts.

Worden also mentioned Ames' role with Integrated Systems Health Management IT. "We are assigned the lead role… a really critical role for the Ares 1 and V (rockets) and solid rocket health management," he said.

Space missions, Science and Astrobiology

"Alan Stern, (NASA's Associate Administrator for Science), visited here (Aug. 16 -17, 2007)," Worden recalled. "He refers to us as the 'un-center' -- the can-do center. We are good at small payloads," Worden continued.

According to the director's charts, Stern challenged Ames "to identify science endorsed by the National Research Council (NRC) Decade Surveys that could be implemented with $30-million 'Missions of Opportunity.'" Ames forwarded 18 mission concepts to the NASA Science Mission Directorate in Washington within three weeks, according to Worden's slides.

Ames has an increased role in NASA Science Mission Directorate projects, according to Worden. "We have been assigned the job of setting up a lunar science institute at Ames," he said. His slides listed some of subjects the new institute--patterned after the Astrobiology Institute--will address. It will jump-start U.S. lunar science by recreating a community of lunar scientists. The institute also will address and consider basic lunar science, lunar sorties, lunar outpost uses including astronomy and lunar dust study.

Referring to the Astrobiology Institute, headquartered at Ames, Worden reported, "We've seen some additional funding." He continued, "After a few years we've added a few more universities."

"Astrobiology is beginning to be restored," Worden said. "Alan Stern believes this is a area that needs to expand."

Worden mentioned a major task for Ames, a sample return mission from Mars. "We are beginning to build a cache box." The Ames-built box will be part of the Mars Science Laboratory (MSL) mission that is on a schedule to launch in 2009. MSL will gather and store martian samples in the cache box until a later mission can take them to Earth for analysis in the 2020 time frame. "This is a very significant project," Worden confirmed.

"Kepler is a major mission (too)," Worden noted. "We have significant challenges with cost and schedule. . . Hard work by Ames and JPL put us back on track."

To explain the Kepler mission, he said, "We're going to look at a bunch of stars like the sun . . . and we expect to find several hundred Earth-like planets."

Then, he turned to the Stratospheric Observatory for Infrared Astronomy (SOFIA). Its mission is to explore the infrared view of the universe while flying above interference from the Earth's water vapor atmosphere.

"SOFIA is another significant program," he offered. "I think we're in very good shape. . . .We have moved the schedule up to do science in mid 2009 … The science will be here." He added that SOFIA flight operations would be in Palmdale in Southern California.

He mentioned that future workshops and conferences at Ames are to include, "Virtual Worlds," Jan. 26-27, 2008; "Deep Mars," related to exploration below Mars' surface, March 1-2, 2008; and the "Lunar Science Conference, July 22-24, 2008, in Bldg. 3. Worden suggested that the conference would put Ames in the spotlight as lunar research begins to ramp up.

"You probably read about the wildfires (in Southern California)… . The Ikhana's (remotely piloted airplane's) sensors (the Ames-developed AMS-Wildfire sensor) can look through smoke … . We have got extremely good publicity," he said.

"We understand there will be money," Worden said, "for small, low-cost missions." Worden also mentioned "Stand Alone Missions of Opportunity" (SALMONs). They would provide

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Ames hosts low-carbon economy seminar

BY APRIL NEILSON

Ed Sheffner, deputy chief of the Ames Earth Science Division, gave a keynote address at the NASA Ames-Cornell University Discovery panel entitled 'How to Build a Low-Carbon Economy,' in mid November.

NASA photos by Dominic Hart

A captivated audience raptly listened to Ames Earth Science Division Deputy Chief Ed Sheffner's report on the effects of C02 in the atmosphere.

The consensus today is that human activities have significantly altered the balance of sources that add CO2 to the atmosphere and the sinks that remove it, says Sheffner. The event, which was coordinated by Ames Environmental Chief Dr. Ann Clarke and moderated by Ames' Chief Scientist Dr. Stephanie Langhoff, featured opening remarks by W. Kent Fuchs, Cornell University's Joseph Silbert Dean of Engineering and panel presentations by distinguished Cornell alumni active in the energy sector.

Disclosing findings from the just-published 'The First State of the Carbon Cycle Report (SOCCR): The North American Carbon Budget and Implications for the Global Carbon Cycle,' Sheffner pointed out that understanding the carbon cycle and human influence on sources and sinks in North America will be crucial to any effort to mitigate global climate change. Observations taken in Hawaii over the last 50 years and recent data released by the Global Carbon Project show that C02 has been steadily climbing every year since 1958. Moreover, since 2000, Sheffner noted:

• The growth of carbon emissions from fossil fuels has tripled compared to the 1990s and is exceeding the predictions of the highest IPCC emission scenarios;

• The rate of increase of atmospheric CO2 has grown from 1.5 ppm/yr to 1.9 ppm/yr; and

• The carbon intensity of the world's economy has stopped decreasing *ppm = parts per million.

"All of these changes," emphasized Sheffner, "characterize a carbon cycle that is generating stronger climate forcing and sooner than expected." He noted that the observations made by NASA Earth science satellites are helping us understand the carbon cycle and the impact of changes in carbon on the land, in the air and in the oceans.

Underscoring Sheffner's remarks, Cornell University Dean Fuchs spoke about Cornell's new initiative to reorganize itself around the theme of sustainable futures by creating a Center for a Sustainable Future to advance not only commitments to a sustainable and energy efficient campus but also to foster new educational opportunities that integrate science, technology, economics and entrepreneurship around concepts of sustainability.

Alumni panelists representing a range of environmental/energy areas included Dr. Jonathan Gelbard, executive director and founder of Conservation Value; Ted Pope, vice president at Energy Solutions; Ben Tarbell, product director for SolarCity; Dr. Carl Pechman, president of Power Economics, Inc.; and Dr. Annemarie Meike, business development executive of the Industrial Partnerships Office at Lawrence Livermore National Laboratory. For more information, visit: http://www.climatescience.gov/Library/sap/sap2-2/final-report/default.htm

Panelist Dr. Carl Pechman of Power Economics (left) explains how customer response to power network conditions can help balance out intermittent renewable resources, as Ben Tarbell with SolarCity looks on.

Code C puts the "IT" in diversity

BY ROSE KING

What is 'IT'? 'Inclusion' plus 'Talent' equals 'Diversity.' Code C, Office of the Chief Financial Officer, has taken steps to promote diversity awareness while encouraging its staff members to attend meetings as a means of inclusion. Its goal is to establish a high standard of excellence while making diversity a reality, not just lip service.

In November 2006, a diversity board was formed which developed a diversity action plan. This past year, the board, along with Code C management, has been monitoring those goals set forth in the action plan. Although challenges still exist, they have made strides towards those goals, one of them being "demonstrate management to commitment."

Code C management plays an active and visible role in supporting diversity initiatives, but how? Darlene Gross, chief, Business Systems Office in Code CS, and a member of the center's Diversity and Equal Opportunity Board, chairs the board; and Paul Agnew, chief financial officer, is a member. Their involvement validates management's commitment to diversity by keeping the diversity strategy on track.

Topics about diversity are added to the Code C all-hands agenda to ensure the entire Code C community is informed keeping the dialog about diversity ongoing:

• The Code C Diversity Action Plan was "rolled out" at a Code C all hands meeting;

• An overview of "Diversity Leadership," a 10-week course offered through Ames, was presented by Denise Snow and Ken Ledbetter, who along with Rose King and Paul Agnew are currently enrolled in the course; and

• A video of the Ames Diversity Kickoff with Bryon Kunisawa was shown at the Code C all hands meeting.

The diversity board also has written two articles, "Code C Employee Diversity Board Spotlight," published August 2007 and "Code C Sets up Employee Diversity Board," published April 2007. These articles have appeared in the "Astrogram" and the Code C newsletter the "SCENE."

Code C is in the forefront in its attempt to make diversity work and the goals set forth happen. The board encourages its staff to participate by becoming members. The world is constantly changing and new ideas and ways of thinking bring with it empowerment. So get on board and get with "IT."For more information, visit http://www.cfo.arc.nasa.gov/er-diversity.html

NESC honors Ames employee for technical excellence

BY KEITH HENRY

The NASA Engineering and Safety Center (NESC) honored an Ames employee, Ian Fernandez, during ceremonies at an NESC leadership meeting held recently at NASA Langley. The ceremony recognized individuals for their contributions to critical technical assessments over the past year.

Fernandez received an NESC Engineering Excellence Award in recognition "of engineering excellence in the development of an innovative load sharing floor design on the Composite Crew Module Project."

The NESC-managed project is designed to evaluate the use of composite materials and other concepts in future spacecraft. While the NESC project is not intended for use in a first-generation crew module, the load-sharing floor design was adopted by the agency's Constellation Program for use in the Orion Crew Module currently under development.

The Engineering Excellence Award honors individual accomplishments of NESC-job related tasks of such magnitude and merit as to deserve special recognition.

This is the fourth year that NESC has recognized employees and NASA partners for outstanding contributions to NESC-sponsored activities and to encourage critical examination of engineering problems.

NASA photo

From left to right: NESC Deputy Director for Safety and NESC Chief Astronaut Ken Cameron; recipient of the NESC Engineering Excellence Award Ian Fernandez; and the NASA Engineering and Safety Center (NESC) Director Ralph Roe, sduring the NESC leadership meeting and awards ceremony at NASA Langley.

Ames honors 21 employees for improving safety

Ames recently recognized 21 employees for their outstanding accomplishments in improving health and safety under the provisions of the Ames Safety Awards Program (ASAP) II. ASAP II was established to recognize employee actions, behavior and/or job performance that result in improved health and safety conditions at the center.

There are four levels of awards, with tier four being the highest level of achievement. The ASAP II board evaluates each nomination and selects the tier level that most represents the actions and accomplishments of that nomination. During this semester two tier four awards were presented.

Tier Level 4 - Individual awards
Huy Tran
Randy Berthold

Tier Level 3 - Individual awards
Dennis Acosta
Chuck Cornelison

Tier Level 3 - Team awards
None

Tier Level 2 - Individual awards
Cheryl Quinn
Andrew Mattioda
Seth Kurasaki
Tony Purcell
Laura Iraci
Steven Hing

Tier Level 2 - Team awards
Supercomputing Team
Chris Hense
Bryan Biegel
John Parks
Mark Tangney
Art Joley
David Robertson
Ana Grady

Code TH Safety Team
Myesha Domino
Lissa Webbon

Tier Level 1 - Individual awards
Kim Washington
Sanford Davis

Tier Level 1 - Team awards
None

Each of these employees and teams was nominated by their colleagues for their outstanding actions and accomplishments in improving health and safety conditions at Ames.

New HSPD-12 badge enrollments on the rise, benefits too

BY RAYMOND O'BRIEN

Identity theft is the nation's fastest growing crime. According to USA.gov, the Federal Trade Commission ranks "identity theft/fraud" as the most rapidly growing category of complaints that the agency receives.

This alarming trend is one of several reasons why NASA is issuing new badges with a more sophisticated and standardized enrollment process,

> ***New badges are to be issued by the end of the year. For further information, visit the HSPD-12 Web site at: http://hspd12.nasa.gov***

which will better protect personal identity information collected from employees and maintained by the agency. Another reason: it is a presidential directive.

In an effort to reduce inefficiency, cost and risk to the federal government, President Bush signed the Homeland Security Presidential Directive (HSPD) 12 "Policy for a Common Identification Standard for Federal Employees and Contractors" on Aug. 27, 2004. This directive calls for all government agencies to implement a uniform identification system.

"Even prior to this directive, NASA was working on a smart card system," said Walter Hussey, project director for HSPD-12. "This directive gave us something to focus on in terms of how we wanted to do this technically."

This new system will help deter identity fraud, tampering, counterfeiting and terrorist exploitation. The directive is not only for NASA civil servants but also includes contractor employees and grantees -- basically anyone who has routine physical or virtual access to NASA facilities and information technology (IT) systems.

NASA is working hard to achieve its task of issuing new badges. With about 80,000 NASA employees and contractors that need new badges, this project is no simple mission.

Three phases are involved in implementing the presidential directive: appropriate background investigation, enrollment and issuance. NASA, as an agency, has completed 100 percent of the phase one investigations for civil servants and nearly 85 percent with contractors.

photos by John Stebel

Above photo: Armando Jimenez (ISSI) of Ames is enrolled for the new NASA HSPD-12 badge by Art Gonzales, personal security specialist (Maden Technologies).

Left photo: During the enrollment process for the new NASA HSPD-12 badges, Jimenez (ISSI) has his fingerprints scanned by Gonzales.

Enrollment, or phase two, requires proving employees' identities and taking fingerprints. Over 98 percent of those who need new badges are now entered in the Personal Identity Verification (PIV) system and over half of those have already had their badging data collected, i.e., enrolled. So far, NASA's total enrollments for new badges have exceeded the 43,000 mark.

"At NASA Ames Research Center, we have nearly completed phase one -- virtually all of the background investigations necessary for re-badging civil servants and contractors are either already on record or have been submitted to the Office of Personnel Management (OPM) for processing," said Wende Hower, Ames Personnel Security Manager. With approximately 3,700 employees that need new badges at Ames, "this is a very significant accomplishment," added Raymond O'Brien, Ames HSPD-12 implementation manager.

Ames is also well into phase two with over 1,500 employees enrolled. The new NASA badges will be available soon, so please look for notifica-

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Worden gives upbeat message about future work for Ames

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opportunities for both Ames science and small satellite missions, Worden's charts revealed.

Small Satellite development and missions

Ames is "getting increased roles in various missions, according to Worden, and the center is working on novel ways to accomplish small, fast-paced 'SmallSat' missions.

Another chart in his stack of slides included a question, "Why is a mission design center needed?" Increasing complexity has slowed the design process to a crawl, according to the chart. More details on the slide revealed that the Explorer 1 satellite was designed and launched in 83 days in 1958.

"In the past it took six months to a year to do mission design," Worden noted. "We are trying to use computers to design (a mission) in an afternoon," he stated. He added, "We presented this (mission design center concept) to the science mission directors and got good vibes," he continued.

Worden mentioned the successful Foton-M3 mission with the Russian Institute of Biomedical Problems that flew Sept. 14 -26, 2007. Ames delivered hardware to Russia in August 2007 for the Foton mission. It investigated tissue regeneration, genetic responses as well as gravity-sensing organ structure and function.

Ames also is working with Russia on the Bion M1 mission, according to Worden. The Bion M1 is expected to launch in September 2010 for a 30-day mission to investigate immune function and physiological responses to microgravity.

Speaking about funded Science Missions Directorate work for Ames, Worden said, "A lot of new things are coming along." He mentioned Lunar Advanced Science and Exploration Research (LASER), astrophysics strategic mission concepts and Small Explorer (SMEX) missions to conduct astrophysics, space physics and solar physics.

Worden described small satellite work at Ames including "micro-nano" spacecraft that have "common, reusable architectures." Besides noting the GeneSat, PharmaSat and other missions, he talked about a proposed lunar science orbiter. Another idea he revealed is the concept of a "CheapSat," that he said is in development and is "based on the idea you can buy off-the-shelf stuff from" an electronics store and build a useable satellite.

Worden said that PharmaSat, too, a small satellite that "builds on heritage of the success of GeneSat." The first PharmaSat hardware delivery is due Nov. 12, 2007, and the mission launch date is in March 2008 on a Minotaur-1 rocket that will boost a Department of Defense Tacsat-3 satellite into Earth orbit.

Regarding the small exploration SMEX missions, "we have teamed with Goddard," Worden said, noting as many as a dozen proposals on which the two centers are partnering. He added, "This is the wave of the future."

Worden also stated that unfunded Science Missions Directorate requests for information. For ISS "attached payloads," Ames has submitted two payload proposals, according to Worden.

"We have submitted 13 proposals for science mission partnership opportunities," said Worden. The proposals are in the areas of astrobiology, planetary and Earth sciences, according to Worden's charts. Other unfunded proposals, he said, include isotope-powered, small missions to planets.

There is "a lot of work (about) asteroids, (and there are) potential announcements of small asteroid missions," he said, displaying a chart about near-Earth-object mission concepts.

Aeronautics work

Turning to aeronautics at Ames, Worden said, "We were given targets to increase people in fundamental aeronautics . . . and we met that goal."

Partnerships

"We are growing partnerships with Google," Worden said. "They sent us a few million dollars." NASA moon data has been added to a store of information linked from Google, according to Worden. "We are negotiating with Google (about use of) 40 acres," he said, noting that the University of California also is negotiating with Ames for a major campus.

"Housing will be built (here), too," he continued. "Those of you have long commutes… you can live here… .We can lease out some of this very valuable land and enhance our operations.

His slides revealed that a NASA YouTube Channel would be implemented. Worden also mentioned collaborations with Symantec (information technology security), Microsoft (the imaging process) and Sun Microsystems (supercomputers), too.

During a short question-and-answer-period after his talk, an audience member asked, "Will you reinstitute the Director's Discretionary Fund?"

"I'm going to try to institute it with a little more goal-oriented (criteria)," he answered. "We'll try to make it more formal."

Former Ames research pilot dies

Edwin W. Lewis Jr., a NASA Dryden Flight Research Center research pilot, died in a Cessna Crash on Nov. 8, 2007. Lewis was flying a Civil Air Patrol Cessna 182 with another person, who also died, when the plane crashed southwest of Las Vegas. The crash is under investigation by the National Transportation Safety Board. Lewis served as a NASA Dryden research pilot since 1997. He previously served as a pilot for eight years at NASA Ames.

NASA photo by Tom Trower

Ames Disaster Assistance and Rescue Team marks 20th anniversary

BY ANN SULLIVAN

For the past 20 years, the NASA Ames Disaster Assistance and Rescue Team (DART) has been ready to respond to disasters both natural and human-made.

These aren't people who watch a disaster unfold on television and say, "I wish I could do something to help." These are people who are ready to spring into action as soon as the phone rings, who have their 'go bags' packed for an immediate departure, and who are disappointed if they aren't in the first group deployed following a disaster.

"DART is prepared to respond to emergencies at Ames and to support the community and the nation as a functional urban search and rescue team," said Bob Dolci, DART chief and director of Ames emergency services. "DART is a highly qualified and well-equipped emergency response team."

Despite their disparate backgrounds -- engineering, science, medicine, safety, logistics, communications, computer technology and administration, among others -- DART's 90 members have one thing in common: a desire to be on the front lines after disaster strikes.

When Hurricane Katrina struck in 2005, members of DART's rescue team deployed with California Task Force 3, a California Office of Emergency Services and Federal Emergency Management Agency (FEMA) urban search and rescue task force, searched for survivors in polluted and dangerous waters. DART's communications team provided equipment, set up a communications network and purchased satellite time that enabled the Michoud Assembly Facility to communicate with the rest of the world. The damage and utility control team deployed with a portable, 3,000-gallon-per-hour water treatment plant to provide potable water. Dolci deployed to Stennis Space Center to assist FEMA and Stennis management with disaster recovery operations.

Seven members of DART were deployed to New York City after the 2001 terrorist attacks, where they worked side-by-side with New York City emergency services units and rescue professionals from around the country to search for survivors and help recover victims in buildings crumbled into tangled masses of concrete and steel.

In the 12 hours after a magnitude 6.9 earthquake shook the San Francisco area in 1989, DART responded to more than 500 building system alarms, three hazardous materials incidents, and inspected more than 90 buildings and research facilities for damage. DART secured dozens of water leaks and natural gas leaks. Team members worked around the clock for three days straight. Their rapid and professional response minimized damage to NASA buildings from floods and explosions, saving countless dollars in potential repair costs.

DART members also have used their training and expertise to solve problems in their everyday jobs. The 'SearchCam,' a tiny fiber optic camera used to search inside spaces too small or too dangerous for a human to enter, was used to check the condition of a back-up boiler in a building at Ames following the failure of the primary boiler. The camera showed that the second boiler also was about to fail. As a result, both pieces of equipment were repaired at the same time, avoiding a second major shutdown and saving considerable time and money.

The reasons people stay with DART year after year are as diverse as the members themselves. For some, DART is a way to give back to their community and nation. For others, it's an extension of their day jobs. Still others enjoy the challenges and working with motivated, forward-thinking people and leaders. Their greatest reward comes from within, DART members say.

"Successfully leading the planning and support of high-speed data, voice and video services to Michoud" after Katrina was extremely rewarding, according to Bill Notley. "This was special," Notley added, because nine months before Katrina, he developed a multi-center communications plan that was "successfully executed in an exercise that exactly matched the scenario and services" his team delivered after Katrina. For canine search specialist Lynne Engelbert, who with her dog Lucy located victims of the New York terrorist attacks, "Being able to help people when they need it the most is the ultimate 'reward'."

Congratulations to the highly trained, experienced and dedicated members of DART on their first 20 years of service!

For more information about DART, visit www.dart.arc.nasa.gov

NASA photo by J.T. Heineck

NASA photo by Dominic Hart

NASA photo by Tom Trower

The NASA Ames Disaster Assistance and Rescue Team (DART) seen here during various emergency service drills at Ames, celebrates its 20th anniversary this year.

Creative costumes win cool prizes at Halloween contest

NASA photos by Dominic Hart

The Ames Exchange held its annual Halloween Costume Contest on Oct. 31. Prizes were awarded to the best costumes and the Ames Exchange provided complimentary refreshments.

Ames holds commute alternatives fair

Employees had the chance to test drive a hybrid and ride a collapsible bike, among other alternative vehicles, seen here during the recent commute alternatives fair held at Ames.

NASA photos by Eric James

PM Challenge 2008 is now open

The NASA PM Challenge 2008 registration is now open. Share your knowledge of project management, safety, systems engineering, communications, team building, lessons learned, engineering management, acquisition, leadership and other topics with your NASA colleagues at the agency's 5th PM Challenge conference to be held in Daytona Beach, Fl., on Feb. 26 - 27, 2008.

Register online at: http://pmchallenge.gsfc.nasa.gov/registration2008.htm. Registration closes Jan. 31, 2008.

NASA Project Management Challenge 2008

For full conference details visit http://pmchallenge.gsfc.nasa.gov.

Disability advocates discuss their inspiring work

Ralf Hotchkiss of Whirlwind Wheelchair International recently spoke at Ames for National Disability Employment Awareness Month.

Two representatives of Whirlwhind Wheelchair International (WWI) recently spoke at Ames for National Disability Employment Awareness Month. The talk was given by Ralf Hotchkiss and Marc Krizack. They described their inspiring work that benefits disabled people in 45 countries around the world.

WWI's mission is to make it possible for every person in the developing world who needs a wheelchair to obtain one so that they can achieve the maximum personal independence and integration into society.

Founded in 1989, Whirlwind grew from Hotchkiss's efforts since 1980 to travel the globe designing wheelchairs in developing countries from locally available materials. Hotchkiss's pioneering work has led to numerous important innovations in wheelchair design.

All WWI's designs are placed in the public domain to aid village wheelchair shops and keep costs to a minimum.

NASA to establish nationwide lunar science institute

continued from front page

the National Academy of Sciences has told us, the science to be done at the moon and from the moon are of high value, and NLSI will help us coordinate and expand a number of in-depth research efforts in lunar science and other fields that can benefit from human and robotic missions that are part of NASA's exploration plans."

NLSI research teams will address current topics in basic lunar science, as well as astronomical, solar and Earth science investigations that could be performed from the moon. They also will offer a quick response capability for lunar science support to NASA's Exploration initiative.

A national search for a NLSI director is currently underway. Most work done under NLSI's banner will take place at other NASA centers, universities and non-profit research groups around the nations. These groups will be competitively selected after scientific peer review.

Initially, NASA will select four or five teams for grants of $1 to $2 million each for three years, with renewals of up to five years. NASA will solicit team proposals in a 2008 NASA Research Announcement.

By late 2008, about 50 researchers around the U.S. could be working under NLSI's banner. By 2010, that number could double. Funds for this effort are part of the president's proposed 2008 NASA budget for the lunar science project within the planetary research program, now under consideration in Congress.

"We're delighted NASA Ames was chosen to lead this exciting new lunar science research office," said Ames Center Director S. Pete Worden. "This will complement the agency's ongoing lunar research and further the implementation of the nation's exploration efforts."

The lunar science institute is modeled after the highly successful NASA Astrobiology Institute, based at NASA Ames. Established in 1997, the NASA Astrobiology Institute promotes, conducts and leads integrated multidisciplinary astrobiology research in addition to training a new generation of astrobiology researchers.

For more information, about NASA and agency programs, visit: http://www.nasa.gov

New HSPD-12 badge enrollments

continued from page 8

tions and instructions on how you can help complete phase three in the coming weeks.

For NASA to achieve this undertaking, the agency needed to create a sophisticated technical infrastructure for all the centers to use.

By putting the new system into action, NASA is already seeing benefits. Not only will the new badges reduce cost and risk, the agency has improved its communication and ability to work with other federal agencies.

"We've tried to work with the other agencies who are issuing their own PIV cards and share lessons learned. We try to make sure we're helpful to them where we can be, and that we pick up on what they've done that can be useful to us," said Portia Dischinger, PIV enrollment and issuance project manager at NASA Headquarters. "We also have worked a lot with GSA (General Services Administration), which is serving as a federal PIV card provider for many agencies and shared NASA's experiences with them."

Scheduled to be issued in coming weeks, the new badges will have a computer chip and will be the means to gain access into those buildings with access controls. For higher risk areas and IT systems, a "two-factor" authentication system will eventually be used, where access requires something you have (your 'smart' badge) and something you know (your personal identification number).

"There are reasons to do this beyond just a presidential directive," said Hussey. "We're doing this to benefit NASA, our employees and the research and information that we develop and use."

For more information, please visit the HSPD-12 Web site at http://hspd12.nasa.gov .

Annual Hispanic Heritage Golf Tournament held, despite the rain

BY VIVIAN TORRES

In mid October, the Hispanic Advisory Committee for Employees (HACE) hosted the 5th Annual Hispanic Heritage Golf Tournament at the Moffett Golf Course, in which 76 avid golfers participated.

Ames Center Director S. Pete Worden launched the kick-off for this year's golf tournament by welcoming the golfers and cheering them on. Among the special guests were Frances Busby, who sang the National Anthem; Bill Henderson, who served as the disc jockey, playing salsa and Hispanic music; and Pam Sheets, who served as photographer, taking extraordinary pictures of all the golfers.

The participants received their welcoming gift or 'goodie bag' and also were provided with tokens to practice prior to 'tee time,' cart, beverages and a wonderful lunch.

Through the inclement weather, which lasted the majority of the day, and although the participants were already drenched and the temperature dropped, the participants proved to be no quitters, save for a few. The golfers played to finish off the last of the 18 holes. These are indeed die-hard golfers.

At the end of the tournament, entertainment was provided with the Mariachis playing their instruments and rendering various songs while the audience sang along, danced and cheered. The golfers are always looking forward to the annual HACE golf tournament, especially with the memorable gifts. In fact, they are already excited and anxious to return next year. According to a few golfers, "it's really all about fun." Special thanks to all the volunteers for supporting this event.

Frances Busby sings the National Anthem at the recent 5th Annual Hispanic Heritage Golf Tournament held at the Moffett Golf Course and hosted by the Ames Hispanic Advisory Committee for Employees.

NASA photos

Ames Center Director S. Pete Worden at the recent annual golf tournament at Moffett.

Ames' young artists honored

NASA photos

On Sept. 19, Ames Research Center and the Ames Fire Department recognized 96 young artists at an ice cream social in the Ames Mega Bites Café. Each of these artists, between the ages of 3 - 18, contributed artwork for the 2008 Ames Safety Calendar. Calendars will be distributed centerwide, via your mail stop, in December.

NARFE annual holiday party set

On Friday, Dec. 7, the National Association of Active and Retired Federal Employees, (NARFE), Chapter 50, will hold its annual Christmas party, from 11 a.m. - 2 p.m., in Bldg. 944. All federal employees working or retired are invited to come. Guests are welcome. The cost is $17 per person.

Lunch is chicken or salmon, vegetables, salad, rolls, beverage and dessert. Mail checks by Dec. 3 to: Dee Shallenberger, 1170 Crespi Dr., Sunnyvale, CA 94086 or Doris Boyd, 945 Torero Plaza, Campbell, CA 95008.

Come and get reacquainted with your former coworkers: Rod Perry, Doris Boyd, Marie Rider, Pat Beck, Claire Barsky and many others.

Ames Ongoing Monthly Events Calendar

Ames Amateur Radio Club, third Thurs., of ea. 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 Bicycling Club, every third Wednesday of each month, 12 noon - 1 p.m., Bldg. N-245 Auditorium. POC: Julie Nottage at jnottage@mail.arc.nasa.gov, ext. 4-3711.

Ames Bowling League, Homestead Lanes on Thursday nights at 6:20 p.m. Seeking substitute bowlers. Questions to sign up: Mike Liu at ext. 4-1132.

Ames Child Care Center Board of Directors Mtg., every other Monday, 1 - 2:30 p.m., Bldg. N-262/Rm 180. POC: Sally Miller, ext. 4-5411.

Ames Contractor Council Mtg., first Wednesday of ea. month, 11 a.m., Bldg. N-200, Committee Room. POC: Chris Johnson, (650) 938-8017.

Environmental Forum, first Thursday every other month, 9 a.m. - 10 a.m., T20-G conference Rm. 129. URL: http://q/qe/events/EHS-series/ POC: Stacy St. Louis, ext. 4-6810.

Ames Federal Employees Union (AFEU) Mtg, First Wednesday of November (7th), noon. First Wednesday of December (5th), noon. Bldg. N-247, Rm. 109. Beginning 2008, third Wednesday each month, same location. Guests welcome. Info at: http://www.afeu.org. POC: Paul K. Davis, ext. 4-5916.

The Hispanic Advisory Committee for Excellence (HACE) Mtg., first Thursday of each month, 11:45 a.m. - 12:45 p.m., Bldg. N-255, Rm. 101C. POC: Eric Kristich, ext. 4-5137 and Mark Leon, ext. 4-6498.

Jetstream Toastmasters, Mondays, 12 p.m. - 1 p.m., Bldg. N-269/Rm.179. POC: Miwa Hayashi, ext. 4-1397, mhayashi@mail.arc.nasa.gov. Web: http://jetstream.freetoasthost.com

Ames Mac Support Group Mtg., third Tuesday of each month, 11:30 a.m.to 1 p.m., Bldg. N-262, Rm 180. POC: Tony 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.

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

Ames Nimble Knitters Club, every Tuesday at 11:30 a.m., Bldg. N-241/Rm 237. POC: Rosalyn Jung, knitfan2@yahoo.com or Diane Alexander at ext. 4-3140. URL: http://knit.arc.nasa.gov

Ames Safety Committee, third Thursday of each month, 10 a.m. - 11 a.m., Bldg. N-237, Rm. 201. POC: John Livacich, jlivacich@mail.arc.nasa.gov, ext. 4-3243 or Terry Reichert, treichert@mail.arc.nasa.gov, ext.-4-0375.

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

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.

Safety Data

NASA-Ames Occupational Illness-Injury Data for Calendar Year-to-Date 2007 Jan. 1, 2007 - Oct. 31 , 2007

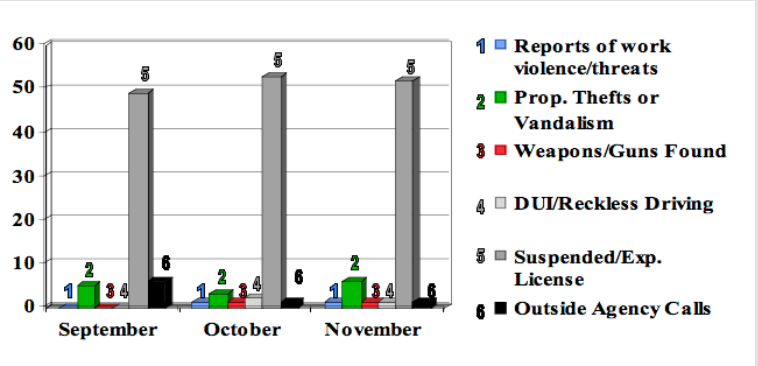
	Civil Servants	Contractors
First aid cases	12	12
Lost Workday cases	0	2
Recordable cases	2	3
Restricted duty days	0	0

Above data are as of Oct. 31, 2007. May be subject to slight adjustment in the event of a new case or new information regarding an existing case.

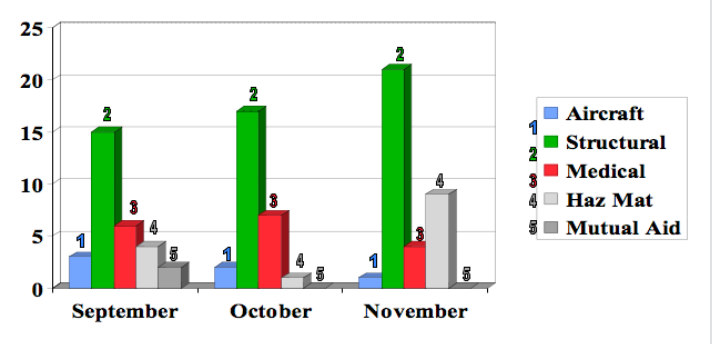
Protective Services monthly activity

A statistical summary of activities of the Protective Services Division's Security/Law Enforcement and Fire Protection Services units for the month of November 2007 is shown below.

Security/Law Enforcement Activity



Fire Protection Activity



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!

Car Pool

A blind Ames employee, Jim Stevenson, is in urgent need of a daily ride to work from mid-town Palo Alto mornings or afternoons, anywhere on the scale from regular to emergency backup. He currently has to ask for backups every day and often can not find a ride at all, so he must take an expensive taxi cab. If anyone can help, especially in the morning, most of the time, it would be most appreciated. He will pay for more than half the gas. Please call ext. 4-5720 if you are willing to help, or e-mail Jim at : jims@eos.arc.nasa.gov

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.

Utility trailer, 4' x 6', dilapidated, wood-rotten, hardware reusable. No wheels. Free. Dick (408) 997-3639.

Sewing machine for sale, $75. Singer (403) Slant-o-Matic, in 2-drawer walnut cabinet. Attachments: cams, bobbins, instr. book, oil. Linda (408) 736-7584, lv. msg.

Benefits Fair set

A '2007 Federal Benefits Open Season Fair' will be held on Thursday, Nov. 29, 2007, in the Eagle Room of Bldg. 943 from 10 a.m. through 1 p.m. All federal civilian employees are invited to attend. If you have any questions, please call Lita Que at ext. 4-1019 or Mary Perez at ext. 4-6865.

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

Don't forget to purchase your baby shower, birthday, holiday gifts at Ames' two gift shops!

Visitor Center Gift Shop N-943 M-F, 10 a.m. to 4 p.m., ext. 4-5412

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

Tickets, etc... N-943 outside the main gate, 10 a.m. to 3:30 p.m., ext. 4-5412 and Beyond Galileo, 8 a.m. to 1:30 p.m. ext. 4-6873

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

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

Moffett Field Golf Club with 'Tee minus 1' Grill and Sports Bar. Call (650) 603-8026.

RV Lots Available Call to reserve a space at (650) 603-7100/01.

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

NASA Lodge (N-19) 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: $55/night ($5 ea add'l adult); Bldg. 583 (150 rooms), rate: $45/night ($5 ea. add'l adult)

Ames Swim Center (N-109) 603-8025

The pool is heated year round! The pool is currently available for lap swim, pool parties and special events. POC -Chana Langley, Pool Manager (650) 603-8025. Memberships: single memberships: $40/yr. Family memberships: $60/yr. After purchasing a membership, there is an entrance fee: daily entrance fee - $3/day or lap pass fee - $40 for 20 uses. Platinum membership - $360/yr. (no daily fee). Special events: include military training, swim team events, kayak role practice, etc. The cost for special events is $50/hr.

Ongoing Vacation Opportunities

Lake Tahoe-Squaw Valley Townhse, 3bd/2ba, View of slopes, close to lifts. Per night: $250, plus $145 cleaning fee. Two night minimum. Includes linens, propane fireplace, fully equipped. Call (650) 968-4155, DBMcKellar@aol.com.

Bass Lake vacation rental, 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.

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 bdrms/2 ba, sleeps 8, fireplace, TVs/VCR/DVD, stereo w/CD player, microwv, W/D, jacuzzi, sauna, outdoor pool. Walk to lake. Close to ski areas. Visit web site for pictures: http://www.ACruiseStore.com $135/night spring and fall, $173/night summer and winter (holidays higher) plus $125 cleaning fee and 12 percent Nevada room tax. Charlie (650) 743-8990.

New York, 5th Ave., one fully furnished bedroom apt. in 24 hour security fbldg. overlooking Washington Square Park, $1,000/week or 3,000/month, negotiable. Call (650) 430-6977.

Paris/France: Fully furnished studio. 5th arr, Latin Quarter, Notre Dame and Lie-St. Louis, $1,400/week, negotiable. Call (650) 430-6977.

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).

Lake Tahoe cabin rental in Agate Bay, North Shore. 4bd/3ba tri-level, AEK, cable TVs, fireplace, BBQ, deck, sleeps 10. Closest skiing is Northstar, Alpine and Squaw. Rates are $375 a weekend, $1,000 a week. Call (408) 867-4656.

Florida west coast vacation in St. Petersburg, beautiful 2bd/2ba condo, fully equipped kitchen and furnished, sunset views, 1/4 mile from St. Pete Beach, monthly or 2 week minimum rentals only. Call (703) 299-8889 or e-mail: jdgoehler@aol.com

Monterey Bay vacation rental at Pajaro Dunes, 20 miles south of Santa Cruz, 3bd/2ba beach house with distinctive architecture. Beautiful ocean and valley views, only 150 ft from the beach, first-class tennis courts. $700/wkend, $2,100/wk including cleaning by the maid service when you depart. Call (408) 252-7260.

South Lake Tahoe large cabin surrounded by protected forest, 8 miles from Stateline Sleeps 12 comfortably, 4 bd/3ba. Hot tub/pool table/65" TV Matt (408) 482-5286

South Lake Tahoe cozy home backs up to large open meadow, 1 mile from Heavenly Valley. Sleeps 11, 3 bd/2.5 ba. Large deck with hot tub. Matt (408) 482-5286.

Astrogram deadlines

Please submit articles, calendar and classified advertisements to astrogram@mail.arc.nasa.gov no later than the 10th of each month. If this falls on a weekend or holiday, then the following business day becomes the deadline. For Astrogram questions, contact Astrid Olson at the aforementioned e-mail address or ext. 4-3347.

Inventor of the computer mouse returns to Ames

BY JEFFREY MCCANDLESS AND GAYE GRAVES

Dr. Douglas Engelbart from SRI International, Mountain View, and inventor of the computer mouse, recently gave a director's colloquium at the center entitled, 'Facilitating the Evolution of our Collective IQ: What Could NASA Do?'

Dr. Bernard Adelstein (right) demonstrates advances in haptic computer input software to the inventor of the computer mouse, Dr. Douglas Engelbart.

Approximately 60 people attended the event to hear Engelbart discuss his ideas for boosting mankind's collective capability for understanding and coping with complex, urgent problems.

During his lecture, Engelbart spoke about the need to develop a Network Improvement Community (NIC) to improve the collective IQ of organizations.

While at Ames, he toured several labs in the Human Systems Integration Division as well as simulators in the SimLabs facilities and he spoke with numerous Ames scientists.

From 1948 - 1951, Engelbart worked at Ames as an electrical engineer supporting wind tunnels before Ames transitioned from a National Advisory Committee for Aeronautics (NACA) facility to a NASA facility. He was delighted to see many of the same wind tunnels he supported then are still present today.

photos by Gaye Graves

Dr. Douglas Engelbart shares memories of his early days at Ames with Human-Computer Interaction (HCI) researcher Jack Li after the Director's Colloquium.

Engelbart is a recipient of the National Medal of Technology, which is the highest honor awarded by the president to America's leading innovators.

At the conclusion of the colloquium, Jeffrey McCandless presented Engelbart with an autographed copy of the book 'Atmosphere of Freedom: Sixty Years at the NASA Ames Research Center,' written by Dr. Glenn Bugos.

National Aeronautics and Space Administration
ASTROGRAM
Newsletter of NASA Ames Research Center, Moffett Field, California
National Aeronautics and Space Administration

Ames Research Center
Moffett Field, CA 94035-1000

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