

Astrogram

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New NASA Administrator welcomes challenges of transition

On his first day of work, NASA's new Administrator Michael Griffin, addressed NASA employees across the nation from Washington via satellite on



NASA photo

NASA Administrator Michael Griffin

April 14, one day after being confirmed by the U.S. Senate as NASA's 11th Administrator.

"That's probably the fastest confirmation on record," quipped Griffin, expressing his appreciation for the confidence shown him by the lawmakers.

Although his presentation was hastily arranged, Griffin spoke confidently in a poised, frank manner about NASA's prospects, displayed a good sense of humor and insisted on being called simply "Mike" or "Michael," pointing out that "the NASA administration is not royalty."

President George W. Bush nominated Griffin as NASA Administrator in March, while he was serving as the head of the Space Department at Johns Hopkins University's Applied Physics Laboratory in Baltimore. Griffin said he was "intensely proud" to be nominated for the position to succeed Sean O'Keefe, who left the Agency in February.

Looking ahead as NASA undergoes transformation in order to meet the goals of the Vision for Space Exploration, Griffin noted that "it's going to be difficult, and it's going to be hectic...but we're going to do this together. The day we lost Columbia was probably the worst day we ever had, but out of that accident came a new vision for NASA," Griffin asserted.

Aware that many employees were wondering about the future of NASA, Griffin provided some answers, while attempting to put them at ease.

The new Administrator outlined his upcoming schedule, and said his first priority is "return to flight." Following that, Griffin said he would receive briefings about NASA and then he vowed to tour all of NASA's centers.

"My goals are to listen to you," Griffin said. During its transition, said Griffin, NASA will be reshaped. "There are going to be some difficult decisions to make," Griffin observed. "There will be tough choices." He pledged to make those choices "as fairly and humanely as I can."

Following his brief presentation, Griffin opened the forum up to ques-

tions from audiences at NASA Headquarters and among the field centers.

The first question came from an employee at NASA Headquarters, "It seems like each of the mission directorates have large challenges," the employee noted. "How do you deal with them all at once?"

"I won't solve them all," Griffin responded, referring to the current problems that face the Agency's mission directorates. "We will bring out a team of people (to solve them)," he explained. He added that he has rarely seen a more precise statement of a mission by government official than that laid out by the President when he outlined a Vision for Space Exploration.

"We will reshape NASA according to the President's vision," Griffin de-

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South Bay Congressional reps visit Ames

The loss of jobs at Ames, reductions in mission-enabling research and the effects of focusing NASA's efforts on returning human beings to the moon

For the first time in recent memory, three local U.S. representatives visited Ames as a group because of concerns about the Center's future. Rep. Anna



NASA photo by Dominic Hart

From left to right: U.S. Rep. Anna Eshoo (14th District); Ames Center Director G. Scott Hubbard; U.S. Rep. Zoe Lofgren (16th District); and U.S. Rep. Mike Honda (15th District). The congressional representatives were at NASA Ames on April 4 to hold a discussion concerning the on-going NASA transformation, and affirmed NASA Ames' important role in providing cutting-edge science and technology in Silicon Valley.

and exploring Mars were the primary topics during a unique, jam-packed meeting in the main auditorium on April 4.

Eshoo (14th District), Rep. Mike Honda (15th District), and Rep. Zoe Lofgren (16th District) made brief opening state-

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clared. He added that to accomplish NASA's goals, he will surround himself with "capable people," and joked that "a manager should be the dumbest person on his team."

A second questioner from NASA Headquarters said that basic science has seemed to "fall by the wayside." Griffin disagreed and said that he thinks NASA's science program is one of "NASA's crown jewels."

Nevertheless, Griffin agreed that "there is no doubt there has been damage (to science at NASA)." He said that while the loss of the Columbia has caused temporary dislocations of science at the agency, he said future budgets call for increases in science.

"People are concerned about the future of Earth science and aeronautics," he said and noted that budget cuts "have to be done with a scalpel and not a meat ax."

Another question from an employee at the Kennedy Space Center in Florida inquired about the public's reaction to the national Vision for Space Exploration.

Griffin responded that with NASA's annual budget of approximately \$16 billion "the country could purchase quite a variety of space programs, and so the question of what we do with the money" is a legitimate one. "When I talk to people about the Vision, I get nothing but cheers," he reported.

A questioner from Langley Research Center in Hampton, Va., asked about the future of aeronautics at NASA.

"Again, aeronautics is a core function of NASA," he stated. "It has been hard hit," he added. "We do live in a world of limited resources," he continued. "Aero doesn't rate zero." He explained that even during the age of Apollo, when NASA strove to fly to the moon, "we also did a lot of other things, too." He said that NASA flew 199 X-15 flights, conducted lifting body research and a lot more.

Another telephone query from Marshall Space flight Center in Huntsville, Ala., asked what Griffin learned outside of NASA that will help "forward" NASA's mission?

"One of the things I've seen outside NASA in the high-tech world, is the engine of competition," he said, adding that people within NASA "get immune to it. We need to open our eyes up to that (competition)," he ventured, suggesting that NASA needs to bring the nation's industrial capacity into the agency.

In response to a question from Glenn Research Center in Cleveland, asking how to pursue research in a competitive arena, Griffin said, "As much as I have been impressed (by industrial competition) ... I am not so foolish (to think) that it is a cure for all (we do)."

Griffin said that while there is a need for competition in government research, there also is a need for government laboratories to conduct research and projects that industry would not undertake.

Griffin explained that during World War II, a host of federally sponsored

laboratories were created. He said he would not distinguish between university-run laboratories and those that employ civil servants. "It would be imprudent to ask companies to do things those companies would not (otherwise) undertake," he said, beginning to explain the role of those laboratories and NASA's centers. He maintained that the role of the federal laboratories is very important.

Griffin carefully pointed out that competition also is "healthy, even for federal centers." But he added that he did not want competition to close a laboratory so the last person out of the door would have to "turn off the lights."

He said he would strive towards an appropriate balance between competition and assigned projects at NASA centers. "There should not be so much pain that (we) would (end up with impotent laboratories)," he added. Competition will only work if there are enough competitors, according to Griffin. "We only have one Navy... Some things that the nation does are simply too big."

Griffin said that NASA Johnson Space Center, Houston, would head the job of making NASA's next spaceship that will carry human beings. "I do believe.... some core missions that NASA does must be assigned," he emphasized.

As he ended the question-and-answer session he said, "I look forward to helping." The crowd at NASA Headquarters clapped, and some people smiled.

On April 18, Griffin held his first news conference as the new NASA Administrator. Addressing reporters gathered at NASA Headquarters in Washington and at various NASA field centers, Griffin vowed to "try to be more accessible, not less accessible" to the news media and said that he planned to establish a new program analysis and evaluation shop headed by Dr. Scott Pace to provide "forward looking planning and analysis" of the Agency's programs. He also told reporters that he would rely heavily on the advice of seasoned NASA managers in making key decisions related to Return to Flight.

Griffin was president and chief operating officer of In-Q-Tel, Inc., before joining Johns Hopkins in April 2004. He also served in several positions within Orbital Sciences Corporation, Dulles, Va., including chief executive officer of Magellan Systems, Inc.

Earlier in his career, Administrator Griffin served as chief engineer at NASA and as deputy for Technology at the Strategic Defense Initiative Organization. He has served as an adjunct professor at the University of Maryland, Johns

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Ames 'situation room' officially opens

The Ames New Business Office has established a 'situation room' located in Bldg. 244, Room 203B, to provide a unique meeting and work space for developing new business ideas.

Designed as a 'think tank' for new business planning and strategy development, the situation room houses a variety of information about Ames capabilities, new business pursuits, potential customers and funding opportunities. An open house and ribbon cutting ceremony was held in March in the situation room.

The situation room is open from 8:30 a.m. to noon for drop-in visits, and 1:00 p.m. to 5 p.m. for scheduled sessions such as seminars brainstorming sessions. Take advantage of the



NASA photo by Dominic Hart

The Ames New Business Office 'Situation Room' open house and ribbon cutting event held in March.

workspace and the informative environment: bring your ideas and colleagues.

To learn more about the situation room, visit the New Business Office Web site at <http://NewBusiness.arc.nasa.gov>.

Prospective tenants 'explore space' at NRP open house



Mejghan Haider, chief of the NASA Research Park Division, speaks with a reporter from the Palo Alto Daily News at the first NRP open house held in March.

Steady rain and gray skies did not keep prospective tenants from visiting the sunny halls of two newly refurbished wings in Bldg. 19 in March at NASA Research Park (NRP) Division's first open house event.

"This was our first effort to aggressively market the existing facilities within the NRP. We had a great turnout and have over 30 prospects. We plan to

have another open house and symposium this summer," said Mejghan Haider, division chief, NASA Research Park.

Visitors from numerous small and large companies, non-profits and university research labs toured second floor wings and available first floor space during the four-hour late afternoon event.

"We were wowed by the response,"

said Antoinette Price, NRP account manager and interior expert who created the sunny hallways. "This was a first of its kind. But then, we should not be surprised because this is NASA," she said.



NASA Research Park account managers Antoinette Price (left) and Cyndi Carbon-Norman (second from left) speak with visitors from Lockheed Martin who came to see available lease space in building 19.

The public-private partnerships in the NRP will benefit the Center in two ways, said Haider. The increased potential for collaboration and partnership will strengthen our research programs, and revenue generation will help reduce the G&A burden to the Center, she said. Haider went on to thank all employees who dropped by and encouraged their associates to attend.

NASA Research Park welcomes these new tenants

Inland Northwest Space Alliance (INSA)

-- Univ. of Montana space advocacy non-profit organization.

Fireball

-- Nationally registered provider of incident support services for wild land fires.

Arachi

-- Developer of comprehensive dynamic motion technology providing realistic motion in digital world.

NXAR LLC

-- Software development for knowledge network systems.

Venezia Construction, Inc.

-- SBA/HUB Zone certified on-site construction.



NASA photos by Dominic Hart

The celebration cake at the recent NASA Research Park first open house event.

For more information about NASA Research Park visit the Web at <http://www.researchpark.arc.nasa.gov>

BY DIANE FARRAR

'Exploring Saturn' family event draws in crowds

On April 16, NASA Ames hosted 'Exploring Saturn' at Ames as another installment in the highly successful and ongoing family night education series. The free event was open to the public and was geared toward all ages of kids and adults. As estimated 3,000 people attended the event.

Hosted by the External Relations and Development Directorate and sponsored by the NASA Ames Education Office, the event was held in conjunction with National Astronomy Day and featured NASA's exploration of Saturn and its moons. The event included the latest images and data from the Cassini-Huygens spacecraft, which arrived at the ringed planet in the summer of 2004.



An estimated 3,000 people attended the 'Exploring Saturn' event held at NASA Ames on April 16.



'Exploring Saturn' family event attendees on April 16 waiting in line for a chance to peek at Saturn through the telescopes that were provided by the Peninsula Astronomical Society.

NASA photos by Astrid Terlep

The event began with family-oriented educational exhibits and activities. Then, a panel of planetary scientists and mission experts presented and explained information arriving from the Cassini satellite currently orbiting Saturn and the related Huygens probe, which landed on Titan earlier this year. Later, visitors were able to conduct their own first-hand explorations of Saturn and its fascinating rings and moons through a variety of telescopes set up by the Peninsula Astronomical Society.

Return to Flight astronauts visit Ames

Return to Flight space shuttle commander Eileen M. Collins and pilot James M. Kelly were available for a 15-minute question-and-answer session with the news media in March.

The astronauts were at NASA Ames to train at the center's vertical motion simulator (VMS). The STS-114 Discovery mission to the International Space Station is scheduled for launch between May 15 and June 3.

While in the simulator, Collins and Kelly practiced space shuttle landing and safety procedures. The VMS accurately produces various landing scenarios, including landing at night, landing with heavy cross winds or landing with a flat tire. The astronauts will 'land' the shuttle as many as 30 times during their four hours of training in the simulator. Astronaut crews

have been training at the vertical motion simulator since the early 1980s.

The VMS complex provides researchers with exceptional tools to explore, define and solve issues in both aircraft and spacecraft design. It offers fast and cost-effective solutions, using real-time piloted simulation, realistic sensory cues and the greatest motion range of any flight simulator in the world. In addition to the space shuttle, the VMS has simulated vehicles including the AV-8 Harrier jet fighter,



NASA photo by Dominic Hrat

Return to Flight space shuttle commander Eileen Collins and pilot James Kelly at Ames on March 23.

the CH-47D Chinook helicopter and concept aircraft and spacecraft.

South Bay Congressional reps visit with Ames employees

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ments and then fielded questions from concerned Center scientists, engineers and support staff. Ames faces a more than \$120 million shortfall in its fiscal 2006 budget, according to a letter the representatives sent to Michael Griffin, the man nominated by President Bush to be NASA's next administrator.

"This is a tremendous opportunity," said G. Scott Hubbard, Ames' center director, as he introduced the trio. Calling Eshoo, Honda and Lofgren "three of our very best friends," Hubbard noted "whenever there are trying times, you find out who your friends are. I can't imagine three better friends of Ames than these folks."

Before the guests addressed the audience, Hubbard outlined the issues facing Ames. Among those critical challenges is full-cost accounting. "Our [astrobiology] scientists are being priced out of the market," he said. Because Ames astrobiologists must include their entire year's salary within a competitive grant application, they are unable to compete against tenured university professors, who typically need to include only two months' salary in their grant proposals.

Hubbard noted that about 25 percent of Ames' budget is involved with some type of advanced technology work. "That budget is being drastically reduced from previous years," he said. Although Ames is competing well where there are opportunities, "we have staff at risk and commitments to various programs at risk" as a result of the program changes.

Ames life sciences research also is "at a crossroads," according to Hubbard, and "it could be eliminated." The Space Station Biological Research Project at Ames, which Hubbard described as the "last fundamental scientific research element of the International Space Station," may be 'zeroed out' in the FY2006 budget. Without this capability, Hubbard said NASA will be severely challenged to understand the effects of the space environment on humans and provide the necessary countermeasures for long-term human spaceflight.

Hubbard believes that Ames has "fared better" in aeronautics, with continued funding for air space management and hopes for future funding of the program to transform the national airspace. Ames' research in human factors also took a hit from a variety of congressional 'earmarks,' although, Hubbard said, he is hopeful that funding will be restored in the future. Other aeronautics programs, including rotorcraft, are not funded at all in the budget proposal.

Hubbard acknowledged the support

Ames is receiving from the Science Directorate at NASA Headquarters for key programs such as the Stratospheric Observatory for Infrared Astronomy (SOFIA). A recent external evaluation of SOFIA determined that the quality of science from the new airborne observatory should be on a par with that of the Hubble Space Telescope. "This is a tremendous achievement for Ames Research Center," Hubbard observed.

According to Hubbard, the South Bay congressional representatives wanted to have a discussion about the ongoing NASA transformation and affirm the important role that NASA Ames, as an integral part of the Silicon Valley community, plays in cutting-edge science and technology. Honda serves on NASA's authorization committee, and he also has coauthored nanotechnology legislation, according to Hubbard.

"We have many challenges. We have many opportunities," Hubbard concluded.

Eshoo, as the senior congressional representative present and the one whose district encompasses NASA Ames, addressed the assembled employees first. The fact that all three South Bay congressional representatives came to Ames as a team "is really an eloquent statement" about Ames employees and the center as a whole, she said. "It underscores not only our commitment, but the seriousness of the case that is before us."

"We had a collective heart attack" when the President's budget came out, Eshoo stated. Then, she said, they knew they had to devise a strategy. "One of my first questions ... was, 'how is the morale?'"

"You have a fighting team ... and you'll need one..." Eshoo ventured. "You have to build coalitions inside the Congress...and outside the Congress," she added, noting that Congress is a reactive, not a proactive, institution. Eshoo then spoke of strategy. "We met with our two U.S. senators [from California]," she said. "They most willingly met with us. They got it," she reported, referring to the situation at Ames. Both Sena-

tors Boxer and Feinstein understand "what these proposed cuts will do to NASA Ames," Eshoo explained.

"Another strategy is to work with Congressman Honda," (who serves on



NASA photo by Dominic Hrat

From left to right: U.S. Rep. Anna Eshoo (14th District); U.S. Rep. Zoe Lofgren (16th District); and U.S. Rep. Mike Honda (15th District) at NASA Ames on April 4.

the Science, Space and Technology Committee.) she said. She added that the delegation plans to meet with the appropriators who recommend funding for the various programs. They also plan to partner with congressional delegations from districts that include other NASA centers facing critical budget issues.

Eshoo referred to a letter the South Bay delegation recently sent to NASA administrator nominee Griffin, "outlining what the priorities are, how critical they are, not just for NASA Ames, but for the future of our country." She said that "it is incumbent upon us to ... secure partners from the private sector" to show the Congress that private-sector companies in Silicon Valley understand what Ames represents to the nation.

The letter also says that there is a shortfall of \$40 million for research in new technology at Ames for fiscal year 2006 in the areas of intelligent systems, nanotechnology and thermal protection systems.

The letter concludes, "NASA Ames' staff and abilities should be considered a national treasure that deserves our fullest support as it continues to shape the technologies and understanding that will guide our nation in the 21st Century."

According to Eshoo, not only NASA, but also other federal agencies are experiencing cuts in the basic research area. "We are cutting back on the innovation" for the future of our great nation, according to Eshoo.

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Sridhar receives IEEE Control Systems Technology Award

Banavar Sridhar, chief, Automation Concepts Branch, Aviation Systems Division, received the 2004 Institute of Elec-



Banavar Sridhar

trical and Electronics Engineers (IEEE) Control Systems Technology for the development of modeling and simulation techniques for multi-vehicle traffic networks and advanced air traffic management systems through innovative application of control systems concepts. The award recognizes outstanding contributions to control systems technology either in design and implementation or project management. The award consists of \$2,000, a plaque and travel expenses to the IEEE Conference on Decision and Control.

Sridhar has a long and distinguished career in flight dynamics, controls and more recently air traffic management. He is widely recognized in industry and academia for his pioneering work in the application of singular perturbation theory to the real-time optimal guidance of missiles against maneuvering targets (1980). In the late 1980s, while at Lockheed Research Center, he shifted his research to address the identification and control of large space structures. Again, Sridhar's contributions were central to this evolving area of research and were included in the design of major space structures including the Space Infrared Telescope Facility and the space station.

In 1986, Sridhar joined NASA, where he initiated a research effort in computer vision for obstacle detection in low altitude helicopter flight. He devised an innovative approach for integrating airborne state information with digital imagery for detecting range information to obstacles along the flight path of a vehicle. The incorporation of a vision sensor for navigation and guidance is essential to the design of many robotic and intelligent systems. Sridhar achieved a major 'first' with the success-

ful flight demonstration of his real-time obstacle detection and ranging algorithms on a NASA/Army UH-60 helicopter in June 1996. His methodology led to continuing work at universities and other government laboratories. The NASA Aeronautics Advisory Committee commended his research as being at the forefront of spatial signal processing and providing an excellent balance between algorithm development and experimental validation.

In the last seven years, Sridhar has redirected his research interests in response to the nation's goal to provide the technology to improve the safety and capacity of the nation's air transportation system. As a part of this research, Sridhar identified the need for an analysis tool that could be used to validate the usefulness of the proposed technologies under a variety of conditions. This led to his design and development of a ca-

pability now referred to as the Future Air Transportation System Concept Evaluation Tool (FACET). FACET includes a set of air traffic models and analysis tools that have become a standard for system-level analysis. FACET is key to exploring many of the new concepts in traffic flow management and has already been used to make key investment decisions.

Several organizations have requested and received a copy of the FACET software under NASA Non-Disclosure and/or Licensing Agreements. FACET received the 2001 NASA Turning Goals into Reality (TGIR) Award. During 2002, FACET received NASA Space Act Board Award and NASA Space Act Software Release Award. Currently, FACET is being incorporated into a commercial product referred to as Flight Explorer that is used by many of

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Gabriel Zavala-Diaz passes away



Gabriel Zavala-Diaz

Gabriel Zavala-Diaz, test engineer in the Ames ARC Jet complex, Code TSF, passed away on Feb. 26 at the age of 29.

Zavala-Diaz joined NASA in November 2001 as an engineering assistant for the Planetary Aeolian Facility while pursuing his bachelors degree in mechanical engineering from San Jose State University. Upon receiving his BS/ME in May 2003, he joined the Themophysic Facilities Branch as a test engineer.

Zavala-Diaz quickly matured into a valuable member of the branch, exhibiting a unique drive and motivation. He served as test engineer for Ames jet tests sup-

porting X-37, Mars Science Lab, In-Space Propulsion, Huygens/Cassini and Return To Flight, as well as for in-house materials development tests and test to characterize the facilities. He was described by his colleagues as a conscientious worker and approached his job with extreme professionalism.

Zavala-Diaz is remembered as a true gentleman with a zest for life and a sense of humor. He is survived by two young children, Isela Brianna and Gabriel Isaac, wife, Christina, mother and father, Teresa and Rafael, and two sisters, Yesmina Lissetta and Cynthia Liliana.

A flag ceremony in honor of him was held at Ames on March 24. Approximately 40 family members attended. Following the ceremony, TSF



Teresa and Rafael, Gabriel's mother and father, receive a ceremonial flag in honor of their son Gabriel Zavala-Diaz.

NASA photo by Cesar Acosta

hosted the family to tour Zavala-Diaz's work environment.

BY IMELDA TERRAZAS-SALINAS

Ames and Aerospace Corp. to make 'Black Box' for Spacecraft

NASA Ames and a nonprofit partner recently agreed to develop the first 'black box' for spacecraft and hope to test a prototype as early as 2006.

The REBR is designed to collect data as a spacecraft reenters the atmosphere and breaks apart due to aerodynamic heating and loads. After the high-speed

materials and sensors," said Ethiraj Venkatapathy, planetary exploration technology manager at NASA Ames. The team is using nanotechnology to develop very small, inexpensive sensors.

Nanotechnology is the creation of materials, devices and systems through the control of matter on the nanometer scale. A nanometer is one-billionth of a meter, roughly 10,000 times smaller than the width of a human hair. "Nanotechnology could lead to changes in almost everything from computers and medicine to automobiles and spacecraft," said James Arnold, a scientist with the NASA Ames Center for Nanotechnology.

"The initial focus of the collaboration will be on development of small reentry probes," said William Ailor, director of the Center for Orbital and Reentry Debris Studies at The Aerospace Corporation and Aerospace lead for the effort.

"Similar technologies could be used on an Ames concept called Scout Probes for Exploration," Rasky said. "This concept makes use of small entry probes to gather information and reconnaissance on atmospheric conditions, surface conditions and hazards. These probes also could serve as landing beacons for following piloted or robotic vehicles. Scout Probes for Exploration could be a critical new capability for reducing risks encountered with remote exploration landings," Rasky ventured.

BY JOHN BLUCK



Model of the Reentry Breakup Recorder (spacecraft 'black box') to scale. The addition of the heat shield is expected to bring its size closer to 1 foot (0.3 meters) in diameter.

A joint program between Ames and the Aerospace Corporation, El Segundo, Calif., will develop a spacecraft black box, among many other low-cost, miniature space systems, according to a NASA-Aerospace agreement. Black boxes carried on aircraft record airplane data such as speed, altitude and crew conversations. This information can be recovered after an accident to help investigators learn the cause of a mishap. The black box often includes a beacon that helps investigators find the box.

"Microspacecraft that can collect spaceflight data and return it to Earth will enhance space travel reliability through better designs," said Ames Center Director G. Scott Hubbard. Hubbard recently signed an agreement with William F. Ballhaus Jr., Aerospace president and chief executive officer, to develop the black box.

"People had not figured how to put black boxes on spacecraft before because the boxes would tend to burn up during reentry," said Dan Rasky, a scientist at NASA Ames. The Center is contributing its spacecraft heat shield expertise to the development effort.

"One of the first uses of these spacecraft black boxes may be on the Crew Exploration Vehicle," Rasky explained. The Crew Exploration Vehicle is a future spaceship that NASA plans to use to fly people to the moon and beyond.

The basis for the effort to develop low-cost spacecraft technologies is the reentry breakup recorder (REBR), a one-foot (0.3-meter) diameter, 2.2-pound (one-kilogram) device that will have a heat shield, batteries, data recorder, sensors and a transmitter.

The REBR has been under development at Aerospace for the past several years, with NASA Ames responsible for the entry system.

portion of the reentry, the REBR would 'phone home' to relay data by satellite prior to impact. The spacecraft black box is only one of many small, lightweight, low-cost devices the partners plan to develop. These new devices would allow NASA and the Aerospace Corporation to flight test miniature sensor systems to gather temperature, pressure and other data, or to validate thermal protection systems for human missions.

"Aerospace may use these devices to gather data during the reentry and breakup of space hardware to validate and calibrate models, and NASA Ames may use them to test new heat shield

Sridhar receives IEEE Award

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the Airline Operation Centers for the management and routing of their individual fleets. The FAA has included a portion of the FACET functionality in its latest release of the En Route Traffic Management System (ETMS).

Sridhar is widely recognized by his peers for his many contributions. He received the Bay Area chapter of the AIAA; Engineer of the Year Award in the category of information systems (1991); IEEE AES Barry Carlton Award (1994); NASA Exceptional Service Medal (1995); and the Best Paper Award by the American Helicopter Society (1996). Sridhar was elected Fellow of the IEEE (2001) for advances in computer vision-based obstacle detection and developments in low-altitude helicopter flight. AIAA elected Sridhar to Fellow (2001) grade for his fundamental contributions to automated guidance of aerospace vehicles and the development of a passive ranging system for low-altitude high

speed helicopter operations.

In 2001, Ames Basic Research Council elected him as an Ames Associate Fellow. Additionally, Sridhar has a long and distinguished record of service to the aerospace community. He has served the AIAA in various capacities including technical program chair for the 1999 AIAA Guidance, Navigation and Control (GNC) Conference; conference program co-chair for the 1998 AIAA GNC conference; and a member of the AIAA GNC technical committee. Outside the AIAA, he has served on the editorial board of IEEE Transactions on Automatic Control; IEEE Controls Systems magazine; IFAC Journal Control Engineering Practice; International Journal of Machine Vision and Applications; and as guest editor for IEEE Transactions on Intelligent Transportation Systems Special Issue on Air Traffic Control Systems.

Vernikos to deliver NRP-sponsored talk at Ames

Ames employees and their families are invited to attend a free public lecture on May 4, featuring author and former director of life sciences at NASA, Dr. Joan Vernikos.

Vernikos, who worked at Ames in the 1960s, will discuss the connection between space exploration, space biology research and the aging process at the second NASA Research Park (NRP) lecture. The talk will be held May 4 at 7 p.m. in Bldg. 943 (the Eagle Room), just outside the NASA Ames main gate.

Vernikos has an impressive resume. She served as director of Life Sciences at NASA Headquarters from 1993 to 2000. She joined NASA Ames Research Center as a researcher in 1966 after four years at Ohio State University Medical School, where she was assistant professor of pharmacology.

Trained in London, Vernikos held academic appointments at Stanford University, Wright State University School of Medicine and was visiting professor at the University of London.

During her early years as a space biology researcher at NASA, Vernikos quickly noticed the connection between what happens to the body in space and

the symptoms of 'normal' aging. Her pioneering work at Ames focused on 'bedrest' studies, in which healthy humans underwent long periods of immobility in bed, mimicking micro-gravity conditions in space. Her breakthrough research created a deeper understanding of the hormonal and behavioral mechanisms that underlie human response to the stress of long-duration spaceflight.

Vernikos' talk at Ames will focus on how to live a vital, healthy life, as discussed in her latest book "The G-Connection: Harness Gravity and Reverse Aging".

"The intent of the NRP lecture series is to highlight exploration, in keeping with NASA's Vision for Space Exploration," said Meighan Haider, NRP division chief. The series will focus on three themes -- 'explore, discover and understand,' she noted. "Stay tuned. Our topics will include everything from new technologies that support human missions to the moon and Mars, to autonomous robots and Earth analog research," she said.

The NRP Exploration Lecture Series was launched in Spring 2004 with a

lecture by journalist and author Andrew Chaikin. Chaikin is most known for his best-selling book 'Apollo' an intimate insider's look at the original Apollo 9 astronauts.



Author Dr. Joan Vernikos will discuss 'Space Exploration: Can Gravity Reverse Aging?' at the NRP Exploration Lecture Series on May 4 at 7 p.m. in Bldg. 943 in the Eagle Room.

After a year's hiatus, the lecture series is now on a regular, three times a year basis. In February 2005, author, explorer and adventurer John Ross talked about exploration and risk to an overflow audience. Dr. Seth Shostak, senior astronomer at the SETI Institute, served as master of ceremonies.

BY KATHLEEN BURTON

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Hopkins University and George Washington University.

He taught courses in spacecraft design, applied mathematics, guidance and navigation, compressible flow, computational fluid dynamics, spacecraft attitude control, astrodynamics and introductory aerospace engineering. He is the lead author of more than two dozen technical papers, as well as the textbook, 'Space Vehicle Design.'

A registered professional engineer in Maryland and California, the Administrator is a fellow of the American Institute of Aeronautics and Astronautics (AIAA). He is a recipient of the NASA Exceptional Achievement Medal, the AIAA Space Systems Medal and the Department of Defense Distinguished Public Service Medal, the highest award given to a non-government employee. He is a certified flight instructor with instrument and multiengine ratings.

BY JOHN BLUCK

Wildlife thrives at Ames



NASA photos by Dominic Hart

The Plover Killdeer bird, above, that is currently nesting in the rocks on King Road at NASA Ames, protecting her four speckled eggs, shown to the right.



NASA adds a physical element to learning mathematics

NASA is testing an innovative approach to help improve student performance in mathematics by challenging them to solve the real-world problems involved with controlling airplanes in the sky.

During the month of April, NASA scientists and education experts at NASA Ames are conducting student evaluations of 'Smart Skies', one of NASA's newest math-related educational products. Smart Skies takes math to a new level by adding an experiential, hands-on component that enables students to participate in real-life interactive simulations. The evaluation began on April 5 with middle schools in the San Francisco Bay area and continues through the end of the month.

"We are very excited about this," said Robert Jacobsen, manager of NASA's Airspace Systems Program located at NASA Ames. "Both retired and active FAA air traffic controllers from Oakland Center volunteered to help as docents and to give guidance and support to the students who are participating in the exercise."

The Smart Skies project is designed to encourage students to explore, discover and understand mathematics and its applications in daily life. At the heart of Smart Skies is a carefully constructed set of instructional materials that includes classroom materials, Web-based simulations and the hands-on simulation.

"The goal is to offer multiple opportunities to develop math skills through application to real problems," said Greg Condon, the creator of Smart Skies.

In the classroom, Smart Skies begins with basic problems involving two airplanes in paper-and-pencil exercises. As the students improve, they move on to more complex problems involving multiple aircraft and approach speeds and a Web-based simulation.

For the hands-on component of the Smart Skies evaluation, students will travel to NASA Ames and 'become' air traffic controllers, pilots and scientific observers as they solve increasingly complex math problems related to distance, rate and time. The simulation takes place in 'Sector 33', modeled after the FAA's Oakland En Route Center Sector 33, located east of Modesto, Calif. That sector controls air traffic approaching the Bay area's three international airports from the east.

In their role as pilots, students move electronically instrumented model aircraft along a designated route of flight laid out on the floor. A metronome is

used to help them maintain an assigned speed. Walkie-talkies allow them to hear

Systems Program is a division of NASA's Aeronautics Research Mission Director-

instructions from the student controllers.

In the simulated control room, student controllers watch the aircraft movement on a computer screen that displays speed and distance information broadcast from the model aircraft. Using the mathematics they have learned in a series of paper-and-pencil classroom exercises, they try to determine if and when the airplanes will fly too close to each another. If problems arise, they radio the student pilots to adjust their speed or route.

As students improve, they are given the task of controlling multiple 'San Francisco International Airport' arrivals that approach from different directions and at different speeds. The student controllers maintain aircraft separation as they line up flights so they cross over the same location in sequence.

The hands-on simulation is designed to add an element of immediacy to problem solving, and to train students to quickly analyze problems and make complex decisions and calculations in their heads.

Smart Skies was created at NASA Ames under the sponsorship of the Airspace Systems Program as part of its commitment to NASA's mission to 'inspire the next generation of explorers' to pursue careers in science, technology, engineering and math. The Airspace

ate located in Washington, D.C.

For additional information about Smart Skies™ visit: http://quest.arc.nasa.gov/projects/smart_skies/

BY JONAS DINO

AMS formally approved

NASA Headquarters has formally approved the Ames Management System (AMS), and has authorized Ames to implement AMS as its operational management system.

AMS is designed to replace ISO 9000 at Ames. It is intended to be more responsive to Ames' unique needs. The AMS received a glowing review from auditors who visited in February. Their review set the stage for recent NASA Headquarter approval this month.

Now that Ames is a fully sanctioned operational mode of the AMS, all components of the Center are expected to continue to use the AMS as part of the every day implementation and execution of their duties and activities.

Executive Safety Committee establishes safety goals

The Ames Executive Safety Committee recently set two new continuous improvements safety goals for 2005 to improve healthy and safety at Ames.

The goals were established by a review of mishaps and close calls in 2004. For example, injuries related to repetitive motion continue to account for nearly half of the lost-time or restricted-duty injuries. Additionally, electrical energy constitutes a potential hazard that is found in each of our work places. Several close calls involving electrical systems occurred in 2004 that could have resulted in serious injury or death.

To increase awareness of potential hazards, the Center will take these steps:

- Clearly communicate injury trends and/or hazard identification trends to employees;
- Establish an electrical safety committee to promote greater awareness of electrical hazards;
- Perform quarterly electrical safety inspections; and

- Increase awareness of stress reduction techniques (including courses offered by the Safety Health and Medical Services Division).

Ames 2005 Safety Goals

- Increase awareness of potential hazards; and
- Improve control of identified hazards

To improve control of identified hazards the Center will:

- Improve follow-up on ergonomic problems previously identified;
- Complete the tracking system for required occupational medical exams; and
- Involve professional health and safety staff as consultants to help supervisors evaluate safety issues.

You can help achieve these goals and help yourself and your fellow employees work more safely by taking the following actions:

- Contributing to the close call/hazard reporting program, reporting any close call or hazard involving an electrical hazard at <http://q2.arc.nasa.gov/hazardrequest>.
- Suggesting ways to improve electrical safety by submitting a safety suggestion at <http://q/qh>;
- Volunteering to participate on an electrical safety inspection with your supervisor;
- Attending one of the stress reduction classes offered at Ames during 2005; and
- Completing any required occupational medicine exams specified by your supervisor.

Working together to improve safety is a cornerstone of the Voluntary Protection Program.

NASA testing human-robot interactions in Utah desert

Two NASA robots and two geologists are now simulating an expedition to another planet during a field test expected to continue until April 15 in Utah's Southeast Desert, near Hanksville.



NASA photo by Bruce Damer

NASA geologist in a simulated astronaut suit with the robot in the Utah desert.

During the ongoing 'Mobile Agents Project,' NASA engineers are working to improve human-robot interactions to help NASA accomplish its Vision for Space Exploration to return to the moon and venture to Mars. The wheeled robots are attempting to help the astronaut team to maintain connection with a

wireless computer network.

"As you look at NASA's exploration vision to return to the moon and go on to Mars, human-robotic cooperation will be vital to achieve that vision," said Eugene Tu, deputy director for the Exploration Technology Directorate at NASA Ames.

"One of our biggest problems is to break out of preconceived notions rooted in science fiction or existing robotic technology," said Bill Clancey, principal investigator for the Mobile Agent project. "By building and testing prototypes, we can test design concepts."

During the field exercise, the researchers' objective is to develop ways to enable robots to take the initiative to work together to help a team of astronauts.

Scientists and engineers from NASA Ames and NASA Johnson Space Center, Houston, are taking part in the test. Prototype 'Extravehicular Activity (EVA) Robotic Assistants,' developed at NASA Johnson, will follow geologists and respond to voice commands at the Mars Society's Mars Desert Research Station.

According to NASA scientists, human-robotic interactions can best be improved using in-situ experiments, during which people and robots cooperate to do research. Scientists plan to examine the interacting constraints of landscape, distance, work coordination and other factors to suggest what new

tools and methods are needed to refine existing technology.

This process will bring together the remote science team, mission support, the habitat and its crew, robots, computer networks and astronauts to simulate planetary surface exploration.

A team that includes about 20 people has placed equipment in and around the Mars Desert Research Station. Team members are using prototype tools, including a wireless computer network, the voice-commanded robots and voice-commanded mission control communication services that partly automate the role of the kind of communications used during the Apollo missions to the moon in the late 1960s and early 1970s.

Researchers are continuing to conduct a series of human-robot simulated geology missions to scout new terrain during multiple days. These simulations also involve the remote science team. Scientists are making audio and video recordings of the activities.

Researchers later will evaluate the data to learn about human-robot interactions including voice commands and work preferences. From analysis of the recordings and other data, investigators can assess equipment, software and procedures. Scientists can then write new requirements and specifications to improve human-robot interactions and cooperation.

BY JOHN BLUCK

NASA Ames Ombuds Office services available

One of the important resources available to employees is the Ombuds Office,



Jack Boyd, Ames Ombuds

which is available to Ames' employee, contractors and students. The office provides a supplemental and confiden-

tial channel of communication to raise significant issues and concerns that you perceive could impact safety, organizational performance and mission success.

The Ombuds is accountable for conducting informal inquiries, raising issues of concern to appropriate officials, and redirecting matters not under the Ombuds's realm to the appropriate office or organization with an existing administrative system; for example, the Inspector General Office, the Equal Opportunity Office, the Ames Union, procurement Ombuds and legal office.

The Ombud's power rests on their reputation for fairness, objectivity, tact, and respectful concern for the welfare of all individuals of the NASA community and for the well-being of the agency.

Jack Boyd continues to serve as Ames Ombuds, and Dr. Geoffrey Briggs is the alternate Ames Ombuds.

The Ombuds office is located in Building 207, Room 107, Mail Stop 207-

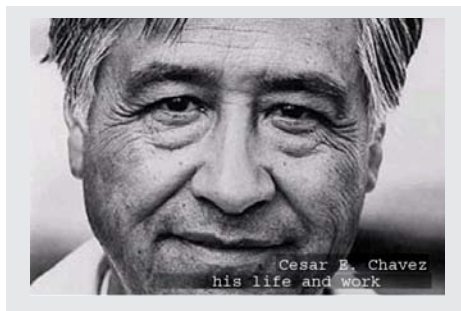


Geoffrey Briggs, alternate Ames Ombuds

1. The office telephone number is ext. 4-6688 and the fax number is ext. 4-6673. The Ombuds Web site is <http://insideames.arc.nasa.gov/life-ombudsoffice.php>

Ames' HACE remembers Cesar Chavez

On March 31, The NASA Ames Hispanic Advisory Committee for Employees (HACE) sponsored several AMES employees to attend a commemorative breakfast honoring Cesar Chavez. The Mexican Heritage Corporation and hon-



orary co-chairs council member Nora Campos and Vice Mayor Cindy Chavez hosted the breakfast for Cesar Chavez in honor of recognizing his life and work. HACE would like to introduce a brief bio about Cesar Chavez.

Born on March 31, 1927, the second child of six and oldest son of Librado and Juana Chavez, Cesario Estrada Chavez became noted by Robert F. Kennedy as "one of the heroic figures of our time." in 1968.

Chavez grew up in the Arizona desert near the town of Yuma. At the age of 10, Chavez's family had lost their

farm and belongings and joined thousands of migrant farmers to work in the fields in California.

In 1942, Chavez quit school after graduating the eighth grade (an unusual occurrence for migrant children) to work full-time in the fields to help support his family. Two years later at the age of 17, he joined the U.S. Navy and returned home in 1948 when he married Helen Fabela.

Chavez and Helen settled in the East Side Barrio of Sal Si Puedes (get out if you can) and had eight children and eventually 31 grandchildren.

In 1952, a man named Fred Ross from the Community Service Organization (CSO) asked Chavez to join the organization to help inform migrant farm workers of their rights. Chavez was uneasy about the idea but decided to join.

He picked apricots during the day and organized workers in the evening to register to vote. After losing his job as a farm worker and working full time at the CSO for 10 years, Chavez resigned on March 31, 1962 from the CSO and moved his family to Delano where he founded the National Farm Workers Association (NFWA) which later became known as the United Farm Workers of America (UFW).

Between the years of 1962 and 1993, Chavez organized many boycotts and

strikes against farm owners. In the spring of 1966, growers negotiated an agreement with the NFWA. This agreement was the first genuine union contract between a grower and farm workers in U.S. history. Chavez also fasted three separate times (totaling 86 days between 1968 and 1988) to dedicate his movement of nonviolence, to protest a law that denied farm workers the right to strike/boycott and to call attention to farm workers and their children stricken by pesticides.

On April 23, 1993, Chavez died peacefully while sleeping at the home of a retired San Luis, Ariz., farm worker. Chavez was conducting UFW work while in Arizona. Six days later, thousands of mourners attended and marched behind his casket during his funeral services in Delano.

Later in 1993, Chavez's family and friends established the Cesar E. Chavez Foundation. Almost 12 years after his passing, Chavez's service to others still lives. March 31 is now known as Cesar Chavez Day of Service and Learning and considered a Holiday in seven states and dozens of cities and counties throughout the Nation.

'Si Se Puede' (it can be done) - Cesario E. Chavez, 1927 - 1993

SUBMITTED BY THE AMES HACE OFFICE

NASA Ames celebrates Earth Day 2005

On April 21, the Environmental Services Department at NASA Ames hosted its annual Earth Day celebration with an informational display at the Mega Bites Café. 'Sustainability,' the concept of

of water and 4100 kilowatt-hours (kWh) of energy. It also eliminates 60 pounds of air-polluting emissions and saves eight cubic feet of landfill space. In addition, Store Stock now provides the

ing facilities. To date, this reuse has conserved 10 million gallons of potable water and similarly reduced wastewater discharge, resulting in a \$45,000 savings from 2002 to July 2004.



meeting today's needs without sacrificing the ability of future generations to meet their needs served as this year's Earth Day theme.

The concept of sustainability is essential in a society unaware of its inefficient use of raw materials. In order to preserve the environment, today's generation must implement practices that continue to nourish economic growth while maintaining the integrity of environmental resources for the long-term. On a daily basis, NASA Ames fosters sustainability in the workplace through a variety of activities:

- NASA Ames' beverage container recycling program resulted in the recycling of 241 pounds of aluminum and 2,320 pounds of plastic last year. Given that the average employee consumes 2.5 beverages per day at work, commercial programs provide a significant portion of the domestic recyclable material. In 2002, 54 billion cans were recycled in the U.S., saving the energy equivalent of 15 million barrels of crude oil - America's entire gas consumption for one day!

- In 2004, NASA Ames' employees collectively recycled 182 tons of paper. Every ton of paper that is recovered saves 3.3 cubic yards of landfill space. Thanks to commercial recycling programs such as NASA Ames', recycled paper fiber now provides almost 37 percent of the domestic raw material supply to the paper products industry.

- Last year, Store Stock began providing 100 percent post-consumer recycled paper as the default item when an order is placed for copier paper. As a result, 95 percent of the over 3,000 boxes of copier paper purchased from Store Stock in 2004 were 100 percent recycled content. According to the U.S. Department of Conservation, the use of 20 cases of recycled content paper saves 17 trees, 390 gallons of oil, 7000 gallons

option of a recycled-content alternative for most of its products. As a result of these efforts, nearly 70 percent of items purchased at Store Stock in 2004 were made of recycled content.

- NASA Ames attempts to lessen the impact of the Bay Area's single largest pollutant source - motor vehicles - by providing employees with electric vehicles, golf carts and bicycles for use on center rather than gas-powered vehicles. NASA Ames further decreases air pollution by providing the Ames shuttle free of charge to all employees who choose to ride the train or light rail to work. According to the Bay Area Air Quality Management District, using alternative transportation for 10 miles of driving each day, for example, saves 0.40 pounds per mile per day or 100.80 pounds per year of air pollutants.

- NASA Ames has provided renewable energy systems for peak demand that provide both environmental and economic benefits. Through energy saving performance contracts and center-funded measures, positive environmental results have been achieved. Overall building electricity usage at NASA Ames has been reduced by 37 percent since 1990, resulting in roughly 94,000 megawatt-hours (MWh) per year saved. This is enough energy to power over 14,000 average households in California. As an example of economic benefit from energy efficiency, the use of solar electric panels on buildings N245 and N235, and the windmill used at NASA Ames' storm water settling basin have reduced the amount of energy purchased and saved \$3,200 per year in utility, operation and maintenance costs (as of September 2003).

- NASA Ames has implemented a plan to reuse at least 50 percent of the cooling and industrial boiler water treated on site from the aerospace test-

- The California Department of Fish and Game lists the burrowing owl and the western pond turtle as 'Species of Special Concern,' meaning that the species' numbers have declined significantly and conservation efforts are required, even though the size of current populations precludes them from being listed as an endangered species. Both the burrowing owl and western pond turtle live on the grounds of NASA Ames. Their existence is significant because they are reported as being locally extinct in the south Bay Area. NASA Ames has far exceeded the basic legal regulations for protection by setting aside eighty-one acres as burrowing owl habitat. In addition, NASA Ames has also voluntarily created a program to protect the turtle population during the Navy's upcoming clean-up of the Northern Channel Superfund site where the turtles live.

NASA Ames has made a commitment to creating a sustainable workplace - as evident by the numerous environmental programs in place here today. These environmental efforts benefit most from the involvement of employees. From recycling a single can to starting a carpool, all efforts lead to the common goal of a sustainable lifestyle. Next time you make a choice, consider taking the more sustainable and Earth-friendly alternative!

To learn more about environmental activities at NASA Ames, visit the Web at <http://q/qe/>

Environmental, Health and Safety Forum set

Hosted by NASA Ames Environmental Services Division

Topic: Global Environmental Trends and a Blueprint for a More Sustainable Future
Presenter: Justine Burt, Manager of Pollution Prevention, Sustainability and EMS for SAIC at NASA Ames

Date: Thursday, May 5

Time: 8:30 a.m. to 9:30 a.m.

Location: Building 221, Room 155

Congratulations to Lockheed Martin for safety award

Lockheed Martin Space Operations at NASA Ames has achieved nearly five and a half years without a loss time

cluding machine shop, crane, and fork truck operations in addition to managing multiple office and laboratory environments.

On March 16, Ames Center Deputy Director Stan Newberry recognized Lockheed Martin for their accomplishments when he congratulated them for winning the National Safety Council's highest recognition 'Safety Leadership Award.'

When asked, "How do you do it?" Their answer is straightforward. OSHA has provided a clear path to success.

It is found in

and employee involvement. When the leaders of a company demonstrate that the health and welfare of their people is a company priority, the rest of the organization will follow. It is critical that all the members within the organization align themselves with this core safety value.

Some skeptics believe that a company needs luck on their side to have a safe workplace.

Lockheed Martin believes that working safely has very little to do with luck, and a lot to do with being diligent. Accidents are just the tip of the iceberg of hundreds of close calls and workplace hazards. When a company is diligent at identifying and correcting unsafe conditions and unsafe work practices, they establish a key component in building a great safety program.

Lockheed Martin, along with hundreds of other companies nationwide, has demonstrated that the elements of VPP work.

To learn more about OSHA's Voluntary Protection Program go to the Web at <http://www.osha.gov/dcspp/vpp/index.html>.



Ames contractor's safety success -- Left to right: Ames Deputy Center Director Stan Newberry; Marvin Christensen, Lockheed-Martin site manager; John Livacich, Lockheed-Martin safety manager; and Michael Hulet, assistant chief, Code OH.

injury or illness. This large and technically diverse contract supports engineering, science, and operations support in-

implementing the elements of OSHA's Voluntary Protection Program (VPP). It all starts with management leadership

South Bay Congressional reps visit with Ames employees

continued from page 5

"Yes, fasten your seat belts. . . This is tough," Eshoo stated. But added that she has confidence in what Ames does and what it represents to our country. "You have produced over and over again. You have management that cares about you," she continued. "Scott Hubbard has beaten down doors in the hallways of Congress ..." to rally support for Ames, she added. "We are not afraid of hard work," Eshoo emphasized. The South Bay delegation will seek support for Ames from "both sides of the aisle - we will go out and lasso [them]," Eshoo said.

Rep. Lofgren opened her remarks by stating that "I love you guys." What Ames does is important to her personally, to our nation and to our future, she said. Calling the administration's budget proposal "very adverse" to science and to Ames, Lofgren noted that in her 10 years in Congress, only once has the South Bay delegation met en masse with California's senators - and that was to discuss the challenges facing Ames.

Lofgren reiterated that the delegation has a strategy for garnering support inside and outside of Congress. "All of us are contacting CEOs, not only to lobby the Congress but also to lobby the White House and OMB," she said. Lofgren said the delegation is optimistic that the next

NASA administrator will understand the value of science, rather than focusing solely on the financial bottom line. "What you need to do is to do good science," she stated. "We do value you and we are going to fight tooth and nail ..." to make sure the budget proposals do not impact Ames' science, she added. "This is the beginning, not the end, of our engagement" on these issues, she concluded.

Rep. Honda then moved to the podium. "You have a team of three of us," he told the employees. Honda believes that the NASA budget should support the mission, not vice versa. "The budgeting process is a reflection of values," Honda said. In this instance, he said, "the budgeting process is backwards" for Ames, commenting again on the effects of full-cost accounting. "As one person who flies a lot, I don't want to see your air traffic management projects eliminated," he added.

Referring to NASA's administrator designee, Honda said, "I sense that [Griffin] has an understanding of science..." and that he believes "we have a fighting chance" and that "logic, science and things that" Ames employees understand will have a better reception under Griffin than under previous administrators.

"This place is the dream works," stated Honda, speaking of Ames and its 65-year history of contributions. "This is where all the dreams come true."

At the beginning of the question-and-answer period, Ames employee Jim Hieronymus commented that the Center's direction seems to have shifted "away from basic research" and is moving in the direction of short-term projects.

In response, Honda said, "We need to constantly keep hammering away [at elected officials]. Already the coalitions are building," he said, with members of both parties.

"You've hit the nail on the head" about leaving out basic research, Eshoo added. Industry leaders know that the government does much of the basic research in the U.S., she said, which underscores the importance of forming alliances with corporate leaders. Lofgren noted that cutting funding for basic research throughout the government is doing "immense" damage not only to NASA, but to the nation.

A man who works in a collaborative effort in NASA Research Park said, "I'd like to know what I can do" to help. Honda suggested that a coalition of young people could send e-mails to the "different offices" of their representa-

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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://acc.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 each 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 each month, 11:30 a.m. to 1 p.m., Bldg. N262, Rm 180. POC: Julie ext. 4-4694 or 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.

Ames Sailing Club Mtg, second Thursday of each month (Feb through Nov), from 11.30 a.m. -1 p.m. in the special events room in the Ames Visitor Center in N-223. All are welcome. POC: Jeff Smith, ext. 4-2586.

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/ge/events/EHSseries/> POC: Stacy St. Louis at ext. 4-6810.

The Hispanic Advisory Committee for Excellence HACE Mtg, first Thurs of each 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.

South Bay Congressional reps visit Ames employees

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tives and others. Lofgren added, "The most important people for any member of Congress are those from their districts," so a nationwide effort will be most effective. "Any ... science/professional organizations that would weigh in on this issue -- basic research -- and the effects it will have on the future of the nation, along with specifics, [would help]," added Eshoo.

Another Ames employee said, "It's not the budget ... it's what NASA Headquarters [does] with the budget." The employee continued, "If last year's trends continue unrestrained, we are going to lose the very facilities and personnel that NASA needs [to complete the Vision to go back to the moon and visit Mars]."

Speaking about how Congress deals with budgets, Eshoo said, "We massage the policy" and "place the dollars next to a policy that we think will be better for our nation and certainly for NASA Ames." The key, she said, is introducing the right language into budget deliberations and getting the language accepted by the majority party in the Congress. Success will only come from a bipartisan effort, she said.

According to Lofgren, "We are here trying to put together a coalition that will support good science. We have to pull in other members from other parts of the country and the other side of the aisle..."

Another audience member who said he worked on the effort to build the International Space Station noted that, "One of our concerns is that ... 20 years of development ... and \$90 billion will be walked away from. We are literally throwing away a whole generation's work," he said, adding that he sees no appreciation of that work by the nation's leadership. Eshoo agreed that "There is too long a list of things that are under

attack." This is about our country and our vision for our country, she added.

Jeff Cuzzi, an Ames space scientist, said that funds are being redirected outside of the civil service as a result of full-cost accounting. He suggested that it is important to the country to preserve the government science capability as a complement to the university and private sector capabilities.

"What can we do to make people aware of our capabilities and contributions?" asked Mary Kaiser. Organizing and bringing together teams to support Ames in a "loud bipartisan voice" from across the country is key, Eshoo noted.

Chief Executive Officer (CEO) Tom Pierson of the non-profit SETI Institute in Mountain View, said, "Some of us do know CEOs. What specifically should

we do?" Eshoo answered, "Recruit, recruit, recruit." She recommends that advocates for Ames send letters outlining the "severe damage" that the FY06 budget proposal for NASA Ames will do not only to Ames, but to the nation. "We need people to put pen to paper."

Lofgren added, "I would ask -- are there people who are willing to help who know people in the administration? I would not exclude connections people might have on the other side of the aisle."

"You don't have a company and cut off R&D," Honda commented near the end of the session.

The assembled crowd gave the three representatives a spontaneous standing ovation.

BY JOHN BLUCK AND ANN SULLIVAN

Ask the 'export expert'

Question:

I forgot the URL for the Export Compliance Office Web site, and I couldn't seem to find it on inside Ames. Can you help me find this site?

Answer:

Good news! You can now find the Export Compliance Office (and the Protective Services Office and the International Travel Office) under 'Quick Links' on the insideAmes Web site located at <http://insideames.arc.nasa.gov/>.

And, here's a good tip for searching for an Ames Web site from

insideAmes: Using the 'Search' box in the upper right hand corner of the page, type in a key word or words, choose 'All Ames Sites' from the drop-down menu below the box and click on 'Find.' If you do not change the default search parameters from insideAmes to 'All Ames Sites,' it will only search the insideAmes Web site for your key words.

Do you have a question for the Export Expert? Send it care of kwall@mail.arc.nasa.gov. And, visit the Web at <http://jp.arc.nasa.gov/EC/EC.html>.

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

Would like a roommate to share expenses. Nice home, less than 5 miles from Ames. Part time/non-smoker preferred. Lets talk. Donna (408) 309-8475 (cell).

Room in 4bd/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, H85, 237, & 101. \$425 and dep. and share utilities. Avail. May 1. Call (650) 964-1900.

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 2005 Jan. 1, 2005 – Mar. 31, 2005

| | Civil Servants | Contractors |
|---------------------------------|----------------|-------------|
| Not recordable, first aid cases | 8 | 3 |
| Recordable no lost-time cases | 1 | 2 |
| Recordable LOST-TIME cases | 0 | 0 |
| Lost workdays | 0 | 0 |
| Restricted duty days | 0 | 8 |

Data above is as of 3/30/05. May be subject to slight adjustment in the event of a new case or new information regarding an existing case.

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, View of slopes, close to lifts. Per night: \$250, two night minimum. Includes linens, cleaning, propane fireplace, fully equipped. Call (650) 968-4155, 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 \$3,600/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.

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.

Motorcycle, 1987 Honda Shadow 1100cc, 46K mls, \$1,000 or B/O. Barry Cunningham at (510) 793-4457.

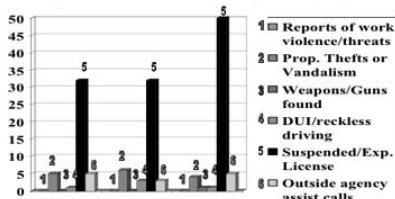
Very beginner tennis player would like a partner for lunch-time (11:30 a.m.) play on the Moffett courts. If interested, contact Leticha at (408) 209-5342.

Protective Services monthly activity

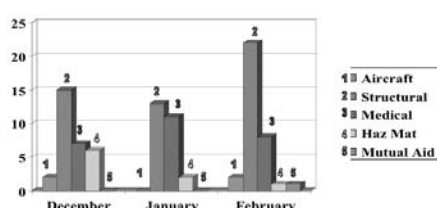
A statistical summary of activities of the Protective Services Division's Security/Law Enforcement and Fire

Protection Services units for the month of April 2005 is shown below.

Security/Law Enforcement Activity



Fire Protection Activity



Expedition 9 astronaut inspires Bay Area students at Ames

On April 14, more than 90 students from San Francisco Bay Area had the



NASA photo by Tom Trower

opportunity to learn first hand from Expedition 9 astronaut Michael Fincke, what it is like to live in space. Students attending the talk were from Slater Elementary School and two Bay Area Explorer Schools, Toyon Elementary School and Barnard White Middle School.

Fincke discussed his six-month mission on the International Space Station as part of the Expedition 9 crew. The talk was held at the center's NASA Exploration Center. He also spoke to Ames employees in the afternoon. His presentation was a compilation of the highlights of the mission and included a tour of the ISS and science onboard.

Fincke was selected in 1996 to join the astronaut corps. Expedition 9 was launched from Kazakhstan aboard a Soyuz TMA-4 spacecraft, and docked with the International Space Station on April 21, 2004. Lt. Col. Fincke spent six-months on the station, during which time he continued ISS science operations, maintained station systems and performed four spacewalks.

BY JONAS DINO



NASA photo by Dominic Hart

Expedition 9 astronaut Michael Fincke (right) receives a memento during his recent visit to Ames from Ames Center Director G. Scott Hubbard.



NASA photo by Tom Trower

Astronaut Fincke during the question-and-answer period with visiting students at Ames.



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