National Aeronautics and Space Administration

ASTROGRAM

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NASA research indicates oxygen on Earth 2.5 billion years ago

NASA-funded astrobiologists have found evidence of oxygen present in Earth's atmosphere earlier than previously known, pushing back the timeline for the rise of oxygen in the atmosphere. Two teams of researchers report that traces of oxygen appeared in Earth's atmosphere from 50 to 100 million years before what is known as the Great Oxidation Event. This event happened between 2.3 and 2.4 billion years ago, when many scientists think atmospheric oxygen increased significantly from the existing very low levels.

Scientists analyzed a kilometer-long drill core from Western Australia, representing the time just before the major rise of atmospheric oxygen. They found evidence that a small but significant amount of oxygen was present in Earth's oceans and atmosphere 2.5 billion years ago. The findings appear in a pair of research papers in the Sept. 28 issue of the journal Science.

"We seem to have captured a piece of time during which the amount of oxygen was actually changing -- caught in the act, as it were," said Ariel Anbar, an associate professor at Arizona State University, Tempe, and leader of one of the research teams.

The goal of both research teams was to learn more about the environment and life in the oceans leading up to the Great Oxidation Event. The researchers did not expect to find evidence of oxygen earlier than what was previously known.

"The core provides a continous record of environmental conditions, analogous to a tape recording," explained Anbar. He and his research group analyzed the amounts of the trace metals molybdenum, rhenium and uranium. The quantity of these metals in oceans and sediments depend on the amount of oxygen in the environment. The other research group, led by Alan Kaufman of the University of Maryland, College Park, Md., analyzed sulfur isotopes. Its distribution also relies on the abundance of oxygen.

"Studying the dynamics that gave rise to the presence of oxygen in Earth's atmosphere deepens our appreciation of the complex interaction between biology and geochemistry," said Carl Pilcher, director of the NASA Astrobiology Institute at Ames, which co-funded the study. "Their results support the idea that our planet and the life on it evolved together."

One possible explanation for the Great Oxidation Event is the ancient ancestors of today's plants first began

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Hopkins outlines NASA's Media Communications Policy

NASA wants to tell its story accurately and unfiltered and to the widest audience practicable was the message delivered to Ames employees by the agency's chief of communications strategy.

NASA photo by Dominic Hart

Robert Hopkins, NASA's chief of communications strategy, is seen here during his recent visit to the center where he outlined the Media Communications Policy for NASA.

Addressing an All Hands meeting Oct. 18, in the main auditorium, Robert Hopkins explained NASA's Media Communications Policy and stressed the importance of open communication throughout the agency.

"NASA, a scientific and technical agency, is committed to a culture of openness with the media and the public that values the fee exchange of ideas, data and information as part of scientific and technical inquiry," Hopkins said.

"Consistent with NASA statutory responsibility, the agency will provide for the widest practicable and appropriate dissemination of information concerning its activities and the results thereof," Hopkins added.

Hopkins said the policy was developed at the direction of NASA Administrator Michael Griffin, who wanted all employees to understand the policy.

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On the Inside . . .

NASA Mars rover software leads to virtual globetrotting

Now, anyone can virtually search Earth close-up, zooming into pebble-size objects, the same way scientists have explored Mars, but in more detail. Scientists have examined Mars scenes after special NASA software joined many overlapping martian images and enabled researchers to study the resultant panoramas of the red planet and even zoom into extreme close-ups of martian soil.

A spin-off of that NASA software creates "GigaPan" panoramas for the Internet, containing lots of pictures made of billions of tiny dots of light (pixels).

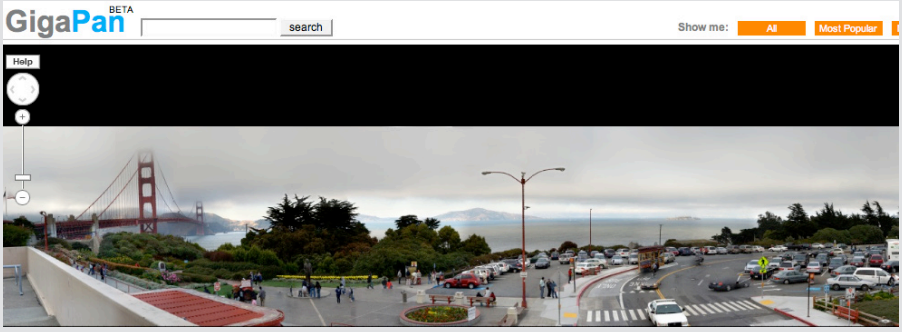
GigaPans are very high-resolution images stitched together from hundreds, potentially thousands of overlapping ordinary consumer digital camera photos. Each wide picture is also stepped into, with closer and closer images taken for each wide view. The resulting mammoth, on-line panoramas permit people to globetrot via the Web and to zoom deep into big, wide pictures of locations like Argentina, Rome's skyline and market places around the world.

"It's like having a pair of binoculars that you can use to explore the panoramas," said Randy Sargent, a senior systems scientist at Carnegie Mellon University West, located at NASA Research Park at Moffett. "When you pack a billion pixels into a panorama, you can explore it for hours and still find new things. It's like being transported," Sargent added.

Carnegie Mellon created a Web site located at http://gigapan.org, where the public can explore many GigaPans and can upload huge, panoramic images.

"GigaPan is a significant achievement because it allows everyone to create, at a very low cost, panoramas that previously could only be made by specialists using systems costing tens of thousands of dollars," said Terry Fong, director of the Intelligent Robotics Group at NASA Ames.

When Sargent was a staff member at Ames, he helped to develop software to sew together images that the NASA Mars Exploration Rovers took on Mars. That is when Sargent and partner Illah Nourbakhsh thought of the "GigaPan" concept. Nourbakhsh is associate professor for Robotics at Carnegie Mellon University in Pittsburgh, Pa.



An example of a panoramic view from the Gigapan Web site. The view is a result of a compilation of consumer digital photos pieced together. Gigapan is a spin-off from NASA software technology.

Amateur photographers from distant parts of the globe also can contribute their views of our home planet by uploading big digital pictures taken by consumer cameras to the Web. "It is increasingly important to give people a broad view of the world, particularly to help us understand different cultures and different environments," Sargent explained.

Team members from the "Global Connection Project," which includes people from Carnegie Mellon, various other universities, NASA Ames, Google and National Geographic magazine on-line collaborated to provide a GigaPan robotic camera mount for consumer digital cameras. It will help photographers take hundreds of overlapping images for panoramas that use the new software - developed in two years by Carnegie Mellon and NASA Ames.

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George Takei, who portrayed Star Trek's "Lieutenant Sulu," speaks at Ames

George Takei, of Star Trek fame, spoke at the center on Oct. 11, in honor of Ames' first observance of National Coming Out Day. The NASA Ames Office of Diversity and Equal Opportunity, the Lesbian, Gay, Bi-Sexual and Transgender (LGBT) Advisory group and the Asian American-Pacific Islander Advisory group hosted the event.

Takei was the keynote speaker and is the charismatic actor who portrayed "Lieutenant Sulu" in the original "Star Trek" television series and a number of the "Star Trek" feature films.

Takei has been an outspoken advocate for the LGBT civil rights movement since he came out as a gay man in 2005.

There was also an introduction to National Coming Out Day by Ardel Thomas, chair of the Queer Studies Department at the City College of San Francisco. Thomas had the privilege of participating in the first march on Washington, D.C., for LGBT civil rights, a milestone in the ongoing LGBT civil rights movement that comprised the origin of National Coming Out Day, which occurred 20 years ago, on Oct, 11, 1987.

NASA photo by Dominic Hart

George Takei was the keynote speaker during Ames' first observance of National Coming Out Day on Oct. 11, 2007.

Taking a tour inside the NASA Ames Protective Services Office

What do law enforcement, counterterrorism, export compliance, locksmith services, international visits, employee and visitor badging, fire protection and emergency response planning have in common?

All these areas, and more, are part of the NASA Ames Protective Services Office (PSO), Code JP, in the Center Operations Directorate.

NASA photos by Dominic Hart

NASA Ames Protective Services Office employees--in the Ames badging office (left); on site at Moffett/NASA Ames (top right); and at the front gate (below)--keep NASA Ames a safe and secure place to work.

"Since 1994, the Protective Services Office has provided NASA Ames with professional security and emergency services," said PSO Chief Bob Dolci. "Our job is to provide a safe, secure environment for the Ames staff so they can do their work and help NASA achieve its mission." Deputy Division Chief Phil Snyder, and Assistant Division Chiefs Ken Silverman and Ann Sullivan, round out the management team.

Security management is probably the most recognizable of Protective Services' functions. We see the guards and the vehicle inspectors at the gates, and some us of know about the officers who ticket us for driving too fast or rolling through a stop sign. But many people know little about what Protective Services actually does.

Former Secret Service agent Ken Silverman leads a team of 12 civil servants and approximately 90 contractor employees whose job is to protect life and property and preserve peace and order at Ames, the NASA Research Park and Moffett Field. Silverman's team also is responsible for international programs, program security, personnel security, technical security and investigations.

With commercial companies, retail shops, restaurants, a bank, housing, a hotel, universities and military establishments on site, in addition to the NASA Ames research campus, Ames/Moffett is much like a city of several thousand people. And, it faces many of the problems of a small city: traffic issues such as speeding, vehicle accidents and failure to stop for stop signs, theft, vandalism and a variety of other criminal offenses.

The law enforcement team includes four primary groups of employees:

• Security officers (light blue shirts) control access to Ames at each of the center's five gates. Undoubtedly the best known security officer is the late Johnny Green.

• Vehicle inspectors search incoming vehicles on a random basis for the presence of weapons, contraband or other potentially dangerous items.

• Security police officers (dark blue shirts) perform law enforcement services at Ames, including patrol, crime prevention and enforcement of the traffic management plan. Security police officers have federal arrest authority.

• Emergency dispatchers take reports of emergency and non-emer-

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Hopkins outlines NASA's Media Communications Policy

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Issued by NASA Headquarters in October 2006, the policy establishes clear areas of responsibility and coordination methods intended to improve NASA's communications process. These procedures govern the release of public information, which is defined as information in any form provided to news and information media, especially information that has the potential to generate significant media or public interest or inquiry. The policy is available online at http://www.nasa.gov/commpolicy

According to a Government Accountability Office (GAO) report issued in May 2007, the director of the Office of Science and Technology Policy cited NASA's media communications plan as a model for other federal agencies to consider when developing their own communications policies.

The policy does not include scientific and technical reports, Web postings designed for technical or scientific interchange, or technical information presented at professional meetings or in professional journals.

Hopkins also is the assistant administrator for the Office of Communications Planning, which provides long-term strategic communications messaging and planning and coordinates outreach activities throughout the agency. He served previously as the senior advisor to NASA Deputy Administrator Shana Dale.

Describing his duties as "the ultimate cat herder," Hopkins said one of the things he does at Headquarters is trying to improve communication by "making sure everyone is talking to each other so that everyone is on the same page."

Hopkins stressed the importance of employees working with their public affairs offices to coordinate media interviews and dissemination of information to the news media.

NASA employees are allowed to speak to the media and the public about their work, but that only designated NASA spokespersons are authorized to speak for the agency in an official capacity regarding NASA policy, programmatic or budget issues. He said contractors are allowed to speak to the media, but only about their area of expertise and identify themselves as contract employees.

Employees are to notify their supervisor about upcoming media interviews and coordinate with their public affairs officer in advance of the interview whenever possible.

Public affairs officers' role is to "attest to the content of the interview, support the interviewee and provide post-interview follow-up with the media as necessary," Hopkins explained.

Ames Center Director S. Pete Worden, who introduced Hopkins, said that NASA wants to disseminate information to the public and will assist researchers to ensure their papers are published.

"The point is to get your stuff out," Worden said. "I think the message here is that if there are problems let us know and we'll work to get them fixed."

BY MICHAEL MEWHINNEY

Sally Ride Festival inspires girls

The Sally Ride Science Festival was held at NASA Ames recently. Hundreds of girls attended the event, which was aimed to inspire girls from 5th - 8th grade to study math and science, in the hope that this will help the next generation of women be active participants in our technical society.

The event was similar to a street fair, and consisted of hands-on activities, booths, food and music. Astronaut Sally Ride gave the keynote address at the event.

Astronaut Sally Ride gives her key note speech at the festival.

Angela Phillips Diaz, director, Strategic Communications and Development Directorate at Ames, (center left in blue suit), visits one of the science stations at the recently held Sally Ride Science Festival at Ames.

Right photo: Girls learn Newton's Laws of Motion as they launch water rockets at the science festival.

NASA photos by Dominic Hart

Nellie Lutcher, a famous musical legacy, remembered

NASA has been a part of my life for 27 years and until recently I did not know why I'm here and what motivated me to work and care for this agency with such passion. That was given to me by my ancestors. I have met presidents of the United States and dignitaries from all over the world as part of my duties for NASA Ames. I have represented NASA on many occasions, produced events on behalf of NASA Ames for thousands of people and yet I was never more moved than the experience I had this past month.

Nellie Lutcher, first African-American woman to be on the board to the Musician's Union. She also performed with Nat "King" Cole and made numerous hit singles.

We all have a story to tell. How we got here, who our people were and what makes us who we are. Someone once said, "Only the strong survived the passage from Africa to the Americas, and I am a descendent of the strongest. I didn't feel very strong, nor do I now; but I feel very proud of my ancestors, because I know it was not easy for them to survive and thrive."

This is the story of one of my relatives, my aunt Nellie Lutcher, born Oct. 15, 1912. She died June 8, 2007. She was born in Lake Charles, La., one of 10 children, my father's oldest sister. She was born into a musical family and everyone played something. She played the piano from age 8 in the church and, by age 13, she was playing for the likes of Ma Rainey. My grandpa had a band, and they played weekends and holidays all around town, with Nellie at the piano. Jazz was her love and, by age 23, she was off to Los Angeles, the big city, to try her luck.

She landed a job the first week earning $2 a night. Until then, she had been paid $2 a month, at home playing for the New Sunlight Baptist Church in Lousiana. Work was steady, but it took her 12 years to be discovered. Working at the Dunbar Hotel in 1935, she knew them all: Duke Ellington, Count Basie, Bill "Bojangles" Robinson, Eddie "Rochester" Anderson, Lena Horne, Langston Hughes and W.B.Du Bois. They all stayed at the Dunbar and listened to Nellie play night after night. Her best friends were Billie Holiday, Ella Fitzgerald and Sarah Vaughan. She played from 8 p.m., in the evening to 2 a.m., in the morning, then moved onto the breakfast clubs to play until 5 a.m. or 6 a.m., in the morning. However, she was discovered in 1947 after performing on the radio for the March of Dimes telethon.

Nellie played for the Queen of England, the BBC in London, the Apollo Theather in Harlem, Café Society in New York, on the Ile de France cruise ship and all over the United States. When I was growing up, she was a regular at Disneyland in the New Orleans section. Mr. Disney would ride her around in a horse-drawn carriage. She cut duos with Nat "King" Cole and had over a dozen hit singles. In her later years, when her music was less popular, she became the first African-American woman to be on the board to the Musicians' Union. She was a part of the class action law suit with the record companies to change the way they put musicians under contract. In her day, the standard contract gave you $.01 per record, a half cent if you recorded a duo. She made millions for others,

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Ames kicks off CFC campaign

NASA photos by Dominic Hart

David Goronja, from Philippine Children's Fund of America, spoke at the recent CFC kick-off meeting at the center.

Anthony R. Gross, 2007 chairman of the Ames CFC, during the kick-off meeting.

The Combined Federal Campaign (CFC) kick-off meeting was held at the center in early October. NASA Ames has traditionally been a leader among Bay Area federal agencies in our generosity and support of the Combined Federal Campaign (CFC). The Ames campaign theme for this year is '2 Minutes 2 Make a Difference.' The campaign this year runs from Oct. 10 through Nov. 16, 2007. Representatives from two Bay Area charities within the CFC spoke during the event. There was training following the meeting for the CFC captains and key workers.

'GREEN Team' holds environmental symposium at Ames

A seminar entitled 'Global Research into Energy and the Environment at NASA (GREEN) Symposium' was held on Oct. 19, 2007, at the center.

The event was a first in a series of seminars that will consider how the tools and expertise developed by NASA for the exploration of space can be applied to problems associated with sustainable energy and clean technologies on Earth.

Can lessons learned from life support, astrobiology, planetary science, systems engineering and aerodynamics be applied to energy and environmental problems? Do we need a new 'Apollo-like' program to focus attention on these problems? If so, what role should NASA play in such a program? What role should NASA Ames play?

To address these issues and inform the NASA Ames community about energy and environmental (clean-tech) activities outside of NASA, the GREEN Team is planning a series of events. These events will include lectures by scientists, engineers and policy makers followed by in-depth discussions with the audience. The audience will include both NASA personnel and invited participants from academia, national labs, and the private sector.

NASA research indicates oxygen on Earth 2.5 billion years ago

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to produce oxygen by photosynthesis. However, many geoscientists think organisms began to produce oxygen much earlier, but the oxygen was destroyed in reactions with volcanic gases and rocks.

"What we have now is new evidence for some oxygen in the environment 50 to 100 million years before the big rise of oxygen," Anbar said.

"Our findings strengthen the notion that organisms learned to produce oxygen long before the Great Oxidation Event, and that the rise of oxygen in the atmosphere ultimately was controlled by geological processes."

The international project brought together researchers from Arizona State University, the University of Maryland, the University of Washington, the University of California, Riverside and the University of Alberta. The project received financial support from the NASA Astrobiology Institute and the National Science Foundation. The Geological Survey of Western Australia provided logistical support.

Founded in 1998, the NASA Astrobiology Institute is a partnership between NASA, 16 U.S. teams and five international consortia to promote, conduct and lead integrated multidisciplinary astrobiology research and train a new generation of astrobiology researchers. The institute's Astrobiology Drilling Program is an international program aimed at coordinating continental drilling projects of astrobiological significance, especially those concerning Earth's early atmosphere.

BY MICHAEL MEWHINNEY

Disability rights proponent speaks at Ames

Kathy Martinez, executive director of the World Institute on Disability (WID), recently shared some of her personal experiences and stories that provided a glimpse into the mosaic and diversity that is the disability community. She spoke at Ames in honor of National Disability Employment Awareness Month this month.

Martinez is an internationally recognized disability rights proponent who specializes in employment, asset building, independent living, international development, diversity and gender issues.

At the Oakland-based WID, Martinez provides influential leadership in the areas of advocacy, training and public policy.

NASA photo by Eric James

Kathy Martinez, executive director of the World Institute on Disability (WID), spoke recently at Ames for October's National Disability Employment Awareness month.

Acquisition Division names COTR of the Year awardees

On Sept. 20, the Ames Acquisition Division hosted an informal ceremony to present letters of appreciation to three contracting officers technical representatives (COTRs) who were this year's 'COTR of the YEAR' award winners.

NASA photo

FY 2007 'Contracting officers technical representatives (COTR) of the Year' awardees, left to right, Charlie Sobeck, Bill Thigpen and Irv Statler.

The recipients were Charles Sobeck, COTR for the Kepler Project; William Thigpen, COTR for the NASA Information Technology Research, Development and Operations for Scientific Computing contract; and Irving Statler, COTR for the Integrated Safety Data for Strategic Response (ISDSR) contract.

These individuals were selected by the Acquisition Division for their determination, attentiveness and professionalism while performing their COTR responsibilities. This demonstrates their commitment to customer satisfaction and proactive contract management. The COTR awards were initiated by working level contract specialists over 20 years ago in recognition of that fact that, as the acquisition process grows ever more complicated, it becomes increasingly important for the people in the technical organizations and the Acquisition Division to work closely as a team.

At the close of each fiscal year, the Acquisition Division attempts to recognize three or four COTRs who have been committed to that teaming relationship which is so vital to successful contract management.

BY GARY HEAGY

Training available for NOMAD

NOMAD (NASA Operational Messaging and Directory) is a new collaborative messaging system being rolled out across the agency. NASA Ames has begun the migration and you will be migrated soon--if not already!

Please participate in instructor-led training on Nov. 7 in the Main Auditorium (N-201) with Entourage (Mac) from 9 a.m. to noon and Outlook (PC) from 1 p.m. to 4 p.m. We've also tentatively scheduled instructor-led calendar training on Nov. 28. Please visit the Web site below for details.

Training is critical to a successful migration and will prepare you for this change in your work environment. You are strongly encouraged to participate in one or more of the training resources available. See the Training section of the NOMAD Web site for more information (http://nomad.arc.nasa.gov).

Nellie Lutcher

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but saw very little for her efforts.

Nellie was her own woman until the end of her 94 years. Her nine sisters and brothers were successful because of her help. She leaves one son, one granddaughter and a host of nieces and nephews, of whom I am one. I am her brother James' daughter, one of five who are proud to say we came from the strongest.

In October 2007, Nellie was honored with the re-naming of a street near where she lived as a girl. The mayor gave the family a proclamation and we were given the keys to the city. A wonderful museum exhibit of her life's work was premiered, as was a one-act play telling her story. I was proud to attend with many of my cousins representing our fathers and mothers during this four-day event, put on by the city of Lake Charles, La.

BY SHEILA LUTCHER JOHNSON-HEACOCK

Kaufhardt Award winners named

On Sept. 11, 2007, the Ames Acquisition Division hosted the annual Leslie A. Kaufhardt Acquisition Peer Awards ceremony presenting awards of appreciation to three of their peers. This honorable award, created by members of the Acquisition Division 21 years ago, allows individuals in the Acquisition Division a chance to recognize and reward their non-management peers for special achievements and/or contributions made to the Acquisition Division, NASA Ames and the agency.

The FY 2007 winners are Joanne Comstock, Pat Hudson and Marianne Shelley. These individuals were selected for their dedication and concerted efforts in making significant contributions toward the achievement of Acquisition Division goals and their support of other staff members.

The Acquisition Peer Award is named in memory of Leslie A. Kaufhardt, an exceptional contract specialist who worked at Ames in the 1970s, 80s and 90s and whose quality of work, positive attitude and spirit have set the standard of excellence for the Acquisition Division.

BY GARY HEAGY

Ames Partnerships Office reaches out to women in technology

On Sept. 27 and 28, 2007, the NASA Ames Technology Partnerships Office reached out to over 1,000 women at the 13th annual Women In Technology International (WITI) Women and Technology Summit in Santa Clara.

WITI was founded by Carolyn Leighton in 1989 to help women advance by providing access to--and support from--other professional women working in all sectors of technology. WITI's mission is to empower women worldwide to achieve new possibilities through technology, leadership and economic prosperity. Current membership is over 103,000.

NASA photo by Eric James

Ames Technology Partnership Office staff members at the recent 13th annual Women In Technology International (WITI) Women and Technology Summit in Santa Clara. Back row, left to right, Kim Hines, Sara Villarreal and Candice Nance. Front row, left to right, Dina Salazar and Paulette Dal Porto.

This year's summit focused on the theme of 'Innovation,' featuring innovators and dynamic discussion about innovation. Speakers included Helen Greiner, co-founder and chairman of iRobot Corporation and Padmasree Warrior, executive vice president and CTO of Motorola, Incorporated. Workshop topics included 'Capital Strategies for Entreprenuers,' 'Powerful and Connected: Women Transforming Technology Environments' and 'Bringing Innovation to Market.'

At NASA Ames, the Technology Partnerships Office works to form partnerships with industry and academia in order to develop new technology that supports Mission Directorate programs. More information can be found at the Technology Partnerships Office Web site at http://technology.arc.nasa.gov.

NASA photo by Eric James

Sara Villarreal, left, of the Ames Technology Partnerships Office provides information to a WITI Summit participant about the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs at NASA.

The Technology Partnerships Office also commercializes and transfers NASA technology to U.S. industry and enhances NASA technology and commercial objectives through the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs. NASA's SBIR and STTR Programs provide a three-phased approach for small businesses to develop technology in response to a specific set of NASA mission-driven needs, as presented in the NASA SBIR/STTR Annual Solicitation.

Under the STTR program, a research institution partners with a small business to develop technology based on specific mission needs. Visit http://sbir.nasa.gov for more information on the NASA SBIR/STTR programs.

The NASA Ames Technology Partnership Office provided a booth at the Women and Technology Summit, with the goal to publicize technology partnership possibilities at NASA. Women-owned, technology-based small businesses, as well as women in technology-based positions within large corporations, were present.

Corporations present at the WITI Summit included IBM, Oracle, Raytheon, Intel and Motorola. The exhibit booth promoted possible business opportunities between private industry and NASA. Small businesses benefited from learning more about the funding possibilities with the SBIR and STTR programs, while larger corporations inquired about partnerships and licensing agreements with NASA.

photo credit: WITI 2007

Helen Greiner, co-founder and chairman of iRobot, at the 13th annual Women In Technology International (WITI) Women and Technology Summit recently held in Santa Clara.

To learn more about the Women and Technology Summit, visit www.WITI.org.

BY CANDICE NANCE

Ames Commute Alternatives Fair scheduled Oct. 24

Learn how easy it is to reduce your monthly gasoline bill, traffic headaches and carbon footprint.

With auto emissions a major contributor to greenhouse gases, now is the time to rethink your daily path to and from work. Attend the Ames Commute Alternatives Fair, Wednesday, Oct. 24, from 11 a.m. to 1 p.m., outside the Ames Mega Bites Cafeteria, King Road side, to learn about money-saving commute alternatives that can make your commute life smoother and more satisfying.

There are many ways you can make a positive impact on the environment through your daily commute. Here is a partial list of participating organizations available to share information with you:

• http://511.org/ - see how easy carpooling is with this efficient one-stop matching resource that also provides money-saving promotions.

• Green eMotor Inc. and Electro Ride Bikes and Scooters - Learn about scooter power and other fuel efficient options.

• Breathe California (formerly the Lung Association) - Gain the health benefits of commute alternatives and also spare the air.

• Hybrid Test Drives with Sunnyvale Toyota, Larry Hopkins Honda, Sunnyvale Ford - Experience the ease of switching to a hybrid with onsite test drives during the fair and discounts!

• San Mateo County Transit - Learn about the SamTrans bus line and CalTrans rail line options that can work for you.

• Altamont Commuter Express (ACE) Train - Help ease car congestion over the Altamont pass and enjoy a relaxing trip to work.

• Ames Environmental Services Division - Find out more about environmental programs underscoring NASA's commitment to environmental excellence.

• Ames Commute Alternatives Program (ACAP) - Choose from one or more Ames alternative commute services including shuttle, carpool/parking, transit discounts and bike locker program.

• Ames Bicycling Club - Join the award-winning club that promotes bicycling at Ames.

• Mountain View Pedestrian Advisory Committee - Learn about the safety programs affecting residents bicycling and walking in the city.

• Peninsula Bike & Pedestrian Coalition (PBPC) - Experience the joys of exploring the Peninsula on foot or bike with this advocacy group.

• Valley Transportation Authority - See how Silicon Valley light rail and bus systems options make it easy to move around and also help ease congestion.

For more information, contact April Neilson at aneilson@mail.arc.nasa.gov, ext. 4-6810. Note: NASA Ames does not endorse any commercial products or services.

BY APRIL NEILSON

Ames supports reducing pollution to protect the environment

Green is "in" everywhere these days and NASA Ames has long been a proponent of programs to reduce pollution, conserve resources and protect the natural environment. Supporting the NASA mission also means supporting viability and quality of life actions on planet Earth through our work contributions, personal energy-use, consumption and waste recycling habits.

Each day, the average American throws away 3.5 to 5 pounds of garbage, adding up to a legacy of 90,000 lbs of trash per person over a lifetime; the bulk of which ends up as ground, water or air pollution.

To bring awareness to this growing environmental problem, the Environmental Services Division hosted an environmental brown bag event recently on the topic of green consumerism, presented by Acterra, a local community organization dedicated to sustainable Earth awareness and education. For more information, visit http://www.acterra.org/

The lunch-hour program highlighted ways to "green your life" starting with a simple demonstration of how much bottled water really costs when the fuel to transport it, produce the plastic and recycle or landfill the container is factored in. Carrying your own refillable water container from home not only spares the environment but also saves costs associated with buying bottled water.

Using the new ENERGY STAR light bulbs (visit http://www.pge.com/res/rebates/lighting/ for more information) is another easy step to reduce energy consumption.

Use of these energy efficient bulbs can reduce production of up to 312 lbs/yr of CO2 - about as much CO2 as the average passenger car produces in four months of driving.

To calculate your CO2 footprint, use the 'Low Carbon Diet Personal CO2 Calculator.' For additional helpful tips for reducing your carbon footprint, check out the EPA's guide to what you can do about climate change at http://www.epa.gov/climatechange/wycd/index.html; visit the Acterra Web site listed above; and consider taking actions like these excerpted from David Gershon's 'Low Carbon Diet: A 30-Day Program to Lose 5,000 Pounds.' Also visit http://www.empowermentinstitute.net/lcd/ for further information.

BY APRIL NEILSON

10 Steps You Can Take to Make a Difference

Energy-Conserving Steps	C02 Emissions Saved Annually
1. Buy a fuel-efficient, hybrid or all-electric passenger vehicle.	2,000 – 10,000 lbs
2. Reduce the miles driven in a car or truck by 20% annually.	450 – 4,000 lbs
3. Reduce solid waste.	1,550 – 3,120 lbs
4. Install a solar hot water heater.	2,500 lbs
5. Purchase an energy-efficient furnace.	2,400 lbs
6. Maintain an efficient car with regular tune-ups and recommended air pressure in your tires.	1,500 lbs
7. Turn down the heating thermostat to 65 - 68 degrees when you're at home, 55 - 58 degrees at night or when no one is home.	1,400 lbs
8. Recycle curbside 100%.	1,300 lbs
9. Insulate your walls and attic.	1,200 lbs
10. Develop fuel-efficient driving practices: maintain steady speed (most fuel efficient is 55 mph), use cruise control, consolidate errands into a once-a-week effort, etc.	1,200 lbs of annual C02 emissions reduction per auto (55 gallons)

Ames Contractor Council holds 2007 Charity Golf Outing

Some 50 'hardworking' contractors and friends on 13 teams participated in the 2007 Ames Contractor Council (ACC) golf outing at The Golf Club at Moffett Field in late September. The weather was great, the shots were long and straight (at least sometimes) and got better on the 19th hole with the post-golf BBQ.

The straightest shots were hit by Kathleen Starmer and Frank Santos. They were the winners of the closest-to-the-pin contests for women and men. The longest-drive winners were Elise Taube and Tim Walker. The team from Consolidated Safety Systems won the low-gross prize while the Planners Collaborative team was the low-net winner. Lewis Braxton, along with Mike Hill, the director of The Golf Club, shared some of the plans and the vision of the club's transformation. There was unanimous agreement that this year was great and next year will be even better.

photo by Carol Roland

The Ames Golf Club Team, left to right, Barry Sullivan, Lewis Braxton, Duc Tran and Demos Tsairides.

This annual event is a unique opportunity for Ames center management and contractor company representatives to gather in an informal setting to mix and mingle. Gatherings such as this golf event foster better working relationships that help both the government and its contractor community achieve success in pursuit of NASA's objectives.

Any company with an active contract at Ames is invited to send its representative to the monthly ACC meetings held the first Wednesday of the month, 11 a.m. to 12 p.m., in the Jack Boyd Committee Room, in Bldg. N-200. The deputy center director, or his representative, is always first on the agenda with an update about center and agency activities. This update is followed with presentations by various guest speakers, including topics such as HSPD-12, security, safety and new business. The next events coming up that benefit the Ames community include the Excellence Awards and the 2008 Ames Calendar.

Through our successful fundraising activities, we are able to contribute to education outreach and other worthy endeavors. To learn more about the ACC and how it actively supports the Ames community, visit the Web site located at: www.amescontractor-council.org

BY DALE STANSBURY AND CHRIS JOHNSON

Mythbusters visits Ames to dispell another myth

Adam Savage, above, of the Mythbusters show prepares for his flight in the advanced concepts flight simulator to test an aircraft myth.

Jamie Hyneman of Mythbusters (left) explains to Ames Center Director S. Pete Worden the myth they were trying to dispell during their recent visit.

NASA photos by Dominic Hart

Taking a tour inside the NASA Ames Protective Services Office

continued from page 3

gency situations, lost or found items, and suspicious letters or packages, and monitor an array of alarm systems at Ames.

Each security officer and security police officer must pass a rigorous background investigation, psychological testing and a medical examination. In addition, every Ames security police officer must graduate from a recognized police academy or have worked as a reserve officer with a local police or sheriff's department. Although security officer requirements are less stringent, they nonetheless meet or exceed the requirements set for private guards by the state of California. Security officers and security police officers at Ames are employees of SecTek Inc.

After being hired, each law enforcement officer must take and pass a 160-hour NASA 'federal arrest authority' course at the Kennedy Space Center. Security officers must pass an 80-hour course. The curriculum for both courses comes from the Federal Law Enforcement Training Center at Glynco, Ga., the same center that trains law enforcement officers for more than 80 federal agencies.

During training, security police officers learn federal laws of arrest, search and seizure, constitutional law, self-defense, arrest control techniques, high- and low-speed driving techniques and officer ethics. Officers also receive in-house training in CPR and first aid, hazmat response, firearm qualification and legal updates. Every other year, each officer must complete at least 40 hours of refresher training to stay current with federal laws and NASA regulations.

Located in Bldg. N-241, the Ames dispatch center is a certified 9-1-1 center that operates 24 hours a day, seven days a week. Dispatchers handle all police and fire-related calls at Ames. Each dispatcher must meet the same requirements as city police dispatchers and attend the same state-certified training course as do city and county dispatchers.

Ames' security management team also is responsible for developing and implementing security plans for special events, such as last April's Yuri's Night celebration. Planning frequently involves collaborations with other law enforcement agencies. Silverman's team also works with the Secret Service and FBI whenever the president or other U.S. or foreign dignitaries visit Ames or land at the airfield. These duties, as well as follow-up investigations of crimes committed at Ames, liaison to outside police agencies and to the U.S. attorney's office, are handled by two special agents in Protective Services.

"Having a good working relationship with the U.S. attorney's office is critical to effective prosecution of any serious crimes that transpire at Ames," Silverman noted.

In an upcoming issue, we'll take a closer look at some other, lesser known, Ames security management functions.

BY ANN SULLIVAN

NASA Mars rover software leads to virtual globetrotting

continued from page 2

In partnership with Charmed Labs, Austin, Texas, the team has begun a public beta test of 400 GigaPan robotic camera mounts. Team members say they also will provide a simpler design for the device so ambitious photographers could build their own GigaPan robotic camera mounts.

NASA Ames provided expertise in panoramic image stitching, camera calibration and interactive graphics. Another key NASA Ames contribution to the GigaPan project is the NASA Vision Workbench application, explained at this NASA Web site: http://ti.arc.nasa.gov/visionworkbench

The GigaPan system is part of the Global Connection Project. Its goal is to help people learn about other cultures and environments across the globe

"An ordinary photo makes it possible to cross language barriers," Nourbakhsh noted. "But a GigaPan provides so much information that it leads to conversations between the person who took the panoramas and the people who are exploring it and discovering new details."

Since 2004, an early GigaPan system has been recording panoramic images every 30 minutes of a backyard. According to scientists, time-lapse digital photography combined with GigaPan images such as the backyard scene, permit users to look back in time and study, for example, a bird's nest being built.

The GigaPan system is already finding more uses. The Pennsylvania Board of Tourism has created GigaPans of Civil War sites. There are plans for children from schools in the United States, South Africa, Trinidad and Tobago to use the GigaPan system to examine each other's environments.

The NASA Ames Intelligent Robotics Group in 2006 used GigaPan as a visual inspection tool during a robotic field test at Meteor Crater in Arizona.

"High-resolution panoramas are important and useful, particularly for understanding scientific phenomena in context," said Fong, director of the Intelligent Robotics Group at NASA Ames.

Scientists also think GigaPan will help researchers communicate among themselves and with the public worldwide. Other uses may include helping managers examine natural disaster scenes remotely.

"The possibilities with GigaPan are limitless," said Fong. "We have only begun exploring how it can be used for education, entertainment, science, engineering and a myriad of uses we never dreamed of."

BY JOHN BLUCK

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 - Sept. 30, 2007

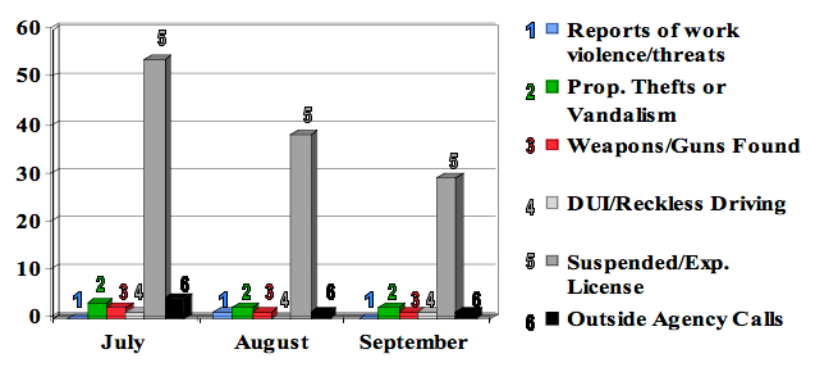
	Civil Servants	Contractors
First aid cases	10	12
Lost Workday cases	0	2
Recordable cases	1	3
Restricted duty days	0	1

Above data are as of Sept. 30, 2007. May be subject to slight adjustment in the event of a new case or new information regarding an existing case.

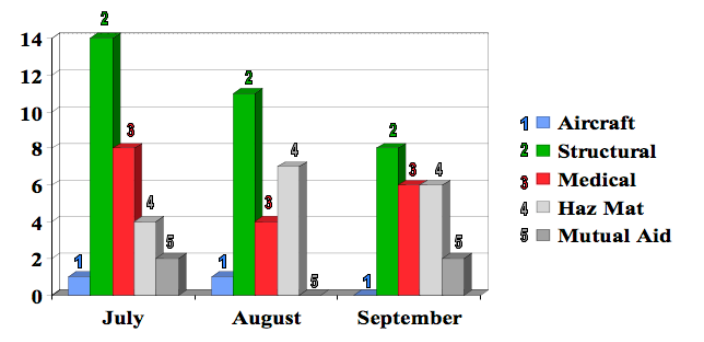
Protective Services monthly activity

A statistical summary of activities of the Protective Services Division's Security/Law Enforcement and Fire Protection Services units for the month of September 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!

Transportation

'03 Mitsubishi Outlander Sport Utility (SUV). Only 51,000 miles. Automatic, 4 cylinder, 2WD, 4 door, red and in excellent condition. $9,950. Call R. Smith (408) 926-4747.

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.

EVM award to be presented at PM Challenge

The NASA Office of Chief Engineer is sponsoring an agency-wide Earned Value Management (EVM) Award of Excellence to be awarded at the PM Challenge Conference in Daytona Beach, Fl., on Feb. 26, 2008. The purpose of this award is to recognize leadership, excellence, innovation and agility in the application of EVM in our projects.

The award is intended for both NASA in-house EVM applications as well as NASA projects that actively use their contractor EVM deliverables to improve the management and forecasting of their contracted activities. All NASA projects that fit these guidelines are encouraged to apply.

For details on the application process, visit the award Web site located at: http://evmexcellence.gsfc.nasa.gov/ or contact Jahi Wartts at: Jahi.O.Wartts@nasa.gov or Phoebe Wescott at Phoebe.L.Wescott@nasa.gov.

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, one 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.

Teams compete for votes at Ames annual chili cook-off

In early October, 18 teams competed in a culinary cook-off. Lots of people were out to sample the awesome chili which began at 11 a.m.

This year's theme was sports and all the booths were decorated to the hilt. Participants got to enjoy their skills in the batting cage, golf radar driving range, speed pitch cage, 3 pointer football and slap shot hockey. The free peanuts, cracker jacks, cotton candy and ice cream cups were a smash hit.

NASA photos by Jon-Pierre Wiens

Ames employees participating in the recent chili cook-off held recently at the center.

Chili cook off awards went to:

Peoples choice

1st place team - Asani (Code TI)
2nd place team - Surfin Slugs on Steroids We Sizzle! (Code D)
3rd place team - Chili Colorado Buffalo's (Code RCM - Leo Magazu)

Judges Choice

1st place team - NFAC is Back (Code U)
2nd place team - Hog Wild (Code RM machine shop
3rd place team - Knockout Chili (Code YS)

Best Presentation

NFAC Is Back (Code U)

5 Alarm

Knockout Chili (Code YS)

Aeronautics Technical seminar held

NASA photo by Eric James

Another presentation in the Aeronautics Technical Seminar series was given recently by Richard Jehlen, director, Planning and Procedures Air Traffic Organization System Operations Services, Federal Aviation Administration (FAA), left, and Chief National Airspace System Architect Diana Liang. This tied directly to key research issues currently being explored by NASA's Next Generation Air Transportation System (NGATS) Airspace and Airportal projects.

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