THE AMES Astrogram
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
AMES RESEARCH CENTER, MOFFETT FIELD
October 16, 1998
on-line@http://ccf.arc.nasa.gov/dx/

Safety Stand-Down Day set for October 28

On Wednesday, October 28, Ames Reseach Center will celebrate Safety Stand-Down Day in response to a directive from NASA Administrator Daniel S. Goldin.

"Safety is our most important value," said Center Director Henry McDonald, "and with that philosophy now at the core of our mission, the Center will kick off the safety accountability initiative."

Under the auspices of the new Code Q, headed up by long-time NASA test pilot Warren Hall, Ames will host a variety of events throughout this year's Safety Week, October 26 through 30. There will be over 70 safety training classes presented on Safety Stand-Down Day alone. Since many of these are legally required courses, it is a great opportunity to get these obligations accomplished, since Ames' staff won't be engaged in regular work activities on that day.

A schedule of safety training that will be available on that day is provided at the Code Q website.

There will also be a lot of fun activities on Safety Stand-Down Day, such as free refreshments and tasty 'safety cake' at the Safety Fair, where booths with safety and health information will abound. A barbeque lunch for $3 should keep everyone satisfied. Gary Plummer, recently of the 49ers, will give a short talk on safety from the stage at the Safety Fair on Durand in front of the Ames Cafe. The 49ers 'Gold Rush' cheerleaders will kick off Gary Plummer's presentation and the fun run/walk. The Gold Rushers will also welcome the runners/walkers back to more free refreshments.

Chuck Yeager, the first pilot to break the sound barrier, will speak in the N-201 Auditorium at 1:30 p.m. for about an hour. Seating is not just for managers but on a first-come/first-served basis with no 'saving' of seats for others permitted. This presentation will be played across the Center's Vidnet channel. Owen Brown, a leading engineer for satellite propulsion systems, will present a very revealing, behind-the-scenes multimedia story on

"Apollo 13: The Rest of the Story," in the N-201 Auditorium at 8:30 a.m. and 10:00 a.m. This presentation will also be shown on Vidnet.

For the latest Safety Stand-Down Day information, visit the Code Q website at: http://dq.arc.nasa.gov/

Ames celebrates National Quality Month '98

National Quality Month '98 is being observed at Ames during October. Robert Navarro, Chief, System Safety and Mission Assurance (Code QS) organized this year's observance in recognition of the hard work of Ames personnel in the development and implementation of the ISO 9001 Quality Management System. The celebration is well underway, with two of its three featured events already completed: the annual Chili Cook-off and the special speakers quality forum. The nationally renowned guest speaker event is scheduled for the 28th of this month.

The October 1 Chili Cook-off was enjoyed by over 2,000 Ames personnel. As everyone arrived to sample the tasty chili from 18 competing teams, they received voting tickets attached to an ISO 9000 questions and answers note card. The variety of savory tastes made the voting for these homemade delights very difficult. However, participants voted the trophy for the Grand Prize People's Choice to Dr. Dave's Demons for the best chili. The second place trophy went to the Chili Champs Gang, and Death By Chili received the third place trophy.

In addition, judges were on hand to sample the chili entries and also award trophies for special categories. The Ames ISO program manager Rick Serrano selected Fahrenheit 2000! to receive the world class quality chili trophy based on their quality system level procedure (SLP)-like document which detailed their preparation process.

The Chef's Choice trophy went to the South Bay Chili House. This team won a second trophy for the Best No-Bean Chili. The category 5 Alarm Chili first place trophy went to Chili With An Attitude, and the second place trophy was awarded to Road Kill Chili. The BEANie Babies won the Best Vegetarian Chili trophy. And, the Dude and the Cowgirls received the first place trophy for the Best Presentation, with the second place trophy being won by Red Hot Chili Cat.

The second event--the October 6 special speakers quality forum--set an attendance record with 175 joining this Ames Training Center gathering. Co-sponsored by the American Society for Quality, it featured John Naber--the 1976 winner of 4 Gold and 1 Silver Olympic swimming medals--and Lee Norbraten of Johnson Space Center's ISO 9000 Executive, previous contributer to Ames' successful Apollo and early Space Shuttle programs.

John Naber gave an inspirational talk relating his personal experiences of preparing for the Olympics, and his post-Olympic experiences. He also inter-mixed personal anecdotes of other Olympic champions.

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Ames ISO Web-site address: http://dqa.arc.nasa.gov/iso9000

Ames wind tunnel sound insulation project completed

Ames has completed a $33.8 million sound insulation project in the world's largest wind tunnel to help the U.S. aircraft industry design quieter engines and test advanced helicopters and other new aircraft.

During the refurbishing that began in September 1994, workers installed a dense acoustic lining in the National Full-Scale Aerodynamics Complex (NFAC). Project engineers said the acoustic modifications were needed to reduce the test section's background noise and echoes, both of which adversely affect the accuracy of sound measurement during jet engine tests.

"We now have an essentially anechoic (no echoes) wind tunnel test facility, which will allow us to conduct very accurate acoustic tests," said project manager Joe Hurlbut.

Workers installed insulation material and 1,600 acoustic panels in the floor, walls and ceiling of the wind tunnel's 40-foot-by-80-foot test section. The new custom-made metal gray panels are made of perforated sheet metal bonded to stainless steel mesh, similar to that used in automobile oil filters. The insulation material behind the panels is similar to the spun fiberglass commonly used to insulate houses. Panels measure about four square feet by 42 inches deep. The deeper the acoustic liner, the lower the sound frequency engineers can measure accurately.

"We needed to absorb the sound produced by the jet engines and helicopter rotors tested here in order to meet our research objectives," said Joe Sacco, the Ames project's test and integration manager.

Ames engineers also upgraded the wind tunnel's control system to improve efficiency; and National Electric Co., Columbus, OH, modified the wind tunnel's main fan drive system to reduce noise. The Scott Company of San Leandro, CA, served as the project's primary contractor.

Each of the wind tunnel's six fan-drive motors can produce up to 22,500 horsepower for a total of 135,000 horsepower. The motors are capable of generating air speeds in the 40-foot-by-80-foot test section of up to 345 miles per hour and up to 115 miles per hour in the 80-foot-by-120-foot test section. Each of the six fans measures 40 feet in diameter and contains 15 variable pitch blades. The wooden blades weigh 800 pounds each and measure 15 feet in length.

Hurlbut said a series of technical problems, including the discovery of cracks in the fan blades in May 1995, delayed completion of the project. The cracks have since been sealed with an epoxy resin and the blades have been wrapped with a carbon and fiberglass composite to strengthen them.

Tests are scheduled to resume in the wind tunnel following completion of the integrated systems testing later this month. In November, Ames engineers are scheduled to begin a two-month test of the Subsonic High Alpha Research Concept (SHARC) aircraft. Sponsored by the Department of Defense and the U.S. Air Force, SHARC is a design concept being studied to improve the maneuverability of jet fighter aircraft.

In late January or early February, engineers are scheduled to conduct a two-week test of the Wright Flyer replica constructed by a team of volunteers from the Los Angeles section of the American Institute of Aeronautics and Astronautics (AIAA). Test engineers will study the replica's stability, control and handling at speeds up to 30 mph in the wind tunnel.

Test results will be used to compile a historically accurate aerodynamic database of the Wright Flyer. Using the wind tunnel test data, a second Wright Flyer will be built by the AIAA volunteers and flown on Dec. 17, 2003, to commemorate the 100th anniversary of the first flight of Orville and Wilbur Wright at Kitty Hawk, NC.

Further information about the acoustic modification project is available at the project website: http://ccf.arc.nasa.gov/je/jeu2.html

BY MICHAEL MEWHINNEY

photo by Tom Trower

NASA Ames Research Center recently completed a $33.8 million sound insulation project in the 40-foot-by-80-foot test section of the National Full-Scale Aerodynamics Complex (NFAC). Joe Sacco, the project's test and integration manager, is shown standing in the wind tunnel's refurbished test section.

Professional Development Program (PDP) participants honored

A graduation ceremony was held on July 20 for NASA's 1997-98 Professional Development Program (PDP) class. This program provides competitively selected Agency professional personnel with developmental work assignments, usually of four to 12 months duration away from their home installations.

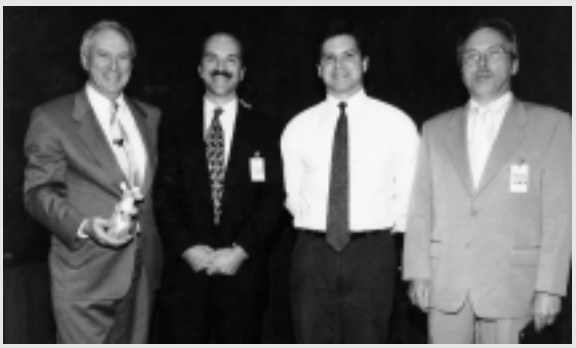
The goal of the program is to provide future NASA leaders with a broader perspective of the agency and the impact of its programs upon developing technology.

This year's PDP class included 21 participants from eight centers. In his remarks to the graduating class, NASA Administrator Daniel S. Goldin urged the graduates to become effective leaders through advanced planning which accommodates professional and personal responsibilities.

Class spokesperson J.C. Duh, from the Goddard Space Flight Center challenged his classmates and Goldin "to continue to inspire future generations with bold vision, daring to take on questions that have occupied so many intellectual minds since the dawning of civilization."

Ames had four participants in the current PDP class.

Further information about PDP opportunities can be obtained from Ames' Human Resources Division.



NASA Administrator Daniel S. Goldin with Ames PDP 1997-98 graduates from left to right: Tim Castellano, Mark Moore and David Tomko. The kangaroo, complete with baby in her pouch, in Goldin's hands represent Headquarters employee, Betsy Carter, who spent the PDP year at Ames and is currently on maternity leave prior to taking up her new permanent assignment in the Ames' Office of External Affairs.

Ames exhibit at festival well received

The weekend of September 12 and 13 marked the fifth consecutive year that Ames has reached out to our neighbors by participating in the Mountain View Art and Wine festival. This years exhibit included displays on the NASA Research and Education Network (NREN), Astrobiology, Information Technology applications, Lunar Prospector, the Space Station Biological Research Project, NASA's 40th Anniversary, and the California Air and Space Center. Visitors were able to peruse two educational CD-ROMS developed at Ames by the education group in the Office of External Affairs, as well as using software to design their own aircraft. Ames employees staffed the exhibit, interacting with a public fascinated by the breadth of NASA's work and eager to talk to 'real NASA people'.

The Mountain View show, and the exhibit at the Reno National Air Races the following week, closes out this year's public outreach program.

This years effort touched the lives of more than 400,000 people.

The public outreach program includes attending and staffing off-site events, running the Visitor Center, conducting tours of Ames, coordinating the Ames Speakers Bureau and managing the traveling exhibits program. Off-site events include airshows, county fairs and art and wine festivals. The Ames Visitor Center is an exhibit hall open to the public, that displays current and historical NASA accomplishments. The Ames Speakers Bureau matches Ames employees with organizations wanting a NASA speaker at their dinner or event. The tour program provides the public with an inside view of the research and facilities at Ames. The Ames traveling exhibits program provides NASA displays and Lunar Samples to organizations conducting public events within the eleven western states.

Families shared the joy of learning about Aeronautics and Mars by sampling the Ames developed educational CD-ROMS.

photos by Astrid Terlep

Festival attendees seek familiar places in aerial photos of Ames and the surrounding community displayed in front of the Ames tent at the recent Mountain View Art and Wine festival.

Reno Air Show draws large crowds

Enthusiastic groups of air race attendees flocked to the NASA tent and exhibits at the recent Reno air races.

Youngsters of all ages eagerly viewed the colorful exhibits, tried out the interactive software, asked questions and gathered information about NASA and Ames programs and missions. More than 30,000 people a day attended the gala event during its regular four-day run.

photos by David Morse

Local student to study in rain forest with JASON project

While most students are back in their classrooms, a ninth grade student at Fremont High School in Sunnyvale will soon be studying in the rainforests of the Peruvian Amazon.

Felix Eisenhauer, 15, is one of five students chosen from hundreds of applicants to become a "student argonaut" for the JASON Project X: "Rainforests – A Wet and Wild Adventure" March 1-12, 1999. Eisenhauer, who is sponsored by Ames, will travel to the expedition sites with Titanic-discoverer Dr. Robert Ballard and other prominent researchers.

"As a middle school student, Felix was recognized by teachers for his 3.7 GPA, musical talents as a concert pianist, and for his science skills. We are thrilled to have him representing Ames and the students of California," said Ames PIN Site Coordinator Lisa Marie Gonzales of the Office of External Affairs.

In preparation for the expedition, Eisenhauer is now visiting the Institute for Exploration in Mystic Exploration in Mystic, CN, and the Denver Museum of Natural History to study fossil rainforest specimens. Eisenhauer also is scheduled to visit the Gilford Pinchot National Forest and the Hoh temperate rainforest in Olympic National Park, WA. Eisenhauer is a member of the Gate and Lyceum Program and a teacher's assistant at the Sunnyvale Music School. A graduate of Sunnyvale Middle School, he was a member of the band and is an accomplished pianist.

Not the traditional textbook style of learning, the JASON Project uses advanced technologies to get students interested in science and technology. Through a unique system called telepresence, the JASON Project will bring the Peruvian Amazon and its inhabitants live to classrooms worldwide. The sites included in the study are the Amazon Center for Environmental Education and Research in Peru, the Hoh temperate rainforest in Olympic National Park, WA and Castle Rock, CO, the site of a 63-million-year-old tropical rainforest.

During the live telepresence activity, students will have an opportunity to climb to a height of more than 100 feet and explore the layers of forest and its inhabitants along a 1/4 mile-long canopy walkway. Back on the ground, they will peer inside an ant colony for an up-close and personal look at life beneath the forest floor. Students will also learn how native peoples have utilized the abundant natural resources for food, shelter and even medicine.

To learn more about Eisenhauer and the student argonaut program, visit the JASON Project website located at: www.jasonproject.org

Founded by international explorer Dr. Robert Ballard, the JASON Project is internationally renowned for its ability to incorporate cutting-edge technologies, a multidisciplinary curriculum, professional training for teachers and Internet communications into a comprehensive learning program.

BY MICHAEL MEWHINNEY

Child Care Center to hold art auction

An art auction and wine tasting event will be held to benefit the Ames Child Care Center on Friday, Oct. 23, at 4:30 p.m. The Ames Child Care Center (ACCC) invites on-site personnel to view and acquire beautiful lithographs, etchings, watercolors and oil paintings while sampling a variety of local wines.

Art by masters such as John Kelly, Alaniz, Neiman, Wooster Scott, Krasnyansky, Schofield, Erte, and Forrest will be for sale as well as that by lesser known but equally exciting artists from around the world. Each piece of art is beautifully custom framed and ready to hang.

Come early, examine the art, question the gallery staff on hand, and, at the sound of the gavel...all are yours for the bidding. It's an opportunity to start your holiday shopping early! The Art Auction will be held at the Moffett Training and Conference Center (Building 3). Art will be available for preview at 4:30 p.m., with the auction set to begin at 5:30 p.m. Local wines and hors d'oeuvres will also be available for attendees' enjoyment. A $5.00 donation, to be paid at the entrance, will provide participants with a wine glass to keep, their first pour, and hors d'oeuvres. Additional wine will be available at a nominal charge.

Proceeds from the art and wine sales will be used for facility improvements at the Ames Child Care Center. All are welcome. Visitors who are not affiliated with Ames will need to obtain a visitor badge to enter the Center. All checks for art purchased should be made payable to the Ames Child Care Center (ACCC). Visa, MasterCard, Discover and American Express will also be accepted.

A sampling of the art is available for viewing on the ACCC website located at: http://accc.arc.nasa.gov/home.html. Work by any particular artist or pieces of art can be requested by contacting one of the following people prior to the event: Kristine Lawrence at ext. 4-1308; Kathy Lee at ext. 4-5051; Karen Traicoff at ext. 4-4066; Liz Hendley at ext. 4-3873; Kim Hines at ext. 4-4911 or Rachel Khattab at ext. 4-5237.

Code JT Software Services

Whether you're just upgrading your Eudora e-mail software or you need to install Microsoft Office on fifty new systems, Code JT's Software management project has set up systems to help. From an easy download at the ARCLIB web site at: http://arclib.arc.nasa.gov/ to custom-configured CD-ROMs for a major deployment, their goal is to make it easy to use centrally managed software.

Code JT provides a variety of commercial software for all major platforms. Offerings include popular titles like Microsoft Office 97/98, Netscape Communicator Pro, Norton Antivirus and Eudora Pro, as well as special purpose software like MacX, LinkUPPP, Hard Disk Toolkit and the Netscape Suite Spot server package.

Most software is available via download from the ARCLIB web site. Many Windows and Macintosh packages are also available from a central file server known as the Ames Server.

Windows clients can connect by choosing Find/Computer from the Start menu and entering Ames Server in the search field. From a Mac use the Chooser to find Ames Server in the ARCLAN AppleTalk zone. Many of the larger packages can also be provided on CD-ROM. For installations such as Microsoft Office 97, many organizations choose to place the installer on a local file server for speed and ease of access from within their domain.

Special purpose packages, such as the Suite Spot servers and FWB's Hard Disk Toolkit, are distributed on an as needed basis to System Administrators or other specific individuals. This type of software often has more stringent licensing requirements than other packages and so is not made available on public servers.

In conjunction with software distribution, Code JT also can be used as a clearing house for software licensing information. If your organization is considering a major software purchase or upgrade, Code JT can help compare what you need to what's already available, or provide information on NASA-specific deals from various vendors. In many cases, Code JT has been able to help organizations save considerable money and time.

For more information on the software available from Code JT or for any software licensing questions, please contact the author at ext. 4-2632 or via e-mail at acarter @mail.arc.nasa.gov.

BY ALLEN CARTER

NASA developing software to improve spacecraft docking

Docking one spacecraft with another will be much easier thanks to smart computer software being developed at Ames. The neural net software will 'learn' the motion behavior of a spacecraft as it flies so that it will not undershoot or overshoot docking targets.

The Ames 'neurocontroller' will be able to automatically dock a spacecraft of unknown mass with another by flying the spacecraft short distances in different directions and learning the handling characteristics of the craft, according to Dr. Robert Mah, an Ames research scientist.

"The neurocontroller automatically enables precise, safe docking by learning just as human beings learn--by experiencing the handling of the spacecraft," Mah said. The neural net software used in the controller is similar to that used to automatically focus home camcorders.

"Current methods used to dock spacecraft will be improved to make docking easier for astronauts," Mah said. "Docking a spacecraft by manual joystick control depends on the skill of the operator."

Manual docking can be slower than desired, and in some cases precious fuel can be wasted. Conventional software has been used to automatically dock spacecraft, when the spacecraft mass properties

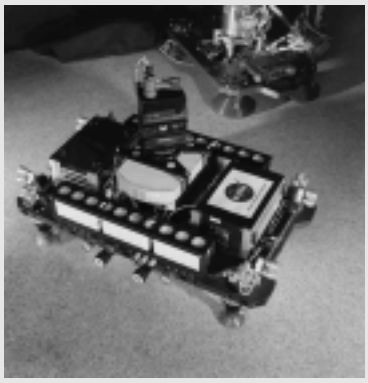


photo by Tom Trower

Spacecraft docking test vehicle floats on cushion of air over granite table in an Ames IT lab.

are known, according to Mah. "But conventional automated docking doesn't work well when the exact mass is unknown or changing robot arm positions alter spacecraft flight characteristics," Mah said.

A future 'worker bee' spacecraft that would be used during construction in space, might grab a construction part and rotate it, according to Mah.

"The arm and the part held by the spacecraft have a tendency to keep rotating," he added.

In contrast, the same spacecraft equipped with the neurocontroller would immediately learn the new "feel" of the way the spacecraft rotates in space while firing its impulse jets. The smart software would then precisely slow the spacecraft's rotation by "burning" the jets for just the right amount of time.

The Ames neurocontroller has not yet been tested in space. "We hope to do space tests eventually, but first we need to fine tune the software in the lab, making more realistic simulations with test vehicles floating on a cushion of air over a special granite table," Mah concluded.

More information about the Ames spacecraft neurocontroller can by found on the Internet at URL:

http://ic-www.arc.nasa.gov/ic/projects/neuro/SMART_SYSTEM/index.html

BY JOHN BLUCK

Flu Clinic begins in October

Flu season is almost upon us, and it's time to get your influenza vaccine at the Ames Health Unit. Health Unit staff will be administering the vaccine to all resident staff (contractors and civil servants) and retirees (no spouses) on Tuesdays and Fridays from October 20 through November 27. There will be two clinics a day, one in the morning from 9:30-11:30 a.m., and another in the afternoon from 1:30-3:00 p.m.

The vaccines will be given on the following dates: October 20, 23, 27, 30; November 3, 6, 10, 13, 17, 20, 24, 27.

Appointments are not required, however, vaccines will be administered only during the specific clinic hours listed above.

The Health Unit staff requests that those wishing to be vacinated wear short or loose fitting sleeves to eliminate the need for private rooms.

Be on the lookout for a centerwide e-mail that will be distributed in October. It will include an information sheet/consent form that individuals should bring with them when they come in.

For more information, contact the Health Unit at ext. 4-5287.

ACCC fundraiser to be held

On Tuesday, November 5, the Learning Express Toy Store will host an evening of shopping for the benefit of the Ames Child Care Center (ACCC). Everyone is welcome to come and shop between 6 p.m. and 8 p.m., and Learning Express will donate 20% of the proceeds from all purchases to the ACCC.

Learning Express is an award-winning toy store providing its customers with an exceptional selection of domestic and imported toys, books, games, puzzles, arts and crafts and science-related products. The store is located at Hacienda Center, 781 East El Camino Real, Sunnyvale.

Funds raised at this event will be used to support the ACCC's music and science programs and to purchase classroom and playground equipment. This event is a great opportunity to take care of holiday shopping and support the on-site childcare center at the same time. Please join us! POC: Debbie Wood at ext. 4-0256.

Information technology expo scheduled

A "SDB High-Tech Expo" for FY '99 will be held at the Ames Cafe's Atrium and Galileo Room on Thursday, October 22. The event will take place from 10:00 a.m. to 2:00 p.m. and will feature the latest in computing and communications technology. All personnel are invited to attend.

Exhibitors will be on hand to demonstrate products and answer questions. Come see the latest in Y2K Solutions; Advanced Presentation Systems; Internet Imaging Technology; Intelligent LAN Switches With Proactive Security Monitoring and Attack Detection; Infared Technology; Real-Time 3D Terrrain Database Generation Toolkits; Computer Systems, Peripherals and Technical Software Including AutoCAD and AEC Imaging; Autodesk Software Training; Data Recovery; Data Visualization; Workstations; Solutions For Operations, LAN and Telecommunications Hardware Storage; Ruggedized Systems and Removable Storage Subsystems; Data Management Including Data Warehouse Development Tools; and other IT Products and Services!

There is no fee to attend and complementary refreshments will be served. For more information, visit www.fedpage.com/events, e-mail fbcwest@fea.net, call (800) 247-6353; or contact Tom Kolis at ext. 4-4690, or e-mail him at: tkolis@mail.arc.nasa.gov.

Ames celebrates National Quality Month '98

continued from front page

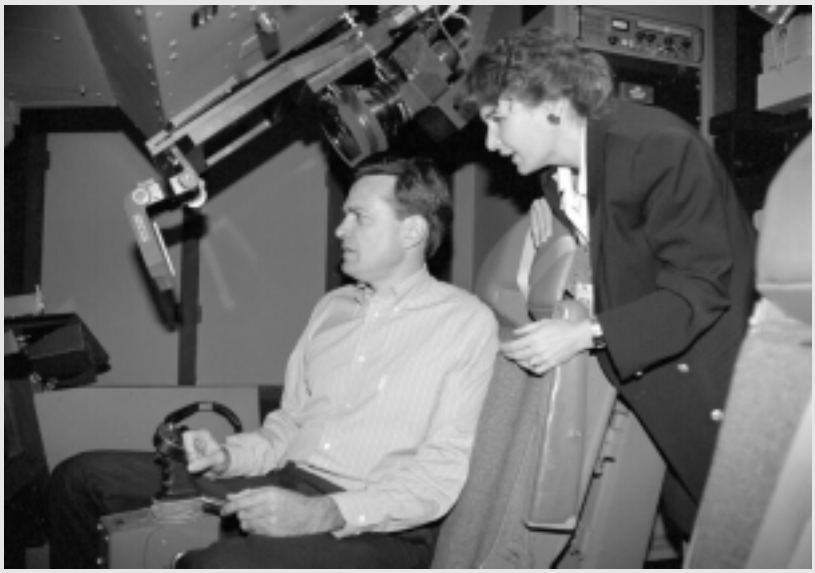
He encouraged everyone to exercise their freedom, set goals, and follow specific guidelines for their achievement. He related Eight Steps to achieving gold metal performance that led to his success and offered them to Ames attendees. They are: 1) have a dream with an emotional attachment, 2) set a realistic goal, 3) firm up a strategy, 4) set a timeline for achievement, 5) have intermediate stepping stones, 6) expect hard work, 7) maintain will power, and 8) deliver under pressure.

In his presentation, Lee Norbraten spoke about the Johnson Space Center ISO 9000 certification success as he led listeners through new insights into the benefits of ISO 9000 implementation to an organization. Mr. Norbraten suggested that, instead of working ISO 9000 as a project which would end at some time, Ames should implement it as a state-of-the-art management system with an ongoing life. Norbraten believes that having a state-of-the-art management system is consistent with Ames being a state-of-the-art research center.

Norbraten related that not only must everyone understand ISO 9000, they must also feel they are a part of the implementation. With a mindset of "implementation" of ISO 9000 vs. "compliance with" ISO 9000, he believes successful implementation can be achieved, and that it will reduce overhead and improve efficiency.

The final event for the month--the October 28 nationally renowned guest speaker event--will feature Chuck Yeager. Mr. Yeager is an aviation pioneer and an original astronaut who recently celebrated his 50th anniversary of breaking the sound barrier. His visit to Ames and his presentation will highlight Ames' top priority--safety and quality initiatives. Ames personnel are invited to hear this aerospace pioneer share his historic experiences in the N201 auditorium from 1:00 p.m. to 2:00 p.m.

KRON's Brian Hackney visits Ames



NBC's KRON-TV Channel 4 science and technology editor Brian Hackney visited NASA Ames Research Center recently. During his visit, he broadcast five live updates from the Vertical Motion Simulator for the Daybreak newscast and delivered a keynote address at the Combined Federal Campaign (CFC) kickoff event in the main Ames Auditorium. Hackney is a space enthusiast, and visits the Center frequenctly to inform Bay Area communities about NASA and Ames programs and missions. His live updates from the Ames Visitor Center were a key element in the success of last year's Open House event that drew nearly a quarter of a million people to Ames.

photos by Dominic Hart

Intern requests now being accepted

Requests for Foothill-De Anza Community College interns are now being accepted for the winter quarter. These students will start their internships in January, 1999.

Organizations wishing to sponsor a student must complete a position description form and return it to the Internship Office by October 27, 1998.

The cost for a new student for the 1998-1999 grant year will be $11,500-$11,700. Funding will be paid in two installments. Forty percent (40%) of the annual cost will be committed in December 1998 and the remaining balance of sixty percent (60%) of the annual cost will be committed in June 1999.

Students work 20 hours a week during the school year and 40 hours a week during the summer. Foothill-DeAnza staff members who coordinate the program are located in Trailer 23-B, ext. 4-5560.

For additional information about the program and to request position description forms, call Mary Conway at ext. 4-5560 or you can e-mail her at: mconway@mail.arc.nasa.gov.

Questions regarding commitment and obligation of funds should be addressed to Maria-Elena Lopez (Mel) at ext. 4-6882 or e-mail to: mlopez@mail.arc.nasa.gov.

Administrator Goldin's statement on NASA's 40th anniversary

Forty years ago in 1958, the National Aeronautics and Space Administration was created with the boldest and most noble of missions: to pioneer the future. We were told to explore new frontiers and enhance life here on Earth. We were asked to inspire; we were expected to inspire. Forty years later, thanks to an American public with an unquenchable thirst for knowledge and a relentless sense of adventure, NASA has delivered.

Think about this: Forty years ago, jet passenger service was a novelty. Global communications meant a telephone line laid across the bottom of the Atlantic Ocean. When NASA was first getting started, the only way to track hurricanes was to fly planes directly over and into the storms. Our universe -- even the cosmic neighborhood just above our atmosphere -- was a mystery. In 1958, sending humans to the moon was pure science fiction.

But we dared to dream. We imagined what could be possible.

And then along with our partners in industry and academia, we went to work.

In 1998, hundreds of millions of people ride American jets each year and new designs for flight go higher, faster and farther than ever before. Global space communications have helped create a global community. Weather satellites can detect the early evolution of an El Niño condition months in advance. There are still many mysteries to be solved, but Voyager, Galileo, the Hubble Space Telescope and other planetary and astronomy missions have circled neighboring planets, given us our first direct evidence that black holes exist, and begun to peer back at the very beginning of our universe. A space program that is forty years old has sent astronauts to the moon, robots to Mars, spacecraft to the furthest reaches of our solar system, and soon will help build the International Space Station. And for every step we take out there, we have contributed to a better quality of life right here. That is true whether it be the "spin-off" technology that helps us detect breast cancer earlier, or the child who looks up and knows that no longer is the sky the limit; it is the stars and beyond.

NASA has had a great forty years, but what the American people can be most proud of is this: when it comes to pioneering the future, we are just getting started. What will always define this aeronautics and space program -- and this country -- is our firm belief that there will forever be something to invent, somewhere to discover, someplace to visit.

Rest assured, NASA will do its best in the next forty years to find out just what and where that will be.

-- Daniel S. Goldin --

Ames employee receives '97 H. Julian Award

Dr. Jeff Scargle was recently selected as the recipient of the 1997 H. Julian Allen Award for best technical paper. His paper entitled "Studies in Astronomical Time Series Analysis. II. Statistical Aspects of Spectral Analysis of Unevenly Spaced Data" has received over 480 citations since its publication in the Astrophysical Journal in 1982.

photo by Dominic Hart

Dr. Jeff Scargle, left, recipient of the H. Julian Award, speaking with Dr. Henry McDonald, who presented him with the award.

The paper addresses the problem of detecting periodic signals hidden in noisy data, where data sampling is at unevenly spaced intervals. Scargle redefines the periodogram, a basic data analysis function, so that it has correct statistical behavior.

This solution to the data analysis problem, and computer codes based on this algorithm, have been widely adopted in the astrophysics community. This work has seen a renewed enthusiasm as the technique has been adopted for use in the detection of extrasolar planets from measurements of the parent stars. Specifically, it has been adopted by leading planet discoverers, such as Dr. Geoff Marcy, to analyze radial velocity data. This work has general applicability to a large number of fields, as evidenced by citations from many scientific journals.

The paper is a landmark in its field and very deserving of the H. Julian Allen Award. To celebrate this event, Dr. Scargle was presented with the award on September 15 in the Space Sciences auditorium of building 245.

Center Briefs

Earth Sciences instrument program participants announced

NASA's Office of Earth Sciences has begun a new program to develop and demonstrate new measurement technologies through ground-based laboratory activities. The Instrument Incubator Program (IIP) will reduce the risk, cost, size, and development time of Earth-observing instruments and enable new Earth-observation measurements.

SeaWiFS completes a year of remarkable earth observations

For the first time in history, NASA is releasing dramatic images documenting the Earth's changing biology, both on land and in the oceans, as observed from space for one continuous year.

The changing seasons of life, the "pulse of the planet," are being monitored by the Sea-viewing Wide Field-of-view Sensor (SeaWiFS), which was launched on Aug. 1, 1997, and has produced data continuously since Sept. 18, 1997.

Among the highlights of SeaWiFS' first continuous year of observation were new insights into the impact of the El Niño climate anomaly on ocean life. Further, SeaWiFS was able to monitor a variety of natural disasters, including fires in Florida, Mexico, Canada, Indonesia and Russia; floods in China; dust storms in the Sahara and Gobi Deserts; and the progress of hurricanes, such as Bonnie and Danielle.

NASA contributes technology to war against cancer

In observance of October as Breast Cancer Awareness Month, NASA is releasing information on new ways aerospace research and technology is helping in the understanding, detection and treatment of all types of cancer.

A NASA fact sheet available on the Internet highlights diagnostic technology currently available and features NASA research and technology that may improve cancer diagnosis, surgical procedures and drug therapies in the future. The website address is: http://www.nasa.gov/women/welcome.html

Five critical cancer experiments will be conducted on the upcoming Space Shuttle mission, STS-95, currently targeted for launch on Oct. 29. A fact sheet describing these experiments will be available closer to launch.

Cancer is the second leading cause of death for Americans. According to the National Cancer Society, 564,800 Americans are expected to die of the disease this year--more than 1,500 people a day. Men have a one in two lifetime risk of developing cancer and for women the risk is one in three. The National Cancer Institute estimates overall annual costs for cancer at $107 billion.

Tremendous gamma-ray flare blasts Earth

An intense wave of gamma rays, emanating from a catastrophic magnetic flare on a mysterious star 20,000 light years away, struck the Earth's atmosphere on August 27, 1998, providing important clues about some of the most unusual stars in the Universe. Scientists said the gamma radiation posed no health risk to humans.

NIAC representative visits Ames in search of new ideas

In search of "revolutionary ideas" for future aeronautics and space exploration projects, the director of a new institute created by NASA to award research grants and contracts visited Ames recently. His purpose was to meet some of the center's advanced technology visionaries.

Dr. Robert Cassanova, director of the NASA Institute of Advanced Aerospace Concepts (NIAC), met with Center Director Dr. Henry McDonald and other senior managers during his Sept. 16 visit. Hosted by Dr. Larry Lasher, the Center's representative for NIAC, and accompanied by Sharon Garrison, the agency's Contracting Officer's Technical Representative (COTR) for NIAC from Goddard Space Flight Center, Cassanova also toured Ames and met with numerous aerospace scientists, engineers, and program managers.

"We're looking for innovative ideas--concepts that stretch the imagination," Cassanova said. He said NIAC was formed to provide an independent, open forum for the external analysis and definition of space and aeronautics advanced concepts to complement the advanced concepts activities conducted with the NASA Enterprises.

"NIAC will have advanced concepts as its sole focus," Cassanova said. "It shall focus on revolutionary concepts; specifically, systems and architectures that can have a major impact on missions of the NASA Enterprises in the time frame of 10 to 40 years in the future."

During his visit to Ames, Cassanova received briefings on a wide variety of subjects, including Information Technology, the NASA Research and Education Network (NREN), Numerical Aerospace Simulation (NAS), space technology, Astrobiology, air traffic management, surface movement advisor, and rotorcraft technology.

Established earlier this year by the Universities Space Research Association, Columbia, MD, NIAC is funded by a three-year, $10.5 million contract awarded by Goddard Space Flight Center. Although the scope of the NIAC is based on the National Space Policy, the NASA Strategic Plan, the NASA Enterprise Strategic Plans and future mission plans of the NASA Enterprises, the institute is not part of NASA.

"The NIAC has been formed for the explicit purpose of being an independent source of revolutionary aeronautical and space concepts that can dramatically impact how NASA develops and conducts its mission," Cassanova said. NAIC will focus on advanced concepts for major systems and architectures.

Proposals will undergo a peer review process to determine the winners of the research grants. Grants will be awarded in a two-phased approach. In the first phase, six-month research grants ranging from $50,000 to $75,000 will be awarded to validate the viability of the advanced concept under consideration. During the second phase, two-year research grants awards of up to $500,000 will be awarded to enable the recipients to study in greater detail their concept's cost, performance, development time and key technology issues. NIAC plans to seek new proposals for each year of its three-year contract.

photo by Roger Brimmer

Dr. Roger Cassanova, director of the NASA Institute of Advanced Aerospace Concepts (NIAC), is shown admiring a display in the lobby of the Numerical Aerospace Simulation (NAS) Facility during a recent visit to NASA Ames Research Center. During his Sept. 16 visit, Cassanova met some of the Center's advanced technology visionaries to discuss new ideas for future aeronautics and space exploration projects.

NIAC is headquartered in Atlanta, GA. Prior to becoming director of the NIAC, Cassanova served as the director of the Aerospace and Transportation Laboratory in the Georgia Tech Research Institute.

Further information about the NIAC is available on the project website: http://www.niac.usra.edu/

BY MICHAEL MEWHINNEY

Calendar

Jetstream Toastmasters, Mondays, 12 noon to 1 p.m., N-269/Rm. 179. Guests welcome. POC: Jenny Kahn at ext. 4-6987 or Pam Walatka at ext. 4-4461.

Ames Bowling League meets at Palo Alto Bowl every Tuesday at 6 p.m. The league is in need of substitute bowlers. POC: Mina Cappuccio at ext. 4-1313.

Ames Ballroom Dance Club, Tuesdays, October 6, 13, 20, 27, Beginning Waltz, 5:15 p.m. - 6:15 p.m., Practice 6:15 p.m. - 7:15 p.m., Moffett Training and Conference Center, Bldg. 3/Showroom. POC: Deb Narasaki at dnarasaki@mail.arc.nasa.gov. ABDC Website: http://pcardinale.arc.nasa.gov/ABDC/.

Ames Child Care Center Board of Directors Meeting, Wednesdays, 12 noon to 1 p.m., N-213/Rm. 204. POC: Debbie Wood at ext. 4-0256.

NFFE Local 997 Union General Meeting, Oct 21, 11:30 a.m. to 12:30 p.m., Bldg. 19/Rm. 1040. POC: Marianne Mosher at ext. 4-4055.

Ames Multicultural Leadership Council Meeting, Oct 21, 11:30 a.m. to 12:30 p.m. in the Galileo Room of the Ames Cafe. POC: David Morse at ext. 4-4724 or Sheila Johnson at ext. 4-5054.

Native American Advisory Committee Meeting, Oct 27, 12 noon to 1 p.m., Ames Café. POC: Mike Liu at ext. 4-1132.

Ames Contractor Council Meeting, Nov 4, 11 a.m., N-200/Comm. Rm. POC: Greg Marshall at ext. 4-4673.

Hispanic Advisory Committee for Employees, Nov 5, 11:45 a.m. to 12:30 p.m., N-239/Rm. 177. POC: Carlos Torrez at ext. 4-5797.

Environmental, Health & Safety Monthly Information Forum, Nov 5, 8:30 a.m. to 9:30 a.m., Bldg. 19/Rm. 1078. POC: Linda Vrabel at ext. 4-0924.

Ames African American Advisory Group Meeting, Nov 5, 11:30 a.m. to 12:30 p.m., N-241/Rm. 237. POC: Mary Buford Howard at ext. 4-5095.

Nat'l Association of Retired Federal Employees, S.J. Chapter #50, Meeting, Nov 6, at the Elk's Club, 44 W. Alma Avenue, San Jose. Social hour: 10:30 a.m. Prog. & bus. mtg. follow lunch at 11:30 a.m. POCs: Mrs. Leona Peery, Pres., (650) 967-9418 or Earl Keener, Public Relations, (408) 241-4459.

Professional Administrative Council (PAC) Meeting, Nov 12, 10:30 a.m. to 11:30 a.m., Location TBD. POC: Janette Rocha, ext. 4-3371.

Ames Sailing Club Meeting, Nov 12, 11:30 a.m. to 1 p.m., N-262/Rm. 100. POC: Greg Sherwood at ext. 4-0429.

Ames Asian American Pacific Islander Advisory Group Meeting, Nov 19, 11:30 a.m. to 1 p.m., N-241/Rm. B2. POC: Daryl Wong at ext. 4-6889 or Brett Vu at ext. 4-0911.

Ames Amateur Radio Club, Nov 19, 12 noon, N-260/Conf. Rm. POC: Walt Miller, AJ6T at ext. 4-4558.

Ames Classifieds

Ads for the next issue should be sent to *astrogram@mail.arc.nasa.gov* by the Monday following publication of the present issue and must be resubmitted for each issue.

Housing

Wanted: minimal living accomodations. Work at Ames, home in Clearlake. Gone weekends. $250-$375 Gloria 650-969-5250 4-2045 ghovde@mail

Room for rent in SouthEast San Jose. Avail Oct. 16. $400 per mo. plus dep. and utils. Call (408) 729-1994.

Share 3/2 house, private bed & bath in 1600 s.f. house in lovely Willow Glen within walking distance of historic downtown district. Large 1/4 acre lot w/fruit trees & quiet, shaded deck area. Prof. female seeks responsible, clean individual to share my home. Male or female, N/S, with no pets. Close to H280 & H87. Private phone line. $750/mo + 1/2 utils. Call (408) 971-6325.

For sale: 4 bdrm, 4 ba, 3,314 sf, guest quarters w/ kitchenette, $409,000, 1035 Brookview Ct, Morgan Hill. Call (408) 683-0262.

For sale: town house in North San Jose. 2 bd/ 1 1/2ba, 988 sq. ft end unit in quiet neighborhood. 2 Car carport. Includes washer/dryer/dishwasher/refrigerator, and wall to wall carpeting. Low HOA. Priced to sell at $166,000. Nelly or Paul (408) 926-4033.

For rent: 3 bd/2 ba house. 85/Camden San Jose. N/S, pet OK. $1,775/mo + dep. Call (408) 978-7860.

Spacious townhouse in Palo Alto for rent - 2 bd/2 1/ 2 ba, large kitchen, din. rm, fam. rm, plus sep. rm for office/extra bdrm. Attached 2-car garage, exc. neighborhd for children, close to elem. schools. Cable TV incl. Desirable mid-town location/easy access to freeway. $1850/mo. Call (408) 255-7346 or (408) 345-3263.

For rent: NS, person to share 3bd/2ba with 2 of same. Incl. BR & LR w/fireplace. Kitchen and W/D access. Digital Cable. Phone not incl. Avail now. $600 + 1/3 util. First/last month, plus $350 dep. Call (408) 297-8959.

Transportation

'62 Chrysler Newport, 361cid V8, push button gears, "space age" instruments. Not running. Not licensed. A restoration project! $250. Mike (510) 276-9415.

'72 VW camper with Adventurewagen top. 1.9L rebuilt engine, 5K mls on new transmission. New clutch. Exc. cond. Sleeps 4 with sink, icebox, water tank and lots of storage. Great camper. B/O. Call (408) 378-2064.

'76 Ford Granada 4-door, 62K orig mls, V-8, AT, normal equipment, interior in good shape,everything works, starts/runs strong, needs valve job on #7 cylinder to run perfect. $600 firm. Call (408) 395-6477.

'77 Toyota Corona Wagon, 5 spd, 141K mls, good condition. $1,000. Call (650) 364-9572.

'78 Pontiac Firebird Esprit, 231cid V6, ps, pb, am/fm stereo, tilt wheel. Runs well, needs body and brake work. $500. Mike (510) 276-9415.

'85 Corvette, wht/gry, 4-speed, 63K mls. Runs/ Looks great, needs minor repairs & tires. $9,500, B/O. Call (408) 377-4053.

'89 Isuzu Amigo, 2WD, 93K mls. Hard top, Back seat. Run's great. $4,000, B/O. Call (408) 377-4053.

'89 Ford Aerostar XLT 7 passenger minivan, burgangy-excellent condition, w/cruise control, A/C, computerized system, tilted steering wheel, $7,000, negotiable. Call (408) 732-9309.

'91 Alfa Romeo 164S, 4-door, 6cyl, 79K mls, cassette, A/C, leather interior, sun roof, all electric, $7,950 or B/O. Tina (650) 563-9709.

'94 Chevy S-10 Truck, 120K mls, white w/gray interior, A/C, orig. owner, $6,900 or B/O. Ronald (650) 688-9202.

'94 Saturn SC2, 55K mls, midnight blue, AT, a/c, Pioneer CD detachable recvr, Bazooka bass tube, prem sound, tint, bra, spoiler, K&N, Splitfire plugs, alarm, new battery, well maintained. $8950. Email: jimmy@osprey.arc.nasa.gov

'98 Dodge Caravan, loaded, 5K mls, 7 year service contract, $18,499 or B/O. Call (408) 257-5737.

Ames Retirements

Name	Code	Date
Janet Carson	C	09-30-98
Dale R. Costa	FMM	09-30-98
Judith Vandonzel	SS	09-30-98
Stephen R. Kanally	JFP	09-30-98
Barbara R. McKeag	JAZ	09-30-98
Rod Bailey	APM	09-30-98
Sukie Stanley	SL	09-30-98
Peggy M. Brown	IHS	09-30-98
Glenn C. Carle	SSX	10-03-98

'98 Harley Fat Boy, a piece of art. Limited Anniv. Edition, immaculate collectable, lots of extras, 1,200 mls, moving/must sell, $23.5K or B/O. Call (408) 464-3036.

Miscellaneous

Barbie collection, '95, '96, '97 Holiday, Peppermint and Jewel Princess and Winter Fantasy Barbies. Sold together, $275. Call (408) 979-9107.

Exercise bike, Schwinn Airdyne with reading stand, barely used: $300 or B/O; large oak coffee table (2.5 ft x 5 ft), light oak with herringbone pattern on top: $75. Rocelia (408) 246-8432.

Laquered, solid brass sink faucet for 8" hole separation. $25. Call (408) 295-2160.

Large mirror, 100" by 72", you pick up from Cupertino. Free. Sandy (408) 249-0920.

Bunk bed, black metal, single mattress top, double futon bottom (makes into sofa). $75. complete. Call (408) 847-9106 in Gilroy after 6:30 p.m.

Dependable, mature, NASA intern available for house/pet/plant sitting. Very flexible, price negotiable, references avail. Katie (408) 860-6068.

Large solid (blonde) oak desk with regular and file drawers, $200 or B/O. Stainless steel water distiller, $65 or B/O. Futon couch/queen bed, very comfortable sitting or sleeping (pretty too), $75 or B/O. Call (408) 296-8182 (eve).

New Sharp MiniDisc portable recorder/player MD-MS722. $340. Email: xiaoliangchen@hotmail.com. Call (650) 766-2384.

Nintendo 64, with 2 controllers & James Bond GoldenEye game. Nearly new. $105. Call (650) 364-9572.

Two (2) tickets to Golden Gate Theater to see "Bring in 'Da Noise, Bring in 'Da Funk!," November 21, 8:00 p.m. Seats are lower balcony, row B, seat 108/110. $105. for both. Call (408) 395-8326.

BMW 13" alloy wheels and tires for 320 series car. Set of four in great shape, $90 each. Tim (408) 241-1063.

Beautiful solid oak bunk bed set w/2-drawer chest (mattresses not inc.) by Stanley. $500 firm. Maytag washer $85. Call (408) 247-3632 (eves).

Whirlpool apartment size washer with sink hookup and electric dryer. Service agreement until October 2000. $500. Call (408) 773-1773.

Apple Powerbook 5300cs, 16MB RAM, 750MB HD, Timbuktu Model/LAN card, all accessories + Targus deluxed carrying case included. $875. Ray (415) 285-8084 or email at: rayo@ippresents.com.

Craftsman 10" table saw w/cast iron table extensions w/Sysmatic combination blade, Biesmeyer 28" t-square fence system w/custom oak extension/router table w/ router fence (w/switched power), contractor saw performance pkg pulley system, dust collection & roll around base. $700. Tom (408) 248-1281.

Vacation rental

Houseboat for rent on "Trinity" Lake in No. CA (Claire Engle Lake). Sleeps 8, kitchen, bathroom w/shower. Floating heaven. $1,200 week. After Sept 9, $850 per week or $480 for 3 days (until October). URL site: www.wildhorses.com/houseboat.html or email at: pam@wildhorses.com

Lake Tahoe-Squaw Valley Townhse, 3br-2ba, View of slopes, close to lifts. Wkend $400, midwk $150 night. Includes linens, firewd, cleaning service. Call (650) 968-4155, or email at: DBMcKellar@aol.com

"Halloween Get Together"

The NASA Exchange will be hosting a "Halloween Get Together" on Friday, October 30 from 2:30 p.m. to 3:30 p.m. in the Ames Cafe. Stop in to meet your friends, wear a costume to scare your colleagues, or drop by to have a laugh at your co-workers!

Wear a costume and join in the Costume Contest. Judging will begin at 3 p.m. Cash prizes will be awarded for the Best Overall ($100), Scariest/Ugliest ($50), Funniest/Cutest ($50) and Most Creative/Unique ($50).

Complimentary cake and punch will be served. For more information, contact Deborah Renick at ext 4-0290 or e-mail at drenick@mail.arc.nasa.gov.

Holiday catered lunch special

Eurest can provide catered holiday lunches featuring carved turkey w/cranberry sauce or baked honey ham. All dinners include mashed potatoes with gravy, fresh vegetable, rolls with butter, and choice of pumpkin or pecan pie. Hors d'oeuvres and holiday cocktail parties are a specialty! Prices start at $5.00 per person. For reservations, call The Ames Café at ext. 4-5969. We cater any day of the week! We cater anywhere! Sponsored by the NASA Exchange.

Ames' women's team excels

The NASA Ames' women's team consisting of Lisa Marie Gonzales, Leigh Ann Tanner, and Sylvia Chen finished 6th out of 68 teams at the Chase Corporate Challenge. The 3.5 mile road race was held in San Francisco on August 12. Next year, the team plans on running even faster!

10 K Fun Run set for Oct 20

Meet in Hangar One to register before the 11:30 a.m. start. No cost/no pre-registration. Since so many ask--a 10K translates into a 6.2 mile run. This race will take you from inside Hangar One, around the air strip, through the golf course and back into Hangar One.

Come enjoy a great, flat, fun 10 K run. Refreshments and prizes will be given out at the finish line.

Fall Fun Run and Walk (2 miles) set for Oct. 28

All Ames personnel and their guests are invited to participate. The walk/run begins at 12 noon on McCord Avenue near King. Ribbons and refreshments will be available at the finish line (near the Cafe). Fun Run T-shirts plus registration fee are only $11.

The registration fee without the shirt is $2. Pre-register with an event coordinator or at the Fitness Center. Registration will also be available at the starting line on race day. A sign-up form and registration fee must be submitted for each participant. Bring a friend to walk or run just for fun! Call Nancy Dunagan at ext. 4-5804 for more details. Sponsored by the Fitness Center.

Moffett Hair Salon

A salon for women, men and children featuring designer cuts, highlighting, permanents hair treatments, and coloring consultations. Call for an appointment at ext. 3-9916. Hours: Tuesday through Friday 8:30 a.m. to 5 p.m. and Sat 9 a.m. to 3 p.m.

Gift Shop sale

The NASA Exchange Gift Shop is pleased to announce that beginning Monday, September 14 and every Monday until further notice they will have a "Threat CON Bravo" sale for all badged employees, including contractors, students and interns. A fifteen percent discount will be offered on all gift shop merchandise.

This is a great time to begin holiday shopping! The Gift Shop is located in Bldg 223. Hours are from 8:00am to 4:30pm, Monday through Friday. Call Janine Ciffone at ext. 4-4948 for further information.

Pumpkin Cutting Contest set

Yes, the Ames Exchange is sponsoring a Pumpkin Cutting Contest! Bring in your carved pumpkin with your name and phone number on the bottom (hidden from view) by 10am on Friday, October 30th. Ames employees are welcome to stop by the Ames Cafe at lunchtime to vote for their favorite pumpkin in the Galileo Room. Cash prizes will be awarded for best overall ($50), second place ($30) and third place ($20).

THE AMES Astrogram

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Managing Editor.....David Morse
Editor.....Astrid Terlep

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