

"It's magic!" (see story pgs. 6-7)

THE AMES

Astrogram

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

AMES RESEARCH CENTER, MOFFETT FIELD

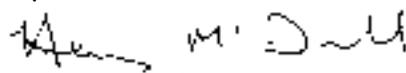
December 11, 1998

on-line@<http://ccf.arc.nasa.gov/dx/>



Season's Greetings

On behalf of the entire senior management staff at Ames, I extend season's greetings to all Center personnel and their families. May this magical holiday season prove to be a joyous and happy one for all of you.


Dr. Henry McDonald, Ames Center Director

Holiday safety tips from Protective Services

The holiday season is once again here. Unfortunately, more traffic accidents occur with the increase in road traffic due to travel to visit family and friends. Also with holiday celebrations and more inclement weather, the chances of accidents and other driving incidents rise. The NASA/Ames Protective Service Office offers the following driving tips to make your holidays safer:

- If you attend any celebrations, do not drink and drive. Have a designated driver, or call a taxi. You risk your health as well as your freedom if you drink and drive.

- Always wear your seatbelts. Not only are you safer, it's the law!

- When driving during inclement weather, slow down! Give yourself at least 4 seconds between you and the car in front of you. Make this reactionary gap longer with wet or icy road conditions.

- In the mountains, be aware of black ice conditions. If you have an all-wheel or 4 wheel drive vehicle, read the operator's manual to learn the proper way of driving your vehicle. Even on sunny days, black ice can be on the roadway in shady areas.

As always, use common sense and courtesy when driving. We've all heard about "road rage," and some of us may have been victims of such actions. If you are confronted by such a situation, do not react, but rather, drive to a populated and well-lit

area, and ask for someone to call 9-1-1. Do not confront the person yourself. This very well could escalate the situation and become physically dangerous to you or your loved ones.

If you have a breakdown on the road, stay with your car, raise the hood and put on your emergency flashers. Stay inside with the doors locked. Only open them for an emergency worker such as a police officer or firefighter.

In the event of an accident, do not move any injured victims, unless there is an immediate threat of fire. Keep the victims still, and try to keep them warm with a blanket or jackets until help arrives. Do not perform first aid unless you have been properly trained.

Avoid using your cell-phone while driving. Telephoning can distract you from operating your car safely. If you have to use the phone, pull off to the side of the road, and make your call.

If you are tired, pull off the road, and take a quick nap, or get a cup of coffee. There is no sense in trying to rush through a trip if the weather, traffic or your fatigue conspire against you to make it unsafe. A large number of accidents every year are caused by fatigued drivers.

Before taking that trip, make sure you have had your car checked by a competent

mechanic. Always have the brakes, fluids, tires, hoses and belts checked. Have worn belts and hoses replaced. But just in case, you should carry some emergency items in your car:

- Road flares or reflectors. Make sure you know how to use these items before you must use them. Your local police department will have tips on safely igniting road flares and their placement.

- Tools. Carry at least two adjustable wrenches and a set of screwdrivers, and know how to use them in case you have to make emergency repairs.

- Water and food. Carry some extra drinking water in case you get stranded. Have some granola bars or other easy-to-carry food items for those emergencies or in case you just get hungry!

- Blankets. The lightweight, reflective emergency blankets work well and do not take up much space.

- Flashlight and extra batteries.

With these few tips and items to carry, you will have the piece of mind you need to make a safe and uneventful trip during the holidays. From the men and women at the Protective Service Office and the NASA Safety Office, have a happy, joyous and safe holiday season!

BY LT. MARK TARTE,
PROTECTIVE SERVICES



Jetstream toastmasters at Ames



photo by Roger Brimmer

Samson Cheung, Ames' Jetstream
Toastmaster's Club President.

Jetstream Toastmasters is one of many Toastmasters International clubs worldwide. Through participation in the Toastmasters Communication and Leadership program, people from all backgrounds learn to speak effectively, conduct meetings, manage a department or business, lead, delegate and motivate in social, professional and leadership situations. Jetstream's membership is comprised mostly of civil servants and contractors who work at Ames. However, association with NASA is not a requirement for membership. We also have members from off site. We are enthusiastic people who support each other while we all try to improve.

New members joining Toastmasters begin with the Communication and leadership manual. There are ten assigned speeches that cover a variety of skills--you choose your speech topics. After you complete these ten speeches, you earn your competent toastmaster (CTM) rating. Then you work in either the Communication track or the leadership track. Eventually, you can reach distinguished toastmaster

(DTM). There are also speechcraft programs and contests on many levels.

Except for federal holidays, Jetstream meets every Monday from noon to 1 p.m., in Building 269, Room 179. Visitors are always welcome!



With NASA's recent announcement of the "Plain Language Initiative," what better reason than to hone your oral and written communication skills with Toastmasters today!

For more information, contact the author at ext. 4-2242.

ALEXANDRA SWANSON



Center Briefs

The universe "down under" is the target of Hubble's latest deep-view

Turning its penetrating vision toward southern skies, NASA's Hubble Space Telescope has peered down a 12 billion light-year-long corridor loaded with a dazzling assortment of thousands of never-before-seen galaxies. The observation, called the Hubble Deep Field South (HDF-S), doubles the number of far-flung galaxies available to astronomers for deciphering the history of the universe. This new far-look complements the original Hubble "deep field" taken in late 1995, when Hubble was aimed at a small patch of space near the Big Dipper. The new region is in the constellation Tucana, near the south celestial pole.

TRMM completes one year of dramatic weather observations

The world's first space mission dedicated to observing and understanding tropical rainfall has successfully completed its first year of continuous data-gathering. Launched last fall, the Tropical Rainfall Measuring Mission (TRMM) spacecraft continues to provide exciting new insight into cloud and precipitation systems over the tropics. Changes in wind patterns generated by these tropical systems spread across the globe to impact weather patterns everywhere. TRMM is a joint U.S.-Japanese mission that was launched on Nov. 27, 1997, from the National Space Development Agency at Japan's Tanegashima Space Center. The TRMM satellite has produced continuous data since Dec. 8, 1997.

NASA awards precollege and teacher and curriculum enhancement grants

The NASA Office of Equal Opportunity Programs has selected 11 minority universities to receive Precollege Awards for Excellence in Mathematics, Science, Engineering, and Technology (PACE/MSET) grants, and nine minority universities to receive Minority University Mathematics, Science and Technology Awards for Teacher and Curriculum Enhancement Program (MASTAP) grants. The schools are located in Alabama, California, Delaware, New Mexico, New York and Texas. The PACE grants provide opportunities for minority colleges and universities, in collaboration with NASA and local school districts, to provide informal educational opportunities that will enhance the numbers and percentages of students enrolled in mathematics and science college preparatory courses.

Ames information technology expertise to shape NASA's Astrobiology Virtual Institute

The NASA Astrobiology Institute (NAI) is an ambitious effort to combine 11 member institutions in the U.S. and numerous other affiliated organizations around the world into a single, cross-disciplinary research institute whose mission is to study the origin, evolution, distribution and destiny of life in the universe.

As if the Institute's mission were not challenging enough, developing the tools and technological infrastructure to enable the members of the 'virtual institute' to collaborate over great distances is a challenge in itself. At the first general meeting of the NAI at Ames, November 5-7, attendees were introduced to the NAI Information Technology Team, whose members presented an IT strategy for the next two years to enable the remote collaboration that will make the virtual institute a reality.

Under the direction of virtual collaboration manager Bill Likens, the NAI IT team will research, develop and make available the tools and technologies that will allow NAI participants or researchers to share information, data, and access to scientific tools. But the establishment of a virtual institute calls for more than just pulling technology together. As team member Jon Guice of Code IC said, "This is the largest virtual institute yet attempted. Yet the technologies and work practices of virtual organizations are largely unknown. It is important that we understand the social and organizational issues involved." In order to assemble and develop this technological infrastructure, the NAI IT team is organized into three thrust areas.

Operations, headed by Maryland Edwards of Code JT, will work closely with the members of the Institute to ensure ease of use and successful collaboration.

The Technology thrust, headed by Vinod Baya of Code IC, will propose and develop new technologies to meet the needs of the Institute members as identified by user studies. Baya's team will also customize and integrate adopted technologies, administer and maintain the development server and share help desk services and training.

The User Studies thrust, headed by Jon Guice, will conduct user studies to learn how researchers work together in a remote collaborative setting, and how their work can best be supported by information technology.

"Our aim is to have tools designed with scientists in mind, and specifically to support the total life cycle of science projects," Guice said.

Russ Wertenberg of Code JT said that the information technologies developed



photo by Eric James

Members of the NASA Astrobiology Institute (NAI) gathered at Ames for a meeting and strategy session November 5 to 7. Highlights of the meeting included addresses by NASA Astrobiology Associate Administrator Dr. Edward Weiler for the NASA Office of Space Science, Nobel Laureate Dr. Murray Gell-Man and interim manager Scott Hubbard. The Institute has a cadre of 11 primary members chosen from research organizations around the country.

for this effort will grow along with the virtual institute. The plan is to begin with established information sharing tools as the starting point and the basis for the eventual introduction of more interactive tools, real-time communication tools and advanced prototypes of new technologies.

After the IT team strategy was outlined, eager crowds of conference attendees filled an adjoining conference room where several information sharing tools and projects were demonstrated. They included Postdoc, a cross-platform web-based document sharing and collaboration tool, and ScienceDesk, which provides remote access to scientific instruments and data collection. Both were developed by the Intelligent Collaboration and Assistant Systems group at Ames. Also available to the Institute are videoconferencing and electronic whiteboards, as well as Code IN's Next Generation Internet and NREN projects.

In addition to supporting the mission of the Astrobiology Institute, the IT team effort will contribute to the development of specifications for new information technologies to be used for future research projects on Earth and in space.

BY PAT KASPER

Wind tunnels and simulators pass audit

The Ames major wind tunnels and simulators (the former AO Division) have successfully passed their first 6-month Surveillance Audit. The wind tunnels and simulators were recommended for certification by Det Norske Veritas (DNV) after a formal audit last May as part of an effort started by the AO Division before the Center's ISO push. The formal certification was received during the summer, and November's audit was part of a scheduled periodic review by DNV to ensure continued adherence to ISO procedures.

The surveillance audit focused on management review, quality system, internal audit procedures, corrective and preventive actions, document control, process control and control of non-conforming product. During the next 2.5 years, all sections of the ISO standard will be reviewed to ensure continued compliance.

Jim Hart, DNV Auditor, reported that only two minor findings had been uncovered which required corrective action. Similarly, Hart submitted four observations that could simplify and/or improve the implementation of the ISO standard and the "Division's" quality system. The internal audit system and the corrective action system received special accolades.

Herb Finger, wind tunnel and simulator management representative, was understandably pleased with the results of the audit.

"It is clear that our staff and our auditors have done an excellent job to maintain our focus on delivering a quality product. Over the next six months, we need to focus on simplifying usage of our ISO system and improve access to the procedures and forms. We need to make ISO simple," he said.

ISO has had a positive effect on the efforts and products of the wind tunnels and simulators. The audit has confirmed that ISO has been internalized to a great extent throughout the organization.



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

How to create or change a quality system document

Step-by-Step help to create or revise documents is now available on-line.

Suppose you need to develop Center-wide Quality System document e.g., a Center-wide or Directorate level procedure or work instruction. Don't panic! There is an on-line tool to walk you through the process from beginning to end--from the origination of a document change request (DCR) to submittal of the finished document to the center-wide document control administrator (CWDCA). This guide provides step-by-step instructions and illustrations to make sure you complete the process in compliance with Ames procedure 53.ARC.0005 and work instructions 53.ARC.0005.1 and 53.ARC.0005.2.

To get started, first visit the Ames ISO web site: <http://dqa.arc.nasa.gov/iso9000>. When the home page finishes loading, you will see six round icons. Click on the link for training (the one on the far right, with an apple symbol). When this page comes up, you will see a training document titled "DCR Step-by-Step Training for the End User." Clicking on either the PDF or PowerPoint symbol for this document will fetch a delightfully easy-to-follow, illustrated guide that walks you through the DCR process. Hint: Printing this short guide gives you a quick-and-easy reference to use

while you make document changes on-line.

Now, all you have to do is follow this simple step-by-step, how-to, process. It's easy! It quickly gets you to the correct on-line form, the document change request, then assists the originator in completing it. When the DCR form is on your screen, it's interactive; clicking on a square automatically places an X in the square, and the tab key moves the cursor to allow you to input information. The guide walks you through the several steps for the originator, the responsible manager and author (subject matter expert) to fulfill the request. Following each step will advance the document from the originator to completion through the center-wide document control administrator. When a new document or revision is approved, the DCA will review the document only for format, and then post the approved document to the correct location in the Centerwide ISO web site.

Congratulations! You have successfully completed your assignment. In addition, you can feel comfortable knowing that it meets Ames administrative document change requirements.

BY JIM BRICKEN

Inspector General prosecutions

The NASA Office of the Inspector General wishes to alert all NASA employees, contractors and others to the following recent prosecutions.

On November 18, 1998, a former NASA Goddard Space Flight Center employee was convicted in U.S. District Court, Greenbelt, Maryland, on a charge of theft of Government property. The individual was sentenced to three years probation, placed on six months home detention, ordered to pay \$12,465 in restitution, and assessed a \$25 special assessment.

The punishment resulted from a September 4, 1998, guilty plea to one count of theft of Government funds. In pleading guilty, the defendant admitted falsification of their NASA time card between July 1997 and March 1998, by adding hours that had not been worked. As a result, the defendant allegedly received approximately \$12,500 to which he/she was not entitled.

On November 19, a NASA Headquarters employee entered a guilty plea in

Maryland District Court, Upper Marlboro, Maryland, to one count of grand theft. The defendant was given an 18-month suspended sentence to run concurrent with 18 months probation and ordered to make \$2,900 in restitution to NASA.

Prosecution resulted when a NASA laptop computer and printer that was loaned to the defendant to do work at home was never returned and, instead, reported stolen to NASA. The defendant subsequently admitted that the equipment was not stolen, but had been pawned.

In each case, special agents of the NASA Office of the Inspector General conducted the investigations. Appropriate local authorities in the relevant jurisdictions handled prosecution of these matters.

Miniaturized transmitter to be used in efforts to save babies

Early next year, a NASA-developed "pill transmitter" is expected to begin monitoring mothers and their babies following corrective fetal surgery. The "pill" will monitor body temperature, pressure and other vital signs in the womb, radioing this critical information to physicians.

Ames is developing the pill, which is about one third of an inch across and one-and-one-third-inches long, in cooperation with the Fetal Treatment Center at the University of California, San Francisco. Later, an even smaller pill will be developed that can be swallowed by astronauts so that NASA can track their vital signs during space travel.

"Nearly every time doctors operate on a fetus, the mother will later undergo pre-term labor that must be monitored," said Dr. Carsten Mundt, an electrical engineer on the Sensors 2000 team at Ames. "Pre-term labor is a serious problem that is difficult to predict and monitor with conventional equipment, and often leads to the death of the baby."

"But if you implant our pill, you can measure pressure changes in the uterus that result from contractions," Mundt said. "When doctors are able to monitor the magnitude and frequency of contractions, the physicians can identify the onset of pre-term labor early enough to prevent it from becoming life threatening to the fetus."

Earlier, pediatric surgeons at the Fetal Treatment Center pioneered a cesarean surgical approach to treat fetuses suffering from various birth defects, including congenital diaphragmatic hernia. In this condition, a hole in the baby's diaphragm lets internal organs shift from inside the abdomen into the chest cavity, leaving insufficient room for lung development. Sixty to 75 percent of babies born with this condition perish. During some of these earlier surgeries, physicians implanted larger sensor-transmitters to monitor mothers and their fetuses.

Recently, Fetal Treatment Center surgeons changed their technique from cesarean to a less-intrusive endoscopic method during which they make small incisions and insert tube-like devices through the mother's

abdominal wall.

Normally, an endoscope is used to see into the interior of a body or hollow organ. Endoscopic instruments are now also used more frequently in surgeries requiring smaller incisions.

"This minimally invasive method represents the future of fetal surgery," said Michael Harrison, M.D., founding director of the Fetal Treatment Center, who in 1981 performed the world's

first corrective surgery on a fetus before birth.

"Because there are no commercially available sensor-transmitters small enough to fit through the tubes used in the new endoscopic surgery technique, scientists and engineers on our team developed the pill-shaped device so that it can pass through the tubes," said Ames team member Mike Skidmore. "Our first pill-shaped device can transmit temperatures as well as the pressure of uterine contractions."

Ames scientists are testing a prototype version of another pill that can measure and transmit pH, or acidity in the fetus, according to Dr. Chris Soms, a scientist on the Sensors 2000 team. "Plans also call for even smaller pills that will measure the electrical activity of the fetal heart," he said. "These pills will transmit fetal heart data, as well as measurements of the baby's body chemicals including ionic calcium, carbon dioxide and glucose."

"We would also like to use this technology to study what happens to astronauts during space travel," said Skidmore. "Not only could they swallow the smaller pill transmitters we plan to develop, but we have a conceptual design of small, flat transmitters that can be taped to the body like plastic bandages."

"There are many possible medical uses for this technology; pills could monitor intestinal pressure changes, or stomach acidity in ulcer patients," Mundt said. "The acid-base balance in the body is a basic measure of health."



photo by Tom Trower

Miniaturized transmitter pill

Moffett Field model railroad club seeks members

The Moffett Field Model Railroad Club is looking for low-voltage electricians, scenery builders and HO/HOn3 model railroad-ing buffs. The club, which is located in building 126 at the south end of Hanger 1, is home to the Santa Clara, Gilroy and Fresno Rail Road (SCG & F RR).

The layout represents a railroad planned but never built. The Southern Pacific Railroad did survey the route--a route from the Santa Clara Valley to Gilroy, up and over the Pacheco Pass and across the San Joaquin Valley to Fresno. The Southern Pacific went so far as to have their surveyors pound in the stakes that the construction crew were to follow. After the 1906 earthquake scattered the stakes, the SP decided that Pacheco Pass was not the place to build their line.

SCG & F RR is an HO scale (1:87) railroad except for the branch line operating from the Pacheco Station through Tres Pinos to Paicines which is HOn3. Trains are operated representing the transition area when diesels were replacing steam. Most of the buildings are reminiscent of the late '40s and early '50s. The scenery and tracks belong to the Club, while most locomotives and rolling stock belong to the individual members.

The 30-plus miles of scale track are divided into 224 operating blocks and have more than 90 turnouts (switches). All but six of these turnouts are electrically controlled. There are 90 structures ranging from the six-foot long San Jose station to little crossing shanties, factories, homes and stores, inhabited by 300 little people. The two-level mountain was constructed using 500 pounds of Hydrocal plaster. Tying the layout together is almost 10,000 feet of wiring!

The club is generally open to visitors on Sunday afternoons from 2 p.m. to 4 p.m. Work sessions are usually on Friday nights from 7:30 p.m. to 9:30 p.m.

If you would like to visit during lunch, or would like more information, call the author at home at (408) 282-2899.

BY JOHN DONOVAN



BY JOHN BLUCK



NASA launches Ames

-- We're on

With world-renowned researchers and scientists and an array of state-of-the-art national facilities, Ames Research Center is in an enviable position. Add to the mix Ames' agency-assigned center missions in critical research areas such as astrobiology and aviation systems, safety and capacity. Toss in our unique geographic location in the heart of Silicon Valley, and there's ample reason to smile and feel great about Ames' future.

But now there is something new. Something that promises to make Ames a focal point for technological leadership, not only within NASA, but in Silicon Valley and the entire Information Technology community. And this new development is not on the distant horizon. It is right HERE, right NOW!

In fact on Dec. 8, NASA unveiled this visionary new concept -- the Ames Research Complex, a world-class, shared-use campus featuring 21st century research, development and education partnerships.

Ames will work with local communities to create the Complex focusing on collaborations among government, academia, private industry and non-profit organizations in support of NASA's mission. The new Complex will ultimately encompass the 2,000-acre property owned by Ames Research Center.

Asked about his vision for the Ames Research Complex, NASA Administrator Daniel S. Goldin replied, "It's bringing the best of the Bay Area together -- our NASA research facility, with the finest higher education institutions in the country, with industry. It's magic!"

"Integrated development of the Ames Research Complex will show the unified

strength of government, industry and academia working at its very best," Goldin

tablishing these partnerships, we will also strengthen the technological leadership of Silicon Valley and enhance the well-being of our communities."

According to Goldin, "NASA is sitting on hundreds of acres of land which, in Silicon Valley, is like gold. So, if we can utilize this land to have a research park with industry, academia and NASA, everybody wins! - the companies, the American people, the university students, and the people who live here who will have new jobs and products."

He explained that all parties are essential to the successful conduct of the partnerships. "NASA does the long-term research--things that will happen 10, 20, 30 years from now. Corporate America can't do that. The universities need to be involved because they're involved in long-term research. Together, we'll do the long-term research, industry will do the near-term product development, we'll turn it over to them and... then buy the products back so we don't have to do product development," Goldin said. "The taxpayer saves money, and we create an incredible number of new jobs in this area and around the

country. America gets the most competitive products, and the American taxpayers have a great space program for less money," Goldin concluded.

The new Ames Research Complex will feature partnerships in astrobiology, aerospace, information technology, education and commercialization of NASA technology, primary elements of Ames' mission within NASA. McDonald said that preliminary negotiations with industry, government and academia have begun and that he hopes to finalize partnership agreements with potential on-site research collabora-



The California Air & Space Center in historic Hangar 1, an artist's conception.

added. "Not from NASA alone, not from Silicon Valley industry alone, and not from our world-class universities alone will tomorrow's required innovations emerge. They will come from all of us working together and making the most of the special attributes that each of us brings to the table. NASA is committed to do that here at Ames," he said.

"To become part of our development, any partnership must further the NASA mission and enhance life in America in the 21st Century," said Ames Center Director Henry McDonald. "We believe that, by es-

Research Complex

our way! --

tors within the next 12 months. Discussions have already led to agreements with the cities of Mountain View and Sunnyvale for

The CASC will be a key feature of the new Complex, developed by an independent, non-profit foundation board estab-

of the teacher institute, as have California education officials.

"The CASC demonstrates the critical importance that NASA places upon education, inspiring America's children, and developing the next-generation of engineers and scientists," said McDonald. "It will also serve as an exciting centerpiece for the other partnerships, enhance the ambience of an R&D campus and allow for large-scale events."

"We want to invite our partners in to help because we have seen over and over again the benefits of NASA's long-term, high-risk research," said Goldin. "If you are willing to work on revolutionary

technology leaps that are both critical to our missions and will be productive for your universities, or profitable for your companies, we'll provide the land here to do it at Ames, in the new Ames Research Complex," he stated.

Asked about the probability that the Ames Research Complex will go forward, Goldin replied, "There's absolutely no doubt in my mind. We have talked to a number of companies. We have talked to a number of universities. The excitement is there! It is GOING to happen. I gave the challenge in June of this year and here we are in December and we are into the next phase of the plan. By June 1999, we will have signed up our first com-

panies and first universities and we will already be working."

BY DAVID MORSE

"It's bringing the best of the Bay Area together -- our NASA research facility, with the finest higher education institutions in the country, with industry. It's MAGIC!"

-- Daniel S. Goldin, NASA Administrator

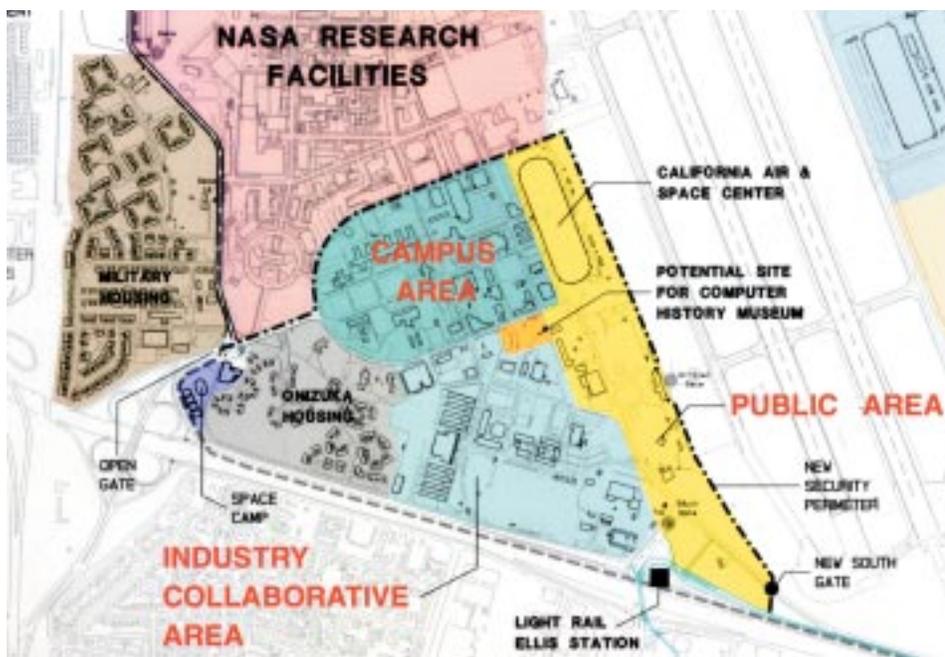
the California Air and Space Center (CASC), and with Stanford University and the University of California at Santa Cruz on research partnership planning.

Initial development of the Complex will focus on a 160-acre parcel on the west side of the airfield. In the near future, all of the east side will be devoted to the military resident agencies, such as the California Air National Guard. The west side will be "opened up" by moving gates and fences to allow public access.

Ames will provide opportunities for collaborative research and education facilities, with the added benefit of no security badging and easy traffic access. This will facilitate a public area designated for two separate independent non-profit education partners, the CASC and the Computer History Mu-

seum. Ames will provide opportunities for collaborative research and education facilities, with the added benefit of no security badging and easy traffic access. This will facilitate a public area designated for two separate independent non-profit education partners, the CASC and the Computer History Mu-

seum. The CASC will convert historic Hangar 1 into a dynamic science and technology learning center supported by futuristic NASA technologies. It will showcase Silicon Valley cutting-edge technologies and NASA missions along with a teacher institute. A number of Bay Area universities have expressed interest in partnering in the design



Quality Awards Nominations

Quality and Safety Achievement Recognition Award Program

QASAR Awards are presented annually by NASA Headquarters to recognize people who have displayed exemplary performance in contributing to safety and quality in products, services and processes for NASA. Each field center and Headquarters may submit one nominee for each of four categories:

1. Most significant safety and mission assurance contribution from within Code Q, the SMA organization.
2. Most significant safety or quality improvement, service improvement or initiative from a NASA employee external to the SMA organization.
3. Most significant safety or quality improvement, service improvement or initiative from a Government (non-NASA) employee.
4. Most significant safety or quality improvement, service improvement or initiative from a NASA prime or subcontract employee.

To be eligible to receive a QASAR Award,

nominated persons must meet one of the following criteria:

1. Identify or implement significant quality or safety improvements to NASA products, services or processes.
2. Institute continuous or safety improvements through NASA or contractor action teams.
3. Identify potential quality or safety problems, providing recommended corrective action to preclude mishaps or major system impacts.
4. Advance the quality and safety profession through other significant accomplishments.

Any NASA or NASA contract employee may nominate an eligible individual to receive a QASAR Award. Submit nominations to Ken Zander, the designated QASAR representative for Ames, at M/S 218-7 or FAX to ext. 4-6508 before Jan. 6, 1999. Ken can be reached at ext. 4-5604. There are additional supplemental award criteria

elements and tips on nomination justification contained in the QASAR Award Program booklet. A very limited number of these booklets have been provided to each Ames director and should be reviewed by people who prepare nominations. The nomination form is reproduced below.

Because of the wide variety of important activities taking place at Ames, there are likely to be many people whose accomplishments deserve QASAR Award level of recognition. This is a prestigious award and wide participation from each Ames directorate is encouraged.

The QASAR award board, composed of representatives from each Center and Headquarters, will select the one person judged "Best of the Best" in meeting the award criteria in each category from the total submitted throughout the Agency. These award winners will receive a plaque and a cash bonus at a NASA conference in Alexandria, Virginia on April 29, 1999.

SAMPLE QASAR AWARD NOMINATION FORM

QASAR CATEGORY

NASA Safety and Mission Assurance (SMA)
NASA (outside SMA Organization)
Government (outside NASA)
NASA Prime or Subcontractor

NOMINEE

ORGANIZATION

JUSTIFICATION

(Describe the specific events or actions which justify the nomination)

CITATION

(Write a brief description summarizing the justification for the award, to be used in award memo)

SIGNATURES

* Center SMA Director

* Center Director or Associate Administrator

Send completed forms to Ken Zander, QS, by 1/3/98.
M/S 218-7 or FAX 4-6508

* N/A for initial submittal. Code QS will obtain signatures for nominations forwarded to HQ.

ARC/AFEU sign negotiated agreement



photo by Roger Brimmer

From left to right: Bill Berry, Dr. Henry McDonald, Diane Kanally (Chief Negotiator for Management) Marc Cohen, Marianne Mosher (Chief Negotiator for the Union) Mike Williams (NFFE National VP for Region 6).

In a ceremony on October 26, Center Director Dr. Henry McDonald and Union President Marc Cohen signed the new Negotiated Agreement between the Ames Federal Employees Union (affiliated with the National Federation of Federal Employees as NFFE Local 997) and Ames Research Center. Printed copies of the contract will be distributed to all employees in the near future. It is posted on the Human Resources Division website at <http://huminfo.arc.nasa.gov> or at the AFEU website at <http://www.geocities.com~ames-fed-union>. Orientation and training modules are being developed for supervisors, managers and employees on the specific terms and obligations in the contract. Training is anticipated to be in January 1999.

Cameras aid San Francisco airport weather reports

New digital video cameras installed by NASA at the San Carlos, CA, airport control tower, are helping to better report current weather conditions for aircraft landing at San Francisco International Airport, some 10 miles away.

Installed by engineers from Ames, the airport approach zone camera system enables air traffic controllers and weather forecasters to track real-time onset and dissipation of fog and low clouds in the airport's approach zone, particularly during the late morning. Since many aircraft arrive at that time, the precise timing of the improved visibility will improve the airport's ability to operate at, or close to, full capacity.

"The big problem with arrivals at San Francisco International Airport is that the runways are only 750 feet apart; when you can't use both runways at the same time, you can only land 30 aircraft an hour," said Yuri Gawdiak, an Ames aerospace engineer and the project leader. San Francisco International Airport is one of the nation's busiest, with 600-700 landings on a typical day. With both runways operating simultaneously, 60 aircraft an hour can land.

"The live pictures allow us to better serve the needs of the Federal Aviation Administration's (FAA) Air Traffic Management Specialists, here at the Oakland Air Route Traffic Control Center in Fremont, CA; the Oakland Bay TRACON (Terminal Radar Approach Control Facility) at the Oakland International Airport; and at the air traffic control system command center in Washington, DC," said Walt Strach, national weather service meteorologist in charge of the Fremont facility.

The airport approach zone camera system will significantly reduce telephone calls between the FAA Oakland Center meteorologist and the San Francisco air traffic control tower.

"This should translate into more efficient procedures for flow control when weather is a factor in landing aircraft at San Francisco International Airport," Strach said.

"The airport approach zone camera system is allowing meteorologists, both in my office and at the national weather service forecast office in Monterey, CA, to better see and understand the local effects of wind currents, and terrain, ocean and bay

influences on the formation and dissipation of clouds and fog in and around San Francisco International Airport," Strach said. The Monterey weather office issues aviation, public and marine forecasts for the entire San Francisco Bay Area.

The high-speed video cameras operate 24 hours a day and provide a 220-degree field of view with rotation, zoom and tilt capabilities. The cameras are remotely controlled by personnel at the National Oceanic and Atmospheric Administration (NOAA) weather center located at the Oakland air route traffic control center and are accessible via a secure web site. Ames engineers will install similar cameras at the San Francisco International Airport control tower in the near future.

The airport approach zone camera system is a joint effort between Ames, the FAA and NOAA. The project is managed by the aviation safety monitoring office at Ames and funded by NASA's aviation safety program.

BY MICHAEL MEWHINNEY

Holiday crime prevention tips from the Protective Services Office

With the holidays upon us, another seasonal phenomena is here: crime. This time of year sees an increase in the number of thefts and other crimes. Here are some tips to avoid becoming a holiday crime victim:

- When you have presents in your car, always store them out of sight. Put them into the trunk or cover them so they are not visible from outside of the vehicle.

- Always be aware of your surroundings, especially if you are shopping alone. If you feel uncomfortable or believe you are being followed, ask a store employee or store security to escort you to your car. Many malls provide free escorts. If you are not sure, ask the store management if they provide this service..

- Do not carry more packages than you can handle when you are walking to your car. Have your door and ignition key out and in your hand. Visually check the interior of your car before you get in. Criminals sometimes hide in the back seat compartments of cars waiting for the drivers.

- If you can, shop with another person. Pairing with someone makes shopping quicker and makes the experience more enjoyable. Criminals are reluctant to confront more than one person, and the "buddy system" gives you an extra set of eyes to be on the look out.

- When you go to a large parking lot,

such as a mall lot, park in a lighted area and remember where you parked. Write it down if you have to. Try to avoid parking next to a vehicle that will block your view of the store front. If you are out of view of the store and you are accosted, chances are no one will see what is happening.

- If you are in a situation that makes you feel uncomfortable, leave. Don't worry about hurting someone's feelings; your safety is your only concern.

- At home, leave the curtains closed when you are not at home. This prevents anyone from seeing what you may have displayed.

- Make sure all of your deadbolts and other locks are in good working order. Have a one-way door viewer installed if you don't have one.

- If you leave for any trips, use randomly programmed light timers. Also put a timer on a radio or TV. You want to make it look like someone is home. Arrange with a neighbor to pick up your papers and mail, or contact the paper delivery service to have delivery stopped while you are away. Have the post office do the same. Burglars will usually avoid a house they believe is occupied.

Criminals usually strike a "target of opportunity." This means simply, if an easy

looking target presents itself, the criminal will take this opportunity to strike rather than the person who looks prepared and alert.

If you are confronted by an robber, do not resist. This increases your chances of being hurt or worse. Give up money or presents. They are not worth your life. Personal protection weapons such as pepper spray or a gun must be a personal choice. Before you decide to carry any such items, always check local and state law about the requirements to purchase, carry and use such an item.

You bear a great deal of responsibility if you carry any weapons for protection and you must know not only how to use them, but when you can use them legally. You bear the responsibility to know the law and abide by it in these situations.

It is always a good idea to practice these tips any time of the year, but especially around the holiday season. If you need any other information, you can contact the Protective Services Office or your local police department for other crime prevention tips. The Moffett Field Protective Services Office wishes all Ames staff a happy and safe holiday season.

BY LT. MARK TARTE,
PROTECTIVE SERVICES

Ames Clubs & Visitors

Communication Navigation and Surveillance/Air Traffic Management Focus Team (C/AFT) visits Ames

On Thursday, November 19, Ames hosted forty members of the Communication, Navigation and Surveillance/Air Traffic Management Focus Team (C/AFT). The C/AFT is an airline-driven forum of airlines, air traffic service providers, government agencies and airline manufacturers formed to develop methodologies for economic, technical and risk analysis of CNS/ATM infrastructure investments.

The visit was organized by Rose Ashford, manager of the Terminal Area Productivity project. The group was greeted by Dr. J. Victor Lebacqz, director, aviation system capacity program.

The group received demonstrations of the Center TRACON Automation System (CTAS), data exchange between CTAS and the aircraft, and between CTAS and the airline operation centers. Group

members then participated in simulations of free flight and trajectory negotiation between the aircraft and CTAS in the Crew Vehicle Systems Research Facility (CVSRF)

simulators. Team members also saw a Surface Movement Advisor (SMA) software demonstration and toured the new Surface Demonstration and Tower Facility (SDTF).

NASA encourages a closer relationship with this type of group, so as to meet the Pillar One goals of Global Civil Aviation. Visitors represented U.S. organizations, such as American Trans Air, Boeing, Continental Airlines, Delta Airlines, The Federal Aviation Administration, Honeywell, The MITRE Corporation, Rockwell Collins, TRW, United Airlines and United Parcel Service Airlines. International organizations included Airbus, the Civil Air Attaché of the British Embassy, Eurocontrol, Lufthansa German Airlines, KLM Royal Dutch Airlines, the International Society of Aeronautic Telecommunications, Canada (SITA) and the National Air Traffic Services, U.K.



photo by Tom Trower

C/AFT Team visitors at the advanced concepts flight simulator.

BY ANGELA BOYLE

Ames Sailing Club completes a remarkable first year



photo by Dominic Hart

Greg Sherwood (JIT), ASC President (dark blue shirt), Safdar Nawaz (OPM) (white hat). Doug Atler (FO) (no hat). Behind Doug is Gil McCoy (non-ARC).

Begun in late 1997 by a handful of Ames sailing enthusiasts, the Ames Sailing Club has surpassed all expectations and grown into a fun, active, organization. The Club was organized to get Moffett Federal Airfield resident agency employees and their families interested, and involved, in the art and sport of sailing. The effort succeeded. San Francisco Bay has some of the best sailing in the world, and our members are taking full advantage of the Bay.

Geared towards people of all ages and experience levels, the Club provided a wide range of activities throughout the year. Highlights include: Wednesday and Saturday fun races, cruising and racing on Monterey Bay, picnic sails to Angel Island and Treasure Island and Friday evening "Attitude Adjustment Sails." Not wanting to let winter stand in the way, a number of enthusiastic members are participating in the Jack Frost mid-winter series.

In addition to the above, several new events are planned for 1999. These include: Mothers' day and Fathers' day brunch sails, whale-watching trips on Monterey Bay, a San Diego to Catalina cruise and opportunities to participate in various local, national

and international sailing regattas and events.

For those interested in sailing instruction, the Club offers informal coaching and workshops as well as informative discussions at meetings. We also assist members in finding formal programs of instruction at several locations in the San Francisco and Monterey Bay areas.

No sailing experience is necessary to join or to participate in most club activities. General meetings will resume in February 1999 with what promises to be a great series of speakers and presentations. Meetings are held the second Thursday of the month from 11:30 a.m. to 1:00 p.m. in Bldg. N262, room 100. Hope to see you there!

For the most up-to-date news and information, an interactive calendar, photo album, and an on-line gift shop, please visit the Ames Sailing Club website at <http://sail.arc.nasa.gov>. POC: Greg Sherwood at ext. 4-0429 or Stan Phillips at ext. 4-3530.

BY GREG SHERWOOD

Events & Classifieds

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 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.

Ames Multicultural Leadership Council Meeting, Dec. 16, 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.

Ames Ballroom Dance Club, No lessons in December; will resume January 5 with Beginning and Intermediate East Coast Swing, Tuesday's from 5:15-6:30. Moffett Training and Conference Center, Bldg. 3 in the Showroom. POC: Deb Narasaki at email: ddnarasaki@mail.arc.nasa.gov. New ABCD website: <http://arcapps.arc.nasa.gov/Info/BallroomDance/Welcomet.Htm>

Ames Contractor Council Meeting, Jan 6, 11 a.m., N-200/Comm. Rm. POC: Greg Marshall at ext. 4-4673.

Hispanic Advisory Committee for Employees, Jan 7, 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, Jan 7, 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, Jan 7, 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, Jan 8, 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.

Southbay FEW Chapter Meeting Jan 12, 11:30 a.m. to 12:30 p.m., Bldg. 241, Rm B2. POC: Christine Munroe at ext. 4-4695.

Professional Administrative Council (PAC) Meeting, Jan 14, 10:30 a.m. to 11:30 a.m., Location TBD. POC: Janette Rocha, ext. 4-3371.

Java User Group, Jan 13, 1:30 p.m. to 2:30 p.m., Bldg 258, Rm 127. Topic is 'Java as a Cycle-Stealing Computational Engine' presented by Al Globus from NAS Nanotechnology (Code IN). POC: Sharon Marcacci (4-1059), <http://jug.arc.nasa.gov>.

NFFE Local 997 Union General Meeting, Jan 20, 11:30 a.m. to 12:30 p.m., Bldg. 19/Rm. 2017. Guests welcome. POC: Marianne Mosher at ext. 4-4055.

Ames Asian American Pacific Islander Advisory Group Meeting, Jan 21, 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, Jan 21, 12 noon, N-260/Conf. Rm. POC: Walt Miller, AJ6T at ext. 4-4558.

Native American Advisory Committee Meeting, Jan 26, 12 noon to 1 p.m., Ames Café. POC: Mike Liu at ext. 4-1132.

Ames Sailing Club Meeting, No meetings in Dec/Jan, Next meeting Feb 11, 1999, POC: Greg Sherwood, ext 4-0429. Web site: <http://sail.arc.nasa.gov>

Model HO/HOn3 Railroad Train Club at Moffett Field invites train buffs to visit and join the club in Bldg. 126, across from the south end of Hanger One. The club is in particular need of low voltage electricians and scenery builders & maintainers. Work nights are usually on Friday nights from 7:30 p.m. to 9:30 p.m. Play time is Sunday from 2 p.m. to 4 p.m. For more info, call John Donovan at (408) 735-4954 (work) or (408) 281-2899 (home).

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. Ads must involve personal needs or items; no commercial/third-party ads and will run on space-available basis only. First-time ads are given priority. Ads must include home phone numbers; however, Ames extensions will be accepted for carpool and lost and found ads only.

Housing

1990 model, 1120 sq. ft., 2 bdrm/2 ba, mobile home in Community of Older Persons, 55+, New Frontier mobile home park in Mt. View. Conveniently close to Ames. Vaulted ceilings in livingroom, dining room, ceiling fan in livingroom, skylight in kitchen, pantry, dishwasher, disposal, laundry room, large storage shed. \$89,900. Call (650) 966-8426 evenings (lv msg).

Housemate needed to share 2 bedroom/2 bath apt. in Mt View. 85/ElCamino. Available Jan 15. \$700/mo. on month to month basis. Dave (650) 964-3543.

Room for rent - available now. Furnished room w/ phone. Open space with running creek on east, large lawn on west, park on north, wilderness on south - walking distance from Castro Street. Share: bath/kitchen/garden/laundry. Easy transport: bus/train + El Camino + highways H101 + 237 + 85 + Cent Expy. Rent: \$560/mo. Call (650) 969-3932 or email at: solemate@best.com

Temporary space available or for part time use. Ideal for Interns. Bed + closet in a home in rustic & natural area near Castro Street in Mountain View. Weekly: \$100 (+ one month dep.) Call (650) 969-3932 Lv msg., or email at: solemate@best.com

Roommate needed to share 2bd/2ba apt. 5 min from Ames @ H85/ElCamino. 1/2 rent and utils. \$700/month. All amenities. Dave (650) 964-3543.

Santa Clara 2-story TH, 2bd/1.5ba, spa/pool, patio, carport, completely remodeled. \$1,450. Call (408) 248-1516.

Owner seeks responsible adult(s), max of three in house, to share large 4bd/2.5ba home in Milpitas. Several possibilities exist. Spacious master bdrm + priv. bath avail. for sgl. (\$725) or couple (\$1,000) + portion of utils or two other rooms available from choice of three (\$650, \$550, \$450) + 1/3 utils. Includes cable, W/D, fireplace, pool & spa. 20 min from Ames. Easy access to H680/237/880. N/S. No alcohol/pets/kids. First/last and \$400 security dep. Avail: Feb '99. Carina (408) 262-5269 Lv msg.

Room for rent in Sunnyvale. Available 1/1/99. 2 bd/1ba apartment near El Camino off Mary. Shared expenses. Barrie (408) 736-8961.

Transportation

'73 Volkswagen Beetle. \$800. Dave (650) 588-5692.

'84 Corvette, black, 4 speed, looks/runs great, new ZR tires, chrome wheels, 89K mls, \$8,800. Call (650) 969-0420

'92 Colt, great commute car (30+ MPG), Mech. sound, very responsive pwr. + handling, plus extras (4 spkr. stereo cas., racks, side molding). gd.cond. \$3,500/B/O. Tony (831) 338-4551.

'92 Ford Bronco Eddie Bauer edition; V8 5.8 Liter, automatic, 4x4, A/C, power windows & locks, tilt wheel, cruise control, am/fm cassette, cd changer, alarm, leather, towing package, all terrain tires, \$13,000. Call (408) 885-0989, #2.

'94 Honda Civic EX, exc. cond., 5 spd manual, moonroof, all power, ABS, 6 spk. stereo, nearly new tires, 57K mls, \$9,000. Call (408) 730-4557.

'94 Saturn SC2, AT, A/C, 57k, midnight blue, alarm, Pioneer CD receiver, premium sound, great bass sound, new batt, well maintained with the best quality parts. \$7,800 or B/O. Email at: jwang2@mail.arc.nasa.gov

Miscellaneous

Childcare: Parents may sign up for the wait list at the Menlo Survey Daycare Center, aka GeoKids, a parent cooperative federal childcare center in Menlo Park. For info visit GeoKids' website at <http://geokids.wr.usgs.gov>, or call (650) 329-4236.

Panasonic Omni Series 19" color TV tuner & TV monitor, \$100; Stereosonic 300 AM/FM tuner/amp 125 watts, \$50; Riedell Silver Star ladies ice skates, size 6 1/2 AA, \$50. Call (408) 736-7584, lv. msg.

Sharks Jacket: Boys medium, brand new, still has tags on. Teal with gray sleeves. Baseball style. \$65 or B/O. Call (650) 961-7971.

Treadmill, Pro-Form 385, 1 year new, fairly used, pd. \$400, sell \$200, need the space. Call (650) 233-9745.

Men's Italian hiking boots, new, sz. 10 med., leather tops w/lining, \$30. Call (408) 255-6917 after 6 p.m.

Go-kart for sale. Hardly used. Yellow, fast, perfect Christmas present. \$400. Call 650-941-3396 or email at: pam@wildhorses.com, subject = GoKART.

Electric scooter, Pace Saver Model 31004. Good condition. \$2,000. Call (408) 395-3356.

Free to good home: 2 cats, 1 1/2 years old, one black & white, the other gray. Loving & friendly. Spayed & all shots current. Call (408) 274-3169.

Telescope, 56x-250x, with tripod, in original box, opened but not used, \$55; TV, mini B&W portable, D batteries or power cord, \$40.; Bed frame (queen head, foot, and side rails), can be four poster or canopy Ethan Allen (Georgian Line)/dark solid wood and very nice, \$350. Call (650) 941-2784.

Ames Retirements

Name	Code	Date
Michael Fritz	D	12/3/98

Sofa, matching chair, and antique dresser. See them all at: www.geocities.com/SiliconValley/Foothills/1384.; Dolby ProLogic surround sound processor w/ powered rear channels. \$45. Call (408) 295-2160.

Full sound DJ system, \$5,000 orig. price, selling for \$3,000. Call (408) 246-4508.

Macintosh fax/modem--external 33.6 Kbps TelePort model by Global Village; Internet edition; power supply, serial cable and phone line included--ready to go! Used 2 months, like new in box. \$75 or B/O. Dave (510) 471-3466.

Organ, Thomas, exc. cond., \$250. Call (408) 272-3893 eves.

Vacation rental

Lake Tahoe-Squaw Valley Townhse, 3bd/2ba, View of slopes, close to lifts. Wkend \$400, midwk \$150 night. Includes linens, firewd, cleaning service. Call (650) 968-4155, DBMckellar@aol.com

Lost & Found

Moffett Field Lost and Found may be reached via ext. 4-5416 at any time. Residents and employees at Ames may also use Internet browser at: <http://cctf/arc.nasa.gov/codejip/lostFound.html> to view a list of found property and obtain specific instructions for reporting lost or found property and how to recover found property. You may also contact Moffett Field Security Police Investigations Section at ext. 4-1359 or email at: mfine@mail.arc.nas.gov.

Astrogram deadlines

All Ames employees are invited to submit articles relating to Ames projects and activities for publication in the *Astrogram*. When submitting stories or ads for publication, submit your material, along with any questions, in MS word by e-mail to astrogram@mail.arc.nasa.gov on or before the deadline.

DEADLINE	PUBLICATION
MON, JAN 4, '99	FRI, JAN 15
MON, JAN 18	FRI, JAN 29
MON, FEB 1	FRI, FEB 12

Emergency Preparedness Drills

Exercise '98-- preparation for possible future emergencies

On December 3-5, Ames Research Center participated in a major emergency response exercise, along with the cities of Sunnyvale and Mountain View, the County of Santa Clara and numerous resident agencies on the Ames/Moffett Complex. This drill was dubbed Exercise '98, and featured a major earthquake on the Hayward fault, and a real building fire. The Ames/Moffett Emergency Operations Center coordinated the response efforts to this exercise and training drill.

This was a functional exercise that involved the various emergency response groups performing tasks that they may be called upon to perform in a true disaster.

Everyone who participated in the Ames/Moffett Exercise '98 has been training for months, in some cases years, to respond to protect lives, the environment and property in the event of a major disaster that may affect NASA Ames and local communities.

Exercise '98 proved invaluable for training emergency personnel, for identifying coordination and communication issues, and as a source of important "lessons learned."



photo by Lisa Coyle



photo by Dominic Hart



photo by Tom Trower



photo by Cesar Acosta

THE AMES *Astrogram*

The Ames ASTROGRAM is an official publication of the Ames Research Center, National Aeronautics and Space Administration.

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THE AMES *Astrogram*

National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, California 94035-1000

Official Business
Penalty for Private Use, \$300



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