

Astrogram

Communication for the Information Technology Age

NASA's educational mission to inspire moves forward

As we mourn our lost NASA family members and look for answers to the Columbia accident, we must forge ahead with NASA's other missions. Far from

my mind about the need for the astronaut educator. I have three children and would still like to pursue this journey."

to halt this program. Please keep it going. There are many of us who understand the risks involved but would love to have this chance to inspire and encourage our students to seek careers in science and space exploration. My thoughts and prayers are with the NASA family as you grieve. Thank you for the amazing work you do!" wrote yet another.

The passion of these teachers is only matched by the passion of NASA to conduct cutting-edge research and explore the unknown.

According to the many messages left on the EAP Web site and the nominations submitted, students understand the risks but are still inspired. Here is just a sampling.

"Last week, I wanted to be an astronaut. This week, I still want to be an astronaut. I could also be a scientist on the shuttle to help save lives. I know that

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From left to right: Florida First Lady Columba Bush, educator astronaut Barbara Morgan and NASA Associate Administrator for Education Dr. Adena Williams listen in as NASA Administrator Sean O'Keefe announces the Educator Astronaut Program at Hardy Middle School in Washington, D.C., on Jan. 21.

being 'business as usual', we will learn, fix the problems and move on as 'Only NASA Can.'

"We have an opportunity here and now to learn from this loss and renew the boundless spirit of exploration present at NASA's beginning. We will do this by being accountable to the American people for our failings and, we hope, credible and compelling in pursuit of research, exploration and inspiration for future generations," said NASA Administrator Sean O'Keefe in a Feb. 12 address to members of Congress.

Despite the shuttle tragedy, NASA's Educator Astronaut Program (EAP) continues with strong public support. In the days following the accident, the EAP office received a surge of nominations and inquiries about the program.

Many teachers have expressed their desire for the program to continue. Here are a few examples of their comments.

"Please, from a personal view as a program applicant, DONOT let the tragedy of Columbia put a halt to your vision, and my vision, of an educator in space," wrote one teacher.

"I know what the crew would have us do. I'm going right ahead and apply for the program," wrote another.

"These events do nothing to change

"In light of Saturday's tragedy, I'm assuming there will be many pressures

Freedom To Manage visits Mega Bites

During October and November, you may have noticed a table set up in the Mega Bites cafeteria, near the far right cashier, with a small group of determined-looking people trying to catch your eye.

The folks giving up their lunch hours were the hard-working Ames Freedom To Manage (AF2M) team, who wanted to get the word out about NASA's Freedom To Manage (F2M) concept and thought that Ames' noon-time rush was a good place to start.

"We had two messages we wanted to get across. The first was familiarity, to give people information about the freedom to manage concept, and the second

was to let people know that NASA Headquarters' top brass supports F2M and would be visiting the center soon to provide more details," said Lynda



Phil Snyder (AF2M) talking with Dave Ofwono and Chris Geary at the Mega Bites cafeteria recently.

Haines, systems management and planning execution for the director's office and chair of the AF2M team. "The

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NASA's educational mission to inspire moves forward

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it has risks, but every job has risks,"

"I would like to work for NASA because I want to serve my country.



Even though there is a chance that I might die, it would be worth it."

NASA Administrator Sean O'Keefe and Florida First Lady Columba Bush announced the Educator Astronaut Program at Hardy Middle School in Washington on Jan. 21, 2003. As of Feb 15, a total of 4,162 nominations have been submitted. California is third in nominations with 353 but second in the number of nominees with 206. The EAP office expects a surge in nominations and applications as the April 30, 2003 deadline approaches.

Most nominations are from students and have included remarks like: "My fifth grade teacher knows a lot about science. When she teaches science subjects, she keeps me interested in studying science," and "He not only meets the requirements, he's an intelligent and a respectable man."

Only a few nominations have had ulterior motives for sending their teacher to space. "Because we hate him and want him to leave, please take him," wrote one student prompting the program office to include "Remember, you're nominating your teacher for a round trip. It's not one way" on the 'nominate-your-teacher icon' on the Educator Astronaut Web site.

After an exhaustive six-month selection process, the thousands of applicants will be narrowed down to 30 to 60 individuals who will be invited to Johnson Space Center, Houston, for more extensive interviews. The Educator Astronaut Program anticipates three to six educator astronauts entering the astronaut class of 2004 for basic training. With the shuttle fleet temporarily grounded, the first flight of educator

astronauts is on hold but when operations resume, they will be ready to 'Inspire the Next Generation.'

Students and the public who wish to nominate a teacher or teachers or who would like to apply can do so at the Educator Astronaut Web site at: <http://edspace.nasa.gov> or by calling (877) 332-7876. The NASA Ames recruitment

effort is being led by Tom Clausen of the Education Office; he can be contacted at Thomas.B.Clausen@nasa.gov or by calling ext. 4-0978. The Educator Astronaut Program is asking everyone to help get the word out to potential candidates. The deadline for the completed applications is April 30, 2003.

BY JONAS DIÑO ▲

Building N239 dedicated to Klein

On Jan. 29, building N239 was officially dedicated to Dr. Harold P. ('Chuck') Klein.

The dedication ceremony took place in the lobby of N239. In atten-

Pierson and Ken Souza spoke about their memories and interactions with Klein at the dedication. All noted their appreciation of the man and their gratitude at being able to have had the



NASA photo by Tom Trower

On Jan. 29, Jack Boyd, assistant to the center director (left), and Stephanie Langhoff, chief scientist (right), unveiled a plaque in N239 commemorating the work of Dr. Harold Klein.

dance were Klein's daughter, son-in-law, granddaughter, grandson and great-grandson along with many of his colleagues. The event was led by Assistant to the Center Director Jack Boyd. Maurice Averner, Richard Grindeland, Richard Johnson, Tom

opportunity to work with a master of his field. During the ceremony a plaque commemorating Klein was unveiled. The plaque will be permanently displayed in the building's lobby as a tribute to Klein.

DDF poster session set for Feb. 27

The Ames staff is cordially invited to attend the Director's Discretionary Fund (DDF) poster session scheduled for Thursday, Feb. 27 from 3:00 p.m. to 5:00 p.m.

The poster session will be held at the Moffett Training and Conference Center (MTCC), in Building 3, in the patio/showroom/fireside area.

This is an opportunity to view some of the most innovative research being carried out at Ames in a relaxing, friendly environment. Refreshments will be served.

For more information, contact Stephanie Langhoff, chief scientist, at ext. 4-6213.

Engineer sees bright future for OneNASA

Since coming to work for NASA in 1995, engineer Karen Vander has seen the basis for the OneNASA ideals at work every day. As the executive secretary for the Rocket Propulsion Test Management Board (RPTMB), NASA's decision-making body for the agency's rocket propulsion testing, Vander provides the daily coordination of the board composed of NASA staff members from White Sands Test Facility, Las Cruces, N.M.; Marshall Space Flight Center, Huntsville, Ala.; Glenn Research Center Plum Brook Station, Sandusky, Ohio; and Stennis Space Center, Hancock County, Miss.

Vander believes the team approach used by the RPTMB is an example of what can work for the whole agency. "The management board is the One NASA concept," she said. "The board works openly in an atmosphere of trust. Everyone has a say, but the goal is to find the best match of assets for propulsion-test programs."

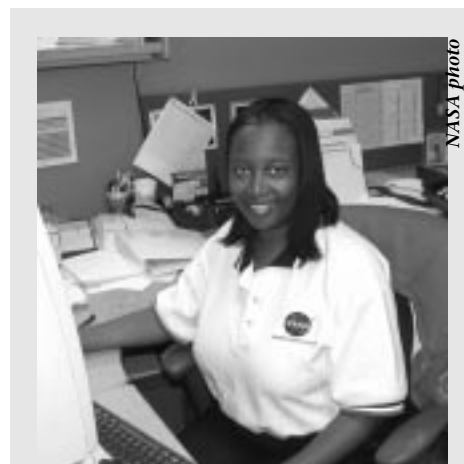
Administrator Sean O'Keefe introduced the OneNASA concept in December 2002 by asking employees to help shape the effort through their thoughts and ideas. OneNASA will require each employee to consider all decisions within the context of what is best for the agency rather than for any one organization.

"Mr. O'Keefe's support will help the agency achieve the OneNASA goal," said Vander. "With his leadership and his knowledge of federal administration, there's no limit to what we can accomplish."

Although Vander sees OneNASA ideals at work daily, she says the initiative can be fully realized only through hard work and cooperation. "We're doing it now," said Vander. "We just have to strengthen what we have. We have to continue to find ways to do our jobs better. We have to work as a team."

Part of achieving the OneNASA goals will mean overcoming old-fash-

ioned, center-centric ideas. "Even though we sit in different states or come from different places, we're still one or-



Karen Vander, an engineer at Stennis Space Center, works diligently to put the OneNASA values to work.

ganization and we should work that way," said Vander. "What center we come from should be nearly invisible. We all need to be working toward a common goal to meet NASA's mission."

The NASA community can help further OneNASA, said Vander, by being flexible. "We're going through a lot of changes now. But as long as the communication lines keep flowing, that's going to help."

As OneNASA ideals improve inter-agency cooperation, Vander noted, the practice also will benefit the agency in its interactions with other federal organizations. "We're building relationships," Vander said. "We have to build on our commonalities to strengthen the agency."

"Karen has risen to meet every challenge we have put in front of her," said NASA's Mike Dawson, assistant director, Stennis Space Center, who has seen Vander put the OneNASA values to work to benefit NASA and its relationships with other federal agencies. "She is currently leading the development efforts of a system to accurately and efficiently track high-valued rocket propulsion-test components to be used in new propulsion system designs and existing propulsion facilities throughout NASA and the Department of Defense."

Vander is an engineer in the Propulsion Test Program Office at Stennis Space Center. Her husband, Maury, is also a NASA engineer.

Chemical management improves at Ames

One of the deficiencies identified by OSHA in the VPP review and subsequent 90-day letter is the center's need to improve management of chemicals. During 2002, a Chemical Management Task Force addressed this need and made several improvements in the procedures for acquiring, using and disposing of chemicals. For these changes to be effective, all chemical users must implement them.

Beginning this month, the Ames Health, Safety and Medical Services Division (Code QH) will work with the chemical users to evaluate their use of several highly hazardous compounds. A different chemical will be spot checked each month. This will include a review of the chemical inventory, the hazard/exposure assessment, training records and chemical handling practices at randomly selected locations.

An e-mail will be sent each month to all employees whose chemical in-

ventory includes the substance being examined that month. Five of these locations will be selected from the inventory listing for the on-site review.

Following is a schedule of the chemicals Code QH will check this year:

- February methylene chloride
- March ethyl ether
- April chromium compounds
- May formaldehyde
- June cadmium
- July alpha-naphthalene, ethylene oxide
- August benzene
- Sept sulfuric acid
- Oct toluene diisocyanate
- Nov osmium tetroxide
- Dec mercury (and organic compounds)

If you have questions, contact the industrial hygienist assigned to your code.

Ames develops and demonstrates the 'hyperwall' to help researchers display, analyze data

The flow field around an aircraft as it soars through the skies; a dynamic model of cloud formation; a molecule undergoing bond breaking in quantum

so the entire matrix of 49 monitors could be curved both vertically and horizontally, it suddenly became much more challenging. And when requested to

make it capable of being completely disassembled, shipped somewhere to demonstrate it for a conference and reassembled in just one day, it went from being challenging, to being highly creative.

Working closely with the researchers, Gundo quickly began conceptual development of the needed framework using an innovative technique developed in Code FM called prototype-as-de-

to the researchers for attaching the monitors and testing the entire system in their laboratory in time for the High Performance Computing and Networking Super Computing 2002 conference last November. Steve Nance of Code FM took on the next challenge and designed and fabricated the necessary shipping crates for the entire system in only two days. The researchers disassembled, crated and shipped the hyperwall to the conference in Baltimore, where it was reassembled in a single day for the NASA exhibit. When operating, the hyperwall proved to be quite popular among NASA and industry conference attendees.

This unique, new Ames capability is now back in the researchers' laboratory in Building T27A, assisting scientists in evaluating large volumes of complex data. A joint Code INR/FM patent disclosure is in process for the unique design of the hyperwall.

The hyperwall recently was featured at a technology showcase on communication and computer hardware/software presented in January by the Girvan



Chris Henze assembling the hyperwall in Building T27A.

mechanical fields. All of these complex simulations are typical examples of how today's supercomputers are generating more data than ever before. And, as the quantity of data increases, advances in computational science have improved the quality of that data. A team of NASA advanced supercomputing (NAS) scientists has developed a tool to help researchers display, analyze and study these high-dimensional datasets in more meaningful ways.

Inspired by the sight of endless panels of images displayed on researchers' walls, desks and corridors, the 'hyperwall' is a seven-foot by-seven-foot cluster of flat-panel screens, each driven by its own dual-processor computer with a high-end graphics card. The hyperwall provides a problem-solving environment where one can use different tools, viewpoints or even different graphics parameters to display the same relationships within a dataset.

The hyperwall was developed jointly by members of the Code INR Research Branch and the Code FM Aeronautics and Spaceflight Hardware Development Division.

When the computer science research team of Chris Henze, Tim Sandstrom, David Ellsworth, Creon Levit and Art Joly first approached Code FM technologist Dan Gundo about creating a framework to hold 49 flat screen monitors in a 7-foot by 7-foot matrix, it seemed a fairly routine task. However, when asked to make each monitor adjustable

sign. Prototype-as-design had proved to be a robust method for supporting Director's Discretionary Fund (DDF) projects. The design quickly progressed, final details agreed upon, materials ordered and fabrication began under the leadership of expert Code FM craftsman Garret Nakashiki as materials arrived.

"There are two reasons why it was named hyperwall," Henze explained. "One is to distinguish ourselves from other visualization techniques like 'power-walls,' using large numbers of flat screens joined together to show just one big picture; and two, using this configuration allows us to visualize hyper-dimension data." Henze said a new application for the hyperwall is a full six-dimensional data-set browser, where "the sampling plane can be rotated, translated or scaled any which way in order to scan through all six dimensions with four- and five-dimensional cases as trivial variants."

The completed unit was delivered



NASA photos by Patrick Moran
David Ellsworth (left) and Chris Henze viewing satellite imagery on the hyperwall.

Institute of Technology at the Moffett Training and Conference Center. An article about the hyperwall appeared in the fall 2002 issue of Gridpoints, published by the NASA Advanced Supercomputing Division, Code IN.

For an online version of the story, see 'What's All the Hype? The vision behind the hyperwall' at: <http://www.nas.nasa.gov/Main/Features/2002/Fall/hyperwall.html>

By DR. GERALD MULENBURG AND JULIE JERVIS

Memorial service held for Dr. Lizbeth Kraft

Following a long illness with muscular dystrophy, Dr. Lizbeth M. Kraft died on Nov. 29, 2002. She will be missed by many.

Born in Vienna, Austria in 1920, Kraft immigrated to the United States with her family in 1923 and was naturalized as a citizen in 1929. She completed her pre-college education in public schools in Schenectady, NY and went on to earn a bachelor's degree in botany from the New York College of Agriculture at Cornell University.

In 1942, Kraft entered the College of Veterinary Medicine at Cornell and received her doctor of veterinary medicine degree in 1945. In the context of the times, Kraft was a true pioneer in the veterinary profession, as few women were successful in gaining admission to veterinary schools and fewer still successfully graduated with the D.V.M./V.M.D. degree.

Following her graduation from veterinary school, Kraft worked at a number of prestigious institutions where she specialized in veterinary microbiology. Early in her professional career, she developed an interest in the diagnosis, prevention and treatment of murine (mouse) viruses. While a research associate at Yale in 1958, Kraft published the seminal paper on the control and natural history of epidemic diarrhea of infant mice, a disastrous disease then prevalent in mouse-breeding colonies. The microbial control concepts contained in this publication led to the invention of the filter-top for rodent cages

(often referred to as 'Kraft tops' early in their use) that have contributed significantly to the prevention of the transmission of rodent disease organisms since then.

Throughout her professional career, Kraft worked for improved standards of care for laboratory animals and better standards of quality for laboratory rodents. For her research and advocacy efforts, she received many accolades and awards, including the Griffin award in 1972, from the American Association for Laboratory Animal Science (AALAS) and the Charles River Prize in 1981. She was recognized as a 'founder' of the specialty of laboratory animal medicine, having been quite active in the establishment of the American College of Laboratory Animal Medicine, achieving diplomate status in 1961 and serving on the college's board of directors from 1965 to 1970 and as the college's president in 1966. Further, she was an early supporter of AALAS and served on its board of trustees and executive board from 1964 to 1967.

Kraft retired from active veterinary activities in 1988 after completing her professional career with an 11-year tour of duty as staff veterinarian and research scientist at Ames. While with Ames, she received three achievement awards for her accomplishments supporting NASA biomedical research programs. Her published legacy includes nearly 60 publications pertaining to laboratory animal science.

In her 'retirement,' Kraft emerged

as a respected visual artist, capable of working in multi-media. She was an enthusiastic supporter of the art community in the Silicon Valley area and



Dr. Lizbeth Kraft

NASA photo by Roger Brimmer


worked to expand various programs now enjoyed by the members of the Pacific Art League. For her contributions to the arts, Kraft was elected as president of the Pacific Art League in 1992 after receiving its Elizabeth Norton Distinguished Service award in 1990.

In 1994, she took over the organization of the local artist community's annual event, 'Silicon Valley Open Studios' exhibit, part of a worldwide program that connects artists, primarily those living or working in Silicon Valley, and art enthusiasts. Working out of her home, she oversaw the growth of the event from one with 110 artist participants in 1994 to one with 350 participants in 2002.

Also, largely through her efforts, a non-profit organization, Silicon Valley Visual Arts, was founded in 1999 and assumed responsibility for the annual open studios event, assuring its continuity into the future.

Prior to her death, Kraft requested that any memorial donations should be made to the Lizbeth Kraft Memorial Fund, Silicon Valley Visual Arts, P.O. Box 60327, Palo Alto, CA 94306-0327 or the Muscular Dystrophy Association (in memory of Lisbeth Kraft), P.O. Box 78342, Phoenix, Ariz. 85062-8342 (or on the Web at: <http://www.mdausa.org/donate>). Please specify that contributions should go toward research on muscular dystrophy.

A memorial service was held on Feb. 1 at the Palo Alto Art Center.

BY RICHARD C. SIMMONDS, D.V.M., M.S. 
DIRECTOR, LABORATORY ANIMAL MEDICINE
UNIVERSITY AND COMMUNITY COLLEGE
SYSTEM OF NEVADA

'Next Steps in Space' briefing held

Space architect Gary Martin briefed Ames personnel in January about NASA's developing plans for the next generation of human and robotic missions in space.

Martin has been asked to develop an integrated space exploration plan for NASA that will guide funding allocations and new initiative development in all the enterprises over the next decade. Mission concepts under consideration extend human exploration beyond low-Earth orbit (LEO) and ultimately to Mars.

Reporting to NASA's Deputy Administrator Frederick Gregory and the Joint Strategic Analysis Committee, Martin will lead the space architect team, composed of representatives from all NASA enterprises and centers, to develop the science rationale, mission concepts and science and technology investment strategies that enable the nation's next steps in space.



NASA photo by Tom Trower

Space architect Gary Martin at Ames at a recent briefing on NASA's developing plans for the next generation of human and robotic space missions.

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promotion lasted for eight weeks and involved about 20 dedicated AF2M team members," she said.

Those who took part termed the effort a success, with over 50 Ames employees taking AF2M suggestion forms or promising to submit useful suggestions.

However, AF2Mers say, enterprise was required. "Every Wednesday during burrito and tostada day, we armed ourselves with F2M poster boards, leaflets and candy to go campaign about F2M," said Dennis Gonzales, Web designer and developer for the Documentation Technology Branch (Code JIT). Though team members started out sitting behind the table, waiting for the hungry crowds to approach so they could preach the gospel of F2M, he said, "instead, the hungry crowds went straight for the cash registers and completely ignored us."

Gonzales and his teammates decided to follow in the footsteps of "those guys at the airports wearing orange robes and bells," by approaching people, handing out leaflets and talking. Fast.

Gonzales says he learned a lot about human behavior that day. "I quickly picked up interesting signals and what I call 'avoidspeak' body language that people use in order to avoid you," he said. "Many people avoided looking directly at you. Or, they would mutter. 'I'm a contractor,' or 'I've already heard of AF2M,' or 'I've already got a leaflet,' or 'I don't work here.' Gonzales' favorite brush-off was 'I'll be back.'"

Deb Wood, associate director (acting) for R&D Services (Code F) also noticed techniques Ames employees used to avoid contact. "People would walk quickly, avoid making eye contact and even stop going to the cashier on the right," she said. "But we persevered, and things started to click."

Phil Snyder, associate director (acting) of Aerospace (Code A), found his most useful method for connecting with people was to reach out with the AF2M message to his network of co-workers and people he already knew. "That method worked beautifully," he said. "While I was there to inform people about AF2M and solicit ideas, chatting with old friends turned out to be a way to break the ice and catch up with long-time friends."

Snyder found that once he explained what AF2M was about, many people immediately came up with robust ideas, which he volunteered to submit to the AF2M database on their behalf. "My message to people was that AF2M is not about creating more management constraints, it's about removing impediments to efficiency."

One good suggestion Snyder received focused on the response of Ames employees during an emergency and its aftermath, such as a major earthquake or a nuclear, biological or chemical attack. "The suggestion was to better define the correct response of ordinary Ames employees, both their level of 'event awareness' during an emergency and also the appropriate actions they should take in the aftermath," he said. This suggestion is currently being addressed by Code Q and Code JP, the division with emergency services responsibilities, with a response expected later in the year.

Those who took part in the cafeteria promotion found it useful. "Giving up my lunch break was well worth it if I

was able to get even one person interested in AF2M," said Gonzales.

"To sum it up, we had a lot of fun talking to colleagues and getting the word out about AF2M," said Haines. She also said that Ames employees don't have to worry about having their lunches interrupted anytime soon, since no more cafeteria promotions are currently planned. However, she said, there may be other AF2M promotions in the works that will involve Ames' lunch-time crowd. She dropped a brief hint, with a twinkle in her eye, "Think McDonald's placemats!" she said.

To submit a suggestion to AF2M or find out more about it, visit the Web at: <http://af2m.arc.nasa.gov>

By KATHY BURTON 
AND DENNIS GONZALES

ACC donates to internship program

In January, Bob Javinsky (EASI), contractor co-chair of the Ames Contractor Council (ACC), presented a check for \$1,000 to the Foothill-De Anza Community College District NASA/Ames Internship Program's scholarship fund. Vice chair Dave Appling of Allied Aerospace and secretary Marla Arcadi of ELORET also took part in the presentation.

"The Contractor Council is committed to enhancing the quality of life at Ames through contributions to key programs," said Appling.

"Our internship program actively engages students in NASA Ames projects to enhance their knowledge and contribute to the NASA mission," said Valerie Sermon, director of the internship program. The program has provided 3,256 interns since 1971. Today, 407 former interns are employed at NASA and 150 interns currently serve NASA Ames.

A goal of NASA Ames is to generate a new work force. The internship program supports this workforce development mission by providing intern-

ship opportunities that: 1) raise students' level of confidence and competence through hands-on experience; 2) expand students' knowledge of career options; and 3) provide valuable work experi-



Officers of the Ames Contractor Council present a \$1,000 scholarship fund donation to FHDACCD Internship Program Director Valerie Sermon and intern Esther L. Guardado recently.

NASA photo by Amara deKeezer

ence and increase professional expertise.

The internship program is currently recruiting new interns for NASA Ames. To sponsor an intern, contact Valerie Sermon at ext. 4-5560 or e-mail her at: vsermon@mail.arc.nasa.gov. Position description forms are available online at: www.foothillfhda.edu/nasa.

By ESTHER L. GUARDADO 

Universities begin new computer institute with NASA

In an effort to help create spacecraft that can think, NASA and a group of six colleges led by Purdue University recently met in West Lafayette, Ind., to

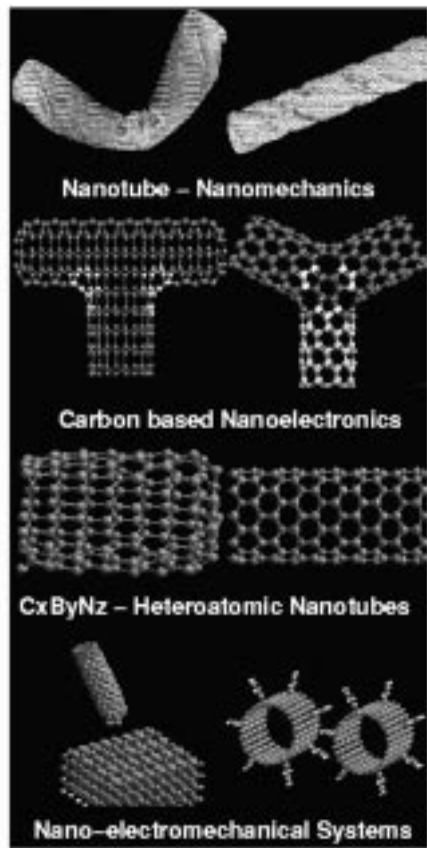


IMAGE PROVIDED BY DEEPAK SRIVASTAVA

officially launch the NASA Institute for Nanoelectronics and Computing.

Institute scientists and engineers will collaborate to work on methods to make electronics measured in nanometers—much smaller than today's components. A nanometer is roughly 100,000 times smaller than the width of a human hair. Purdue scientists will work with researchers at Northwestern, Cornell and Yale universities, the University of Florida and the University of California at San Diego.

"Innovative technologies developed under the auspices of the institute will benefit the U.S. space program for decades to come," said Purdue President Martin C. Jischke. "The research also will benefit Indiana and society in general through possible technology spin-offs; and it will provide learning opportunities for our best students, who represent the coming generation of scientists and engineers," he added.

"The team based at Purdue will be looking at several novel, unconventional technologies for NASA mission needs," said Meyya Meyyappan, director of the

Center for Nanotechnology at NASA Ames. The technologies will have applications for commercial systems as well, according to Meyyappan.

A meeting at Purdue was held to formally announce the new NASA institute. Researchers held a series of meetings to discuss the new institute and another new federally-funded nanotechnology effort.

The institute will be based at Purdue's Birck Nanotechnology Center, one of four centers that will be part of the recently created Discovery Park. The park will be a complex of facilities that use a multidisciplinary approach to develop new technologies.

Future computers will make spacecraft more autonomous so they can better function in remote regions of space without the need for human intervention, said Supriyo Datta, director of the institute and Purdue's Thomas Duncan distinguished professor of electrical and computer engineering.

"The research will focus on improving the electronics for NASA space missions, which require lots of computa-

tion, sensing, data collection, storage and communication," Datta said. "The system has to be able to respond to unexpected circumstances."

The 'brains' of future spacecraft will be miniature supercomputers, according to scientists. "For all decisions to be made right at the spacecraft, instead of at mission control here on Earth, requires enormous computing power, orders of magnitude more than what we have today," Meyyappan said. "These computers will have to come in small packages, because you can't haul a bunch of mainframes into space."

The institute is one of seven new university research, engineering and technology institutes created by NASA. The NASA institute at Purdue will contain four major facilities: the Birck Nanotechnology Center, the Bindley Bioscience Center, the Burton D. Morgan Center for Entrepreneurship and an e-Enterprise center.

Technical information about NASA nanotechnology can be found on the Web at: <http://ipt.arc.nasa.gov>

BY JOHN BLUCK ▲

February is African-American History Month

NASA Ames is commemorating national African-American History Month by focusing on the many contributions and extraordinary accomplishments that men and women of African-American descent have made, and continue to make, as part of an important component of our workforce. We appreciate and pay special tribute to these individuals for their continued leadership, dedication and outstanding service in the fields of science, education, business, politics and the arts. This year's theme for national African American History Month is 'The Souls of Black Folk: Centennial Reflections.'

African-American leaders and institutions have long distinguished themselves. African-American chemists, biologists, inventors, engineers and mathematicians have contributed in both large and small ways, and the accomplishments of the past and present can serve as pathfinders to present and future engineers and scientists. Granville T. Woods, electrical engineer, mechanical engineer and inventor, invented the telegram system in 1887, and is better known for his contributions in developing the 'third rail' concept in mass-transit subway

systems and developing the 'trolley' system for trolley cars.

In 1961, Ozzie Williams was in charge of developing and producing rocket control systems as a rocket propulsion engineer, and these control systems were used in guiding lunar landing modules during NASA's Apollo moon landing.

African-American NASA astronauts such as Ed Dwight (America's first black astronaut) and Dr. Mae C. Jemison, and leaders such as Dr. Martin Luther King Jr., whose legacy of nonviolence and work to champion civil rights continue to inspire people throughout the nation, are only a few examples of many prominent and distinguished African-Americans who have left their mark in the fields of science, public service, government and politics.

To celebrate and acknowledge the African-American History Month, there are several events planned throughout the Bay Area communities during the month of February. Ames employees are encouraged to participate in local community events and activities in honor of this special and important observance.

A tribute to Kalpana Chawla of the STS-107 crew

Editor's note: Kalpana Chawla worked at Ames from 1988 to 1993 on powered-lift computational fluid dynamics. This is a tribute from one of her co-workers at Ames.

Kalpana Chawla, one of the astronauts who died on Feb 1, 2003, was my colleague and friend. For several years,



Kalpana Chawla

she had the office literally next door to me at Ames. We saw each other every day. We went to the same seminars. We went to the same meetings. We went to the same parties.

Her specialty was aerodynamics simulation. I had the pleasure of working with her on several projects. She tutored me on the techniques I needed to implement 'overset grid methods' on the connection machine (a special kind of supercomputer). She was a leading expert on these techniques.

When she was accepted by the astronaut corps she left behind, without hesitation, her career as a computational aerodynamicist at Ames to train for spaceflight at NASA in Texas. I asked her when and if she thought she would actually fly. She told me it would take a few years but she would fly - because once you are accepted into the corps, you fly. It would be a waste otherwise, for the agency and for the trainees.

She loved flying as well as the science of flight. She was both a private pilot and an aerodynamic engineer. She made the transition to astronaut after years of working for NASA in aerodynamics and after the Challenger accident and subsequent investigation. She knew the risks. She accepted them with

absolute enthusiasm and no equivocation. Even before her first shuttle mission in 1997, she had become a hero to all Indians and especially to all Indian girls.

I'm sure she did her job on the shuttle crew with the same unique blend of serious intensity and humor that I remember from her days at Ames. I had always thought we would see her come back to Ames. Perhaps someday as the director. Everyone who knew her and indeed everyone in both of her countries is shocked and in grief. But grief is not the lasting message. The lasting message is, I believe, spoken to all the girls of India and thence to all young people in our planetary culture. The message is

that with education, perseverance and confidence you can achieve your goals, you can realize your dreams, you can achieve singular heroism.

We here have the enormous privilege of working together in support of our planet's first conscious steps into the greater cosmos. I implore us to honor Kalpana and the extent of her dedication by doing what is right--not merely what is expedient. Take strength, take inspiration from her example. She died not after a life of pursuing her own comfort but rather in the midst of pursuing our highest collective goals.

BY CREON LEVIT ▲

Polish prime minister visits Ames



NASA photo by Tom Trower

On Feb. 6, Jack Boyd, executive assistant to NASA Ames' center director (second from left) greets Polish Prime Minister Leszek Miller (right) as Tom Moyles, center operations director (third from left) and David Morse, special assistant to the center director, (far left) look on.

Got any used CDs?

If you have any used books, CDs, DVDs or VHS tapes that you are no longer using, consider donating them to the Ames Child Care Center (ACCC) fundraiser.

The ACCC is raising money for new playground equipment and as a non-profit organization, it can issue a donations receipt for your taxes.

Donations can be dropped off across from Gate 17 at the Ames Child Care Center or pickup can be arranged by contacting Maja at email maja@sbcglobal.net or call (650)988-6993 or Sally at (650) 224-9268.

VPP STAR Tip

The documented job hazard analysis breaks down the job, determines the hazards that exist or might occur and recommends preventions or controls.

...Margaret Richardson, in *Preparing for the Voluntary Protection Programs*, Copyright © 1999 by John Wiley & Sons

Harry DeVoto, former Ames employee, passes away

The sun rose on the life of Harry John DeVoto, born April 11, 1918 in S.



photo by Sears Portrait Studio

Harry DeVoto

Norfolk, Va. The sun set on his life Jan. 2, 2003 in San Ramon, Calif., relinquishing his life to lung cancer. His physical body succumbed to this disease, but not his spirit.

He was 84 years old and led a full and vibrant life. He excelled in many sports; basketball, tennis, golf, sailing, scuba diving, jogging, cycling and skiing. He had a zest for life and was interested in a great many things, always active in a variety of projects. DeVoto was a man held in high esteem by his family and peers alike. He was admired and appreciated and will be so greatly missed by all those who shared his life and knew him.

DeVoto was recruited to work for NACA at Langley Field, Va., while in the Army Air Force and was transferred to NACA-Ames Aeronautical Laboratory at Moffett Field, which later became NASA Ames. He retired in 1972 as chief of the Graphics and Exhibits Division. His later years were spent joyfully, filled with genealogy research, traveling, sometimes abroad, golfing and, with his wife, enjoyed their beloved train collection.

He is survived and will be sorely missed by his loving wife, Shirley DeVoto. He is also leaving his two children; his son, Daniel Harry DeVoto, and daughter-in-law Molly of Pleasanton, and his daughter, Donna May DeVoto of Tracy. One of his two brothers, Daniel S. DeVoto of Pittman, New Jersey predeceased him, May 19, 2002 at the age of 83 years. His younger

brother, John Edwin DeVoto, is a resident of Wilmington, Del. He is survived by 4 grandchildren: Alissa DeVoto, of Pleasanton; John Lombard of Ft. Benning, Ga.; Dianne Lombard of Denver, Colo.; and Michelle Deangelo of Denton, Texas. He is also survived by

six great-grandchildren: Terry, Kirstin and Josh Deangelo, and Ashley, Kayla and Tristin Lombard. All who knew DeVoto will smile in remembrance of him as they hear the echo of him saying his familiar 'Over and Out.'

BY SHIRLEY DEVOTO ▲

ACC supports Ames Child Care Center

The Ames Contractor Council (ACC) was honored recently to present a special donation to the Ames Child Care Center (ACCC). The ACCC was chosen by the council as a deserving organization that improves the quality of life for employees at Ames. The donation was received with enthusiasm and excitement, in anticipation of the possibilities for its use.

Bob Javinsky of Enterprise Advisory Services Inc., and ACC contractor co-chair confirms, "NASA Ames Contractor Council is pleased to have this opportunity to help an organization that is such a vital resource to many NASA Ames employees. We are delighted with the feedback we have received from the childcare center and are excited to be able to contribute to the overall success of their program."

"The Ames Child Care Center plans to use the funds to purchase a digital camera for use in enhancing the teaching styles and options of our staff. This new equipment will allow us to improve our recording and observation techniques as well as give us another mechanism for staff to encourage early childhood development," stated Lisa McNee, ACCC director. "Generous organizations like the Ames Contractor Council's help make our program the best it can be for our children."

The ACCC provides full-time care and development for approximately 80 infant, toddler and preschool children of employees at Ames and Moffett Field. The focus is on creating a nurturing, caring environment that enhances individual growth and encourages group interaction. Professionals that are dedi-

cated to early childhood development staff the center; many have training and degrees that target the unique needs of young children. The ACCC has been in operation since 1985, supported by facilities provided by NASA Ames. The funding for the operational expenses of the ACCC comes from tuition paid by



NASA photo by Anara deKeezer

Making the donation presentation to the Ames Child Care Center recently was Bob Javinsky of Enterprise Advisory Services Inc, ACC contractor co-chair; Dave Appling of Allied Aerospace, ACC vice chair; and Marla Arcadi of ELORET Corp, ACC secretary/treasurer. Receiving the donation was Lisa McNee, ACCC director; Brad Switzer, ACCC assistant director; Thomas Maier, board president; and Cheryl Quinn, vice-president. From left to right: Marla Arcadi, Lisa McNee, Dave Appling, Bob Javinsky, Brad Switzer, Cheryl Quinn and Thomas Maier.

the parents. Enhancements to the program rely upon donations and fundraising.

The center is accredited by the National Association for the Education of Young Children (NAEYC). NAEYC accreditation is a rigorous, voluntary process by which early childhood programs demonstrate they meet national standards of excellence. This prestigious recognition has been achieved by approximately 7 percent of early childhood programs nationwide. Children's language and social skills especially benefit from the better quality found in NAEYC-accredited programs. "This program promotes children's success in school as well as in life," said McNee.

Ames is in the beginning stages of building a new, permanent facility on a

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Event Calendar

Ames Amateur Radio Club, third Thursday of each month, 12 noon, N-T28 (across from N-255). POC: Michael Wright, KG6BFF, at ext. 4-6262.

Ames Ballroom Dance Club. Classes on Tuesdays. Begin classes at 6:15 p.m. Higher-level class meets at 5:15 p.m. Held in Bldg. 944, the Rec. Center. POC: Helen Hwang, hwang@dm1.arc.nasa.gov.

Ames Bowling League, Palo Alto Bowl on Tuesday nights. Seeking full-time bowlers and substitutes. Questions to sign up: Mike Liu at ext. 4-1132.

Ames Child Care Center Board of Directors Mtg, every other Thursday (check Web site for meeting dates: <http://acc.arc.nasa.gov>), 12 noon to 1:30 p.m., N-215, Rm. 212. POC: Tom Maier, ext 4-3643.

Ames Contractor Council Mtg, first Wednesday each month, 11 a.m., N-200, Comm. Rm. POC: Anita Fogtman, ext. 4-4432.

Ames Diabetics (AAD), 1st & 3rd Weds, 12 noon to 1 p.m., at Ames Mega Bites, Sun room. Support group discusses news affecting diabetics. POC: Bob Mohlenhoff, ext. 4-2523/e-mail at: bmohlenhoff@mail.arc.nasa.gov.

Ames Federal Employees Union (AFEU) Mtg, third Wednesday of ea. month, 12 p.m. to 1 p.m., Bldg. 19, Rm 1042. Info: <http://www.afeu.org>. POC: Marianne, ext. 4-4055.

Ames Mac Support Group Mtg, third Tuesday of ea. month, 11:30 a.m. to 1 p.m., Bldg. N262, Rm 180. POC: Julie ext. 4-4694 or Tony ext. 4-0340.

Ames Model Aircraft Club, flying radio-controlled aircraft at the north end of Parsons Ave. on weekend mornings. POC: Mark Sumich, ext. 4-6193.

Ames Sailing Club Mtg, 2nd Thurs of month, 11:30 a.m. -1 p.m. POC: Diane Purcell ext.4-3232. Check Web site for calendar of events at: <http://sail.arc.nasa.gov>

Environmental, Health and Safety Information Forum, first Thursday of each month, 8:30 a.m. to 9:30 a.m., Bldg. 19/Rm 1040. URL: <http://q.arc.nasa.gov/qe/events/EHSeries/> POC: Julie Morsellino at ext. 4-6810.

The Hispanic Advisory Committee for Excellence HACE Mtg, first Thurs of month in N255 room 101C from 11:45 a.m. to 12:45 p.m. POC: Eric Kristich at ext. 4-5137 and Mark Leon at ext. 4-6498.

Jetstream Toastmasters, Mondays, 12 p.m. to 1 p.m., N-269/Rm. 179. POC: Cathy Payne at ext. 4-0003.

Model HO/HOn3 Railroad Train Club, Bldg. 126, across from south end of Hangar One. Work nights: usually Fridays, 7:30 p.m. to 9:30 p.m. Play time: Sundays, 2 p.m. - 4 p.m. John (408) 735-4954 (W) or (408) 281-2899 (H).

Nat'l Association of Retired Federal Employees, (NARFE), Join to protect your federal retirement. 1st Fri. of ea. month. S. J. Chptr #50. Mar. 1, 11 a.m., lunch, \$6.50, Home Town Buffett, 2670 El Camino, Santa Clara. Prog: Visit by CA State President of NARFE. POC: Earl Keener (408) 241-4459 or NARFE 1-800-627-3394.

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

Perfect race attendance recognition for NASA Ames runners



From left to right: Runners honored for Fitness Center perfect race participation in 2002 were: Susan White, Nancy Dunagan (Fitness Center manager), Mike Rogers and Rick McIlmoil.

photo by Dominic Hart

The NASA Ames Fitness Center sponsors a 5K or 2-mile race the third Tuesday of every month.

The following runners were honored for completing all of the monthly races, two Fun Runs and two 10K

races during 2002: Susan White, Rodger Mueller, Mike Rogers, Art Joly, Rick McIlmoil and Dennis Jespersen. There is no cost for the monthly races. Newcomers are always welcome.

ACC supports Child Care Center

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new site. The new facility will have greater capacity and provide for additional improvements to the current program.

The Ames Contractor Council was established at this center in 1987 as a forum for contractor and government managers to address common problems and issues and to improve responsiveness to the center's continually changing needs. Membership is open to all contractors, subcontractors of any tier, and grant administrators, provided only that they have a resident presence at Ames. The council is committed to assisting Ames in providing world-class quality products and services that consistently meet or exceed all customer specifications and expectations for technical, schedule and cost performance.

The primary goals of the ACC are to form a partnership between Ames management and contractor managers and improve the working relationship between the two parties and to actively work together on management issues of mutual interest to strengthen the partnership. The ACC strives to provide an open forum for innovative ideas that relate to the center's current programs and future developments and help improve the general quality of life for all center employees. Through an annual awards ceremony, the ACC also provides a forum for centerwide recognition of excellent contractor employee performance.

BY MARLA ARCADY ▲

Ames Classifieds

Ads for the next issue should be sent to astrogram@mail.arc.nasa.gov and must be resubmitted for each issue. Ads must involve personal needs or items; (no commercial/third-party ads) and will run on a space-available basis only. First-time ads are given priority. Ads must include home phone numbers; Ames extensions and email addresses will be accepted for carpool and lost and found ads only. Due to the volume of material received, we are unable to verify the accuracy of the statements made in the ads. Caveat emptor!

Housing

For sale: 2 bd/2.5 ba townhouse, San José; 2-story w/ 2 master suites, end unit, 2-car garage, 1,241 sq ft, 1 block to H280/680, close to Willow Glen area; great condition; \$350K. Mark (408) 279-2168.

Quiet 600 sq foot, 1 bd/1 ba cottage in Campbell. Hardwood in living room, fridge, self-cleaning gas range, shared washer/dryer, priv. yard. Cat OK. \$1,150/mo. Close to H85 on Virginia Av; cross San Tomas/W. Campbell Ave. Call (650) 969-5867.

Sunnyvale, 1 bd aptment. Large, clean, quiet. Nr Fair Oaks/H101. Free laundry. \$850/mo. Call (408) 988-0880.

For rent, 2bd/1ba house, in Mtn. Vw., near Dana, H85 and 237. Student special: \$800/mo. Month-to-month lease. Call (650) 322-0120.

Room for rent in Redwood City. Share w/prof'l female in 2 bd/1.5 ba twtns/duplex. \$550/mo. includes utils, use of kitchen, laundry on site, priv. yard. Quiet/safe nghbrhd. N/S, no pets. Sec dep. req. Discount for commuters. Diane (650) 365-3690 or e-mail: rubiconjeep@yahoo.com

For rent: room in condo unit. Share unit with prof'l female, San José (near Campbell), female pref'd, no pets, N/S, \$650/mo. + half utils. Avail. begin. March 24. Call (408) 977-0673 or e-mail at: cecemad93@earthlink.net.

Roommate wanted. 10 mins from Ames and close to downtown. Newer Mt. View townhouse, W/D and DSL. Complex has hot tub and swimming pool. N/S Female preferred \$630 per mo + 1/3 utils. Call (650) 969-2563.

Mster bdrm w/priv. bthrm. Use of kitchen, liv. rm, W/D, shared w/two male prof'ls. Male/female OK. No pets, N/S pref'd. Month to month; prefer commitment of 6 mos. \$650/mo. + \$250 dep. + 1/3 utils. (water/garbage paid). Kevin (408) 723-2115 or e-mail: khoward@myway.com

1bd/1ba condo (furnished or not) within short walk to Ames. Resort-style setting. Pool, spa, gym. Full remodel. All new appliances, paint, carpet, lighting. Gas, water, garbage paid. \$1,250. Must see! Call (650) 804-0860.

Miscellaneous

Sailboat 1/4 partnership. 25' Pacific Seacraft in Fort Mason marina (San Francisco). \$3,500 or B/O. E-mail silvanopc@yahoo.com or (415) 828-0513.

Mini motor-home, self-contained. 119K mls, '87 Ford Econoline engine. \$7,000 or B/O. Runs great. Nds some body wrk. Email silvanopc@yahoo.com or (415) 828-0513.

Old dining table set. Rattan. Thick 3/8 glass oval top (65" x 42") 4 comfortable cushioned swivel chairs. Best offer. Shirley B. (408) 777-0277.

Computer desk plus separate bookcase, birch veneer, like-new from IKEA, built-in keyboard tray and CD rack. \$35. Call (408) 295-2160.

TV armoire w/2 drawers plus matching end table w/ 2drawers, perfect for bedroom, stained honey-color finish, like-new \$65. Call (408) 295-2160.

Torso Track exercise equipment. Simple to use, lightweight, easy to store. Works entire abdominal area, back, shoulders and arms. Includes power bar owner's manual and instruction video. \$75. New condition. Call (650) 968-1899 leave message.

Reclining chair, \$35; 28 inch square end table, \$30; stereo cabinet and speakers, \$50; TV stand, \$20; 9 cu.ft. freezer, \$45; portable microwave with table, \$25. Call (408) 255-8362.

Loveseat, \$100. Recliner, \$75. Oak parquet dining table w/4 chairs, \$100. End table and sofa table, \$75. Call (408) 865-1157.

Apple Computer, iMac G4 700MHz, 128MB RAM 40GB HD CD-RW drive, 15" TFT, "New in the box". \$995 or B/O. Call (831) 336-8973.

Beautiful, large solid oak desk (5' X 3') and return with many drawers. Full ornate vanity panel all sides. Excellent condition. \$300. Can deliver. Call (650) 804-0860.

Transportation

'72 Austin Mini. 4 cyl. 1275cc right-hand drive. An original! White w/teal roof and hood stripes, snrf, gd brakes/shocks. New: alt, batt, tires, wipers, horn, and antenna. Clear CA title/never needs to be smogged. Great condition. \$7,900 or B/O. Mike (408) 433-1668.

'74 GMC 3/4 ton pickup 41K mls on rebuilt 350 motor and 350 trans. Many new parts, \$2,400 or B/O. Call (408) 615-1420 or (408) 515-2631.

'76 Ford Ranchero GT. 460, AT, red paint with black interior. Loaded! Stored many years, needs TLC. Runs good. \$2,450 or B/O. Scott (510) 317-1809.

'78 JEEP CJ7, 6 cyl, 5 spd, d300 t-case, roll cage, ps. 32" tires, 2 1/2" Rancho lift, runs and looks good. Orange paint with black interior. Comes with bikini top and 1/2 doors. \$5,250 or B/O. Scott (510) 317-1809.

'88 Jaguar XJ6 Sedan 4D, very good condition, low miles, well maintained. \$3,950 or B/O. Call (510) 324-7187 or (510) 304-4487.

'91 Ford Taurus LX, V6 automatic, high mls., faded ext. paint, interior in gd cond, gd tires and brakes, am/fm cass. Reliable commuter, used synthetic oil since new, new in box OEM spare parts, water pump, fuel pump and drive belts. Nds new seal on transmission drive shaft. \$500. Jose Rustia (408)205-2722 or justia@aol.com.

'96 Toyota Camry LE, V6, 134K mls, exc. cond, very well maintained, records. \$5,800. Call (650) 279-2703.

'97 Honda Civic LX, 50K mls, black, automatic, CD, alloy rims, immaculate cond, very well maintained. Kelly's Blue value \$10,600; asking \$8,500. Call (650) 604-1438.

'00 Chevy Malibu, Black, 26K mls, fully loaded w/ sun and moon roof, tinted windows, under warranty thru 2005, great condition. \$10,500 or B/O. Call (408) 910-0374.

'01 F350 Lariat crew cab dually 4x4 truck. 64K mls on 7.3 liter diesel, 6 spd, long bed, super duty. White paint with tan leather interior. Fully loaded with all options. Lots of power, includes Hypertech chip. Asking \$28,900 or B/O. Scott (510) 317-1809.

Car Pool

Car pool from Pleasanton. Contact Natalio Mingo at: mingo@nas.nasa.gov, or call ext. 4-1776 or Deepak Kulkarni at kulkarni@ptolemy.arc.nasa.gov or ext. 4-4869.

Ames Public Radio and Phone

1700 KHz AM radio -- information announcements and emergency instructions, when appropriate, for Ames employees. The emergency information phone number for Ames is (650) 604-9999.

Safety Data

	Civil Servants	Contractors
Not recordable first aid cases	1	4
Recordable no lost time cases	0	0
Restricted workday cases	0	0
Lost workday cases	0	0
Data above is for January 2003.		

Exchange Information

Information about products, services and opportunities provided to the employee and contractor community by the Ames Exchange Council. Visit the web site at: <http://exchange.arc.nasa.gov>

Beyond Galileo N-235 (8 a.m. to 2 p.m.)
ext. 4-6873

Ask about NASA customized gifts for special occasions. Make your reservations for Chase Park

Mega Bites N-235 (6 a.m. to 2 p.m.)
ext. 4-5969

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

Visitor Center Gift Shop N-223
(10 a.m. to 4:00 p.m.) ext. 4-5412

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

Tickets, etc...(N-235, 8 a.m. to 2 p.m.)
ext. 4-6873

Check web site for discounts to local attractions, <http://exchange.arc.nasa.gov> and click on tickets.

NASA Lodge (N-19) 603-7100

Open 7 days a week, 7:00 a.m. to 10 p.m. Rates from \$40 - \$50.

Vacation Opportunities

Lake Tahoe-Squaw Valley townhse, 3bd/2ba. View of slopes, close to lifts. Per night \$250, two night min. Includes linens, cleaning, propane fireplace, fully equipped. Call (650) 968-4155, DBMcKellar@aol.com

South Lake Tahoe Cottage w/wood fireplace and hot tub. Rates from \$50 to \$130 per night. Call (650) 967-7659 or (650) 704-7732.

Vacation rental, Bass Lake CA 14 mls south of Yosemite. 3bd/1.5 ba, TV, VCR, MW, frplc, BBQ, priv. boat dock. Sleeps 8. \$1,050/wk. Call (559) 642-3600 or (650) 390-9668.

Big Sur vacation rental, secluded 4bd/2ba house in lovely canyon setting. Fully eqpd kitchen. Access to priv. beach. Tub in patio gdn. Halfway between Carmel & Big Sur. \$175/night for 2; \$225 for 4 and \$250 for more, plus \$150 cleaning dep. Call (650) 328-4427.

Incline Village: Forest Pines, Lake Tahoe condo, 3 bd/2 ba, sleeps 8. Fireplc, TV/VCR, MW, W/D, jacuzzi, sauna, pool. \$120/night low season; \$155/night high season. \$90 cleaning fee and 12% Nevada room tax. Charlie (650) 366-1873.

Tahoe Donner vacation home, 2 bd/2ba. trees, deck, sun, fun. Access to pools, spa, golf, horseback riding, \$280 wkend, \$650 week. Call (408) 739-9134.

Pine Mountain Lake vacation home. Access to golf, tennis, lake, swimming, horseback riding, walk to beach. Three bedrooms/sleeps 10. \$100/night. Call (408)799-4052 or (831) 623-4054.

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:
Feb. 26	March 2003
Mar. 26	April 2003
Apr. 29	May 2003

Mac OS X vendor fair set

The Ames Macintosh Support Group (MSG) will present a Mac OS X vendor fair on Tuesday, March 4 from 10:00 a.m. to 3:00 p.m. in the Moffett Training and Conference Center, in Bldg. 3.

During this event, vendors will showcase their Mac OS X compatible products and display them 'expo-style' in the ballroom while select short-product presentations will be provided 'seminar-style' in the Macon room. The event's focus will be on Mac OS X and the software and hardware offerings for the scientific, programming, graphics and general purpose user communities.

Mac OS X is Apple's UNIX-based operating system. It provides an industrial-strength, standards-based operating system engineered for stability, scalability and reliability and yet has the ease of use that you would expect from Apple. Mac OS X can easily connect to and interoperate with Windows-based systems, is Section 508 compliant and offers numerous new features.

A Web site with additional details about this event, including the current list of vendors expected to attend, can be found at: <http://msg.arc.nasa.gov/macosx/vendor2003.html> For more information contact Julie ext. 4-4694 or Tony at ext. 4-0340.

How to answer a message from space

Dr. Seth Shostak of the SETI institute will give a non-technical illustrated talk on March 5 at 7 p.m., about 'What happens after contact: Responding to a message from space.'

The lecture will be given at the Smithwick Theater at Foothill College, located on El Monte Road and Freeway 280 in Los Altos Hills.

Shostek, a senior astronomer at the Search for Extra-Terrestrial Intelligence (SETI) Institute in Mountain View, will discuss what plans scientists have if they detect a radio message from an alien civilization out among the stars. He will examine how any such messages will be verified (to avoid hoaxes), how the news

will be announced, how information from the message would be disseminated and how humanity might decide whether and how to reply.

Shostek is renowned for his ability to explain astronomical ideas (and their implications for society) in everyday language and is the author of 'Sharing the Universe: Perspectives on Extra-terrestrial Life.'

The event is free and open to the public. For more information, call the series hotline at (650) 949-7888.

The event is co-sponsored by Ames, Foothill College astronomy program, the SETI Institute and the Astronomical Society of the Pacific.

Attention NACA retirees

NACA Reunion X will be held in Cleveland, OH, Oct. 10-12, 2003. If you have not already received your invitation, please send your name and address to:

NACA Reunion X Committee
c/o NASA Glenn Research Center
Mail Stop 500-311
21000 Brookpark Road
Cleveland, OH 44135

You can also call (216) 433-5358 and leave your name and address and we will get the necessary information out to you. We look forward to hearing from you.

-- NACA Reunion X Committee



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