

## Administrator Goldin speaks of tragedy and pride --urges NASA family to unite and move forward

This has been a difficult time for all of us. We have witnessed a senseless tragedy of



NASA Administrator Daniel S. Goldin

monumental proportions.

Tuesday night, as the President said, our way of life and our very freedom was attacked. But he encouraged all of us to unite in our resolve for justice and peace. He encouraged us to move forward.

I want to commend NASA employees and contractors—our entire NASA family—for their strength, their courage and their commitment to our nation during this difficult time...and for moving forward with our important work. It is imperative that we do so.

We've faced adversity before. And always we, as a people, have become stronger because of it. I have seen your unwavering allegiance to the values for which our country stands and it fills me with immeasurable pride.

Your exceptional performance even under stress, your patience, your commitment to safety, and your respect for your fellow man and woman exemplifies the best of this country.

So I ask you now to rededicate yourself

to your families. Take time to bring your family close and reflect on how important those relationships are. And then rededicate yourself to your jobs...to making America even stronger.

Whether you are a rocket scientist, a cook, a physicist, a secretary, an engineer, a research scientist, a maintenance person... your contribution to America's space program is important.

Throughout these terrible days, NASA's work has continued. The International Space Station is still in orbit, research continues, telescopes continue to send us remarkable data. I have received correspondence from all over the world expressing concern for our people and our assets.

The public is genuinely concerned about keeping our launch vehicles and facilities safe. We will continue to refine and strengthen security measures at all NASA installations and we will continue our important work.

But I ask each of you... please be patient. Work with our security people. They're here to guarantee your safety and the

safety of your co-workers. We cannot forget that there's still the potential for further violence.

As many of you know, I am originally from New York. The devastation in that city has affected me deeply. I have also worked on Defense Department projects in my career, and NASA has a close working relationship with the DoD.

I have friends and colleagues who work in the Pentagon. The gaping hole in that building and the senseless loss of life there has also affected me personally.

It is healthy to discuss the events of the past few days. If you need to do so beyond your friends and family, if you feel anxious or concerned about your safety or any other topic, go to the trained counselors available at the Employee Assistance Program.

... Even the strongest of us sometimes need to talk. It's okay to feel vulnerable. But we're in this together... and we'll come through this, stronger than ever.

And I would like to remind everyone

*continued on page 7*

## Ames joins nation in mourning



photo by Astrid Terlep

Center flags were lowered to half mast in respect to, and remembrance of, those who lost their lives in the terrorist attacks of Sept. 11 in New York, Washington and Pennsylvania. The Ames family joined the nation in mourning this tragic loss.

## Center Briefs

### NASA awards grants to enhance space education and outreach

NASA announced in August a big step toward improving the way it brings space science to local communities around the country.

The agency's Office of Space Science, at NASA Headquarters in Washington, D.C. selected seven recipients for grants to help space scientists become involved in educational activities. It is hoped that recipients will build partnerships between the space science and education communities. Further, they have been selected to serve as regional points-of-contact for space scientists and educators seeking information on, and involvement in, NASA's space science education and outreach program.

### Earth is becoming a greener greenhouse

NASA satellite data suggest that, for more than two decades, there has been a gradual greening of the northern latitudes of the Earth.

Researchers confirm that plant life seen above 40 degrees north latitude, which represents a line stretching from New York to Madrid to Beijing, has been growing more vigorously since 1981. One suspected cause is rising temperatures possibly linked to the buildup of greenhouse gases in the Earth's atmosphere.

Over this same time period, parts of the Northern Hemisphere have become much greener and the growing season has increased by several days. Further, Eurasia appears to be greening more than North America, exhibiting more lush vegetation for longer periods of time.

### Chandra catches Milky Way 'monster snacking'

For the first time, astronomers have detected material being consumed by the supermassive black hole in our own backyard. A violent, rapid X-ray flare, captured by NASA's Chandra X-ray Observatory, has been observed from the direction of the supermassive black hole that resides at the center of our Milky Way galaxy.

A team of scientists, led by Fredrick K. Baganoff of the Massachusetts Institute of Technology (MIT) in Cambridge, Mass., detected a sudden X-ray flare while observing Sagittarius A\*, a source of radio emission believed to be associated with the black hole at the center of our galaxy.

"This is extremely exciting because it's the first time we have seen our own neighborhood supermassive black hole devour a chunk of material," Baganoff said. "It's as if the material there sent us a postcard before it fell in."

## Ames participants raise \$7,000 for AIDS research in Alaska bike ride

Two Ames men pedaled bicycles 500 miles in Alaska from Aug. 20 - 25 during a ride to raise money for Acquired Immune Deficiency Syndrome (AIDS) research.

Seth Carter of Raytheon and Mark Leon of Ames rode for six days from Fairbanks to Anchorage, Alaska during the 'Alaska AIDS Vaccine Ride.' Both men work for the High Performance Computing and Communications Program in Code D.

"We both raised the funds required, and together we will be donating over \$7,000 to the event," Leon said. "My mother passed away earlier this year from lung cancer, and I wanted to do something to make a difference towards ending suffering and saving lives," he continued.

More information about the Alaska AIDS bicycle ride is available on the Internet at: <http://www.vaccineride.org/alaska/>



photo by Pamela Sheets

Mark Leon of Ames (left) and Seth Carter of Raytheon rode six days from Fairbanks to Anchorage during the 'Alaska AIDS Vaccine Ride.'

## Fall Fun Walk and Run set for Sept. 25

This year's Fall Fun Walk and Run is set for Sept. 25 and will be 2 miles in length.

The start time is 12 noon, with the starting line at DeFrance and Warner. Registration

is from 11:15 a.m. - 11:50 a.m. at the site. The cost is \$2. Pre-registration with a Fun Run coordinator or at the Fitness Center is available before Sept. 20. T-shirts, ribbons, refreshments and prizes will be handed out at the finish line.

Certificates will be given to winners in both walking and running categories. No roller-blades will be permitted.

Contact Nancy Dunagan at ext. 4-5804 for additional information.



# NASA comes to the aid of aircraft-noise sufferers

Residents of communities near airports may some day breathe a sigh of relief as a result of NASA tests using one of the world's largest wind tunnels to evaluate a variety of 'quiet' aircraft technologies.

Aircraft are at their 'loudest' when landing gear, wing flaps and slats are deployed, creating large amounts of wind turbulence and generating lots of noise. Engineers at Ames, with support from NASA Langley Research Center, Hampton, Va., are using Ames' subsonic wind tunnel to test design modifications that reduce aircraft noise on a 26 percent-scale model of a Boeing 777 aircraft.

"This wind tunnel test is the culmination of eight years of work to make aircraft quieter during the time when the most noise is produced — take-off and landing. This is the first time that all of these noise-control devices will be tested together. Each device works separately, but this test will determine how well they work together," said engineering lead Kevin James of Ames.

"These technologies, developed by NASA and an industry airframe-noise-reduction team, will revolutionize the design

of future generations of commercial aircraft. Communities will experience less noise, and their citizens' quality of life will be improved, with the implementation of the advanced technologies to be demonstrated in this critical experiment," said Bill Willshire, noise-reduction program manager at Langley. The research to develop quieter aircraft is funded under the Aerospace Vehicle System Technology Noise Reduction program managed by Langley.

The model — known as the Subsonic Transport Acoustic Research (STAR) model — consists of the left half of the aircraft. It was mounted with the wing vertical in the test section. The model is complete with a wing, landing gear, leading-edge slats and flaps that are fully extended to duplicate take-off or landing conditions.

"This model is one of the most detailed wind tunnel models of a commercial aircraft ever tested. The model has all of the control surfaces and parts of the real aircraft. It has a semi-wingspan of 26 feet and is built to a tolerance of 0.030 of an inch," said James. "The Boeing 777 was picked for the development of these quiet modifi-

cations because it is already a relatively quiet aircraft. We wanted the challenge of making it even quieter," James added.

To determine noise levels, the test will use one large, fixed acoustic-sensor array

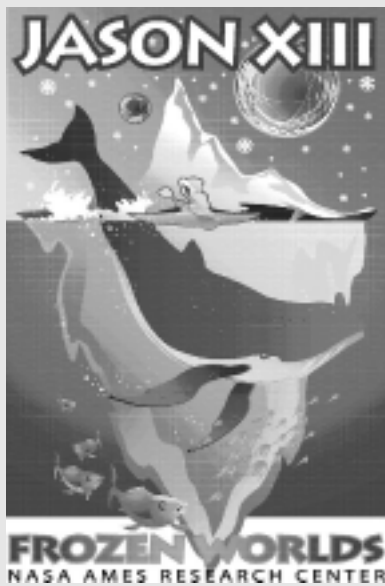


photo by Tom Trower

Ames' 40 x 80-foot subsonic wind tunnel is being used to test design modifications that will reduce aircraft noise on a 26 percent-scale model of a Boeing 777 aircraft.

## JASON XIII project is coming to Ames

The JASON XIII project will take students to 'Frozen Worlds,' the regions around the



North and South Poles, to unravel the mysteries of fascinating frozen features and bizarre living creatures. Students in grades 3-9 will discover the geography and climate

of frozen worlds, the human history and culture of those lands, and the unique adaptations that allow the ecosystems and species to exist in these regions.

The JASON project allows students to see in real time what scientists do every day. Next Jan. 28 to Feb. 8, students will come to the Ames main auditorium to participate in a live interactive broadcast, working with real-time research data and the JASON expedition teams. Over 10,000 local students and teachers are expected to participate in this coming year's expedition. To help teachers prepare their students for this project, the Ames Education Office is sponsoring workshops to acquaint them with the curriculum and demonstrate effective learning activities. The next JASON workshops are on Sept. 21 and 22 and Oct. 11 and 13.

All Ames employees are encouraged to get their own schools involved. For more information on getting your school involved with JASON or to volunteer for the JASON broadcast, contact Tom Clausen at ext. 4-5544 or John Colombero at ext.4-0857. For more information about the JASON project, visit: [www.jasonproject.org](http://www.jasonproject.org)

and one mobile acoustic (or 'microphone') array that can cover the entire length of the model. Acoustic arrays enable engineers to measure the noise generated from small portions of the model. With the microphone array, noise generated from the flap edge can be separated from noise generated from the slat. The benefit of the microphone array is very much like that of a microscope, allowing researchers to look at individual noise-generating parts. The model is also heavily loaded with sensors that monitor wind speed, turbulence and pressure.

"We've learned a great deal over the past several years and have significantly improved our sensor-array designs. A mobile array was needed because some of the noise produced is very directional. The sensor needs to be in position to 'see' the noise in order to accurately detect the noise," said James.

BY JONAS DIÑO



# Hubbard draws crowd at 'Search for Life on Mars' seminar

Ames' Deputy Director for Research Scott Hubbard discussed NASA's new Mars program at a recent on-site presentation. The program was significantly revamped under his tutelage following several back-to-back



Scott Hubbard addresses a full house at an Ames seminar on August 21 entitled "The Search for Life on Mars: Following the Water" held in the Space Sciences auditorium.



photos by Tom Trower

Researchers listen to Scott Hubbard outline NASA's new Mars policy. Hubbard, Ames' Deputy Director for Research, has first-hand knowledge of current plans having recently returned from a stint at NASA Headquarters as the agency's Mars program director.

Mars mission failures in 1999. Hubbard summarized the new program and outlined opportunities for future research and mis-

sion proposals.

According to Hubbard, the new Mars exploration program is a science-driven, technology-enabled effort to characterize and understand Mars, including its current environment, climate, geologic history and biological potential. Central among the questions to be addressed during future missions is the core astrobiology conundrum: "Did life ever arise on Mars?" The

new science strategy is generally known as "follow the water." "The new exploration approach," he explained, "is based on seeking in-situ Martian samples, based on orbital reconnaissance, investigating Mars' surface and, finally, selecting and landing at the most-promising Mars sites in order to obtain samples for return to Earth."

BY KATHLEEN BURTON

## Hand-held computers may reduce airport congestion

Ames researchers have determined that small, Internet-linked computers in the hands of airport workers may help unclog the nation's air terminals.

The research finding is based on studies at San Francisco International Airport and other air terminals. NASA scientists at Ames collaborated with United Airlines on the two-year project. Researchers also suggest that additional 'curb-to-gate' changes, including better signs in terminals, synchronized clocks and improved check-in procedures, as well as improvements in airline and airport operations, may help reduce flight delays.

"The study recommends the development of a next-generation of airport information systems. These would include use of hand-held computers to allow airline employees and others to update schedules on the tarmac, on baggage carts and in gate areas," said Dr. Roxana Wales, a member of the Ames research team. "Delays can arise at any point in a flight, including preparations before leaving the gate; and difficulties at one point can lead to a slipped

schedule at any other point. We have to focus on the entire system. Much of the current attention focuses on the movement of planes instead of the whole process of getting people from point A to point B," Wales said.

Other experts across the country have advocated adding runways to airports and are working to improve air traffic control systems. "Airline and airport operations need to be included in the debate on how to streamline the nation's air travel system," said Wales.

"United Airlines gave us access to all areas of their operation. They badged us for access to non-public areas and allowed us to interact and talk with employees at all levels. This is extraordinary access for a group of researchers," she explained. The team conducted extensive research in airline operation centers, on baggage ramps where airplanes are loaded and unloaded, in airline lobbies, at counters, at passenger gates and in control towers.

Today's airport information and communication systems are designed for rou-

tine aircraft turnaround, according to the NASA research team. Problem and delay situations "require a 'richer' information environment to facilitate decision making," Wales said.

The good news is that there are near-term solutions in sight that include simply integrating information systems across groups in airports, according to the Ames team. They also said that better communications and other improvements should include not only airline employees, but all workers involved in smoothly getting a passenger from the street to his or her destination.

"A breakdown in the process, where the customer is unable to understand and expediently move through one step to another, at any point, can contribute to a delay," said Zara Mirmalek, another research team member. The team conducted research at San Francisco's United domestic terminal and airports serving Atlanta, Chicago and Oakland, Calif.

BY JOHN BLUCK

## Safety & Preparedness

# DART--looking for a few good men . . . and women!

The NASA Ames Disaster Assistance and Rescue Team (DART) is looking for people who are interested in joining this highly-trained group. Civil servants, contractors and Moffett resident agents are welcome to apply for membership in any of the following areas: search and rescue, hazardous materials response, emergency operations center and emergency communications.

DART rescue was established in 1986 with training as an emergency response team beginning in 1987. Since that time, the team has evolved into a diverse, multi-skilled urban search and rescue team with capabilities in collapsed structure rescue, water rescue, trench rescue, high angle rescue, etc. The team has 20 emergency medical technicians with the remainder being certified American Red Cross emergency responders.

DART is Ames and NASA sanctioned. Interested parties must apply to join the team. Once appointed, DART becomes a collateral duty to one's primary job. Areas served by DART members include: rescue, HazMat response, structural assessment, damage and utility control, emergency operations center, emergency communications, logistics and building emergency response teams (BERT).

Members of DART have responded to emergencies at Ames, such as those resulting from the Loma Prieta earthquake, floods and hazardous materials incidents. They also support special events held at Ames, like the recent Air Expo.

Some members of DART are part of California Task Force 3 (CATF3), one of the 11 FEMA task forces deployed during the



Oklahoma City bombing in 1995 and called upon to assist with the recent tragedies in New York and Washington, D.C. Nine DART members responded as part of the Oklahoma City deployment. DART members were also involved in CATF3's deployments to Hurricane Iniki and the Northridge earthquake.

Emergency operations center and emergency communications members receive

special training and are a critical resource during emergency planning and response at Ames.

If you are interested in becoming a member of DART, please request and complete an application form and mail it to the author at M/S 158-1. DART will be holding an informational briefing in mid-October.

BY LYNNE ENGELBERT

## Author Michael Pollan to speak during safety week

Safety and Quality Week will be capped off with another outstanding speaker on Thursday, Sept. 27. Michael Pollan will appear before the Ames staff in the main auditorium to share his unique perspective, his intense curiosity and his infectious good humor.

Pollan is a contributing writer to the New York Times magazine and the author, most recently, of the 'The Botany of Desire: A Plant's-Eye View of the World.' His writing has received numerous awards, including the John Burroughs prize for the best natural history essay in 1997, the QPB New Vision Award for his first book, 'Second Nature,' and the 2000 Reuters-I.U.C.N. Global Award for 'Environmental Journalism' for his reporting on genetic engineering.

Pollan will explore the relationships that develop between different plant species and among plants and humans. From these beginnings, he will look at the importance of bio-diversity and the role of genetically engineered crops. He might help you to

rethink the Disney version of Johnny Appleseed.

Besides 'Second Nature' (1991), Polan also wrote 'A Place of My Own' (1997).

His work is included in many anthologies, including 'Best American Essays' and the 'Norton Book of Nature Writing.' In addition to publishing regularly in the New York Times magazine, his articles have appeared in Harper's, Vogue, Travel and Leisure, Garden Design, Gardens Illustrated, the Harvard Design magazine, and House and Garden. Pollan is also a contributing editor at Harper's magazine, where he served for many years as executive editor.

Mark your calendar now and plan to attend this special event.

For more information about the activities scheduled during Safety and Quality Week, go to: <http://q.arc.nasa.gov> and click on the Safety and Quality Week button.

BY JACK STANLEY



Michael Pollan, author and environmentalist, will speak at Ames' Quality and Safety week wrap up.

## Ames uses aerial remote sensing to help grape growers

Ames researchers are helping growers improve wine quality by employing remote-

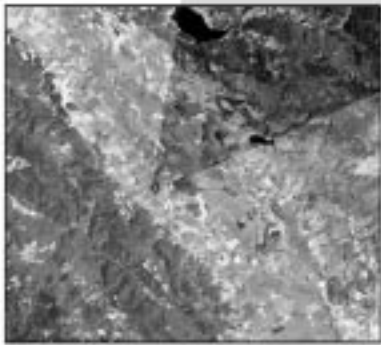
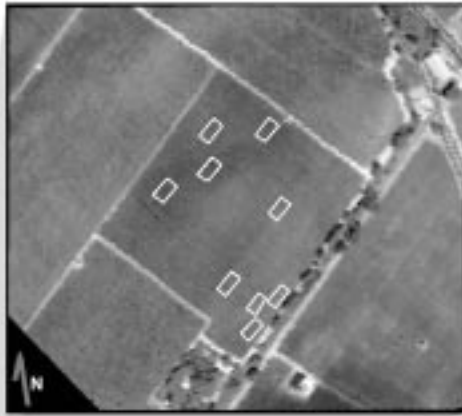
researchers said. Scientists also measured light levels, water status, chlorophyll and other factors on the ground.

vide the winemaker with increased latitude in blending, and serve to increase quality."

Scientists on the ground measured leaf area in selected sample sites at the winery. The researchers then combined the ground-gathered leaf area data with aerial and satellite information to make an accurate map of the vineyard under study. Researchers used red and near-infrared images to monitor plant density, comparing various vine areas. Study results are scheduled for later publication in the journal *Applied Engineering in Agriculture*, and for presentation at the Third International Conference on Geospatial Technologies in Agriculture and Forestry.

NASA remote sensing of vineyards by airplane and satellite first began at the Robert Mondavi winery in 1993 to track the phylloxera infestation that was affecting northern California. From the late 1980s, California winegrowers faced destruction of their vines by infestation of the pest that kills vines by feeding on their roots. Infested areas must eventually be replanted on a phylloxera-resistant or tolerant rootstock. Additional information about Ames' grapevine studies is on the Internet at: <http://geo.arc.nasa.gov/sge/vintage/vintage.html>

BY JOHN BLUCK



sensing techniques to scan vineyards from high above California.

Scientists are using images taken from airplanes and satellites to map vineyard leaf area to assist vintners in measuring ripening rate, disease incidence, soil drainage and fruit quality.

"For hundreds of years, wine growers have known that grapes harvested from different areas in their vineyards can produce wines with unique flavors and tastes," said Tim Mondavi, winegrower and vice-chairman of Robert Mondavi winery, Oakville, Calif. "We are now using NASA's advanced remote-sensing technologies to understand the subtle nuances of our vineyards--and with astounding results."

Researchers divided groups of vines in the study area into high-, moderate- and low-vigor areas, which have unique flavors and levels of grape maturity, allowing for different styles of wine. Results of the study confirm that the low- and moderate-vigor areas produced higher quality wines, while the high-vigor area produced medium quality wine. The winery has engaged a commercial remote-sensing vendor for 'decision support' across its Napa properties,

for cultivation and harvest.

Remote-sensing imagery allows Robert Mondavi winegrowers to better understand micro-regions within their vineyards. "We now identify vine vigor to see weak and strong areas of growth in the vineyard, then we break up how we harvest," said Daniel Bosch, vineyard technical manager at Robert Mondavi Winery. "We can taste those differences in the grapes at harvest."

"Winemakers blend wines from different lots to create a desired flavor profile in the final wine," Johnson said. "A greater number of distinct wine lots will pro-



Ames researchers are helping winemakers enhance crop value and quality using images from aircraft and satellites combined with on-the-ground sampling.

# Administrator Goldin speaks of tragedy and pride -- urges NASA family to unite and move forward

*continued from front page*

that there are Employee Assistance Program offices at every NASA center.

Another thing that makes this country strong is the fact that we are different.

We Americans come in all shapes and colors... we believe in a greater power and worship in many different ways...we speak many different languages...and have many different types of dress.

NASA is a reflection of the wonderful diversity that is America. We have a legacy of embracing people of many cultures, dating back to our very beginnings.

Please remember that we are greater than the sum of our parts, because of our diversity. This is the time to embrace all people of good will and we should continue to be sensitive and respectful of all Americans.

I have heard many people express frustration that there seems to be nothing we can do to help those directly affected by this senseless tragedy.

There are things we can do to help. First, there is a continued need for blood donations. A call to your local Red Cross will direct you to a nearby blood donation center.

Second, charitable organizations such as the Red Cross and the Salvation Army need our financial support.

Third, and perhaps most important, we can help by getting about our business...by doing our jobs...by living our lives.

One of the goals of these despicable terrorists is to disrupt our way of life and our society. If we let that happen, we will have handed them a victory. Let's not do that; let's hand them a resounding defeat.

There's one more step we all can take. The President has declared tomorrow a National Day of Prayer and Remembrance.

Please, each of you in our own way, pray for the victims and their families... and pray for the brave men and women who are working with them... the firefighters, rescue crews and medical personnel on the scene in New York and in Washington.

Let us resolve to go forward... rededicated to our families, rededicated to our work, rededicated to our country, and rededicated to our way of life.

Before there were space stations, computers and sophisticated navigation devices, early explorers looked to the Northern Star to help guide their travels. During stormy weather and cloud-filled nights...these explorers waited patiently, because they knew

that the Northern Star would be there, once the weather cleared, to show them the way.

America is that northern star when it comes to justice, freedom and peace. The people of the world have been patiently waiting...watching us. And now, a couple of days later, the smoke is clearing... and we're still there...shining brighter than ever...ever vigilant, ever committed to the

values of freedom and democracy... poised to show the way, no matter what difficulties or evil forces block our path.

May God bless you, and may God bless America.

*Editor's Note:*

*Slightly shortened text of a speech by Administrator Daniel S. Goldin to NASA personnel on Sept. 13, 2001.*

## Terrorist concerns prompt enhanced security

As a result of the recent terrorist acts in Washington, D.C. and New York City, federal installations and facilities, including NASA Ames Research Center, have adopted more stringent security and access procedures designed to safeguard human life and property.

All center personnel are advised that the following more restrictive conditions and requirements are now in effect and will remain so for the foreseeable future, including:

- Access to Ames may be obtained through the main gate on a 24-hour, 7-day-per-week basis. Two other gates — on Ellis Street (South Gate) and beyond the Ames Visitor Center (Gate 17) — will be open from 6:00 a.m. to 6:00 p.m. on weekdays.

- All passenger vehicles operated by Ames civil service or contractor personnel with hard picture badges and entering the center during normal duty hours are subject to random consent searches. Consent to search may be withheld, but it is a condition of entry. Outside of normal duty hours, every vehicle and driver requesting entry to Ames is subject to search.

- All delivery trucks, and all panel vans and similar vehicles, like SUVs, that do not allow for an unobstructed view of their interior will be searched.

- Only those guests deemed 'essential' by directorate and/or center man-

agement will be permitted to visit Ames at the current time. All such 'essential' visitors (whether American, foreign, technical, administrative, news media and/or military, for instance) will be badged and must be escorted by their sponsor at all times while on center.

- Facilities that are categorized as 'critical' or part of the 'mission essential infrastructure' will have only a single point of entry and exit. Only authorized personnel will be permitted to enter such facilities. Parking of vehicles, whether personal or delivery, in close proximity to such facilities will not be permitted.

While these procedures may result in modest delays, particularly during peak-entry times, they have been developed to ensure the safety of center personnel. Employees are encouraged to explore mass transit, carpool and other transportation alternatives.

If you have any questions about the new security requirements, speak with your supervisor or contact the Ames Protective Services Office for clarification. All suspicious activity, packages, behavior and persons should be reported to the Protective Services Office immediately. Additional security patrols and building checks will be made. Anyone requiring help with such things as building entry or late night escort is advised to call Protective Services for assistance.

# Homer Hickam to kick-off Safety and Quality Week

A young man in a small West Virginia coal town dreams of building rockets to outer space, when he witnesses Sputnik flying overhead. A perfect Hollywood opening scene, the story behind the hit film



Homer Hickam

'October Sky' is all the more remarkable because it is drawn from the real life of former NASA engineer Homer Hickam. Taken from the pages of Hickam's best-selling autobiography 'Rocket Boys: A Memoir' (re-released as 'October Sky'), the film won the adulation of critics and the hearts of movie goers.

Hickam's inspirational work, 'Rocket Boys,' focuses on his high school years when he and his boyhood friends dreamed of careers with NASA while building and launching their own sophisticated rockets.

But, it was more than a dream for Hickam, who became a NASA aerospace engineer. 'Rocket Boys' was selected by the New York Times as one of its 'great books' of 1998.

In his latest book, 'The Coalwood Way,' Hickam applies his storytelling gifts to his senior year in high school, 1959. The book deals with the changes he faced as Coalwood ceased to be a company town and the miners had to adapt to a new way of life where issues such as racism and domestic violence had to be confronted. These changes would have a lasting effect on Coalwood and the rest of America.

Hickam will, once again, bring his powerful story to the Ames staff on Monday, Sept. 24 to launch Safety and Quality Week 2001. Charting his own remarkable journey from the coal mines of West Virginia to the heart of NASA, he applies the life lessons in

leadership and personal responsibility learned in Coalwood to the business world.

An astronaut training manager for space missions, Hickam explores team building and how difference and adversity can be utilized to create a strong, unified vision. He has worked with many Ames employees on various payloads, including the frog embryology experiment that was flown on Spacelab-J in 1992.

Those attending the 10:00 a.m. presentation by Hickam are welcome to swing by the lobby of Building 200 at 9:30 a.m. to enjoy a cup of coffee or juice and a pastry before going to the auditorium for the kick-off festivities.

For a complete schedule of the week's events, go to: <http://q.arc.nasa.gov> and click on the Safety Week button.

BY JACK STANLEY



## H. Julian Allen award presented

The 2000 H. Julian Allen Award was given to the paper entitled 'Carbon isotope evidence for the stepwise oxidation of the Proterozoic environment,' published in 1992 in Nature, Vol. 359. The paper was authored by Dr. David J. Des Marais, Harald Strauss, Roger E. Summons and J. M. Hayes.

On Aug. 23, David Des Marais presented the H. Julian Allen Award lecture about his research into how the biosphere of the Earth evolved over its history. A short ceremony took place following the lecture, after which refreshments were served.



photo by Tom Trower

Dr. David Des Marais, Ames recipient of the 2000 H. Julian Allen Award presented on Aug. 23 in the Space Sciences auditorium.

## Computer Museum History lecture

On Thursday, Oct. 11, at 6 p.m - 7:30 p.m., the Computer Museum History Center at Moffett will sponsor Dan Ingalls who will be present his lecture on 'From Smalltalk to Squeak' in the N-201 auditorium at Ames. Smalltalk-80, the language from which Squeak is derived, traces its roots to the famous beanbag chair culture of Xerox PARC in the 1970s. Developed by a team headed by Dan Ingalls, Smalltalk was to be the supporting software environment for Alan Kay's visionary portable and networked Dynabook computer -- a concept that re-

mains compelling today.

Though the original Dynabook never came into being, Smalltalk took root and continued on. Ingalls tells the story of how the foresightful Smalltalk concepts and capabilities have evolved into a modern environment called Squeak. The lecture is free with a reception to follow.

Please RSVP by Tuesday, Oct. 9. Call ext. 4-2714 or send an email to: [lectures@computerhistory.org](mailto:lectures@computerhistory.org). For more information, visit: [www.computerhistory.org](http://www.computerhistory.org)

## Errata

Friedemann Freund, in addition to Nathalie Cabrol, provided principal investigator mentorship to Ames Astrobiology Academy college student Rachel Schelble. We regret this omission in the Sept. 4 Astrogram article entitled 'Astrobiology Academy Inspires Future Leaders.'



# Calendar & Classifieds

## Event Calendar

### Model HO/HON3 Railroad Train Club at Moffett

Field in Bldg. 126, across from the south end of Hangar One. Work nights are usually Friday nights, 7:30 p.m. to 9:30 p.m. Play time is Sundays, 2 p.m. to 4 p.m. Call John Donovan (408) 735-4954 (W) or (408) 281-2899 (H).

**Jetstream Toastmasters**, Mondays, 12 noon to 1 p.m., N-269/Rm. 179. Guests welcome. POC: Samson Cheung at ext. 4-2875 or Lich Tran at ext. 4-5997.

**Ames Bowling League**, starts Sept 4. Bowling at the Palo Alto Bowl on Tuesday nights. Seeking full-time bowlers to fill out teams and substitute bowlers. Pre-league meeting at Palo Alto Bowl on Tuesday, August 28 at 6 p.m. Questions about the league or wish to sign up, contact Mike Liu at ext. 4-1132.

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

**Ames Child Care Center Board of Directors Mtg**, Every other Thursday (check website for meeting dates: <http://accrc.arc.nasa.gov>), 12 noon to 2 p.m., N-269, Rm. 201. POC: Joan Walton, ext 4-2005.

**Ames Sailing Club Mtg**, second Thursday each month, 11:30 a.m. to 1 p.m., bldg. N262/Rm 100. Brown bag lunch, usually includes a special speaker. Come learn about sailing. Everyone welcome. POC: Stan Phillips, ext. 4-3530 or Joyce Barrett, ext 4-3816.

**Ames Pollution Prevention week**, Sept 17 - 21. Displays of pollution prevention, recycling and affirmative procurement will be at Mega Bites, the Ames cafeteria. Ms. Timonie Hood of EPA Region 9 will be speaking on the Waste Wise program from 12:30 p.m. - 1:30 p.m. in N19, rm. 1040. For other planned activities, you can contact the pollution prevention coordinator Gigi Phung at: [gphung@mail.arc.nasa.gov](mailto:gphung@mail.arc.nasa.gov)

**Ames Federal Employees Union (AFEU) meeting**, Sept 19, 12 p.m. to 1 p.m., Bldg. 19, Rm 1042. Info at: <http://www.afeu.org>. POC: Marianne Mosher at ext. 4-4055.

**Ames Amateur Radio Club**, Sept 20, 12 noon, N-T28 (across from N-255). POC: Michael Wright, KG6BFX, at ext. 4-6262. URL: <http://hamradio.arc.nasa.gov>

**Native American Advisory Committee mtg**, Sep 25, 12 noon to 1 p.m., Building 19, Rm 1096. POC: Mike Liu at ext. 4-1132.

**Ames Contractor Council Mtg**, Oct 3, 11 a.m., N-200, Comm. Rm. POC: Paul Chaplin at ext. 4-3262.

**Environmental, Health and Safety Monthly Information Forum**, Oct 4, 8:30 a.m. to 9:30 a.m., Bldg. 19/Rm 1040. URL: <http://q.arc.nasa.gov/qe/events/EHSeries/> POC: Julie Quanz at ext. 4-6810.

**Nat'l Association of Retired Federal Employees (NARFE)**, Oct 5, S. J. Chapter # 50 mtg, 9:30 a.m., Hometown Buffet, Westgate Mall, 4735 Hamilton Avenue, San José. Lunch at 11 a.m. \$6.27 pp. Program at 10 a.m. Peninsula Stroke Association. POC: Earl Keener (408) 241-4459 or NARFE 1-800-627-3394.

## Ames Classifieds

Ads for the next issue should be sent to [astrogram@mail.arc.nasa.gov](mailto: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; Ames extensions and email addresses will be accepted for carpool and lost & found ads only. Due to the volume of material received, we are unable to verify the accuracy of the statements made in the ads.

### Housing

3 bd/1.5 ba, 2-story twnhw on Luz Avenue, San José. Freshly painted inside, dishwasher, gas heat, w/w carpet, outside child play area/large patio. 1 car port. Easy access to H101/680/280. \$285K. Azucena (408) 559-2881.

Two sunny, pleasant furnished bedrooms for rent in home in the Los Gatos/Campbell corner of San Jose for considerate, professional non-smoker. Off-street parking, safe family neighborhood, most utilities included. Long term preferred, shorter term possible for summer/fall. Shared bath/kitchen. Lease/deposits required. Call (408) 266-7272 and lv. message..

Townhouse for sale: 2 bd/1.5 Ba, 4 miles and 10 minutes from Ames; best area of Sunnyvale, across from excellent elementary school; has large patio with private hot tub and orange tree, complex pool, fireplace, large greenbelt in front, close to Hwys 85 and 280 and El Camino Real, washer and dryer and refrigerator can remain (along with dishwasher); going on market soon; new carpets and paint; \$365K. Call (408) 245-8256.

Room for rent in house, San Jose (Willow Glen) 20 min to Ames. Great neighborhood, short term rental or longer term avail. \$665/month depending on length of rental. Full access, fully furnished, W/D, D/W, gardener, very clean. Room is currently being rented by an intern at Ames but will be available 9/1/01. E-mail any questions to [t20brown@pacbell.net](mailto:t20brown@pacbell.net). Call (408) 265-9142.

3bd/2ba 1,700 sq.ft. Yr. 2000 Mnfrctd. home right off Shoreline (5 min commute or 15 min walk to/from Moffett Field). Grmt. ktchn. w/bay windows. Mrbl. frplc. Huge Mstr. bd. and bthrm. w/jczz. Cntrl. A/C and heating. Lots of amenities. \$185K James (650) 428-0123.

1 bdrm available 10/1 in Redwood City \$600 + 1/2 util. + \$600 security dep, shared bathrm & kitchen. Nice area. Female preferred, NS/NP. Call (650) 365-3690.

### Miscellaneous

JUKI industrial tailor/dressmaker sewing machine single needle. Exc. cond. \$450 or B/O. Nancy (408) 946-5034.

Wanted: Olympus G40 electronic flash unit for IS-1/2 SLR. Brian (650) 940-1673 or [brian@landsurfing.com](mailto:brian@landsurfing.com)

Old fashioned free-standing wood headboard for king size bed; has oval mirror w/etching, shelves and carving. \$100. Call (510) 770-9933.

Amana side-by-side fridge; 22 CF, almond color, ice maker, great cond. \$200. Call (510) 770-9933.

Two pair of double, prairie-style casement windows removed from 1923 California Bungalow home, victims of a remodel. Gd cond, call for pics, \$125. Call (408) 295-2160.

Electronic chess set (Kasparov/still in box) \$85; Sega Dreamcast video game set (used once) \$150; security camera/monitor (still in box) \$75; electronic crock pot \$25; 2 CB radio-walkie talkies (still in box) \$25; used, good cameras - not digital (please call for info). PJ (650) 599-9829.

Canon BJC-6000 photo printer (1440x720dpi) with manual & software with (6) full ink tanks and spare black cartridge. 1yr old; example photos available, \$115. Call (408) 295-2160.

Electric powered hospital bed-\$75, aerobic conditioner - \$20; exercise bike- \$25; rowing machine - \$40. Chris (650) 948-1981.

Health Rider with rep. counter/timer, like new. \$150. Deborah (510) 794-5738 after 5:30 p.m.

Pair of San José Sharks hockey tickets for games on Sept 20 and 25 available. Tickets are \$34 each. Call (408) 735-0524.

Bicycle, specialized Hardrock mountain bike, 19" frame, more than two years old, includes U-lock & chain, rear light, pump, patch kit, two spare tubes, pump, and one fender if needed. \$100. Eugenio (650) 964-8174.

Desk, metal approximately 6'x4'x3' with two drawers on right side. \$50. Eugenio (650) 964-8174.

Nice 6-piece Queen-size bedroom set including pillow-top mattress/boxspring set, excellent condition, \$1,650. Sofa \$300. Call (408) 946-3609.

Old fashioned free-standing wood headboard for king size bed; has oval mirror w/etching, shelves and carving. \$100 or B/O. Call (925) 427-4146.

Amana side-by-side fridge; 22 CF, almond color, ice maker, great cond. \$200 or B/O. Call (925) 427-4146.

Looking for bunkbed in good condition, with full-size bed beneath. Email: [copernicus7@hotmail.com](mailto:copernicus7@hotmail.com)

### Transportation

'70 VW convertible classic, original owner, no smog needed; transmission ok; needs work on top & possibly engine. \$1,600. Esther or Art (650) 961-2732.

'84 Toyota Corolla Liftback 4D, fair condition, nds paint job & possibly new struts, clutch starting to slip, complete service record, gd for short commute. \$1,000. Eugenio (650) 964-8174.

'87 Toyota 4Runner 4WD, white, 5 spd. AC, good condition, 5K. Call (209) 835-6351.

'89 Jeep Comanche, Fuel Injected 4 cylinder (108,000), manual transmission, 2wd, PS, PB, AC, AM/FM cassette, bedliner, straight body, clean interior, great mileage, runs great. Lots of power for a 4 cylinder. Passed California smog, clear title. \$1,850 or B/O. Call (510) 317-1809 or email [Rubiconjeep@yahoo.com](mailto:Rubiconjeep@yahoo.com)

### Ames public radio

1700 KHz AM radio -- information announcements & emergency instructions, when appropriate, for Ames employees.

## 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. Check centerwide emails for special sales and events. Make your reservations for Chase Park here.

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

Catering is available for your office BBQ or luncheon. Come by for details. See daily menu at: <http://exchange.arc.nasa.gov>

**Visitor Center Gift Shop N-233**  
(10 a.m. to 4:30 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 our web site for all 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.

**NASA Swim Center (N108) 603-8025**

The pool is open for the summer. Book your office birthday party. A fun way to spend the day.

### Vacation Opportunities

Lake Tahoe Squaw Valley twnhse, 3bd/2ba, balcony view, horseback riding, hiking, biking, golf, river rafting, tennis, ice skating and more. Summer rates. Call (650) 968-4155, [DBMcKellar@aol.com](mailto:DBMcKellar@aol.com)

South Lake Tahoe cottage with 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. 3 bd/1.5 ba, TV, VCR, MW, fireplace, charcoal BBQ, priv. boat dock, great lake view. 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 equipped kitchen. Access to priv. beach. Tub in patio garden. Hiking, biking and jogging. Halfway between Carmel & Big Sur. \$175/night for 2, \$225 for 4 & \$250 for more, plus \$150 cleaning dep. Call (650) 328-4427.

## Events & Workshops

### 'Innovative Ideas and Alternatives to Imaging Telescopes' workshop set

The Innovative Ideas and Alternatives workshop is scheduled for Sept. 27 – 28 at the Knight Center, Alabama A&M University in Huntsville, Ala. Limited seating is available. Ames staff are invited to hear and participate in the discussion of new and innovative ideas and exciting prospects toward the application of today's technologies in this area. World-renowned scientists

will present their views and discuss new ideas. Attendees will be able to witness and be a part of these advancements.

All telescopes now deployed use the system optics to form the image and use detectors to register that image. But optical solution of the inverse problem (What was probably 'out there' to have caused the incident wavefront?) is very constrained,

is linear, has only a limited number of operations and has no iteration.

Galileo would understand all such telescopes immediately. What Galileo did not have was a supercomputer on a chip. If the computer is used to form the image, much more powerful image-formation algorithms can be used. The role of the optics becomes the gathering of information needed to give to the computer.

Adopting this view places emphasis on sophisticated, image-formation algorithms and on new telescope optics -- literally non-imaging optics.

Reservations for the workshop and a \$100 fee must be arranged as soon as possible to reserve your place in this important meeting. The contact persons for the workshop are H. John Caulfield, chairman, at: (256) 851-5844 or email him at: john.caulfield@cim.aamu.edu or Daryush ILA, co-chairman, at: (256) 851-5866 or email him at: lla@cim.aamu.edu

### Boyd committee room dedication



photo by Dominic Hart

Deputy Director Bill Berry works the control panel in the newly remodelled Committee Room that was dedicated to honor Jack Boyd, Executive Assistant to Dr. Henry McDonald, on Aug. 29. A summary of what visitors and staff can expect to find in this new technological marvel will be provided in the next Astrogram issue (of Oct. 1).

#### Safety and Quality Week scheduled for Sept. 24 thru 28

-- includes Safety Stand-Down Day, Chili Cook-off and much more. Training classes offered all week. POC for the events is jstanley@mail.arc.nasa.gov, ext. 4-4242 Safety Week schedule is at: <http://q.arc.nasa.gov/sqw/>. Environmental, health and safety monthly information forum is at: <http://q.arc.nasa.gov/qe/events/EHSeries/>



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