

Memorial service set for aerodynamicist R.T. Jones

A memorial service for Robert Thomas (R.T.) Jones will be held Oct. 27 at 4 p.m. in the Memorial Church at Stanford University, followed by a reception in the Stanford University Faculty Club. Jones, U.S. inventor of the swept-back wing, basic to all of today's high-speed aircraft, died August 11 at his Los Altos Hills home. He was 89.

An internationally acclaimed expert in many fields of science and technology whose research was essential to the development of supersonic flight, Jones is perhaps best known as the inventor of the oblique wing design. This radical design concept pivoted an entire straight wing attached to the fuselage, forming a scissor-like appearance as flight speed increased.

"R.T. Jones was one of the world's most highly acclaimed aeronautical engineers," said William Berry, deputy director at Ames. "He was a critical member of the Ames aeronautical community and will be sorely missed by his colleagues and friends."

Prior to his retirement in 1981, Jones

sance Man who won a lasting place in all our hearts."

Throughout his career, Jones received numerous awards. In 1981, Jones received the Congressional Excalibur Award in rec-

(NACA). Jones began his research career in 1934 when he joined NACA at its Langley Memorial Aeronautical Laboratory, now called the NASA Langley Research Center in Hampton, VA.

He developed his swept wing theory in 1944 and received the Sylvanus Albert Reed Award from the Institute of Aeronautical Sciences in 1946. That same year, Jones transferred from Langley to NASA Ames, where he worked until 1963 when he left to join AVCO Everett Research Laboratory, Boston, MA. He returned to Ames in 1970 to continue his research on the oblique wing. In 1971, Jones was awarded an honorary doctorate of science by the University of Colorado.

Jones was a member of many professional organizations, including the National Academy of Engineering, the National Academy of Science, and a Fellow of the American Academy of Arts and Sciences. He was the author of numerous publications and technical papers, 69 of which are contained in the "Collected Works of Robert T. Jones," NASA TMX-3334, published in 1976. In 1978, he received the Prandtl Ring Award from the German Aeronautics Society (Deutsche Gesellschaft für Luftund Raumfahrt), considered the highest honor in the field of fluid dynamics.

A Fellow of the American Institute of Aeronautics and Astronautics, Jones was selected as an Honorary Fellow of the or-



R.T. Jones shown here with the oblique wing design model.

ognition of his numerous contributions to aeronautical science. Earlier that same year, Jones was awarded the Smithsonian Institution's prestigious Langley Award, an honor bestowed on such aviation "giants" as the Wright Brothers, Charles Lindberg, Robert Byrd and James Webb, NASA's second administrator.

Last October, Jones was honored as one of NASA's Superstars of Modern Aeronautics during ceremonies held at NASA Glenn Research Center at Lewis Field in Cleveland, OH. Jones, who was too ill to travel at the time, was represented at the ceremony by his daughter, Harriet Jones of Berkeley, CA and his son, David Jones of Corinth, MS.

"Daddy was a sweet, sweet guy, a very peaceful man," said his daughter, Harriet Jones. "He was a pacifist and he worked to create harmony among people of all races. If he saw an injustice, then he went out and did something about it."

At age 17, Jones dropped out of college after one year to work for Charles Fowler's Flying Circus. Two years later, at age 19 while working for Nicholas-Beazley Aircraft in Missouri, he designed a 576-pound race plane. From 1931-34, Jones attended classes in subjects such as vector analysis, airfoil theory and relativity theory taught by his mentor, Dr. Max Munk, a scientist at NASA's predecessor agency, the National Advisory Committee for Aeronautics

Letter written by R. T. Jones to Jack Boyd, executive assistant to the Center Director, on June 1999 in response to picture of proposed Mars airplane flying over Mars which Jack had sent to him:

Dear Jack:

Have you read the "Warlord of Mars" by Edgar Rice Burroughs? The hero went into a cave in Arizona and he thought very hard of being on Mars. The next thing he knew, he was there. I guess that would take care of the transportation problem. If not, the vehicle in the beautiful picture you kindly sent to me will do just fine. Thank you for the present.

-- R. T. Jones

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Robert Thomas (R.T.) Jones

worked as a senior scientist at NASA Ames where he earned a world-wide reputation as an expert in aerodynamics, optics, and biomechanics, as well as an applied mathematician, astronomer, inventor, author and violin maker.

"R.T. Jones was one of those rare individuals who, through his constant quest for knowledge and dedication to his work, made the world a better place for us all," wrote Neal Lane, Assistant to the President for Science and Technology, in an August 17 letter to the Jones family. "In every sense of the word, R.T. Jones was a true Renais-

NASA studies weather on remote Pacific atoll

The world's largest atoll is the site of a two-month experiment that is part of a NASA-led study to better understand tropical rainfall in an effort to improve weather forecasting and long-term climate modeling.

Experts from NASA, including about a half dozen Ames people, make up a team of more than 200 persons from government agencies, universities and research institutions who traveled to the remote atoll, Kwajalein to participate in the experiment. The atoll is a chain of coral islands that surround a 1,000 square mile lagoon. Kwajalein is part of the Republic of Marshall Islands in the tropical Pacific Ocean.

"There are very few motorized vehicles on Kwajalein for personal transportation," Wendy Dolci of Ames wrote in a memorandum to those traveling to the atoll. She serves as co-project experiment manager with Steve Hipskind (Code SGG). "Even though Kwajalein is flat terrain, biking there can be a challenge due to the wind. Pedaling into the wind is like pedaling uphill and can be difficult," she continued.

NASA Ames is responsible for KWAJEX experiment project management and logistics. Ames has also managed three TRMM validation missions to Texas, Florida and Brazil. "Our job during KWAJEX is to synthesize the scientific objectives and the detailed requirements the scientists have, and from those develop and implement the overall project plan," Hipskind said.

KWAJEX is part of a bigger NASA Tropical Rainfall Measuring Mission (TRMM),

during which scientists throughout the world are gathering detailed weather data on the ground, by airplane, ship and balloon. Researchers will calibrate instruments on board the mission's TRMM satellite and gather detailed weather data the satellite cannot obtain remotely. KWAJEX is the last of a series of experiments conducted as part of TRMM.

"NASA and the Japanese National Space Development Agency launched the TRMM satellite from which we'll get global precipitation measurements," said Hipskind. By measuring tropical rainfall, scientists hope to get an improved overall picture of how the Sun's energy, which is concentrated in the tropics, is transferred from the ocean to the atmosphere. A better understanding of the energy transfer that drives the atmospheric motion, will help scientists improve global computer models to better forecast weather and long-term climate change.

"With its radar and microwave instruments, the satellite obtains a large-scale view of precipitation, but with less detail than many surface-based instruments. In contrast, ground and airborne measurements allow us to really understand the three-dimensional structure and evolution of tropical storm systems," Hipskind said. "Even without the satellite, these field experiments are leading to significant scientific progress in understanding precipitation processes."

"Once you are able to establish the relationship between what the satellite is seeing and what is happening in detail in

the atmosphere, then you can have confidence in the satellite measurements on a global scale," Hipskind stated.

"There are three instrumented aircraft scheduled to fly during the experiment: the DC-8 'Flying Laboratory' from NASA Dryden Flight Research Center, Edwards, CA; a Cessna Citation II from the University of North Dakota and a twin-engine Convair 580 from the University of Washington, Seattle," said Dolci.

The DC-8 will serve two roles for the experiment. That aircraft will simulate satellite overpasses by flying above clouds with the same instruments that are aboard the TRMM satellite - a radar and radiometers.

The DC-8 will also collect data from within clouds, using cloud particle imagers and sampling equipment to measure vapor, liquid, and solid particle size, temperature, density and motion within clouds.

A newly commissioned National Oceanic and Atmospheric Administration (NOAA) research vessel, The Ron Brown, will make additional observations. "Two of our key instruments are meteorological Doppler radars on Kwajalein and on The Ron Brown," Hipskind said. When combined, the two Doppler radars can be used to measure the three-dimensional motions of cloud droplets, he explained.

The Ames KWAJEX Internet site is <http://cloud1.arc.nasa.gov/kwajex/index.html>

BY JOHN BLUCK

A Parsons Street story

Two Space Campers, also siblings, recently told their counselors that their great grandfather had worked at NASA Ames. Knowing the significance of the center's street names, one of the counselors made a connection with the children's last name-Parsons. The late John F. Parsons, also known as Jack, was one of the founders of NASA Ames.

The name recognition prompted other members of the Parsons family to pay a return visit to Ames. On a pleasant afternoon, August 13, the family arrived at the center to remember Jack Parsons- a devoted husband, father and a man dedicated to the advancement of aeronautics. Today, he is well remembered for his contributions in building numerous facilities and wind tunnels at Ames.

Evelyn Parsons, along with her son John Jr., and daughter Patricia met with Jack Boyd in his Administration Building office. Boyd, as well as Bill Berry and Ames historian, Glen Bugos were on hand to provide a warm welcome. Their meeting place was of much significance. On the wall, there is a distinguished picture of Jack Parsons, who worked in that very office more than thirty years ago. Jack Boyd had the pleasure of

working with Mr. Parsons for two decades.

"Jack Parsons was 'The Builder' at Ames. He was level headed, widely liked and highly



Left to right: Patricia, John and Evelyn Parsons in front of the Parsons street sign at Ames.

respected. He was the first of Ames management to have abilities in research, facility design and in executive management," said Boyd.

The office provided an informal atmosphere for the Parsons to sit and reminisce. In particular, Boyd talked with Evelyn about her husband and his accomplishments. Evelyn was modest and listened intently while recalling names brought up from the past.

After a bit of conversation, Assistant to the Center Director Ken Christensen led the family to the corner of the street that prompted the visit. The Parsons got out of the tour van and gazed at the street sign for the first time. "What a wonderful dedication to a man who truly loved his work," said Evelyn.

Jack Parsons was one of the original engineers to arrive at the Ames site in January, 1940. A proficient and ingenious builder, Jack oversaw all construction efforts. He also became the Chief of Full-Scale and Flight Research Division. Eventually, in 1952, NACA Director Dr. Hugh Dryden appointed Parsons to be the first Associate Director of Ames. Parsons held this position until he retired in 1967.

BY JASON MILLER

Software of the Year award

NASA space-age software applications win awards

Remote Agent, an artificial intelligence software that demonstrated command of a spacecraft millions of miles from Earth, and Genoa, a software package that can predict aging and failure of materials, including those used in airplanes, cars, engines and bridges, recently were named co-winners of NASA's 1999 Software of the Year award.

During three days last May, the Remote Agent software controlled the Deep Space 1 spacecraft, in a science-fiction-like feat. NASA scientists gave the software package command of Deep Space 1 during a flight experiment, and the artificial intelligence more than met expectations. The software detected, diagnosed and fixed problems, showing that it can make decisions to keep a mission on track. Remote Agent was developed at Ames and the Jet Propulsion Laboratory (JPL), Pasadena, CA.

"The Remote Agent approach to spacecraft autonomy signals the dawn of a new era in space exploration," said Dr. Pandu Nayak, Ames deputy manager of Remote Agent development. "Remote Agent will enable new classes of missions and more effective use of existing resources; and it will enable today's ground operations teams to operate significantly more missions. Remote Agent and its components are already being considered for a variety of missions across the Agency."

"This technology will allow us to pursue solar system exploration missions that only a few years ago would have been considered too elaborate, too costly or too dependent on teams of Earth-bound controllers," said Dr. Doug Bernard, JPL's Remote Agent manager.

NASA scientists say the artificial intelligence used on Deep Space 1 is the precursor for self-aware, self-controlled and self-operated robots, exploring rovers and intelligent machines.

Experts from Ames and JPL pooled their expertise to conduct Remote Agent, an experiment designed to push the limits of spacecraft autonomy. Their efforts proved that this sophisticated artificial intelligence software is capable of achieving high-level goals by issuing spacecraft commands.

To demonstrate Remote Agent's versatility, the tests threw unique challenges in the software's path: scientists created four simulated failures designed to test Remote Agent's abilities. During one of the simulated failures, the spacecraft's camera appeared to be stuck in the "on" position. In response, Remote Agent formulated and executed a new plan to turn off the camera and preserve the spacecraft's power. An Internet web page contains logged events from Deep Space 1 during the ambitious artificial intelligence test: [\[rax.arc.nasa.gov\]\(http://rax.arc.nasa.gov\)](http://</p></div><div data-bbox=)

Launched October 24, 1998, Deep Space 1 validated 12 new technologies, including Remote Agent, for use during science missions in the 21st century. The spacecraft has exceeded all of its technology validation success criteria. Deep Space 1, part of the New Millennium Program, is managed for NASA's Office of Space Science, Washington, DC, by JPL, a division of the California Institute of Technology, Pasadena, CA.

The other software co-winner, Genoa, is a progressive failure analysis software system developed at the NASA Glenn Research Center at Lewis Field in Cleveland, OH. Genoa is used to model aging and failure in structural materials, including high-tech alloys and ceramics.

Another Ames set of software tools, developed for medical use, was a runner-up in the competition. The suite of medical software applications is designed to help doctors remotely treat patients in space and on Earth. Called "Virtual Interactive Imaging and Cybersurgery for Distant Healthcare," these software tools enable high resolution, near-real-time rendering of medical images for doctors located thousands of miles away from patients.

"The award focuses attention on how the information superhighway of the future and wireless technology will improve the health care of those living in remote sites, whether they are astronauts on the Moon or Mars, or ordinary people living in areas distant from metropolitan medical centers of expertise," said Dr. Muriel Ross, leader of the Ames effort to develop care of patients from a distance.

In May, doctors at five distant sites in the United States demonstrated how to use the NASA software to diagnose patients, practice operations and train, using 3-D medical images carried by a high-performance wide-area computer network. The images included 3-D, scanned images of patients' hearts, skulls and other body parts. On computer screens, doctors at the remote sites saw every procedure in stereo 3-D as each physician manipulated images of virtual patients.

"We're looking at methods to bring the clinic to the patient, rather than the patient to the clinic," said Ross. "We're supporting remote collaborations of doctors at different locations on Earth. This will prepare us to use the technology for spacecraft crews traveling to the International Space Station, Mars or other planets, where specialists may not be available."

The project linked Cleveland Clinic physicians at NASA Glenn with other health care specialists at Stanford University Medical Center, Stanford, CA. In addition, doc-

tors from Salinas Valley Memorial Hospital, Salinas, CA, and the University of California, Santa Cruz participated. The Northern Navajo Medical Center, Shiprock, NM; and NASA Ames were also connected by the computer network. The concept and software are being developed at Ames' Center for Bioinformatics

More information about the Center for Bioinformatics is on the Internet at: <http://biocomp.arc.nasa.gov/home.html>

In addition to selecting cybersurgery for distant healthcare for an award, NASA also chose two other software packages as runners-up: Generic Inferential Executor (Genie) from Goddard Space Flight Center, Greenbelt, MD; and Enigma Software Tools from Johnson Space Center, Houston, TX.

Three other packages received honorable mention: NPARC Alliance Flowfield Simulation System from Glenn Research Center; ASPEN: Automated Scheduling and Planning Environment from JPL; and Ring Buffered Network Bus Data Management System from Dryden Flight Research Center, Edwards, CA.

The NASA award is the largest award of its kind in the United States. The winners were selected from a field of 50 entries representing more than 150 corporations, universities and government laboratories.

Last year, NASA awarded more than \$350,000 in cash prizes to the winners. The event is cosponsored by the NASA Inventions and Contributions Board and the NASA Chief Information Officer. NASA officials will officially present the awards at special ceremonies later this year. Information about the winning team and other finalists is available from: <http://www.hq.nasa.gov/office/codei/swy99win.html>

BY JOHN BLUCK



Memorial service set for R.T. Jones

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ganization in 1979. He received the President's Award for Distinguished Federal Civilian Service in 1981 in recognition of his numerous contributions during his 40-year government career.

"The last time I saw Daddy was when he lay dying," said his daughter, Patricia Jones. "I said to him, 'Daddy, you are going straight up to heaven because you are a very aerodynamic guy. You have a lot of lift and no drag. My sister laughed hilariously and Daddy contorted his face as if he was trying to laugh."

BY MICHAEL MEWHINNEY



Protective Services Office serves Ames community

In the last issue of the Astrogram, you were given an overview of the Protective Services Office (PSO). In this issue, we will look at the law enforcement and security protection work of the office. As you are aware, the PSO is a diverse operation, comprised of a wide variety of responsibilities and authorities. The most visible part of the PSO office are the security officers on foot controlling entry at the main gate and the law enforcement security police officers working in patrol cars.

Each security officer and security police officer is hired after a rigorous background investigation, psychological testing, medical examination and passing a physical agility test.

To be a Protective Services Office security police officer, the candidate must have graduated from a recognized police academy or actually be working as a reserve peace officer with a local police or sheriff's department. The security officer requirements are less stringent than for a security police officer, but they meet or exceed the requirements set for private guards by the State of California.

After being hired, each law enforcement and security officer then goes through a 120 hour NASA Federal Arrest Authority course at the Kennedy Space Center. The

curriculum comes from the Federal Law Enforcement Training Center at Glynco, Georgia, the same training center that trains DEA agents, U.S. Marshals and a host of other Federal law enforcement officers. Every other year, each officer receives a minimum of 40 hours in update training to stay current with Federal law and NASA regulations.

The PSO officers learn Federal laws of arrest, search and seizure, Constitutional law, self-defense, arrest control techniques, high and low speed driving techniques and officer ethics. After passing a test in each one of these areas, they are then sworn in as a Federal Officer for NASA. Their authority comes from Title 42 USC, Chapter 26, §2456a, the National Aeronautics and Space Act of 1958 and is implemented under CFR Part 1203b.

They also receive in-house training in CPR and First Aid, Hazmat response, firearm qualification and legal updates. We have CPR, firearms and self-defense instructors on staff and we take advantage of many of the classes offered through the Ames Safety Office and the Evergreen College Police Academy in San Jose.

Our law enforcement officers deal with everything from enforcing the Moffett Field traffic management plan to investigating

theft reports and arresting persons for criminal offenses. We also handle security for the many special events that are held at Moffett Field each year such as Flag Day with KSFO Radio, the recently completed Wings Over Moffett airshow and the Space Shuttle Conference.

Several of our law enforcement officers have worked with or retired from other police agencies around the Bay Area and they bring a wealth of experience and training to our office. Many of our security officers have moved up to a law enforcement position within the office or with other agencies after having put themselves through a police academy.

We are available for the safety and security of Ames personnel and property 24 hours a day, 7 days a week. Our dispatch center is a certified 911 answering point and dispatches all police and fire-related calls at Ames. Each dispatcher must meet the same requirements as a city police dispatcher and attend the same state certified training course as do city and county dispatchers.

We are here to serve the Ames community by the most efficient, safest and ethical means possible and we welcome your suggestions and comments about our operations any time.

BY LT. MARK TARTE



Ames breaks its own safety record!

There has not be one day of lost time due to civil servant injuries for over a year. This was celebrated by a banner signing event in the conference room of Bldg.200, where all the directors were invited to share in the Center's appreciation for everyone's efforts.

Lost-time injuries cost everyone here at the Center. These injuries do not just cost the person who was injured, but they also cost the people who have to pick up more of the work load when someone is unable to make it in to work.

The Safety Office is trying to raise the awareness of just how important your personal well-being is, as well its benefit to the Center's productivity.

It is due to everyone's efforts that we all go home safe each day, hopefully with our well-being intact.

Please help to make Ames a model workplace for well-being and productivity. If there are safety issues that you feel we need to better address, speak with your supervisor, call the safety hotline at ext. 4-SAFE, or write a safety suggestion that could earn you \$300; there is a winner every month. Visit the Code Q website for details at: <http://q.arc.nasa.gov/>

BY PATRICK HOGAN



photo by Tom Trower

Ames' Center Director Dr. Henry McDonald (left) and Deputy Director William Berry (right) sign the safety banner which is currently displayed near the front gate at Moffett.

Commute Alternatives

Mass transit riders receive \$30 monthly subsidy

As options for local transportation increase, many Ames employees are enjoying a monthly \$30 subsidy for riding mass transit.

"There is a \$30 monthly subsidy that NASA and Army employees can receive if they buy any monthly transit pass," said

of bus and train riders as well as Ames Commute Alternatives Program (ACAP) people.

"The Blue ACE shuttle bus can also pick up non-ACE train passengers on our route, and they can ride free," said Varita Patterson, Blue Shuttle driver with MV Transportation. ACE is the Altamont Commuter Express train that started running last October with stops at San Jose, Diridon; Great America; Fremont; Pleasanton; Livermore; Vasco Road, Livermore; Tracy; Lathrop/Manteca; and Stockton.

"I would like to get more passengers to use the shuttle service to ensure continued Moffett ACE Blue Shuttle route services. They're talking about changing the service after the Light Rail starts running," Patterson said.

The Light Rail service to Mountain View and Ames is scheduled to begin in December, according to Amanda Dunham, the ACAP coordina-

"I love the ACE train. I want to keep the Blue Shuttle," said Donald James, Chief, Education Branch, Code DXE.

"If we have to use light rail, that would be a long walk," said ACE train rider Doris Jackson of Protective Services who takes the shuttle to the ACE Great America station. "I guess the white NASA 'Shuttle' bus service that already goes to Caltrains on Moffett Blvd. would work if it also covered the ACE train, but they should just keep the Blue Shuttle service."

"I heard they were thinking of combining the ACE Red Shuttle Bus that runs at Lockheed-Martin with Moffett," said Patterson.

"I wouldn't like it if they cut out the Moffett Blue ACE shuttle bus," said George Danek, and Army employee with AFDD who also rides the ACE train.

"Eliminating the Blue shuttle to Great America would add a lot of time to our commutes and would make it inconvenient."

"My husband and I commute on the ACE train daily from Stockton, and if the Blue Shuttle were not available, our 2 hour, 20 minute commute would be even longer.

Without the shuttle to Moffett, we would have to seriously consider another means of transportation," said Nicole Gomez-Varelas of Code SL.

"If there's no Blue Shuttle, how do we get from the South Gate in a driving rain to the places where we work?" asked rider John Bush, of Code SG.

"They have Spare the Air Day, and I think it's a great idea. I think it is working, and if we continue to do this bus run, the air can only get better," Blue Shuttle driver Patterson said.

"In December when I first started driving the Blue Shuttle to Moffett, I was picking up about eight people. Then it went up to about 30. Maybe later, it will go up to about 50," Patterson said.

Patterson recently transferred to another MV Transportation route in the East Bay. "We wish her the best, and she will be missed at South Bay,"

said Robert Gonzales, Manager at MV Transportation, San Jose.

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photo by Margaret Toth

Varita Patterson, Blue Shuttle driver in front of the Blue Shuttle bus.

Janine Ciffone, financial officer for the NASA Ames Exchange "There's a form that government employees need to complete in order to receive their subsidies."

Anyone interested in receiving the subsidy should call Ciffone at ext. 4-4948 or email her at jciffone@mail.arc.nasa.gov.

"Contractor company officials who are interested in providing a \$30 subsidy for their employees can also contact me for details," said Ciffone.

"At least one on-site contractor has taken advantage of the Exchange subsidy offer to provide the monthly price break to their employees, and that company saves the administrative costs of issuing commuter checks," she said. "Monthly tickets are sold at the Exchange Gift Shop in the Ames Visitor Center with \$30 deducted from the cost for participating government and contractor organizations. The only exceptions are the ACE train tickets for which we mail a \$30 reimbursement check to employees," Ciffone explained.

Meanwhile, a high regard for fresh air and a community spirit are common traits

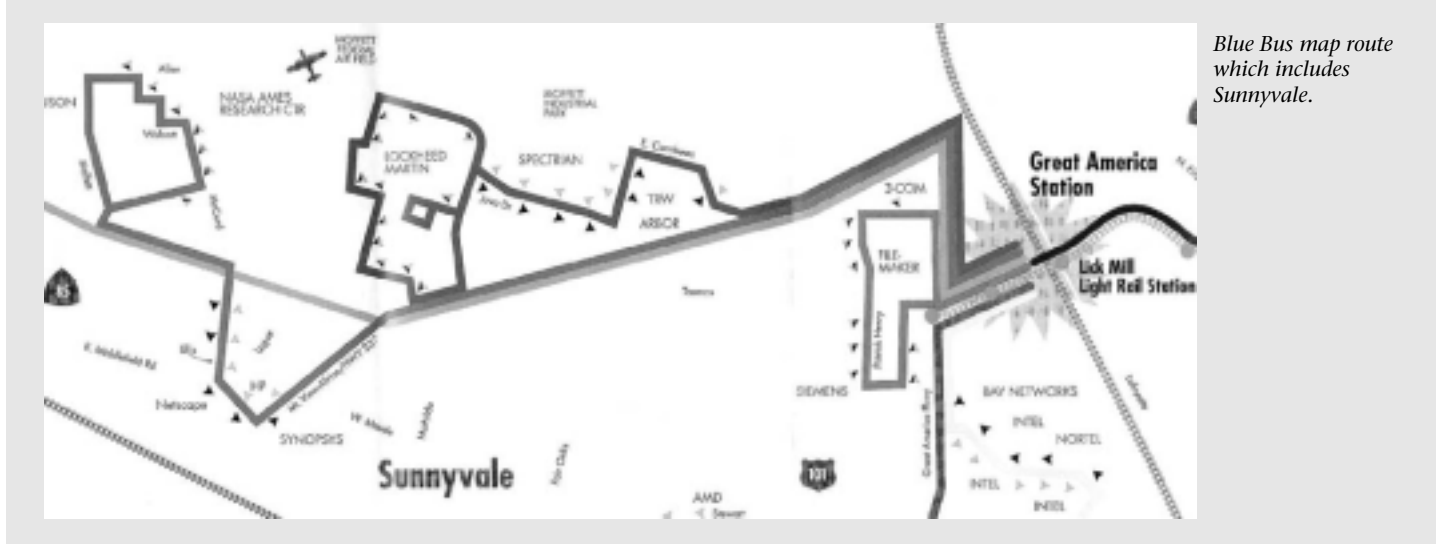


Blue Shuttle map route at Ames.

tor. The Ames Light Rail stop is near the Ames South Gate, and is a long distance for some commuters to reach on foot.

Mass transit riders receive \$30 monthly subsidy

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Blue Bus map route which includes Sunnyvale.

"The Blue Shuttle service was never intended as more than a 'bus bridge' until the new light rail line opened. The ACAP program is working on possible scenarios to get Ames people from light rail to their offices," Dunham said. "Right now, the most likely solution is for ACERAIL passengers to take light rail to the Lockheed station and then ride VTA bus #45 onto the Center. This will benefit not only the ACE riders, but also anyone who decides to commute to Ames on light rail. Ridership matters, so potential passengers should let the VTA know they're interested in taking #45."

Approximate ACE morning arrivals of two trains at Great America:

- 6:26 a.m.
- 7:33 a.m.

Approximate Blue Shuttle Bus morning arrivals at McCord Ave. and Walcott Rd. near bldg. N229:

- 6:50 a.m.
- 7:56 a.m.

Approximate Blue Shuttle Bus evening departures from McCord Ave. and Walcott Rd. near bldg. N229:

- 3:51 p.m.
- 5:21 p.m.

Approximate ACE evening departures of two trains from Great America:

- 4:27 p.m.
- 5:57 p.m.

Links to the Santa Clara Valley Transportation Authority (VTA) website and route information, as well as other transit links, are available on the ACAP website at: [http://](http://george.arc.nasa.gov/jf/acap)

[/george.arc.nasa.gov/jf/acap](http://george.arc.nasa.gov/jf/acap). The VTA customer service line is (408) 321-2300.

Tickets are on sale the first and last week of each month at the Ames Visitor Center. Payment can be by cash or check, 8 a.m. to 4:30 p.m., Monday through Friday.

"The ticket sales and the subsidy program are a real service to the greater Bay Area community because the government and participating companies are encouraging use of mass transit which is helping to reduce air pollution," Ciffone said.

Employees can contact the ACAP office at ext. 4-1895 to learn more about other commute options including trains, light rail, car pools, buses and even bicycle routes.

BY JOHN BLUCK

Essentials of Biology course to be held in September

Biology, the study of life, is a dynamic, transforming force in the world around us. In the next century, biology will influence our lives, the environment, and developing technologies to an unprecedented extent.

Knowledge of life's fundamental biological processes is especially significant to NASA for advancing human exploration of our solar system, for influencing our search for life on other planets, and for guiding the establishment of ecosystems on other worlds.

NASA's Essentials of Biology course was developed at the request of NASA Administrator, Dan Goldin, to assist all NASA employees in gaining an increased understanding of biology's role in tomorrow's world. The intent is to review and renew our appreciation of biology--the incredible, evolving science of life. Ames played a lead role in developing this unique course for the agency and it has received highly favorable reviews

following the premier presentations at Headquarters.

The Essentials of Biology course will be presented at Ames on September 15-16. All Ames employees are encouraged to attend and our contractor staff are invited to participate as well. Please mark your calendars now. Space is limited.

The Essentials of Biology course is a unique, two-part multimedia presentation. Four speakers, all specialists in their fields, present 20-40 minute segments using computer generated slide shows and video tapes of subjects ranging from the origins of life, through the importance of a single cell, to the human body and Earth's ecosystems.

The presentations are designed for those with little or no background in the area, but they also illustrate cutting edge research and technology as well as the relevance of biological studies to NASA's mission.

The 7-hour course will be presented

over two days, in Bldg. 201, Auditorium.

Part I Sept. 15, 8:30 a.m. - Noon
or
Sept. 15, 1:00 - 4:30 p.m.

and
Part II Sept. 16, 8:30 a.m. - Noon
or
Sept. 16, 1:00 - 4:30 p.m.

No registration is necessary. However, attendance will be recorded in your official training record. The attendees are given the opportunity to ask questions and interact with the presenters throughout the course, with longer question-and-answer sessions at the end of each day.

Any questions regarding the presentation of the Essentials of Biology course may be directed to Dana Askins at email: daskins@mail.arc.nasa.gov or call her at ext. 4-3794 or contact Deb Narasaki at email: dnarasaki@mail.arc.nasa.gov or call her at ext. 4-2082.

Calendar

Ames Bowling League will be starting the 99/00 season at Palo Alto Bowl every Tuesday at 6pm on Sept. 7. The season is 33 weeks long and ends April 25 with a banquet the week after. The league is in need of bowlers to join teams, as well as substitutes. POC: Mina Cappuccio, mcappuccio@mail.arc.nasa.gov, at ext. 4-1313 or Mike Liu, mliu@mail.arc.nasa.gov, at ext. 4-4357.

Ames Ballroom Dance Club, Tuesdays: Hustle 8/31, 9/7, East Coast Swing 9/14, 9/21, 9/28. 3 levels of classes, from Beg. to Int., 5:15 - 6:45pm. Moffett Training and Conference Center, Bldg. 3/Showroom. Women dancers are especially encouraged to join. POC: Helen Hwang, hwang@dm1.arc.nasa.gov.

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

Jetstream Toastmasters, Mondays, 12 noon to 1 p.m., N-269/Rm. 179. Guests welcome. POC: Jenny Kahn at ext. 4-6987 or Karen Matsuoka at ext. 4-6184.

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

Ames Contractor Council Meeting, Sep 1, 11 a.m., N-200 Comm. Rm. POC: Jack Stanley at ext. 4-2345.

Environmental, Health and Safety Monthly Information Forum, Sept 2, 8:30 a.m. to 9:30 a.m., Bldg. 19/Rm 1078. POC: Linda Vrabel at ext. 4-0924.

Hispanic Advisory Committee for Employees, Sept 2, 11:45 a.m. to 12:30 p.m., N-241/Rm 237. POC: Mary R. Valdez, at ext. 4-5819.

Ames African American Advisory Group Meeting, Sept 2, 11:30 a.m. to 12:30 p.m. POC: Robert Finnie at ext. 4-5230. Contact Robert for meeting place.

Nat'l Association of Retired Federal Employees, San Jose Chapter #50, Meeting, Sept 3, at the Elk's Club, 44 W. Alma Avenue, San Jose. Social hour: 10:30 a.m. Prog. & bus. mtg. follow lunch at 11:30 a.m. POCs: Mr. Rod Peery, Pres., (650) 967-9418 or NARFE 1-800-627-3394.

Professional Administrative Council (PAC) Meeting, Sept 9, 10:30 a.m. to 11:30 a.m. Location TBD. POC: Janette Rocha, ext. 4-3371.

Ames Sailing Club Meeting, Sept 9, 11:30 a.m. to 1 p.m., N-262/Rm. 100. POC: Greg Sherwood, ext. 4-0429.

NFFE Local 997 Union General Meeting, Sep 15, noon to 1 p.m., Bldg. 19/Rm. 2017. Guests welcome. POC: Marianne Mosher at ext. 4-4055.

Ames Amateur Radio Club, Sep 16, 12 noon, N-260/ Conf. Rm. POC: Mike Herrick, K6EAA at ext. 4-5477.

Ames Asian American Pacific Islander Advisory Group Meeting, Sep 16, 11:30 a.m. to 1 p.m., N-241/Rm. B2. POC: Daryl Wong at ext. 4-6889 or Brett Vu at ext. 4-0911.

Java User Group, Sep 23, 10 a.m. to 11:30 a.m., Bldg. 258, Rm. 127. Topic: Improving Java Performance - Tips and Tools. POC: Sharon Marccaci, ext. 4-1059 or email at: nasalib@mail.arc.nasa.gov.

Native American Advisory Committee Mtg, Sep 28, 12 noon to 1 p.m., Ames Café. POC: Mike Liu at ext. 4-1132.

Safety and Quality Week, Oct 12-15. Kick-off with Dr. Harry McDonald, Quality Forum co-sponsored with American Society for Quality, Street Fair, Chili Cook-Off, Training and Apollo 13 Commander Jim Lovell. POC: Judi Martelli, ext. 4-2785 or Bob Navarro, ext. 4-5640.

Ames Classifieds

Ads for the next issue should be sent to astrogram@mail.arc.nasa.gov by the Monday following publication of the present issue and must be resubmitted for each issue. Ads must involve personal needs or items; (no commercial/third-party ads) and will run on space-available basis only. First-time ads are given priority. Ads must include home phone numbers; 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.

Housing

Furnished room. Share bath/kitchen/garden/laundry. Easy transport: bus/train + El Camino + H101/237/85 + Central Expressway. Rent: \$560/mo. Call (650) 969-3932 or email at: solemate@best.com

Available immediately for commuter and/or intern; a semi-private temporary space in the same location as above. Weekly \$100 (+ one month). Call (650) 969-3932 or email at: solemate@best.com

Master bdrm available in Mt. View. Large apartment of professional lady; El Camino & Rengstorff. Gated bldg w/pool; convenient to bus 20 mins to downtown Palo Alto. Safe. \$750. Fontella (650) 962-8411.

New Ames postdoc arriving July 10, seeks "affordable" housing (rental/share) near Moffett. I'm clean, easy to live with. Reply to: scottm@darkwing.uoregon.edu or call (831) 338-1286.

House to share w/ 1 other adult; Fremont. Own bath & room. Quiet, N/S only. Share kitchen/garden/laundry facil. No cats or dogs, please (cats present). Carpool possible; near bus over Dumbarton. Avail now. 1/2 utilities + \$500/mo; deposit. Call (510) 797-7442 or (510) 226-2444 (ask for Kathie).

Condo for rent in Saratoga, near H85. 1bd/1ba, W/D/DW/R, garage, pool, \$1,000 a mo. plus security deposit. Available Sept 18. Call (408) 255-8362.

Furnished master bedroom available mid Sept-Jan, in Santa Clara near Great America. Rent negotiable. Must house-sit cats while owner travels. Female preferred. Call (408) 588-4041 or email cconley@mail.arc.nasa.gov.

Miscellaneous

Ethan Allen early American sofa, \$150; rocking chair, \$100; garage door hinge, one piece door, double, w/ springs, \$30; garage door hinge, one piece door, single, w/springs, \$15. Call (408) 946-2998 eves.

Cushcraft AV5 antenna, Yaesu FT-101ZD w/ manuals, 160-10m, SSW, CW. Yaesu FC902 antenna coupler, instruction manual w/mike, TV filter, dummy load, 4-way antenna switch, all for \$550 or B/O. Call (408) 946-2998 eves.

Car stereo AM/FM, Dolby cassette, CD changer control, anti-theft with 4x20W power, from new car. \$40. Call (408) 295-2160.

Set of 4 tires on rims, balanced, wheel covers, P205/60R15 Firestone Firehawk GTA. Good condition. Came off a '97 Nissan Altima. Make offer. Call (510) 471-3466.

Yamaha Clavanova Piano, ex. cond, model CVP-10PE. AWM (Advanced Wave Memory), full grand piano keyboard/weighted, dual foot pedals, polished ebony finish, flash memory, digital reverb., Too much more to mention here. \$1,500. Call (510) 471-3466 or email at yobowl@yahoo.com

1/2 HP garage door opener w/remotes, \$20; oak bath vanity w/corian bowl, B/O.; exercise bike \$30; asian drawer handles \$3/set; Mac LC w/ HP Inkjet and CDROM, \$50. All items in great condition. Eric or Deb (650) 424-8138.

Weight bench, bar, and 100 lbs of weight. Marcy, Olympic width, incline, and leg extension/curl, \$150; Kelly baby backpack, \$100; 1993 Honda CR 500, \$2,500; Torchiere Lamp, black, \$10. Everything in excellent cond. jim (408) 264-0833.

Oriental rugs: 5' x 8', wool sculptured cut, deep blue/green traditional Chinese floral pattern, good condition, \$100; 5.5' x 8.5', thick wool sculptured cut, pale blue, white and cream. hexagonal pattern, good condition, \$200. Dave or Audrey (408) 248-1516.

Sailboat. 14' Fiberglas "Force 5," Single 91 sqft sail. Basically a Cadillac Laser. Good condition. \$800 includes trailer. Warren (408) 246-3627 or email at NASAPLT@aol.com

White bedroom set including mirror, dresser, night stands and two bookcases for \$295. Call (408) 733-1906.

2 infant bassinets: one white wicker with hood (\$25) and the other a new Graco model with Noah's arc theme (\$35). Call (408) 736-6061 or tlbeard@mail.arc.nasa.gov

Transportation

'72 Mercedes Benz 280 SE (4.5 L, gas engine), 180K miles. Silver and black classic, single owner for 27 years! Sunroof, power windows/doors, leather and wood interior, mechanically solid. Perfect for the home classic car restorationist. \$5,000 or B/O. David (650) 851-9202.

'89 Harley-Davidson 883 Huggger (Sportster). Perfect condition. Metallic blue. Custom pipes, chrome, seat, windshield. 10,200 mls. 2 HJC helmets included. \$4,950. Call (650) 969-5581.

'90 Ford Ranger 4x4 pick-up. 110K mls. Dark metallic silver. New paint and tires. Excellent condition. \$4,950. Call (650) 969-5581.

'92 BMW 325is. 120K mls. Black. Outstanding luxury sport coupe in exc. condition. Loaded w/ options, including sliding/tilting sunroof, premium sound system, 6-CD changer, trip computer, electrically heated seats. New Pirelli tires. \$12,500. Call (650) 969-5581.

'95 Saturn SL2 5 speed. Air, excellent condition, 67K mls. \$7,950 or B/O. Jesse (831) 427-1644.

'98 Honda ACE 750 "Classic" styled motorcycle. The bike has Cobra tapered aftermarket exhaust and rejetted carburetors, custom handlebars and seat. Paint scheme is black and copper. \$4,750. Nick at (408) 735-8109.

Vacation rental

Lake Tahoe-Squaw Valley townhse, 3bd/2ba, balcony view, horseback riding, hiking, biking, golf, river rafting, tennis, ice skating, and more. Summer rates. Call (650) 968-4155 or email at: DBMckellar@aol.com

San Juan, Puerto Rico, 3 bdrm ocean side apartment. School headmaster wishes to trade for a 3-4 bedroom home/apartment in the Menlo Park/Palo Alto area for Dec 21, 1999 —Jan 7, 2000 inclusive. Joe (650) 969-6119 or Russ (787) 726-5745 or email rbeecheer@caribe.net

Lost & Found

Moffett Field Lost and Found may be reached via ext. 4-5416 at any time. Residents and employees at Ames may also use Internet Browser at: <http://ccf.arc.nasa.gov/codejip/pages/lostFound.html> to view a list of found property and obtain specific instructions for reporting lost or found property and how to recover found property. Call Moffett Field Security Police Investigations Section at ext. 41359 or email at: mfine@mail.arc.nasa.gov.

Astrogram deadlines

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

DEADLINE	PUBLICATION
TUES, AUG 31	MON, SEP 13
TUES, SEP 14	MON, SEP 27
TUES, SEP 28	MON, OCT 11
TUES, OCT 12	MON, OCT 25
TUES, OCT 26	MON, NOV 8
TUES, NOV 9	MON, NOV 22

Safety and Quality Week set for October

"Assuring mission success through safety, quality and environmental responsibility" is the theme for this year's Safety and Quality Week celebration. Last year's separate acknowledgement of both Ames' Safety Week and National Quality Month will be combined this year for an event-packed week. Code Q (the Safety, Environmental and Mission Assurance Directorate) will be sponsoring this event that is planned for Oct 12-15.

Safety and Quality Week will begin on Tuesday, Oct 12 with a Kick-Off celebration featuring: Dr. Harry McDonald and Warren Hall; Colonel Bill McCabe, Director of Corporate Aviation at Dupont; Jan Schlichtmann, the attorney portrayed by John Travolta in the movie "A Civil Action"; and the Fall Fun Run.

On Wednesday, Oct 13, The Quality Forum, co-sponsored with The American Society for Quality, will be conducted.

Speakers will include: Shuttle Astronaut Colonel Mike Mullane ('Lessons from Challenger'); Richard Allen, Quality Director for Selectron, Inc., the two time winner of the Baldrige National Quality Award; and Ray Davies, DNV (U.S.A.) Incorporated General Manager and President of Loss Control Management.

Thursday, Oct. 14, will be Safety and Quality Stand-Down Day and will host a full day of activities. The events currently scheduled include: the Fourth Annual Chili Cook-Off; the Safety Fair; an open forum with George Atkinson, former Defensive Back for the Oakland Raiders; and keynote speaker Jim Lovell, Commander of Apollo 13 ("Houston we have a problem"), who will relate his unique perspective on the importance of safety and quality to his infamous mission.

The Safety Fair and the bigger, better, more sizzling Chili Cook-Off will once again

be held on Durand Road in front of the Ames Café and Bldg. 218 on Oct. 14. This site provides space for all the chili booths and the interesting health and safety displays, leaving plenty of room for eager samplers. In addition, Health and Safety training classes will be conducted in the morning. Chili tasters will visit the booths, judge the chili samples, and cast their votes for the Grand Prize Peoples Choice Award.

Formal classroom training, Professional Development Initiative (PDI) web-based training and local training by supervisors will be available throughout the week.

So mark your calendars and plan to join in the activities!

Visit the Q homepage at <http://q>, to read more about Safety and Quality Week 1999.

BY JUDI MARTELLI

Chair massage times change

On-site chair massage has been offered at the Ames Fitness Center on Tuesdays and Thursdays for the past several years. Beginning in September, the days will be cut back to Tuesdays only, with the same hours of 11:00 a.m. - 2:00 p.m. The phone number to schedule appointments has changed to (650) 596-2644. For more information, call Miriam Glazer at ext. 4-5172.

Trailblazer race set

Lots of family Fun will be had at the annual Trailblazer 10K/5K Race and Nature Walk on the Stevens Creek Trail in Mountain View on October 3.

Visit the website for more information at www.stevenscreek.com/friends or call (408) 255-5780 for information and registration forms.

THE AMES *Astrogram*

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