



ASTROGRAM

Newsletter of NASA Ames Research Center, Moffett Field, California

February 2007

Ames' transformation called 'amazing' by center management

NASA Ames is beginning to show strength and its future looks optimistic,



NASA photo by Dominic Hart

Ames Deputy Center Director Marvin "Chris" Christensen addresses the audience during the recent all-hands meeting in February.

tic, according to Ames' Deputy Director Marvin "Chris" Christensen.

The agency's FY08 budget shows a 3.1 percent increase, a clear mandate of administration support of NASA, he said, despite the difficult political climate. NASA Ames' forecast holds the promise of many new opportunities, Christensen assured a capacity crowd gathered Feb. 7 in the main auditorium for an all-hands meeting to discuss the state of the center. The Innovative Partnerships Program and the Small Business Innovative Research program "are going strong," and Ames is recognized for its new role as the small satellite lead and its 'space portal' entrepreneurship, he said.

"People should be proud to work at NASA Ames Research Center," Christensen said. "Due to a lot of hard work by a number of dedicated people, it's an extremely strong center."

The thermal support program

(TSP) remains critical to the agency, and Ames' excellence in aeronautics and information technology is unsurpassed, said Christensen.

"By making our programs more relevant, our institution is moving to the next state of 'readiness,' he noted. "Our workforce is becoming realigned to take on meaningful work, and the restructured organization is beginning to optimize operational efficiencies."

Turning to mission directorate funding issues, he said the Science Mission Directorate's (SMD) budget represents about 31 percent of the

overall NASA budget. Its successes include gaining national attention for Earth sciences, and funding the Global Precipitation Measurement Mission as a new start. He reported that the Hubble Space Telescope will be serviced in 2008, and five Themis microsatellites are still expected to launch.

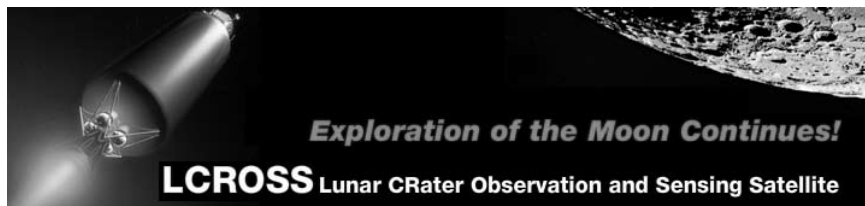
Christensen pointed out that although Ames lost the Stratospheric Observatory for Infrared Astronomy (SOFIA) to Dryden for flight tests earlier this year, negotiations are underway at Headquarters to allow Ames

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NASA Moon-Impactor mission passes major review

NASA's drive to return astronauts to the moon and later probe deeper into space achieved a key milestone

The mission is valued at \$79 million, excluding launch costs. The mission will help NASA gain a new foothold



recently when agency officials approved critical elements of a moon impact mission scheduled to launch in October 2008. NASA's unmanned Lunar Crater Observation and Sensing Satellite, known as LCROSS, will strike the moon near its south pole in January 2009. It will search for water and other materials that astronauts could use at a future lunar outpost.

Scott Horowitz, associate administrator of the agency's Exploration Systems Mission Directorate, led a confirmation review panel that recently approved the detailed plans, instrument suite, budget and risk factor analysis for the satellite.

NASA Ames Research Center, Moffett Field, Calif., manages the mission.

on the moon and prepare for new journeys to Mars and beyond.

The confirmation review authorized continuation of the lunar impactor project and set its cost and schedule. Another mission milestone, the critical design review, is scheduled for

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Diving Safety Office could aid both Earth and space sciences

As NASA goes forward in the Vision for Space Exploration, research remains an ever-present element in defining the world around us. Within



NASA Ames and University of Puerto Rico divers taking a spectral measurement with a handheld spectroradiometer.

at Ames. This office operates under guidelines established by the American Academy of Underwater Scientists (AAUS) and provides full technical support for the development of diving protocols, diver training and certification and field support as required.

To facilitate the research community, a full range of diver training is available. Classes range from general certifications to tailored, specific skill classes such as deep water and high-altitude diving. Safety classes range from diver-rescue training to the development of

the past six months, exploration was conducted to determine the biodiversity of high-altitude lakes and in coral reefs to determine bio-health and diversity. Just as astronauts work underwater to practice their EVA procedures, researchers work underwater as a laboratory for data gathering.

Conducting aquatic research is only possible through learning the techniques of skilled and safe diving. With this in mind, the talents of personnel came forward for the establishment of a Diving Safety Office

emergency rescue plans. All of these become vital elements in assuring safe and greatest available access to nature's aquatic laboratories.

The Diving Safety Office also includes certified divers and boat operators who are available to research projects to reduce training time and funding to develop unique skills within the project. In addition, the office has an inventory of diving equipment and small portable boats that can be made available to the researcher.

The office will assure that all

NASA Ames-affiliated scientific diving is conducted in a manner that will maximize protection of the scientific diver while allowing efficiency of observation and a means of collecting data that are available through no other means, in a safe manner. The office has proven that it provides a level of recognized structure and competency that allows research teams to interact with national and international marine research organizations.

Projects currently being supported include the Remote Sensing and Spectral Analysis of Coral Reef Health and Biodiversity and the Astrobiology High Lakes Project.

In summary, the Diving Safety Office has captured unique local talent to allow Ames researchers and affiliates to expand their potential research programs to support exploration initiatives and emerging earth sciences programs. The capabilities the office provides may not only support and promote the Earth sciences programs but could play a lead role in supporting water analog activities to more fully understand future activities in the microgravity and 1/3 gravity environments of exploration.

For additional information, contact the Ames Diving Safety Office at ext. 4-3408 or at e-mail the author at Randall.W.Berthold@nasa.gov

BY RANDALL BERTHOLD

Worden recognizes 'Morning Report' for Space Act Award

The Aviation System Monitoring and Modeling (ASMM) Project team was recognized by Ames Center Director S. Pete Worden in January for receiving a second Space Act Award from the NASA Inventions and Contributions Board for the invention and commercialization of the Morning Report Atypicality Tool For Analysis of Aircraft Flight Data.

Morning Report automatically analyzes the flight data recorded

by each aircraft in an airline's fleet during a selected period of time. It then brings all of the flights that were deemed atypical in a multivariate statistical analysis, with respect to the main body of comparable flight data, to the safety analyst's attention. ASMM project team members present at the ceremony included Dr. Irving Statler and retired United Airlines Captains Robert E. Lawrence and Robert E. Lynch. The cash Space Act

Board Award was distributed among the inventors. Morning Report has been commercialized within the airline industry and a patent is pending. It has been recognized by the aviation industry as a significant contribution to the achievement of proactive management of safety risk by demonstrating its capability to identify unexpected, operationally significant events or trends that could compromise aviation safety.

Ames' staff volunteers to help search for missing sailor

In search of renowned computer engineer Jim Gray and his 40-foot sailboat, missing in the Pacific Ocean, outside San Francisco's Golden Gate Bridge, a NASA high-flying ER-2 aircraft, similar to a U-2, took off from NASA's Dryden Flight Research Center, Edwards Air Force Base, Calif., in the morning of Friday, Feb. 2.

This flight was also a required pilot-proficiency flight. The airplane carried a 16-megapixel digital camera that took near-infrared and visible light images, which can show details in easy-to-spot 'false colors'.

Gray had been en route to the Farallon Islands to scatter his mother's ashes. He was reported missing Sunday, Jan. 28, by his wife. The Coast Guard had stopped its search Thursday, Feb. 1.

Organizers at NASA Ames worried that the search area could be mostly cloud-covered, but the weather was better than expected, though there was some cloud cover. Water could be seen between the clouds.

The pilot, David Wright of Dryden, flew the aircraft at about 50,000 feet, lower than normal, to get a better view of the search area. He flew multiple



Lockheed's ER-2 high altitude research aircraft in flight, similar to the ER-2 that recently aided in the search for renowned computer engineer Jim Gray and his 40-foot sailboat.

tracks three miles apart extending to about 30 miles off the coast from about Carmel to Pt. Reyes, Calif. The camera took pictures at 29-second intervals except when the aircraft was over clouds that covered roughly 50 percent of the area searched. Also, a video camera in the nose of the ER-2 ran all the time to help pinpoint locations.

After the ER-2 aircraft flew back

to Dryden, an F-18 jet carried the imaging data (on tapes and discs) from Dryden, north to NASA Ames. Imaging experts at NASA Ames geospatially registered and processed the images. Then volunteers began to examine hundreds of images and hours of video in search of the missing man and his watercraft.

BY JOHN BLUCK

NASA Moon-Impactor mission

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late February. That review will examine the detailed Lunar Crater Observation and Sensing Satellite system design. After a successful critical design review, the project team will assemble the spacecraft and its instruments.

"The Lunar Crater Observation and Sensing Satellite project represents an efficient way of doing business by being cost capped, schedule constrained and risk tolerant," said Daniel Andrews, project manager at Ames for the lunar impactor mission.

The lunar impactor will share a rocket ride into space with a second satellite, the Lunar Reconnaissance Orbiter. After the orbiter separates from the Atlas V launch vehicle for its own mission, the LCROSS will use the spent Centaur upper stage of the rocket as a 4,400-pound lunar impac-

tor, targeting a permanently shadowed crater near the lunar South Pole.

According to scientists, the Centaur's collision with the moon will excavate about 220 tons of material from the lunar surface. The Lunar Crater Observation and Sensing Satellite will observe the plume of material with a suite of six instruments to look for water ice and examine lunar soil. The satellite will fly through the plume, also impacting the lunar surface. That second impact will be observed from Earth.

The prime contractor for the satellite is Northrop Grumman Space Technologies of Redondo Beach, Calif. For information about the Lunar Crater Observation and Sensing Satellite on the Web, visit: <http://lcross.arc.nasa.gov>

BY JOHN BLUCK

Alonso gives aero update



NASA photo by Dominic Hart

The Fundamental Aeronautics Program Director Dr. Juan Alonso and members of his staff visited Ames recently. As part of the visit, Alonso provided Code A and T staff an update on the status of the Fundamental Aeronautics Program. He also spoke to the rest of the Ames community in the main auditorium.

Airborne pollutants know no borders

Mounting evidence suggests that gas and aerosol pollutants are routinely transported by winds across and between continents and can affect the air and climate of areas far from their source.

Scientists studying atmospheric changes have observed smoke plumes from wildfires in the boreal forests of Alaska and Canada that were carried as far as parts of Europe, Africa and the Arctic. Satellite imagery was used to guide field research that used weather instruments aboard five different aircraft and the ship Ronald H. Brown to sample the air above North America and the Atlantic Ocean.

"Our findings are the most extensive characterization of the North American troposphere to date," said Hanwant Singh, project scientist at NASA Ames. "We investigated the transport and transformation of gases and aerosols on intercontinental scales. Pollution plumes from Asia and North America were intercepted and analyzed as they were transported over the North American continent and the Atlantic." Singh led the Intercontinental Chemical Transport Experiment - North America (INTEX-NA) campaign that studied the chemical composition and processes of atmospheric changes over North America.

Changes in atmospheric composition and climate have been attributed to rapid industrialization and the related energy consumption. Fossil fuels are the main source of energy. Studies have shown that air pollutants from carbon-based fuels include such contaminants as carbon monoxide, nitrogen oxides and other harmful gases and particles.

Any substance introduced into the atmosphere has the potential to circle

the Earth. In the last decade, field experiments have documented the flow of air pollutants from the Asian continent to the Pacific Ocean.

Typically, the transport of Asian pollution to North America peaks in spring. However, five major Asian plumes were observed at lower



atmospheric levels crossing North America in the summer. When plumes were sampled and analyzed, findings showed fewer human-produced pollutants (such as carbon dioxide) and more biogenic trace gases, which occur naturally from microbial activity in soil (such as nitrous oxide and nitric oxide) and wetlands, swamps and rice paddies (such as methane.)

"We found that air quality across the North American continent was greatly polluted by major fires over Alaska and Canada and strong winds from Asia," explained Singh.

While scientists witnessed air pollutants flow into North America from Asia, they also observed air pollution flow from North America. Summer-time was selected to do field research because the days were longer, vegetative growth abundant, and wildfires were at their peak. To sample air coming across the Atlantic, four aircraft, each carrying different weather

instruments, were strategically based in New Hampshire, Faial (Azores) and Creil (France).

Smoke plumes from wildfires in Alaska and Canada were detected by several satellites and affected areas thousands of miles away. Smoke reached Europe without significant removal of particles. Receptor sites along the pathway showed an increase in ozone and decrease in carbon monoxide in the upper troposphere over the Atlantic. Data also showed relatively little direct Asian influence on ozone over the United States, but a sizable U.S. influence on Europe's ozone.

Ozone can be both beneficial and harmful to life on Earth. In the stratosphere, it prevents most of the harmful ultraviolet rays from reaching the Earth's surface. But in the troposphere, near the Earth's surface, the ozone is a pollutant. Surface ozone forms when nitrogen oxides and volatile organic compounds react in the presence of sunlight.

Just as Asia's pollution influences the air quality over North America, and North America's pollution affects European air, studies also show that ozone and other oxidants travel to northeast Asia from Europe and North America.

These and related studies appeared in the American Geophysical Union issues of the *Journal of Geophysical Research*, 2006.

For further information, please visit: <http://www.espo.nasa.gov/in-tex-na/>

BY RUTH DASSO MARLAIRE

Monroe selected as ‘Most Promising in Government’

Gilena Monroe of Ames, Code AFA, was recently selected to receive the ‘Most Promising in Government Award’ from the Black Engineer of the Year selection panel. She received her award at the 21st Annual Black Engineer of the Year Awards Conference on Feb. 17 in Baltimore, MD.

The selection panel for this award included the Council of Engineering Deans of the Historically Black Colleges and Universities, Lockheed Martin Corporation, Daimler Chrysler Corporation and US Black Engineer & Information Technology Magazine.

Monroe has a master’s degree in industrial and systems engineering from North Carolina A&T State University and a bachelor’s degree in computer science from Kentucky State University.

She joined the Aviation Systems Division in 2004 under the Federal Career Intern Program and was assigned as a project engineer on the Surface Management System (SMS) research and development team. She has been conducting data analyses of SMS

performance to evaluate its predictive accuracy, and her work is helping to



NASA photo by Tom Trower

Gilena Monroe received the award the ‘Most Promising in Government Award’ from the Black Engineer of the Year selection panel.

form the basis for a solid understanding of surface traffic operations that will contribute directly to the future concepts of surface operations in the

National Airspace System.

Monroe co-authored a paper on the accuracy and impact of SMS integrated with the Traffic Management Advisor decision support tool; the paper was presented at the AIAA Aviation Technology, Integration and Operations conference in September 2005. She was one of the recipients of the NASA Honor Award in Group Achievement for the SMS Project team.

Monroe has been an active participant in diversity and equal opportunity activities, including her participation in the Blacks in Government National Training Conference, Black History Month activities, working with students through NASA’s Smart-Skies educational outreach, and tutoring students at the 100% College Prep Institute in San Francisco. Monroe is a member of the National Society of Black Engineers, the Society of Women Engineers and the Human Factors and Ergonomics Society.

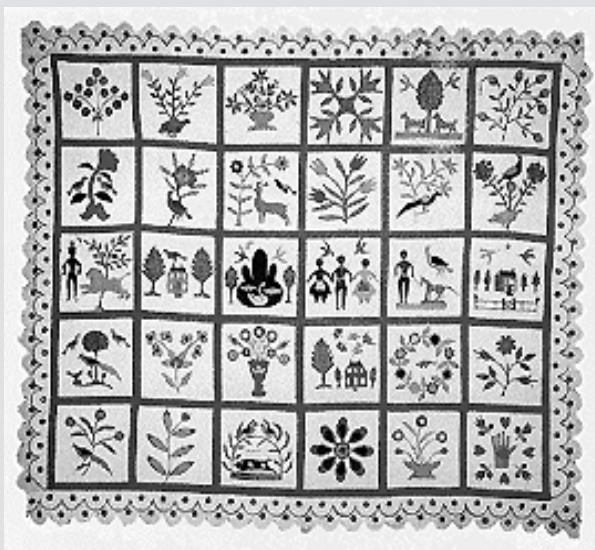
BY KATHARINE LEE

Ames AAAG celebrates Black History Month

The Ames African-American Advisory Group celebrated National African-American History month this month in several ways. The national theme for 2007 was ‘From Slavery to Freedom: The Story of Africans in the Americas.’ Vendors sold African attire and art in the Mega Bites Cafeteria and the cafeteria also provided traditional ‘soul food’ on their Tuesday menu during the month of February. On Feb. 28, the program ‘A Patchwork Quilt’ was presented, which provided an oration of stories to give you a glimpse of the lives of some prominent and lesser-known people who were instrumental in the formation of African American history.

African-American patchwork

quilts were made of cloth and provided a narrative of family history. Their creators used the technique of applique to literally paste their family album onto a lasting fabric. Stories were told through quilts and they provided visual records of family events such as birth, marriage, geographical locations and spiritual dedication. The program concluded with a reception in the lobby of Building 200 that featured a selection of baked specialty desserts prepared by Brown Girl Kitchen.



An example of one of the African-American patchwork quilts which provide a narrative of family history.

NASA Ames announces 2006 Length of Service Awards

Ames Research Center would like to acknowledge and recognize employees who achieved their Length of Service anniversaries for 25 and above years of service during the period June 30, 2005 to Dec. 31, 2006. The contributions of these employees' many years of service to our country and in helping NASA achieve its many goals is greatly appreciated.

25 Years of Service

Albert J. Ahumada Jr.
 Guadalupe M. Armendariz (Retired)
 Gary J. Atkins
 Rhonda O. Baker
 David M. Bergner
 I-Chung Chang
 Denny S. Chaussee
 Ronald L. Chinnapongse
 Mary Chow
 Kenneth L. Christensen
 Rudy P. Cotillon
 Robert J. Dolci
 Laura W. Doty
 Stephen R. Ellis
 Robert L. Finnie
 Ronald C. Fong
 Kathleen R. Giffin
 Peter T. Goldsmith
 Janice S. Gonzaga
 Andrew A. Gonzales
 Karen L. Gundy-Burlet
 David J. Hollenbach
 Stephen A. Jacklin
 Sheila A. Johnson
 Rosalyn Y. Jung
 Eric A. Kristich
 Robert M. Kufeld
 Mark J. Leon
 Jane A. Leyland
 Miguel S. Lopez
 Mark E. Mc Kelvey
 William J. McDermott
 Beverly C. Mesa (Retired)
 Suzanne C. Meyer
 Randall L. Peterson
 Terrence K. Rager
 Thomas L. Roellig
 Glen E. Sasaki
 John A. Segreto
 Sally A. Shaw
 Merle Simbe

Martha A. Smith
 Charles A. Smith Jr.
 Donald I. Soloway
 Michael R. Stock
 Lynn D. Thomas
 Rosa M. Tonarelli (Retired)
 Donna M. Washington
 Sandra G. Williams (Retired)

30 Years of Service

Frank J. Aguilera
 Roger W. Ashbaugh
 John G. Bluck
 Tony R. Caringello
 Dennis R. Cauterucio
 Patricia S. Cowings
 Douglas A. Denham
 David J. Des Marais
 Theodore J. Forsyth (Retired)
 Linda L. Franklin
 James R. Freil
 Danielle J. Goldwater
 Paul R. Grams
 John W. Hines
 Terry L. Holst
 Richard L. Jaffe
 Eric H. James
 Susan A. Kalb
 George H. Kidwell Jr.
 Knowlen F. Knowles Jr.
 Sylvia S. Longchamps
 Marshal L. Merriam (Retired)
 Michael J. Ospring
 Nellie M. Powell
 Patti P. Powell
 Dennis E. Ray (Retired)
 Catherine H. Schulbach
 Betty W. Silva

James H. Stevenson
 Anthony W. Strawa
 Scott R. Torok
 Thomas N. Trower
 Mary C. Valleau (Retired)

35 Years of Service

Jeffrey V. Bowles
 Joseph T. Camisa
 Horacio Chavez Jr.
 Sanford S. Davis
 Vivienne D. Gallo (Retired)
 Ronnee R. Gonzalez
 Karl Grundmann
 Leonard C. Hee
 Gail E. James
 Oscar Jung
 Diane M. Kanally
 Michael R. Landis
 Reynaldo E. Manila
 Eugene S. Moses (Retired)
 Thomas J. Moyles (Retired)
 Lawrence E. Olson
 Mary E. Perez
 Katherine C. Sablan
 Adrian L. Smith

40 Years of Service

Anthony R. Gross
 Linda L. Jahnke
 Everett A. Palmer III
 Rick J. Serrano
 Edward L. Tindle (Retired)
 John Zuk

45 Years of Service

James P. Connolly

TOPS mission discussed at colloquium



NASA photo by Tom Trower

Dr. Olivier Guyon presented a Director's Colloquium entitled 'The TOPS Mission Concept: Finding planets around nearby stars' in February at Ames. Guyon, an astronomer at the Subaru Telescope in Hawaii, explained the scientific potential and the technical challenges of the Telescope to Observe Planetary Systems (TOPS) mission concept, including describing what sorts of planets TOPS can detect around nearby stars.

Macon archeological explorers give expedition overview

On Jan. 31, a Director's Colloquium entitled 'New explorations of the USS Macon using advanced marine technology' was presented at Ames by

an archeological expedition off the Big Sur coast at the submerged wreck site of the rigid airship USS Macon.

The Macon crashed on Feb. 12,

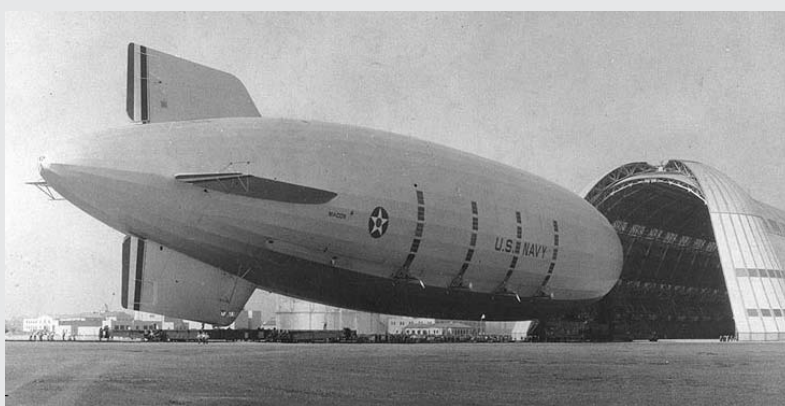
1935, as it headed back to its home base, in Hangar One at Moffett Field. Grech and Rock gave an overview of the expedition to the Macon along with stunning photographs of the airship and discussed the methods used to remotely operate the Tiburon, an underwater vehicle they used to compile a mosaic portrait of the debris field.

NASA photo by Dominic Hart



Left to right: Chris Grech and Steve Rock, Macon expedition explorers, seen here during their director's colloquium in January, presenting their expedition findings to the Ames staff.

Chris Grech and Steve Rock. Grech was the leader of the recent expedition to the Macon. In September 2006, researchers from NOAA's National Marine Sanctuary program and the Monterey Bay Aquarium Research Institute in Moss Landing (MBARI) led



The USS Macon (ZRS-5) leaving the airship hangar at Naval Air Station Moffett Field, on Oct. 26, 1933, in preparation for her first flight since arriving from the East Coast 11 days earlier. The photograph is from the NAS Moffett Field history file and an official U.S. Navy photograph from the collections of the Naval Historical Center.

Ames' transformation called 'amazing' by center management

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to maintain management of the flying observatory's science work. A decision is expected in March.

He also reminded everyone that the Kepler mission remains a high priority, and that other opportunities may arise in the future.

The future looks promising for the Aeronautics Mission Directorate as well, according to the Christensen. Starting in FY08, it shows a stable budget profile with a 4.6 percent budget increase in FY07. Congress also is showing support for its program budget, he said.

Addressing Ames' future in aeronautics, he said "we have restored confidence in our abilities and management at Headquarters and, consequently, Ames will be given more responsibilities and approval for new hires."

However, the Space Exploration Mission Directorate's future was less certain. Its FY08 budget showed a set-

back, and depending on the outcome of the FY07 continuing resolution, the schedule for the Crew Exploration Vehicle/Crew Launch Vehicle may be in jeopardy, he said. Presently, the Orion and Ares 1 procurements are on schedule, and the Launch and Range Operations (LRO) and the Lunar CRater Observation and Sensing Satellite (LCROSS) are still set to launch in FY2008, Christensen reported.

Christensen warned that these cutbacks could impact the advanced capabilities work at Ames, specifically in the human research and performance and PharmaSat areas. "Ames may use the money Aeronautics gave it for new hires to protect these highly skilled jobs," he said.

While these reductions may affect the Ames Constellation work, the upside is that Ames has other possibilities and options, he said.

Christensen also announced the creation of a new organization at

Ames, the Engineering Directorate (Code R), to separate program and project responsibility from engineering support by moving current Code P engineers into the new organization. Laura Doty will lead the new directorate.

He concluded by noting that Ames is moving to the next state of readiness and that our program mix is increasingly moving to a position of relevance to the agency. Staff realignment and organizational restructuring for programmatic and operational efficiencies are on-going. Finally, the center has restored confidence in our abilities and management at NASA Headquarters.

"In the end, it's all about the people at Ames. If you do good work, people will notice, and you'll be recognized for the quality of your work," Christensen concluded.

BY RUTH MARLAIRE

NASA Research Park Partner Changene granted patent

NASA Research Park partner Changene, Inc. was granted patent # 7,163,795 on Jan. 17 by the U.S. Patent and Trademark Office (PTO) for the discovery of nacrein from *Pinctada margaritifera*, a black pearl oyster found in the South Pacific Ocean.

Nacrein is a naturally occurring biological molecule that regulates calcium crystals during pearl formation. The mechanism of building biominerals in shells is similar to bone formation in humans. Studies show that nacreous substances extracted from *Pinctada* species demonstrated significant osteogenic (bone forming) activities in mammalian models.

"Changene is investigating nacrein for space missions as a countermeasure for bone mass loss in the micro-gravity environment," said Frank Chang, Changene CEO. "In space, many bones that aid movement on Earth are not subjected to the same stresses as they were on Earth. Over time, calcium normally stored in the bones breaks down and is released into the bloodstream, causing a decrease in bone density, or bone mass,"

he said.

This bone loss begins in the first few days in space at an average rate of 1.6 percent per month. This drop in density, known as disuse osteoporosis, leaves bones weak and less able to support the body's weight and movement upon return to Earth, putting the astronaut at a higher risk of fracture.

Osteoporosis and low-bone density are also major health concerns for the world's aging population. Data-monitor, a leading consulting firm in London, forecasts osteoporosis market sales would reach \$10.4 billion for consumers in 2010.

Chang said Changene collaborated with NASA Ames' Advanced Supercomputing Division for ongoing studies, applying molecular dynamic simulation on the nacrein molecule and deciphering its tertiary structure. He said it is common in biotech field that research and development processes take many years; however, with the known structure and subsequent *in silico* studies, scientists are able to speed up R&D processes.



3D structure of Nacrein (above model) was deciphered with NAMD (NANoscale Molecular Dynamics, a parallel object-oriented molecular dynamics program) by NASA Advanced Supercomputing division and Changene.

Ames hosts visit by Nealy, Cagle



In late January, Angela P. Nealy, top photo, right, visited Ames to meet the teams working in/on her field, that of assessing performance biomarkers for elite athletes. She visited Ames with astronaut Yvonne Cagle (photo to the right) and has worked with Cagle at the University of Texas Medical Center, in addition to training numerous Olympic track and field stars.



NASA photos by Dominic Hart

Upcoming Events . . .

Ames' Environmental Services Division presents:

Predicting Climate Change with a Hazy Crystal Ball - The Effects of Aerosols on Climate, presented by Dr. A.W. Strawa

Date: March 1, 2007
 Time: 11:30 a.m. - 12:30 p.m.
 Place: NASA Ames Conference Center, Bldg. 3, Patio Room

Climate change has received considerable attention by the media recently. One of the largest sources of uncertainty in assessing climate change is the effect that aerosols have on climate. This seminar will provide a frame work for understanding the role of aerosols based on basic concepts of climate change.

Strawa, an atmospheric scientist in the Earth Science Division at Ames who been studying the effects of aerosols and clouds

on climate for the past 15 years, will discuss what aerosols are, their sources and trends, how they affect climate, and the difficulty in assessing their effect on climate.

Finally, he will discuss some strategies for controlling aerosols emissions and the effect these have on future climate conditions. Strawa has over 30 scientific publications.

Free public lecture focuses on looking for Earth-like planets

As part of the Silicon Valley Astronomy Lectures, Astronaut/ Scientist Janice Voss of Ames will give a non-technical, illustrated talk on: 'Searching for Earth-like Planets: NASA's Kepler Mission'

Date: March 7, 2007
 Time: 7 p.m.
 Place: Smithwick Theater, Foothill College, El Monte Road and Freeway 280, Los Altos Hills .
 Cost: Free and open to the public. Parking on campus costs \$2.

Call the series hot-line at (650) 949-7888 for more information and driving directions.

No background in science will be required for this talk.

Background information: The more than 200 planets discovered around other stars so far are all Jupiter-like planets, big and most likely made of gases and liquids.

Naturally, astronomers are eager to refine their search to be able to identify smaller solid planets, resembling our own Earth. In November 2008, NASA is scheduled to launch the Kepler mission, to search for Earth-like planets around distant stars.

Voss, who is the science office director for the project, will describe the design and expected results from the four-year mission.

Voss has advanced degrees in

electrical engineering and aeronautics/ astronautics, and has also done research in space physics. She became an astronaut in 1991, and has been a mission specialist on five space flights.

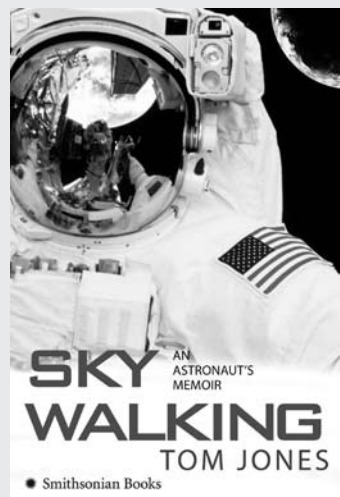
She has logged over 49 days in space, traveling 18.8 million miles in 779 Earth orbits.

As part of the evening, she will also discuss her experiences as a scientist in space and her perspective on the space program.

She will take questions from the audience at the end of the talk.

The lecture is co-sponsored by NASA Ames, the Foothill College Astronomy Program, the SETI Institute and the Astronomical Society of the Pacific.

Astronaut Tom Jones to give lecture at Ames



Planetary scientist and veteran shuttle astronaut Tom Jones (in photograph at right) will present a Director's Colloquium at Ames on March 13, from 10 a.m. -11 a.m. in N-201, the Main Auditorium. In addition, Jones will deliver a free public lecture March 13 from 7:00 p.m. to 9:00 p.m. in Bldg. 943, the Eagle Room.

Jones will discuss his new book, 'Skywalking: An Astronaut's Memoir,' detailing his experiences as mission specialist and payload commander aboard four space shuttle flights. Jones will sign copies of his book after the lecture.



Ames Ongoing Monthly Events Calendar

Ames Amateur Radio Club, third Thursday of each month, 12 noon, N-T28 (across from N-255). POC: Michael Wright, KG6BFB, at ext. 4-6262.

Ames Ballroom Dance Club, Classes on Tuesdays. Beginning classes meet at 5:15 p.m. Higher-level class meets at 5:50 p.m. Held in Bldg. 944, the Rec. Center. POC: Helen Hwang at helen.hwang@nasa.gov, ext. 4-1368.

Ames Bicycling Club, Every 3rd Wednesday of the month. The meeting location is Building 19, Conference Room 1083 and the meeting time is 12 noon - 1 p.m. Contact Julie Nottage at jnottage@mail.arc.nasa.gov, ext. 4-3711. By-laws of Ames Bicycling Club can be found at <http://zen.arc.nasa.gov>; the link is right under the picture.

Ames Bowling League, Homestead Lanes on Thursday nights at 6:20 p.m. Seeking substitute bowlers. Questions to sign up: Mike Liu at ext. 4-1132.

Ames Child Care Center Board of Directors Mtg, every other Tuesday in N-229/Rm 117 from 12 - 1:30 p.m. POC: Julie Schonfeld, ext. 4-6504.

Ames Contractor Council Mtg, first Wednesday each month, 11 a.m., N-200, Committee Room. POC: Chris Johnson, ext. (650) 938-8017.

Ames Federal Employees Union (AFEU) Mtg, third Wednesday of ea. month, 12 p.m. to 1 p.m., Bldg. 221, Rm 104. Guests welcome. Info at: <http://www.afeu.org>. POC: Marianne Mosher, ext. 4-4055.

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

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

Ames Sailing Club Mtg, second Thursday of ea. month (March through Nov), from 12:00 p.m. -1:00 p.m. in Bldg. N-262, Rm 100. URL: <http://sail.arc.nasa.gov/>. POC: Becky Hooley, ext. 4-2399.

Environmental Forum, first Thursday every other month, 9:00 a.m. to 10:00 a.m., Bldg. 218/2nd floor training room. URL: <http://q/qe/events/EHSseries/> POC: Stacy St. Louis at ext. 4-6810.

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

Jetstream Toastmasters, Mondays, 12 p.m. to 1 p.m., N-269/Rm.179. POC: Miwa Hayashi at ext. 4-1397, mhayashi@mail.arc.nasa.gov, Web: <http://jetstream.freetoasthost.com>

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

Ames emergency announcements

To hear the centerwide status recording, call (650) 604-9999 for information announcements and emergency instructions for Ames employees. You can also listen to 1700 KHz AM radio for the same information.

Safety Data

NASA-Ames Occupational Illness-Injury Data for Calendar Year-to-Date 2007 Jan. 1, 2007 – Jan. 31, 2007

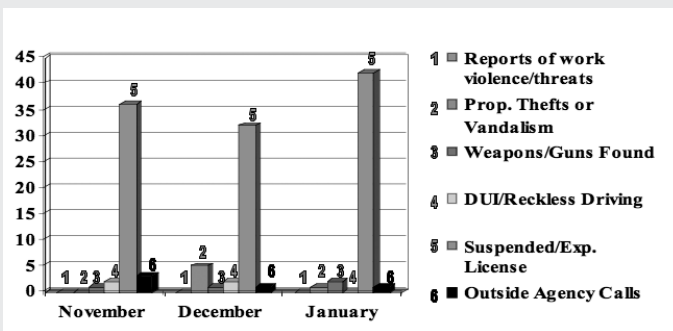
	Civil Servants	Contractors
First aid cases	1	1
Lost Workday cases	0	0
Recordable cases	0	0
Restricted duty days	0	0

Above data are as of 01/08/07. May be subject to slight adjustment in the event of a new case or new information regarding an existing case.

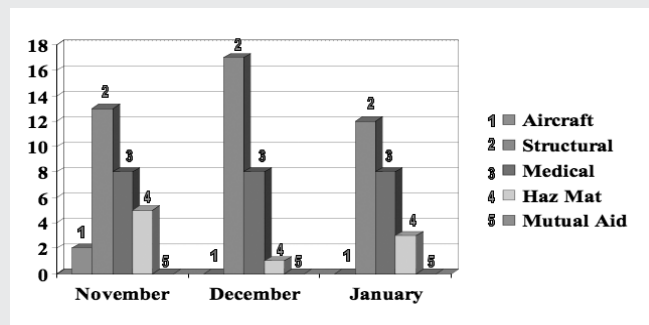
Protective Services monthly activity

A statistical summary of activities of the Protective Services Division's Security/Law Enforcement and Fire Protection Services units for the month of January 2007 is shown below.

Security/Law Enforcement Activity



Fire Protection Activity



Ames Classifieds

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

Miscellaneous

The Ames Cat Network needs help finding homes for cats trapped at Moffett. They range from feral to abandoned/lost pets. Tested, altered and inoculated. Call Iris at ext. 4-5824 if you or someone you know are interested in fostering or adopting a cat.

Sleeper Sofa Bed - like new. Beige/brown - unattached pillows across back - \$100. Call (408) 765-4935.

Astrogram deadlines

Please submit articles, calendar and classified advertisements to astrogram@mail.arc.nasa.gov no later than the 10th of each month. If this falls on the weekend or holiday, then the following business day becomes the deadline. For Astrogram questions, contact Astrid Olson at the aforementioned e-mail address or ext. 4-3347.

The NASA Lodge
Rooms starting at \$45 a night.



<http://naccenter.arc.nasa.gov/lodging.html>

Having a B-I-G family reunion and just run out of bedrooms and inflatable beds? Reserve rooms at the NASA Lodge

Ames employees and contractors can "host" their friends or relatives at the Lodge, and it doesn't have to be government or NASA related.

Let Us Welcome You!

Call (650) 603-7101



Construction safety course set

A Construction Safety Best Practices Course is scheduled.

Date: May 1 and 2, 2007

Place: NASA Ames, Bldg. 943

The course consists of 12 hours presentation followed by a 4-hour work shop and will be held in Bldg. N-943 conference room. Civil servants and contractors engaged in facility construction are encouraged to attend. Point of contact is Clarence Smith of Facilities Engineering Branch at ext. 4-6895.

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 Gift Shop N-235 in the cafeteria, 8 a.m. to 2 p.m., ext. 4-6873

Don't forget to purchase your baby shower, birthday, holiday gifts at Ames' two gift shops!

Visitor Center Gift Shop N-943 M-F, 10 a.m. to 4 p.m., ext. 4-5412

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

Tickets, etc... N-943 outside the main gate, 10 a.m. to 4 p.m., ext. 4-5412 and Beyond Galileo, 8 a.m. to 2 p.m. ext. 4-6873

Mega Bites Cafeteria N-235, 6 a.m. to 2 p.m., ext. 4-5969/Catering ext. 4-2161

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

Moffett Field Golf Club with 'Tee minus 1' Grill and Sports Bar. Call (650) 603-8026.

RV Lots Available Call to reserve a space at (650) 603-7100/01.

Civilian/Contrators, \$50/mo; military \$25/mo

NASA Lodge (N-19) 603-7100

Where to stay when you're too tired to drive home? What about the lodge?! Two types of rooms: Bldg. 19 (43 rooms), rate: \$55/night (\$5 ea add'l adult); Bldg. 583 (150 rooms), rate: \$45/night (\$5 ea. add'l adult)

Ames Swim Center (N-109) 603-8025

The pool is heated year round! The pool is currently available for lap swim, pool parties and special events. POC -Chana Langley, Pool Manager (650) 603-8025. Memberships: single memberships: \$40/yr. Family memberships: \$60/yr. After purchasing a membership, there is an entrance fee: daily entrance fee - \$3/day or lap pass fee - \$40 for 20 uses. Platinum membership - \$360/yr. (no daily fee). Special events: include military training, swim team events, kayak role practice, etc. The cost for special events is \$50/hr.

Vacation Opportunities

Lake Tahoe-Squaw Valley Townhse, 3bd/2ba. View of slopes, close to lifts. Per night: \$250, plus \$145 cleaning fee. Two night minimum. Includes linens, propane fireplace, fully equipped. Call (650) 968-4155, DBMcKellar@aol.com

Vacation rental, Bass Lake, 4 mls south of Yosemite. 3bd/1.5 ba, TV, VCR, MW, frplc, BBQ, priv. boat dock. Sleeps 8. \$1,050/wk. Call (559) 642-3600 or (650) 390-9668.

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

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

Incline Village, Forest Pines, Lake Tahoe condo, 3 bdrms/2 ba, sleeps 8, fireplace, TVs/VCR/DVD, stereo w/CD player, microwv, W/D, jacuzzi, sauna, outdoor pool. Walk to lake. Close to ski areas. Visit web site for pictures: <http://www.ACruiseStore.com> \$135/night spring and fall, \$173/night summer and winter (holidays higher) plus \$125 cleaning fee and 12 percent Nevada room tax. Charlie (650) 743-8990.

New York, 5th Ave. One fully furnished bedroom in 24 hour security bldg, overlooking Washington Square Park, \$2,000/wk or \$3,000/mo. negotiable. Call (650) 349-0238.

Paris/France: Fully furnished studio, 5th Arr, Latin Quarter, Notre Dame and Lie-St. Louis., \$1,400/wk. negotiable. Call (650) 349-0238.

Santa Cruz townhouse, 2 bedrooms plus study, 2 baths, decks, totally furnished, 3 blocks from beach, available July, August, September; \$1,600 per month. Call (831) 423-5777 (H) or (831) 277-8476 (C).

Lake Tahoe cabin rental in Agate Bay, North Shore. 4bd/3ba tri-level, AEK, cable TVs, fireplace, BBQ, deck, sleeps 10. Closest skiing is Northstar, Alpine and Squaw. Rates are \$375 a weekend, \$1,000 a week. Call (408) 867-4656.

Florida west coast vacation in St. Petersburg, beautiful 2bd/2ba condo, fully equipped kitchen and furnished, sunset views, 1/4 mile from St. Pete Beach, monthly or 2 week minimum rentals only. Call (703) 299-8889 or e-mail: jdgoehler@aol.com

Maui luxury oceanfront resort one-bedroom condo available one week. Rents for \$345/night now, \$495/night in the summer. We will rent to an Ames family for \$1,750 for the week. See the condo at <http://www.starwoodvo.com/resorts/villafeatures.jsp?resortID=12> Call (650) 572-8877 for availability and questions.

Monterey Bay vacation rental at Pajaro Dunes, 20 miles south of Santa Cruz, 3bd/2ba beach house with distinctive architecture. Beautiful ocean and valley views, only 150 ft from the beach, first-class tennis courts. \$700/wkend, \$2,100/wk including cleaning by the maid service when you depart. Call (408) 252-7260.

South Lake Tahoe Large cabin surrounded by protected forest, 8 miles from Stateline Sleeps 12 comfortably, 4 bd/3ba. Hot tub/pool table/65" TV Matt (408) 482-5286

South Lake Tahoe Cozy home backs up to large open meadow, 1 mile from Heavenly Valley. Sleeps 11, 3 bd/2.5 ba. Large deck with hot tub. Matt (408) 482-5286

ACC recognizes contractor employees for safe work practices



The Ames Contractor Council (ACC) recognizes deserving contractor employees and contractors for their safe performance on NASA Ames' projects and programs. In accordance with the ACC charter, we present these awards annually in front of their peers and management, both civil servants and contractors. At the Jan. 3 meeting, ACC Safety Committee Chair Mike Weiss, of Jacobs Technology Inc., presented the company award to Mike Prucey of SecTek and the individual award to Cheryl Orth of SAIC. For more information about the ACC, visit the in Internet at <http://contractorcouncil.arc.nasa.gov/> From left to right: Mike Prucey, Mike Weiss and Cheryl Orth

NASA photo by Tom Trower

ACC Excellence awards presented

The Ames Contractor Council Excellence awards ceremony was held recently at the center. The ceremony is held to present awards to contractor individuals and teams in recognition of their outstanding contributions to the mission of Ames. Ames Deputy Center Director Marvin "Chris" Christensen (far left) presented the awards.



NASA photo by Dominic Hart



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