SPACE CENTER
Roundup

December 15, 2000

VOL. 39, NO. 25 LYNDON B. JOHNSON SPACE CENTER, HOUSTON, TEXAS

Season's Greetings

As the holiday season approaches, we can all take pride in the Center's progress this year. This first year of the new century has been a most productive one, both in space and on the ground.

Marking an early success for the year, the STS-99 crew aboard *Endeavour* completed the first human space flight mission of the 21st Century in February. The crew gathered Earth mapping and imagery data unlike any achieved before. The data will find applications in many fields including air traffic safety and communications.

Atlantis' STS-101 crew got the Memorial Day holiday off to a great start, gliding to a landing on May 29, completing a successful mission to service and supply the International Space Station. In September, *Atlantis* and its seven-member STS-106 crew, five astronauts and two cosmonauts, performed a space walk to connect power, data and communications cables between the newly arrived Zvezda Service Module and the station. In October, *Discovery* and its STS-92 crew delivered two major station components to the orbiting outpost: the Z1 Truss (communications platform) and a new docking port. Crewmembers completed four consecutive days of space walks to complete the linkup of the two elements to the ISS.

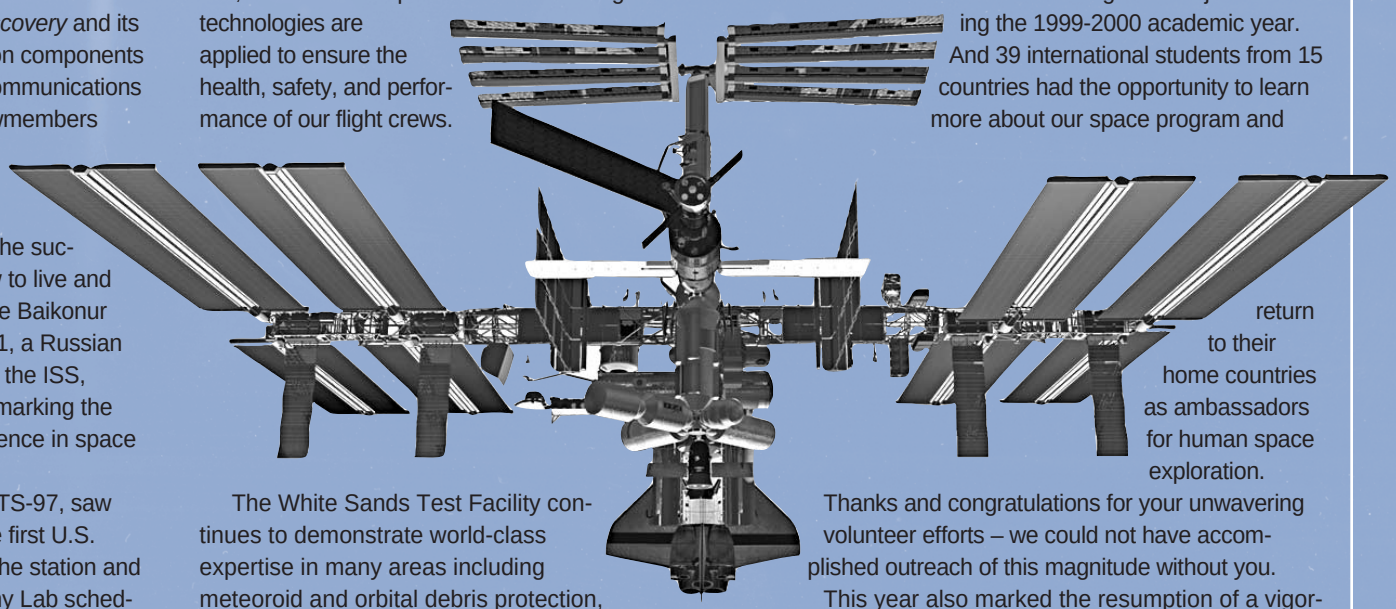
These missions paved the way for the successful launch of the first resident crew to live and work aboard the ISS. Lifting off from the Baikonur Cosmodrome in Kazakhstan on Oct. 31, a Russian Soyuz carried the Expedition 1 crew to the ISS, opening a new era in space flight and marking the beginning of a permanent human presence in space for many years to come.

The final shuttle mission of 2000, STS-97, saw *Endeavour*'s five astronauts deliver the first U.S. solar arrays that will provide power to the station and enable the operation of the U.S. Destiny Lab scheduled for launch next month. The flight concluded a year of significant achievement in Space Shuttle Program history, marked by the accomplishment of missions of unprecedented complexity. We can all take pride in the tremendous success of these missions as we look forward to the many challenges that lie ahead in completing assembly of the ISS.

The Space Shuttle Program continues to aggressively evaluate and implement beneficial space shuttle improvements. A major shuttle development milestone was the flight of the new glass cockpit on *Atlantis*. Planning for safety improvements received renewed attention this year and additional funding to implement high priority safety upgrades has been provided by Congress. Key Space Shuttle Program goals for these planned safety upgrades are a major reduction in ascent catastrophic risk; a significant reduction in orbital and entry system catastrophic failure risk; and a significant improvement in crew cockpit situational awareness for managing critical operational situations.

Many of you have been involved in the development of critically important advanced technology efforts. These have ranged from advances in lighter, stronger materials such as carbon nanotubes, to the development of new robotics technologies for use by astronauts training on the ground and working aboard the ISS. We have experienced medical breakthroughs including advances in cellular biotechnology research – an exciting endeavor which is opening new vistas in our understanding and treatment of disease, tissue modeling and drug development – to advances in spacecraft design and testing including the X-38 Crew Return Vehicle and the TransHab. These research and development efforts are critical to furthering our exploration of space.

During the past year we have been developing the plans for a major new capability at JSC, the Bioastronautics Facility. One of our goals as the Center of Excellence for Human Operations in Space is ensuring our understanding and addressing the human elements of space flight. This facility will provide a world-class space biomedical research asset that will be available to students and researchers from national and international communities. Astronauts will have access to state-of-the-art physical training, rehabilitation, and medical experts as new knowledge and technologies are applied to ensure the health, safety, and performance of our flight crews.



The White Sands Test Facility continues to demonstrate world-class expertise in many areas including meteoroid and orbital debris protection, hypervelocity impact testing, and fire hazards associated with oxygen systems. They provide a wide variety of test and laboratory research and development support to all NASA centers, the Department of Defense, other government agencies and private industry. WSTF personnel are working with professionals in many industries from aerospace to health care to apply their expertise, train employees and develop new products.

The Space Operations Management Office continues its efforts to provide quality operational support to all NASA missions. In addition, SOMO made progress in the consolidation of all mission and data services for the Agency and is now working on a future architecture effort that will provide space communications support for all Enterprise requirements until the year 2020. A major emphasis during the past year has been to commercialize key assets and capabilities across the Agency. Also, the launch of the latest Tracking and Data Relay Satellite in June was a major accomplishment for the organization.

The year of firsts in space was matched by a year of firsts on the ground, firsts that have expanded our community outreach efforts and have helped us better serve the needs of our workforce team. The Western Heritage Pavilion on the grounds of JSC adjacent to Rocket Park was officially christened this year. This open-air pavilion provides viewing of the longhorn pasture, where local high school students participate in the Longhorn Project, our joint educational program with the Clear Creek Independent School District that teaches local high school students how animal husbandry, agriculture and aquaculture relate to the future of human space flight. Importantly, the new JSC Child Care Center opened its doors in August. The new facility expands capacity nearly 70 percent and features many modern innovations.

We have continued to share our story with more and more people through venues such as Open House and Inspection2000, as well as through a variety of education programs. The Science Advisor (SciAd) Program successfully completed its first year, and KC-135 student flight opportunities outreach efforts expanded to include community college students for the first time. Texas Aerospace Scholars served more than 230 Texas high school juniors during the 1999-2000 academic year. And 39 international students from 15 countries had the opportunity to learn more about our space program and return to their home countries as ambassadors for human space exploration.

Thanks and congratulations for your unwavering volunteer efforts – we could not have accomplished outreach of this magnitude without you.

This year also marked the resumption of a vigorous recruiting and hiring program for the Center. Our challenging work, many accomplishments, and reputation as a world-class employer enabled us to hire 160 outstanding people from across the country. We're proud of our progress in this area, and welcome these new members of the JSC team.

It is with sadness that I note the passing this year of Dr. Robert Gilruth, the Center's first director, and former JSC Deputy Director Sig Sjoberg. Their vision, energy and dedication helped define the American space program and build JSC into what it is today, the leader in humanity's exploration of outer space. They are greatly missed.

This holiday season finds many of you working around the clock overseeing station operations, some of you in Russia, away from your families. Your efforts have contributed greatly to our success this year. I would like to extend my best wishes to all those individuals and their families for the many sacrifices you make to support our endeavors.

I thank all of you – the civil servant/contractor workforce team and our supporters in the community – for your hard work and your outstanding contributions to furthering the exploration of space. My heartfelt wishes to you and your families for a joyous holiday season.

George W. S. Abbey

Brian Welch, NASA director of Media Services and former *Roundup* editor, dies

Brian D. Welch, former JSC public affairs officer and NASA's Director of Media Services, died Friday, November 24, after suffering a heart attack.

Welch is well known throughout the JSC community as the longtime editor for the *Space News Roundup* in the 1980s. For eight years, Welch oversaw the publication and was noted for his in-depth commentaries.

"When I became Director of JSC, our major activity was to return the shuttle to safe flight following the *Challenger* accident," said former JSC Director Aaron Cohen. "There were many demands placed on me to give speeches to explain our activities to reach that goal. I needed someone who could put all the information in the right context, and I turned to the Public Affairs Office for help. Brian Welch emerged as the person I counted on time and time again. I will always treasure the many hours I spent working with Brian."

In 1984, Welch became a public affairs mission commentator, providing real-time descriptions from the Mission Control Center during space shuttle flights. He also served as Deputy News Chief at the center, manager of the JSC mission commentary team and newsroom manager during shuttle flights.

"Brian was one of the most dedicated, intense, fervent lovers of America's space program and of the principles and purposes of journalism," said Rob Navias, chief, Mission Planning and Integration Office. "He was a consummate professional whose loss will be felt forever."

He served ten months at NASA Headquarters as speechwriter for NASA Administrator Daniel S. Goldin, before being appointed Chief of News and Information in 1994. Welch was named Director of Media Services in 1998.

"All of us at NASA are stunned and saddened by this tragic loss," said Goldin. "Brian's love and enthusiasm for space flight and exploration was infectious. He approached his job with a passion and a purpose and truly embodied the spirit of this agency."

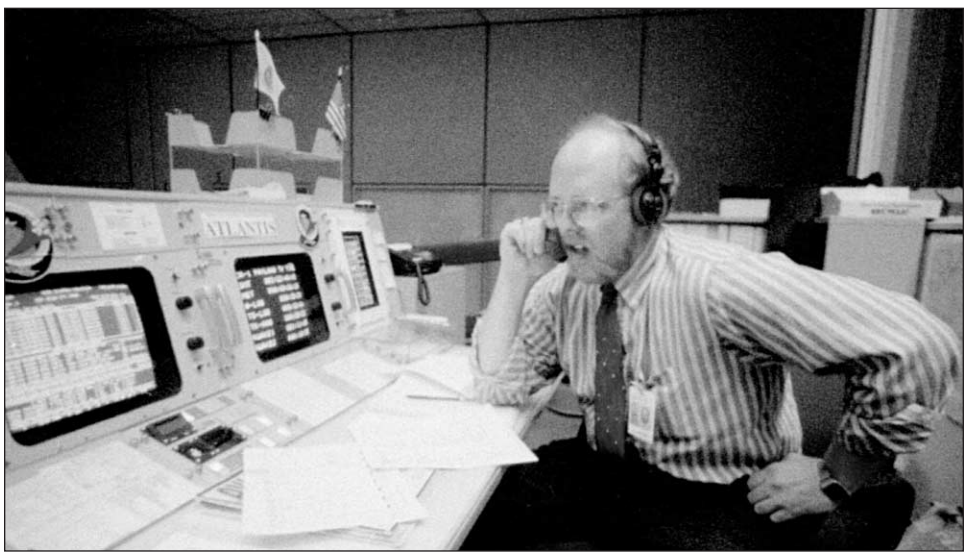
As Director of Media Services, Welch led many of the agency's public outreach efforts. He was responsible for overall agency news operations, NASA Television and the agency's Internet efforts.

Welch began his NASA career as a cooperative education student at the Langley Research Center, Hampton, VA, in 1979. He was a graduate of Murray State University, Murray, KY, and a native of Fulton, KY. His mother, one brother and one sister survive him. ■

In Welch's memory, we have reprinted one of his commentary pieces as taken from the *Roundup*'s commemorative 25th Anniversary issue – September 30, 1983.

JSC Origins…and the future

By Brian Welch



NASA JSC Photo S45 (S) 123

Brian Welch 1958 - 2000

The trees are taller now, more stately, and though battered and thinned by the hurricane of '83, they will in 10 or 20 years stretch out over the grounds of the Johnson Space Center with a lordly, leafy reach reminiscent of Langley, where it all began.

When Robert Gilruth made his first visit to the shores of Clear Lake, however, the area had just been scrubbed clean by Hurricane Carla, and he can be forgiven if a grim sort of feeling welled up in the pit of his stomach as he imagined the vast investment ahead. Out of a flat cow pasture, a space center would rise, and for his people back at the Langley Research Center in Hampton, Virginia, a move was looming which would radically alter their daily lives.

Gilruth had flown to Houston from Langley that September in 1961 to look over the new site. Back at Langley, the time for being built from scratch had come just after World War 1, when the lower Virginia peninsula was one big military base from Williamsburg to Norfolk. By the time the National Aeronautics and Space Administration was created in 1958, Langley had been a part of the National Advisory Committee for Aeronautics (NACA) for close to 50 years. It was NACA's prime aeronautical research facility at the time, but in 1958 all of that had been ceded to NASA. Langley had a long and distinguished history. It is said that hardly an airplane flies today that in some way or another has not been influenced by what was done at Langley. It was where the NASA story really began, and the tall hardwoods and Virginia pines which shaded its grounds gave it an air of permanence and stability. Moreover, it was the first home of the Space Task Group.

This new site, however, was different. It was a flat cow pasture scoured by brisk winds off Galveston Bay. A very large effort would be required to turn it into the new flagship facility of a new age of exploration. But then, big plans were being made, and in the tenor of the times a construction project even of this magnitude paled in comparison with striking out for the Moon.

It was altogether clear on May 25, 1961, the day President Kennedy committed the United States to a race for a Moon landing before the decade was out, that a staggering job had been dumped in NASA's lap. "Now how the hell are we going to do that?" one NASA engineer asked a colleague as they sat contemplating the speech in a quiet office at Langley.

It was a good question, and the man who ended up answering that and many others was Gilruth. A highly respected technical manager, Gilruth had become head of the Space Task Group, the nucleus of what would eventually become a team of 400,000 people. His job soon took on immense proportions. Hundreds of decisions were needed immediately, if not yesterday, and even as the pace quickened, it also became institutionalized for a period of several years. It never let up, not for a long time.

One of the decisions Gilruth and others in NASA faced was what to do with the Space Task Group. It was growing daily, the job ahead was monumental, and the normal quiet routine of Langley was beginning to groan under the strain. New facilities would be needed, and the construction alone would rival that of many projects America had undertaken in the past. Aside from manufacturing plants, assembly buildings, test stands, shipping facilities and launch pads, the Agency would need new laboratories, office buildings, aircraft hangars and huge warehouses, and the Space Task Group would need a home.

Even before it was built, they called it the Manned Spacecraft Center, and from the beginning it was seen as the crown jewel of the new effort, the lead center for all space journeys involving astronauts. But where to put it? As government decisions go, the answer came quickly.

On July 7, 1961, NASA Administrator James E. Webb directed the establishment of preliminary site criteria and a site selection team. Essential criteria for the new site included the availability of water transport and a first-class all-weather airport, proximity to a major telecommunications network, a well established pool of industrial and contractor support, a local utility system capable of delivering 80,000 KVA of reliable power, a readily available supply of water on the order of two million liters per day, a mild climate permitting year-round outdoor work, a culturally attractive community and at least four square kilometers to build on. By August, some 23 sites had been selected as possibilities, including Jacksonville, Miami, Baton Rouge, Corpus Christi, San Diego and San Francisco. Houston was initially included by virtue of the San Jacinto Ordinance Depot, since military rather than commercial facilities were judged best for helping handle NASA's large retinue of jets and specialized equipment. After a visit, however, the selection team agreed that a piece of property owned by Rice University, with its proximity to Ellington Air Force Base, was equally attractive, and on September 19, 1961, that site was chosen. Just the day before, Houston's population had topped the one million mark.

The city was ecstatic. Space fever promptly swept the town. The baseball team was named the Astros, and the basketball team was called the Rockets. The Astrodome, Astroworld and countless businesses with "space city" somewhere in the title blossomed over the years.

It was an enraptured crowd of almost 1,000 then that greeted Gilruth on his second visit to Houston in December 1961. Speaking at the Shamrock Hilton (the interior of which once caused the architect Frank Lloyd Wright to murmur, "I always wondered what the inside of a juke box looked like."), Gilruth announced that a second manned space flight program would occupy the staff of the new space center. The new program would bridge the gap between the early Mercury flights and the later missions to the Moon. He described a half-billion-dollar program to perfect orbital rendezvous techniques using a two-man capsule launched by a derivative of the Air Force's Titan II booster. The project was called Advanced Mercury, Mercury Mark II or simply Mark II, depending on who was asked. Later, they would call it Gemini.

So it was that in July 1961, the directive had come to find a home for the Space Task Group. That date is altogether fitting, since by some strange quirk of history, a great many of the central events in the NASA story have occurred in the month of July.

There was, for example, the signing in July 1958 of Public Law 85-568, the National Air and Space Act, by which President Eisenhower approved the creation of NASA. Eleven years later, in 1969, Apollo 11 landed two men on the Moon in July and the name Houston became the first word uttered from the surface of another planetary body. In July 1972, as NASA turned its attention toward pumping new technology into the private sector, the first of the highly important Landsat Earth observation satellites was launched. Three years later, in July 1975, Americans and Soviets met in space during the Apollo-Soyuz Test Project. One July later, in 1976, the Viking 1 lander became the first probe to touch down on the surface of Mars. In July 1979, during the troubled months when NASA and the Johnson Space Center were dealing with widespread criticism of the Space Shuttle Program, Skylab reentered the atmosphere to a crescendo of bad publicity.

NASA took a drubbing in the media during that July, but things got brighter in July of 1982, when the Shuttle *Columbia* completed her fourth test flight and officially opened a new era of space transportation. That July Fourth will probably always stand out in the minds of many who work at JSC. It was a proud day. Flags festooned Mission Control, and that afternoon the new orbiter, *Challenger*, visited the Clear Lake area with a stopover at Ellington Air Force Base. But it was a July Fourth exactly 20 years earlier, which probably made the biggest impression on the Houston area. That was the day the astronauts came to town.

They were the Original Seven, the chosen, the first of a new breed of explorers, and in the early 1960s there were few celebrities on the planet who could compare with them. When they made their first trip to Houston on July 4, 1962, all the stops were pulled out. They were given a motorcade along a route lined with cheering admirers. Speeches were made, the welcoming ceremony was pure Texan, and a vast barbeque was thrown in their honor at the Houston Coliseum.

Today there are almost 80 active astronauts living in the Clear Lake area. They still command a lot of attention, but the tours which used to bring citizens out to tramp about on their lawns and ask to pose with their wives and children have long since stopped.

These days, after 20 years of becoming accustomed to astronauts, Houston takes less notice of them. The new generation of space explorers marry, raise children, go to movies and restaurants, shop in the malls, go to baseball games and every once in awhile they take a trip into orbit. Most people don't even recognize the vast majority of them anymore, much less ask for autographs. And there is a certain significance to this, satisfying to the people at NASA – it means they've done their jobs well. Space flight has matured, it has become a routine – if still spectacular business, and it promises to become more routine in the future.

And if a sense of the ordinary becomes a part of space flight, it will be because an enormous number of people are flying routinely in space. It will be because Shuttle flights take off every week or so, and because scientists and engineers and specialists of all kinds are living and working in space. In the next decade or so, the Johnson Space Center will probably be very heavily involved in the construction of a space station in low Earth orbit. NASA sees this as the next logical step and proposes to have construction underway by the early 1990s. In some ways, that will be analogous to the construction of JSC here some 20 years ago.

As with JSC, one of the items under construction will be a mission control center. With the advent of a space station, more complex orbital operations will begin, requiring some kind of control center in orbit, many believe. This orbital complex probably will also include scientific laboratories, living quarters, and repair and construction facilities. It won't be close to Clear Lake and the salty breezes, but there will be all of the world's oceans to look out on.

And in 20 or 50 years, when the trees at the Johnson Space Center have finally grown to maturity and arc out over the roads and walkways, they may even plant a few more… up there. ■

2000 NASA and JSC Honor Awards Ceremony

The NASA and JSC Honor Awards Ceremony was held on December 6 in the Teague Auditorium. Approximately 175 individuals and groups were recognized by center management to receive the Agency's highest honorary awards. Assisting Center Director George Abbey with the award presentation was former astronaut and now Commander of the 3rd Marine Aircraft Wing at NCAS Miramar in San Diego, Calif., Major General Charles F. Bolden, USMC. General Bolden received a warm welcome on his return visit to the center as he addressed the awardees and the filled-to-capacity auditorium.

Following the ceremony, a reception was held in the lobby of the auditorium for award recipients and their guests. ■

The following is a list of the honorees, some of which received their awards at earlier ceremonies:

NASA Distinguished Service Medal

Steven A. Hawley, Ph.D.
Tamara E. Jernigan, Ph.D.
Kent V. Rominger

NASA Outstanding Leadership Medal

Eileen M. Collins
James B. Costello

NASA Exceptional Bravery Medal

Terry A. Lee-Lamkins

NASA Exceptional Service Medal

Daniel T. Barry, M.D., Ph.D.
Perry J. Bennett
Gilbert Bonse
Tommy E. Capps
Gilbert L. Carman
Cathy L. Claunch
Catherine G. Coleman, Ph.D.
Betsy L. Hodges
Jerry L. Homick, Ph.D.
Jay C. Hoover
Gary W. Johnson
William R. Jones II
Joseph J. Kosmo Jr.
Axel M. Larsen Jr.
Adele E. Leighton
Chin H. Lin, Ph.D.
Marilyn M. Lindstrom, Ph.D.
Mary F. Lopez
Robert D. Neil
Ellen Ochoa, Ph.D.
James N. Ortiz, Ph.D.
William W. Parsons
Vicki C. Pendergrass
Patricia A. Petete
Steve M. Poulos Jr.
Penny E. Saunders
Margaret G. Savoy
Paul E. Shack
Dan D. Swint
Glen E. Van Zandt
Dennis J. Webb

NASA Exceptional Achievement Medal

Michele A. Brekke
Timothy T. Cao
Charles W. Dingell Jr.
Julie A. Kramer
Alice T. Lee
Chris S. Lovchik
John P. Mulholland
Frank W. Parker
George F. Parma
Anthony C. Sang
Donna M. Shafer, J.D.
Joel M. Stoltzfus

NASA Public Service Medal

Bradley N. Bell
– Lincom Corporation
David A. Brady
– United Space Alliance
Dorinda L. Carmichael
– Muniz Engineering, Incorporated
Frans Gillebaard
Diane Gillebaard
Carroll E. Hollier
Roscoe Lee, Ph.D.
• TRW Systems & Information Technology Group
Philip R. Lewis
• Science Applications International Corporation
Wayne B. Powell
• Brown & Root Service Pioneer
F. Fisher Reynolds
• United Space Alliance
Billy C. Robinson
• Brown & Root Service Pioneer
Erlinda L. Stevenson
• United Space Alliance

NASA Group Achievement Award

Comprehensive Medical Information System Project Team
Flight Hardware Common Certification Team
Get Away Special Payload Safety Memorandum of Agreement Team
International Space Station Debris Avoidance Team
International Space Station Safety Engineering Group
Multi-Use Robotic Manipulator Development Facility Integration Team
Neutral Buoyancy Simulation Group
Orbiter Communications Adapter Team
Plastic Land Mine Detection System Team
Space Shuttle Orbiter Wire Inspection and Repair Team
STS-93 Flight Design Team
STS-93 Payload Operations and Integration Team
STS-93 System Integration and Orbiter Team
USA Simplified Aid for EVA Rescue Development Team
Virtual Reality Display Software Package Implementation Team\

NASA Public Service Group Achievement Award

Neutral Buoyancy Laboratory Dive Team
• Johnson Engineering Corporation
Quick Look Analysis Team
• Science Applications International Corporation/ GHG Corporation
STS-93 Chandra Training Team
•United Space Alliance

JSC Certificate of Commendation

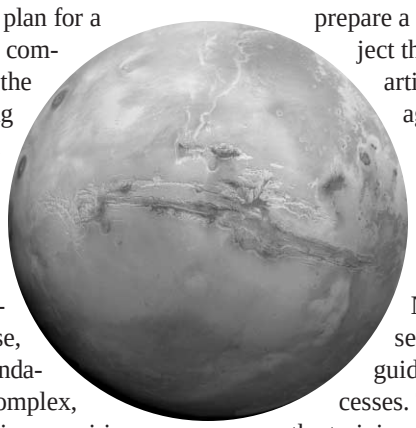
Charles S. Allton
Melody M. Anderson
Ken M. Bain
Adam T. Baker
Herbert H. Baker Jr.
Rudolf M. Balciunas
Raul A. Blanco
Thadd C. Bowers
Wanda L. Brown
TuQuynh T. Bui
Radel L. Bunker
Lynn E. Buquo
Beth D. Caplan
Jose M. Caram
Sandra L. Cargill
Sharon B. Castle
Linda W. Chauvin
Cinda Chullen
Barbara A. Conte
Joseph S. Cook Jr.
Robert M. Cort
Shelia K. Cowan
William S. Cowart
Oma W. Cross
Cecilia C. de la Garza
Michael P. DeMasie
Patricia A. Dickson
Bret G. Drake
Sharon R. Evans
Jeanette W. Everling
Edward K. Fein, J.D.
Malise M. Fletcher
Royce G. Forman
Cordelia A. Foster
Carolyn G. Fritz
Scott D. Gahring
Jill I. Goldstein
Lazarus Gonzales Jr.
Bernadette M. Hajek
Curtis D. Hanks
Paul S. Hill
Sabbir A. Hossain, Ph.D.
Kristin E. Ingram
Linda S. Jack
M. Scott Johnson
John J. Kennedy
Sean R. Keprta
Carl F. Koontz
Alice T. Lee
Angelene M. Lee
Ronald B. Lee
Kevin W. Lewis
Vivian B. Long
Angela K. Martin
John A. McCullough
Mary C. McLain
Stacey A. Menard
Michael E. Montz
William J. Moon
Landon A. Moore
Stacey E. Morrison
Christopher Mortellaro
Nancy E. Munoz
Kornel Nagy, Ph.D.
Clair D. Nelson
Cuong Q. Nguyen
Raymond L. Nieder
Jose M. Olivarez
Munish P. Patel
Laura G. Pepper
Joseph L. Prather
Gary L. Priest
Jasen L. Raboin
Mario Ramirez
J. Gary Rankin
Harold W. Reimers
Gerald J. Reuter
Norma D. Rhoads
William W. Robbins Jr.
Dale R. Roberts
Troyonia J. Ross
Douglas R. Sander
Steven M. Schenfeld
John H. Scott
Delene R. Sedillo
William D. Sherborne
Donn G. Sickorez, Ph.D.
Thomas B. Smith
Carl I. Soderland
Eileen K. Stansbery, Ph.D.
Nancy L. Steisslinger
Lisa Y. Stephens-Hammond
Andre J. Sylvester
Johnetta D. Thomas
Anthony P. Uttley
Emily A. Venski
Richard C. Wadle
Anne E. White
Eugene F. Zetka

JSC to sponsor third annual Mars Settlement Design Competition

Building on the success of the February 1999 and 2000 JSC Mars Settlement Design Competitions, JSC will sponsor the event for a third year February 2 - 4, 2001.

The third annual Mars Settlement Design Competition will bring high school students to JSC for an intensive overnight weekend program in which they will compete in the design of a future human Mars base. "We are looking forward to another stellar educational experience for the students," says this year's chair, Michael Kincaid, chief of the Education and Student Programs Branch of the Human Resources Office.

The JSC Mars Settlement Design Competition is an exciting industry simulation game for high school students, set in the middle of the 21st Century. In the game scenario, The Foundation Society, a private organization that promotes human exploration and colonization of space, has issued an urgent call to industry to propose a design and operating plan for a new Mars base. The competition emulates the experience of working as a member of an aerospace company team, developing a design and proposal for the new Mars base. The requirements for the base, specified by The Foundation Society, are complex, challenging and exciting, requiring imaginative and innovative solutions.



Students with a variety of skills will be teamed with others to form four competing student companies. Up to 140 students will be able to take part in the competition. Students need not be science and technology focused to enjoy the competition. It takes a wide variety of people, talents and skills to prepare a design and proposal for a project this large. Analysts, planners, artists, writers, organizers, managers, communicators, and others with imagination and creativity will be needed by each student company.

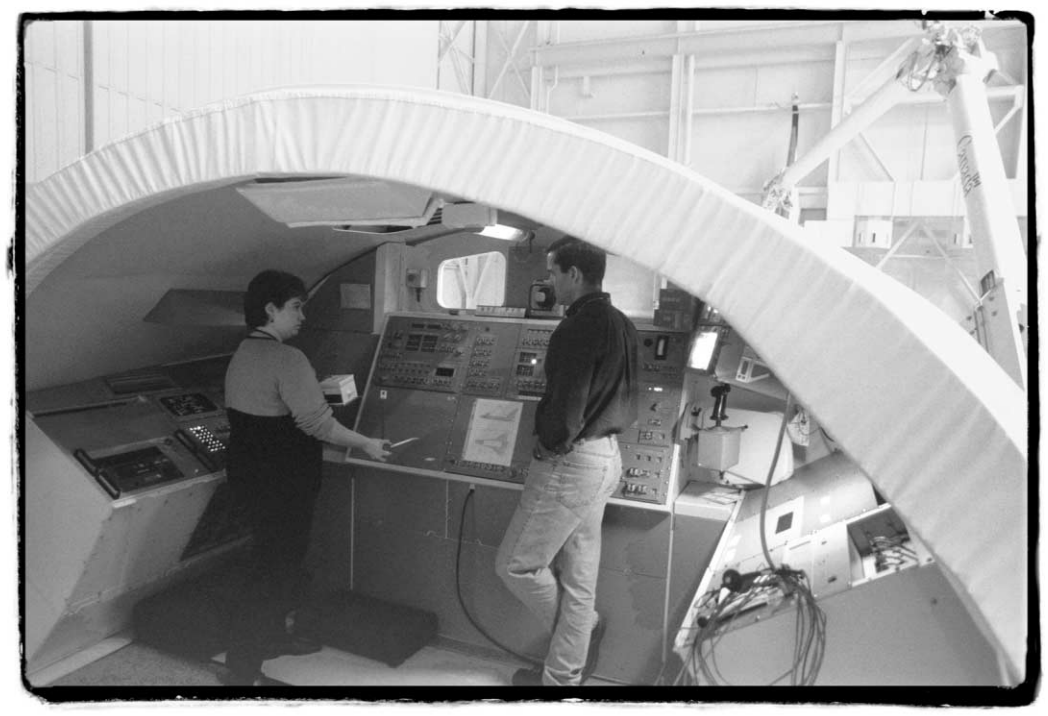
Each company will be provided with a professional NASA or industry manager to serve as company CEO and to guide the company in their processes. The students will receive all the training, guidance and information needed to prepare a winning design and proposal as part of the competition activities. The competition concludes with each student company's presentation of its proposal to a panel of NASA and industry judges, who select the winning proposal.

Students who participate in this competition will learn much about Mars, space science, the space environment, engineering and business careers, organizing, integration of complex activities, teamwork, management, and effective communication, all set in an exciting and unusual context.

The competition is being held as part of JSC's set of National Engineers Week activities. ■

If you have family members or friends who are high school students and who would be interested in participating in this competition, you may contact Norman Chaffee, competition coordinator, AP2, at x33777 for more information and an application form. Information is also available on the competition Web site at http://marsbase.jsc.nasa.gov.

Unique photo project to tell the story of
NASA**People**at**Work**



Photos by
Guy-Christophe Coppel

JSC has recently agreed to a unique project, that when complete, will hopefully share a different perspective of the nation's space program with audiences around the world.

Free-lance photographer and communications consultant Guy-Christophe Coppel, a native of Brittany, will work through JSC on a long-term photographic project titled NASA People at Work. For three years, Guy-Christophe Coppel will learn the inner workings of the center, observe the processes that make it work and, through his camera, capture the spirit of the people who make space exploration happen.

"As a photographer, it has always been my dream to photograph NASA people," states Coppel in a written statement. "I have always been passionate about space, but also because I am so moved by men and women doing their very best, those who are making the impossible possible, thanks to their commitment, dedication and teamwork."

Coppel's timing could not be better. Only eight days after signing his agreement with JSC, Zvezda was launched, marking a historic milestone for the world's largest space endeavor, the International Space Station. As part of his plan, Coppel has observed shuttle launches and will possibly visit other NASA centers, but his goal is to capture at JSC "things besides the big picture, spectacular events."

"I want to spend time with people, and really absorb what drives them. Not just walk in, 'click, click' and goodbye," he explains. "I want them to get comfortable with me and I want them to understand my purpose."

So what is his purpose? Coppel says he will strive to "tell the story of everyday life" at NASA and show people there is a lot more to the space program than the launches on the evening news.

"Visitors, even people genuinely interested in the space program, only see one snapshot of NASA," said Coppel. "It's primarily determined by the press. They, in essence, filter what we see of NASA, but through this project we will be able to give the public a more realistic look into NASA. I can show them real technicians, real engineers – people who have given their life towards what they consider important."

> ***NASA is dealing with a universal dream. It is much more than meeting the Congressional mandates. It is something that touches all mankind.***
>
> — Guy-Christophe Coppel

The ultimate goal of the work is to create a photographic exhibition and eventually a book by the same title. Coppel's work may also be used in NASA Web projects, annual reports and possibly an online gallery. There will be smaller projects along the way; in fact, an early collection of his photos taken so far was displayed at Inspection2000.

"I was very proud to participate in this very special event designed for the business guests of JSC. I was proud to have been able to give them a little behind-the-scenes flavor of NASA people," said Coppel, "It was very challenging, but thanks to the help of many people, the hard work of everyone, especially those in the photo lab in Bldg. 8, the magic of NASA worked for me too! Making such an exhibit in fewer than six weeks would have been impossible anywhere else except at JSC. It was a real gift for me, specially on the human level through the way I have been welcomed by people everywhere I have been."

Coppel says it was the Original Seven that sparked his passion for the space program. Even at the young age of 9, far across the ocean, Coppel says he was moved by the intrigue and challenge of space flight.

He recalls growing up in Rennes, his hometown and capital of Brittany, and watching on the sole television station the breaking news of Apollo 13's critical situation.

"That was the one time in my life that I prayed," admits Coppel. "I didn't even know their names but it was amazing how connected I felt to them."

Even now, he marvels at how the Apollo 13 challenge unified humankind.

"No one has ever been able to generate that much concern," says Coppel. "The Pope asked to pray for them, it united people like nothing else – despite religion, despite the Cold War, everyone offered to help. Space was the most powerful mechanism to unite people."

Coppel has always been interested in people, in his own words, "a passionate witness of human beings in their efforts for doing their very best." After studying history and geography at the University of High-Brittany in Rennes while working as a yoga teacher, he finally decided to take again to his cameras and worked extensively for artists and musicians, making CD covers, illustrations, and pictures, before running his own communications agency for 10 years.

A third-generation photographer, he has created two other photographic works that have evolved into numerous exhibitions and have been covered in various publications. Titled "Enez Sun," the first collection focuses on a western island of Brittany. A second titled, "Pennou," which means "heads" in Breton language, is a portrait gallery of leading personalities in Brittany and in the other Celtic countries.

"NASA People at Work gives me the feeling I am doing the right work, with the right persons in the perfect time," says Coppel. "Behind every single picture, there is a story, even several. I'll write it, not as captions, but as a real story.

Please see **PEOPLE**, Page 5

Continued from Page 4

PEOPLE

"These photos can be a tool to communicate, but also to educate and hopefully inspire, outside and inside NASA," said Coppel. "They can create a different face, a more personal look, than what is usually given. It is like going inside a family and being with them, not just for the big wedding and the births, but every day – when they are working, cooking, when they are happy and when they are in pain, but always with much love and respect for everyone and what they are doing." ■

On**Display**

You can see a second exhibition of Coppel's first **NASA People at Work** photos at a special onsite viewing. The collection will be on display in the Bldg. 11 cafeteria through January 5, 2001.

Ripped from the ROUNDUP

Ripped straight from the pages of old Space News Roundups, here's what happened at JSC on this date:

1 9 7 5

Earth's protective ozone layer above the equator came under the eye of NASA's newest Atmosphere Explorer satellite early in December.

An ozone detector aboard the spacecraft, called a backscatter ultraviolet (BUV) spectrometer, will provide information on the ozone layer in the equatorial region of the globe between 20 degrees North and South.

Immediately after the instrument was activated on December 4, controllers at NASA's Goddard Space Flight Center in Greenbelt, Maryland, began receiving data on a checkout basis. The BUV spectrometer became fully operational the following week.

1 9 8 5

Remote sensing technology has uncovered information that suggests a civilization existed in the subtropical Peruvian jungles prior to the Incas.

Tom Sever, NASA's principal investigator at the National Space Technology Laboratories, and Tom Lennon, archaeologist and co-director of the University of Colorado's Rio Abiseo National Park Project, jointly completed a 5-day expedition into the jungles of Peru's Rio Abiseo National Park after remote sensing, by satellite and aircraft, permitted the explorers to map and prioritize the field investigation sites.

A materials dating process is currently underway to determine when the civilization existed. Sever said, "Our guess right now is that the civilization was pre-Inca because the architecture is circular and statuary have very delicate motifs, in comparison with the Inca ruins, which are long, narrow structures with corner bases."

1 9 9 5

When *Atlantis* glided to a landing at Kennedy Space Center on Monday, it ended an eight-day mission that marked several milestones in the continuing program of joint U.S./Russian cooperation in space.

"I think we left a gateway open for the next five flights," Commander Ken Cameron said. "That's what it's all about – one step at a time toward the Station."


ROUNDUP
Frosch, Yardley cover new space technology in STS development

Cox, Stuart earn Secretarial Excellence Awards


NASA JSC Photo 2000 by Bill Stafford

Claire Cox


NASA JSC Photo 2000 by Bill Stafford

Donna Stuart

Claire Cox of the Office of Procurement and Donna Stuart of the Human Resources Office each recently received the Marilyn J. Bockting Secretarial Excellence Award in recognition of their exceptional contributions, professional competence, and personal dedication.

Claire Cox was recognized in October for her contributions as the lead secretary for the Institutional Procurement Office. She has proven to be an exceptional organizer, team player, and implementer of improvements. Upon her assignment to this office a year ago, she took the initiative to establish improved systems and procedures, which have resulted in greater efficiency and timeliness in conducting all office activities. For instance, she proactively reviewed all office files and immediately took action to set up new files that are in accordance with NASA filing and record-keeping policies. The file system is comprehensive and well indexed so that files are easily retrievable and usable. In addition, she has established an action tracking system. She maintains an up-to-date training and leave schedule for more than 30 employees, while performing all of the ongoing duties such as timekeeping, property management, move coordination, and training coordination.

As lead secretary, Cox provides mentoring and guidance to other secretaries that support her. After a recent split of the Institutional Procurement Office and the Institutional Resources Office, she has willingly continued to support the manager and office. Cox also supports Center Operations Directorate staff since she is co-located in the COD suite. She greets visitors, handles incoming calls, and provides any necessary support for the COD staff.

Due to her exceptional organizational and computer skills, Cox has further been counted on to support numerous special activities throughout the center. She has handled all correspondence and reservations for the Center Director's Breakfast, supported the Registration Committee for the National Contract Management Association, planned Safety and Health Day activities for the office, and been an active participant in Inspection Day.

Donna Stuart was recognized in November for her contributions as an office assistant on the Human Resources Administrative Team. She reflects the spirit of this award daily through her initiative, can-do attitude and conscientious attention to detail. The products she produces and winning attitude she promotes are top notch. She is one of the major contributors to the success of the Human Resources Administrative Team. The team relies on her as the subject matter expert in PowerPoint and Excel. Since the team was formed, she has volunteered to take on additional responsibilities and is always more than willing to help wherever there is a need.

Over the last few months, Stuart's responsibilities have expanded from supporting the Human Resources Management Branch to providing division-wide support as travel coordinator and property custodian. As travel coordinator, her attention to detail and conscientious follow-up on travel arrangements have earned her praise from all of the travelers. The property custodian duties have been time-consuming to learn and implement, but she has met the challenge with flying colors, all the while managing her normal workload.

Where Stuart really excels, though, is in producing electronic PowerPoint presentations for the Human Resources Office. Her creativity, application knowledge, and attention to detail have blended to produce outstanding presentation materials on several occasions. Within the last few weeks, she led the office in an effort to prepare employees for several college recruiting trips. She prepared all of the electronic presentations, incorporated numerous graphics, created charts from raw data, and made a truly impressive presentation employees were proud to use. In addition, she stayed late to follow through with Graphics and Printing to ensure the job was done correctly and on time.

Most recently, Stuart again used her skills to produce electronic presentations for the Human Resources representatives to present organization overviews to the deputy director. She produced professional, highly impressive presentations, all within a short period of time. ■

JSC Exchange requests employee feedback

Here's your chance to be heard! The JSC Exchange, which is responsible for the operation of the cafeterias, Exchange stores, Gilruth Center, vending machines, Employee's Activity Association, and other activities, is conducting an online survey to find out how to better serve you.

Would you like to see new facilities at the Gilruth Center? Are there any new services that you would like provided on-site such as shoe repair or a hair salon? Would you like the cafeteria to offer some new menu selections?

This survey is your opportunity to provide feedback on your interests. Results of the survey will help the JSC Exchange evaluate current activities and consider future projects and services. All civil servants and contractor personnel are requested to complete the survey by visiting the JSC Human Resources homepage or

http://hro.jsc.nasa.gov/SURVEYS/exchange/EXCHANGE.htm

TICKET WINDOW

The following discount tickets are available at the Exchange Stores

AMC Theaters	$5.00
Moody Gardens (2 events) (does not include Aquarium Pyramid)	$10.75
Moody Gardens (Aquarium only)	$9.25
Space Center Houston . . . . . adult . . $11.00 . . . . child (age 4-11)	$7.25
(JSC civil service employees free.)	
Space Center Houston annual pass	$18.75
Postage Stamps (book of 20)	$6.60
Entertainment Books	$20.00
Franklin Planner refills (Classic Style)	$25.50
Franklin Planner refills (Seasons and Montecello)	$30.25

Come see our great gift ideas for the holidays!

Check out our new Web site on the JSC People page at:
http://hro.jsc.nasa.gov/giftshop/

Exchange Store hours

Monday-Friday
Bldg. 3 7 a.m.-4 p.m.
Bldg. 11 9 a.m.-3 p.m.

- All tickets are nonrefundable.
- Metro tokens and value cards are available.
- Sweetwater Pecans . . . . . $6.25 per lb.
- Chocolate-covered Pecans . . . . $8.00 per lb.

For additional information, please call x35350.

Please bring your driver's license to pay by personal check.

Photographer Benavides documents space history

When Benny Benavides' family moved to San Antonio in 1952, he had missed class registration at the local high school and, as such, he had limited options for elective classes. He was nonchalantly enrolled into an introductory photography class, but he had no idea where that class would eventually lead him.

After graduating from Lanier High School, he enlisted with the U.S. Army and was trained as a military combat photographer. In his years with the service, from 1955 to 1958, Benavides covered a wide range of military operations. Although the country was at peace, the interval between the Korean and Vietnam Wars, photographers were still in high demand and he honed his skills at the Guided Missile School at White Sands.

At the conclusion of his tour, Benavides found himself going to work as a photo lab technician for JSC, then called the Manned Spacecraft Center. At the time, the center was still being built. The photo lab, as with many of JSC's early offices, was located at Ellington Air Force Base until the MSC officially opened in 1962. Just as the Apollo Program was dawning, Benavides was promoted to NASA staff photographer and alas, a career in photography, at one of the world's most extraordinary sites, during its most remarkable period, was launched.

After 37 years as part of JSC's photography team, Benny Benavides bids farewell to the center that has become his second home. Through the camera lens, he has been privy to seeing firsthand some of the country's most historic moments, and more importantly, his images have been our eyes, bringing the story of human exploration of space to the world.

Roundup: You have been here during some of NASA's most exciting times. What stands out? What has been the most memorable for you?

Benavides: There are so many. For me, every photo always had a story to itself. Every mission was like another level getting us to the Moon. I remember Apollo 11, being on the USS Hornet, retrieving the parachuters and picking up the astronauts and bringing them to the carrier. Then we went back to pick up the module. Later, I went with Michael Collins to bring the second batch of lunar samples to Houston. We had big boxes that we had them in. Then there was Apollo 13 and I was in the helicopter as we waited for them in the sky. We had to document everything.

To me, the photos documenting astronaut training in a chamber are just as important as those taken when we were picking up crewmembers from the ocean.

Roundup: Looking through NASA archives, including photos and past *Roundups*, there have been a lot of VIPs, celebrities and international dignitaries that have visited the center. Who are some of the people you were able to meet?

Benavides: Well, there was President Nixon who came onto the USS Hornet to congratulate the Apollo 11 astronauts. He was the first President I had worked with and it was very exciting. Everything on the ship was spic and span. There was lots of security, including destroyer ships nearby. But the mood was very exciting and happy. If you were to see the sequence of shots, there is a lot of laughter and smiling. It was a neat experience.

I've photographed other Presidents as well – George Bush when he was here with the President of Mexico, and President Clinton.

Photographer Benny Benavides is the man behind the camera for many familiar NASA photos. Shown here are some of his most noted photographs. (1) Onboard the USS *Hornet*, President Nixon congratulates the Apollo 11 crew. (2) Benavides chronicled many milestones as NASA worked to create a protective garment for David, a young boy restricted by an immune deficiency disorder. (3) Benavides caught on film while on site at Edwards Air Force Base for a shuttle landing of *Columbia.* (4) This impromptu photo of *Columbia* has been reproduced around the world. (5) Benavides was frequently dispatched onto Navy helicopters as the NASA photographer to document crew return operations and vehicle splashdown. (6) The official photo of NASA's first female astronauts. (7) Benavides was on hand for many of JSC's presidential and VIP visits, including this one by President Ronald Reagan and wife Nancy.

Roundup: Have you ever been starstruck?

Benavides: No – the only one that really to got me was David, the little boy with the impaired immune system who had to live in a bubble. NASA was helping to develop a suit for him so that he could go outside, and for months we saw him in the hospital, while shooting photographs for engineering purposes. We would go to the hospital to document things. We went maybe ten times or so but you know I watched him, and you still get close, so that when he died, that was very difficult.

Another interesting visitor was the Queen of England. Houston Mayor Cathy Whitmire was there too, and while waiting, we began talking. We talked for 15 or 20 minutes while we waited for the Queen to arrive, so it's funny how it could have been different. If it were just the Mayor, I may not have gotten to talk to her, but because we were all waiting for the Queen, it was no big deal to talk to her then.

We also had the Dahli Lama visit the space center and that was really different. To see a holy person – that was interesting. Even though you are raised one way, you still have a sense of awe for this person.

Roundup: What was your proudest moment at NASA?

Benavides: I was really proud when we went to the Moon. You felt like you did your job, like you were part of the team even if you were a small, small part.

Roundup: What have you enjoyed the most about your job as a NASA photographer?

Benavides: Photography plays a big role in the space program. I have seen a lot of my pictures in school textbooks and that means a lot to me – to know that I contributed to the history of the world.

There is a photo I took that has been used everywhere. It is a photo of the shuttle reflected in a pool of water. After every shuttle landing, we would stay with the shuttle as the crew gets out and walk with the shuttle all the way down to the hangar. This was at Dryden/Edwards Air Force Base, and as I was walking down the road, I saw a pool of water ahead and I could see the shot in my mind. I ran down ahead of the group to catch the shot. That photo has been used so much the negative doesn't exist anymore. It has been worn out. Now there are only copies of copies.

Roundup: What is your goal when you are shooting these photos, what are you trying to achieve?

Benavides: It depends on the type of shots. For engineering photos, I am trying to please the engineer and get what he needs, but for other photos, you want to tell the story. You want to capture feelings and emotions. Even if it's people walking through mockups, you can tell they are seeing the future ahead. ■

DATES & DATA

January 1

NSS meets: The Clear Lake area chapter of the National Space Society meets at 6:30 p.m. at the Parker Williams Branch of the Harris Co. Library at 10851 Scarsdale Blvd. For more information contact Murray Clark at (281) 367-2227.

January 2

Quality Society meets: The Bay Area Section of the American Society for Quality will meet at 6 p.m. at Franco's Real Italian Restaurant on NASA Road 1. No reservations are required. For more information, contact Ann Dorris at x38620.

January 3

Astronomy seminar: The JSC Astronomy Seminar Club will meet at noon January 3, 10 and 17 in Bldg. 31, Rm. 248A. For more information contact Al Jackson at x35037.

Spaceteam Toastmasters meet: The Spaceteam Toastmasters meet at 11:30 a.m. January 3, 10 and 17 at United Space Alliance, 600 Gemini. For more information contact Patricia Blackwell at (281) 280-6863.

January 4

Communicators meet: The Clear Lake Communicators, a Toastmasters International club, meet January 4, 11 and 18 at 11:30 at Wyle Laboratories, 1100 Hercules, Suite 305. For more information contact Allen Prescott at (281) 282-3281or Richard Lehman at (281) 280-6557.

Warning System Test: The site-wide Employee Warning System performs its monthly audio test at noon. For more information contact Bob Gaffney at x34249.

January 5

Chess Club Meets: The Space City Chess Club meets each Friday evening from 5:30 p.m. until 9 p.m. at the Clear Lake United Methodist Church, 16335 El Camino Real, Rm. 423. All skill levels are welcome. For more information, please call James Mulberry at x39287 or James Termini at x32639.

January 9

Aero Club meets: The Bay Area Aero Club meets at 7 p.m. at the Houston Gulf Airport clubhouse at 2750 FM 1266 in League City. For more information contact Larry Hendrickson at x32050.

IAAP meets: The Clear Lake/NASA Chapter of the International Association of Administrative Professionals meets at 5:30 p.m. in the Colonial Room at Grace Community Church, 14325 Crescent Landing. Cost is $12.

January 11

Airplane club meets: The Radio Control Airplane Club meets at 7 p.m. at the Clear Lake Park building. For more information contact Bill Langdoc at x35970.

January 12

Astronomers meet: The JSC Astronomical Society meets at 7:30 p.m. at the Center for Advanced Space Studies, 3600 Bay Area Blvd. For more information contact Chuck Shaw at x35416.

January 17

Scuba club meets: The Lunarfins meets at 7:30 p.m. For more information contact Mike Manering at x32618.

January 18

Directors meet: The Space Family Education board of directors meets at 11:30 a.m. in Bldg. 45, Rm. 712D. For more information contact Lynn Buquo at x34716.

January 25

Radio Club meets: The JSC Amateur Radio Club meets at 6:30 p.m. at Piccadilly, 2465 Bay Area Blvd. For more information contact Larry Dietrich at x39198.

Roundup takes holiday break until January 12

This issue of *Space Center Roundup* will be the last of 2000. The next scheduled date of publication would have been December 29.

The first *Roundup* of 2001 will be published on January 12.

The *Roundup* editors wish everyone a safe and happy holiday season and a great 2001.

GILRUTH CENTER NEWS

Sign up policy:

All classes and athletic activities are on a first-come, first-served basis. Sign up in person at the Gilruth Center and show a yellow Gilruth or weight room badge. Classes tend to fill up two weeks in advance. Payment must be made in full, by cash or by check, at the time of registration. No registration will be taken by telephone. For more information, call x33345.

Gilruth badges:

Required for use of the Gilruth Center. Employees, spouses, eligible dependents, NASA retirees and spouses may apply for photo identification badges from 7:30 a.m.-9 p.m. Monday-Friday and 9 a.m.-2 p.m. Saturdays. Cost is $12. Dependents must be between 16 and 23 years old.

Open from 6:30 a.m.-10 p.m. Monday-Thursday, 6:30 a.m.-9 p.m. Friday, and 9 a.m.-2 p.m. Saturday. Contact the Gilruth Center at (281) 483-3345.
http://www4.jsc.nasa.gov/ah/exceaa/Gilruth/Gilruth.htm

Nutrition intervention program: This is a free seven-week program designed to provide an understanding of the role diet and nutrition play in health. The program includes a series of lectures and private consultations with a dietitian. You will learn how to use dietary vitamins, minerals and herbal nutriceuticals for optimizing health. Classes are held on Wednesdays from 4 p.m. to 5 p.m. For details call Tammie Labiche, registered dietitian, at (281) 483-2980.

Defensive driving: One-day course is offered once a month at the Gilruth Center. Pre-registration required. Cost is $25. Call for next available class.

Stamp club: Meets every second and fourth Monday at 7 p.m. in Rm. 216.

Weight safety: Required course for employees wishing to use the Gilruth weight room. Pre-registration is required. Cost is $5. Annual weight room use fee is $105. The cost for additional family members is $58.

Exercise: Low-impact class meets from 5:15-6:15 p.m. Mondays and Wednesdays. Cost is $24 for eight weeks.

Step/bench aerobics: Low-impact cardiovascular workout. Classes meet from 5:25-6:25 p.m. Tuesdays and Thursdays. Cost is $40 for eight weeks.

Yoga stretching: Stretching class of low-impact exercises designed for people of all ages and abilities in a Westernized format. Meets Thursdays 5-6 p.m. Cost is $40 for eight weeks. Call Darrell Matula, instructor, at x38520 for more information.

Ballroom dancing: Classes meet Thursdays from 6:30-7:30 p.m. for beginner, 8:30-9:30 p.m. for intermediate and 7:30-8:30 p.m. for advanced. Cost is $60 per couple.

Country and western dancing: Beginner class meets 7-8:30 p.m. Mondays. Advanced class (must know basic steps to all dances) meets 8:30-10 p.m. Mondays. Cost is $20 per couple.

Fitness program: Health-related fitness program includes a medical screening examination and a 12-week individually prescribed exercise program. For more information call Larry Wier at x30301.

Aikido: Martial arts class for men and women meets 5-6 p.m. Tuesdays and Wednesdays. No special equipment or knowledge is needed to participate. Aikido teaches balance and control to defend against an opponent without using strength or force. Beginning and advanced classes start each month. Cost is $35 per month.

NASA BRIEFS

NASA PROGRAM HELPS BRAIN-INJURED PATIENTS

Brain-injured patients are exploring the stars with a click of a computer mouse, thanks to a special hands-on, interactive NASA education program.

Through Telescopes In Education, sponsored by NASA's Jet Propulsion Laboratory, patients are no longer limited by their physical barriers, and are free to stretch their imaginations.

In May, a dozen patients who suffered severe head injuries, took control of a science-grade reflecting telescope located at the Mount Wilson Observatory, high above the Los Angeles basin in the San Gabriel Mountains. Using the Internet, patients at Delta Rehabilitation Facility for the Severely Head-Injured in Snohomish, WA, downloaded digital images of nine deep space objects, including several galaxies and star clusters.

The director of Internet Services for the Brain Injury Association of Washington, Paul Walsh, and his wife, Valarie, began teaching basic astronomy to a roomful of Delta residents nearly one year ago. Walsh discovered the patients were an eager and attentive group of students.

"People who have sustained a major brain injury often have a keen and hungry intelligence that has been masked and hidden behind the devastation caused by their injuries," Walsh said.

The program allows educators and students around the world to remotely control research-quality telescopes and charge-coupled device cameras created at JPL and located at the Mount Wilson Observatory. All they need is a computer modem and special astronomy software.

In 1999, the program enabled more than 10,850 students, located in 25 states, to conduct astronomical observations and meaningful research. Use of the system is free except for the purchase of the remote software, which controls the telescope.

Information on the Telescopes In Education program is available at:

http://tie.jpl.nasa.gov/

Delta Rehab information on this special project and a link to the Brain Injury Association Web site is located at:

http://www.nwlink.com/~filmdos/m111/infinityproject.htm

NASA ASTROBIOLOGY ARCHITECT DIES

NASA Scientist Dr. Gerald Soffen, who led the Viking science team that performed the first experiments on the surface of the planet Mars and a guiding force in NASA's effort to search for life in the universe, died Nov. 22 at George Washington University Hospital in Washington, DC. He was 74.

A close advisor to NASA Administrator Daniel S. Goldin, Soffen helped shape NASA's Astrobiology program, the study of life in the universe. Soffen also was instrumental in the establishment of the NASA Astrobiology Institute, a virtual organization comprising NASA centers, universities and research organizations dedicated to studying the origin, evolution, distribution and destiny of life in the universe.

Soffen worked for NASA for more than 30 years. He began his NASA career at the Jet Propulsion Laboratory where he managed biological instrument development at the Pasadena-based facility. He also was the principal investigator for the proposed Mars Microscope.

Soffen was born in Cleveland, Ohio, on Feb. 7, 1926. He received his Ph.D. in biology in 1961 from Princeton University. He earned his master's of science degree from the University of Southern California and bachelor's degree from the University of California, Los Angeles.

He is survived by his wife, Kazuko, and a sister, Nancy Guy, who lives in California.

SPACE CENTER Roundup

The Roundup is an official publication of the National Aeronautics and Space Administration, Johnson Space Center, Houston, Texas, and is published by the Public Affairs Office for all space center employees. The Roundup office is in Bldg. 2, Rm. 181. The mail code is AP121. The main telephone number is x38648, and the fax is x32000. Electronic mail messages may be directed to:

Editor . . . . . .William Jeffs . . . . . .william.p.jeffs@jsc.nasa.gov

Assistant Editor . . . . . .Nicole Cloutier . . . . . .nicole.cloutier1@jsc.nasa.gov

PRSRT STD
U.S. POSTAGE
PAID
WEBSTER, TX
Permit No. G27