April 30, 1999 Vol. 38, No. 9

Spaceport News

America's gateway to the universe. Leading the world in preparing and launching missions to Earth and beyond.

John F. Kennedy Space Center

Fortieth Anniversary
Pioneering the Future

STS-96

ROMINGER HUSBAND
PAYETTE TOKAPEB
JERNIGAN OCHOA BARRY

STS-96 is scheduled for liftoff Thursday, May 20, at 9:32 a.m. EDT from KSC's Launch Pad 39B.

Leading the crew on the second International Space Station flight of the Spacehab Double Module will be Commander Kent Rominger. Discovery's crew will include Pilot Rick Husband and Mission Specialists Ellen Ochoa, Tamara Jernigan, Dan Barry, Julie Payette with the Canadian Space Agency and Valery Tokarev with the Russian Space Agency.

This is the first of numerous resupply flights to ferry equipment and supplies that will be used to build and outfit the station.

Discovery's crew members will deliver more than 5,000 pounds of supplies to be stored aboard the station for use by future crews, including laptop computers, cameras, tools, spare parts and clothing.

In addition, a U.S. crane and parts of a Russian crane will be attached to the exterior of the space station for future use in moving equipment and workers around the exterior of the station.

Putting the station to the test:

some assembly required, but batteries are included

As the excitement of building the International Space Station (ISS) grows, so does the work in KSC's Space Station Processing Facility (SSPF).

Although building the space station on orbit is a daunting undertaking, consider the necessary and tremendous task of managing the continual flow and processing of hardware and software through the SSPF.

As if the management of all of the elements weren't enough, integrating them to function together is an incredible effort.

Just ask Ralph Fritsche, Multi-Element Integration Test (MEIT) Director.

Fritsche is now leading a NASA/Boeing team initiating a P6 photovoltaic module/Z1 truss power-up configuration prior to the U.S. Lab's inclusion in the test.

"In May, we plan to integrate the U.S. Laboratory into the current test configuration; the P-6 photovoltaic module, the Z-1 truss

(See MEIT, Page 5)

Artist's concept of the International Space Station on orbit

KSC continues to make dreams come true

Stephen Coyle's dream came true when he met Astronaut Rick Linnehan.

by Susan Hubscher

As the tall, blue-suited astronauts walked into the room, the quiet young boy's face broke into a smile. His eyes, which were brimming with painful tears the minute before, now shone with joy as his dream finally came true on Thursday, April 22, thanks to Kennedy Space Center and the "Share a Dream Foundation" of Ireland.

Stephen Coyle, 9, suffered severe injuries and was placed on a life support machine after he and

(See Dream, Page 2)

Dream ...

(Continued from Page 1)

his parents were caught in the explosion of a car bomb last year in Omagh, a city in Northern Ireland.

"Doctors gave Stephen very little time to live," wrote his mother, Linda Coyle, in a letter to the Share a Dream Foundation. "He survived unbelievable odds and was called 'The Miracle Boy' by all the hospital staff."

When President Bill Clinton met Stephen in the Belfast hospital on his trip to Ireland last year, he promised Stephen on national television that when he got better, his dream of touring the Kennedy Space Center and meeting a real astronaut would come true.

Explaining why he chose to come to KSC rather than anywhere else, Coyle said that he really liked space and that he has followed the space program at KSC. Coyle's mother told a reporter that Stephen has a miniature statue of the Shuttle on his shelf at home, and Coyle says that shooting stars are the best thing about space.

"My sister even has [plastic] stars on her ceiling," said Stephen.

When asked by reporters if he would like to be an astronaut one-day, the little boy smiled and nodded.

Stephen was accompanied by his parents, Linda and Francis Coyle, his older sister Natalie, and Shay Kinsella, director and founder of "Share A Dream" Foundation.

Stephen met astronauts Rick Linnehan and David Brown and KSC Deputy Director for Launch and Payload Processing Loren Shriver at KSC's Visitor Complex. They talked with Stephen about his trip to America and his love of the space program. As they talked, the group walked outside to the Rocket Garden where the astronauts explained parts of the Shuttle and what it is like to fly in space.

"When you land, the Shuttle is like a bathtub with wings," explained Linnehan. "You only get one chance."

After the astronauts encouraged Stephen and Natalie to stay in school and study hard, they gave Stephen a patch from STS-90 — the same patch Linnehan had on his flight suit. Then Shriver placed a NASA hat on the boy's head.

"We are so glad to have you here, and we hope you have a great visit," Shriver said to the family.

Coyle and his family then left on a VIP tour of the center, which included the Orbiter Processing Facility, the Vehicle Assembly building, Launch Pad B, the Apollo/Saturn V Center and the International Space Station Center.

As they boarded the bus, Stephen's mother thanked everyone again.

"If you would have told us a year ago that we would be here and experiencing this, I would have laughed at you," she said. "Thank you all so much."

It is still difficult for the family to discuss the horror of the August 15 explosion.

"It was scary," said Stephen quietly, describing how he felt after the explosion. "I was afraid."

Stephen Coyle (center) looks up in amazement at the structures in KSC's Rocket Garden during his visit to the space center on April 22. From left are Shay Kinsella, director and founder of "Share a Dream;" Astronaut Rick Linnehan; Stephen; his sister, Natalie; and Astronaut David Brown. Behind the children is their father, Francis Coyle.

Stephen's parents were also injured in the blast that killed 29 people. Stephen's older sister Natalie was not with the family that fateful day.

"We went shopping in Omagh for equipment for Natalie's pony," said Mrs. Coyle. "There were big crowds on the street. We had heard there was a festival that weekend."

The Coyle family was told there was a bomb scare in the City Hall at the top of the street.

As they were heading to the car to leave the city, a nearby car bomb detonated.

"There was an enormous bang, a flash and smoke," said Linda Coyle, "and then there was a terrible silence."

Linda found her husband, and soon after, they found Stephen lying against the pavement.

Stephen was taken to Omagh hospital and treated for internal injuries, and then flown to Belfast hospital.

Francis described the confusion in the hospital as the staff was hit with the emergency and how he kept an eye on Stephen.

"I kept telling him to fight," said Francis. "I told him he had to fight. I even promised him we'd get a dog."

Stephen says that his father's advice and promise helped him fight to recover. The family's new dog is named Bart.

Stephen continues to be treated for internal injuries, and he is slowly improving both physically and mentally.

Environmental and Energy Awareness Week celebrated around KSC

In conjunction with Earth Day activities on April 22, Kennedy Space Center, Cape Canaveral Air Station (CCAS) and Patrick Air Force Base celebrated Environmental and Energy Awareness Week April 19-23.

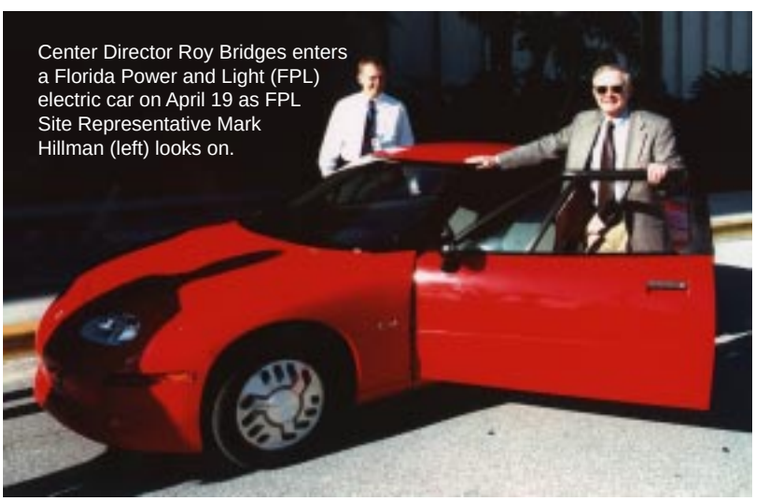
During the week, KSC celebrated its success as a leader in environmental stewardship and energy conservation.

Since 1994, KSC has reduced hazardous waste generation by 50 percent, decreased toxic chemical releases by 45 percent and improved facility energy efficiency by six percent.

Since 1992, the 45th Space Wing has reduced the use of ozone-depleting substances by 45 percent and pesticides by 80 percent while increasing recycling by 416 percent.

In addition, KSC and the 45th Space Wing continue to be leaders in natural resource prevention.

This year's theme was "Make a World of Difference," and activities included exhibits at the KSC Visitor Complex, CCAS, Patrick Air Force Base and KSC facilities. Exhibitors included conservation organizations, energy-related vendors and others.



Center Director Roy Bridges enters a Florida Power and Light (FPL) electric car on April 19 as FPL Site Representative Mark Hillman (left) looks on.

Florida on fire: what is KSC doing?

by Susan Hubscher

In most parts of Florida, you can set your watch by the thick clouds that roll across the state each afternoon, unleashing a daily torrent of cooling rain.

But not this year.

Officials last year blamed El Niño for the severe summer heat and prolonged drought that rendered Florida a tinderbox; so far, this year is showing little difference. The state is parched.

The weather has again been unseasonably dry, and officials say it will require nothing less than a tropical storm to douse the flames and put the fires out.

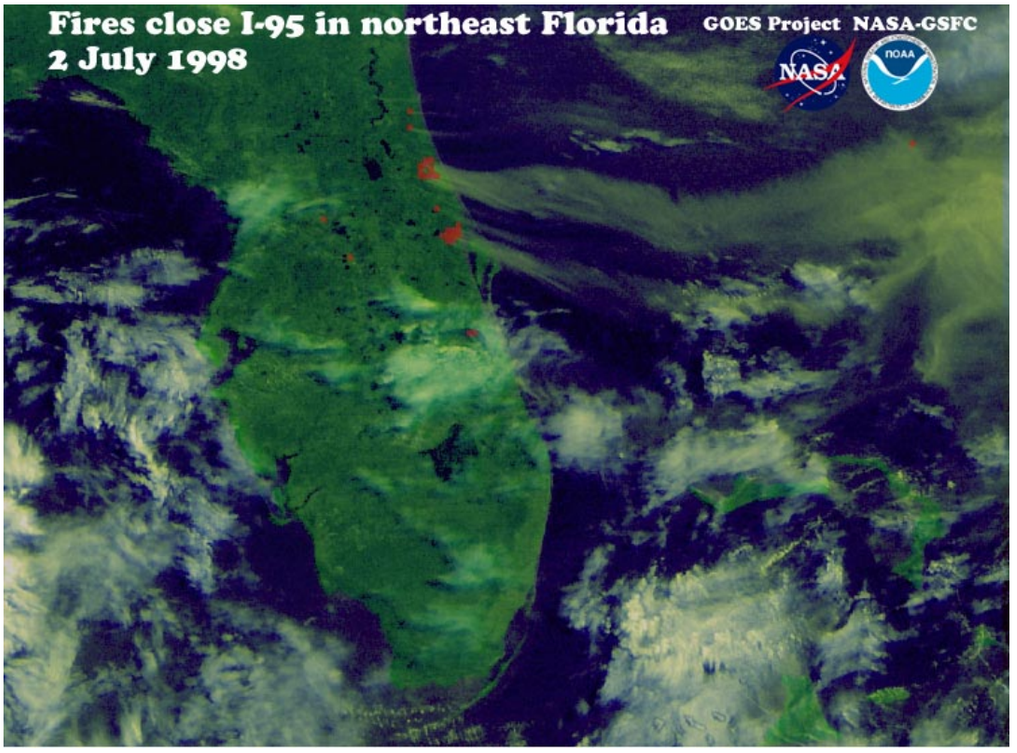
It is a highly ironic suggestion coming a month before the annual hurricane season.

Although this fire season is no less threatening than last year, KSC employees can breathe a little easier because the KSC/Cape Canaveral Air Station (CCAS) Fire Department is more prepared than ever to fight possible fires.

Do not fear, said Tim Moore, SGS chief of Fire Services for KSC and CCAS. KSC Fire Rescue has tripled their fire fighting forces, which spells good news for KSC and for the county.

"Under the J-BOSC contract, KSC, Cape Canaveral Air Station and Patrick Air Force Base have combined their fire rescue resources," said Moore. "We have a P-19 crash truck that we use for off-road fire fighting, and Capeside has two, so now we have essentially three times the force."

Also added to the fleet is a tanker from Patrick Air Force Base.



This 1998 National Oceanic and Atmospheric Administration satellite image clearly shows smoke rising from central Florida during the summer fires that affected much of the region last year.

KSC/CCAS Fire Rescue will once again offer its services to emergency situations off-center, as it did last year. Then, the department helped save more than 60 homes and businesses locally.

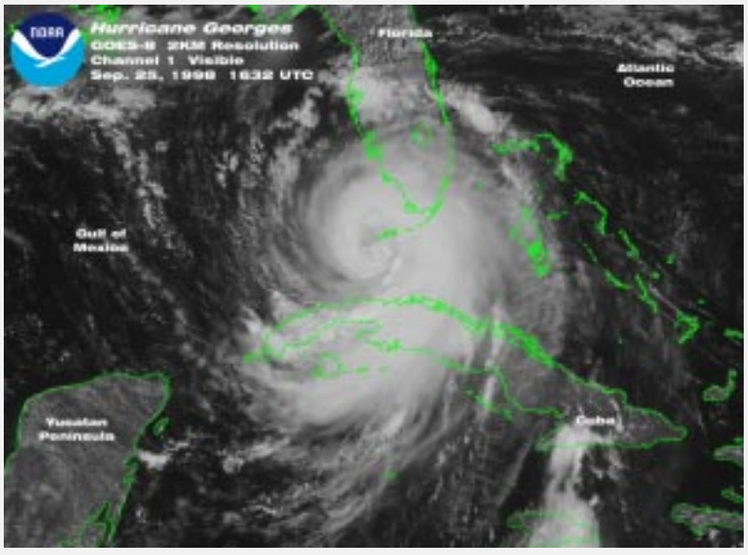
But even when they fight fire elsewhere, KSC is still their first priority.

"We never leave our backdoor unlocked," said Moore, explaining the center's emphasis on emergency preparedness. "We won't spread ourselves too thin. We will help the county, but this is America's space program, and if we lose a building here, space exploration could be put on hold."

The extra fire fighting resources will prove very important to KSC this summer. Florida's drought index, or the humidity of the air and the

(See Fire, Page 6)

Storm season 1999 — What's in store for central Florida?



NOAA image of Hurricane Georges in 1998 as it crosses over the Florida Keys.

The 1999 Atlantic Hurricane Season will begin on June 1 and end on Nov. 30. Last year, Hurricanes Mitch, Earl and Georges inflicted millions of dollars of damage and devastated countless lives.

This year, Dr. William Gray, a recognized authority on hurricane and tropical storm predictions, and his research team from Colorado State University are predicting an active hurricane season. Predictions for 1999 include 14 named storms, nine hurricanes, among which will be four major hurricanes. Dr. Gray's research team also has predicted the areas they believe will have the highest likelihood of hurricane landfall. This forecast warns that major hurricane probabilities lie:

- along the East Coast, including the Florida Peninsula, and
- along the Gulf Coast from the Florida Panhandle westward to Brownsville, Tx.

Emergency points of contact are Wayne Kee, NASA, at 867-3795; Mario Ramirez, Boeing, at 867-4998; Jim Cheek, USA, at 861-9156; Roger Scheidt, CCAS, at 853-6861; and Sgt. Jonathan Chastine, 45th Space Wing, at 494-4224.

Landsat 7 launched

On April 15, Landsat 7 lifted off from NASA's Space Launch Complex 2 at Vandenberg Air Force Base in California aboard a Delta II launch vehicle. Launch was on time as scheduled, and spacecraft separation occurred about an hour after launch time. The spacecraft is currently in orbit undergoing check-out.

Landsat 7, part of the United States' oldest land-surface observation satellite system, marks a new direction in the program to reduce the costs of receiving data and increase coverage for use in global change research.

The Landsat series dates to 1972. Landsat 5, launched in March 1984, is still operating. The Landsat 7 mission, with updated technology, was designed to maintain the flow of Earth observation data gathered over the past quarter century.

Data from Landsat are used for monitoring global deforestation and fire damage; estimating soil moisture and snow water equivalence; and monitoring flood, storm, earthquake and volcanic eruption damage. Additional applications include monitoring strip mining reclamation and population changes in and around metropolitan areas.

A U.S. Geological Survey data center in Sioux Falls, SD, will be the primary receiving station and data distribution center.

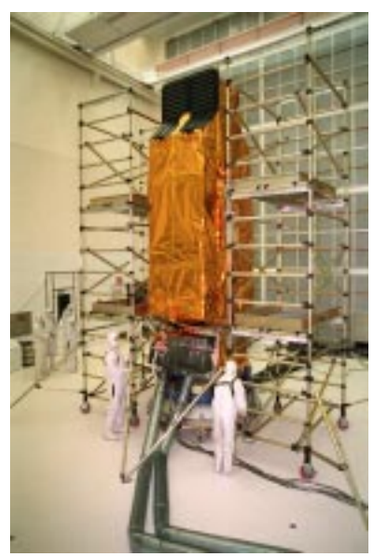
The satellite was built by Lockheed Martin Missiles and Space of Valley Forge, Pa. The science instrument came from Hughes Santa Barbara Remote Sensing of Santa Barbara, Calif.

The Delta II was manufactured in Huntington Beach, Calif., and assembled in Pueblo, Colo.

and up goes GOES

At Launch Pad 36A at Cape Canaveral Air Station, the first stage of a Lockheed Martin Atlas II rocket was lifted into an upright position on April 17. The rocket will be used to launch the Geostationary Operational Environmental Satellite-L (GOES-L), the latest in the current series of advanced geostationary weather satellites in service. Launch is scheduled for May 15 during a launch window extending from 2:23 to 4:41 a.m. EDT.

Preparing FUSE for launch at CCAS



NASA's Far Ultraviolet Spectroscopic Explorer, or FUSE, satellite (at right) arrived earlier this month at NASA's Hangar AE on Cape Canaveral Air Station (CCAS) to begin prelaunch processing for launch in late May.

FUSE will investigate the origin and evolution of the lightest elements in the universe — hydrogen and deuterium.

In addition, the FUSE satellite will examine the forces and process

(See FUSE, Page 8)

MEIT ...

(Continued from Page 1)

and Pressurized Mating Adapter 3 — hooking up all electrical and fluid connections to verify how they operate together, and we want to have a known good test configuration prior to U.S. Lab inclusion," he noted.

Fritsche is a member of NASA's Space Station and Shuttle Payloads Directorate, which is responsible for writing procedures and leading implementation of the tests. The MEIT is comprised of several test configuration opportunities to qualify elements in the same order that they will be attached on orbit.

Qualifying ISS hardware and software on the ground is an essential step before building the station on orbit.

This will be the second test configuration of the Multi-Element Integration Test (MEIT). The first test was completed successfully in January.

McPhillips, deputy manager for systems integration with KSC's Space Station Hardware Integration Office, is responsible for overseeing the MEIT scheduled to occur next month.

"We attempted a test configuration of the P-6 integrated equipment assembly, the Z-1 truss and PMA-3 before the holidays," she recalled.

Engineers and technicians worked day and night to trouble shoot design problems and communication and tracking system errors.

"Many midnight calls were placed to engineers and designers at Boeing in Houston, as well as Conoga Beach and Huntington Beach in California," said McPhillips. "NASA contacts at Goddard Space Flight Center and Johnson Space Center were also called.

"We're fortunate to have a great civil service and contractor team working together on the MEIT," she continued. "That's especially important when you have to work on unanticipated problems late into the night or on weekends. We have to be able to rely on each other at all times."

In late January, all design and communication and tracking errors were fixed, and the test was accomplished successfully.

"This is what we run these tests for," she noted, "in order to prevent fixes or additional work for the crews in space. We have to be sure before we send the elements up that we've done as much as possible on the ground to assure the elements' efficient and effective operation together."

Sometime shortly after test configuration 2 is completed in late May or early June, a third test configuration will be run.

This will include PMA-3, the Italian-built Multi-Purpose Logistics Module (Leonardo) and the U.S. Laboratory to see how they operate together.

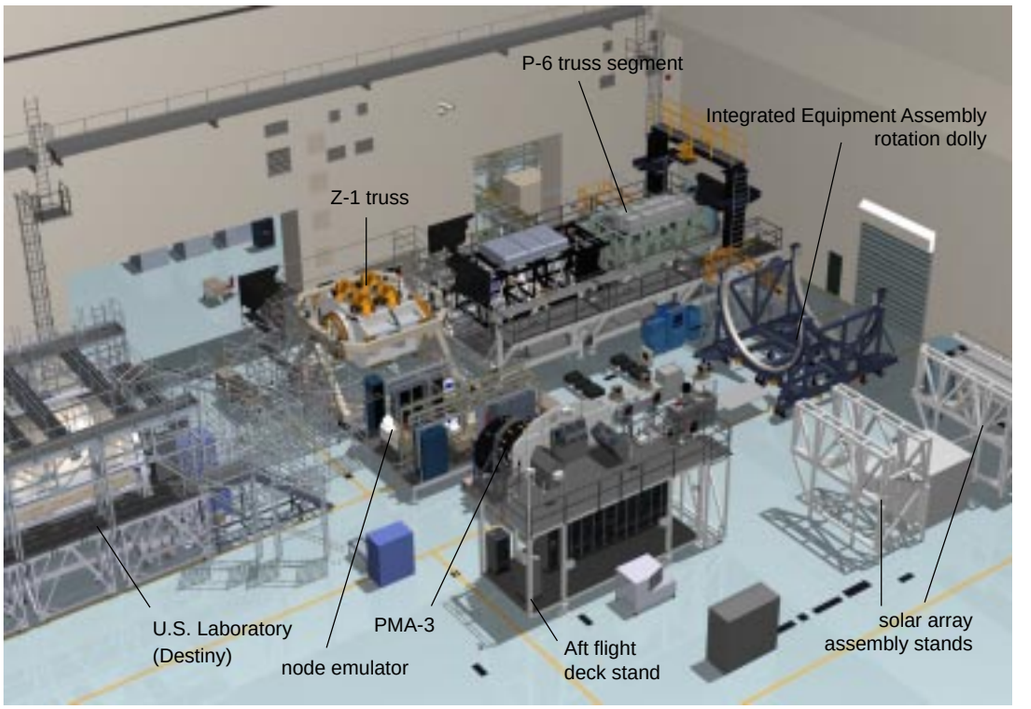
Then, in early summer, test configuration 4 will test the Canadian robotic arm with station elements.

A final test of elements and flight software will occur during the summer as well before the third ISS flight, STS-101, scheduled for December.

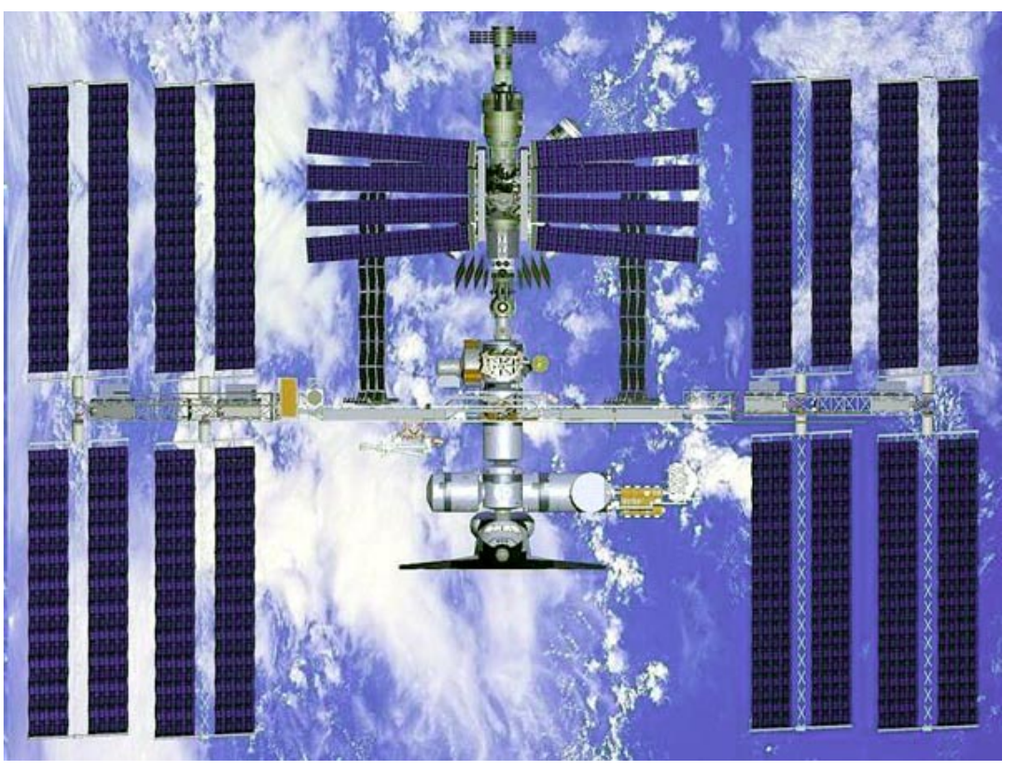
"We work on fixes and troubleshooting potential problems during these test configurations," said McPhillips, "so we have to be flexible with our timelines. It's safer and easier to make these adjustments on the ground than it is in space, so we make the most of our opportunities to qualify the equipment while we can."

Once fully assembled on orbit, the station will provide 46,000 cubic feet of pressurized living and working space for astronaut engineers and scientists — equivalent to the interior volume of a Boeing 747 jumbo jet.

For more information on the International Space Station, check out *http://station.nasa.gov* .



This engineering layout shows components of the International Space Station's Multi-Element Integration Test as they are positioned in KSC's Space Station Processing Facility for test configuration 2. Above are the U.S. Laboratory (Destiny), the Unity node emulator, the Aft Flight Deck, the Z-1 Truss, the P6 truss segment, ammonia processing equipment, associated ground support equipment, scaffolding and support stands.



The International Space Station will have a mass of about 900,000 pounds (460 tons) when completely assembled, and a mass of more than 1.1 million pounds when docked with an orbiter. Two computers in the U.S. Laboratory module are dedicated to keeping the station in proper orientation as it orbits the Earth once every 90 minutes.

Fire ...

(Continued from Page 3)

moisture of the soil, has reached 500.

The index for desert climates is 800, which the KSC Fire Department expects the Florida index to reach this year.

"Florida is also three inches below our annual average of rainfall," said Moore.

With Florida experiencing the same weather patterns as last year, KSC's Fire Rescue Service is gearing up for another busy season by taking some precautions on center property.

Kennedy Space Center sits on 140,000 acres of land. About 10,000 acres are used for spaceport activities, leaving the rest for wildlife and plant growth.

KSC Fire Rescue and the U.S. Fish and Wildlife Service are trying to help safeguard remote locations by cutting back bushes and shrubs from around the buildings, conducting logging activities at the South end of property and implementing controlled burns to reduce the fuel load.

Moore says the safety precautions are not harming the growth on KSC.

"Some species of palm and other plants are actually fire-dependent," explained Moore. "They need the fires to survive and flourish."

The U.S. Fish and Wildlife Service and Fire Rescue Service are working together to fight and prevent fires, said Moore, but if anyone sees an uncontrolled fire in any part of property, the best number to call is 911.

For any other questions about fire safety or prevention, employees should contact Henry Pankow, assistant chief of Fire Prevention at 867-3491.

Moore reminded people there are easy ways to help in fire prevention:

- Do not discard cigarettes outside;
- Watch camp fires and barbeques;
- Do not use flares or fireworks;
- Avoid placing wood shingles on roofs;
- Remove bushes and pine trees around buildings;
- Post fire emergency telephone numbers;
- Report hazardous conditions that could cause a wildfire;
- Be alert!

Taking our Daughters to Work at KSC

Just months before the launch of the first Shuttle mission to be commanded by a woman, KSC hosted hundreds of girls reaching for their own stars.

Daughters of NASA and contractor personnel spent the day at Kennedy Space Center on April 22, learning about robotics (above), space technologies and opportunities to build their futures in the variety of careers available to them.

April 22 was the annual "Take Our Daughters to Work Day," a nationwide celebration designed to inspire and motive young women.

This was KSC's seventh year participating in the event. The theme this year was "The Future is Me," stressing to young women the importance of setting goals and building self-esteem.

Featured events included science and robotics demonstrations, an Audobon Society bird of prey demonstration, and security and fire prevention displays.

Participants spent the remainder of the day in the parents' or sponsors' work areas observing work environment activities.

A "Take Our Sons to Work Day" is currently planned for June 8.

NASA awards launch contract for Athena rocket

NASA recently announced a contract award to Lockheed Martin Astronautics, in Denver, to launch the Vegetation Canopy Lidar (VCL) satellite on an Athena I rocket.

Launch is scheduled for August 2000 from a launch pad located on Kodiak Island, Alaska. This will be the first launch to low Earth orbit from the Alaska Aerospace Development Corporation's new commercial launch facility.

The VCL satellite is designed to precisely measure the Earth's vegetation coverage, vegetation depth (or canopy) and topography by using short laser pulses from a LIDAR (Light Detection and Ranging) system.

The Athena I rocket will place the satellite into a 261 mile-high orbit above the Earth inclined 67 degrees to the equator. The VCL spacecraft weighs 954 pounds and is 6.8 feet tall by 3.8 feet wide.

NASA has launched two other missions on Athena rockets — the Lewis satellite from Vandenberg Air Force Base in California on Aug. 22, 1997, using an Athena I, and the Lunar Prospector spacecraft from Cape Canaveral on Jan. 6, 1998, using an Athena II. NASA had previously planned to launch the Clark satellite on an Athena I, but discontinued the program.

However, the agency retained its contractual rights to the three-stage Athena I that will now be used for VCL.

The VCL mission is being implemented for NASA's Goddard Space Flight Center, Greenbelt, Md., by the University of Maryland, College Park, in support of the Earth System Science Pathfinder (ESSP) Program.

The single-science instrument on VCL, the Multi-Beam Laser Altimeter (MBLA), is being built by Goddard's Laboratory for Terrestrial Physics. The spacecraft bus for VCL is being built by Orbital Sciences, Dulles, VA.

Space station and Shuttle program management changes

Top International Space Station (ISS) and Shuttle management positions at Johnson Space Center (JSC) in Houston have changed. NASA Space Shuttle Program Manager Tommy Holloway was named manager of the ISS Program, effective April 19. He succeeds Randolph Brinkley, who is departing NASA to pursue opportunities in the private sector.

Ronald Dittemore, a 22-year veteran of the Space Shuttle Program, was named to replace Holloway as Space Shuttle Program manager.

Holloway began his career with NASA in 1963, planning activities for Gemini and Apollo flights in the Mission Control Center. He was a flight director in Mission Control for early Space Shuttle flights and became chief of the Flight Director Office in 1985.

In 1989, he was named assistant director for the Space Shuttle Program for the Mission Operations Directorate. In 1992, he became the deputy manager for Program Integration with the Space Shuttle Program, and, in 1994, he was named director of the Phase I Program of Shuttle-Mir dockings.

Holloway was named manager of the Space Shuttle Program in August 1995.

"I have never worked with a better team than those involved with the Shuttle program, and the decision to accept a position as manager of the Station program was a difficult one," said Holloway. "I am extremely proud of the job those working on the Shuttle perform, and I am heartened by the fact that Ron Dittemore will manage the program. The first components of the International Space Station are in orbit, but there are many exciting challenges ahead as we continue its assembly during the next five years."

Dittemore joined NASA in 1977 as a Space Shuttle propulsion systems engineer and worked as a propulsion systems flight controller in Mission Control during the early Shuttle flights.

In 1985, he was selected as a Shuttle flight director in Mission Control, leading control teams during all phases of flights, including launch and entry. In 1992, Dittemore was named deputy assistant director of the Space Station Program in the Mission Operations Directorate at JSC.

Since 1993, he has worked in management of the Space Shuttle Program, serving first as the Deputy Manager for Space Shuttle Program Integration and Operations. In 1995, he became manager of Space Shuttle Program Integration and served as chairman of the Mission Management Team during Shuttle flights.

In 1997, Dittemore was named manager of the Space Shuttle Vehicle Engineering Office in the Space Shuttle Program.

"The Space Shuttle is more reliable, more capable and more efficient today than ever before," noted Dittemore. "At the same time, with assembly of the station, the Shuttle has a bigger job ahead of it than ever before. As we do that job, above all, my goal is to fly the Shuttle safely and continue the tradition of excellence that has been instilled in this program. The Shuttle has a lot of life ahead with the capability to continue to fly for decades to come, and we plan to continue to make it as safe and efficient as possible as we build the station and prepare for the future."

Brinkley was scheduled to leave NASA by the end of April. He joined NASA in August 1992 in the Office of Space Flight following a distinguished career as an officer and pilot in the United States Marine Corps.

In December 1992, Brinkley was named mission director for Shuttle mission STS-61, the first servicing mission to the Hubble Space Telescope.

In January 1994, Brinkley was named manager of the International Space Station program at Johnson Space Center, overseeing the implementation of the newly redesigned project under a single prime contractor while incorporating Russia as a new partner.

Brinkley leaves a program that in the last three weeks has received distinguished awards for its accomplishments, including the National Space Club's Nelson P. Jackson Award and the United States Space Foundation's Space Achievement Award.

Tommy Holloway

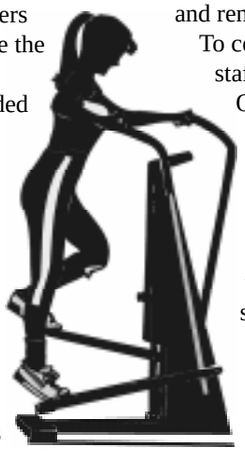
Brinkley recently was presented the NASA Distinguished Service Medal by NASA Administrator Daniel Goldin.

"I have been provided a truly unique opportunity to contribute to this historic and extraordinarily difficult undertaking by NASA and its international partners," Brinkley commented. "With the long awaited first element launches of U.S. and Russian hardware and the incredibly successful on orbit assembly of Zarya and Unity, I take great professional pride and personal satisfaction in this historic accomplishment.

"Although there are many challenges ahead for the International Space Station," Brinkley continued, "I have full confidence that the talented and dedicated members of the ISS team will continue to be successful."

Come to KSC's Fitness Center Grand Opening on May 4

The KSC fitness centers are proud to announce the opening of the newly renovated and expanded Operations and Checkout (O&C) Building Fitness Center.



The new facility has doubled in size and offers new equipment, a large aerobics room, motivational and educational programs and renovated locker rooms.

To celebrate the expansion, the staff is planning a Grand Opening event to be held on Tuesday, May 4, at 10 a.m. at the new O&C facility on the first floor.

There will be a ribbon cutting ceremony, tours of the new fitness center, special guests, door prizes and fun.

Everyone is welcome to attend the Grand Opening on May 4.

Asian-American Heritage Month to be celebrated during May at KSC

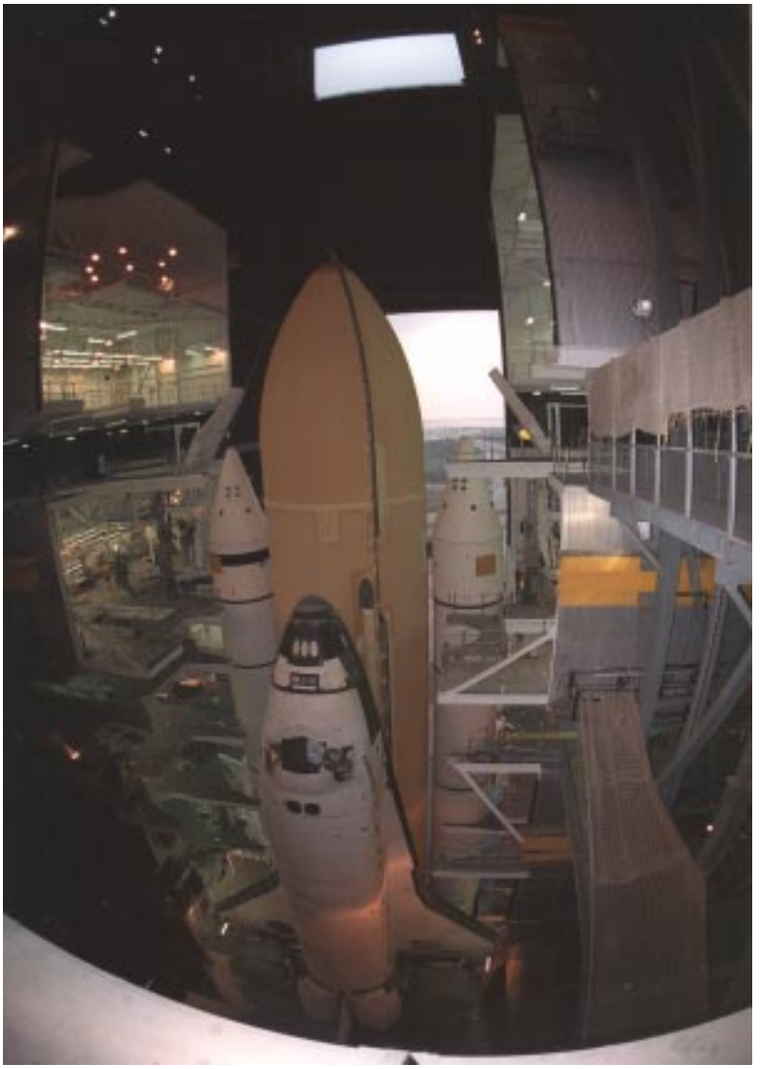
Help celebrate Asian-American Heritage Month by attending the Asian Pacific Islander Working Group luncheon on Friday, May 7, at 11:30 a.m. in the Operations and Checkout Building's Mission Briefing Room. Tickets are $7.50 per person and are on sale through May 5.

For ticket information or to volunteer to support the group, call Kenny Aguilar, 867-2307; Marina Harris, 867-2468; Rupert Lee, 867-1403; Paula Nosca, 867-0745; or Christopher Chan, 730-5547.

The Shuttle Shuffle — from rollover to rollout

The orbiter Columbia sits outside Orbiter Processing Facility (OPF) bay 1 after transfer from the Vehicle Assembly Building (VAB), where it was stored temporarily while Discovery was in OPF bay 1 being processed for mission STS-96. Columbia is scheduled to fly on the following mission in July, STS-93, when it will carry the first female commander on a Shuttle mission, Eileen Collins, with four other crew members to deliver the Chandra X-ray Observatory to space.

The orbiter Discovery rests inside KSC's Vehicle Assembly Building after rollover from the Orbiter Processing Facility Bay 1. Discovery is being readied for mission STS-96, targeted for launch May 20. STS-96 is a logistics and resupply mission for the International Space Station, carrying payloads such as a Russian crane, the Strehla; a U.S.-built crane; a Shuttle Vibration Forces experiment; and Starshine, a student-led experiment.



Space Shuttle Discovery makes its first motion from the Vehicle Assembly Building (VAB) at 7 a.m. on April 23 on its way to KSC's Launch Pad 39B. Discovery is scheduled to launch on May 20 at 9:32 a.m., when it will carry the seven-member STS-96 crew to the International Space Station (ISS) on the second U.S. ISS mission. Kent Rominger will command the crew, which includes Pilot Rick Husband, and Mission Specialists Ellen Ochoa, Tamara Jernigan, Dan Barry, Julie Payette with the Canadian Space Agency and Valery Tokarev with the Russian Space Agency. Discovery is scheduled to return to KSC on May 30 at 5:27 a.m. at the end of a nearly 10-day mission to resupply the International Space Station.

FUSE ...

(Continued from Page 4)

involved in the evolution of the galaxies, stars and planetary systems. FUSE will do this by investigating light in the far ultraviolet portion the electromagnetic spectrum.

FUSE processing at CCAS began with a functional test of the satellite's systems. Another milestone achieved in the ultra-high clean room facility at Hangar AE was the installation of flight batteries. Installation and testing of the solar arrays is scheduled for mid-May. There will also be testing of the satellite's communications and data systems while linking FUSE with the spacecraft control center at The Johns Hopkins University, Baltimore, Md. FUSE was developed and will be operated by The Johns Hopkins University under contract to Goddard Space Flight Center, Greenbelt, Md.

Management of the launch is KSC's responsibility.

John F. Kennedy Space Center

Spaceport News

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