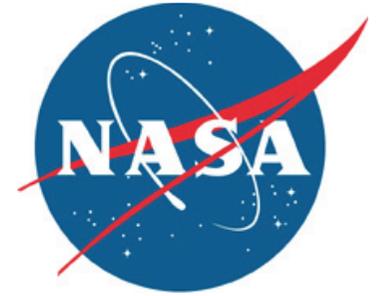


Spaceport News

John F. Kennedy Space Center - America's gateway to the universe

www.nasa.gov/centers/kennedy/news/snews/spnews_toc.html



New utility facility focuses on future

Shop offers lots of flexibility for upcoming missions

By Kate Frakes
Spaceport News

A ribbon cutting ceremony July 1 marked the official opening of Utility Shop K6-1246, a fully operational facility that will help make United Space Alliance Ground Systems Support operations more centralized and efficient.

Jason Ritter, civil and architectural section lead for Kennedy's Center Operations Facilities Division, largely contributed to the facility's development as lead design engineer, as well as construction and project manager.

"This facility houses individuals whose responsibilities include everything

"The facility is a multi-use, flexible building that has the ability to transform with future changing requirements."

Jason Ritter, Civil and Architectural section lead for Kennedy's Center Operations Facilities Division

from office facilities to ensuring the launch pads are in operational shape and ready to support space flight operations," Ritter said.

Utility Shop K6-126 is divided into two main areas. The office area hosts about 75 managers, engineers and schedulers.

The open work area is used for six USA Ground



NASA/Dimitri Gerondidakis

Kennedy Space Center Director Bill Parsons, left, helps cut the ribbon at a ceremony July 1 marking the official opening of Utility Shop K6-1246.

Systems Support shops, as well as a material service center and petroleum, oil and lubricants storage area.

Rush Construction, Inc. began construction in late 2006 after hurricanes damaged and even destroyed

some trailers and other structures. Jones Edmunds & Associates designed the facility.

Ritter said the facility represents a movement forward, from temporary trailers and sheds to a more

permanent facility, providing continued support to space flight operations.

"The facility is a multi-use, flexible building that has the ability to transform with future changing requirements," Ritter said.



NASA

The Astrovan has a built-in cooling system that connects to the astronauts' bulky suits, so they do not get overheated during the trip to the launch pad.

Rare view inside Astrovan shows ride rich in tradition

By Cheryl Mansfield
Spaceport News

The sight of the Astrovan's shiny silver exterior and bold NASA emblem evokes pride and excitement in those who watch it wind its way toward the launch pad at Kennedy Space Center.

Before each space shuttle launch, astronauts smile and wave as they board the van that will carry them to meet their fully fueled ride to space.

Since 1984, each shuttle crew has traveled those nine miles, from their crew quarters to the launch pad, aboard the same vehicle.

A modified Airstream motor home, the "Astrovan" as it is called has only racked up 24,000 miles in its 24 years of service.

That's because it's used solely to transport the astronauts on three occasions: to the launch pad for launch dress rehearsal, on launch

See **ASTROVAN**, Page 8

Security Boat Storage Facility a gift from 'Santa'

By *Alessandra Vaughan*
Spaceport News

Later this month, Kennedy Space Center's security force will receive a long-awaited gift, a brand new Security Boat Storage Facility.

The facility is between the Vehicle Assembly Building and Launch Complex 39, next to the Observation Gantry.

Construction began May of this year and is scheduled to wrap up by the end of July.

The project was initiated by Space Gateway Support's security operations division but the backing and continuous support came from Kennedy's Pat Klotz, also known as "Santa" to many SGS marine enforcement personnel.

In the past, security boats were stored on the water and exposed to harsh Florida elements - sun, heat, rain, salt water and buzzards.

Although it may come as a surprise, buzzards cause some of the biggest wear and tear to the security boats, by damaging seats and control panels. Corrosion also has a large impact, causing dry rot on the seats, hull and other elements of the vessels.



NASA/Jim Grossman

The new Security Boat Storage Facility will protect boats from weather, wildlife and extend the life of each boat about another five years.

These problems lead to higher spending on repairs and the purchase of new boats, more often than necessary.

Bill Rickelman, captain of the SGS Marine Enforcement Unit, said the new building will protect the boats from weather and wildlife, adding at least five years of

life to each NASA security boat.

In addition to sheltering NASA security boats from Florida's harsh elements, the construction of this facility will give the boats shelter during hurricanes. In the past, during severe storms, security boats were stored in the VAB and took up much needed

"The unit wishes to express its sincerest thanks to Pat Klotz for making this long overdue facility a reality."

**Bill Rickelman,
captain, Space Gateway
Support Marine
Enforcement Unit**

storage space. Thanks to the boat storage facility, this will no longer be an issue.

The new facility has been in the works for several years and its completion is eagerly anticipated by Rickelman.

"The unit wishes to express it's sincerest thanks to Pat Klotz for making this long overdue facility a reality," Rickelman said.

The opening of the Security Boat Storage Facility truly is Christmas in July for NASA's security force.

Lightning warnings give workers heads up on danger

By *Linda Herridge*
Spaceport News

Though Kennedy Space Center doesn't rank No. 1 in the world for the most lightning strikes, that unenviable honor goes to the Democratic Republic of the Congo in Africa, Central Florida does rank No. 1 in the United States. With afternoon thunderstorms occurring almost daily, it is all the more reason for everyone who works at Kennedy and Cape Canaveral Air Force Station to be aware of and understand the danger of lightning.

According to William Roeder, a meteorologist with the 45th Weather Squadron, lightning kills approximately

More online

More information on lightning safety is available at www.lightningsafety.noaa.gov. For information on lightning safety training call William Roeder at 853-8410 or e-mail him at william.roeder@patrick.af.mil.

60 people each year in the U.S. In Florida, the bolts kill more people than nearly all other weather tragedies combined. Lightning bolts are hotter than the sun's surface, can travel at speeds higher than 100,000 miles per hour and strike the planet about 100 times each second.

"Everyone needs to be aware of the lightning hazard and the lightning safety procedures, both on base and while off duty," Roeder said.

Helen Kane, an education specialist in the External Relations Education and University Research Division said, "Lightning is like a GPS system, somehow it knows where you are."

On the spaceport, a Phase-1 Lightning Watch is issued up to 30 minutes before a thunderstorm could possibly approach or develop. This watch means lightning is expected within six miles of the location

specified in the alert and serves as a warning that lightning soon will become a danger.

A Phase-2 Lightning Warning is issued when lightning is imminent or occurring within six miles of the location specified in the alert. This warning means there is danger and people should seek shelter immediately.

The alerts are issued for several locations at Kennedy and CCAFS. Kennedy locations include the shuttle landing facility, the Vehicle Assembly Building, Launch Pads 39A and B, the industrial area and Haulover Bridge. CCAFS locations include all launch pads, the industrial area and Port Canaveral.

"If a storm is coming, I stay in the building until it has passed," said Jennifer Van Pelt, who is a project administrator with ASRC. "Lightning is not something you want to test."

Kennedy Weather Officer John Madura said his office tries very hard to educate people about lightning hazards.

"We send out warnings when this deadly danger is present, but that's all futile if individuals don't act to protect themselves," Madura said.

Roeder advises everyone to pay attention to and react to the Phase-1 and 2 alerts as if your life depends on it—because it does.

Beached melon-headed whale gets lucky break

By Mary Ann Chevalier
Spaceport News

Call it fate, or kismet, or just plain dumb luck, but whatever the reason, everything and everyone came together to save a stranded visitor to NASA's Kennedy Space Center on June 24.

A rare, melon-headed whale beached itself on the center's east coast, just south of Launch Pad 39A. The helpless whale was alone on the beach, which is unusual for a species associated with mass-beachings. The animal was well above the water line when a worker from the U.S. Fish and Wildlife Service on routine patrol spotted him -- lucky break No. 1.

Thinking quickly, the FWS worker called Kennedy's Life Sciences Support (LSS) and Jane Provancha answered. She was close to the beach working with endangered Scrub-jays -- lucky break No. 2.

Provancha and her teammates headed for the shore with a sling and maneuvered the young, male whale back into the water.

"I'm totally soaked, but it was worth it," Provancha said. "He looks good, really good."

Soon after a superficial

"This is a great chance to learn more about the species, then return him to the wild."

Megan Stolen,
Hubbs-Sea World
Research Institute
biologist

exam, the LSS team contacted Hubbs-Sea World Research Institute biologist, Megan Stolen. Stolen arrived and confirmed the 8-foot-long, 900 pound animal was in stable condition and an excellent candidate for transport to Sea World, Orlando -- lucky break No. 3.

"We don't have a lot of information about melon-headed whales because they live in deep water, well away from the shoreline. This is a great chance to learn more about the species, then return him to the wild, if he survives," Stolen said.

As new volunteers came forward, teams took turns at 20-minute intervals



NASA/Kim Shifflett

A veterinarian, left, and Sea World representatives cool the skin of a melon-headed whale found stranded south of Launch Pad 39A at NASA's Kennedy Space Center. The whale was transported to a whale rescue center in Panama City, Fla., for rehabilitation and release.

in the surf. They labored in the water for more than four hours waiting for the special transport vehicle. The whale, perhaps sensing their good intentions was calm and cooperative.

Finally, the truck arrived and the stranded whale was gently loaded for the ride to receive his veterinary

examination and possible treatment.

The rescue was complete.

As the truck pulled away, Stolen said, "You know, out of all the whales rescued only about 5 percent survive. And, out of those survivors, only about 1 percent actually are able to be

returned to the wild. Tough odds, but I feel pretty good about this guy, he's been lucky so far."

At last report the young, melon-headed whale underwent medical treatment and rehabilitation at Gulf World in Panama City, Fla. Hopes are high he soon will be returned to the wild.



NASA/Kim Shifflett

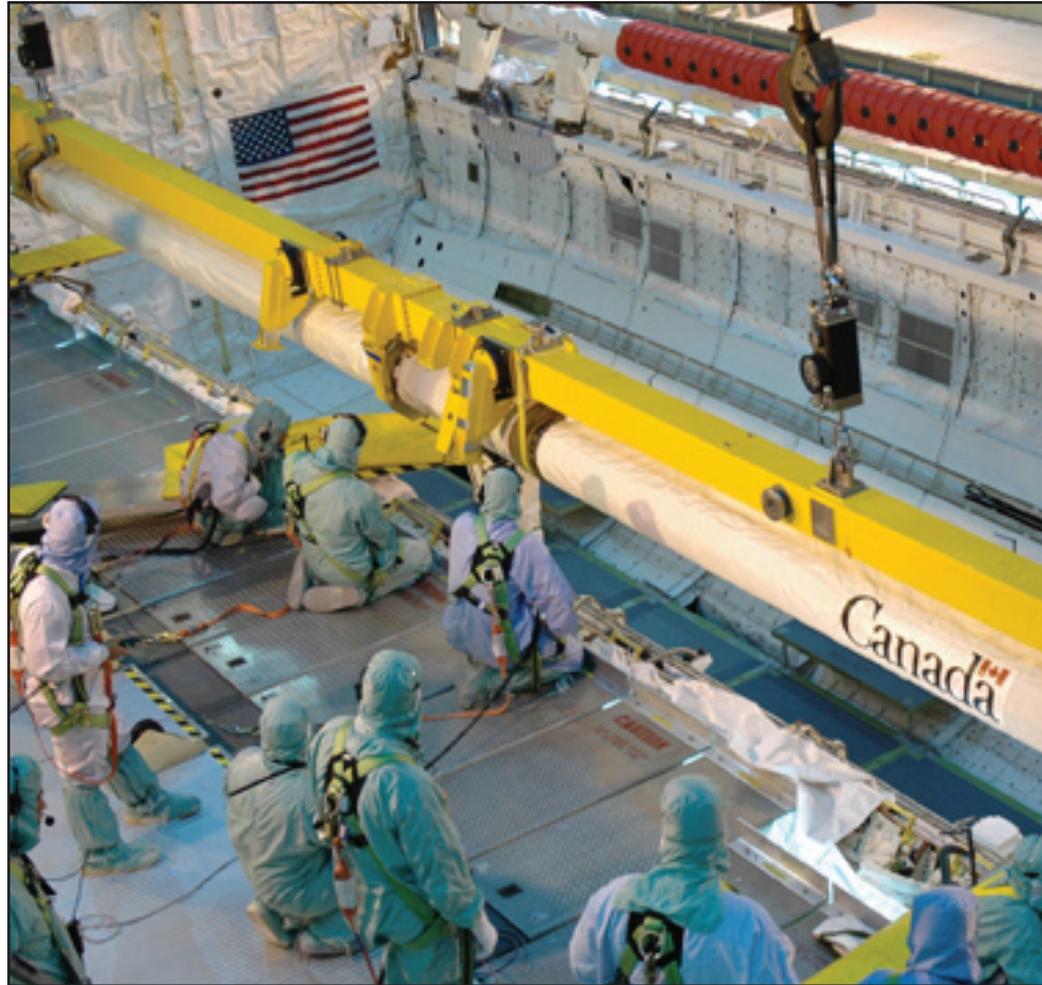
Workers from Kennedy Space Center, a veterinarian and representatives from the Hubbs-Sea World Research Institute carry a melon-headed whale on a sling to a waiting truck.

Scene Around Kennedy



NASA/Kim Shiflett

Inside the Space Station Processing Facility STS-126 crew members check data on equipment that will fly on their mission.



Workers ensure space shuttle Discovery's robotic arm is placed correctly for installation in the payload bay in the Orbiter. This mission, Discovery will carry the S6 truss segment to complete the 361-foot-long backbone of the International Space Station.



NASA/Amanda Diller

Platform C is moved out of the Vehicle Assembly Building at Kennedy Space Center to allow refurbishment of the facility for the Constellation Program's Ares 1-X vehicle. The platform will be demolished.



NASA/Jim Grossman

A worker attaches an overhead crane to the aft skirt for the Ares 1-X rocket in the Assembly and Refurbishment Facility at Kennedy Space Center. The segment is being lifted into a machine shop work stand for drilling modifications.

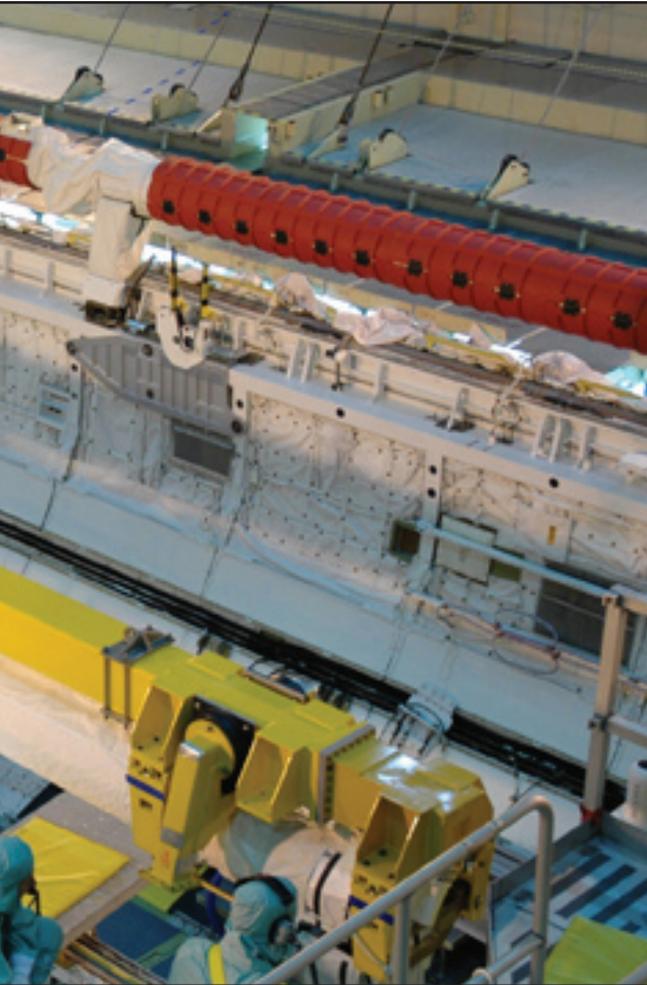


Five Florida high school seniors were presented NASA awards for their science projects. The projects were judged and selected by NASA-KSC judges on July 10.

Spaceport News

Send photos of yourself and/or your work. Photos should include names and job titles, from

Kennedy Space Center



NASA/Jim Grossman

ter Processing Facility bay 3. Scheduled to launch on the STS-119
e Station.



Reader-submitted photo

Jack Rebstock hugs Kim Cleary and gives her roses as she crosses the finish line after last year's YMCA Family Chal-
enge Triathlon. Cleary was one of three Kennedy workers in the triathlon who survived cancer. A special triathlon has
been added to this year's festivities for cancer survivors and their caregivers, July 25 and 26 at the Titusville YMCA
Family Center. For more information, call 321-268-2209 or 321-501-2384 or send an e-mail to jkramer2@cfl.rr.com.

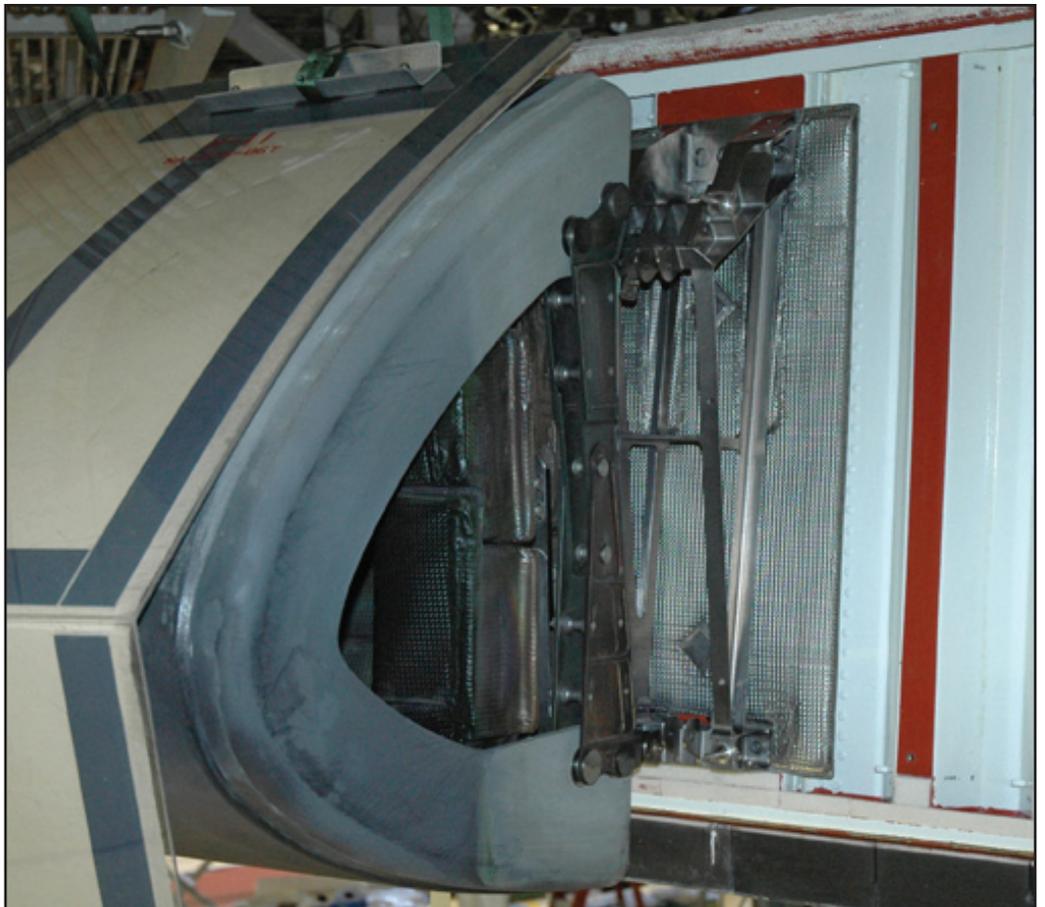


Reader-submitted photo

wards at the 53rd State Science & Engineering Fair of Florida. The recipi-
projects in various categories that were related to NASA's mission.

ews wants your photos

r your co-workers in action for possible publication.
a short caption describing what's going on,
m left to right. KSC-Spaceport-News@mail.nasa.gov



NASA/Jim Grossman

The leading edge of the wing on space shuttle Endeavour's heat shield with a reinforced carbon-carbon panel and one
insulator assembly removed. Endeavour is the scheduled launch vehicle for the STS-126 mission and will deliver a
multi-purpose logistics module to the International Space Station.

Nautical heroes set sight on SRB retrievals

By *Alessandra Vaughan*
Spaceport News

When most people think of heroes, they think of astronauts exploring the final frontier. Here at Kennedy, the title of hero can reach far beyond our famed space explorers, to every engineer, mechanical tech and welder involved in launching each space shuttle safely. Among the many heroes within these gates one group stands out as nautical heroes; the crews and divers aboard the solid rocket booster (SRB) retrieval ships, the Freedom Star and the Liberty Star.

The NASA-owned ships are unique vessels, specifically designed for the task of SRB retrieval. The 176-foot-long ships were built in the early 1980s at the Atlantic Marine Shipyard at Fort George Island in Jacksonville.

Along with 2,900 horsepower and highly precise

Global Positioning Systems the ships also are equipped with bow and stern water jet thrusters. The water jet system gives the ships great maneuverability, allows divers to safely work nearby and protects the endangered manatee population within the Banana River. In addition to saving the manatees, the retrieval crews also have rescued stranded boaters.

The 149-foot-long SRB's are the largest solid propellant motors ever developed for space flight. During ascent the boosters propel the orbiter to more than 3,500 miles per hour. The importance of the boosters during launch and ascent is evident, but the retrieval and reuse of them also is an integral part of the shuttle program. At 2 minutes and 7 seconds after liftoff, the boosters are depleted and jettisoned into the Atlantic Ocean. At that time, when most spectators have their

eyes on the shuttle, the crews of the Freedom Star and Liberty Star are diving into action.

Each ship has a permanent crew which consists of a captain, two mates, four seamen, two marine engineers and a cook. In addition, each ship has eight to 10 divers who aid the crew in the delicate SRB retrieval operation.

Once the booster hits the water, crews quickly survey the booster, send divers in the water to insert the Diver Operated Plug into the booster for water removal, float the booster into floating log position and tow it back to Cape Canaveral Air Force Station to begin processing for its next launch.

The nautical heroes aboard Freedom Star and Liberty Star are an integral part of the shuttle program and remain vital to the continuation of space exploration.



Courtesy of United Space Alliance

The SRB retrieval team arrives at a floating solid rocket booster in the Atlantic Ocean during a recent shuttle mission. The booster was towed back to Hangar AF at Cape Canaveral Air Force Station.

Launch directors in control of behind-the-scene intangibles

By *Steven Sicheloff*
Spaceport News

Few people truly understand what Shuttle Launch Director Mike Leinbach does, even members of his family.

"My mom, before she died, never quite understood the magnitude of what we do," Leinbach said. "As much as I explained to her, she just never quite saw the enormity of it. My brother-in-law sees it in spades. My wife used to work out here, so she knows."

People he runs into outside of work don't usually get it either.

"They say, 'Hey, you're the shuttle launch director, that must be a cool job.' Yeah, it's a cool job, and it usually stops there," Leinbach said.

All that doesn't matter to Leinbach, who has no doubt his job is one of the best in the world.

"This is America's space program, it's unbelievable to be able to work out here," he said. "I'm one of 15,000 people who think they have

the best job in the world."

As chief executive of the launch team, the launch director also is the front man of a band of highly trained engineers and technicians who specialize in one of the most demanding fields in the world: launching people into space on the strength of millions of pounds of fire and smoke.

He bids the astronauts farewell and is one of the first faces they see on the shuttle runway when the mission ends.

"I'm very, very lucky that I get to greet the astronauts when they come home," Leinbach said.

Leinbach's most public role as launch director is to conduct the countdown for space shuttle missions. He leads 460 launch controllers, working in two firing rooms, checking and rechecking shuttle systems before liftoff.

Bob Sieck, a former shuttle launch director whose NASA career began during the Gemini Program, stressed the demands of recognizing

the thousands of people who play a role in preparing and launching a shuttle.

"You have to have the attitude that this is a big team and everybody on this team is important," he said. "It isn't just the people in the control room who push buttons."

Sieck and Leinbach have seen some odd things during their careers.

Sieck said he saw so many unusual things during shuttle preparations and countdowns that a normal, smooth countdown would have stood out on its own.

"That would have been the strangest thing I had observed," he said.

Leinbach's strangest observation during countdown was when an unlucky buzzard flew into the external tank during liftoff.

A radar now scans the sky around the orbiter for birds.

The launch director's duties extend to other teams, as well. Leinbach, for example, is the chair-

man of the Rapid Response Team.

That means he has to coordinate the network of NASA first responders if a problem develops during liftoff or landing.

It was that role that Leinbach had to embrace as he waited for Columbia's return to Kennedy in 2003.

"That day of Columbia was very tough," Leinbach said. "I always watch the deorbit burn from the firing room and because of my job go out to the Shuttle Landing Facility for landing. So I was at midfield and the first indication of a problem was the loss of communication between the orbiter and Johnson Space Center, and then it was one thing after another."

Leinbach's love for astronauts also extends to the vehicles as well.

"The people that work on the orbiters here feel like they lost a family friend in the orbiter," he said. "Really, it's a beautiful machine and you take so much pride in it, it almost becomes part of you. There's no way to describe it to outsiders."

VAB rose from the marsh 45 years ago



NASA file

Construction of the Vehicle Assembly Building begins, as seen from the Turn Basin.



NASA file

Driving test piles during the early construction phase of the Vehicle Assembly Building.



NASA file

Construction of the Vehicle Assembly Building required 4,225 steel piles.

By Kay Grinter
Reference Librarian

Construction began on the most recognizable landmark at NASA's moonport, the Vehicle Assembly Building, 45 years ago.

Designed for the storage and erection of the Apollo Program's Saturn V rocket, the VAB became the largest building in the world by volume, enclosing about 129.5 million cubic feet.

Following the initial site preparation of the marshy coastal property, oversight of the placement of the pilings by the U.S. Army Corps of Engineers got under way in July 1963.

NASA alum Bob Barnini transferred from the Corps' New England office in Boston to the Jacksonville office in 1961, attracted by Florida's warm weather.

"Very few politicians made much impression on me," Barnini said. "But when JFK said we're going to put a man on the moon, I thought 'We're really going to do it,' and I wanted to be a part of that."

Assigned to the corps' project office at the new launch site, Barnini said of the VAB construction: "A lot of people said it couldn't be done, but the Corps' Canaveral

Remembering Our Heritage

District had a motto - 'Can do.' It captured a dynamic spirit of success that did not allow for failure."

The VAB is supported on open-end steel pipe piles, 16 inches in diameter and 3/8-inch thick, driven about 160 feet to bearing on limestone bedrock.

Hal Row, also a NASA alum and former member of the corps, explained: "The VAB was my initial contract. Big vibrating hammers, held by mobile cranes, were used to place about a pile a day. The piles were too long to drive in one piece so we used 80-foot lengths. When one length was in place, another was welded to it, and we continued the drive until we hit the limestone layer."

The piles anchor the building in high winds and also prevent the structure from sinking.

In total, 4,225 piles were required, with an end-to-end length of 128 miles, about the same distance from Cape Canaveral to Tampa.

"The only thing that made the job difficult or different was just the quantity," Row said.



NASA file

The steel piling construction phase of the Vehicle Assembly Building.

NASA Employees of the Month: July



NASA

Employees of the Month for July include, from left: John R. Lorch, Engineering Directorate; Sylvia Vega, Procurement Office; Robert P. Mueller, Applied Technology; Jackie LeClaire, Constellation Office; and Stephen Paglialonga, Information Technology & Communications Services. Not pictured: Jon Devereaux, Engineering Directorate; Gregroy Gaddis, Launch Vehicle Processing Directorate; Kirk Ketterer, Safety & Mission Assurance Directorate; John Adkisson, Center Operations; Jose Nunez, ISS & Spacecraft Processing Directorate; and James Sudermann, Launch Services Program.

From **ASTROVAN**, Page 1

day and after landing.

Since the earlier shuttle flights had fewer crew members, they used the Apollo-era astronaut transport van, which now can be seen by tourists at the Kennedy Space Center Visitor Complex's Apollo/Saturn V Center.

The current vehicle's appeal is rooted in its tradition rather than its décor. The interior's narrow-center aisle is paralleled by long benches that sport dark-blue upholstery. The seats are equipped with lift-out sections to accommodate the ventilator units used to circulate cool air through the astronauts' bulky orange launch and entry suits. Dark-gold drapes frame the windows and dark-wood paneling lines the walls.

According to Astrovan driver Ronnie King, the astronauts like the history-filled, if somewhat dated, vehicle just fine.

"We were staged to get a new one," the 10-year veteran driver said. But, according to King, word came that the rookie astronauts wanted to keep the vehicle that was steeped in the tradition of the astronauts who traveled those nine miles to the pad before them.

Employed by space shuttle contractor United Space Alliance, King is one of five drivers called upon to pilot the Astrovan. On launch day, the vehicle is the centerpiece of a motorcade escorted by security toward the seaside launch pad, and is in constant communication with the NASA test director via radio.

When it comes to launch day "they have their game faces on," King said of the crew members. "This is serious business."

As the remaining shuttle flights are flown, each successive crew of astronauts will make its way to the same shining silver van, prepared to write the next page of space history.

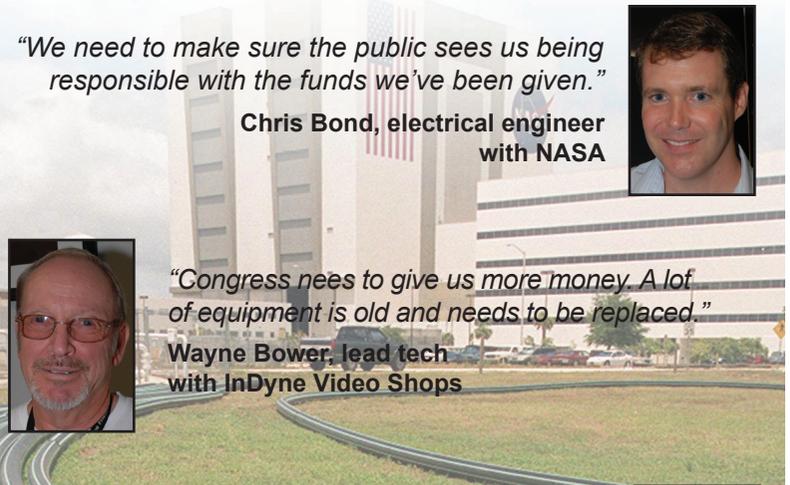
WORD ON THE STREET

What should be done to keep Kennedy Space Center a vital part of our nation's space program?



"Everybody should vote because it takes the people to get the job done right."

Leslie Raab, janitor with Yang Enterprises



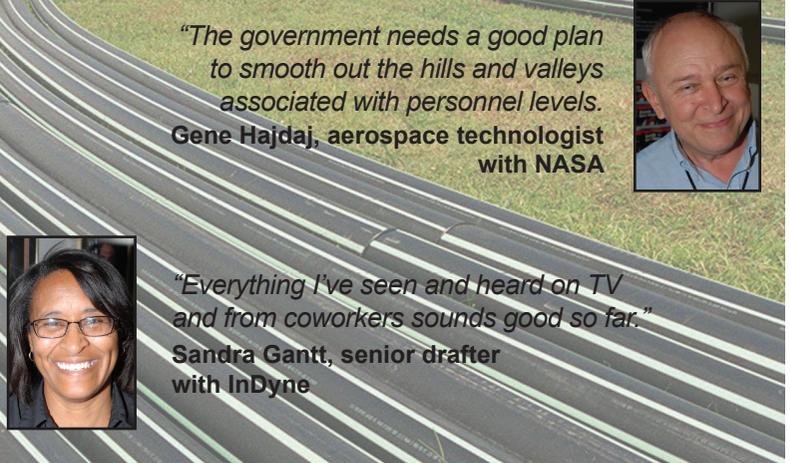
"We need to make sure the public sees us being responsible with the funds we've been given."

Chris Bond, electrical engineer with NASA



"Congress needs to give us more money. A lot of equipment is old and needs to be replaced."

Wayne Bower, lead tech with InDyne Video Shops



"The government needs a good plan to smooth out the hills and valleys associated with personnel levels."

Gene Hajdaj, aerospace technologist with NASA



"Everything I've seen and heard on TV and from coworkers sounds good so far."

Sandra Gantt, senior drafter with InDyne



John F. Kennedy Space Center

Spaceport News

Spaceport News is an official publication of the Kennedy Space Center and is published on alternate Fridays by External Relations in the interest of KSC civil service and contractor employees.

Contributions are welcome and should be submitted three weeks before publication to the Media Services Branch, IDI-011. E-mail submissions can be sent to **KSC-Spaceport-News@mail.nasa.gov**

Managing editor Candrea Thomas
Editor Frank Ochoa-Gonzales
Copy editor Rebecca Sprague

Editorial support provided by InDyne, Inc. Writers Group.
NASA at KSC is on the Internet at www.nasa.gov/kennedy
USGPO: 733-049/600142

Spaceport News wants your photos

Send photos of yourself and/or your co-workers in action for possible publication. Photos should include a short caption, with names and job titles, from left to right. Send them to **KSC-Spaceport-News@mail.nasa.gov**