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Spaceport News

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

Discovery, STS-116 crew members to deliver P5 segment

At press time, Space Shuttle Discovery and the STS-116 crew members were scheduled to lift off from Launch Pad 39B on Dec. 7. The seven-member crew includes Commander Mark Polansky, Pilot William Oefelein and Mission Specialists Nicholas Patrick, Robert Curbeam, Joan Higginbotham, Sunita Williams and Christer Fuglesang, who represents the European Space Agency.

Williams will replace current space station crew member Thomas Reiter and return home next summer following Endeavour's STS-118 mission. This is the first crew member rotation in four years involving a space shuttle rather than a Russian Soyuz.

The primary hardware Discovery will deliver to the space station is the Integrated Truss Segment P5, which measures 11 feet long by 15 feet wide by 14 feet high. The segment serves as a spacer and will be mated to the P4 truss that was attached in September during the STS-115 mission.

Attachment of the 4,000-pound P5 sets the stage for the relocation to its final assembly position of the P6 truss and the pair of solar arrays that have been located on top of the station's Unity module for six years. The 20th space shuttle mission to the station is also the most choreographed between the crew members and flight controllers at Mission Control in Houston, who will send all commands to carefully redistribute power from one location to another.

Visit **http://www.nasa.gov** for updates.

STS-116 crew members arrive for the launch of Space Shuttle Discovery. From left are Mission Specialist Joan Higginbotham; Pilot William Oefelein; Mission Specialists Robert Curbeam, Christer Fuglesang, Nicholas Patrick and Sunita Williams, and Commander Mark Polansky.

NASA flight technology used on SpaceX Falcon I rocket

By Linda Herridge
Staff Writer

The Autonomous Flight Safety System (AFSS) is the prototype of a flight technology developed by Kennedy Space Center's Applied Technology directorate and the Wallops Flight Facility in Wallops Island, Va., with support from ASRC. The AFSS, along with the Low Cost Tracking Data and Relay Satellite System (TDRSS) Transceiver (LCT2), will be tested aboard a SpaceX Falcon I rocket flight in mid-January from Kwajalein Atoll in the South Pacific.

The AFSS is an independent self-contained computer subsystem that will be mounted onboard the Falcon I payload fairing. AFSS autonomously makes flight termination decisions using a redundant onboard system of navigation sensors and flight processors.

During launch, the AFSS/LCT2 will interface with TDRSS to demonstrate utilization of GPS and communication satellites to perform traditional ground based range safety operations in space. The AFSS/LCT2 will be monitored on the ground to see how quickly and accurately it communicates with the Global Positioning System (GPS) and Inertial Measurement Unit navigation sensors to relay metric tracking and flight termination data through TDRSS.

The AFSS test article will contain a preprogrammed set of mission rules and projected flight path data. During the demonstration flight, AFSS commands will be monitored in realtime and analyzed at KSC's Engineering Development Lab to determine its performance and the action that would result from an errant flight path. The AFSS commands will not cause any action that affects the Falcon I vehicle.

"The AFSS is an interesting demonstration of emerging technologies which will help define the range of the future," said Dr. Dave Bartine, Applied Technology director.

During the demonstration flight, LCT2 will transmit AFSS flight data to TDRSS, which will relay the data to White Sands Missile Range. It then will be sent to Wallops Flight Facility, Kennedy Space Center and Kwajalein for analysis. The AFSS test article will not return to Earth.

"AFSS is intended for use onboard small-to-medium class expendable launch vehicle or

(See FALCON, Page 3)

THIS EXPERIMENTAL rocket launched in April from the White Sands Missile Range used the NASA-developed flight system.

The Kennedy Update

Jim Kennedy
Center Director

As this issue was being completed, the STS-116 crew members were busy preparing for the 20th space shuttle trip to the International Space Station to deliver the P5 integrated truss structure, the SPACEHAB module and other key components. My hat is off to Commander Mark Polansky, Pilot William Oefelein and Mission Specialists Nicholas Patrick, Robert Curbeam, Joan Higginbotham, Sunita Williams and Christer Fuglesang as they attempt this challenging mission.

Thanks to the hard work of our work force in processing Discovery, allowing for mission managers to move up the launch date, employees will now be able to spend the holidays with family and friends.

I know we are all proud of the contributions made to the greatest technological achievement in the world's history: the International Space Station. This mission confirms we're back in the space station construction business as we take the steps necessary to return to the moon, then travel to Mars and beyond.

You may have heard about the Mars Global Surveyor's end to its highly successful mission, including returning more than 240,000 images of the red planet to Earth. Developed under NASA's Mars Surveyor Program, the orbiter launched from the Cape Canaveral Air Force Station's Launch Complex 17A on Dec. 11, 1998.

The contributions this spacecraft has made to NASA will be felt for decades to come.

> "We are all proud of the contributions made to the greatest technological achievement in the world's history: the International Space Station."

Back on Earth, I'm proud to let you know about the new alternative fuel station offering ethanol E-85 in the Launch Complex 39 area. Whenever possible, please use this environmentally friendly fuel in government fleet vehicles.

This station will be expanding in the future to offer more fuel choices and services.

Plans are coming together for a Holiday Celebration on Dec. 14 that all of the center's employees will be sure to enjoy. The celebration recognizes all of the monumental achievements from the past year. I hope to see you at either the Headquarters Building or the Operations Support Building II, along with your friends and coworkers.

I'm very proud of the holiday gift drives under way, including, among others, the Federally Employed Women's gift stocking project, Space Gateway Support's Adopt-A-Child toy drive and United Space Alliance's Toys for Tots campaign. Take comfort in knowing that even though the children that benefit from these programs will only be receiving one gift, that gift may give them a brighter view of the future. I wish you all a safe and most enjoyable holiday season!

Help the spaceport save energy dollars during holidays

Please be aware that the Headquarters Building and several other Industrial Area buildings will be experiencing the loss of electrical power, heating and air conditioning during the holiday break starting Dec. 25 through Jan. 1.

Supervisors, please advise and encourage your personnel to take advantage of this holiday break and not return to work until Jan. 2. However, accommodations will be provided for those who aren't able to take leave and for those who are in mission-critical positions.

All managers in the Headquarters Building should query their departments for personnel who are unable to take annual leave during this period, identify their room numbers and locations, identify constraints and impacts that these outages have caused, then report to HQ Facility Manager Leroy Smith at 867-8499 or e-mail: *Leroy.C.Smith@nasa.gov*. During the upcoming holiday break, please remember to do the following:

- Turn off your computer, monitor and printer (if not required to remain on);
- Turn off the lights in your office when you are the last person to leave;
- Turn off the hall and hall closet lights on your way out, if you are the last person to leave your area in the building;
- Turn off displays and decorative lights;
- Turn off or unplug any appliances in the office, such as coffee makers, desk lamps, fans, radios, etc;
- Turn off the copier machines (including in hallways) and scanners; and
- Close the blinds on all windows.

December NASA employees of the month

The December NASA employees of the month include, from left, Tim Widrick, Launch Services Program; Denise Travers, Information Technology and Communications Services; and William Potteiger, Shuttle Processing. Not pictured are Enrique Barnes, Safety and Mission Assurance; Matthew Carroll, International Space Station and Payload Processing; Jonathan Donohoe, Chief Financial Office; Donald Hammel, Constellation Project Office; Dawn Oliver, Chief Counsel Office; and Rosaly Santos-Ebaugh, Center Operations.

STS-116 is Higginbotham's time for Discovery

By Cheryl Mansfield
Staff Writer

During her nine-year tenure as an engineer at Kennedy Space Center, Joan Higginbotham actively participated in 53 space shuttle launches — an impressive accomplishment for anyone. But when she returns to Kennedy for the launch of Discovery on STS-116, she'll take "participation" to a whole new level: as astronaut Joan Higginbotham on her first shuttle mission.

The Chicago native's planned vocational path didn't initially point to the space program. "My career plan originally did not include becoming an astronaut," she explained. "What I had envisioned for myself was to get a degree — my electrical engineering degree — and go on to work for IBM."

But an engineering hiring freeze at the industry giant coupled with an offer from NASA changed all that. Two weeks after her graduation from Southern Illinois University in 1987, Higginbotham arrived in Florida and began her career at the space center as a payload electrical engineer.

Over the ensuing years, she held a number of positions in the shuttle program, even working in the firing room — the launch control "nerve center" during the shuttle countdown and liftoff. In those first years at Kennedy, Higginbotham earned an advanced degree in engineering management from nearby Florida Institute of Technology.

After that, at the urging of one of her bosses, she applied to join the astronaut corps in 1994. When she didn't make the cut on her first try, Higginbotham returned to Florida Tech, this time earning a master's in space systems while continuing to work full time at the space center.

"It was hard. I'd been back two years earlier. I'd gotten a master's degree. I'd pretty much figured that I was done," said Higginbotham. "I worked essentially night shift so that I could go to school during the day and get my second (master's) degree. But obviously, it paid off."

That payoff came when she applied a second time to become an astronaut. Her hard work was rewarded and she headed for Houston as part of the 1996 astronaut class.

Since then, her assignments have spanned various aspects of the shuttle and International Space Station programs. After originally training as part of the STS-117 crew, she was assigned instead to the STS-116 mission, where she will operate the station's remote manipulator system.

"My primary task in this mission is to act as robotics arm operator on the space station along with Suni (Williams). I am the load master, who is the person in charge of transfer, and I also am in charge of deploying some small satellites once we undock from the space station," Higginbotham said.

STS-116 MISSION Specialist Joan Higginbotham is ready to practice driving the M-113 armored personnel carrier during November's terminal countdown demonstration test activities.

JOAN HIGGINBOTHAM, a mission specialist for STS-116, talks to Kennedy Space Center Deputy Director Bill Parsons after arriving at the center for a terminal countdown demonstration test last month.

"The arm operations are really complex. We have very tight tolerances between the arm and different structures," she explained. "As we're putting the P5 truss into position, we are coming within inches of a box, and that's unheard of. You always want to stay two feet away from a structure. So, two feet and two inches is a big difference!"

But while this mission and those to come are extremely complex, she sees them as challenges that will give the astronauts the experience they need for future exploration planned by NASA.

"When we go back to the moon and on to Mars, I don't think those operations are going to be any less complex than the ones that we are doing now, so it's essential for us to master these skills now for us to continue with our exploration."

And despite the fact that she'll be back at Kennedy, where she participated in scores of shuttle launches in the past, this time will be different.

When the main engines ignite, the solid rocket boosters thunder, and Space Shuttle Discovery roars off the launch pad, Higginbotham will be strapped into her seat on Discovery's middeck for the ride of her life.

"Personally, it means that I have this really unique opportunity to serve my country in this manner," she reflected, "and I feel extremely honored and blessed to have that opportunity."

FALCON . . . *(Continued from Page 1)*

unmanned aerial vehicles," said Michelle Amos, who is the KSC project manager for AFSS. Amos said range safety officers are required for upfront decision making and encoding of flight rules. "The AFSS is designed to increase launch safety and allow safe launches from anywhere, anytime," Amos said.

Development of the technology began in 2000. In April this year, a flight demonstration of an AFSS developmental test article using redundant GPS sensors and two independently programmed processors was conducted aboard a two-stage sounding rocket launched from White Sands Missile Range. AFSS was not connected to an actual flight termination system. The test article functioned and reacted correctly during the entire flight, from launch to parachute deployment.

SPACEHAB module gives astronauts room to move

By Anna Heiney
Staff Writer

Imagine if you could attach an enormous walk-in closet to your house for more storage room.

Seven astronauts set to fly aboard Space Shuttle Discovery will benefit from a similar arrangement. The commercially owned SPACEHAB logistics single module will serve as an extra "float-in closet" during STS-116, a 12-day mission to deliver hardware, supplies and a new crew member to the International Space Station.

The SPACEHAB single module more than doubles the storage capacity of the orbiter's middeck. And because the 1,100-cubic-foot module is pressurized, powered and climate-controlled, it's a convenient "shirtsleeve" environment for the astronauts. They can enter through a tunnel connected to the middeck without ever having to suit up and step out into space.

On the STS-116 mission, the module is filled almost to its three-ton capacity. Mission Specialist Joan Higginbotham will serve as the "load master," overseeing the transfer of the module's 5,800 pounds of cargo to the space station. Items to be delivered include crew essentials like food, clothing and water containers.

The crew will free up room on the station by loading the SPACEHAB module with a Russian Elektron oxygen generator and waste containers for the return trip to Earth. Behind SPACEHAB in the payload bay are the P5 integrated truss segment and another SPACEHAB product: the integrated cargo carrier.

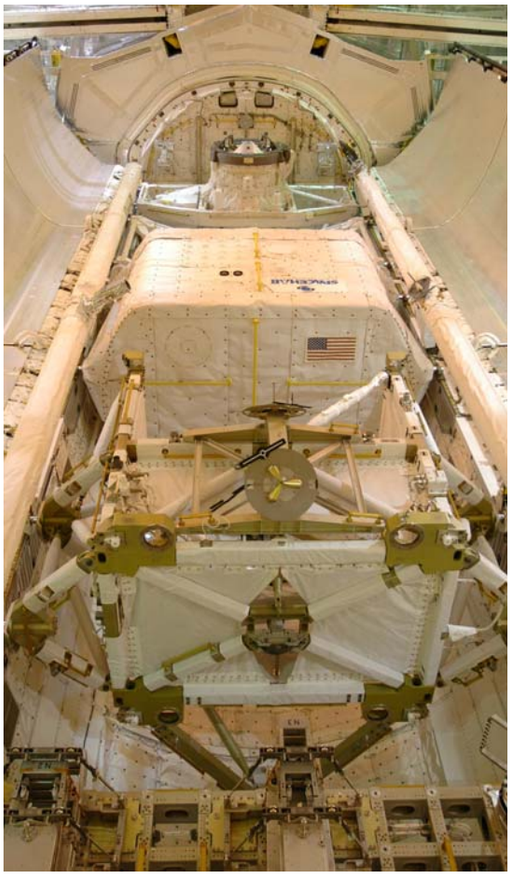
Measuring almost 14 feet wide and 7.5 feet long, this versatile carrier acts as a shelf inside the bay. Cargo attached to either side of the carrier can be accessed by the shuttle's robotic arm or by spacewalking astronauts.

Among the equipment mounted on the carrier for STS-116 are debris panels to shield the station's Zvezda service module from micrometeorites, and three tiny microsatellites to be deployed late in the mission. SPACEHAB modules and integrated cargo carriers are prepared for launch at the company's own SPACEHAB Payload Processing Facility in Cape Canaveral.

When the hardware is tested and certified to fly, it is transported to Kennedy and installed in the shuttle orbiter. The SPACEHAB logistics single module flying on STS-116 was installed along with the other payloads into Discovery's payload bay on Nov. 11.

The modules can be configured for cargo or science research experiments, and come in single or double sizes, depending on the mission's unique needs. The first SPACEHAB module, configured for research, lifted off on Space Shuttle Endeavour on mission STS-57 in 1993.

Another SPACEHAB logistics module and integrated cargo carrier are slated to fly aboard Space Shuttle Endeavour on the STS-118 mission, scheduled for launch in 2007.



THE SPACEHAB module is loaded above the P5 truss on Space Shuttle Discovery.

Constellation Project Office appreciates Jackson's leadership

By Linda Herridge
Staff Writer

After growing up on the Space Coast and viewing many Apollo and space shuttle launches, Melodie Jackson said it just seemed natural that she would eventually work at Kennedy Space Center. Jackson, who is a mission operations integration engineer in the Constellation Ground Operations Project Office, received the Employee of the Year award for 2006 from her directorate.

Jackson said it's exciting to be involved at the beginning of the Constellation Program. "It will be interesting to see the Orion crew exploration vehicle dock with the station in the future, but it will be sad to see the space shuttle retire," Jackson said. "I'm excited to be in this organization and look forward to what the future holds in store for our Constellation Program and the Vision for Space Exploration."

Jackson received the award for her many contributions to the Constellation Program during the past year, including her "commitment and leadership to develop an integrated resource-loaded schedule for the Ground Operations System Requirements Review."

The review and resource requirements cover the broader picture of how KSC will achieve its goals for the Ares I and Ares V exploration programs, according to Jackson.

"I feel very honored to receive this award," Jackson said. "My co-workers are a great group. We support each other and work together as a team."

Jennifer Kunz, who is the project's Operations and Integration division chief, said Jackson's contributions are far-reaching and recognized throughout the Constellation Program. "She contributes her expertise and conscientiously works a multitude of integration activities across the center," Kunz said. "She is a tremendous asset to our team."

During her 21-year career with NASA, Jackson has served in a variety of roles. She began her career with NASA in 1985 as a co-op student in the Materials Testing Lab in the Operations and Checkout Building. Jackson was hired full time in 1987, after graduating from the University of Central Florida with a Bachelor of Science degree in mechanical engineering.

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MELODIE JACKSON of the Constellation Project Office is a NASA employee of the year. She began her career at NASA in 1985 as a co-op student.

Space shuttle Ice Team is cool under pressure

By Cheryl Mansfield
Staff Writer

Drama builds as the countdown clock ticks down toward another space shuttle launch. Dressed in bright-orange protective suits and prepared for the mission, an elite group boards a van and the convoy heads to the launch pad where the shuttle awaits.

But this crew isn't made up of astronauts headed for space. It's the "Ice Team."

To say that members of the Ice Team — officially called the Final Inspection Team — need to be cool under pressure is an understatement. When your job means spending more than two hours completely inspecting a fully fueled space shuttle as it stands ready for launch, it's not your typical day at the office.

Other than the closeout crew and the astronauts, this team's members are among the few who'll ever get this close to a ready-to-fly shuttle. Team members have the crucial and potentially dangerous job of inspecting the entire space shuttle stack — orbiter, external tank and solid rocket boosters — to locate any unusual ice build-up, debris or damage that could endanger the vehicle and crew after liftoff.

They follow the processing of the orbiter, tank and boosters, which allows their trained eyes to spot trouble during those final, critical hours at the launch pad. If the team spots something out of the ordinary, "We can make a real-time decision," said Tom Ford, who heads the inspection team.

As the team leader, Ford plays a pivotal role as he coordinates the team's work and communicates its findings to the launch director. Even before tanking begins at the launch pad, his launch day starts in briefings with the launch director in which the decision to begin loading the propellants is made.

At the "ice console" in Firing Room 2 at the Launch Control Center, Ford is among those who carefully watch monitors as cameras at the pad scan the huge, orange external tank as it's filled with super-cold liquid hydrogen and liquid oxygen, searching for any abnormalities that might spell trouble. As the tanking nears completion, Ford and his team get the call to kick into high gear as they prepare for their up-close-and-personal look at the shuttle on the launch pad.

After suiting up, they gather at their van near the cavernous Vehicle Assembly Building to receive final safety briefings, which include up-to-the minute information that would help them quickly exit the launch pad area in the event of an emergency. Each team member carries an emergency apparatus to supply 10 minutes' worth of air, and a helicopter is on call for their evacuation.

Primed for action, they wait for orders from the NASA test director to proceed to the pad. It's during a built-in hold in the countdown at the T-3 hour mark that the team gets to work. When they get the order to roll, the convoy — which also includes the closeout crew that assists the astronauts — is waved through the security roadblocks.

As they travel several miles to the launch pad, their eyes are treated to a sight few ever get to see. "It's really cool when we're driving up there and seeing the vehicle, with the oxygen clouds boiling off. It's surreal," said Ford. "Especially when it's dark and all the Xenon lights are on."

As they unload their equipment at the base of the launch pad, the team members can hear the hum, creeks, bangs and other noises emitted by the vehicle towering overhead as it undergoes temperature changes. But when they board the elevator that takes them to the top of the service structure, their minds are focused on the work ahead.

They begin their inspection at the 255-foot level. Using cameras, binoculars, infrared sensing devices and other equipment, they begin to check each surface of the vehicle, looking for unusual ice build-up created by the cryogenic propellants that fuel the shuttle's three main engines.

FROM THIS vantage point at the 135-foot level of the launch pad's fixed service structure, team leader Tom Ford (using binoculars) and his crew visually inspect and photograph the vehicle.

Using infrared sensing, they look for abnormal temperature readings that might indicate a problem. From this highest vantage point, they are able to check for ice in the area under the "beanie cap" — a vent hood that covers the top of the external tank until just prior to launch and vacuums away liquid oxygen vapors. Ice build-up in that spot would be a showstopper, since it could fall and hit the orbiter while in flight.

The group continues methodically working at the 215-ft., 195-ft. and 135-ft. levels, checking in with launch control at each level. The team members finish their inspection at the base of the vehicle on the mobile launch platform, moving around the solid rocket boosters' aft skirts and under the external tank and main engines.

With a final walk-around inspection of the vehicle completed and the team members in agreement on their findings, they load their van and head back to launch control, where Ford reports to the launch director. At about the same time they depart the pad, another van full of orange-suited crew members approaches.

This time, it's the astronauts' turn to ride the elevator up the service structure to the "White Room" where the closeout crew will help them strap into their seats in the orbiter.

Back at launch control, Ford returns to Firing Room 2 and continues monitoring the shuttle's final checks. Then comes the pivotal moment: the main engines ignite, the solid rocket boosters thunder, and the shuttle roars off the pad. He eyes the monitors closely as the shuttle lifts off, using an assortment of views including those from new on-board cameras that capture the separation of the boosters and tank.

He ends his 12-hour day by checking the first of many video replays, a job that he'll continue doing over the next five days. "When you launch, it feels great," said Ford.

It's all in a launch-day's work for the Ice Team.

Kennedy Web team receives Crystal Reel Award

By Jennifer Wolfinger
Staff Writer

MEMBERS OF the Web Operations Team, seated from left, include Alysia Lee, Cheryl Mansfield and Margaret Persinger. Team members, standing from left, include Dennis Armstrong and Mike Chambers. Not pictured is Jeanne Ryba. The team received the 2006 Crystal Reel Award (above) from the Florida Motion Picture and Television Association.

The Web Operations Team at Kennedy Space Center recently won the Florida Motion Picture and Television Association's 2006 Crystal Reel Award for providing the world with a glimpse into the life of an International Space Station crew member.

The award honors outstanding achievement in the motion picture, television, audio recording and digital media industries in Florida. The team won for an "In Their Own Words" vignette featuring Mike Fincke, an astronaut who spent months on the station. Fincke provides a snapshot of what it's like being an astronaut by recounting his personal space flight experiences.

"In Their Own Words" is a series of video diaries that offer insights into the careers and people of NASA. According to Dennis Armstrong, public Web information manager, the program humanizes NASA's incredibly talented people who do interesting, exciting and difficult things.

"We try to show that if dreams can come true for our employees, it is possible for any young person to do the same," said Armstrong.

Multimedia Manager Jeanne Ryba said the team submitted this piece because Fincke's words remind us that anything is possible in this country. She explained that the space program inspired a young Fincke, and his persistence paid off when he achieved his dream of becoming an astronaut.

According to Armstrong, there were more than 70 entries in 13 categories this year. The entries were judged in New York and Los Angeles by other Motion Picture and Television Association chapters.

The team, made up of Armstrong, Ryba, Alysia Lee, Cheryl Mansfield, Mike Chambers and Margaret Persinger, received a crystal film reel which will be displayed at the KSC News Center.

"We knew that we had assembled an outstanding Web team here and had long felt our products were as good as (or better than) those developed in private industry. Needless to say, it is very flattering to be recognized by such an esteemed group," said Armstrong.

The Crystal Reel Awards Program is recognized as the primary film and television competition for Florida. The program is often referred to as Florida's version of the Academy and Emmy awards, and the award is highly coveted. The competition was open to projects completed in Florida during the 2005 calendar year.

To view the award-winning video, visit **http://www-pao.ksc.nasa.gov/kscpao/videos/metafiles/ksc_020305_fincke.ram** For more information about the Florida Motion Picture and Television Association, visit **www.fmpta.org**.

Launch Complex 39 offers ethanol E-85 pump

THE NEW LC-39 Alternative Fueling Station offering ethanol E-85 is open for business. Located south of Saturn Causeway on Contractors Road, the station has passed all inspections and is now open to fuel all ethanol E-85, flex fuel vehicles. The station includes a 10,000-gallon tank with a two-hose dispenser. Only E-85 is available at this site.

To operate the station:

1. Press the key that reads, "Pay Outside Credit."
2. Slide a credit card through the card reader.
3. For Government Services Administration vehicles, follow the pump instructions: Enter driver's ID number.
4. The system will authorize the transaction.
5. The system will read, "Remove nozzle, lift handle and pump."

Kennedy Space Center is mandated to use ethanol E-85 in government fleet vehicles when operating on the center.

THE LC-39 Alternative Fueling Station on Contractors Road offers ethanol E-85 for government fleet vehicles.

Remembering Our Heritage

40 years ago: First Applications Technology Satellite launch included many firsts

By Kay Grinter
Reference Librarian

The groundbreaking Applications Technology Satellite-1 was launched on Atlas-Agena 19 on Dec. 6, 1966, during a very busy time for the Unmanned Launch Operations team at Kennedy Space Center.

The liftoff fell between the launches of two Lunar Orbiters: one in November, the other in February. It was the first of six ATS spacecraft launched between 1966 and 1974.

Former ULO Launch Director John Neilon was involved in all six launch campaigns and recalled from his home in Cocoa Beach: "Checkout was routine until several days before the intended launch, when the spacecraft had to be demated from the launch vehicle. They were remated a few days before the countdown was scheduled to pick up. The countdown then went smoothly, with launch occurring at 9:12 p.m. that Tuesday night."

NASA alumnus Jim Weir was the spacecraft launch conductor for ATS-1 and was in the blockhouse during launch. "Clyde McGee was the ATS launch operations manager for Hughes Aircraft," he recalled from his home in Dahlonega, Ga.

"General Dynamics/Convair did not have the whole magilla until the fourth ATS mission in 1968," Weir explained. "They provided the Atlas booster for ATS-1, but the Agena-D upper stage and shroud were built by Lockheed."

"It was always a pleasure to have him and his team in town, both at work and after hours for celebrations at the Mousetrap Lounge in Cocoa Beach."

The ATS project had the distinction of having launches on three different launch vehicles: the Atlas-Agena for ATS 1 through 3, the Atlas-Centaur for ATS 4 and 5, and the Titan 3-C for ATS-6.

"GDC (General Dynamics/Convair) did not have the whole magilla until the fourth ATS mission in 1968. They provided the Atlas booster for ATS-1, but the Agena-D upper stage and shroud were built by Lockheed," Weir explained. "The 'shroud' is what we commonly called the spacecraft fairing at that time."

ATS-1 was the first synchronous satellite to be launched by an Atlas-Agena vehicle. Two burns of the Agena-D second stage and a solid booster in the spacecraft were needed to inject it into its synchronous Earth orbit.

There were also a number of firsts among the many experiments carried on the satellite, including the first VHF experiment for voice transmission via the satellite to airplanes in flight, the first transmission of high quality cloud-cover pictures of the Earth from synchronous orbit, and the first transmission of weather data over a long-distance system.

Although the design life of ATS-1 was three years, it was still serving the medical emergency communications needs of remote Alaskan villages 10 years later through the "Doctor's Call" program which linked medical professionals in Anchorage and Fairbanks to those in areas without modern medical facilities.

EMPLOYEES AT Cape Kennedy's Launch Complex 12 (left) prepare the Applications Technology Satellite-B and its Atlas-Agena space vehicle for its December launch.

NASA LAUNCHED the ATS-1 at 9:12 p.m. Dec. 6, 1966. The satellite performed the first VHF experiment for voice transmission to airplanes in flight and provided the first high-quality cloud cover pictures of the Earth from synchronous orbit.

JACKSON . . .

(Continued from Page 4)

In 1989, she moved to the Payload Processing Directorate where she helped process one of the largest and heaviest payloads, the Spacelab Module, for several space shuttle missions. Jackson also worked on several planetary mission payloads, including Galileo and Magellan, and assisted in both vertical and horizontal payload processing.

After the reorganization in 2000, she transferred to the International Space Station and Payload Processing directorate in the Space Station Processing Facility. She served on the Checkout Assembly and Payload Processing Services Source Board from 2001-02, helping to write the statement of work and evaluate proposals.

"It was very rewarding to work on multiple payloads here on the ground and then see them in space and on the station," Jackson said.

She also was in the Space Station and Payload Processing business office as the alternate contracting officer technical representative. She helped to implement contract changes and also performed other business-related functions for the directorate.

Jackson lives with her husband, Kevin, and two children in Titusville. She enjoys spending time with her family, traveling, especially snow-skiing out West and swimming.

Kennedy invites work force to Holiday Celebration

Center Director Jim Kennedy invites all KSC civil service and contractor employees to join him on Dec. 14 for a Holiday Celebration at one of the following locations:

• Headquarters Building lobby – 9 to 10:30 a.m.

• Operations Support Building II lobby - 1 to 2:30 p.m.

• For second- and third-shift employees, the celebration will also be at the OSB II lobby from 10 to 11:30 p.m.

Come join your friends, co-workers and former co-workers to exchange greetings. Refreshments will be provided. Some NASA astronauts are also scheduled to appear. For information, call 867-2144.

THIS YEAR'S Holiday Celebration will be held Dec. 14 in the Headquarters Building lobby (pictured) and the Operations and Support Building II. Retirees and astronauts will also share in the festive event.

Holiday stockings needed for Salvation Army project

Members of the Space Coast chapter of the Federally Employed Women need your help for the annual "Stuff a Stocking Project," part of the Salvation Army Christmas program.

Please clearly mark the age and either "boy" or "girl" on the outside of a stocking. If the group runs out of stockings, as it did last year, please use the recommended list and fill a shoebox. No gift is turned away and the items will be taken to the Hacienda Girls Ranch and Country Acres Children's Home.

Many of these children would not receive Christmas gifts if not for the generosity of others.

Recommended items by age group

0-1 year - Teething ring, baby rattle, socks, stuffed toys, baby shampoo, baby lotion, baby powder, baby wipes and cup.

2-3 years - Toothbrush, toothpaste, socks, underwear, bows, small toy, coloring book and crayons.

4-6 years - Toothbrush, toothpaste, socks, underwear, bows/barrettes, crayons, coloring book and small doll.

10-12 years - Socks, underwear, circle-a-word/crossword puzzles, ball cards, markers, notebook paper, nail polish, Chapstick/lip gloss, Kleenex, wallets and combs/brushes.

13-16 years - Circle-a-word/crossword puzzles, markers, notebook paper, nail polish, Chapstick/lip gloss, Kleenex, wallets and combs/brushes.

The deadline to return the stockings to any of the individuals listed below is Dec. 12.

Contact Martha Carroll, CCAFS CES/CEVP; Irene Laturno, CCAFS Hangar R&D; Laurie Brown, CIF 302B; Dawn Partlow, E&O Building, room 60650; Sandra Getter, EDL Building, room 203; Ana Contreras, Headquarters Building, room 1147; Connie Dobrin, HQ Building, room 2647; Carolyn Burnham, LCC Building, room 3P12; Charmel Anderson, O&C Building, room 1073; or Arden Belt, NASA News Center.

Visitor Complex offers holiday discount for badged employees

Through Dec. 24, all badged Kennedy Space Center and Cape Canaveral Air Force Station employees receive a 30-percent discount at Visitor Complex retail locations, including the Space Shop at the main Visitor Complex and the gift shop at the U.S. Astronaut Hall of Fame. Select from hundreds of space-themed items, such as ornaments, toys, apparel, jewelry, books, mugs, mission merchandise and more.

Present your badge at the will-call ticket window to receive a limited admission ticket (does not include the KSC bus tour or IMAX movies). You must present your badge at the time of admission and purchase. This offer is not transferable and cannot be combined with any other discount. For more information, call 321-449-4444.

John F. Kennedy Space Center

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