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Spaceport News

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

http://www-pao.ksc.nasa.gov/kscpao/snews/snewstoc.htm John F. Kennedy Space Center

Electrical system project finishes ahead of schedule

The Spaceport has been fitted with a new electrical system, two years ahead of schedule.

Replacement of the last of the Load Break Switches (LBS) has been achieved. The project, which had a completion date of September 2004, was officially celebrated Sept. 26 with a switch-pulling ceremony held at Complex 25.

According to SGS President Mike Butchko, "Today we celebrate the de-energizing of the old LBS and the pulling of switches to our new LBS. SGS is very pleased we were able to accomplish this project two years ahead of schedule, significantly reducing the safety risk to the Spaceport population.

"I am very proud of this accomplishment and our personnel who replaced over 100 LBS on the short end of two years."

On hand to celebrate the achievement was Roy Bridges, NASA-KSC director, and Col. Michael Lehnertz, 45th Space Wing vice commander, along with Susan Kroskey, deputy director, Cape Canaveral Spaceport Management Office (CCSMO).

Load Break Switches regulate the flow of electricity, and they have been a part of the Spaceport since the 1960s. With more than 250 LBS serving the Spaceport, replacement started many years ago on an as-needed basis.

In March 2001, an LBS exploded near the Range Operations Control Center resulting in a fire, which took SGS Fire Department nearly one hour to extinguish. Butchko requested an immediate assessment of all LBS and the potential danger.

(See LBS, Page 6)

From left, SGS President Mike Butchko, Center Director Roy Bridges, 45th Space Wing Vice Cmdr. Col. Michael Lehnertz and CCSMO Deputy Director Susan Kroskey pull the switch on the last new Load Break Switch.

Inside

New Shuttle Processing Director Named

Michael Wetmore has been appointed director of the Shuttle Processing organization at Kennedy Space Center (KSC), effective Nov. 3.

In this position, Wetmore will be responsible for the management and oversight of Space Shuttle processing and launch operations at KSC. He has been the deputy director of Shuttle Processing since 1999.

"Mike is a great leader with just the right mix of skills to lead our Shuttle Processing team," said Roy Bridges, director, KSC.

"He is well known throughout the Shuttle program for his integrity, his acute sense of judgment on business decisions, and his dedication to the 'One NASA' initiative. He is the right man for these times."

Michael Wetmore

Wetmore earned a bachelor degree in mechanical engineering from the U.S. Naval Academy, Annapolis, Md., in 1980. He served seven years in the United States Navy as a nuclear trained submarine officer, including six strategic deterrent patrols.

In 1987, he began his career at NASA as a Shuttle environmental control and life support system engineer.

Wetmore has excelled in a variety of positions which include Shuttle fuel cells/power reactant storage and distribution engineer, resources management lead for the Space Shuttle Launch and Landing Projects Office, manager, Space Shuttle Launch and Landing Projects Office, and deputy director, Process Integration.

He has also served one year at NASA Headquarters as the chief of the Space Shuttle Resources and Program Evaluation Branch, responsible for the administration

(See DIRECTOR, Page 6)

Recognizing Our People

Certificates of Appreciation

This award recognizes significant contributions by Kennedy Space Center civil servants, contractors, public organizations, or individual citizens to Center endeavors.

NASA
Randall M. Heald
Douglas G. Hendriksen
Wanda L. Henderson
John D. Fablinger
June A. Perez
Roger S. Rudig
Dawn H. Trout
Celene L. Morgan
Penny L. Myers
LaShanda M. Gantt
Rachel R. Kamenetzky
Susan D. Sitko
Stephanie A. Sowards
Robert A. Yaskovic, Jr.
Julie R. Caimi
Charlotte Beauchemin
Kimberly R. Jenkins
Marcia Groh-Hammond
Wayne R. Martin
Jorge E. Rivera
Jade R. Rymkos
Becky J. Thompson
Scott B. Thurston
Charles R. Buhler
Dr. Luz M. Calle
James D. Belote
Charles L. Davis
Debra Donovan
Patrick M. Klotz
George D. Phillips
Harry Plaza
Renee B. Ponik
Krista K. Shaffer
Cricket Stevenson

All Point Logistics Incorporated
Sandra L. Longo

Boeing NASA Systems
Douglas A. Gray
Fulin Gui
Dale W. LeVey
D. Wayne Metcalfe
R. Michael Peacock
Michael D. Stirling
G. Scott Strickland

Comprehensive Health Services Inc.
Meredith R. Caukin
Kim D. Lucks
Garret Brill
Margaret L. Napp
Larry E. Nichols
Williams B. Nichols

Federal Data Corporation
Jimmie L. Fitzgerald
John K. Parrish

InDyne, Inc
Debbie D. Stiggons

Jones, Edmunds and Associates
Steve Laux

Research Planning Inc.
Dennis J. Reddecliff

Space Gateway Support
Robert V. Bryan
Frank C. Chaffins
James A. Mullinnix
Daniel J. Tierney

United Paradyne Corporation
Christopher B. Rawlins

United Space Alliance
Peter R. Aiello
Henry C. Arab
William E. Carr
Gary L. Crawford
Debra G. Favata
Gilbert L. Fox
Ronald J. Horvath
Scott McGilvray
Tracy A. Neal
Kathryn A. Nelson
Steven G. Pancoast
Constance R. Vondrell

ZHA Inc.
Matthew Taylor

Boeing Team Reduces NASA Energy Costs

O&C Team: Front row, left to right, Al Pearson, Clay Elliott, Johnny Hovis, Fulin Gui; back row, left to right, Jeff Norgren, Chip Everhart, Greg Coles, Doug Thom.

Thanks to a Boeing facilities engineering team, the Operations and Checkout (O&C) high bay at Kennedy Space Center is now able to maintain optimal conditions for payloads processing, while using up to 85 percent less energy than in years past.

So far, the modifications made by this team have saved NASA almost $250,000 a year in high bay utility costs.

The team recognized a need for modifications in 2000 when an investigation of the high bay's Heating, Ventilating and Air Conditioning (HVAC) system showed that an extreme amount of energy was being used to control the humidity inside the O&C high bay. The system was combining warm outside air and cold inside air, then cooling and re-heating the two simultaneously. Two large units and one small unit were running continuously year round, struggling to maintain the temperature, humidity and pressure inside the 650-foot long structure.

(See ENERGY, Next Page)

Employees of the Month

From left to right: Liz Osborne (TA) , Ronald Phelps (PH), Welmon Speed (UB), Dionne Jackson (YA), Kathy Luse (GG), Kathy Mease (VA) and Martie Teague (QA).

GG – Chief Financial Office
PH – Shuttle Processing
QA – Safety, Health & Independent Assessment
TA – Spaceport Services
UB – ISS/Payloads Processing
VA – ELV & Payload Carriers Programs
YA – Spaceport Engineering & Technology

Combined Federal Campaign Up and Running, Through End of October

This year's CFC got off to a fast start with a Kickoff Rally in the Training Auditorium on Oct. 1. Chairperson Bob Mott, of the Shuttle Processing Directorate, welcomed everyone and reminded them how blessed we all are to live in America. NASA employee Kim Jenkins stirred the audience with her rendition of the "Star Spangled Banner."

Center Director Roy Bridges charged the group to go back to the workplace and conduct a quality campaign. He asked unit coordinators and key solicitors to brief each employee on the merits of the campaign and make sure each received a personal "quality ask." He espoused this year's theme: "Promoting Hope... Through Generosity."

Guest speaker Cindy Flachmeier, program coordinator for the Domestic Violence Program, Salvation Army of North/ Central Brevard, gave a heart-warming talk about the importance of individual contributions. Next, Wendy Chioji, WESH-TV 2 News anchor challenged those present to "give something back," to a world in which we have been given so much. Rob Raines, president, United Way of Brevard, thanked the KSC workforce for their generous contributions in the past and looked forward to another great year of partnership with KSC.

Week number one contributions totaled more than $127,000, almost half of this year's goal of $265,000. At press time more than $176,000 had been raised. The campaign runs through the end of October.

NASA employees can make their contributions on line at web site: **http://cfc.ksc.nasa.gov.**

When you print out your receipt and give it to your unit coordinator/key solicitor, you will be entered into the weekly incentive prize drawings for gift certificates to the NASA Exchange. The grand prize drawing, held at the conclusion of the campaign, from among all contributors will be four Maximum Access Passes to the KSC Visitors Complex and two seats on the center director's bus for an upcoming launch.

Acting Deputy Director JoAnn Morgan (left) and Cener Director Roy Bridges (right) chat with news anchor Wendy Chioji, whjo talked to attendees at the Combined Federal Campaign Kickoff Rally.

ENERGY. . .

(Continued from Page 2)

The team identified the problems and investigated the capabilities of the existing system. With no equipment budget, they were able to develop a reliable solution that dehumidified moist air without re-heating it. By rearranging airflows, cooling was fully utilized for both dehumidification and heat sensitive payloads.

"The modification turned out to be very successful," said Dr. Fulin Gui, a Boeing engineer who developed the concept.

"In fact, operation and cost records show that it improved high bay climate condition while cutting energy consumption significantly."

". . . it improved high bay climate condition while cutting energy consumption significantly."

DR. FULIN GUI
BOEING ENGINEER

This process, along with the improved processes completed two years ago in the Space Station Process Facility and recently in the Multiple-Purpose Process Facility, have established a baseline for new utility practices across KSC with the potential to save NASA $1 million dollars annually.

The O&C high bay is one of the major payload processing facilities at KSC. Numerous payloads, including components of the International Space Station Laboratory, have been assembled and tested in the high bay.

STS-109 Hubble Workers Recognized

All hard workers need the occasional pat on the back for encouragement. That's exactly what happened Oct. 3 when contributors to STS-109's Hubble mission received well-deserved praise from Frank Cepollina, the Goddard Space Flight Center project manager for Hubble servicing missions.

Scott Higginbotham, STS-109 mission manager, welcomed recipients and introduced Cepollina. The award ceremony, which took place at the O&C Building, was initiated by Cepollina to recognize KSC's talented efforts to help meet GSFC's mission objectives.

"It's often said that we punish the innocent and reward the guilty," said Cepollina to the crowded room. "There are people who come out of the woodwork to fix a problem. We have thousands of problems in processing; therefore, we have thousands of heroes– you are our heroes."

Honorees turn table

Higginbotham and Bob Hart represented workers when they thanked Cepollina for his admirable leadership. The two managers gave Cepollina a picture of the STS-109 launch bordered by special notes from the team.

"I have had the good fortune to serve as the Boeing flow manager on every Servicing Mission, and the Original Telescope Deployment. So you see, there is some history here," said Hart.

"The HST team from Goddard is one of the nicest 'get the job done right' groups I have had the pleasure to work with. This is a great observatory, and it's in good hands."

After the motivational words, 90 employees received a certificate, STS-109 photo montage and an exquisite crystal cube with a "floating" Hubble image embedded by the latest laser technology. Cepollina presented GSFC

(See HUBBLE, Page 4)

Special Space Act Award

KSC Retiree Honored for Invention After 25 Years

More than 100 inventors, including the father of the cochlear implant, received recognition at the Sixth Annual Kennedy Space Center Space Act Awards Luncheon Oct. 1.

KSC's Technology Commercialization Office Chief Jim Aliberti and Spaceport Engineering and Technology Director Jim Heald welcomed the inventors to KSC Visitor Complex's Debus Center.

This is the third consecutive year KSC earned more Space Act Award dollars than any other NASA civil service center. The fiscal year 2002 award amount of $190,850 is proportionately divided among the four areas of awards. According to KSC Center Director Roy Bridges the accomplishment displays the Center workforce is dedicated, hard working and creative.

"It makes my day to see this becoming an annual thing," Bridges said. "You're creating a standard and improving the quality of life."

This year's inventors are definitely living up to the Center Director's statement. Included among the winners, who individually received $500 to $21,000, was retiree and exceptional Space Act Award recipient, Adam Kissiah.

> *"It's wonderful to get a chance to meet the inventor of the technology that made it possible for my child to hear."*
>
> **ALLEN DIANIC**
> ENSCO

Not only did he finally receive well-deserved praise for inventing the cochlear implant 25 years ago, he was also given $21,000. His monetary award is considered the largest award to a single inventor in KSC history.

While medical centers worldwide use Kissiah's invention, he's humble about his impact. "Regardless of what level of participation I had, it is nice to know I contributed to making many lives better," he said.

Another Space Act Award recipient, Allan Dianic, who is an ENSCO Inc. employee, met Kissiah at the ceremony and gave Kissiah a warm "thanks" for the invention. In August, Dianic's two-year-old daughter, Victoria, regained full hearing after receiving a cochlear implant.

"It's wonderful to get a chance to meet the inventor of the technology that made it possible for my child to hear," he said.

The Space Act Awards program was authorized under the Space Act of 1958 to provide official recognition and to grant equitable monetary awards for those inventions and other scientific and technical contributions that have helped to achieve NASA's aeronautical and space goals. The awards are also designed to stimulate and encourage the creation and reporting of similar contributions in the future.

Adam Kissiah (right), a retired NASA-KSC engineer, received an exceptional category NASA Space Act Award for his technology breakthrough 25 years ago -- the cochlear implant. With him is ENSCO employee Allan Dianic whose daughter has benefited from the technology.

[Editor's note: The next issue of Spaceport News *will feature a full report of the awards luncheon and a listing of winners.]*

Before a Hubble awards ceremony, Frank Cepollina, Goddard Space Flight Center project manager for Hubble servicing missions, talks with Bob Hart (left), Boeing flow manager, and Scott Higginbotham (right), STS-109 mission manager. Cepollina commended all Hubble workers for their efforts.

HUBBLE. . .

(Continued from Page 3)

workers' awards; Higginbotham and NASA Shuttle Test director Steve Altemus distributed for NASA; Management & Utilization Director Jim Chilton presented for Boeing; and USA Vice President Ed Adamek distributed for USA.

Recognition wasn't limited to just the technical workforce. All categories of employees were acknowledged, such as engineers, administrative assistants and public affairs officers.

Cepollina described award recipient and USA employee Linda Bradley, who has been part of the Hubble Program since the 1980s, as the "Mother of Hubble." He said, "We rely on her to tell us how things should be done."

Bradley was pleasantly surprised at being honored.

"To be recognized for my continuing support is a testament to the leadership and teamwork that embodies the Hubble Project. In mid-1989, I was charged with leading the trailblazer team that brought the Hubble to Florida," she said.

"I am honored and overwhelmed to once again be acknowledged by the NASA Hubble Project team. My efforts are a labor of love, loyalty and astonishment of all the amazing discoveries that this incredible machine has produced."

Cepollina also reminded workers their work is unique.

"There is no question Hubble has become a public icon," he said. "It's a positive example of NASA, NASA's people and NASA's mission."

Students learn more than science with EarthKAM on ISS

NASA's mission of inspiring the next generation of explorers seems to be working on some local students.

Nikki Woxberg, a teacher from McNair Magnet School in Cocoa, Fla., and her students are involved in the EarthKAM (Earth Knowledge Acquired by Middle school students) program. This program is a Space Flight experiment taking place aboard the International Space Station (ISS).

A camera mounted inside the Space Station is focused on Earth and takes pictures chosen by EarthKAM students. The students and educators create an area in their classrooms called Student Mission Operation Center (SMOC).

The students use maps of our planet to choose interesting places to target along the path of the International Space Station. Using the orbit track of the ISS they take "footprints" of the Earth. A footprint is the area within the camera's lens. There are three lenses used; a 50mm, 80mm, and 180mm lens determine the diameter of land covered, from 30 miles to 7. Through the program, students learn a wealth of math and science skills, as well as language arts, photography, leadership and teamwork.

Woxberg explains what she likes best about EarthKAM. "The best thing about [the project] is that during the time when the camera is active, the students are learning so much and they are having so much fun that they don't really see it as learning. It is not like the regular classroom, it's just so much fun."

The students submit an image request form for each photograph to be taken. Each school is allowed on average 100 images per mission. David, a student, explains the process of the photos.

"First we log on to the photo entry page, put our information in, uplink it to the University of California, San Diego, which sends it to the International Space Station to take the picture. Once the picture has been taken, it is sent back to the University."

EarthKAM students gather for a group photo after visiting theWeb Studio at the Press Site.

The university then uploads all the images to the EarthKAM's web site located at **http://www.earthkam.ucsd.edu/.**

"The EarthKAM project is a prime example of how interaction between NASA, academia and students can make science fun," said Dennis Armstrong, KSC Internet manager. "Students involved in this project learn lessons in math, science, geography and Internet usage that have a lasting impact."

Woxberg and her students showed the fruits of their labor in a KSC Direct live streaming program via the web. It highlighted a current experiment aboard the International Space Station. This program has been archived and is available in a streaming video at **http://www.ksc.nasa.gov/kscdirect/archives/launch/sts112/day2/l-event2.htm.**

STS-112 launch premieres ET camera

The view from the External Tank camera shows a cloud of smoke and steam on the pad below as Space Shuttle Atlantis hurtles into space on mission STS-112. The Atlantic Ocean laps the shore on the right. Liftoff from Launch Pad 39B occurred at 3:46 p.m. EDT. Atlantis carries the S1 Integrated Truss Structure and the Crew and Equipment Translation Aid (CETA) Cart A. The CETA is the first of two human-powered carts that will ride along the ISS railway, providing mobile work platforms for future spacewalking astronauts. On the 11-day mission, three spacewalks are planned to attach the S1 truss. Landing at KSC is scheduled for Oct. 18 at 11:46 a.m. EDT.

40th Space Congress Calls for Papers, Presentations

The 40th Space Congress, sponsored by the Canaveral Council of Technical Societies, will be held in Cape Canaveral, April 29 through May 1. This congress is a gathering of a significant portion of the world's aerospace community to discuss the status and future of space activities around the world.

The theme for this year's Congress is "Linking The Past to the Future - A Celebration of Space." Panel sessions and paper presentations will address how the combined efforts of the Scientific, Commercial, Military and Educational communities contributed in the past, and will in the future, to the growth of knowledge and understanding of space and to the well-being of humankind around the world. For further information visit the web site at **http://www.SpaceCongress.org**.

The 40th Space Congress invites individuals from the U.S. and international communities wishing to offer papers and presentations on the listed subjects to submit (e-mailed abstracts are preferred) a 200-word abstract no later than Nov. 3, to *SpaceCon TechPapers@kscems.ksc.nasa.gov.*

The point of contact is Michael Bell, Technical Papers chairman, at 321-867-3312. Indicate on the top of each abstract which technical paper session you believe your paper best fits, chosen from the list on page 7. Also attach your professional affiliation, return mailing address, e-mail address, fax, and telephone number. All abstracts will be forwarded to the appropriate Paper Session chairman, who will make the final selection of papers to be presented and published in the Congress Proceedings. The abstract authors who are selected for presentations will be notified by the end of November.

(See PAPERS, Page 7)

ART/AST conference draws space program leaders

More than 150 space program leaders attended a conference on Advanced Spaceport Technology (AST) and Advanced Range Technology (ART) held in Colorado Springs September 23–27.

The ART conference, co-chaired by Darin Skelly, who leads the Range Technology Development efforts at KSC, and Maj. Deb Fogle, of the Air Force Space Command (AFSPC), kicked off the conference.

Gen. Mitchell of AFSPC and Jim Heald, director of the KSC Spaceport Engineering and Technology directorate, gave welcoming speeches.

Several technology-based presentations were made, and then the group divided into seven small subteams to focus on specific "function" areas of the range, such as telemetry, tracking and surveillance, and commanding.

Over the next several months, each of these subteams will prepare a function-specific roadmap for next-generation technology development, and these individual roadmaps will then be integrated into a master roadmap for Range Development work.

"Many people spent a lot time getting ready for this conference and it showed. This was our biggest conference yet, and based on the initial feedback, it was a huge success," Skelly said.

"Building a national consensus and identifying the next-generation technologies to develop isn't easy – we have a lot of hard work ahead of us.

"However, if the success of this conference is any indication, we have the right team in place to get it done."

The AST conference, chaired by Cris Guidi of KSC, began Wednesday afternoon and wrapped up Friday afternoon.

Following a similar format to the ART, the AST conference began with technology and current events briefings, and then the large group was divided into eight subteams for detail-oriented discussions.

In addition to the six technology function area subteams, the AST also provides a forum for Commerce Development and Education Outreach subteams.

Each technical subteam is responsible for generating a roadmap of technologies that are needed, and those roadmaps will be integrated into a master roadmap for Spaceport development work.

"The progress made during this conference by the ASTWG subgroups has put us well on our way to developing a national strategy for future spaceports," Guidi said.

Vic Villhand (right) of Booz-Allen-Hamilton leads ART subteam on tracking and surveillance.

Phil Weber, who manages the Spaceport and Range Development initiative, said, "This conference was a tremendous success … the KSC and AF Team should be very proud! We continue to increase our membership and broaden our stakeholder base.

"Having the Air Force host the third ART/AST conference indicates an increasing level of commitment and involvement in this activity. Our ultimate goal is to establish a consortium of stakeholders who feel ownership of these national roadmaps, and provide resources, both dollars and manpower, for turning the crank on developing future spaceports and ranges.

"We are planning for things that you can't buy in the catalogue today, things that aren't developed yet. That is the way you lead the target and get out in front of this."

Conference attendees included NASA, the Air Force, the Navy, the Dept. of Commerce, the FAA, State Spaceport developers, industry, and universities.

LBS. . .

(Continued from Page 1)

It was quickly determined in the Vehicle Assembly Building (VAB) that three LBS represented the highest level of safety concern.

These LBS might explode spontaneously, especially if a power surge or an unplanned outage occurred. Compounding the risk, STS-102 was housed inside the VAB awaiting its next mission.

The differences between the new and old LBS are significant. The old LBS, for instance, were oil filled and hazardous due to their highly flammable nature.

DIRECTOR. . .

(Continued from Page 1)

of the budgets for the Space Shuttle, Expendable Launch Vehicle and Payload Carriers programs.

Wetmore received a master's degree in business administration from Florida Institute of Technology in 1989.

He is a recipient of the Navy Achievement Medal, NASA Exceptional Service Medal, and NASA Outstanding Leadership Medal.

Wetmore is married to the former Kim Sannicandro of Merritt Island.

KSC Fitness Centers Hold Intercenter Walk/Run

The KSC Fitness Centers will be sponsoring the Intercenter Walk/Run on Oct. 29, at the Shuttle Landing Facility. The 2-mile walk/run, 5K and 10K run are free for all KSC/CCAFS employees. Stop by either Fitness Center by Oct. 25 to pre-register — late registration takes place at the race. T-shirts may be ordered at any NASA Exchange store. The last day to order t-shirts is Oct. 25. If you are interested in being a volunteer, please call 867-7829.

Retired space workers gather for reunion

Retired and current space workers, their families and friends gathered at the Miracle City Mall, Titusville, for the annual Space Workers Reunion, Sept. 28.

The event was sponsored by the U.S. Spacewalk of Fame and Museum. Throughout the day, attendees participated in several presentations, demonstrations, exhibits, museum tours and book signings (below).

Many stood in line to meet former Apollo 13 astronaut Fred Haise, reminisce about the early days and get pictures and memorabilia signed.

Also on hand to sign their books were noted author and historian Andrew Chaikin; Hal Burton, author of "From Behind Sandbags"; and Guenter Wendt, author of "The Unbroken Chain."

The highlight of the day came during the reunion dinner when Haise recounted his early Marine days, the aircraft he flew, and his interest in space flight that ultimately led to his becoming an astronaut. Haise described his Apollo program involvement and his Apollo 13 flight experience.

Little-known facts that he brought to light included that in addition to the workers at the Cape, approximately 500,000 people from almost every U.S. state contributed to the Apollo program.

When asked about the Apollo 13 crisis, Haise replied that at the time of the explosion, his first response was "one of confusion," and that mission control thought it wasn't a real problem for "about 18 minutes." The service module explosion resulted in a sea of debris and the loss of an oxygen tank. He described his feelings when the crew realized there would be no moon landing but said he never felt fear.

During the dinner, Haise also treated his audience to a preview of original *Apollo 13* movie scenes featured in the new IMAX 3-D movie.

Former astronaut Fred Haise (right) signs autographs for attendees at Space Workers Reunion.

When a young boy asked if 13 was his lucky number now, Haise replied, "I'm happy and feel lucky and privileged to have lived when I did." And he concluded, "I feel lucky that I accidentally became an astronaut."

PAPERS. . .

(Continued from Page 5)

These presenters will be given specific instructions and format requirements by the paper session organizers. Please disseminate this call to other interested parties throughout your organization. We are looking forward to a broad spectrum of participation in this year's Congress from all sectors of the Space Community.

Topics for the Technical Paper Sessions:

■ ***The Great Telescopes "Discoveries, Current Status & The Future"*** — Topics in the areas of discoveries and findings from Earth-based observatories, space telescopes such as the Hubble Space Telescope, and deep space observatories. In addition, information on the next-generation telescopes is sought.

■ ***Space and Biotechnology Research*** — Results and discoveries in the area of biotechnology and space biology research, material science research and spinoffs.

■ ***International Space Station Advances, Mission Milestones, Mission Operations*** — Topics such as the ISS elements, issues in space construction, operations, long-duration concerns, closed loop environments and utilizations.

■ ***Exploration Missions*** — Topics in the area of space exploration missions such as discoveries in our galaxy and beyond, including our solar system, space propulsion, comets and black holes.

■ ***Spaceport and Range Technology - Technology Demonstrations*** — Presentations and demonstrations for a broad spectrum of technology initiatives related to the development and advancement of spaceport and range technology.

■ ***Safety & Spaceport Ballistic Program*** — Topics in the areas of spaceport safety and space ballistic safety systems. Initiatives and developments in this growing area will reveal information related to the safe and successful operation of current and future spaceports.

■ ***Education and History - 100th Anniversary of Flight*** — Education programs, projects and history designed to inspire and foster learning and the excitement of flight.

■ ***The Building of a Spaceport - Knowledge Capture and 40th Anniversary of Space Congress*** — This session will chronicle historical perspectives of our heritage in the building of a spaceport, including lessons learned, knowledge capture and sharing and implications for the future.

■ ***Space Business, Legal and Policy*** — This session will address global space commerce initiatives including satellite services, partnerships, space tourism, or new launch services. Papers are sought on space policy, business systems and business cases for space.

Drive cautiously near SCAPE vans

All Kennedy Space Center and Cape Canaveral Air Force Station employees are reminded to be very careful while driving in the proximity of all NASA SCAPE vans.

Anytime you see a SCAPE van, it could potentially be carrying up to 10 suited personnel, according to Mark Annulis, Wyle Laboratories Life Support supervisor.

"SCAPE personnel are standing while in transport. Sudden stops or swerves of the SCAPE van could result in injury to the personnel wearing the SCAPE suits," Annulis said.

SCAPE operations for Boeing, Lockheed Martin, United Space Alliance and the U.S. Air Force are supported by Wyle Laboratories.

Extreme effort launches two rockets in 25 days

On Oct. 2 and Oct. 27, 1962, Launch Complex 17B supported the launches of two Energetic Particles Explorer spacecraft.

These spacecraft — Explorer XIV and Explorer XV — were almost identical payloads launched on identical Thor-Delta vehicles, but just 25 days apart.

Explorer XIV (S-3A), like its predecessors, was designed to measure the energetic particles of natural radiation belts. Explorer XV (S-3B), however, was hurried into production with the specific objective of studying the location, composition and decay rate of the artificial radiation belt created by the U.S. Air Force Starfish test, a high altitude nuclear test conducted above Johnston Island west of Hawaii on July 9, 1962.

Its systems were basically the same as Explorer XIV's since the satellite was a backup model of that spacecraft. However, the power supply system was modified to be more resistant to radiation in space.

Pad 17A was not available because it was already occupied with the vehicle being prepared to launch the Relay 1 satellite.

Don Sheppard recalls the extraordinary effort it took to launch two spacecraft so close together from the same pad. He was the payload coordinator for the missions, a function similar to a launch site support manager today.

"It was the highest priority mission we had ever had," Sheppard, himself a physicist, recalls about Explorer XV. He was originally part of the Vanguard operations team that moved to the Cape from the Goddard Space Flight Center. "We were told we could have anything we needed to get the job done. It was extremely important to understand the physics of how the recently discovered Van Allen belts that were formed over eons by the solar wind were now suddenly much more powerful and were affecting the performance of some other satellites."

The technology and processing procedures were already in place. They had been tested and proved on previous Explorer launches. The most pressure the employees felt came from the clock — the push to do something that had never been done before, conduct another launch from the same pad in just days.

Sheppard said that the successful effort had Bob Gray and John Neilon at its helm, and lots of hours of overtime were worked by a small number of NASA management and large contractor support teams.

The area surrounding KSC was relatively undeveloped which caused some hardship. Working at the Cape then was like being "back in the pioneer days. It was just mosquitoes, and that's about it. But we loved it because we were always doing something new and important; actually, much the same as the KSC people are doing today."

Even with the long hours, Sheppard always managed to make it back home to Melbourne every night. In 1962, before I-95 was constructed, A1A and U.S. 1 were the only two roads leading to South Brevard. He made that long drive in a small English Morris Minor automobile that got 45 miles to the gallon.

"That car became a recognizable fixture in the Hangar AE parking lot," Sheppard said. "It was there for the Explorer launches and many others."

Remembering Our Heritage

One of two Explorer rockets launched in October 1962.

Super Safety & Health Day

Remember, the fourth annual Spaceport Super Safety & Health Day is just around the corner. The event will be held on Oct. 23, and will kick off at 8 a.m. in the KSC Training Auditorium. The morning activities will feature a presentation by John Drebinger Jr., a nationally known speaker, trainer and author on safety and safety communication. The afternoon activities will feature a multitude of vendors and exhibitors, astronaut visits, and a health fair and open house at the O&C Fitness Center. For the latest information, visit the web site at **http://www-ss.ksc.nasa.gov/supersafety2002**.

John F. Kennedy Space

Spaceport News

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