

Mission Update

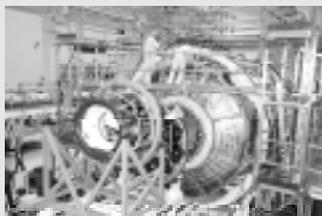
STS-91



Launch date change: Discovery arrives at Launch Pad 39A May 3. This unusual image was taken from the 95-foot level of the pad as the Orbiter Access Arm supporting the white room (arm on right) and the External Tank Gaseous Oxygen Vent Arm were moved into place on the orbiter and its stack. The Flight Readiness Review for STS-91, the final Shuttle-Mir docking flight, is scheduled for May 20. A tanking test of the first Super Lightweight Tank is planned for May 18. Launch date for the mission has been changed from May 28 to June 2 at about 6:04 p.m. EDT. Below, the SPACEHAB Single Module is moved by crane over the payload canister in KSC's Space Station Processing Facility. It was to be joined in the payload canister by the Alpha Magnetic Spectrometer-01 payload before being moved to the pad. SPACEHAB is used mainly as a large pressurized cargo container for science, logistical equipment and supplies to be exchanged between the two spacecraft.



STS-88



PMA-2 pre-mate: In the Space Station Processing Facility, work is under way to prepare for the mating of Pressurized Mating Adapter-2 (PMA-2) to Node 1, the first U.S.-built element of the International Space Station scheduled to be launched.

Spaceport News

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

John F. Kennedy Space Center

Contractors earn safety honors

Four KSC contractors were honored April 23 for their efforts to improve safety.

The KSC Safety Initiatives Award Program was instituted in Fiscal Year 1995. It encourages

planning, development and execution of safety initiatives which focus on contractor safety program improvements, increased efficiency and best use of available resources. Each contractor has the opportunity to submit a proposal and negotiate an agreement with NASA for safety program improvement. Upon successful completion of the program plan, the contractor is eligible for one of two awards.

In Fiscal Year 1997, three KSC contractors earned the KSC Safety Initiatives Award: I-NET, McDonnell Douglas Space and Defense Systems

(See SAFETY, Page 2)

Aguilar named EO director

Effective April 20, Kenny E. Aguilar became Chief, Equal Opportunity (EO) Program Office at KSC.

Aguilar formerly was the center's personnel director. As EO chief, he will be responsible for day-to-day management of the NASA

(See AGUILAR, Page 6)



WORK IN PROGRESS — Workers from Rush Construction Co. are turning what was once a cluster of partitioned rooms into a firing room again. When the job is complete, this will be Operations Control Room 1, the first CLCS firing room to achieve fully operational status. See page 6 for an artist's drawing of the finished room.

Latest CLCS "shipment" extends to Firing Room 4 and the HMF

The Checkout and Launch Control System (CLCS) program is widening its geographic boundaries. The latest shipment, known as Thor, extends the initiative into

Firing Room 4 of the Launch Control Center and the Hypergol Maintenance Facility (HMF).

Thor is the third CLCS "shipment" to date. A shipment can include anything from the arrival or installation of new equipment to a specific improvement in existing equipment, or to the achievement of a certain level of capability.

Included as part of Thor is the breakdown of Firing Room 4 in the Launch Control Center (LCC). This marks the first step in transforming the firing room into a new, state-

of-the-art configuration capable not only of supporting Shuttle processing and launch countdown, but also vehicles like the X-34 advanced technology demonstrator, said CLCS Deputy Project Manager Ric Hurt. The floor plan has been finalized, and a console layout finalized. Equipment

(See CLCS, Page 6)

Spaceport News editorial change

Effective May 6, Susan Maurer will be serving as the acting editor of the *Spaceport News*, succeeding Paula Shawa. Please direct any e-mail to her at Susan.Maurer-1@ksc.nasa.gov. Bruce Buckingham continues to serve as managing editor, and also can be contacted.

Safety ...

(Continued from Page 1)

(now Boeing) and United Space Alliance. Dynamac received the KSC Center Director's Award for Safety Initiatives, given to a contractor who not only has implemented a program per the agreement with NASA, but can demonstrate that the goals of the program are being achieved.

The three Safety Initiatives Award recipients were cited as follows:

- I-NET, the previous Engineering Support Contractor noted that raw stock materials such as sheet, bar, rod or tubing was being received from Base Operations Contractor stores with a plastic envelope that was extremely difficult to remove.

Technicians also were spending time trying to remove the adhesive from the envelope and were resorting to volatile solvents such as methyl ethyl ketone and acetone to remove it. A pilot program was instituted to see if a non-toxic solvent could be used instead. Three non-toxic solvents — positron, electron and bortex — were successfully substituted.

- McDonnell Douglas successfully increased the

scope of area/facility safety inspections to incorporate other safety-related issues. The contractor also implemented an initiative to reduce repeat discrepancies identified during safety inspections.

- United Space Alliance (USA) analyzed vehicle accident data for three consecutive fiscal years. Backing accidents showed the highest incidence, and vans in particular were the most involved vehicle.

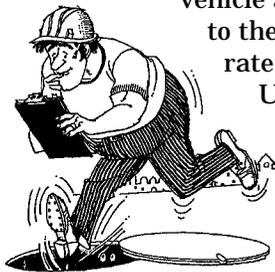
Fifteen vans were installed with backup sensors that emit a high-pitched beep when the vehicle approaches an object to the rear. The accident rate was reduced to 0.

USA also was recognized for developing an effective program for ensuring that Original Equipment Manufacturer Pneumatic Test

Equipment is certified operationally safe and subject to in-service inspection and periodic re-certification.

- Dynamac received the KSC Center Director's Safety Award for its efforts to improve field rescue capability.

As the Life Sciences Support Contractor, Dynamac often stations employees in remote field locations — locating them in case of an emergency was a concern. The company developed a program



THINK SAFETY!
On The Job Site



KSC Director Roy Bridges (second from left) presents the KSC Center Director's Safety Award to Dynamac representatives Guy Camomilli (from left), Becky Smith, Resa Reddick, and Todd Kuhn.



BRIDGES (center) poses with representatives of the three KSC contractors receiving the Safety Initiatives Award for Fiscal Year 1997. From left are: Jack Jamba and Mark Nappi, United Space Alliance; Jim Keller, I-NET; and Tim Murphy, McDonnell Douglas. The presentations were made during an April 23 ceremony in Headquarters.

using Global Positioning System (GPS) satellite tracking capability and was able to reduce by more than

half the amount of time it would take to reach an employee in the event of an emergency.

Adamek takes over as head of USA Florida Ground Operations

Paul E. "Ed" Adamek has been named vice president and associate program manager for United Space Alliance (USA) Ground Operations at KSC. In this position, he directs the 4,000



Adamek

members of the USA team who serve as the prime contractor

for NASA's Space Shuttle program.

A 36-year veteran of the space program, Adamek served as vice president and deputy associate program manager for two-and-a-half years before assuming his current position. He has been directing the Ground Operations program in an acting capacity for the past six months.

USA Ground Operations is responsible for conducting all processing activities of NASA's

Space Shuttle fleet from landing to liftoff, as well as staffing the Trans Atlantic Abort landing sites and recovering the reusable solid rocket boosters at sea. USA, with headquarters in Houston, is a joint venture of Lockheed Martin and Boeing, established to perform the five-year Space Flight Operations Contract (SFOC).

Before joining USA, Adamek worked for Lockheed Martin for 34 years, hiring on

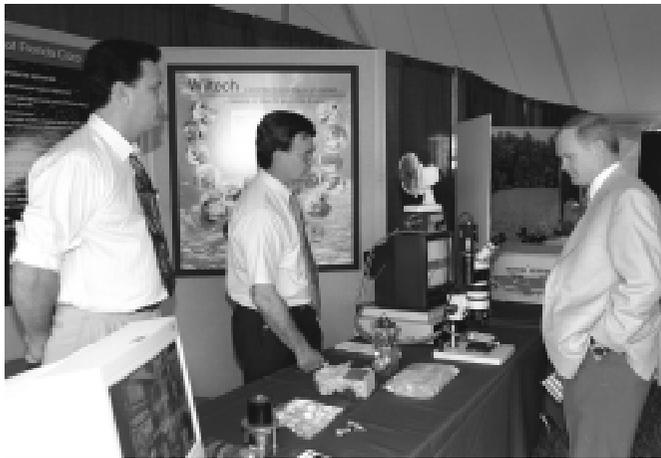
as a sheet metal worker in 1962. He later completed a two-year management development program and progressed through positions of greater responsibility. He joined Lockheed Space Operations as director of Reliability and Quality Assurance in 1985 and was named director of Safety, Reliability and Quality Assurance in 1989. A native of Morgantown, W.Va., he now resides in Cocoa Beach.

KSC Happenings



DYNAMAC Biologist Melissa Hensley (far left) shows Daughters Day attendees in the Operations and Checkout Building some of the equipment and apparel which would be used for field work, including the trap for catching Florida scrub jays so they can be banded and tracked. The show-and-tell demonstration by Hensley and co-worker Vickie Larson was just one of the many opportunities daughters of KSC employees had on April 23 to learn more about KSC and the types of work performed here.

CENTER Director Roy Bridges (right) visited the exhibits and displays set up at the KSC Visitor Complex for Environmental and Energy Awareness Week. Here, Wiltech Florida Corp. employees Tom Kelley (left) and Ken Fishell show him some of the exhibits. The April 20-21 show at the visitor complex also traveled to certain facilities around the center.



Needed: EEO Counselors

The Equal Opportunity Program Office (EEO) has a need for several co-lateral EEO Counselors. If you have a few hours to devote to counseling fellow employees in pre-complaint and informal complaint stages of EEO, please contact the EO Program Office, mail code AJ, or 867-2307, for application forms. Applications, along with a supervisory approval form, must be completed and received in the EO Program Office no later than May 18, 1998. Selectees will be sent to Basic EEO Counselor Training prior to counseling employees. Any interested employee may apply. Eligible applicants will be interviewed by a panel from the Multicultural Diversity Council.



THREE manatees get a helping hand finding their way home by members of Sea World, the U.S. Fish and Wildlife Service, the Merritt Island National Wildlife Refuge and the Florida Department of Environmental Protection. The release took place April 20 at KARS Park 1. The wayward sea mammals were found trapped in a storm drain in Cocoa Beach, and taken to Sea World of Florida in Orlando to recuperate before being released.



THE KSC Child Development Center honored its 24 child-care givers on April 24, the first Child Care Professionals Day. This special day was established by an act of Congress to single out for praise those individuals who take care of our children when we are at work. "The KSC Child Care Development Center's motto is *With love and knowledge we teach our children,*" said Center Administrator Denise Johnson, "and we believe that the child-care professionals who work here certainly live up to those words." A luncheon was held and each care-giver presented with a plaque and a pin. From left, above, are: Johnson; Cindy Stepina, preschool lead teacher; Niki Davis, two-year-old lead teacher; Jennifer Duran, toddler I lead teacher; Lori Baker, infant lead teacher; Janet Bloom, transitional ones lead teacher; Miriam Fuentes, child development assistant administrator; and Ken Woodill, NASA Exchange general manager.

KSC to host May 13 – 15 Aerospace Mechanisms Symposium in Cocoa Beach

Kennedy Space Center will host the 32nd annual Aerospace Mechanisms Symposium, scheduled May 13-15 at the Hilton Oceanfront Hotel in Cocoa Beach.

Approximately 160 persons from all over the world are expected to attend the three-day conference, according to Host Chairman Sterling Walker, KSC's director of Engineering Development. Walker also serves on the Symposium Organizing Committee.

Hosting of the event rotates annually among eight NASA field centers. The symposium is sponsored by Lockheed Martin Missiles & Space Co. and the Aerospace Mechanisms Symposium Committee.

"Historically, this is one of the most well-attended aerospace symposiums, especially when it is hosted by Kennedy Space Center with all of its attractions both on-center and in the Central Florida area," Walker said. "Generally, there is representation from all the NASA centers and the Jet Propulsion Laboratory, as well as all the major aerospace companies, a number of smaller companies specializing in the space business, and academia."

The symposium focuses on the design, fabrication, testing and operational use of aerospace mechanisms. It will include

six sessions for presentation of papers. One session will be chaired by NASA engineer Alan Littlefield, who also is the symposium co-host chairman.

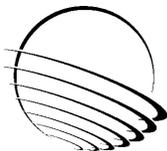
This year's event is dedicated to the memory of the late Dr. Charles Coale, a structural dynamist at Lockheed Martin who provided leadership to the symposium for more than 20 years, until his death last summer.

Center Director Roy Bridges Jr. will welcome the attendees on May 13 and a reception will be held that night at the Apollo/Saturn V Facility. Loren Shriver,

KSC's deputy center director for Launch and Payload Processing, will give an overview of the space center on May 15. Attendees also will have the opportunity to tour KSC on the symposium's last day.

Another highlight will be a presentation on May 14 by astronaut Don McMonagle, who is manager of Space Shuttle Launch Integration at KSC. He will give an astronaut's perspective on the use of mechanisms during extravehicular activities (EVAs). A banquet will follow at the Hilton.

The cost of the symposium is \$160, or \$100 for students and educators and \$25 for retirees (sessions only). To register, contact Martie Teague at 867-7770.



Blood pressure tests offered in May

Employees can get their blood pressure checked throughout the month of May at KSC. High blood pressure often is called the silent killer because those who are hypertensive have few — and often, no — symptoms.



Employees can get the checkup on a walk-in basis at all three medical clinics, and according to the following schedule in area facilities, from 11 a.m. to 3 p.m. throughout:

May 7, Thursday — Cape Canaveral Air Station (CCAS) cafeteria;

May 12, Tuesday, KSC Headquarters lobby;

May 13, Wednesday, Assembly and Refurbishment Facility (ARF) cafeteria;

May 14, Thursday, Space Station Processing Facility (SSPF) cafeteria;

May 18, Monday, Cape Canaveral Air Station, MRL lobby;

May 19, Tuesday, CCAS, Integrated Transfer Launch (ITL) warehouse, Rm. 208;

May 20, Wednesday, Operations and Checkout (O&C) Building lobby;

May 21, Thursday, Operations Support Building (OSB) lobby;

May 26, Tuesday, CCAS, Complex 36 Site Support Building;

May 27, Wednesday, Central Instrumentation Facility (CIF) lobby;

May 28, Thursday, Base Operations Building (BOB), 2nd floor conference Room.

Employees of the Month — May



HONORED IN MAY — From left, are Edward Gawronski, Chief Financial Officer's Office; Nancy Zeitlin, Launch Integration Office; James Fesmire, Engineering Development; Pam Lohning, Logistics Operations; Rodney Winningham, Installation Operations; Patricia Ermerins, Shuttle Processing; Stephen Cox, Payload Processing; Patricia Snooks-Moore, Safety and Mission Assurance. Not shown are Janet Gobaira, Checkout and Launch Control System; Bet Eldred, Administration Office; Diane Ely, Biomedical Operations; Clarence Floyd, Procurement Office; and Doug Kverek, Space Station Hardware Integration Office.

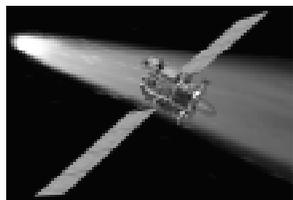
Fitness day is May 20

To celebrate National Employee Health and Fitness Day, the KSC Fitness Centers are sponsoring a Health Fair May 20, from 10 a.m. to 2 p.m., in the Operations and Checkout Building Mission Briefing Room and lobby. Door prizes, blood sugar tests, free massages, a "Quick Fit" workshop, health risk appraisals and tuberculosis tests will be offered. Free bagels and fruit, too!

Deep Space 1 launch slips to October

Additional time required to test the Deep Space 1 spacecraft means the planned July launch has been rescheduled for October.

Deep Space 1 is the first launch in NASA's New Millennium program, a series of missions designed to test new technologies so that they can

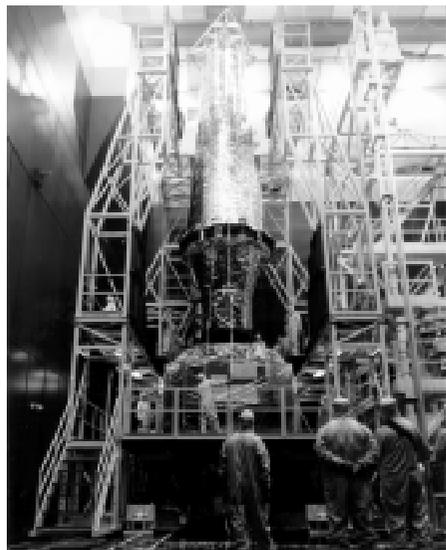


be used on science missions in the next century. Among the 12 technologies the mission is designed to validate are ion propulsion, autonomous optical navigation, a solar

power concentrator array and an integrated camera and imaging spectrometer.

The delay is due to a combination of late delivery of the spacecraft's power electronics system and an ambitious flight software development schedule, which together leave insufficient time to perform thorough spacecraft testing.

Deep Space 1 will be launched from Cape Canaveral Air Station on a Delta II expendable launch vehicle.



AXAF under assembly at the TRW plant in Redondo Beach, Calif. TRW is in the final stages of integrating and testing the observatory. In late April, members of the STS-93 flight crew which will deploy AXAF visited the plant to get a close-up look at the five-ton spacecraft. A final test awaiting AXAF was an environmental test in a very-low pressure chamber simulating the vacuum of space. Over a period of weeks, AXAF will be exposed to periods of extreme heat and cold to ensure that all of its subsystems can survive the harsh thermal conditions of space.

NASA seeks new name for AXAF

A contest is under way to come up with a new name for NASA's Advanced X-ray Astrophysics Facility (AXAF).

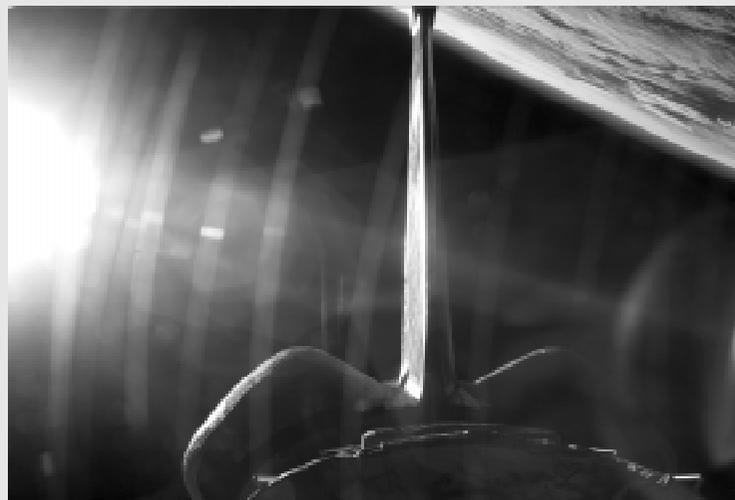
AXAF, the third of NASA's great observatories, is scheduled for deployment during Shuttle Mission STS-93 this December. Members of the STS-93 flight crew, led by Commander Eileen Collins, recently visited the manufacturing plant of AXAF builder TRW in California to get a close-up look at the satellite.

Contest rules, electronic entry forms and additional information can be found on the Internet at <http://asc.harvard.edu/contest.html>
Entries also can be mailed

to: AXAF Contest, AXAF Science Center, Office of Education and Public Outreach, 60 Garden St., MS 83, Cambridge, MA 02138. Mailed entries must be postmarked no later than June 30, 1998. All entries must state a name of the mission, along with the reason the name would make a good choice. Entries should contain the name of a person (not living), place or thing from history, mythology or fiction. The name can't have been used before on space missions by NASA or other organizations or countries.

The final selection and 10 runners-up will be announced by NASA later this year.

STS-90 on-orbit ...



ABOVE — Earth view looking toward the aft of Columbia. At left, Pilot Scott Altman works on a laptop computer. The computer provides real-time information about the Shuttle's position above the Earth, as well as predicting upcoming Earth observation targets.

PAYLOAD Specialist Jay Buckley, right, is wearing special micro-binoocular glasses as he works on rodent skill experiments in the Neurolab1 module. The dark cord connected to Buckley's right arm is a grounding strap.



... and landing.



A FLOCK of birds take flight as Columbia, with its drag chute deployed, touches down on Runway 33 of KSC's Shuttle Landing Facility to complete the nearly 16-day STS-90 mission. Main gear touchdown occurred at 12:08:59 p.m. EDT on May 3. Mission duration was 15 days, 21 hours, 50 minutes and 58 seconds. The 90th Shuttle mission was Columbia's 13th landing at the space center and the 43rd KSC landing in the history of the Space Shuttle program. During the mission, the crew conducted research to contribute to a better understanding of the human nervous system. On board are Commander Richard Searfoss; Pilot Scott Altman; Mission Specialists Richard Linnehan, D.V.M., Dafydd (Dave) Williams, M.D., with the Canadian Space Agency, and Kathryn (Kay) Hire; and Payload Specialists Jay Buckley, M.D., and James Pawelczyk, Ph.D.

Aguilar ...

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Equal Opportunity Program at the center, including support of equal employment practices for all employees and equal consideration for all applicants for employment.



Aguilar

Aguilar is responsible for providing professional advice to center management on policy matters relating to equal employment opportunities. Additionally, he is responsible for administering the agency's complaint processing system.

Aguilar began his career with NASA at the Lewis Research Center in 1979. He served as deputy personnel director and for several years as director of Equal Opportunity Programs at the Cleveland, Ohio, facility.

He joined the KSC workforce in 1993, initially working in the Personnel Management Branch. In 1995, Aguilar was honored with the Center Director's Award, the highest and most prestigious award available at the center. He was recognized for his efforts to improve KSC union/management relations, the quality of the work environment, and the quality and diversity of the KSC workforce.

An Ohio native, Aguilar has a bachelor of arts degree from Youngstown State University and attended graduate school at Cleveland State University. Aguilar said of his new position as Equal Opportunity Program Office chief, "Ensuring that the KSC workforce is diversified and representative of the American population as a whole is an important priority. I look forward to continuing a strong and effective EO program here at the space center."



TAKING SHAPE — In the Hypergol Maintenance Facility (HMF), Don Slayman, NASA (at left); Chris Boyd, United Space Alliance and Tim McKelvey (in adjacent room), NASA, prepare for a test of the CLCS interface in the Industrial Area location. The HMF is the first operational area to receive CLCS.

CLCS ...

(Continued from Page 1)

will soon be installed, including 12 consoles, with a projected completion date of October.

At the HMF, facility modifications are complete and hardware is now being installed and activated. Development of application software to support CLCS in the HMF also is under way.

Other developments include:

- Achievement of an initial launch data bus and telemetry interface — the critical interface between the Shuttle and the CLCS network.
- Deployment of BASIS. BASIS is the business system interface for CLCS. It provides the user with access to software programs like Microsoft Windows, the Internet and data analysis and retrieval. Firing Rooms 1 and 3 personnel have access to the capability in order to provide feedback to the CLCS project, Hurt said. BASIS also includes what is called Jview capability, which allows access to realtime data via the Web. The user can get control room data and such peripheral data as ground measurements and meteorological information.

- Completion of performance modeling. A model has been developed which will allow CLCS personnel to determine if the system can handle the required data rates and measurement changes.
- Shuttle Data Center equipment and modifications

completed. The new servers which will succeed existing hardware of the Central Data Subsystem on the second floor of the LCC have been installed. They will be phased into operational status gradually.

There are now about 320 NASA and contractor personnel supporting CLCS, Hurt said, noting that a highly successful training program had to be devised to bring some on board.

The CLCS team recently briefed representatives from Orbital Sciences Corp., the X-34 prime contractor, on CLCS capabilities.

"We showed them that CLCS will be flexible enough to be used from inside a trailer to support an advanced vehicle such as X-34," Hurt said.

CLCS also will support the first Super Lightweight Tank test later this month, Hurt noted. CLCS will be able to provide additional strain gauge data not currently available through the Launch Processing System.



ARTIST'S RENDERING — Operations Control Room 1 (OCR 1) will have the same eyebrow-shaped console layout, with the console rows facing tiered management stations, as the current operational firing rooms. Console features and capabilities, however, will be more advanced and user-friendly than what is now being used.



John F. Kennedy Space Center

Spaceport News

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Contributions are welcome and should be submitted two weeks before publication to the Media Services Branch, AB-A. E-mail submissions can be sent to Paula.Shawa-1@ksc.nasa.gov

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