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Spaceport News

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John F. Kennedy Space Center

Mission update

Mission: STS-75 on Columbia.

Status: Members of the STS-75 Tethered Satellite System Reflight Mission Failure Investigation Board made their initial first-hand inspection of the severed tether March 19 at Kennedy Space Center after it was removed from Columbia and safed. After extensive photo documentation, the tether was sent to Marshall Space Flight Center March 23, where it underwent further examination. See page 5 for photos of the tether.

The tethered satellite re-entered the Earth's atmosphere at about 6:12 p.m. EST on March 19, according to calculations by the United States Space Command's Space Control Center in Cheyenne Mountain, CO. The satellite re-entered the atmosphere over an area which includes Northeast Africa and Southwest Asia. The satellite was not designed to survive re-entry.

Mission: STS-77 on Endeavour.

Launch date, time: May 16, 6:32 a.m. from Launch Pad 39B.

Mission synopsis: Major payloads include Spacehab-04 which will carry 12 experiments ranging from the growth of crystals to the separation of organic materials using aqueous techniques. Spartan 207 will be deployed and retrieved via the Remote Manipulator System and carries one payload - the Inflatable Antenna Experiment (IAE). The Technology Experiments Advancing Missions in Space (TEAMS-01) features experiments in tank venting, liquid metal heat pipe designs, a laser-based altitude measurement system and an antenna system proposed for the International Space Station.

Landing date, time: May 26, 7:09 a.m. at the Shuttle Landing Facility.



THE SPACE SHUTTLE Atlantis hurtles skyward from Launch Pad 39B at 3:13 a.m. EST March 22. Loren Shriver, Space Shuttle Program Launch Integration manager, and Launch Director Jim Harrington commended the KSC launch team for the smooth countdown and the launch which occurred right on time. Flight controllers detected a small leak of hydraulic fluid from one of three hydraulic systems aboard the Shuttle shortly after liftoff. When all three hydraulic systems were shut down after reaching orbit, as is normal, no further indications of a leak were observed. Atlantis successfully docked with the Mir space station at 9:34 p.m. EST March 23. Mission Specialist Shannon Lucid officially joined the Mir crew where she will remain for four and a half months.

Honeycutt back on job, thanks employees for concern

I would like to express my sincere appreciation to all of you for the flowers, cards, letters, prayers and thoughts during my recent operation and subsequent rehabilitation.

The experience of going through major surgery was a unique one for me and was compounded by the fact I was in North Carolina rather than here in Central Florida. The entire experience was made easier because of you and your daily messages of cheer. Before my operation, I didn't really have an appreciation for the tremendous positive impact the thoughts and prayers of others provide to a patient's recovery process.

As you may know by now, I'm just about completely recovered from the surgery and back to work.

Thanks again for your thoughts and prayers. They really made a difference.

NASA hopes to avoid RIF

KSC could meet staffing goals through attrition

NASA will do all it can to avoid a reduction in force (RIF) in the foreseeable future, Administrator Dan Goldin said after presenting President Clinton's 1997 budget recommendations for the agency.

"So far as we can tell we do not anticipate a RIF in 1996 and we'll fight the battle in '97," Goldin said during a question and answer session following the presentation from NASA Headquarters March 19.

Goldin said centers have been successful in bringing their numbers down through last spring's buyouts, career counseling, and hiring freezes.

"We're working with our employees," Goldin said. "Relative to the plan we've had more departures than we expected. I don't want to give up until we absolutely positively have to do it."

Kennedy Space Center is losing about twice as many employees annually as it did before NASA's 1994 Zero Base Review recommended the center reduce its civil service work force by 1,000 and contractors by 2,000 by the year 2000.

And most of those employees are now leaving for reasons other than retirement, said James L. Jennings, director of the Administration Office.

In fiscal year 1994 KSC had 2,531 full time equivalent civil service employees, Jennings said. In 1995 that number was

(See RIF, Page 6)

Evey takes new position as Air Force assistant undersecretary for procurement

Walker Lee Evey, NASA's senior procurement representative for the Shuttle prime contract Source Evaluation Board, has taken a new position as assistant undersecretary of the Air Force for procurement. He will assume the new role in early April.

Evey came to the Kennedy Space Center in May 1994 as director of the Office of Procurement. Previously he served at NASA Headquarters where he was director of the Acquisition Liaison Division of the Office of Procurement.

Evey entered civil service in 1974 at Patrick Air Force Base where he served until his selection as a contract analyst for base contracting at Headquarters, Air Force Systems Command (AFSC). After work with the Department of Energy, Evey returned to the AFSC where he was promoted to several positions before being selected by NASA to head the Office of Program Operations in February 1987. He remained in that position until December 1992 when he was selected to head the Procurement Policy Division.

KENNEDY SPACE CENTER 7th ANNUAL SPRING INTERCENTER RUN

Registrations are now being taken for Kennedy Space Center's Spring Intercenter Run, which will be held Wednesday, April 17 at 5 p.m. at the Shuttle Landing Facility runway.

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New this year are race numbers featuring the name of the event and tear-off tabs to record finishing times. Participants must sign up by midnight April 5 at the KSC exercise facilities. There is no race fee but T-shirts are available for a charge.

Name _____ First _____
 Last _____
 Age _____ Male Female
 City/State _____

TIME _____

No 0001

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MCDONNELL DOUGLAS SPACE & Defense Systems Vice President and General Manager George Faenza presents the Johnson Space Center Group Achievement Award to members of the STS-71 Russian Logistics Engineering, Stowage and Shipping team for their work on Space Shuttle accommodations and pre-and post-flight processing for Russian logistics items. It is the first time a Kennedy Space Center team has been awarded the Johnson award which was signed by Johnson Center Director George Abbey. The recipients, from the left, are Debbie Gast, Brenda Forbes and Kim Juranek. They are all in the Logistics and Automation Systems directorate of the KSC division of McDonnell Douglas.

Harold 'Jack' Scarborough dies at 71

Harold K. "Jack" Scarborough, retired chief of the former Manpower and Organization Branch of the Executive Management Office, died March 14 at his home. He was 71.

Scarborough joined the KSC work force in January 1964 as a placement specialist in the Personnel Office and was later appointed chief of the Personnel Management Assistance Branch. In 1981 he earned the KSC Director's Award for his exceptional contributions during

the personnel build-up and preparation for the first Space Shuttle launch.

He retired in 1994 with more than 40 years of federal service.

Prior to joining KSC, he worked for the Air Force as a personnel specialist at Clovis, NM; Mobile, AL; Osan, Korea; and Fort Walton Beach. He was a troop carrier pilot during World War II and a Strategic Air Command aircraft operations officer during the Korean conflict.

Rockwell manager named 1996 Debus award recipient

The National Space Club - Florida Committee has selected Lee Solid as its 1996 recipient of



SOLID

the Debus Award, a prestigious honor bestowed each year to a Floridian who has made significant contributions to the nation's space program.

Solid has been with Rockwell since 1959, first with Rocketdyne, progressing to the current position of vice president and general manager of Rockwell's Florida Operations in Cape Canaveral.

He has been involved in the launch operations end of every manned space program.

He lives on Merritt Island and is active in many civic organizations.

"Lee Solid is an outstanding choice to receive the Debus Award," said Space Club Chairman Jim Drake.

"His tireless dedication to aerospace is awesome and his strong desire to make a difference in our community is inspiring."

The award is named in honor of Dr. Kurt Debus, the first

director of the Kennedy Space Center.

Previous recipients are George Faenza, president of McDonnell Douglas Space and Defense Systems; Kennedy Space Center Director of Shuttle Operations Bob Sieck; former Florida Congressman Bill Nelson; former KSC Center Director Forrest McCartney, Lyle Holloway, director of launch sites for McDonnell Douglas Aerospace; and George Page, former KSC launch director and deputy center director.

The 1996 presentation will take place during a banquet on Friday, April 12 at the Cocoa Beach Holiday Inn.

The keynote speaker will be Harry Stonecipher, president and chief executive officer of McDonnell Douglas Corporation. The date marks the 15th anniversary of the first Space Shuttle launch and the 35th anniversary of the first man in space, Cosmonaut Yuri Gagarin. The black-tie dinner begins with a reception at 6:30 p.m. Tickets are \$50 for Space Club members and \$60 for non-members. Corporate tables of eight can be reserved for \$500. For reservations contact Gale Kuznicki at 799-6849 or Delores Stephens at 269-9123.

KSC library to celebrate National Library Week with open house

The Kennedy Space Center library has entered the electronic age.

Gone are the battered green volumes of the "Readers' Guide to Periodical Literature" that most people remember spending many late nights with while working on school assignments. The library still has books and magazines, but new electronic tools are making them much easier to use.

The library has introduced so many computerized innovations recently, that it is holding an open house April 16-18, in conjunction with National Library Week, to showcase new services to KSC employees. The open house will feature interactive demonstrations at 10 a.m., noon and 2 p.m. each day.

Among the items to be demonstrated will be CD-ROM directories and indexes, the World Wide Web and various online search mechanisms. These include:

*The NASA Aerospace Research Information Network (ARIN): An online catalog which provides access to more than 300,000 books, documents and periodicals at all NASA center libraries.

*RECONplus: the newly redesigned NASA RECON database, contains bibliographical references to aviation and aerospace related subjects dating from the early 1900s.

*Applied Science and Technology Index: a networked CD-ROM index of articles from more than 500 scientific and techni-

cal journals.

*Engineering Index: this networked CD-ROM provides bibliographical references to over 10 years of the literature of mechanical engineering and related disciplines.

*Phone disk: a networked CD-ROM compilation of telephone directories enabling users to call up names and addresses from all 50 states.

*Thomas Register: a listing of American manufacturing company profiles available by a networked CD.

These resources and others not only ease the task of finding information, they open up the world as an information source.

Many are available at KSC employees' computers. Contact the library for information on electronic resource access.

Those who visit or call the library will find highly experienced staff members ready to assist customers with research requests and use of library resources.

In addition to holding an extensive scientific, technical and management collection, the library is a historical treasure trove of documents, photographs, specifications and standards dating back to the beginning of America's space program. The vault enclosing the documents, specifications and standards collection, is a remnant of the days when much of the material was classified.

CD-ROMs containing all U.S. military and federal, and some industry and society specifica-



SENIOR LIBRARIAN Debbie Guelzow, standing left, and librarian Elaine Liston, standing right, assist library patrons with the computers available for use at the library.

tions and standards will also be demonstrated during the Library Week open house. The ISO 9000 series of international quality standards is included in the CD collection.

All departments of the library are located on the first floor, east wing of the Headquarters Building. Service hours are 6:45 a.m.

to 5 p.m. Monday through Friday.

The library has set up a home page on the World Wide Web which may be reached at url: <http://www-lib.ksc.nasa.gov/lib/library.html> or from the KSC home page. The library can be reached via e-mail at address: ksc.library@kmail.ksc.nasa.gov.

ABOUT THE KSC LIBRARY

Listings of new materials are posted regularly on the library's home page and in the "KSC Bulletin".

ACQUISITIONS:

NASA civil service and KSC contractor employees can request, for work-related use, the purchase of printed materials.

ARCHIVES:

The Archives houses nearly 650,000 pages of documents and more than 25,000 photographs, the majority of which were donated.

BOOKS AND MAGAZINES:

More than 30,000 books and 1,200 magazine titles are available.

CD-ROMS:

15 CD-ROM titles are currently available for use in the library. Another 12 titles are accessible on a KSC network. CD-ROMS cannot be checked out.

DOCUMENTS/TECHNICAL REPORTS:

The collection includes more than 80,000 paper documents and more than 1 million sheets of microfiche. These include KSC and other center's documents, reports pertinent to KSC's mission, and military manuals and regulations.

INTERLIBRARY LOAN:

Books, magazine articles and other materials not owned by the KSC library may be borrowed from other libraries. The KSC library has access to the resources of more than 21,000 libraries worldwide.

SPECIFICATIONS AND STANDARDS:

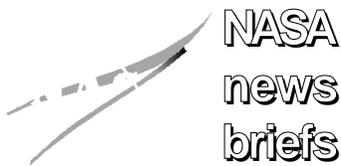
More than 250,000 items issued by governments, the military, industry and associations are available. Many are also available on CD-ROM for use in the library.

WORLD WIDE WEB:

Computers are available in the library to access the World Wide Web.



KSC SENIOR LIBRARIAN Donna Atkins pulls a microfiche from the library's files.



Supersonic jet rollout starts joint program with Russians

A modified Russian supersonic passenger jet was rolled out of its hangar March 17, symbolizing the start of a joint six-month flight research program between NASA, a U.S. industry team and the Russian aerospace industry.

The Russian Tupolev Design Bureau Tu-144LL supersonic flying laboratory will carry experiments in support of NASA's High-Speed Research (HSR) program. The HSR program, begun in 1990, teams NASA with U.S. industry to conduct research on technology that may allow the future development of a new High-Speed Civil Transport (HSCT) at the turn of the century. The U.S. industry team for the Tu-144 project is led by Boeing with support from McDonnell Douglas, Rockwell, Pratt & Whitney and General Electric.

The Tu-144LL project was enabled by an agreement signed in June 1993 in Vancouver, Canada, by Vice President Gore and Russian Prime Minister Viktor Chernomyrdin. This is the most significant joint aeronautics program to date between the two countries.

The project calls for the Russian-made aircraft to make 32 flights in six months beginning this spring. All flights will be in Russia. Six NASA/U.S. industry experiments will be flown at various times throughout the period. Two more experiments will be conducted on the ground using a Tu-144 engine.

The Tu-144 can fly at Mach 2.3, or 2.3 times the speed of sound - approximately 1,500 mph. Its speed and availability make it the perfect vehicle for NASA to conduct studies of

high-temperature structures and materials, acoustics, supersonic aerodynamics and supersonic propulsion.

Commander, pilot named for 2nd Hubble servicing

U.S. Navy Commander Kenneth D. Bowersox and Scott J. "Doc" Horowitz, Ph.D. (Lt. Colonel, USAF) have been named to command and pilot, respectively, the second Space Shuttle mission to service the Hubble Space Telescope



BOWERSOX



HOROWITZ

scheduled for early next year.

They join Payload Commander Mark C. Lee (Colonel, USAF), Gregory J. Harbaugh, Steven L. Smith and Joseph R. Tanner who were named in May 1995 as the spacewalkers for the mission. Steven A. Hawley, Ph.D., who will serve as the flight engineer and primary remote manipulator system operator, was named to the crew in February.

The 10-day STS-82 mission currently includes four planned spacewalks. The four extravehicular activity crew members will alternate on the spacewalks to accomplish a number of equipment changeouts and upgrades on the telescope. Major equipment changeouts include two science instruments and a data interface unit. The instruments are the Near Infrared Camera Multi-Object Spectrometer and the Space Telescope Imaging Spectrograph.

NASA, McDonnell Douglas unveil X-36 tailless aircraft

The first ever display of the newest X-plane, the X-36, a remotely piloted tailless re-

search aircraft, took place March 19 at McDonnell Douglas, St. Louis, MO.

The X-36 is a tailless design for a stealthy fighter aircraft that could dramatically change the look of future jet fighters. This scaled, remotely piloted aircraft concept has no vertical tail, yet is expected to demonstrate the feasibility of future fighters achieving maneuverability superior to today's best fighters. By eliminating the need for these tail control surfaces, future tailless fighter aircraft will weigh less, fly farther and be able to survive better than today's fighters. This revolutionary new design is the result of technical breakthroughs made by a dedicated team of engineers from NASA Ames Research Center, Mountain View, CA, and McDonnell Douglas Aerospace.

Winter runway safety subject of new study

The safety of aircraft takeoffs and landings will be enhanced with the knowledge and operational procedures expected from a new study of winter runway friction now underway.

The five-year government/industry study, called the Joint Winter Runway Friction Measurement Program, is being led by NASA and Transport Canada with support from the Federal Aviation Administration (FAA). Also participating are organizations and equipment manufacturers from Europe and several Scandinavian countries.

The study will include braking tests with instrumented aircraft and ground vehicles in the U.S. and Canada.

Results are expected to enhance safety for all ground operations and help relieve airport congestion during bad weather. Results also will help industry develop improved tire designs, better chemical treatments for snow and ice control, more reliable ground vehicle friction measuring systems and runway surfaces that minimize bad weather effects.

Flight crew recognition of

less-than-acceptable reported runway friction conditions prior to the "go/no go" or the "land/go around" decision point is one of the near-term program goals.

NASA's B-737 research aircraft and Canada's National Research Council Falcon-20 aircraft completed a week-long series of landing tests earlier this month on ice- snow- and slush-covered runways at the Jack Garland Airport in North Bay, Ontario, Canada.

Delta Clipper rolls out, flight tests to start in May

The four-story-high, newly refurbished NASA Delta Clipper vehicle rolled out of McDonnell Douglas' facility in Huntington Beach, CA, March 15 for transport to New Mexico in preparation for flight tests beginning in May.

Dubbed the DC-XA, for Delta Clipper-Experimental Advanced, the unpowered, single-stage vehicle is being developed under a cooperative agreement between NASA and its industry partner to demonstrate new technologies needed for a reliable, affordable reusable launch vehicle that could be operated commercially by American industry with NASA as one of its customers.

"This is a radically different vehicle from the DC-X that flew last year in tests conducted for the Air Force," said DC-XA project manager Dan Dumbacher at NASA's Marshall Space Flight Center, Huntsville, AL. "Many technology innovations have been introduced to the vehicle and when we test fly it this spring we'll be writing a new page in the history of space transportation systems."

The DC-XA will be the first rocket ever to fly with a composite hydrogen tank. The tank, built by McDonnell Douglas, is made of graphite-epoxy and is 1,200 pounds lighter than the aluminum tank used in the DC-X. Achieving that kind of weight reduction is essential to the development of a single-stage-to-orbit reusable launch vehicle.

Tether investigation begins at KSC



MEMBERS OF KENNEDY Space Center's STS-75 payload test team assisted the Tethered Satellite System Reflight Mission Failure Investigation Board last week by safely removing the tether which unexpectedly separated during that mission and preparing it for analysis at the KSC malfunction lab. In the top left photo, payload test team members examine the severed end of the tether under a stereo microscope at the Operations and Checkout Building. The tether was photographed extensively with special attention to high magnification (70 to 520 times) of the tether core. Above right, the end is examined in detail under the stereo microscope. Below left, workers cut 27 meters of tether off the spool along with the tether's severed end. The broken end of the tether was sent to the KSC malfunction lab on March 21. On March 22 the tether and lower tether control mechanism were sent to the Marshall Space Flight Center for further analysis.

Cash advances no longer available for NASA travel

Cash advances for travel expenses will not be available after April 1, so the Payroll Office is advising any NASA employees who travel to make sure they have alternative methods for receiving funds.

That office recommends that travelers obtain either a government American Express card or a direct deposit account for travel through the Personal Services Branch. The direct deposit account is separate from direct deposit accounts for payroll and can also be used to receive reimbursements. Any civil service employee needing to set up such an account or to receive an Automatic Teller Machine card for their account can call 867-3917.

NASA retirees can attend NACA reunion

The seventh reunion of former employees of the National Advisory Committee for Aeronautics (NACA), NASA's predecessor organization, will be held in Hampton, VA, on Oct. 3 through 6. Langley Research, once known as the Langley Memorial Aeronautical Laboratory, will be the cornerstone of the visit by all former NACA people and their spouses.

The 1996 Reunion VII marks the 38th year since Congress transformed NACA to NASA and the 20th anniversary of the first NACA reunion, held in Asheville, NC. Members of the Langley NACA/NASA Alumni Association will serve as

hosts of the event with Cornelius "Neal" Driver serving as reunion chairperson. The Holiday Inn Hotel and Conference Center in Hampton will serve as reunion headquarters.

Activities will include tours of historic Jamestown, Yorktown and Williamsburg and an evening at the Virginia Air and Space Center with its IMAX theater. Reunion VII is also open to all NASA retirees and their guests. To register, or for more information, call or write:

NACA Reunion VII, NASA/LaRCAA, Mail Stop 496, Hampton, VA, 23681-0001, (804)595-1306.

Goldin 'pleased' with proposed \$13.8 billion 1997 budget

The following are excerpts from comments NASA Administrator Dan Goldin made on NASA television March 19 following the release of President Clinton's proposed 1997 budget for NASA.

We asked for stable funding through fiscal year 1997 and that's exactly what the president's budget gives us. We are very pleased with the fiscal year 1997 level of \$13.8 billion. This stability will enable us to continue to restructure NASA carefully and deliberately and assure safety, achieve real cost savings, and eliminate overlap and low-priority support functions and non-essential programs.

The president made good on his promise, and so did we. We have used this period of stability to reinvent the Agency, just like we said we would.

Over the last several years, NASA has been dealt its fair share of deficit-reduction-driven budget cuts, and we've stepped up to them. In fact, we've done more than step up. We've aggressively used these cuts to become more efficient and relevant, to make sweeping changes at NASA that recalibrate the agency for a bold, exciting aeronautics and space program that does more for less.

It's been a challenge, and I'm proud of the way NASA has risen to it. We have made real changes

at NASA — real changes in our culture, real changes in our thinking, real changes in our products.

We've turned around cost overruns. A General Accounting Office survey of our major programs in 1992 identified an average cost growth of 77 percent. Now, four years later, we are underrunning our program cost estimates from last year.

We restructured our large programs, including Cassini, the Advanced X-Ray Astrophysics Facility (AXAF), the Earth Observing System (EOS) and the International Space Station.

Space Station on track

The redesigned International Space Station is right on track. The program is now led by a single contractor, and we have streamlined the program office at the Johnson Space Center. Contractors have delivered over 80,000 pounds of flight hardware. And an important step toward the station — the Shuttle-Mir rendezvous — went off perfectly.

We found savings of \$1 billion a year in the Shuttle program, while maintaining the same high safety level, and we are marching toward commercialization, another example of the "new-think" at NASA.

We've also made huge strides toward restructuring NASA as an institution. A centerpiece of this is the Zero Base Review.

Hundreds of NASA employees were involved in this review.

The Zero Base Review took a fresh look at what we do at NASA — every job, every function, every facility. We're looking at NASA in a whole new way. We're using fresh ideas to adapt to a new era in government.

We've made some important changes at NASA based on the Zero Base Review. We've clearly laid out the roles and responsibilities of NASA centers and of Headquarters. They have a new focus and a sharpened purpose. In fiscal year 1996 and fiscal year 1997, we will continue to implement the Zero Base Review recommendations.

We also developed a strategic plan, which we shared with industry, academia, the administration and Congress. It lays out a clear vision for NASA — where we want to be in 25 years and how to get there.

We have brought down the size of NASA's work force significantly to meet budget and personnel targets. We used buyouts and other management tools to downsize in an orderly way. We've already come down from 25,000 to 21,000 and we're headed for 17,500 by the turn of the century.

We've been way out in front in meeting these targets, and we've done it without an Agency-wide reduction in force. We are committed to meeting our tar-

gets. But we're also committed to the human dignity of our employees, and we've worked hard to reach both goals. Beyond fiscal year 1997, there are obvious uncertainties. The out-year projections are significantly lower than previous projections: \$13.1 billion for fiscal year 1998; \$12.4 billion for fiscal year 1999; and \$11.6 billion for fiscal year 2000.

Focus on 1997

Our understanding is that these projections are not chiseled in stone. As administrator, I have decided not to take any precipitous action in fiscal year 1996 to work toward these figures because to do so would involve a major disruption to our employees. We intend to concentrate on fiscal year 1997, and we look forward to working with the Administration on out-year funding.

We look to the future with optimism. It's certain that pressures on domestic discretionary funding will continue, and possibly even increase, in the foreseeable future. But we're confident that the president's strong commitment to the research and development that's so crucial to America, and the commitment of our supporters in Congress, will shape a vibrant future for NASA. We're confident that NASA will continue to transform itself to meet the demands of a new age in government and a new age in exploration.

RIF. . .

(Continued from Page 1)

82 less or 2,449 and the projection for the end of the 1996 fiscal year is 2,249, or 200 less than the previous year.

Between October and February of 1996 the center has lost 44 employees, and out of those only seven retired — the rest left for other jobs or personal reasons, Jennings said.

"Before the buyouts those numbers would have been just about reversed," he said. "What

we're seeing is the younger work force is leaving."

Jennings said with trends continuing as projected, KSC should be able to meet targeted staffing levels until 1999 through attrition. But with an upcoming election and the budgets for 1996 and 1997 not yet approved, those targeted numbers remain subject to change, he said.

NASA needs firm figures to plan for the years beyond 1997 and those variables leave some big unknowns, he said.



John F. Kennedy Space Center

Spaceport News

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