



Mission: STS-78 on Columbia.

Launch date, time: June 20, 10:49 a.m. from Launch Pad 39B.

Primary payload: Life and Microgravity Spacelab (LMS).

Landing date, time: At press time the mission was scheduled to land at the Shuttle Landing Facility at 8:38 a.m. July 7.



Mission: STS-79 on Atlantis.

Launch date, time: July 31, approximately 11:42 p.m. from Launch Pad 39A.

Mission Synopsis: STS-79 is the fourth in a series of NASA docking missions to the Russian Mir Space Station, leading to the construction and operation of the International Space Station. As the first flight of the Spacehab Double Module, STS-79 encompasses research, test and evaluation of ISS as well as logistics resupply for the Mir Space Station. STS-79 is also the first NASA/Mir American crew member exchange, with astronaut John Blaha replacing Shannon Lucid aboard the Mir.

Landing date, time: August 9 at approximately 8:17 p.m. at KSC.

Spaceport News

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John F. Kennedy Space Center



STS-78 PAYLOAD specialists Robert Thirsk of the Canadian Space Agency and Jean-Jacques Favier of the French Space Agency hold an Olympic torch which the crew is carrying on board the Space Shuttle Columbia. If the mission ends at KSC July 7 as planned, Commander Tom Henricks, Pilot Kevin Kregel and Mission Specialist Susan Helms will travel to the KSC Visitors Center to cheer for KSC's Olympic torch bearers and present the torch and an Olympics banner to representatives of the Atlanta Committee for the Olympic Games.

KSC receives federal Quality Achievement Award

Center recognized for reducing costs, processing time

Kennedy Space Center has been awarded a Special Quality Achievement Award for a range of continual improvement accomplishments in 1995.

The award, which was presented during the 9th Annual National Conference on Federal Quality on June 5 in Washington, DC, recognized the KSC team for "a very successful five-year continual improvement journey" and proven results including:

- * Reducing the cost per Space Shuttle flight in the last five years by \$55 million;
- * Reducing Shuttle processing time from 1.1 million hours per mission in fiscal year 1989 to .7 million hours in fiscal year 1995;
- * Reducing consumption of chlorofluorocarbon by 58.9 percent, resulting in a cost savings of nearly \$1 million.

The award was presented by Jim King, director of the Office of Personnel Management, and accepted by NASA Administrator Dan Goldin and KSC Deputy Center Director Gene Thomas.

As part of the conference



KSC DEPUTY DIRECTOR Gene Thomas, center, receives the Quality Achievement Award from Jim King, right, director of the Office of Personnel Management. NASA Administrator Dan Goldin is at left.

agenda, a KSC panel moderated by Associate Director Al Parrish presented "Process Improvement in a High Tech Organization," a review of payload customer activities by Pam Biegert, Payload Ground Operations, and a review of Shuttle data analysis techniques by Tim Barth, lead industrial engineer for Shuttle Operations.

The KSC Benchmarking Network presented "A Practical Approach to Sharing Best Practices in a Competitive Environment." Panelists were Darcy

Drew, principal operations analyst, McDonnell Douglas Space and Defense Systems; Jeanette Eads, continuous improvement administrator, EG&G Florida, Inc.; and Cathy Horton, lead industrial engineer, NASA/KSC.

The KSC presentations were well attended and several requests were made for KSC metrics, data, and consultation.

The KSC Continual Improvement Program was displayed at a conference booth and the KSC exhibit was again one of the best attended.



CENTER DIRECTOR Jay Honeycutt, center, presents a photo montage to Patricia Jones, NASA scholarship recipient. On the left is Patricia's mother, Edie Tompkins, and on the right her father, Ralph Tompkins, a NASA retiree.

NASA scholarship awarded to daughter of KSC retiree

A NASA scholarship award was recently presented to Patricia A. Jones, daughter of former Kennedy Space Center employees Ralph and Edie Tompkins.

Jones graduated third in her class of 304 at Titusville High School. She plans to attend the University of Central Florida to pursue a degree in engineering or biochemistry. She has won many awards, including the NASA certificate of Outstanding Achievement for creative endeavor in aerospace research

during the 1996 Regional Science and Engineering Fair. She was also selected for the all-county honor and all-state senior high choruses and received the athletic director's scholar athlete award.

Sixty eight students have received the scholarships, started in 1982 to assist qualified dependents of NASA and former NASA employees. The fund began with a gift from Pulitzer Prize winning author James Michener. It is administered by the NASA Exchange Council.



KENNEDY SPACE CENTER'S newest certified managers are, standing from the left, William Cooper and Robert Kuzma, Sherikon Space Systems; James Wolfe, I-NET, Inc.; David Otero, McDonnell Douglas Space and Defense Systems; and Ronald Weise, The Bionetics Corp.; Seated from the left are Barbara Williams, EG&G Florida, Inc.; Joyce Bodor, NASA; Linda Warren, EG&G; and Peri Baker-Horner, Rockwell International; Not picture is Edward Schutta, formerly of Lockheed Martin Space Operations.

10 KSC employees designated certified managers after course

Ten Kennedy Space Center employees have completed a certified manager preparatory course offered by the McDonnell Douglas Management Association.

The certified manager (CM) is a credential for managers based on an examination program, similar to the certified public accountant (CPA) designation in accounting or the professional engineer (PE) in engi-

neering. The CM designation sets minimum professional standards based on education, experience and competency.

The courses, which were taught by Certified Managers Wendall Wilkins, Charles Smith, and Denise DeVito, were held two hours a week for 15 weeks. Those receiving certification were acknowledged in a ceremony at the O&C Mission Briefing Room June 21.

Employees of the month



HONORED IN JULY are, standing from the left, Barry Slack, Biomedical Operations Office; Timothy Potter, Shuttle Processing Directorate; Roger Rudig, Office of the Chief Financial Officer; and Howard Sterling, Safety and Mission Assurance Directorate. Sitting, from the left, are Joy Colston, Procurement Office; Tom Mariani, Logistics Operations Directorate; and Charlotte Becker, Engineering Development Directorate. Not pictured are Michael Bell, Administration Office; and Vanessa Stromer, Payloads Processing Directorate.

Change of command ceremony planned for CCAS Military Traffic detachment

The Military Traffic Management Command Cape Canaveral Detachment will have a ceremony to mark a change in command on July 12 at 10 a.m. at its headquarters in Port Canaveral.

Major Richard Burns, currently in command, will be leaving for a new assignment in Korea and Major Donald Buxton will be transferring from Fort Leavenworth, KS, to assume command of the detachment.

The ceremony will include music, presentation of the colors, remarks by Col. Steven J. Brady, commander of the MTMC 1304th Major Port Command, and remarks by both the outgoing and incoming commanders.

A reception will be held immediately following the ceremony.

For further information call the detachment headquarters at 853-5358/5359.

Spacewalk to commemorate contributions to space program



A BRICK pathway is taking shape near the Center for Space Education at the KSC Visitors Center.

Anyone who has contributed to the success of the space program now has the opportunity to make a lasting impression of that effort while contributing toward future space endeavors.

The Astronauts Memorial Foundation and the NASA Alumni League, Florida chapter, are jointly sponsoring the Spacewalk of Honor at the KSC Visitors Center.

The walkway, which will encircle the west pond located between the Center for Space Education and the Space Mirror Memorial at the Visitors Center, will be paved with 22,000 bricks, each inscribed with the name of an individual who has played an active role in the space program.

Anyone interested in purchasing a brick will be asked to submit a statement of up to 50 words describing his or her relationship to the space program.

The statement, along with the person's

name and the location of their brick, will be available at a computerized information kiosk located near the Spacewalk.

Each honoree will also receive a personalized and numbered certificate suitable for framing.

Purchase price of the bricks is \$75 which will go to the Astronauts Memorial Foundation to create an endowment fund to support the Center for Space Education, and to the alumni league for aerospace scholarships.

The project should take about a year to complete, said Jim De Santis, president of AMF.

Several of the bricks are already in place, including those honoring the crew of Apollo 13. Applications for purchasing the bricks are available at the KSC Visitors Center, at Brevard County First Union and Barnett banks, or by calling the toll-free number 888-99SPACE.

NASA, industry to work together on lightning detection

Since 1992, a NASA-developed Lightning Detection and Ranging (LDAR) system has provided a safe, productive work environment at the Kennedy Space Center (KSC) and the Eastern Range, which are located in the most lightning intensive area in the United States. Now private industry and the public stand to benefit from the technology.

NASA has signed a Space Act Agreement with Global Atmospheric, Inc. (GAI) of Tucson, AZ, to begin joint work on development of an LDAR system that meets both NASA and commercial needs. The technology has commercial application in the electric utility, aviation, atmospheric research, commercial rocket launch, recreation, construction and meteorological industries.

"The 45th Weather Squadron at Cape Canaveral Air Station uses LDAR to accurately inform KSC of any lightning threats in the area," said John Madura, manager of KSC's weather office. Cape Canaveral Air Station and the National Weather Service in Melbourne, are the only organizations currently using this system.

Current two-dimensional commercial systems only locate cloud-to-ground lightning. NASA's three-dimensional LDAR system also pinpoints the location and altitude of in-cloud and cloud-to-cloud lightning by measuring the exact arrival times of electromagnetic pulses.

"When you hear a crackle of lightning over your radio, you are listening to an electromagnetic pulse. Since the speed of light is constant, once we know the time of a pulse we can figure out exactly how far away the lightning is," explained Carl Lennon, KSC Information Systems Division.

The system detects the VHF or very high frequency radiation and maps the volume of the lightning activity. The result is a three-dimensional presentation of the local activity and the threat that it presents.

GAI designs, manufactures and markets commercial lightning detection systems used worldwide for collection, analysis, display and dissemination of lightning related information. They bring the expertise and resources to this partnership that are necessary to expedite commercialization.

"This collaboration between GAI and NASA brings together two organizations respected in this field of study and should benefit the public with an extremely solid new product," said Pat Zumbusch, GAI president.

The two-year agreement assigns responsibilities to both parties. GAI will focus on improving the location accuracy, small signal detection, and flexibility of NASA's existing system. After reducing the cost of transmitting and displaying data, a commercial version of the system will be available.

NASA will operate the LDAR system, allowing GAI to compare it to newly developed systems.

NASA will also assist GAI with the design and evaluation of system components and allow the company to use existing equipment, facilities and weather data.

"This agreement is the perfect example of NASA working together with industry to bring space age technology down to earth," said Bill Sheehan, KSC's Technology Programs and Commercialization Office.

Briefing gives Mars preview

KSC employees will be given a preview of NASA's Mars exploration program during a pre-launch mission briefing July 8 at 9 a.m. in the Mission Briefing Room.

Wayne Lee, mission planner for Mars Operations from the NASA Jet Propulsion Laboratory, will preview the Global Surveyor and Pathfinder missions scheduled for launch later this year.

The Surveyor, scheduled to launch in November on a Delta II from Cape Canaveral Air Station, will begin the most comprehensive orbital study of any planet in the history of space exploration. The Pathfinder, slated for a December launch from CCAS, is designed to crash land on the Mars surface and deploy a microrover to collect data.

NASA scientists hope that the study of Mars can provide insight into the formation and evolution of Earth and the inner solar system.

Children try on KSC for size



SEVERAL BOYS visiting Kennedy Space Center on Sons' Day June 14 enjoy the perspective normally seen by presenters at the Press Auditorium. From the left are Billy Browning, Johnny Diamantas, Michael Allbright, Jesse Seelos, Jesse Williams, Kyle Diamantas and Lamar Evans. They are accompanied on their tour by Cindy Oates and David Zorn of United Space Alliance.

MORE THAN 1,500 children took part in Sons' Day events. Andrew Bernardo, pictured at right with his father Phil, a NASA employee, had the opportunity to try on an astronaut suit in the Operations and Checkout Building. After being welcomed by Center Director Jay Honeycutt, NASA participants heard astronaut candidate Frank Caldeiro speak and took part in a presentation by Steve Van Meter of KSC's robotics laboratory. An unexpected bonus was the surprise visit by four crew members from the upcoming Mir docking mission STS-79. The event, which included many girls as some contractors held a combined "Take Our Children to Work" activity, was successful because of the cooperation between NASA, contractors, the KSC Visitors Center, and Delaware North Parks Service, said Barbara Powell, event coordinator.



SHANNON LUCID joins in an inventory of food supplies on the Mir space station shortly after her arrival there in March. Yuriy Onufriyenko, Mir 21 mission commander, is at left and Yuriy Usachov, flight engineer, is on the right.

KSC collects kudos from space

The work of the Kennedy Space Center has been acknowledged around the world but now, thanks to e-mail set up on the Mir space station, it is being recognized from space.

Astronaut Shannon Lucid, who has resided on the Mir since March, and is scheduled to return aboard STS-79 in August, used her e-mail June 12 to respond to a message she received from Mike McCulley, vice president and associate program manger, ground operations, for United Space Alliance.

McCulley had written:
*Dear Shannon:
I listened very carefully when you "instructed" us to make sure 79 was on time. The flow is going well and we at KSC and United Space Alliance (formerly*

Lockheed-Martin) are all proud of you and the two Yuris. By the way, Galileo continues to perform well.

*Good luck,
Mike*

Lucid's response reflected on the work being done at KSC to prepare the Space Shuttle Atlantis for that return flight.

*Mike,
Thanks for the note!!! My definition of happiness has changed — or maybe I should say expanded!!! In addition to an empty payload bay, happiness is looking down at Florida from the station Mir and almost seeing all those great Atlantis folks going about their daily tasks in such an enthusiastic and professional manner!!!!
Shannon*

Oh say can you see?



NASA ADMINISTRATOR Dan Goldin is among several special guests getting an up-close view of the launch of STS-78 June 20 at the Banana Creek viewing site.



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Spaceport News

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