



### Kid safe

JSC employees volunteer to improve the safety factor at the Child Care Center. Story on Page 3.



### Checking it out

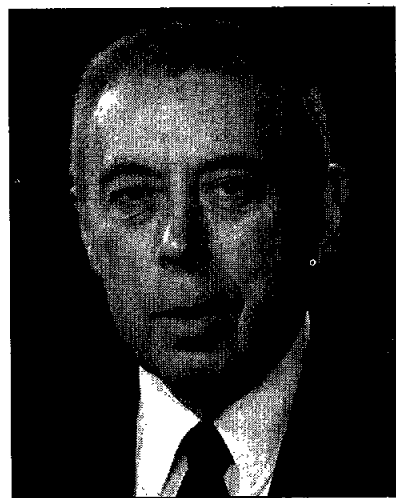
STS-82 astronauts check out hardware that will be used to berth the Hubble Space Telescope. Photo on Page 4.

# Space News Roundup

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No. 5



George Abbey

## Abbey to receive space trophy

JSC Director George Abbey will receive the prestigious National Space Trophy on March 6 during a special banquet at Space Center Houston. Astronaut John Young also will be honored for his lifetime dedication to the space program.

The National Space Trophy is given annually by the Rotary National Award for Space Achievement Foundation to one individual for outstanding leadership and personal commitment to space exploration. Nominations are submitted by leaders of the aerospace industry, government agencies, profes-

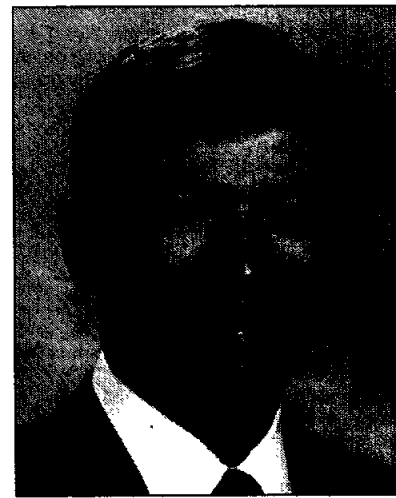
sional organizations and the media. A ballot of finalists is voted on by the Foundation's national board of advisers with confidential votes tabulated by an independent accounting firm.

Nominating Abbey for this year's honor, Robert Minor, president of the Space Systems Division of Boeing North America, cited "his exceptional vision, his superior leadership qualities, his unique and effective problem solving techniques and his broad understanding of technical management. His dedication and capabilities are truly

extraordinary and his major contributions to space exploration and the furtherance of the space program are legendary."

JSC Associate Director, Technical, John Young will be honored with the Corona Award.

The Corona Award recognizes a distinguished lifetime of achievement in the exploration of space and is made only when the Foundation board members feel that exceptional merit demands the special conferment. The Corona Award has been given once before  
Please see **MAX-Q**, Page 4



John Young

## Blaha calls Mir dockings turning point

Astronaut John Blaha is back after four months on orbit, calling the cooperative international program of shuttle-Mir dockings and residency "a turning point in world history."

Blaha arrived at Ellington Field on Jan. 23, along with all of his STS-81 crew mates except Jerry Linenger, who is now taking his place on Mir.

Commander Mike Baker, Pilot Brent Jett and Mission Specialists Marsha Ivins, John Grunsfeld and Jeff Wisoff joined Blaha in praising

the integrated efforts required to make their missions successful.

"The idea that five, 10, 15 years ago we had two super powers who had nuclear missiles aimed at each other

and now we are cooperating the way we are, is absolutely incredible," Blaha said. "It is a turning point in world history and this Mir-shuttle program is an example of how you can work together with former enemies and do something fantastic. I think that is very healthy for the entire planet Earth."

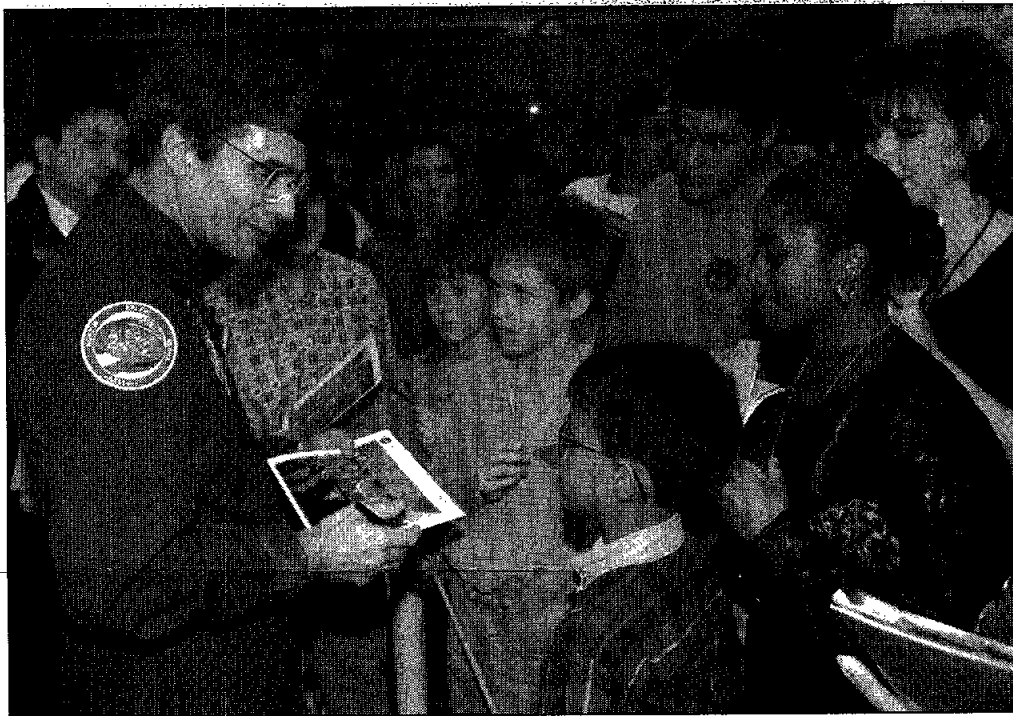
JSC Acting Deputy Director Brian Duffy welcomed the astronauts home on behalf of JSC Director George Abbey, who sent his congratulations to the STS-81 crew and team "that went up and made the docking, bringing two spacecraft together and making it look easy."

Grunsfeld said that while it may have looked easy, the mission required a lot of dedication and effort. That it looked easy was a tribute to everyone at JSC, NASA and in Russia who worked hard to learn the lessons that will be extremely important to future cooperation.

"This mission included all the excitement of space shuttle missions but also all the romance of visiting a foreign country, and Mir is very much a foreign country in space," he said. "It was wonderful to share those experiences with the cosmonauts who have the same goals and ideals that we do of space exploration. I think all of us have taken away from this mission additional excitement as a result."

Commander Mike Baker called the flight "absolutely fabulous," and gave credit to "the world's greatest crew, the world's best training team, flight controllers both here and in Moscow and a fabulous Mir crew."

Jett applauded his family and friends who supported him through  
Please see **CREW**, Page 4



JSC Photo S81-014 by Mark Sowa

Astronaut John Blaha greets friends and family members who welcomed him home last week after his four-month stay on the Russian Mir Space Station. The STS-81 crew docked *Atlantis* to the Russian station, picked up Blaha and left Astronaut Jerry Linenger. Blaha returned to Earth with the STS-81 crew Jan. 12 after spending 128 days in space, 118 on Mir. During docked operations the cosmonauts and astronauts transferred more than 6,000 pounds of water, supplies and science equipment to the Russian station. Linenger will remain on Mir until May when replacement Mike Foale will lift off on STS-84 for his tour of duty on the Russian outpost.

## Bridges becomes KSC's new director

Former shuttle astronaut and retired Air Force Maj. Gen. Roy Bridges, will be the new director of the Kennedy Space Center, effective March 2.

Bridges will succeed Jay Honeycutt, who announced his retirement last October.

"I am thrilled Roy is returning to the NASA team," NASA Administrator Daniel Goldin said. "Roy has a unique and very accomplished background that will be a tremendous asset in his new job as KSC director. He is the right person to take KSC into the next century."

As director, Bridges will be responsible for managing NASA's only site for processing and launch of the space shuttle vehicle at a

rate of seven to eight flights per year; processing of the payloads flown on both the shuttle and expendable launch vehicles; and overseeing of expendable launches carrying NASA payloads. He will manage a team of about 2,000 NASA civil servants and about 14,000 contractors.

As a NASA astronaut, Bridges served as pilot on STS-51F in 1985. The Spacelab 2 mission was a multidisciplinary mission with 13 investigations in seven scientific disciplines, including solar physics, atmospheric physics, plasma physics, high energy astrophysics, infrared astronomy, technology research and life sciences.

## Linenger settles in, begins experiments

Astronaut Jerry Linenger began working with experiments this week as he settled in with Russian crewmates, Commander Valery Korzun and Flight Engineer Alexander Kaleri.

This week's activities included initial activation of the Biotechnology System, designed to support long-duration experiments in a low-gravity environment. Experiments to be conducted in the BTS are involved with tissue culture, protein crystal growth and fundamental biotechnology research. Facility checkout of the BTS will ensure that risk-free experiments can be conducted on the International Space Station.

The facility consists of six modules designed for easy changeout

to accommodate changing science requirements and advances made during the several year planned period of its operation.

After *Atlantis* undocked from Mir, the cosmonauts took a day off to relax and unpack some of the material transferred from the shuttle. Linenger told flight controllers that unpacking his many boxes of gear was like opening Christmas presents.

Linenger created quarters in the Spektr module and by Wednesday of the first week, the triathlete began his daily exercise regimen, which includes two

hours of running on a treadmill and riding on a stationary bicycle.

Linenger began work with some of the life sciences and medical investigations he will conduct during his stay on the orbiting facility. He also replaced radiation dosimeters that went back to Earth on *Atlantis* with new instruments that will continue measurements of radiation aboard Mir.

Linenger and some of his former STS-81 crewmates took samples from Mir's air, water and physical surfaces to check for microbes. The samples were returned to Earth on

the shuttle and will be compared with other samples taken periodically through the mission.

The harvest of wheat from the Greenhouse experiment occurred Jan. 17 during the docked phase of operations. The equipment was dismantled and stowed. Another crop will be grown after Linenger completes his tour.

Two instruments—the Mir Structural Dynamics Experiment and the Space Accelerations Measurement System—took measurements during the docking mission to help flight engineers better understand the dynamics of the 400,000-ton spacecraft created by the docking of the shuttle and Mir.

## Discovery set to lift off on STS-82

By Ed Campion

The second servicing mission to the Hubble Space Telescope remains on track for a mid-February lift off from Launch Pad 39A at Kennedy Space Center.

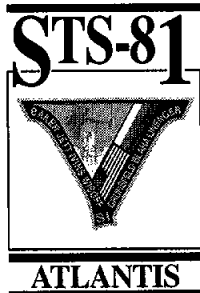
NASA managers were scheduled to meet yesterday at KSC to conduct the formal readiness review of the mission and set the official launch date. The current STS-82 target launch date is Feb. 11 at 2:56 a.m. CST.

Major processing activities at KSC this past week included the installation of the payload into *Discovery's* cargo bay. Because of the extremely clean environment needed for the HST payloads, the installation activity was performed in an exceptionally deliberate and precise manner. Integration and verification tests of the payload are planned for this coming weekend. The astronauts were at KSC this week conducting a dress rehearsal of the launch countdown.

Assuming a launch on Feb. 11, the start of the official countdown will begin at 3 a.m. CST on Feb. 8 followed by the STS-82 crew's arrival at KSC around 7 a.m. CST.

Two days after launch, Commander Ken Bowersox and Pilot Scott Horowitz will guide *Discovery* to a rendezvous with the orbiting astronomical observatory. Mission Specialist Steve Hawley will then use the shuttle's mechanical arm to retrieve the telescope and lower it onto a work platform in the cargo bay. The next day will mark the first of four space walks to be conducted on four successive days. Astronauts Mark Lee, Greg Harbaugh, Joe Tanner and Steve Smith, working in pairs, will remove and replace various HST components.

*Discovery's* mission duration is planned for 9 days, 22 hours, 47 minutes. The second shuttle mission of the year will conclude with a landing at KSC on Feb. 21 at about 1:43 a.m. CST.





From left, Gail Boyes, Michelle Isermann and Cinda Chullen rake weeds making the JSC Child Care Center's playground a safer place for the children. Employees of the Engineering Business Management Office volunteered their time during JSC Safety Day in October to make the Child Care Center a safer place to play. Center, Robin Stuart repairs a Bye-bye Buggy at the center. Other activities included sanding and hammering, raking over-grown grass and repairing playground equipment.



# Lending a Hand

## Business managers trade calculators for shovels, rakes to make child care center safer

**M**ost JSC employees spent their Safety Day in October, roaming the mall looking at the variety of displays and attending safety seminars around the center. But, some employees in the Engineering Business Management Office volunteered their time to make the JSC Child Care Center a safer place for JSC children.

"We were encouraged through numerous safety day training sessions to be creative in planning the activities for JSC's Safety Day held last October," said Gail Boyes of the Engineering BMO. "The day following this training, I noticed a toddler table at the JSC Child Care Center was missing a leg and was being balanced by a chair. That appeared to be a very unsafe condition for our younger JSC family members."

Boyes decided that there might be other potential safety risks at the child care center and asked the facility director, Yolanda Gregory, to gather a list of other areas at the center that may be considered unsafe.

"I also had suggested to the individuals in my office as a part of their activities on Safety Day to consider volunteering an hour or two of their valuable time to provide some physical labor at the child care center in order to make it a safer place for the kids to learn and play," said Boyes. "To my surprise, 17 members of the Engineering BMO showed up at the child care center early October 23, with tools in hand, ready to make the site safer for the kids."

Those eager individuals included Boyes, Kathy Jurica, William Bays, Dave Westfall, Cinda Chullen, Michelle Isermann, Lisa Rea Phillips, Ann

Sullivan, Robin Stuart, Keith Hutto, Charlene Gemar, Caroline Root, Krystine Bui, Jeff Johnson, Stephanie Hunter, Wendy Boudreaux and Wayman Randolph.

Some of the helpful activities performed by the Engineering BMO included sanding and hammering nails on handrails and play structures in both the toddler and preschool playgrounds; replacing a missing handrail; fixing the brakes and awning on the six-seater toddler bye-bye buggy; raking up over-grown grass and small toys that were buried in the sandy play areas; repairing a rotted slide for the pre-toddler playground; fixing a baby bed leg; repairing wood on the front of the G-Node; and moving a piece of space hardware into the pre-toddler area to be used as a shade structure.

"I wish we had more time, or could have worked on the weekend when the kids were gone to do some fixing up inside the child care center," Hunter said.

"This probably was one of the most worthwhile and productive efforts done on Safety Day. We should make it an annual event and get other offices involved. I felt like I was really giving some value back to JSC on Safety Day," Chullen said.

After several hours, the Safety Day list generated by the child care director was complete.

"This group really worked hard and accomplished a majority of the tasks on the child care center's 'to-do' lists," said

Tim Boyes, president of the child care board of directors. "Their hard work has made our facility a safer place for the children and the staff to learn and play."

Child care center parents also got involved during the child care center fall work day held Oct. 19. Parents, Vince Berend, Lynn Buquo, Sharyl Butler and Harold Moffitt redistributed sand and pulled grass under the climbing structures, repainted doors and repaired water play tables.

All the hard effort during Safety Day and parents work day resulted in an enjoyable Child Care Center Fall Festival held Oct. 31. The Fall Festival is an annual event hosted by parents and teachers for the child care center membership. This year's hosts and contributors to the event



included parents Alison Rickerl, Hester Yim, Helen Neighbors, Chip Shepherd, Sheryl Butler, Susan Morgan, Liz Pawlik, Dena Haynes, Karen Frank, Mary Cerimele, Jill Hemmingson, Malise Fletcher, Caryn Salkowski, Jackie Geyer, Gail Boyes, and Charlene Gemar, and the child care center Director Yolanda Gregory and teachers, Tina Bush, Lety Smallwood, El Borinsky, Queen Okoloise, Vera Tosto, Jackie Henderson, Branka Prusac, Jeanne Silver and Vicci Bennett.

Their efforts included setting up a haunted house and providing many ghostly games, snacks and activities. The festival was attended and enjoyed by many of the child care center's members and fans, including JSC Director

George Abbey, JSC Associate Director for Management Susan Garman, Director of Human Resources Harvey Hartman, Manager of Programs and Policy Robert Hall and the Space Family Education board of directors, Tim Boyes, Vincent Berend, Karen Frank, Gretchen Thomas and Sharon Licht.

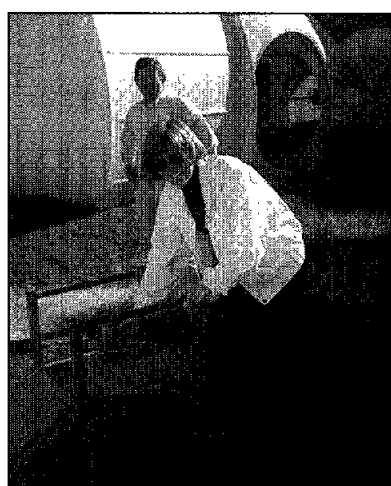
Plaques were presented by SFEI to Abbey, Garman, Hartman and Hall prior to the Christmas holidays, expressing SFEI's thanks for their participation at the festival and their continued support to the child care center.

The JSC Child Care Center is managed by the Space Family Education, Inc., a non-profit corporation established over five years ago for this purpose. The center's goal is to provide quality child care for on-site JSC employees and contractors.

Membership of the Space Family Education, Inc., consists of parents and interested individuals. A board of directors is elected every two years by the membership and is responsible for the hiring of a director, who provides day-to-day management. The present board consists of Tim Boyes, president, Vincent Berend, vice president, Gretchen Thomas, secretary, Sharon Licht, treasurer, and Karen Frank, policies and procedures. The facility director is Yolanda Gregory. The corporation was formed to provide parents and interested individuals at JSC with control and operation of the facility and to relieve the U. S. Government and NASA of any liability associated with child care. The primary source of financial support is through tuition fees paid by the parents and through community support, including fundraising activities handled by volunteers. □



Engineering Business Management Office volunteers are presented with a Golden Hammer Award at an all-hands meeting for their efforts at the JSC Child Care Center. Front row from left are, Gail Boyes, Caroline Root, Robin Stuart, Michelle Isermann, Krystine Bui, Charlene Gemar and Cinda Chullen. Back row from left are, Ann Sullivan, Kathy Jurica, Keith Hutto, Jeff Johnson, Lisa Rea Phillips, Wendy Boudreaux and Stephanie Hunter. Volunteers Bill Bays, Dave Westfall and Wayman Randolph were unable to attend the special presentation.



Char Gemar grinds an infant slide to smooth the wood and prevent splinters as Dave Westfall looks on.



From left, Human Resources Director Harvey Hartman, JSC Child Care Director Yolanda Gregory, JSC Associate Director for Management Sue Garman, parent Frank Wood, JSC Director George Abbey and board members Tim Boyes, Vince Berend and Grethen Thomas take time out during a safety inspection to celebrate the JSC Child Care Center's annual fall festival.



# Guidance, navigation team hangs STS-81 plaque

The Guidance, Navigation and Control team hung the STS-81 Mission Control plaque in recognition of its work before and during the flight.

Team Lead Ken Bain climbed the ladder held by Kevin Dunn as teammates, Eddie Trlica, Laura Stallard, Dave Marquette, Mike Sarafin and Jeff Wyrick were honored for their work to modify launch commit criteria on the orbital maneuvering system engine's actuator and for their discovery of a potential combined control mode that can be used during docked operations to save propellant.

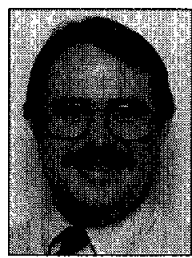
"The STS-81 mission was one of the smoothest to date primarily because of the good work by all disciplines which made it difficult to choose one as the representative to hang the plaque," said Lead Flight Director Bill Reeves. "The Guidance Navigation and Control discipline was singled out because of its excellent support and persistence in recognizing that for a period of time both the shuttle and Mir spacecraft were controlling

the attitude of the combined stack at the same time. Further analysis on their part has discovered a potential combined control mode that may be used under certain circumstances in the future to save propellant with direct application to both the Phase 1 program and the International Space Station."

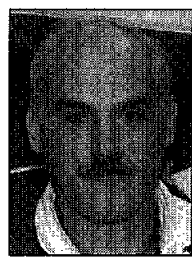
## Readdy to move to shuttle program

Astronaut Bill Readdy will move to the Space Shuttle Program Development Office to manage development enhancements across the program.

"This is a very high priority to lead the STS into the next century," said Space Shuttle Program Manager Tommy Holloway. "We must have a safe, reliable, maintainable and affordable human-rated transportation system if we are to succeed in building the International Space Station and beyond in the 21st century. Technology enhancements focused on our existing space shuttle will be the bridge that spans



Bain



Readdy



Vilas



McKay



Dittemore



Richards

the current era and leads to the next step in space technology."

Readdy will lead a team that will identify, prioritize and implement Space Transportation System safety, operations and maintenance technology enhancements.

## Vilas elected to new post

Faith Vilas of the Earth Science and Solar System Exploration Division recently was elected chair of the Division for Planetary Sciences in the American Astronomical Society.

The Division for Planetary Sciences is one of the largest professional societies in the field of planetary sciences in the U.S. Its purpose is to advance the investigation of the solar system; encouraging interdisciplinary cooperation, which is accomplished through its annual meeting; and sponsor the official journal of the division, "Icarus".

Vilas will manage the operation of the division and represent the division both within and outside of the division and it's parent organization, the American Astronomical Society.

## McKay receives honor

Technical Communicator Mary Fae McKay of the Earth Science Branch is about to become a Fellow of the Society for Technical Communication.

McKay will receive the rank at the STC annual conference to be held in May. There are fewer than 100 Fellows in the more than 18,000 members of STC. Fellows are chosen from among the associate fellows for "sustained and significant contributions to the theory and practice of technical communication" and, according to the STC membership directory "include some of the most admired members of our profession."

McKay's work as a technical com-

municator has received numerous technical publication competition awards both locally and nationally.

## Dittemore, Richards take on new roles

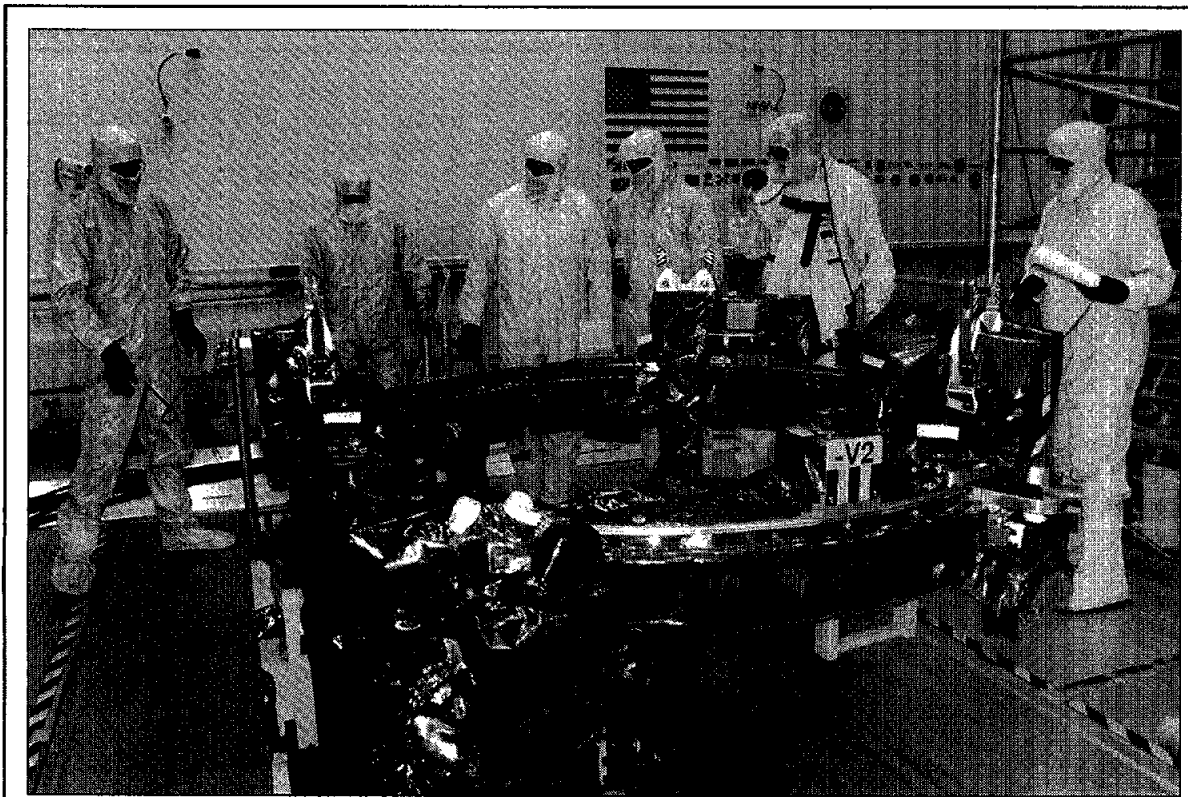
JSC Director George Abbey has named Ron Dittemore manager of the Space Shuttle Vehicle Engineering Office and Dick Richards will serve as manager of Space Shuttle Program Integration.

Dittemore has been with NASA for more than 19 years and served in several senior technical and managerial positions. Most recently he served as the manager of Space Shuttle Program integration. Dittemore also served as manager of the Space Shuttle Integration and Operations Office.

Richards will replace Dittemore as manager of Space Shuttle Program integration. He will continue to serve as the Hubble Space Telescope mission director.

JSC

# People



NASA Photo KSC-96PC-1374

**WITH THIS RING**—In Kennedy Space Center's Vertical Processing Facility, the STS-82 astronauts get familiar with the Flight Support System Berthing and Positioning System ring that will allow them to hold the Hubble Space Telescope in *Discovery's* cargo bay during servicing. From left are Mission Specialist Joe Tanner, a Hubble technician, Payload Commander Mark Lee, Mission Specialist Greg Harbaugh and additional Hubble technicians. Tanner, Lee, Harbaugh and Mission Specialist Steve Smith will perform space walks to service the orbiting telescope.

# Golf association begins new season

The JSC Golf Association will begin its 1997 tournament season March 1 and is seeking golfers for handicap play.

The season is designed for experienced golfers, both civil servant and contractors, who enjoy competitive play, strictly by the rules. The season consists of nine stroke play tournaments at different

courses during the year. Flights are established with a maximum handicap of 36 or about 110 maximum scores. Season winners are determined by points from the best seven of nine tournaments. Two tournaments from the Texas Top 20 list of favorite public courses are scheduled—Old Orchard and Longwood.

Entry fee into the JSC Golf Association is \$80. Part of this cost goes toward a prize fund. Cost per tournament ranges from \$30 to \$65 depending on the course.

Applications are available from Treasurer Bob Sampson and are due Feb. 21. For information call Sampson at x34962 or e-mail at: robert.k.sampson1@jsc.nasa.gov

# Max-Q to perform at banquet

(Continued from Page 1)  
in 1992 to Robert Gilruth.

Young's exceptional accomplishments in his career as a Navy pilot and as a NASA astronaut and senior management official have earned him more than 80 other major awards and four honorary doctorate degrees, making him an ideal candidate for the Corona. Young was the first person to fly in space six times, and he is the only one to fly that many times in three different space vehicles—two times each in Gemini, Apollo and the space shuttle. Young is one of only a dozen astronauts to walk on the moon and he commanded STS-1, the first flight of the space shuttle program.

The Rotary National Award for

Space Achievement Foundation also will honor several scientists, engineers and managers with Stellar Awards at a 7 p.m. March 6 banquet at Space Center Houston.

The theme for this year's event is "Dreams to Destiny." A multi-media program will celebrate the accomplishments and contributions of individuals in making the dream of space exploration a practical reality. Houston Livestock Show and Rodeo announcer Bill Bailey will serve as master of ceremonies and the all-astronaut band, Max-Q, will provide musical entertainment.

For additional information on the Foundation or to inquire about tickets to the special event at Space Center Houston, call Jack Lister at 480-6516.

# Space News Roundup

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Editor ..... Kelly Humphries  
Managing Editor ..... Karen Schmidt

# Crew celebrates space commitment

(Continued from Page 1)  
training and the mission.

"It is not exactly easy living with someone who is training for a space flight," Jett said. "It is a lot of effort, it's a year out of your life when you are very focused and they put up with a lot. I think they deserve a lot of credit for our success."

Wisoff said everyone from family members to shuttle mechanics to the weather was responsible for the success of the mission.

"We had flawless weather, we had a flawless training team, a flawless vehicle and in general we had flawless timing because we got John back in time for the Super Bowl," he joked. "But it all wouldn't have happened without the support of our family, friends, our training team and

all the people who got the vehicle to perform perfectly for us. It really is a team effort. These missions that are international in nature show that we can work together to further our goals in space exploration."

Ivins celebrated the commitment of JSC workers to space exploration.

"Every time that you send people into space you prove again that there is still magic in the universe and that there is still strength in the human spirit and determination to know what's over the horizon."

"STS-81 really was a team effort," Duffy said. "It's a team here in the U.S., a team in Russia, a team in the space shuttle, a team in Mission Control, a team in Russian mission control, a team aboard the Mir—team effort from start to finish."