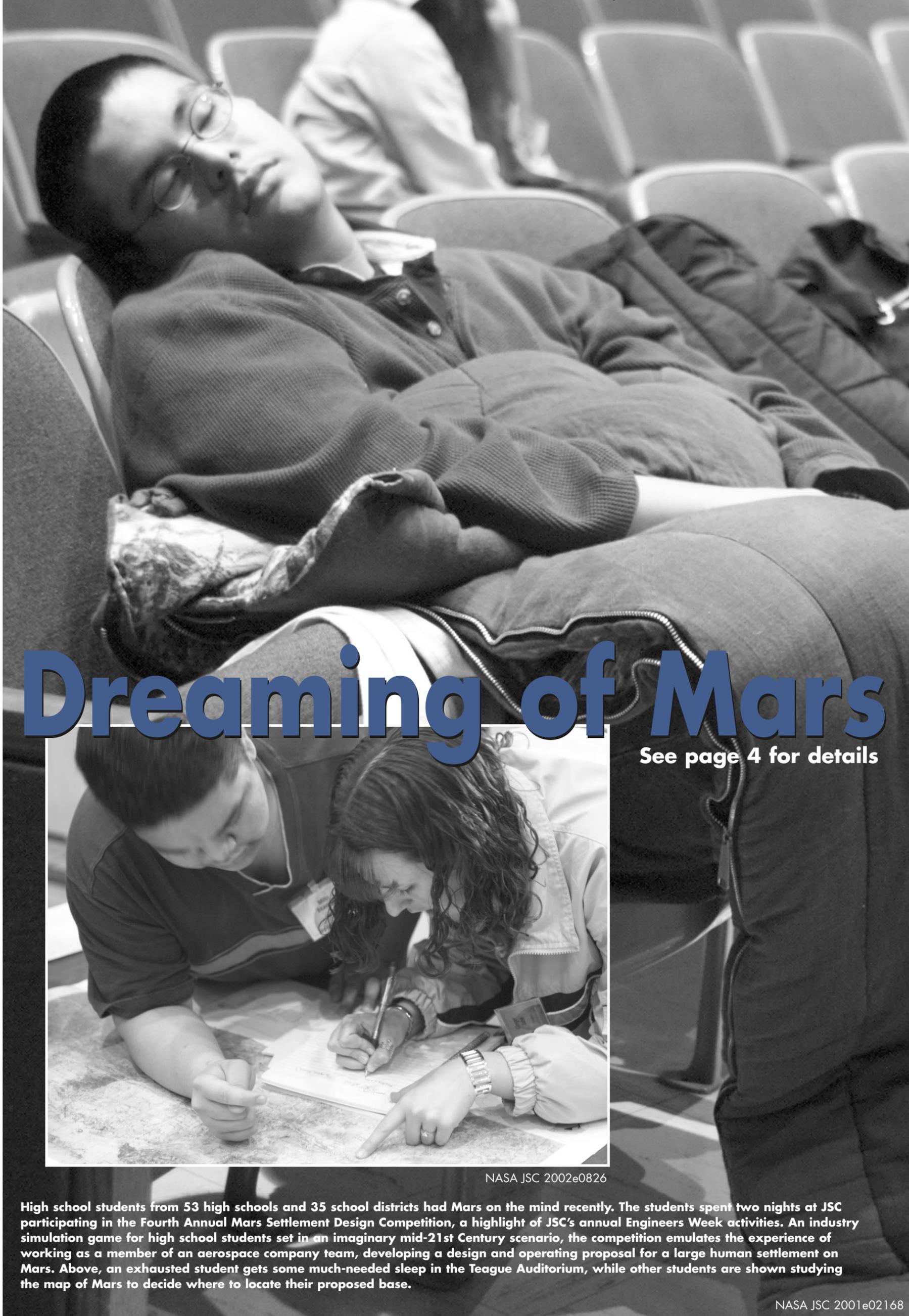




# SPACE CENTER Roundup

VOL. 41 NO. 4 LYNDON B. JOHNSON SPACE CENTER HOUSTON, TEXAS APRIL 2002



## Dreaming of Mars

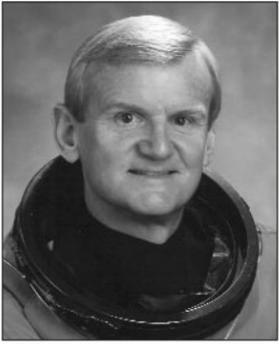
See page 4 for details

NASA JSC 2002e0826

High school students from 53 high schools and 35 school districts had Mars on the mind recently. The students spent two nights at JSC participating in the Fourth Annual Mars Settlement Design Competition, a highlight of JSC's annual Engineers Week activities. An industry simulation game for high school students set in an imaginary mid-21st Century scenario, the competition emulates the experience of working as a member of an aerospace company team, developing a design and operating proposal for a large human settlement on Mars. Above, an exhausted student gets some much-needed sleep in the Teague Auditorium, while other students are shown studying the map of Mars to decide where to locate their proposed base.

NASA JSC 2001e02168

# VPP embraces the whole family



NASA JSC S94-25739

**By Astronaut John Casper,  
Director Safety, Reliability, & Quality  
Assurance Directorate**

OSHA's Voluntary Protection Program – or VPP – isn't just for work anymore. At every opportunity, we at JSC extend the spirit and intent of VPP – not just to our employees – but to every single family member as well.

It just makes good sense. You can't have a happy, productive employee if someone at home is ill or injured, so we want to share both the philosophy and the how-to of healthier, safer living. Safety has always been the first consideration for space flight. Today, as our awareness of safety and health grows, with VPP as the centerpiece, we see the ultimate goal as more involvement among individual employees.

So, how do you make VPP personal? First, get people involved at their level. As we involve more and more people who might otherwise have taken a somewhat passive role, we generate new enthusiasm and even more creative ideas.

For example, what began as an idea from an employee has emerged into a NASA-wide conference to be hosted by JSC on April 16-18, 2002, at the Gilruth Center. Planned in part by employee volunteers, the purpose of the conference is to share best practices and lessons learned, so the entire NASA family may continue to grow as an example of safety excellence. We are also involving employees in our preparation for the Center's VPP re-certification in late July.

There are other examples of what has brought employees closer to the safety program at JSC. Here's a look at some:

- ◆The JSC Safety Action Team (JSAT) is not just another committee. JSAT is composed of rotating volunteers, both civil service and contractor, who represent the voice of the workforce, individually and collectively, in keeping JSC safe and healthy. The JSAT also has a direct audience with the Deputy Center Director to discuss issues. No problem or concern is too small to warrant their attention.
- ◆The yearly Personal Safety Fair is an event that steps beyond workplace safety, addressing such diverse topics as gang violence, home security, firearms safety, skin cancer prevention, carbon monoxide poisoning in the home and even everyday problems, such as how to safely jump-start a dead battery.
- ◆The Annual Safety & Total Health Day is the day designated when all JSC personnel assess their corporate and personal safety plans through mutual exchange and education. Produced by and for the employees, the steering committee relies heavily on employee participation for the day's success. The most recent theme of which was "Make It Personal!"
- ◆The Safety & Total Health Newsletter, possibly more than any other resource, has given identity to the Center's Safety and Health program. Not only are many of the articles from our employees' own experiences, the newsletter also serves as a ready forum for questions, ideas and suggestions for safety and health education and improvement. Now in its seventh year of publication, the four-page monthly issue reaches an estimated 13,500 employees.

How does JSC know it reaches beyond the workplace and to the entire family? Feedback mostly. We frequently hear stories of how someone administered CPR learned at work or rendered first aid. One employee, so impressed with the safety program, borrowed safety videos and began teaching his children and some of their young friends basic survival techniques for home fires. Another employee saved a stranger's child from near drowning last summer. Still another initiated a fire escape plan for her group of coworkers when on travel.

So, we see impressive evidence that VPP is not left at the doorstep at the end of the workday; it's becoming a 24-hour state-of-mind. And, that's the way it ought to be – VPP isn't just for work any more.

FROM THE DESK OF ROY S. ESTESS



**NASA Administrator Sean O'Keefe recently presented the NASA Outstanding Leadership Medal to Roy Estess for his leadership at JSC. Estess was honored at the senior management retreat at Airlie Conference Center in Warrenton, Va.**

To the JSC employee family,

For the past year, it has been my honor to work alongside you here in Houston. My tenure as Center Director, although longer than expected, has been an enjoyable and educational experience for me.

In the past year, I have watched as your hard work helped the Space Station to grow in size and capability, as three Expedition crews lived and worked on board, and as we safely flew six shuttle missions and returned their crews to Earth. Your dedication to the continuing safety of space flight is a source of pride for me personally and for the entire NASA family. You deserve to be proud of all that you have accomplished and to look forward with confidence to the challenges ahead.

Remember that you are a member of only two relatively small groups of people on the Earth who know how to do what you do. The ability to select and train the right people, build the machines and tools required and then plan and execute trips into space safely is certainly a unique capability. And you are the best!

As I return to my home at the Stennis Space Center, I will take with me many cherished memories of the support you have given me in this past year and the many lessons I have learned.

I know that Jeff Howell will be equally impressed with your professionalism and dedication to our country's space program. I encourage you to welcome him and show him that you are among NASA's finest and most talented people.

I have enjoyed knowing and working with you. I will miss you.

Roy S. Estess

## SOLAR has new training module available

NASA's SOLAR Online Training System has a new module available for all NASA employees. The new module is (HR-001-02D) Accessibility Awareness Training, and is designed to provide an overview of the 1973 Rehabilitation Act and how that affects NASA and NASA employees.

The 1973 Rehabilitation Act includes Section 501, which prohibits discrimination against employment for individuals with disabilities; Section 504, which states that government facilities must be accessible to individuals with disabilities; and Section 508, which states that individuals with disabilities have a right to access the same electronic information as everyone else.

The training module is very user-friendly and can be completed in about 15 minutes. Every NASA employee is encouraged to take the familiarization training and to help NASA become a better workplace for all of us, including staff, the public and visitors who may have a disability. See <https://solar.msfc.nasa.gov:443/solar/deliver/public/html/newindex.htm> for the complete course listing on SOLAR.

# Estess leaves his mark of excellence on JSC

By Kendra Ceule

**A**fter having spent more than a year as Acting Director of JSC, Roy Estess is returning home to Mississippi to resume his duties as Director of the John C. Stennis Space Center.

"I'm going to miss him," said Deputy Director Randy Stone. "He's become a very good friend."

Described by Stone as a "perfect gentleman who is tough when he needs to be," Estess has had an impressive career with NASA. His service spans 33 years and has taken him from Mississippi to Washington D.C. to Houston and back.

In 1980, he was named Stennis' Deputy Director, becoming its Director in 1989. Estess then fulfilled a temporary assignment to NASA Headquarters from 1992-93, serving as a special assistant to two NASA Administrators. He then returned to Stennis before his arrival at JSC in February 2001.

Stone, who has worked with Estess extensively, said he does not think it has been difficult for Estess to work in so many different environments.

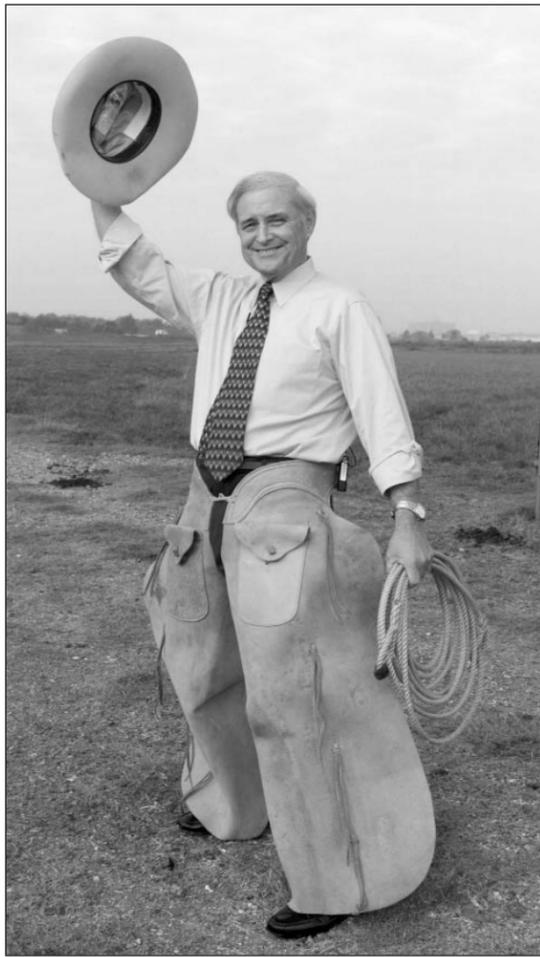
"He captures everyone's respect immediately wherever he goes," Stone said. "And most of the senior staff at JSC have known him over the years through his work at Headquarters and at Stennis. He's been highly respected for a long time."

So respected, in fact, that Estess has received multiple accolades for his federal service. It is telling that his awards not only include the Presidential Distinguished Service award, which he received twice, but also the Alumni Fellow of Mississippi State University.

According to Dan Carpenter, Director of Public Affairs, Estess is adept at balancing his leadership roles with a willingness to listen to suggestions from others.

"He is very open to input and ideas from staff," Carpenter said, "and yet is very capable of making the decisions that need to be made."

Sue Rainwater, Branch Chief of Mechanical Boosters Maintenance Systems, said Estess did an effective job of committing himself to his new post even though he knew it was temporary. "He never acted like a short-timer," she said. ❖



## Well-respected Howell named JSC Center Director



NASA JSC 2002e05118

Jefferson Davis Howell, Jr., has been named Director of the Johnson Space Center and assumed his duties this month. Howell, a retired U.S. Marine Corps Lieutenant General, is only the eighth person to serve as Director in the Center's 40-year history.

"Gen. Howell is a true patriot and leader with more than three decades of executive management and financial management experience," said NASA Administrator Sean O'Keefe. "Throughout his military and civilian careers, Jeff has been a leader, an innovator and a team builder. He's the right person to lead the NASA Center that's the cornerstone of our human space flight operations."

Howell served as Senior Vice President and Program Manager for the Safety, Reliability and Quality Assurance contract at JSC. The contract focuses

on safety and mission assurance for the Space Shuttle and International Space Station programs. He was employed by Science Applications International Corporation (SAIC). He earned a bachelor's degree in political science and a master's degree in economics at the University of Texas.

Howell had been with SAIC since February 1999, when he first served as Deputy Program Manager of the safety contract. He was named Program Manager in August 1999. Howell managed more than 525 people in support of a contract focused on safety and mission assurance in support of the Space Shuttle and International Space Station programs.

"This is a tremendous honor," Howell said. "The people who work at the Johnson Space Center are among the best and brightest in our industry with a history of incredible accomplishment. As we face the challenges of the upcoming year, we will work together, maintaining our commitment to safety and bringing the benefits of space home to the people of Earth."

He went on to say, "I also want to congratulate Roy Estess on the excellent job he has done here over the past year and thank him for his dedication to NASA." ❖

# Mars on the mind

## High school students design launch facility for competition

Interest in the Red Planet was at a fever pitch at JSC over the weekend of Feb. 22-24, as JSC hosted its Fourth Annual Mars Settlement Design Competition. The competition — a highlight of JSC's annual Engineers Week activities — is an exciting industry simulation game for high school students set in an imaginary mid-21st Century scenario. The competition emulates the experience of working as a member of an aerospace company team, developing a design and operating proposal for a large human settlement on Mars.

Representing 53 high schools and 35 school districts, 142 excited students from the Houston and southeast Texas area attended this year. Thirteen area teachers served as chaperones for the weekend. JSC, The Boeing Company, Clear Creek ISD and the Houston Section of the American Institute of Aeronautics and Astronautics were the major sponsors of the competition. In addition, eight local companies provided financial support, and almost 100 civil servants and contractors served as volunteers in many different capacities.

Sponsored at JSC by Dr. Bonnie Dunbar, Assistant Director for University Research and Affairs, and by Michael Kincaid, Chief of the Education and Student Programs Branch, the competition has grown significantly in each of its four years.

"In the next few decades humans will travel to Mars, and it's rewarding to be able to bring the excitement and challenge of planning such a mission to local students, who may, indeed, be part of the real future activity," said IMPASS contractor Norman Chaffee, Competition Coordinator.

In the game scenario, students are divided into four competing "companies" and are allowed to select their own company name and to self-organize.

After two orientation and technical background training sessions, the student companies are given a formal "Request for Proposal" for a human base on Mars. They have 24 hours to develop a 50-page written proposal and a 45-minute oral presentation.

This year's scenario was set in the 2050s. The companies were required to design a base for 15,500 permanent residents, located on the upper slopes of a large Martian volcano, and to construct and operate a 100-kilometer electromagnetic mass driver device to

launch Martian assets into orbit without polluting the atmosphere with conventional rocket exhaust.

Each student company was provided with a NASA/contractor CEO to help guide their efforts. The competition work occurred in team areas set among the large mockups in Building 9 and in the Gilruth Center. The students slept at the Gilruth Center and dined in JSC facilities during the weekend. A team of 12 JSC/contractor judges reviewed the four written proposals and heard the oral presentations in the Teague Auditorium on Sunday morning. The judges selected the team from Vulture Aviation as the winning student company.

"Thank you for exposing my son to something so exciting and inspiring," Margaret McPhail of the EVA Project Office wrote to organizers. Her son, Christopher, attended the competition with other students from Pearland High School. "He had a wonderful time and thought it was a great adventure." ❖



NASA JSC 2002e08023 Photo by James Blair  
**Students participating in the Mars Settlement Design Competition work on their proposal. Sponsored at JSC by Dr. Bonnie Dunbar, Assistant Director for University Research and Affairs, and by Michael Kincaid, Chief of the Education and Student Programs Branch, the competition has grown significantly in each of its four years.**



NASA JSC 2002e00540 Photo by James Blair

Pictured above are this year's participants in the Mars Settlement Design Competition, which was held at JSC. Representing 53 high schools and 35 school districts, 142 students from the Houston and southeast Texas area attended the two-day event.

# JSC engineers celebrate E-Week

By Kendra Ceule

Ask a kindergartner what she wants to be when she grows up, and chances are she won't say "an aerospace engineer."

But if you ask Karon Woods, that's only because kids don't know what engineers do. Woods, the Safety Lead for Mission Planning at JSC, does her part to raise awareness for the engineering profession by participating in National Engineers Week.

"At the beginning of the presentation, we ask kids what an engineer is. Nobody has a clue," she said of her recent visit to a Pearland elementary school. "By the end, everybody wants to be an engineer."

That's just the kind of result that engineers nationwide strive for during Engineers Week, or E-Week, which is usually held the week of George Washington's birthday. Washington is considered the United States' first engineer for his dedication to technology and education.

The National Society of Professional Engineers founded E-Week in 1951, and JSC has been participating for 11 years. There are a number of ways for engineers to get involved.

One E-Week standard is the Discover "E" program, which brings engineers to classrooms to educate K-12 students about the profession. Woods has been visiting classes during E-Week for seven years. This year, she gave presentations to kindergartners, as well as first-, second- and fourth-graders.

Rather than lecture about her job, she chose to do interactive projects with the students. For example, the kindergarten project helped the kids understand how engineers might plan for a mission to Mars — by likening it to a trip to Grandma's house.

"We listed all the things we might need for a long trip to Grandma's, like sleeping bags and food," Woods said.

A project for another class allowed fourth graders to build and launch rockets — but not until everyone had on their safety goggles. "That way, they learn that NASA is very concerned with safety," she said.

It's not just longtime NASA engineers who participate in the school outreach: A group of 23 NASA co-op students also took their message on the road.

The co-ops visited Fairmont Junior High School and gave presentations in six different classes, speaking about what they do at NASA and which courses had helped them get there.

Wendy Stone, who organized the co-op group, said that the students' interest "hit an absolute high" when

a co-op explained her work with robotics. In telling kids what engineers do, Stone said the experience might have helped recruit a future class of NASA employees.

"The kids in school now are the ones that will carry NASA and other space-related agencies into the next several decades," she said. "It's very important that they build their interest and knowledge now so they can make this agency even better in the future."

Anne Roemer, Education Program Manager at JSC, coordinates the Center's involvement with E-Week. She estimates that 6,000 Houston area students were reached through this year's Discover "E" program. Classroom students weren't the only ones who got to enjoy E-Week.

Two JSC engineers spoke about their profession to an audience of 425 home-schooled kids at Space Center Houston. Albert Rodriguez and Liz Bauer, who both work in the Biomedical Systems Division, started by dispelling the "Top Five Myths About Engineers" while wearing "geeky" coke-bottle glasses.

Among the myths were the ideas that engineers are all geniuses and are all males. "It's actually a very diverse profession," Rodriguez said. "On our teams, we work with men, women, and people of different ages and ethnicities. It makes for a creative team."

Rodriguez and Bauer were also encouraging about the engineering job market. "There aren't enough engineers to go around," Bauer said.

Rodriguez encouraged kids in the audience to take "as much science and math as you can get your hands on."

Another JSC E-Week activity was the Webcasting Series, now in its second year. In the series, NASA engineers discuss their careers and education with kids all over the country via the Internet. Viewers can e-mail questions to the engineers during the hour-long broadcast.

One Webcast session featured three engineering co-ops, who explained their work at NASA. They also answered questions about everything from their desire to be astronauts one day to the coolest thing they've done at JSC.

One co-op participant, Fernando Zumbado, said that he likes being an engineer because he's always been interested in science. "I wanted to know how things worked," he said.

"I took apart my family's TV — that got me in trouble."

Through E-Week, NASA engineers have the chance to highlight their professions and encourage tomorrow's engineers. At the same time, they realize that the job is not for everyone. "The important thing," Webcast participant Louis Malone II said, "is really to find out what you want to do and pursue it." ❖



NASA JSC 2002e05982 Photo by James Blair

Activities were varied for E-Week. Above, NASA engineers Elizabeth Baumer and Albert Rodriguez took time out of their day to speak to students at Space Center Houston. Also, engineering Co-ops recently visited Fairmont Junior High-Deer Park ISD during E-Week. The Co-ops discussed their roles as JSC employees and their responsibilities at work. At the top, John Flores, a 7th grade Technology Education student in Jim Glock's class, shows off a clothespin he holds with a spacesuit glove during the Co-ops' visit.

# 40th anniversary of Americans in orbit

On Feb. 24, the four remaining members of the Mercury Seven Astronauts were honored in a daylong celebration at Kennedy Space Center to recognize the 40th anniversary of Americans in orbit. On-hand for the day's events were John Glenn, Scott Carpenter, Wally Schirra and Gordon Cooper – the ones responsible for the first U.S. orbital flights.

The celebration began with a press conference that included media from around the globe. The four then participated in a dedication ceremony to open the newly renovated Rocket Garden at the Kennedy Space Center Visitor Complex.

One of the rockets featured in the rocket garden is the Mercury Atlas, the same rocket that Glenn, Carpenter, Schirra and Cooper rode into space.

The day ended with a special event entitled "An Evening with the Mercury Astronauts." Held in the expansive Apollo/Saturn V Center under a 363-foot Saturn V moon rocket, Astronaut Jim Lovell served as the host for the evening.

The four men reminisced about their ground-breaking flights and life as one of the Mercury Seven Astronauts. The evening also featured an appearance by the comedian known as the Eighth Mercury Astronaut, Bill Dana.

**Roundup editor Melissa Davis** attended the events. Below, she provides a snapshot of that special day.



At left are the Mercury Seven Astronauts: Scott Carpenter, Gordon Cooper, John Glenn, Virgil 'Gus' Grissom, Walter Schirra, Alan Shepard and Donald 'Deke' Slayton. Above are the remaining members of the original seven: Cooper, Schirra, Carpenter and Glenn.

## 'We're not a bunch of guys, we're a bunch of brothers'

The applause was as spontaneous as it was surprising.

These days it's rare for the media to give such respect to the subjects of a press conference. However, emotions just took over when the four remaining Mercury Seven Astronauts walked into the room.

To say they still have the right stuff would be cliché. It would also be true. While the world has changed significantly since these men captured the headlines, their appeal is timeless.

Wally Schirra is still comedic.

John Glenn is still stately.

Scott Carpenter is still dashing.

And Gordon Cooper is, well, still Gordo.

"It's been 40 years now and it seems

like about 40 days," Glenn told the reporters from around the globe.

The four still know how to charm the press, which isn't known for its soft side. The men were showered with compliments. One reporter even stood and told the four he didn't have a question – all he wanted to say is that they are still American heroes.

He wasn't the only one who thought so. More than a thousand people showed up that day to catch a glimpse of the space pioneers.

Many astronauts and dignitaries attended at the evening's event – people who normally steal the spotlight.

However, this was a night reserved for four men who captured America's heart during the tense space-race era.

In the age of Space Shuttles and the International Space Station, it was fun to travel back in time to the beginning of America's storied space program.

"Project Mercury was just the start of where we're going to go in the future," Glenn said.

While they are proud of their past, the four still look forward. "Each flight, as it moves up, is the greatest flight because that's the one that's the cutting edge at the time," Glenn said. "That's the one that takes it just a little bit further."

True to their reputation, the day's events were filled with numerous wisecracks:

### Schirra on NASA launching chimpanzees before humans

"The ASPCA kept sending us letters about the cruelty to animals, so we launched Al Shepard."

### Cooper on Glenn's return to space in 1997

"I just want to say to John, that when I'm old I want to go to Mars."

### Glenn on his return to space

"It's not true that I'm the only man to leave Florida in something other than a Winnebago."

### Carpenter on speaking after Glenn

"I forgot how hard it is to follow John."

However, the gathering of these legends was just as sentimental as it was entertaining. The four made it known they are not complete without their deceased Mercury Seven brothers – Virgil "Gus" Grissom, Alan Shepard and Donald "Deke" Slayton.

Schirra got choked up when he spoke of missing them, and Glenn said, "Three people are not here with us now who were a very key part of this whole thing – Alan, Gus and Deke – and you can't help but think about them."

Only those seven know what they went through – physically and mentally. They were guinea pigs as much as they were heroes. They risked their lives during a primitive time in the space program to lay the groundwork for all that has followed their historic flights.

That is why a bond exists with the remaining four that can never be broken.

"We have the privilege of loving each other and teaching each other," Schirra said.

Carpenter agreed. "We have a camaraderie that is indestructible."

He added, "It is an honor to be a part of this group, dwindling as it may be. It is a great pleasure to be associated with you three guys."

Cooper echoed the same sentiments.

"We're not just a bunch of guys, we're a bunch of brothers. I love you guys." ❖



When asked by a reporter if any of them still would like to go to space, the remaining Mercury Seven Astronauts gave an overwhelming response.

# ISS gets the star treatment

IMAX® **SPACE STATION 3-D** is the first cinematic journey to the International Space Station. Narrated by Tom Cruise, the film allows viewers to experience for themselves life in zero gravity aboard the new Space Station.

The audience blasts off into space with the astronauts and cosmonauts from Kennedy Space Center and Russia's Baikonur Cosmodrome to rendezvous with their new home in orbit 220 miles above Earth. **SPACE STATION** is the story of this unique partnership of 16 nations building a laboratory in outer space, a permanent facility for the study of the effects of long-duration exposure to zero gravity and a necessary stepping stone in global cooperative efforts toward the human exploration of space.

## WORLD PREMIERE

April 17, 2002

National Air & Space Museum IMAX Theatre in Washington D.C.

## LOCAL PREMIERE

Beginning May 18, 2002

Moody Gardens in Galveston

## DID YOU KNOW?

- ★ Between December 1998 and August 2001, 13 miles of 65 mm film negative was sent to space for use in two different IMAX 3-D cameras.
- ★ Each roll of film is only 108 seconds long!
- ★ During three trips to film at Kazakhstan, the film crew carried 1,500 meters of telephone cable and hundreds of bags to fill with sand to hold equipment in place.
- ★ To keep the film from fogging, fresh film was flown up and down from the Station on every visiting Shuttle mission. The Space Station crews discovered they could keep the film fresh longer by storing it between water containers on board.
- ★ Seven Shuttle crews and two Space Station Expedition Crews supported filming IMAX Space Station: Expedition 1 and 2, STS-88, STS-92, STS-97, STS-98, STS-102, STS-100 and STS-104.

*"Three events immediately come to mind when I recall STS-88, the first assembly mission: The exuberance of the crew when Nancy Currie grabbed the FGB (functional cargo block or Zarya) with the shuttle arm and secured it over the payload bay; the sheer joy of entering a new vehicle on orbit for the very first time when Sergei Krikalev and I floated in side by side and turned on the lights; and finally the sense of pride and accomplishment when we undocked and got our first look at an operational, fledgling Space Station through the overhead windows. The Space Station 3-D movie really captures the size and magnificence of the station. We can really be proud of what we've accomplished thus far. It's truly amazing what we can accomplish working together."*

**Bob Cabana, STS-88**

*"We worked hard to film the best scenes we could because this experience will really allow millions of people to learn about life in space about the Space Station. We wanted everyone who sees the movie to get the full flavor of the experience and share the excitement with us."*

**Joe Tanner, STS-97**

*"What most movie goers don't realize is that each scene they see shot on orbit in this movie was take one of one! There are no retakes with IMAX. Each scene is between 20 to 30 seconds long and each scene is shot one time. If we don't get the shot the first time, the movie loses a major part of the story line. No other professional movie made in the world is shot like IMAX."*

**Marsha Ivins, STS-98**

*"After seeing the 3-D footage, I felt like I was on Alpha again. Not only does the movie document the assembly of the station with spectacular exterior views, but it also shows the human aspects of living and working inside the Space Station. Viewers will be able to float through space and watch the construction work and really be able to experience life on the station through the magic of 3-D."*

**Jim Voss, Expedition 2**



Photo courtesy of IMAX

Actor Tom Cruise and his family visited JSC for a behind-the-scenes look at the human space flight program. Cruise is the narrator for *Space Station 3-D*. Here, Acting Director Roy Estess presents Cruise with a memento of his visit to JSC.

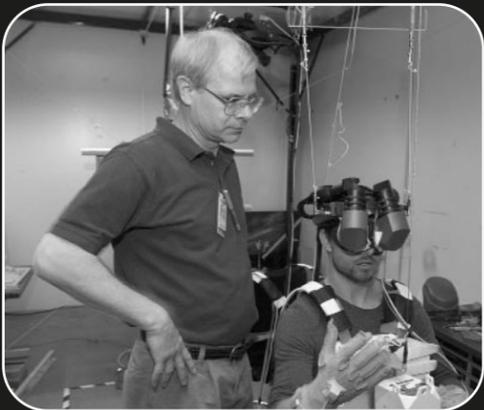


Photo courtesy of IMAX

Dave Homan, left, gives Cruise guidance as he experiences the feel of virtual reality training.



Photo courtesy of IMAX

Cruise and Astronaut Kent Rominger prepare for a shuttle "launch" in the Building 5 simulators.



Photo courtesy of IMAX

Rominger reviews a 'report card' with Tom Cruise after a simulated shuttle launch and landing in Building 5.

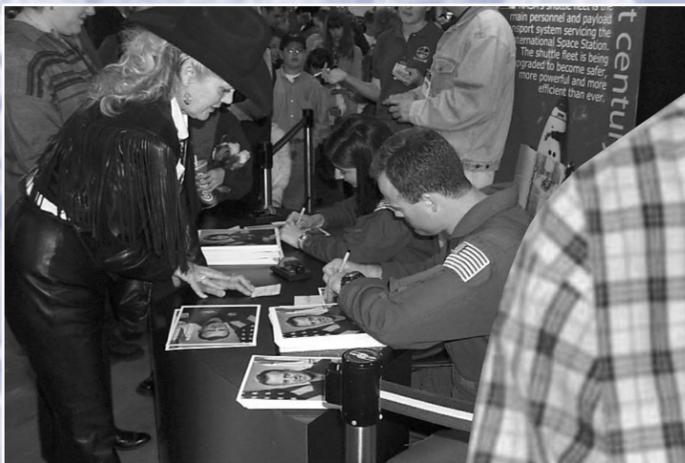
# Holy Cow!

What can make 20,000 youngsters happy? Twenty thousand NASA Johnson Space Center aerospace activity books can do it. That is how many activity books were given to youngsters visiting the NASA Johnson Space Center exhibit at the Houston Livestock Show and Rodeo (HLS&R) 2002 in the Agraventure section of Reliant Hall between Feb. 12 and March 3. The exhibit, staffed by 80 volunteers, 17 astronauts and their friends from the astronaut office, had about 40,000 visitors during the 20-day show.



Volunteer Jerry Elliott visited with the exhibit's next-door neighbor, Elsie. Elsie wore her best blanket and fresh flowers, and she had polished hooves and horns for her appearance at the show.

Thanks to Jackie Baston, Don and Cynthia Hanselman, Bettye Bowerman and Jerry Elliott for the images. A huge thanks to all who helped made the exhibit at HLS&R 2002 a tremendous success.



A rodeo fan visiting the JSC exhibit talked with Astronaut Ron Garan as he signed a lithograph for her. Nicole Stott kept busy signing autographs and visiting too.



IMPASS Community Outreach Coordinator, Hazel Fipps-Mann, who coordinated the volunteer effort for the event, helped Flat Stanley in his Extra-vehicular activity.



Astronaut Barry Wilmore's cowboy hat was the perfect accessory for his flight suit. Wilmore exchanged autographed pictures with a fan that had her own claim to fame: Her photo appeared in the newspaper with an account of her expertise at the weaving loom. Wilmore got her autograph in exchange for his. Astronaut Janice Voss is in the Commander's seat signing autographs for eager visitors.



The exhibit featured popular photographic opportunities, eye-catching graphics and videos featuring JSC's educational programs and the International Space Station.

A young cowboy showed Flat Stanley the ropes.

## SPACE CENTER Roundup

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