Space News ROUNDUP!

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In this issue

ALAN B. SHEPARD JR.
1923 –1998

JSC Photo by Mark Sowa

NASA Administrator Daniel S. Goldin eulogizes Alan B. Shepard Jr., the first American launched into space and one of only 12 human beings to set foot on the Moon, during Aug. 1 memorial services in Teague Auditorium. Joining Goldin were, from left, Gordon Cooper, Wally Schirra, Scott Carpenter, John Glenn, Chris Kraft, Peter Vanderhoef, Edgar Mitchell, Jim Lovell and Lisa Beeson.

JSC honors Shepard as space hero

Alan B. Shepard Jr., the first American to fly in space and one of only 12 humans who walked on the Moon, was remembered as one of NASA's greatest pioneers at JSC memorial services attended by about 900 people.

Shepard died July 21 in Monterey, Calif., after a long illness. He was 74.

"When Alan Shepard and the other Mercury astronauts came along, they were intense, determined and willing to risk their lives to open the space frontier," said NASA Administrator Daniel S. Goldin. "They gave our nation what all nations, what all people need—heroes, genuine heroes."

Among those speaking were the surviving four of the original Mercury 7 astronauts: Sen. John Glenn, Scott Carpenter, Gordon Cooper and Wally Shirra. Shepard's wife, Louise, and their three daughters, Laura, Julie, and Alice, attended the Teague Auditorium service

Glenn said that he and the other Mercury astronauts "have lost more than a friend. We have lost another brother." He said that Shepard was "a patriot, a leader. He was a fierce competitor. He was a hero." Glenn, at 77, is scheduled to fly on STS-95 in October.

A tearful Shirra said, "The brotherhood we have will endure forever."

All four said Shepard had helped revive the morale of the nation after Yuri Gagarin's April 12, 1961, flight. Shepard's flight less than a month later got the U.S. off the starting line in the space race that took Americans to the Moon.

Edgar Mitchell, who walked with Shepard on the Moon and who is now the sole survivor of the Apollo 14 crew, said that wherever astronauts and explorers go "when we depart

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Alan Shepard's story, in his own words

[Editor's note: Earlier this year, Alan Shepard was interviewed at his home in Pebble Beach, Calif. as part of a NASA oral history project. This story is based on that interview.]

If it hadn't been for Victor Polis, Alan Shepard might never have made it to the Moon.

Shepard had been scheduled to fly on the first Gemini mission, launched March 23, 1965—not quite four years after he had become the first American in space. But he was grounded because of a malady called Meunière's disease, which caused lack of balance, nausea and dizziness because of increased pressure in the inner ear.

Shepard decided to stay with NASA and hope that a cure would be developed that would allow him to return to space, and indeed, to fly alone in an airplane. Medication helped, but after several years there still was no cure.

"It was (fellow astronaut) Tom Stafford who came to me and said he had a friend in Los Angeles who was experimenting in correcting this Meunière's

Please see **SHEPARD**, Page 8

JSC expects huge Open House crowd

By John Ira Petty

JSC will host tens of thousands of visitors for its fourth annual Open House on Saturday, Aug. 29. They'll come to see the people, tools and the concepts that make up the nation's human space flight program.

The event, which attracted more than 70,000 people in 1997, is open to the public without charge or reservations. Gates open to the public at 9 a.m. and visitors can explore the center until 6 p.m.

Open House is an opportunity to show the nation's people, who own the space program, how JSC develops, supports and carries out human space flight programs. Visitors also will be able to see some of the many benefits the human exploration and development of space have brought and will continue to bring to the nation and the world.

The event gives the center and its people a chance to talk face-to-face with the public, many of whom know little about the space program. It allows employees at the center to explain their jobs, how those activities fit into the broader picture and how the community and the country benefit.

Guests can select facilities or displays to see using free brochures with a map and brief explanations. More than 150 exhibits and displays will be available at 20 of the center's buildings, most open to the public only this day. Volunteers will be on hand to explain what they do.

Visitors are welcome to walk to the various displays, or they can ride covered trams around the center. The gift shops and cafeterias will be open.

Open House is held concurrently with the Saturday of the three-day Ballunar Liftoff Festival, also at JSC. The festival, featuring 100 or more balloon launches, offers midway rides, games, skydiving exhibitions, balloon flights and booths. Festival admission is $3 for adults with children under 12 admitted free.

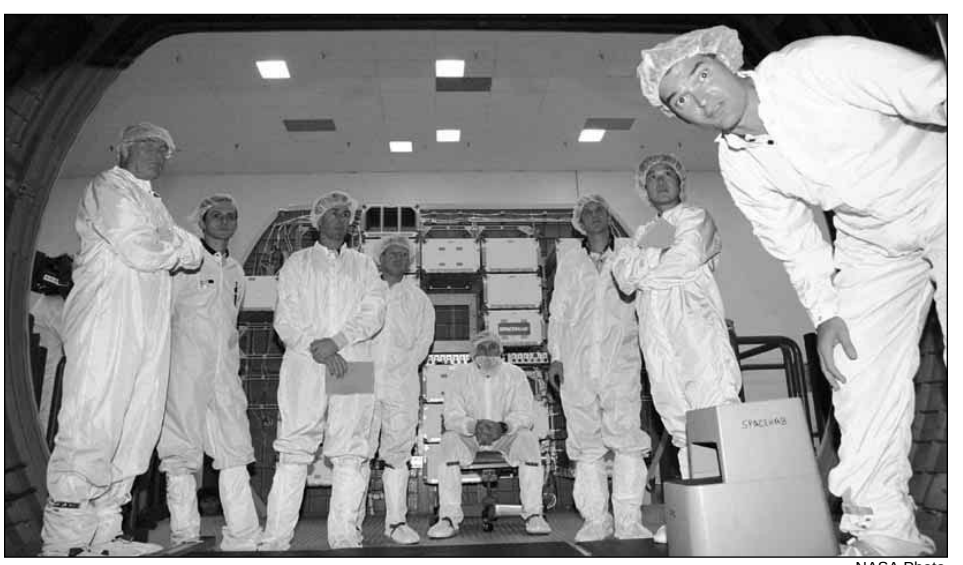
Space News Roundup moving to new format

Today's issue marks a turning point for the Roundup which is moving to a monthly news magazine format with expanded participation from all JSC organizations.

Starting with today's issue, the Roundup will be published the first Friday of each month. The first issue to showcase the news magazine format will arrive in employees' "in" boxes Sept. 4.

In an effort to generate more involvement in the content of the Roundup and to help the Public Affairs Office keep its finger on the pulse of what is relevant to JSC management and employees, a working editorial board is being formed. The board will consist of representatives from every JSC organization. It will meet the week following every publication to review the previous issue, collect ideas for coverage in the next issue and make long-range plans for future issues.

The first editorial board meeting will be Sept. 8. Organizations are in the process of assigning representatives. Employees with feedback on Roundup features they would like to see retained or suggestions for improvements should contact their directorate offices for the names of their representatives. A full roster of the new board's membership will be printed in October.



NASA Photo

INSIDE INSPECTION—STS-95 crew members get a briefing on the Spacehab module from Chris Jaskoika of Boeing, in foreground at far right. From left, are Payload Specialist John Glenn, Mission Specialists Pedro Duque and Steve Robinson, Pilot Steve Lindsey; Commander Curt Brown, Mission Specialist Scott Parazynski; and Payload Specialist Chiaki Mukai. STS-95 will feature a variety of research payloads.

Four veteran controllers become flight directors

Beck

Cain

Curry

LaBrode

The Mission Operation Directorate has named four new flight directors for future assignments in the Mission Control Center.

The four new flight directors, all former flight controllers, are Kelly Beck, LeRoy Cain, John Curry and Richard LaBrode.

Beck is from Cahokia, Ill. She holds a bachelor's degree in aerospace engineering from Parks College of St. Louis University and a master's in physical sciences from the University of Houston Clear Lake. Beck, 31, has been a part of the space program for almost 10 years, first as a government contractor and more recently as a JSC employee.

Before being selected as flight director, she supported numerous space shuttle missions, 16 of them as a guidance and procedures officer responsible for the onboard guidance and navigation.

Cain joined Rockwell Shuttle Operations Co. at JSC in 1988. He became a JSC employee in 1991. Before being appointed a flight director he served as a guidance, navigation and control officer for numerous shuttle missions, including 14 flights as the ascent/entry GNC officer. More recently he served as the lead for the Ascent/Entry Guidance and Procedures Group, overseeing the preflight and real-time operations and support. Born in Dubuque, Iowa, Cain, 34, holds a bachelor's degree in aerospace engineering from Iowa State University in Ames.

Curry is from Albuquerque, N.M. He holds a bachelor's degree in aerospace engineering from Texas A&M. Curry, whose NASA career began in 1987, served as a flight planner on 18 space shuttle missions, four of them as lead flight activities officer. In April 1997, Curry, 33, transferred to the Operations Liaison Office and supported Mike Foale's Mir/NASA-5 mission as one of the NASA operations leads in the Russian mission control center outside Moscow.

Four months later, Curry was named lead for International Space Station mission operations in Russia. He will remain in that position until completion of the STS-88 mission.

LaBrode, 36, was born in Orleans, France, but grew up in St. Louis, Mo. He holds a bachelor's degree in electrical engineering from the University of South Florida in Tampa.

A 13-year veteran of the space program, LaBrode began as a contractor employee and served as a flight controller in the Communications Group. He is a veteran of 51 shuttle missions, 31 of which he supported as an instrumentation and communications officer. He became a NASA civil servant when he was selected as a flight director.

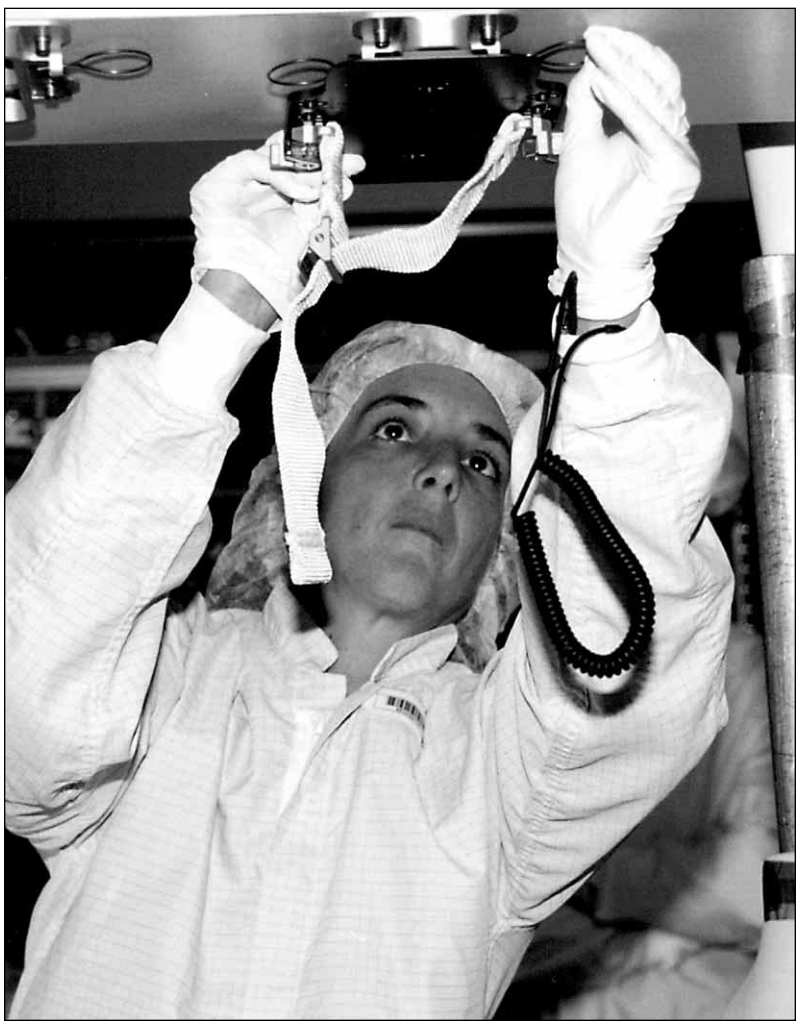
Wilcutt takes over in Russia for Halsell

Terry Wilcutt will replace fellow astronaut Jim Halsell as the NASA manager of operational activities at Star City, Russia.

The tenth astronaut to serve in this rotational position, Wilcutt will support the training and preparations of NASA astronauts at Gagarin Cosmonaut Training Center, Star City. A Marine Corps lieutenant colonel, he will be the primary liaison between NASA and cosmonaut training center management, and will continue operational and personal relationships with Star City management and the cosmonauts.

Wilcutt

Wilcutt has three flights to his credit. He first flew as the pilot on STS-68 in 1994. In 1996, he was the pilot for STS-79, the fourth shuttle-Mir docking mission, and in 1998, he commanded STS-89, the eighth docking mission.



NASA Photo

FOOT CHECK—STS-88 Mission Specialist Nancy Currie works on a foot restraint attached to the Unity connecting module, part of the International Space Station, in the Space Shuttle Processing Facility at Kennedy Space Center. During the mission, Unity will be mated to the Zarya control module, which already will be in orbit. The crew was at KSC for the Crew Equipment Interface Test. STS-88 is scheduled for launch Dec. 3.

Space walkers join third Hubble servicing crew

By Eileen Hawley

A team of veteran astronauts will begin training to install new instruments and upgrade systems to enhance the scientific capabilities of the orbiting Hubble Space Telescope.

Crew members Steve Smith, Mike Foale, Claude Nicollier and John Grunsfeld will conduct a record six space walks during the STS-104 mission, scheduled for launch in May 2000. Smith will be the payload commander, coordinating the astronauts' space-walking activities.

"The ambitious nature of this mission, with its six space walks, made it important for the payload crew to begin its training as early as possible," said Flight Crew Operations Director Dave Leestma.

The crew will rendezvous with and capture the orbiting Hubble Space Telescope, and secure it in *Columbia*'s payload bay using the shuttle's robot arm. Then, working in teams of two, the veteran astronauts will venture into the payload bay performing a variety of tasks that will improve the productivity and reliability of the telescope.

Both Smith and Nicollier have previous experience with Hubble. Smith performed three space walks during the second Hubble servicing mission in February 1997. Nicollier operated the robot arm during the first visit to the telescope during STS-61 in 1993. Foale has spent more than 10 hours conducting space walks from both the shuttle and Russia's Mir Space Station. Grunsfeld has two previous space flights.

Meanwhile, veteran cosmonaut Sergei Krikalev has been assigned to the crew of STS-88, the first American International Space Station assembly mission.

Krikalev, who will be one of the first full-time residents on the station, will join Commander Bob Cabana, Pilot Rick Sturckow, Mission Specialists Nancy Currie, Jerry Ross and Jim Newman when *Endeavour* launches in December.

A cosmonaut since 1985, Krikalev has accumulated more than one year and three months in space as a member of two Mir space station crews. He has flown on board the shuttle once before, as a member of the STS-60 crew in February 1994.

During that nine-day flight, Krikalev operated the shuttle's robot arm and supported a variety of materials science experiments. Throughout the shuttle-Mir program, he supported operations, working in Mission Control.

JSC's Woods earns Flight Safety Award

JSC employee Karon Woods of the Safety, Reliability and Quality Assurance Office recently received the NASA Flight Safety Award.

The award recognizes extraordinary contributions to flight safety that helped avoid potentially catastrophic mistakes.

Woods

Fred Gregory, NASA associate administrator for safety and mission assurance, presented the award.

Woods and her team developed a software tool that enables NASA to continuously assess system risks of all shuttle elements. The tool will be available to industry to improve airplane, auto and consumer product safety.

Culbertson replaces Chilton in station

Frank Culbertson, who has led NASA's shuttle-Mir program since August 1995, will take over for departing Kevin Chilton as acting International Space Station deputy program manager for operations.

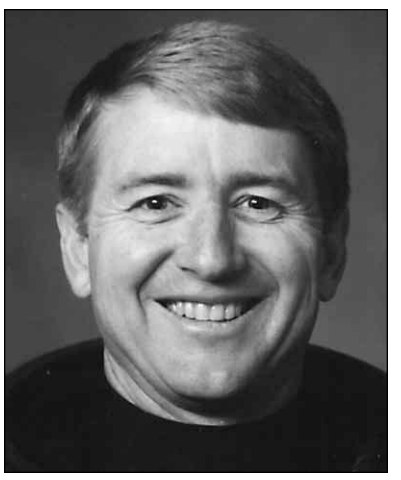
Culbertson, a veteran of two space flights, has guided the Phase 1 Program through all but the first of the nine successful shuttle-Mir docking missions and more than two years of continuous American presence aboard Russia's Mir Space Station.

Chilton, recently selected for promotion to the rank of brigadier general in the U.S. Air Force, is leaving NASA to continue his military career. A veteran of three space flights, Chilton has overseen the operational planning for the International Space Station since 1996.

"Having Frank Culbertson's Phase 1 leadership and management experience and expertise applied to the International Space Station is certainly appropriate as we enter what will be one of the most challenging and exciting times in the history of space flight—the assembly of the International Space Station in orbit," Brinkley said.

A three-time shuttle veteran, Chilton commanded STS-76, the third docking mission to the Mir, and flew on STS-49 in May 1992, and STS-59 in April 1994, logging more than 704 hours in space.

Culbertson, a retired Navy captain, commanded *Discovery* on STS-51 in September 1993, deploying the Advanced Communications Technology Satellite and deploying and retrieving an astronomy satellite. He served as pilot of *Atlantis* in November 1990 on STS-38, a classified Department of Defense mission. Culbertson has logged more than 344 hours in space.



Frank Culbertson

Data processing team hangs STS-91 plaque

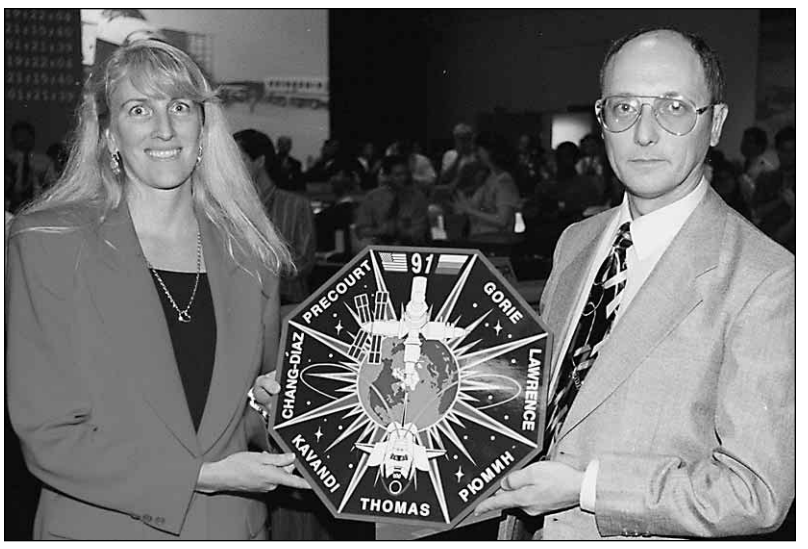
The STS-91 Data Processing Systems team earned the right to hang the mission plaque in the Mission Control Center following a successful June 11 landing.

Terri Murphy, the STS-91 ascent/entry and Orbit 1 DPS Officer, was selected to hang the plaque in recognition of the way in which she and the rest of her team handled the problems associated with the computer software bug that occurred several days before landing.

"Their performance was a shining example of good old fashioned flight control operations," Dye said. "They were faced with a new and unusual problem which had never been simulated or predicted. They knew that the software had some sort of internal problem, and that the only sure way to eradicate the bug was to shut down the only working guidance and navigation computer, leaving the orbiter without control, and then bring up a fresh machine.

"Despite the seriousness of such a step, the team recommended the major reconfiguration with confidence, and followed through with clear and concise directions for the team and the crew to recover the system," he concluded.

Team member Robert Hudson climbed the ladder to position the plaque.



JSC Photo

STS-91 Lead Flight Director Paul Dye, right, hands the mission plaque to Terri Murphy, the STS-91 launch and entry data processing systems officer, so that she may hang it in the Mission Control Center.

Gerstenmaier leads shuttle program integration work

Bill Gerstenmaier became manager for Space Shuttle Program Integration this week.

Gerstenmaier has been with NASA for more than 21 years, and at JSC since 1980. He has served in several senior technical and managerial positions, most recently as manager for operations, Space Shuttle Vehicle Engineering Office, and as the Phase 1 Program operations manager.

He holds a bachelor of science in aeronautical astronomical engineering from Purdue University, and a master of science in mechanical engineering from the University of Toledo.

Community News

Workshop sparks enthusiasm among visiting educators

By Amy Milkavich

Inspiration comes from many places, but when found in the classroom, sparks fly and the results can be magical.

While magic is not the mission of JSC, the 25 educators who attended a two-week long workshop here July 5-18 will have a chance to see some sparks fly when school starts in the fall.

"People at JSC treated our group to special and rewarding experiences that I will cherish for the rest of my life," said Rebecca Goehring of Wimbledon, S.D. "Sometimes each of us in our careers need to reflect on why we are doing what we are doing, and I can tell you that I left JSC with a new and clearer purpose as to why I am an educator."

The workshop, called NEWEST, is the NASA Educational Workshop for Elementary School Teachers and is produced under the NASA Educational Workshops umbrella of programs.

The NEW programs are part of NASA's ongoing efforts to advance and communicate scientific knowledge and understanding of the Earth, the solar system, the universe, and to invest in America's future.

"We are trying to show how teachers can take space into the classroom and excite the kids and inspire them to explore knowledge," said Norma Rhoads, JSC NEWEST coordinator.

Throughout the two weeks that they were at JSC, the teachers explored educational techniques incorporating the theme of space travel and exploration.

"The knowledge and experience I gained from this workshop will continue on to every child I have an opportunity to reach," said Heather Brown of Van Buren, Ark. "I truly believe that one day one of my students will go to Mars or the Moon."

A portion of the workshop was devoted to an assignment that required the teachers develop a hypothetical Mars base. To complete the project, participants had to consider the challenges of developing a livable environment on Mars and imagine possible solutions.

JSC employees from across the site volunteered to serve as mentors for the projects. Mentors helped participants learn about Mars and current plans for Mars exploration.

"I look forward to this every summer. It's a real fun two weeks," said John Gruener, a JSC employee who has served as a mentor for six years.

In addition to the Mars base mentoring project, participants attended presentations on such topics as robotics, space suits, and the X-38 project, toured training facilities, and received training in hands-on activities.

While at JSC, teachers also had an opportunity to videoconference with teachers in Wales, with the goal of maintaining a connection between their classroom and a partner classroom in the United Kingdom.

"The Mars base project will be an important and exciting tool that I will use this year. I have already heard from my Welsh partners and they are very excited too," said Marilyn Brothers of El Dorado, Kan. "Education is truly universal. We need to spend more time on projects such as these to learn from each other."

Participating teachers can choose to use the connection established while at JSC in a variety of ways, including pen pals, cultural sharing projects and an international Mars base.

"We sent several things to them at Christmas time about the Mexican Christmas traditions, and they sent us information about the Welsh Christmas traditions," said Karyl Tench, a NEWEST alumnus from San Antonio. "The cultural exchange was wonderful. (The students) were able to see that these were actually kids who had families and pets, just like them."

A total of 17 NEW programs are available across the country for all K-12 teachers and informal educators. In order to participate, teachers must submit an application, which is then reviewed and rated, with the highest ranking applicants selected to participate.

JSC Photo by Mark Sowa

Above: Bill Albee, a teacher from Axtec, N.M., tests a robot his group built during a NEWEST hands-on session at JSC in July. In the background, Jim Christensen, a National Science Teachers Association facilitator from Holstein, Iowa, watches another group's robot perform its task. Below: NEWEST participants and Summer Faculty Fellows enjoy watching the movie Apollo 13 from where it actually happened—the third floor Flight Control Room in JSC's Bldg. 30.

Local astronomers earn honors at Texas Star Party

JSC Astronomical Society members Bob Taylor and Jack "Triple" Nickel brought home the equivalent of "gold stars" from this year's Texas Star Party.

Nickel, who works in NASA Aircraft Operations at Ellington Field, and Taylor, who serves the nearby Texas Air National Guard, brought home two of four awards given. Judges do not bestow first, second or third places, instead selecting only those entries worthy of award.

Every year for the past 20 years, a Texas Star Party has been held in the dark skies of West Texas, drawing people from all over the world. Each year, there is a formal judging of these homemade telescopes.

The star party boasts attendance by hundreds of amateur astronomers and astrophotographers and becomes a showplace of new equipment and homemade telescopes. This year, 601 registered astronomers showed up at the Prude Ranch, just outside Fort Davis, Texas, and down the road from the McDonald Observatory, for the "darkest skies in North America."

Of these, there were about 20 entries in the amateur telescope making contest. The judging committee consisted of two writers/editors from Sky and Telescope Magazine, one writer from Astronomy Magazine, several members from the Texas Star Party board of directors, and a photojournalist for the Public Broadcasting System. The judging committee carefully examined each entry, listing any noteworthy aspect of the design or functionality. They interviewed the maker and asked many questions regarding unique ideas and design features.

Taylor submitted his homemade Newtonian Reflector telescope and it's associated equipment. He hand ground, polished and figured the 22-inch mirror and had designed and constructed the truss supports out of common household materials. Additionally, he had made a refractive sighting scope and mounted it on the side of the large telescope. The base and support mechanism for the mirror and trusses was fashioned out of a swimming pool sand filter and parts from a band saw. The telescope resembled "Star Wars" robot R2-D2 when it was packed away.

Nickel's entry also was a Newtonian Reflector telescope. He hand ground, polished and figured the 8-inch mirror and fashioned the tube out of a 10-inch concrete-pillar-tube form. The base was cut out of three-quarter-inch oak veneer plywood and stained and varnished to a furniture quality finish. The tube was painted a high gloss black, thus making the telescope look like a medium-sized cannon.

Anyone interested in the JSC Astronomical Society or the Texas Star Party, is encouraged to visit their web sites at: http://www.ghg-corp.com/cbr/jscas.html and http://www.metronet.com/~tsp/index1.html.

JSC Safety Alert

Shock Hazard from Tektronix Oscilloscopes

What Happened

Tektronix, Inc., is voluntarily recalling oscilloscopes with Model Numbers TDS210 and TDS220.

Outcome of the Investigation

Tektronix has determined that using certain models of oscilloscopes incorrectly may cause the ground connection to fail and could cause serious injury or death from electrical shock. Tektronix has received reports of situations where the ground lead on these oscilloscopes has opened as a result of incorrect use. They are not aware of any injuries to users.

This recall applies to Tektronix model number TDS210—serial number below B049400 or C010880; and Tektronix model number TDS220—serial number below B041060 or C011175.

If you incorrectly connect a probe ground lead to a voltage source or incorrectly touch the ground ring near the probe tip to a voltage source, a circuit board trace in the oscilloscope's electrical ground path may open. The oscilloscope may appear to function normally, but because it is no longer properly grounded, you are at serious risk of electrical shock.

What You Can Do

Stop using the recalled oscilloscopes immediately and return them to Tektronix. Call James Cooley at x37142 to obtain a copy of the recall return instructions.

Tektronix will modify your oscilloscope(s) to remove this shock potential and return it to you free of charge.

Memorial to benefit interns, co-ops

Boeing's Ambrose ends battle against lung cancer

Frank Ambrose, a Boeing contractor whose battle against lung cancer and lymphoma led to an outpouring of support from his teammates earlier this year, died July 16 at his home.

An informal memorial service was conducted July 22 at Stevenson Park in Friendswood. At the family's request, the traditional black dress code was not followed.

Ambrose's fellow International Space Station Program Management and Control Team members demonstrated their support in March by shaving their heads when chemotherapy left Ambrose with such sporadic tufts of hair on his head and beard that he decided to shave it all off.

Kevin Window and Mark Wilson, the NASA and Boeing co-chairs for the SMC team, organized the head-shaving party. At the party, Ambrose was the first to shed his locks. All 19 of the men on the team shaved their heads, and a few from other teams joined in, making the total sheared 23. Several had kept their heads shaved since.

"We can thank the Lord that we had such a great man like Frank that touched all our lives and brought many friends, family, and folks that didn't even know Frank to their knees in prayer," Window said. "It is a great loss to us in the earthly sense, but we know now that we have a great angel to watch over us."

A memorial fund has been established at the JSC Federal Credit Union in Ambrose's name to assist in internships and cooperative education students for the space program. Checks may be made out to the "Frank Ambrose Memorial Fund" and mailed to:

JSC Federal Credit Union
P.O. Box 58346
Houston, TX 77258

Bigger, Better, Friendlier

JSC's 1998 Open House will offer some new twists that should make it even more visitor-friendly than the successful 1997 event that drew more than 70,000 people.

One big change is that buses will take guests to the Sonny Carter Training Facility and Ellington Field.

The buses to the Sonny Carter Training Facility will be provided by Space Center Houston. Other buses, chartered by the center, will take people to Ellington Field.

Last year visitors had to drive to visit those sites. It they prefer, they can travel to both facilities in their own vehicles this year, too.

The tram route has been changed slightly, and information and water stations have been combined. The two were separate in 1997. Additional stations are being added.

The brochure/map people are handed at the gate also has been redesigned—enlarged to a 17-by 28-inch format, which will be folded to a convenient size. It will be printed in two colors, with the map on one side and detailed exhibit information on the other.

Ask not how your center can serve you…

Volunteers are still needed for Open House on Saturday, Aug. 29. JSC will be open to the public from 9 a.m. to 6 p.m.

Volunteers are needed from 8 a.m. to 7 p.m., but can offer their services in two-hour increments—two hours, four hours, six hours … or all day.

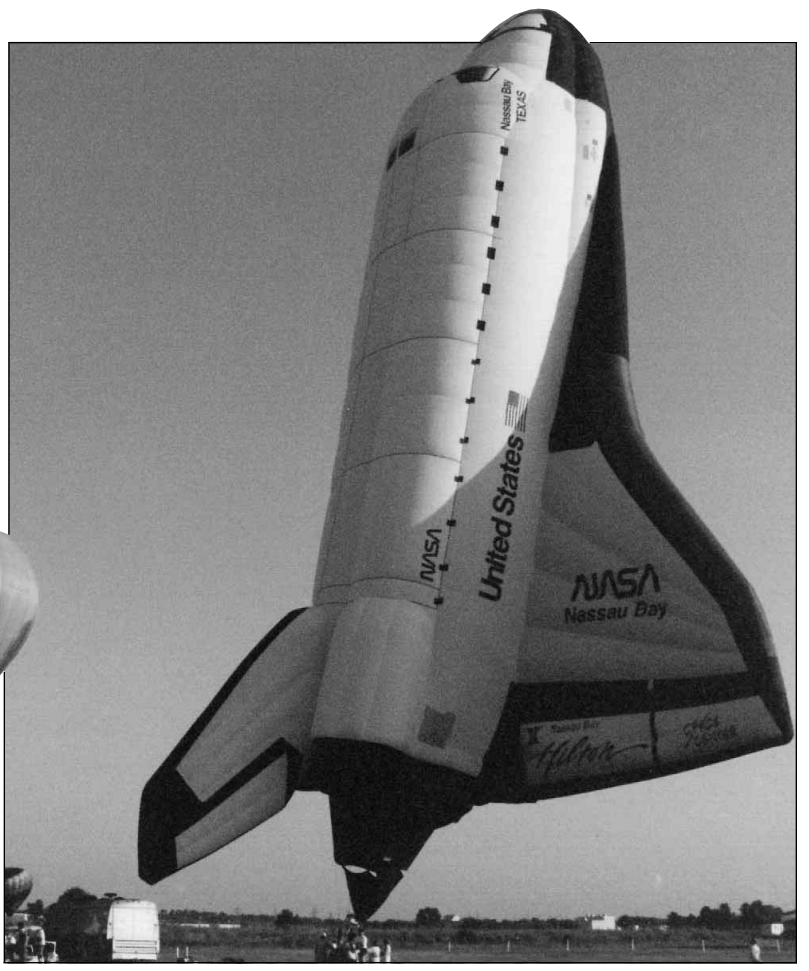
Additional Spanish-speaking volunteers are especially needed.

More than 70,000 people attended the 1997 Open House, and at least that many are expected this year. This event is important to the center. It is an opportunity for us to show the public what we do—how their tax dollars are spent and what they're getting in return.

Volunteers will serve at the information booths/water stations situated throughout the center. They'll have a chance to interact positively with visitors, to help show them how important the center is to the community and the nation.

To volunteer, please telephone Kacy Carraway at x35045 or e-mail her (kacy.r.carraway1@jsc.nasa.gov) with the following information: Last name, first name; mail code, telephone number, when you can work, and any special preferences or comments, and your e-mail address.

A brief training class will be held before Open House.



Ballunar Liftoff to complement Open House with aerial daring

The Ballunar Liftoff Festival, featuring mass ascensions of hot-air balloons, skydiving competitions and more, will be held Aug. 28, 29 and 30, complementing JSC's Aug. 29 Open House.

As a result two exciting family events are available that Saturday at the space center.

Ballunar Liftoff Festival Inc., the sponsoring organization, is dedicated to helping the public learn about aviation and space exploration. It also funds educational activities to help young people learn about space, mathematics and science.

Opening festival ceremonies begin at 6 p.m. Friday. Events continue from 6 a.m.-10 p.m. Saturday and from 6 a.m.-7 p.m. Sunday. The schedule is subject to change.

The hot-air balloon launches will take place early in the morning and in the late afternoon. One evening contest involves balloons skimming just above the ground as their pilots try to grab a ring from atop a 20-foot pole. The winner gets a "high-dollar prize," festival officials say.

About 100 balloons are expected.

Skydivers will jump from 13,000 feet over the festival and land in the event's performance field. On the way down they will do aerial acrobatics and create giant human patterns.

Other attractions include space and aviation hardware, music and other entertainment, food, games, arts and crafts, and exhibits of business sponsors.

Admission is $3 for adults. Children under 12 get in free.

Help make Open House safe, fun

Safety can't be allowed to take a day off on Open House Saturday, not with 70,000 or more visitors—many of them children—coming to see what JSC is all about.

Just one serious safety lapse resulting in an injury could change the day from one of fun and fascination to a painful experience for the victim and the victim's family. An accident shown on the evening news is not how we want our 1998 Open House to be remembered.

Each employee volunteering to help host Open House participates in a training session, which includes safety considerations.

Tracy Fergurson of the Occupational Safety and Quality Assurance Branch offers these reminders:

• Visitors may not be aware of our regulations, such as crossing streets at crosswalks or stopping their cars for pedestrians in the crosswalks, so employees need to be extra careful that day when driving and crossing streets.

• A first aid station staffed by a nurse will be set up in the lobby of the Bldg. 8 clinic during Open House. The clinic's ambulance also will be available.

• The emergency number is x33333. It will be on the back of volunteers' badges.

• Employees should be prepared to help visitors evacuate during a fire alarm by showing them stairs from upper floors and exits.

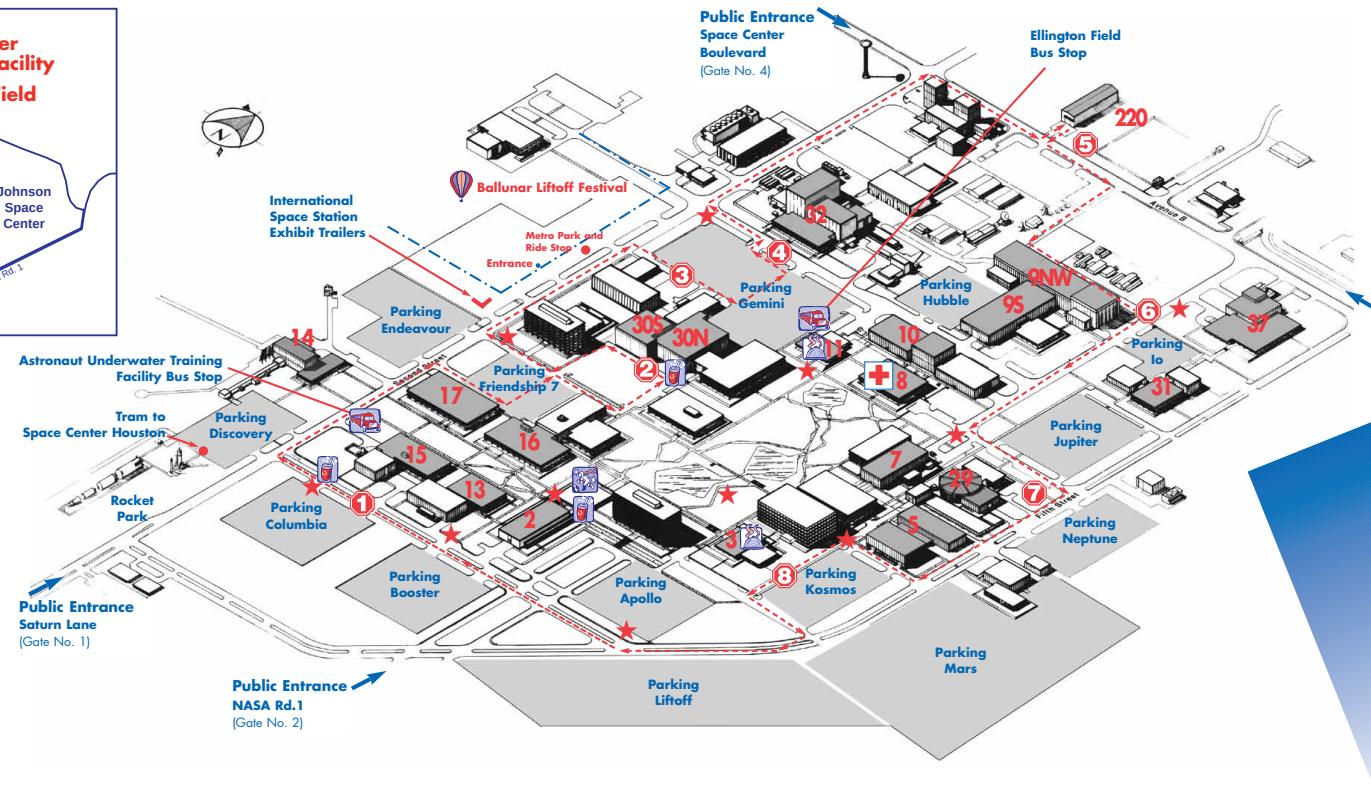
• Employees should check their areas throughout the day for potential hazards—including tripping hazards or slipping hazards, sharp objects/edges along the tour route, and shock hazards (exposed wires).

• Remember, in checking for hazards, that a lot of children will be among our guests.

Safety professionals will be walking around and available all day to help with any issues that may arise.

Johnson Space Center

OPEN HOUSE



Fortieth Anniversary
Pioneering the Future

August 29, 1998

Houston, Texas • Space City USA

Here's where to go, what to see during JSC Open House

Here is a building-by-building rundown on what visitors to JSC's 1998 Open House will be able to see, arranged in the order the free trams will transport people to them.

Other stops will take visitors to areas where they can board buses for the Sonny Carter Training Facility and Ellington Field.

Building 2

A Lost Child Center and Lost and Found will be here. Educational activities include building shuttle gliders and educational handouts. The Shuttle Amateur Radio Experiment and "Doing Business with NASA" will be explained. Presentations will include John Young talking about his lunar and shuttle experiences, Frank Culbertson discussing space exploration and international cooperation, and Linda Godwin taking about her three space flights.

Building 13

Building 13 will feature spacecraft mechanisms and thermal control systems for the shuttle and the X-38, as well as shuttle landing components, the shuttle's drag chute, infrared video, shuttle thermal tiles, a shuttle seat and the shuttle escape pole.

Building 14

Building 14 will show off its Space Communications Systems and Antenna and Tracking Development Lab. Exhibits include spacecraft communications, microgravity measurement devices, and the Antenna Test Chamber.

Building 15

Building 15 features human spacecraft propulsion and energy systems, including power, energy and rocket systems for the shuttle, space station and future spacecraft. Propellants of the future that could be produced on the moon or Mars, X-38 power devices, shuttle propulsion and power upgrades and spacecraft component quality testing will be featured here.

Building 16

Building 16 is the home of the main labs to test all shuttle systems—software and hardware—so problems can be detected and fixed before flights. Astronauts also train in rendezvous, docking and landing simulators located here.

Building 17

Building 17 has the Space Flight Food Facility. Space food, including hot sauce in space, liquids in space and international space foods, U.S. and Russian, will be on display.

Building 30

Building 30 houses the Mission Control Center, where visitors can see the Apollo Mission Control Room, the shuttle Flight Control Room and support rooms. Also open to visitors will be weather forecasting facilities, the Emergency Operations Center and the Environmental Services Office.

Building 11

Building 11—the cafeteria and gift shop—is where visitors can buy food and souvenirs. They also may get an autograph from an astronaut and learn about "spinoffs," which are Earth applications of space research-derived technology. International Space Station trailers will be in the parking lot of the Ballunar Liftoff Festival with displays on how astronauts will do research, eat, sleep and live while aboard the International Space Station.

Building 32

At the Space Simulation Laboratory, equipment is tested in conditions simulating the vacuum and temperatures of space. Displays include shuttle emergency equipment, space suits, and a partial Transhab mockup.

Building 220

Building 220's Test Article Preparation Facility will show a mockup of the X-38.

Building 9

Building 9 NE will showcase its space shuttle mockups and trainers. Exhibits include space shuttle equipment, two shuttle trainers, robotic hands, and virtual reality training. Also open will be the Manipulator Development Facility, where astronauts practice grabbing satellites with a hydraulic shuttle robot arm.

Building 9NW will showcase International Space Station Mock-ups and Trainers. The mock-ups in this facility are much like the real space station inside, so astronauts use them to become familiar with the spacecraft layout. A Mir display will be there too.

Building 9S with its Mockup Fabrication Facility will show guests how tools, mockups, composite materials and other structures used for trainers or spacecraft development are made—often from scratch.

Building 10

The Machine Manufacturing Facility makes metal products for parts, spacecraft, simulators, aircraft and institutional use.

Building 31

Building 31 is the home of the Planetary and Earth Sciences Laboratory, which houses lunar and other astromaterials, and information about orbital debris. Guests can use a glovebox to see what it's like to work on rock samples.

Building 37

The Medical and Life Sciences Laboratory will focus visitors' attention on physiological changes during space flight, medical experiments in space that could lead to better treatment of some diseases, shuttle medical kits and telemedicine.

Building 5

In Building 5, guests will see where astronauts train in sophisticated simulators for the shuttle and the space station. There is even a model of the Russian Soyuz, which will take some astronauts to the space station.

Building 7

Building 7 houses advanced closed-loop life support chambers and a space suit laboratory. Here visitors will see how engineers and scientists design, develop and test tools, life support systems, space suits, heating and cooling systems.

Building 29

Here, advanced life support chambers are being prepared for testing at JSC. Attendees also will see concepts of how plants can be used to provide food, contribute to air revitalization and water and waste recovery during long space flights.

Building 3

Building 3 houses a cafeteria and gift shops, with astronaut autographs and souvenirs available. Also, guests can learn about working for NASA and a little about the NASA budget.

Ripped from the ROUNDUP

Ripped straight from the pages of old Space News Roundups, here's is what happened at JSC on this date:

1963

An expected rise of almost $1 million in the Manned Spacecraft Center's monthly payroll in the next eight months was reported to space industry representatives attending the Second Space Industry Assistance Symposium in Houston on July 30.

The symposium, held on the Rice University campus, was co-sponsored by MSC and the Houston Chamber of Commerce, in cooperation with Rice University.

With the increase, the local monthly payroll of approximately $2.3 million is expected to reach $3.2 million by next April …

1968

James A. Lovell Jr. Last week was named to replace Michael Collins as prime command module pilot for the third manned Apollo mission. Collins is recuperating from successful spinal surgery on July 23. Lovell was command module pilot on the mission's backup crew.

1973

Official dedication ceremonies for the Lyndon B. Johnson Space Center will be held August 27 at the NASA site southeast of Houston.

The former Manned Spacecraft Center was renamed in honor of the late President on February 17 of this year. Dedication ceremonies have been scheduled to coincide with the 65th anniversary of Johnson's birth.

1978

John W. Kiker and David E. O'Brien recently received letters from President Jimmy Carter in recognition of their money-saving suggestions. Kiker's idea for Orbiter/747 piggyback ferry and approach and landing tests saved an estimated $30 million. O'Brien's suggestion for substitution of a flight recorder will save an estimated $152,000.

1983

The most demanding and far-ranging EVA ever attempted in space is now scheduled for STS-11, in a visual and technological tour de force leading up to the Solar Max revisit on STS-13.

Not since the lunar surface EVAs of the Apollo era has JSC prepared for such complex extravehicular activity, and the training necessary for this exercise has involved new approaches for the crew trainers, EVA planners and the crew members themselves.

1993

Friends and colleagues of retiring JSC Director Aaron Cohen are being invited to honor him for his profound contributions to America's human space program at an Aug. 27 Space Center Houston gala.

Cohen will retire from NASA on Aug. 20 after a distinguished career in government and industry aerospace to become the Zachry Professor of Engineering at his alma mater, Texas A&M University.

JSC labs earn board approval

JSC's Clinical and Microbiology Laboratories in Bldg. 37 recently received a two-year accreditation by the Commission on Laboratory Accreditation of the College of American Pathologists.

The laboratory's director, Dr. Daniel Feeback of the Life Sciences Research Laboratories Branch, Medical Sciences Division in the Space and Life Sciences Directorate said the commission congratulated the laboratories on the "excellence of the services being provided."

The JSC Clinical and Microbiology Laboratories perform all the diagnostic laboratory testing on NASA astronauts immediately before and after space flights. This information is used by NASA flight surgeons in assuring the health of individual members of flight crews. The JSC Clinical Laboratory now is one of more than 5,000 CAP-accredited laboratories nationwide.

"Not only did the laboratories meet all of the CAP requirements for accreditation, they received a perfect score with absolutely no deficiencies noted in the seven areas," Feeback said, listing the categories of general laboratory, hematology, automated/general chemistry, urinalysis, special chemistry, microbiology and diagnostic immunology/serology that were thoroughly examined by the CAP inspection team during a June 23 on-site inspection.

"The NASA contractor personnel who work in the laboratories from Wyle Laboratories and EASI as well as the NASA technical monitor of the Microbiology Laboratory, Dr. Duane Pierson, are to be commended for their efforts in achieving such a high level of quality which culminated in the successful accreditation," Feeback said.

Feeback added that the center-wide ISO-9002 process contributed to the laboratories' capability to meet or exceed the rigorous CAP standards.

The laboratories also perform annual tests on all members of the astronaut corps, whether active or retired. This information and testing performed on a comparison group of non-astronauts, mostly from JSC and JSC contractor personnel, is used in the Longitudinal Study of Astronaut Health, designed to detect any short- or long-term differences between the groups that could be attributed to space flight.

The laboratories provide test results on all astronaut candidates as part of the medical evaluation process to determine that they meet the NASA astronaut medical standards prior to selection. Clinical laboratory testing support also is provided to the Human Test Subject Facility in Bldg. 37, as well as to outside investigators as part of either flight or ground-based studies relevant to human space flight.

The CAP Laboratory Accreditation Program, begun in the early 1960s, is recognized by the federal government as being equal to or more stringent than the government's own inspection program.

Inspectors examine the records and quality control of laboratories for the preceding two years, as well as the education and qualifications of the total staff, adequacy of the facilities, the equipment, laboratory safety, and laboratory management to determine how well the laboratories are serving their clients.

The College of American Pathologists is a medical society serving more than 14,500 physician members and the laboratory community throughout the world. It is the world's largest association composed exclusively of pathologists and is widely considered the leader in laboratory quality assurance. The CAP is an advocate for high-quality and cost-effective medical care.

JSC Photo 98-E-06022A by Mark Sowa

Medical technologists work in JSC's Clinical Laboratories in Bldg. 37. JSC's Clinical and Microbiology Laboratories recently received accreditation from the College of American Pathologists.

Gilruth Center News

Hours: The Gilruth Center is open from 6:30 a.m.-10 p.m. Monday-Thursday, 6:30 a.m.-9 p.m. Friday, and 9 a.m.-2 p.m. Saturday.

Sign up policy: All classes and athletic activities are on a first come, first served basis. Sign up in person at the Gilruth Center and show a yellow Gilruth or weight room badge. Classes tend to fill up two weeks in advance. Payment must be made in full, in exact change or by check, at the time of registration. No registration will be taken by telephone. For more information, call x30304.

Gilruth badges: Required for use of the Gilruth Center. Employees, spouses, eligible dependents, NASA retirees and spouses may apply for photo identification badges from 7:30 a.m.-9 p.m. Monday-Friday; and 9 a.m.-2 p.m. Saturdays. Cost is $10. Dependents must be between 16 and 23 years old.

Nutrition intervention program: Six-week program includes lectures, a private consultation with the dietitian and blood analysis to chart your progress. Program is open to all employees, contractors and spouses. For more information call Tammie Shaw at x32980.

Defensive driving: One-day course is offered once a month at the Gilruth Center. Pre-registration required. Cost is $25. Call for next available class.

Stamp club: Meets every second and fourth Monday at 7 p.m. in Rm. 216.

Weight safety: Required course for employees wishing to use the Gilruth weight room. The next classes are scheduled for at 8 p.m. Aug. 13 (must be on time to receive credit for class). Pre-registration is required. Cost is $5. Annual weight room use fee is $90. Additional family members are $50.

Exercise: Low-impact class meets from 5:15-6:15 p.m. Mondays and Wednesdays. Cost is $24 for eight weeks.

Aikido: Introductory martial arts class meets from 5:15-6:15 p.m. Tuesday and Wednesday. New classes begin the first of each month. Instruction is by a fourth-degree black belt. Learn to defend yourself and get a great aerobic workout. Cost is $35 per month.

Step/bench aerobics: Low impact cardiovascular workout. Classes meet from 5:15-6:15 p.m. Monday, Tuesdays and Thursdays. Cost is $32 for eight weeks. Call Kristen Taragzewski, instructor, at x36891 for more information.

Yoga: Low impact exercises expertly designed for people of all ages and abilities in a Westernized format. Stretching class meets 5-6 p.m. Thursdays; cost is $32 for eight weeks.

Ballroom dancing: Classes meet from 7-8:15 p.m. Thursdays for beginner advanced classes and from 8:15-9:30 p.m. for beginner-intermediate and intermediate students. Cost is $60 per couple.

Country and western dancing: Beginner class meets 7-8:30 p.m. Mondays. Advanced class (must know basic steps to all dances) meets 8:30-10 p.m. Mondays. Cost is $20 per couple.

Fitness program: Health Related Fitness Program includes a medical screening examination and a 12-week individually prescribed exercise program. For more information call Larry Wier at x30301.

Gilruth Home Page: Check out all activities at the Gilruth online at: http://www4.jsc.nasa.gov/ah/exceaa/Gilruth/Gilruth.htm

Ticket Window

Bldg. 3 Exchange Store hours are 7 a.m.-4 p.m. Monday-Friday.

Bldg. 11 Exchange Store hours are 9 a.m.-3 p.m. Monday-Friday.

For more information, please call x35350.

The following discount tickets are available at the Exchange Stores:

General Cinema Theaters $5.50

Sony Loew's Theaters $5.00

AMC Theaters $4.75

Astroworld One Day Admission $21.00
(valid at all Texas Six Flags Theme Parks)

Moody Gardens (2 of 6 events) . . . . . .$ 9.75

Sea World . . . . . .adult $27.25 . . .child (3-11) $18.25

Schiltterbahn . . . . . .adult $20.75 . . .child (3-11) $17.50

Space Center Houston . . .adult $10.25 . . . .child (4-11) $7.00
JSC civil service employees free.

Splashtown Water Park . . .adult $14.50 child (under 48") $11.50

Metro Tokens and value cards also are available.

Roundup Deadlines

Beginning this month, the Space News Roundup becomes a monthly publication, delivered to all JSC employees the first Friday of every month. The change in frequency reflects a recognition of the increasing availability of up-to-the-minute news available through television, electronic mail, the Internet and other advancements in computer networking technology. The Roundup will take on a news magazine format that endeavors to provide more in-depth content that will allow employees more insight into the activities of the agency and the center.

Story ideas should be submitted as far in advance as possible, but no later than two weeks prior to the date of publication.

The new deadline for Dates & Data calendar items is one month prior to the desired date of publication. Stories and ideas should be submitted to Editor Kelly Humphries in Bldg. 2, Rm. 180, or via e-mail to kelly.o.humphries1@jsc.nasa.gov.

Retirees should submit change of address notices to the distribution group at Mail Code BT552 or call Ignacia Ramirez at 281-483-6161.

Onsite Insights

Engineer's dreams live on in reality

JSC Photo S98-10889 by Steve Candler

Bill Schnieder explains the concept of the inflatable TransHab module being developed for potential use in long-duration space flight missions.

By John Ira Petty

When Bill Schneider was a 10-year-old growing up in Louisiana, he had a dream. He knew then, as the 1950s began, that humans would go into space and eventually to other planets. He wanted to be a part of it.

Some of that dream is still alive. The rest of it has become reality.

Schneider, 58, recently was promoted to the position of JSC senior engineer, space systems, in the center's Engineering Directorate. The promotion came under a special ST (Science and Technical) category.

The ST category, he said, "allows you to stay focused on technical issues, as opposed to budgets and other matters—to keep your technical expertise up and to lead technically in achieving excellence in the things that we do." Before the promotion, he was the assistant director for Engineering.

Schneider's 35 years at NASA have been marked by hands-on contributions to resolving major issues of the space program and leading special design teams. He has been driven by three self-imposed principles—technical excellence, cost-effective simplicity and practicality, and the development of young engineers.

"When I see young people and see a sparkle in their eyes, it kind of brings me back to my younger days," he said. "I love to see that sparkle keep increasing through the years."

It took longer than his father would have liked for him to develop an academic sparkle in his own eyes.

The dream occupied attention that might better have been focused elsewhere. "I didn't study as much as I should have," he says now. As Schneider grew up he made and launched small solid-fuel rockets. His parents put a stop to the rocket launches after a series of explosions, but the dream persisted.

At Louisiana State University serious study began. He was at the top of his class in mechanical engineering and attracted the attention of Manned Spacecraft Center officials. Others offered more money, but he wanted to work for NASA.

Schneider realized he was strong in mathematics and design, but that he needed some hands-on manufacturing experience. He found after-hours work—for no pay—at a machine shop on Telephone Road.

That lasted until he started graduate school at the University of Houston, where he got a master's in mechanical engineering in 1968. He went on to earn a mechanical engineering Ph.D. at Rice in 1972, excelling academically while working full-time at JSC.

His accomplishments parallel the history of JSC. Among them:

- A leading role in the design, manufacture and testing of the 32,000-pound payload that flew in place of the lunar module on Apollo 8.
- The critical elasticity analysis for the mobile equipment transporter (the lunar rickshaw) used extensively on the moon by Alan Shepard.
- Resolution of a number of problems relating to the space shuttle's thermal protection tiles.
- The concept for the new "joint interference fit" for the shuttle's solid rocket motor redesign after the –*Challenger* accident.
- Responsibility for structural design, assembly techniques and test of the "Option C" International Space Station.
- Modifications that salvaged the Russian shuttle docking mechanism after a failure just before shipment to the United States.
- Direction of the TransHab design study team.

"Now we're doing a lightweight Mars lander design," he said.

He has garnered honors along the way, including the NASA Exceptional Engineering Achievement Medal, two NASA Exceptional Service Medals, the STS-1 Special Achievement Award, the Shuttle Orbiter Project Special Engineering Achievement Award, and the Aerospace Mechanism Symposia Award. He also holds seven U.S. patents and two others are pending.

Schneider is married and the father of two daughters and a son. His hobbies include woodworking, wood carving and air brush art. He also plays tennis and enjoys hiking.

But most of his thoughts during his waking hours are devoted to space flight, and to the future.

"We'll certainly go to Mars, and later other planets." Schneider said. So the dream is still there. "It hasn't changed a bit. It's exciting. It's a true adventure."

Dates & Data

Aug. 11

Aero club meets: The Bay Area Aero Club will meet at 7 p.m. Aug. 11 at the Houston Gulf Airport clubhouse at 2750 FM 1266 in League City. For more information call Larry Hendrickson at x32050.

NPMA meets: The National Property Management Association will meet at 5 p.m. Aug. 11 at Robinette and Doyle Caterers, 216 Kirby in Seabrook. Dinner costs $14. For details call Sina Hawsey at x36582.

Aug. 12

PSI meets: The Clear Lake/NASA Chapter of Professional Secretaries International will meet at 5:30 p.m. Aug. 12. For more information, call Elaine Kemp at x30556.

Astronomy seminar: The JSC Astronomy Seminar will meet at noon Aug. 12, 19 and 26 in Bldg. 31, Rm. 129. For more information, call Al Jackson at x35037.

Communicators meet: The Clear Lake Communicators will meet at 11:30 a.m. Aug. 12, 19 and 26. For information and location, contact Henry Duke at 281-280-4403 or Melissa Sommers at 281-332-0698.

Spaceland Toastmasters meet: The Spaceland Toastmasters will meet at 7 a.m. Aug. 12, 19 and 26 at the House of Prayer Lutheran Church. for more information call George Salazar at X30162.

Spaceteam Toastmasters meet: The Spaceteam Toastmasters will meet at 11:30 a.m. Aug. 12, 19 and 26 at United Space Alliance, 600 Gemini. For details, call Patricia Blackwell at 281-282-4302 or Brian Collins at x35190.

Aug. 13

MAES meets: The Society of Mexican American Engineers and Scientists will meet at 5 p.m. Aug. 13 at Mario's Pizza in Webster. For details, call George Salazar at x30162.

SSQ meets: The Society for Software Quality will meet at 6:45 p.m. Aug. 13 at the Holiday Inn. To make a reservation, call Earl Lee at 281-282-4331 or Herb Babineaux at x34263.

TSU alumni meet: The Texas Southern University, Clear Lake/Galveston Alumni Chapter will meet at 6:30 p.m. Aug. 13 on the TSU campus in Hannah Hall Room 217. For more information call 281-481-0950 or Janell Ellison at 713-731-0949.

Aug. 14

Space Society meets: The Clear Lake Area chapter of the National Space Society will meet at 6:30 p.m. Aug. 14 at the Radisson Hotel, 9100 Gulf Fwy. in the Deer Park room. The group meets the second Friday of every month. For more information, call Murray Clark at 281-367-2227.

Astronomers meet: The JSC Astronomical Society will meet at 7:30 p.m. Aug. 14 at the Center for Advanced Space Studies, 3600 Bay Area Blvd. For more information, call Chuck Shaw at x35416.

Aug. 19

Scuba club meets: The Lunarfins will meet at 7:30 p.m. Aug. 19 at the Redfish Restaurant under the Kemah/Seabrook bridge, Seabrook side. For more information, call Mike Manering at x32618.

Aug. 20

Directors meet: The Space Family Education board of directors will meet at 11:30 a.m. Aug. 20 in Bldg. 45, Rm. 712D. For more information on this open meeting, call Gretchen Thomas at x37664.

Aug. 27

Radio Club meets: The JSC Amateur Radio Club will meet at 6:30 p.m. Aug. 27 at the Piccadilly, 2465 Bay Area Blvd. For more information, call Larry Dietrich at x39198.

Sept. 3

NCMA meets: The National Contract Management Association will meet at 11:30 a.m. July 23 at the Gilruth Center. Members should register through their key contacts. Nonmember registration and payment in advance should be made through Julie Sarafolean, 212-6005.

Williams heads Space, Life Sciences

Astronaut Dafydd "Dave" Rhys Williams is designated as the new director of Space and Life Sciences at JSC.

Williams

Williams, who holds a master's in physiology and a doctorate in medicine from McGill University in Montreal, served as a mission specialist on the STS-90 Neurolab mission earlier this year.

He completed his residency in family practice medicine at University of Ottawa in 1985, and obtained a fellowship in emergency medicine from the Royal College of Physicians and Surgeons of Canada after completing a residency in emergency medicine at the University of Toronto in 1988.

He then became an emergency physician with the Department of Emergency Services at Sunnybrook Health Science Centre and a lecturer with the Department of Surgery, University of Toronto.

He later became acting director of the Department of Emergency Services at Sunnybrook and assistant professor of surgery and medicine at the University of Toronto.

Williams joined NASA in 1995 as a member of that year's astronaut class. Before joining NASA, he had been manager of the Missions and Space Medicine Group within the Canadian Space Agency's Astronaut Program.

People on the Move

Human Resources reports the following personnel changes as of July 25, 1998:

Key Management Assignments

Jack Knight was selected as chief, Simulator Operations and Technology Division, Mission Operations Directorate.

Fred Spross was named manager, Science Payloads Management Office, Space and Life Sciences Directorate.

Milt Heflin was named deputy manager, Flight Director's Office, Mission Operations Directorate.

Bob Maraia was selected as chief, Thermal Branch, Structures and Mechanics Division, Engineering Directorate.

Bill Paloski was selected as chief, Life Sciences Research Laboratories, Medical Sciences Division, Space and Life Sciences Directorate.

Travis Brown was selected as chief, Project Development Office, Science Payloads Management Office, Space and Life Sciences Directorate.

Earl Tiedt was selected as deputy manager, Science Payloads Management Office, Space and Life Sciences Directorate.

Ron Wade was named chief, Security Branch, Center Operations Directorate.

Additions to the Workforce

Rad Sinyak joins the Public Affairs office as a communications specialist.

Tomas Gonzalez-Torres joins the EVA and Robotics Systems Branch in the Mission Operations Directorate as a flight controller.

Mike Interbartolo joins the Guidance and Propulsion Systems Branch in the Mission Operations Directorate as a flight controller.

Joe Voor joins the Environmental Systems Branch in the Mission Operations Directorate as a flight controller.

K.C. Chhipwadia joins the Crew and Thermal Systems Division in the Engineering Directorate as an environmental control systems engineer.

Karen Nyberg joins the Thermal Systems and Engineering Support Branch in the Engineering Directorate as an environmental control systems engineer.

Barney Corbin joins the Logistics and Maintenance Office in the International Space Station Program Office as an imagery analyst.

Christie Nance joins the Advanced Development Office in the Engineering Directorate as a flight systems engineer.

Promotions

Mary Thomas was selected as a contract specialist in the Institutional Business Management Office in the Business Management Directorate.

Glenda Lancon was selected as a supply management specialist in the Supply and Materials Branch in the Center Operations Directorate.

Nancy Capra was selected as a secretary in the Flight Crew Operations Directorate.

Debra Yockov was selected as the division secretary in the Operations Technology Division in the Mission Operations Directorate.

Reassignments Between Directorates

Bob Savely moves from the Information Systems Directorate to the Engineering Directorate.

Larry Gana moves from the EVA Project Office to the International Space Station Program Office.

Tony Sang moves from the Mission Operations Directorate to the International Space Station Program Office.

Ben Sellari moves from the Mission Operations Directorate to the International Space Station Program Office.

Reassignments Between Centers

Steve Miley of the Business Management Directorate moves to NASA Headquarters.

Maryland Edwards of the Engineering Directorate moves to Ames Research Center.

Leslie Hartz of the Engineering Directorate moves to Goddard Space Flight Center.

Mike Gaunce of the Space and Life Sciences Directorate moves to Ames Research Center.

James Sturm of the Engineering Directorate moves to Goddard Space Flight Center.

LaTonya Alexander of the Business Management Directorate moves to Langley Research Center.

Jeff Cullen of the Business Management Directorate moves to NASA Headquarters.

Michelle Munk of the Engineering Directorate moves to Langley Research Center.

Retirements

Ken Hill of the Mission Operations Directorate.

Alan Shepard Chronology

1923 Born Alan Bartlett Shepard Jr. on Nov. 18, 1923, in East Derry, N.H.

1940 Graduated from Pinkerton Academy, Derry, N.H.

1944 Graduated from U.S. Naval Academy, Annapolis, Md., with bachelor of science degree. Assigned to destroyer Cogswell, deployed in Pacific during World War II.

1945 Married former Louise Brewer of Kennett Square, Pa.

1947 Earned Navy wings after training at Corpus Christi, Texas, and Pensacola, Fla. Assigned to Fighter Squadron 42 at Norfolk, Va., and Jacksonville, Fla., serving tours aboard aircraft carriers in Mediterranean. Daughter, Laura (now Snyder), born.

1950 Graduated from U.S. Navy Test Pilot School at Patuxent River, Md. Participated in flight test work and was assigned to Fighter Squadron 193 at Moffett Field, Calif., a night fighter unit flying Banshee jets. Made two tours to the Western Pacific onboard the carrier *Oriskany.*

1951 Daughter, Julie (now Coleman), born.

1957 Graduated from Naval War College, Newport, R.I. Assigned to staff of commander-in-chief, Atlantic Fleet, as aircraft readiness officer.

April 1959 Selected as one of original seven Mercury astronauts.

1961 On May 5, became first American in space aboard Freedom 7 spacecraft, launched as a Mercury-Redstone vehicle on a ballistic trajectory suborbital flight that reached an altitude of 116 statute miles and landed 302 statute miles down Atlantic Missile Range. Awarded NASA Distinguished Service medal, presented by President John F. Kennedy.

1963 Began training as commander of first manned Gemini flight. Grounded by NASA flight surgeons. Designated chief of the Astronaut Office with responsibility for all astronaut activities.

1969 Cleared again for flight following corrective surgery for ear condition.

1971 Commanded Apollo 14 with Stuart A. Roosa, command module pilot, and Edgar D. Mitchell, lunar module pilot, on nine-day flight, third lunar landing mission, which launched Jan. 31 and landed Feb. 9. Spent 217 hours in space, including more than nine hours on Moon with Mitchell. On returning to Earth, resumed duties as chief of the Astronaut Office. Appointed by President Richard M. Nixon as a delegate to the 26th United Nations General Assembly, serving through the entire assembly which lasted from September to December.

1974 Retired from NASA and the Navy in August.

1979 Awarded Congres-

Shepard tells story of rich life in his own words

(Continued from Page 1)

problem surgically," Shepard recalled. The operation involved inserting a tube to enlarge the chamber and reduce excess pressure. A possible side effect was loss of hearing.

"So I went out there under an assumed name," Shepard said. Thus was patient Victor Polis created. Only the doctor and nurse knew his true identity.

The surgery was successful. "After about a day I was out of there," he said. After several months he was returned to flight status.

Shepard, as many have said, was an original, not afraid to push the envelop in a calculated, precise sort of way. Here are some of this thoughts on highlights of a unique and remarkable space flight career.

• On April 9, 1959: "That was one of the happiest days of my life ... the day we first showed up officially as the first astronauts in the United States."

• On moving into the new environment of space: It was "the challenge of being able to control a new vehicle in a new environment. It's something I'd been doing for many, many years as a Navy pilot."

• On being selected to make the first flight: After total elation, "I felt sorry for my buddies ... They all came over and shook my hand, and pretty soon I was the only guy left in the room."

• On President Kennedy's announcement about sending a man to the moon: "Oh, we were delighted. But there was a little bit of a gulp in there, because he put a time cap on the deal. I don't think any of us thought we'd be able to make it within 81/2 years."

• On Deke Slayton being grounded because of a heart irregularity: At that point the feeling of competitiveness with Deke turned into camaraderie … a sense of 'Let's get you back on schedule, old buddy, somehow."

• On being grounded himself: "Obviously, being grounded was the worst thing that has ever happened to me."

• On the Apollo 1 fire: "I don't think there's any question that the Apollo 1 fire did shape up the whole system. Perhaps because of Apollo 1, Apollo went on to be a hugely successful series of flights."

• On Apollo 13: "I think that was probably NASA's finest hour. From a pilot's point of view, it was just as important as stepping on the Moon."

• On seeing Earth from the moon: "That was an overwhelming feeling in seeing the beauty of the planet on one hand but the fragility of it on the other."

• On hitting a golf ball on the Moon: "So far, I'm the only person to have hit a golf ball on the moon—probably will be for some time. It was designed to be a fun thing. Fortunately, it still is a fun thing. The makeshift club is with the U.S. Golf Association in their museum."

• On John Glenn's second flight: "I've been saying for years that the taxpayers didn't get their money's worth out of Glenn, because he made one flight and immediately went into Congress. I called him the other day and said, 'John, I'm glad that you're going to give me one more flight for my tax dollars.' I think it's a good thing. I think we'll learn something from it."

• Would Shepard like to fly again? "Of course I would."

• On looking back: "It's been a great part of my life, to be involved in the space program, specifically in being allowed to make a couple of really recognizable, spectacular, lucky missions."

JSC Photo by Mark Sowa

NASA astronauts perform a flyover as part of a tree-planting ceremony in honor of Alan Shepard at the Astronaut Memorial Grove. The live oak tree was planted as part of Saturday's memorial services honoring Shepard, who died July 21 at the age of 74 after a lengthy illness.

Culbertson, Arndt receive technical council honors

Frank Culbertson, manager of the Phase 1 Program, and Dickey Arndt, of JSC's Avionics Systems Division, earned top honors from the Clear Lake Council of Technical Societies.

Culbertson was named Technical Administrator of the Year, while Arndt received the Technical Person of the Year Award.

The awards were presented recently at the council's annual awards banquet at the Gilruth Center.

Other nominees for Technical Administrator of the Year were Jayant Ramakrishnan of Dynacs Engineering Co. and Don Travis of Lockheed Martin. Other Technical Person of the Year nominees were Stuart Corns of the Boeing Co. and Frank Martin of JSC's Information Systems Directorate.

Three major awards were presented at the banquet. The third was won by George Collins of the University of Houston-Clear Lake, who was named Educator of the Year. The other nominee was Karolos Grigoriadis of the University of Houston.

Featured speaker at the banquet was Clifford Hess, project manager for the Autonomous EVA Robotic Camera, who discussed Sprint-AERcam, which flew on STS-87.

The council was formed in 1980 and has a membership of nine local technical societies.

DynCorp division earns ISO certificate

DynCorp Johnson Support Division has received its ISO 9001 certification. DynCorp /provides aircraft maintenance and modification services for JSC's Aircraft Operations Division at Ellington Field.

About 240 people work on the contract, including 12 in El Paso and five at Edwards Air Force Base in California.

Bob Payne, manager of DynCorp Johnson Support Division's engineering department, said the organization had worked for about 16 months toward the ISO certification, awarded last May. ABS Quality Evaluations Inc. did the assessment leading to certification.

Mercury astronauts mourn loss from 'brotherhood'

(Continued from Page 1)

this realm, one day we will all be together again."

At a subsequent tree-planting ceremony at JSC's memorial grove, family members and JSC Director George Abbey planted a live oak for Shepard. He was the 28th astronaut so honored. Among other trees there are memorials to fellow Mercury astronauts Gus Grissom and Deke Slayton.

At the ceremony, Abbey said Shepard "represented the best this country has to offer. Alan Shepard has been and always will be a part of each step we take into space."

The ceremony concluded with taps played by astronaut and ISS Phase 1 Program Manager Frank Culbertson, and a missing man flyover by NASA T-38s.

Named as one of the nation's original seven Mercury astronauts in 1959, Shepard became the first to carry America's banner into space on May 5, 1961, riding a Redstone rocket on a 15-minute suborbital flight that took him and his Freedom 7 Mercury capsule 115 miles in altitude and 302 miles downrange from Cape Canaveral, Fla.

Buoyed by the overwhelming response to Shepard's flight, which made the astronaut an instant hero and a household name, President John F. Kennedy set the nation on a course to the Moon, declaring before a joint session of Congress just three weeks later, "I believe this nation should commit itself to achieving the goal, before the decade is out, of landing a man on the Moon and returning him safely to the Earth."

Shepard was the fifth man to walk on the Moon, and the oldest, at the age of 47.

Shepard, however, was almost bypassed for a trip to the Moon. He had to overcome an inner ear problem called Meuniere's syndrome that grounded him for several years following his initial pioneering flight.

An operation eventually cured the problem and Shepard was named to command the Apollo 14 mission. On Jan. 31, 1971, Shepard, Command Module pilot Stuart Roosa and Lunar Module pilot Edgar Mitchell embarked for the Moon atop a Saturn 5 rocket. Shepard and Mitchell landed the lunar module Antares on February 5 in the Fra Mauro highlands while Roosa orbited overhead in the command ship Kitty Hawk.

Shepard planted his feet on the lunar surface a few hours later, declaring, "Al is on the surface, and it's been a long way, but we're here." During two excursions on the surface totaling nine hours, Shepard and Mitchell set up a science station, collected 92 pounds of rocks and gathered soil samples from the mountainous region.

Before leaving the Moon, Shepard (an avid golfer) hit two golf balls with a makeshift club. The first landed in a nearby crater. The second was hit squarely, and in the one-sixth gravity of the Moon, Shepard said it traveled "miles and miles and miles."

Shepard's death leaves only four survivors among the original Mercury 7 astronauts: Sen. John Glenn, Scott Carpenter, L. Gordon Cooper and Walter Schirra.

Born Alan Bartlett Shepard Jr. on Nov. 18, 1923, in East Derry, N.H., he received a bachelor of science degree from the United States Naval Academy in 1944. Upon graduation, he married Louise Brewer, whom he met while at Annapolis. Shepard received his wings as a Naval aviator in 1947 and served several tours aboard aircraft carriers. In 1950, he attended Naval Test Pilot School at Patuxent River, Md., and became a test pilot and instructor there. He later attended the Naval War College at Newport, R.I., and after graduating, was assigned to the staff of the commander-in-chief, Atlantic Fleet, as an aircraft readiness officer.

In August 1974, Shepard, then a rear admiral, retired from both NASA and the Navy and became chairman of Marathon Construction Corp. in Houston. He later founded his own business, Seven Fourteen Enterprises, named for his two missions on Freedom 7 and Apollo 14.

In 1984, he and the other surviving Mercury astronauts, along with Betty Grissom, the widow of astronaut Virgil I. (Gus) Grissom, founded the Mercury Seven Foundation to raise money for scholarships for science and engineering students in college. In 1995, the organization was renamed the Astronaut Scholarship Foundation. Shepard was elected president and chairman of the foundation, posts he held until October 1997, when he turned over both positions to former astronaut James Lovell.

Survivors include his widow, Louise, daughters Julie, Laura and Alice and six grandchildren.

The family has requested that in lieu of flowers, donations be made to the Astronaut Scholarship Foundation, 6225 Vectorspace Boulevard, Titusville, Fla., 32780.

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