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John F. Kennedy Space Center



Sean O'Keefe

O'Keefe shares vision for NASA with KSC workers

New NASA Administrator Sean O'Keefe believes NASA is the federal agency that embodies the American public's most cherished aspiration: Adventure.

Because the public identifies so much with NASA, the organization has a huge responsibility to live up to the nation's expectations.

"It's a bit intimidating to

(See O'KEEFE, Page 6)

Refurbished Columbia performs

Launch caps off Orbiter's mods

Columbia successfully returned to flight on the STS-109 mission, launched March 1 at 6:22 a.m. EST, after undergoing two and a half years of comprehensive maintenance, modification and processing operations.

"It was my first launch, the opportunity of a lifetime," said new NASA Administrator Sean O'Keefe. "It was a wonderful demonstration of the expertise of the team. I was very impressed with the level of diligence shown to ensure the safety of the crew and the success of the mission."

During its latest Orbiter Major Modification (OMM) period, Columbia underwent a substantial weight reduction with the removal of more than 1,000 pounds of Development Flight Instrumentation wiring and hardware no longer

(See COLUMBIA, Page 6)



Billows of smoke and steam flow over the launch pad as Space Shuttle Columbia leaps into space on mission STS-109. Liftoff occurred March 1 at 6:22 a.m. EST. It was the 27th flight of the vehicle and 108th in the history of the Shuttle program. The goal of the mission is the maintenance and upgrade of the Hubble Space Telescope.

Inside

Page 2 – "Recognizing our People" honors employees.

Page 3 – African-American History Month Luncheon held.



Pages 4-5 – KSC celebrates the 40th Anniversary of Americans in Orbit.

Page 8 – Pioneer 10, OSO 1 anniversaries in "Remembering our Heritage."

Research park becoming reality

SERPL under construction, southern road leg complete

Kennedy Space Center's planned International Space Research Park – being created through a partnership of NASA and the State of Florida – is gaining momentum.

Workers traveling down Kennedy Parkway can witness progress being made on the construction of the park's cornerstone facility, the Space Experiment Research and Processing Laboratory (SERPL), and an associated road, Space Commerce Way.

Center Director Roy Bridges has been a major proponent for the park and the SERPL because he believes the projects will help take KSC to a new level as a Spaceport Technology Center.

"The promise of the International Space Research



An artist's rendition of the Space Experiment Research and Processing Laboratory now under construction.

Park and the SERPL show why it's important that we continue to strengthen our partnerships," Bridges said. "If NASA is to fulfill its mission, we must work together with the State, other federal agencies, academia and industry."

(See SERPL, Page 7)

Recognizing Our People

George Page left his mark on space program

Veteran Kennedy Space Center employee George Page passed away Feb. 26. He was 77.

Page had a distinguished aerospace career spanning more than three decades, from manned and unmanned space flights to Shuttle. He worked at KSC for 20 years.

His name is engraved in KSC history as the launch director for the first three flights of the shuttle program, starting with STS-1 in April 1981. He retired in 1984 as deputy director of Kennedy Space Center.

"All of us at KSC are saddened by the loss of George," said KSC Director Roy Bridges. "His leadership set the standard of excellence, and his contribution to human space flight continues to be felt with each successive mission. We are thankful for his great legacy."

Page began his career as a launch operations engineer with General Dynamics Corp. After five years, he moved on to Westinghouse Electric Corp. as a flight test engineer, where he stayed for six years.

Page then joined NASA in June 1963 as a spacecraft test conductor on the Gemini Program. While at KSC he served as chief of the Spacecraft Division for Apollo, Skylab and



This photo George Page was taken Dec. 12, 1988 in honor of his becoming an STS-26 Return to Flight Award recipient.

Apollo-Soyuz launch operations; director of Expendable Vehicles Operations Directorate; director of Cargo Operations; director of Shuttle Operations; and finally, deputy director of KSC.

At his retirement party in 1984, then Center Director Dick Smith commented that Page had "left his mark on every major program" at the Center. Smith concluded that Page's leadership in preparing Columbia for its first launch was

"one of the most significant contributions to a major national program ever made by an individual at KSC."

Significant awards presented to Page while at KSC include two of NASA's Distinguished Service Medal, one in 1975 for his role in the joint USA/Russian manned space mission and again in 1981 for his performance as launch director on STS-1.

During the Apollo Program he received two NASA Exceptional Service Medals for his part in the historic Apollo 8 and Apollo 11 missions. In 1981, Page received Presidential recognition as a Meritorious Senior Executive. In 1982 he was awarded the Presidential rank of Distinguished Senior Executive.

Born in Pittsburgh, Pa., Page attended school in Harrisburg, Pa. He served in the Army Air Corps in World War II. After the war he earned a B.S. degree in aeronautical engineering from Pennsylvania State University.

Even after his retirement, Page, who lived in Cocoa Beach, remained interested in the Shuttle launches and evolving Shuttle program.

He is survived by his wife Lois, three children, and six grandchildren.

Ann Montgomery lauded for distinguished career

Ann Montgomery retired in January from her position as deputy director of Safety, Health and Independent Assessment after a 33-year career at NASA.

On Feb. 22 she was honored with a coffee reception attended by friends and former co-workers.

Montgomery joined the Agency in 1968 after earning a bachelor of science degree in mathematics and master of science degree in engineering from the University of Florida.

According to Montgomery, what convinced her to join the NASA team was a promise.

"Harry Shoaf, my first boss, promised me that I could travel a lot and meet astronauts," she said. "At 21 years old, that sounded very exciting, especially at a time that women were expected to take traditional jobs."

Over the years she filled various positions, starting as lead crew systems engineer on the Apollo, Skylab and Apollo-Soyuz Test Programs and working in the design phases of the Shuttle and the Spacelab.

She later became site manager of the Orbiter Processing Facility, and among other accomplishments, helped process the first Space

Shuttle mission and designed a new tile facility.

She was the first woman assigned as a Flow Director at KSC, for the orbiter Columbia. Later she served as deputy director of Safety and Mission Assurance.

"Every assignment that I had," said Montgomery, "gave me an opportunity to learn and grow. Even though I was at KSC for 33 years, it was never boring and a lot of wonderful people helped me to succeed when I was offered new opportunities."

Perhaps because of her own achievements, Montgomery sees a positive future for Kennedy.

"With a more diverse workforce now than there was in the '60s," she said, "there are more opportunities for everyone to change careers, retrain and try something new. The increased mobility is good for the worker and even better for the organization."

Montgomery is looking forward to her retirement to pursue interests that were restricted by her career.

"With working and raising a family, I have never had the time to volunteer as much as I have wanted to," she said. "Participating in



Kennedy Space Center Director Roy Bridges presented Ann Montgomery, former deputy director of Safety, Health and Independent Assessment, her certificate of retirement at her retirement reception Feb. 22.

Leadership Brevard last year introduced me to a lot of community needs, such as Habitat for Humanity, and I want to spend some of my time serving others. Time spent with my family also remains important to me."

African-American History Luncheon draws crowd

For the third consecutive year, the Black Employee Strategy Team's (BEST) African-American History Month Luncheon sold out, drawing a crowd of nearly 400 people at the Kennedy Space Center Visitor Center's Debus Conference Facility Feb. 20.

Michael Bell served as master of ceremonies for the luncheon, which recognized achievements of local African-Americans, and told participants how to become improved leaders.

Combining other cultures with American patriotism, Deon Williams played the national anthem on a steel drum, a Caribbean instrument.

KSC's Director Roy Bridges thanked participants for contributing to the local, national, and KSC community.

"One thing we really need to be thinking about is how blessed we are to be Americans and working at Kennedy Space Center," Bridges said. "It's not easy to have a society that we can feel blessed to live in. So, I appreciate all you do to contribute in making it this way."

James Glenn, a standout student and athlete from Titusville High School and the president of his church's young people department, proved that youth could also be pillars in the community.

His powerful reading of his poem "All that I Am" resulted in one of the afternoon's standing ovations.

Brevard Community College (BCC) students enhanced the festivities by performing their Praise Team's dance routine to

gospel music.

James Jennings, keynote speaker and KSC's deputy director, congratulated BEST for being one of the Center's most active organizations.

He then emphasized the power of teamwork, and described the leadership behavior of geese to illustrate how participants can make the community, BEST, KSC and themselves even better.

"Geese follow three rules. They share leadership, they keep company with the fallen, and they always give encouragement from behind," Jennings said. "Geese know one can't lead at all times, so they rotate, and they're able to go greater distances."

He also encouraged BEST members to not only maintain their pace, but to continuously give more of themselves.

"I'm a strong believer in luck. The harder I work, the more I seem to have," Jennings said. "And don't be afraid of criticism. If you do nothing and say nothing, you'll be nothing. It's not how many times you fall that matters, but how often you get up."

Michelle Amos, BEST chairperson, accepted Jennings challenge to work harder, as she presented him with a plaque for his involvement with BEST.

In memory and honor of one of BEST's founding members and former KSC Equal Employment Opportunity Program Office (EO) deputy director, the Evelyn Johnson scholarship was pre-



At left, Michelle Amos, BEST chairperson, presents KSC Deputy Director James Jennings, the keynote speaker for the luncheon, a plaque for his involvement with BEST. Below, KSC workers serve themselves from the buffet table during the African-American History Month Luncheon.



sented to Emily Fields.

Fields is a BCC and Stay-In-School student, and an assistant to JoAnn Morgan, KSC's director of External Relations and Business Development.

Wanda Petty and founding BEST members Joel Fears and Daniel Evans Sr. were honored with

plaques for their service to the organization.

To end the festivities, everyone sang the Negro National Anthem, and Kenny Aguilar, the EO Office Chief, awarded door prizes and explained that the new administration will bring fresh and positive opportunities for the year.

Emily Fields wins Evelyn Johnson scholarship

Hard work definitely paid off for Emily Fields during the 2002 African-American History Month Luncheon hosted by the Black Employee Strategy Team (BEST).

On Feb. 20, Fields was presented with the Evelyn Johnson Scholarship at the event, which was held at the Kennedy Space Center Visitor Center's Debus Conference Facility.

The scholarship is awarded in memory of Johnson, one of BEST's founding members and former KSC Equal Opportunity Office deputy director.

"Evelyn didn't realize how many lives she touched."

EMILY FIELDS,
ASSISTANT



A KSC Stay-In-School program student since 1999, Fields originally worked in Shuttle Processing, but

since 2000, she has served as an assistant to JoAnn Morgan, KSC's director of External Relations and Business Development.

According to BEST Chairperson Michelle Amos, Fields triumphed because of her defined future goals, desire to succeed, and enthusiasm for learning.

Fields, who enjoys spending time with her family and exploring computer programs, is considering studying engineering at the University of Central Florida, after completing her degree program at

Brevard Community College.

"Evelyn didn't realize how many lives she touched. I'm an example of that and I never even met her personally. They've just broadened who can apply for the scholarship, which allows Evelyn Johnson's legacy to reach even more people," Fields said. "I'm honored to be the recipient. I am really thankful to BEST and the BEST mentors."

For more information on the Evelyn Johnson Scholarship, contact Michelle Amos at 867-6681 or Michelle.Amos-1@ksc.nasa.gov.

40th Anniversary of

Four legends visited Kennedy Space Center Feb. 24, sharing their memories from 40 years ago when they one by one became the first Americans to orbit the Earth.

During several special events, including a rededication ceremony for the Rocket Garden at KSC Visitor Complex, Mercury Project astronauts John Glenn, Scott Carpenter, Wally Shirra and Gordon Cooper recalled some of their glory days.

They also paid tribute to the other members of the Mercury 7 team who have passed, Alan Shepard, Gus Grissom and Deke Slayton.

Glenn recognized the contributions of the Mercury launch team when he asked them to rise and stand during the 40th anniversary banquet held at the Apollo Saturn V Center.

Although Glenn was the first American to orbit the Earth, he sought to put his flight into perspective.

“Each of us had flights and people say to us ‘Which was the greatest flight?’” Glenn said.

He paused, and then continued, “Each flight as it goes up. Because that is the one that’s on the cutting edge at the time. That is the one that is building on the experience that everyone else has had up to the time. That’s the one that takes the torch and carries it a little bit farther.”

He referred to STS-109, which was just days away as he spoke, as being on the verge of becoming the “greatest flight,” because it was the most recent.

Glenn, the oldest of the Mercury astronauts, became the first American to experience orbital spaceflight after his Friendship 7 spacecraft atop an Atlas 6 rocket launched Feb. 20, 1962. He again became the oldest American ever in space when he flew aboard Space Shuttle Discovery on the STS-95 mission, which launched Oct. 29, 1998.

Glenn was recently selected to serve on the NASA Advisory Council, the panel that provides advice and counsel to the NASA Administrator.

Glenn’s orbital launch was preceded by the sub-orbital flights of Alan Shepard and Gus Grissom.

Carpenter’s mission was the second orbital flight, which launched May 24, 1962. Shirra’s mission launched Oct. 5 that year, and Cooper’s orbital flight launched the following May 15.

Slayton, who in the original plan would have been the first American to orbit the Earth, was grounded because of a heart rate abnormality. Finally Slayton was able to achieve orbit in 1975, when he was launched as the first Apollo Docking Module pilot during the Apollo-Soyuz Test Project.

Glenn and the other living members of the Mercury 7 team shared vivid memories of their orbital flights.

Carpenter said his favorite part of the experience was the launch because at that point the spaceflight hadn’t happened yet, but was out there ahead of him.

Cooper humorously described the experience of his launch as like being in a “hot car” that never seems to run out of acceleration.

“Around the time you accelerate to Mach 12 or 13, you begin to wonder if you haven’t made a tactical error,” he said with a wry smile.

The Mercury 7 group all expressed their hopes for the future of the space program, including that the International Space Station be fully equipped and crewed to fulfill its envisioned research promise.

“We made an agreement with many other countries and we should live up to it,” Shirra said during a press conference at the Visitor Center.

His sentiments were repeated by the other Mercury astronauts.



Above, a group portrait of the original seven astronauts for the Mercury Project. NASA selected its first astronauts on April 27, 1959. Left to right at front, Walter “Wally” Schirra, Donald “Deke” Slayton, John Glenn Jr. and Scott Carpenter. Left to right at rear, Alan Shepard, Virgil “Gus” Grissom and Gordon Cooper Jr.



John Glenn speaks during the rededication ceremony for the Rocket Garden.

Americans in Orbit



The last of the surviving Mercury astronauts, (from left) Gordon Cooper, Wally Schirra, Scott Carpenter and John Glenn, share a light moment with Apollo 13 Commander Jim Lovell, now chairman of the Astronaut Scholarship Foundation.



Kennedy Space Center Director Roy Bridges and John Glenn are pictured at the 40th anniversary banquet held at the Apollo Saturn V Center.



Rocket Garden at KSC Visitor Complex held Feb. 24.



The first American astronauts gather to sign a plaque for the Rocket Garden at KSC Visitor Complex.



Comedian Bill Dana (left) reacts as he is baited by Wally Schirra during the 40th anniversary banquet. Dana was beloved during the early space program for his character "Jose Jimenez," the reluctant astronaut.

O'KEEFE ...

(Continued from Page 1)

be chosen to lead an organization with such a high level of recognition," said O'Keefe, who was sworn in as administrator Dec. 21.

O'Keefe shared his enthusiasm for the space program and his determination to take NASA to a new level during his recent visit to Kennedy Space Center. The visit was part of his tour of all the NASA centers.

He spoke with KSC workers Feb. 15 in the Training Auditorium, outlining his strategies for leading NASA, and then answering questions.

O'Keefe paid tribute to the proud heritage of KSC, calling it "A place legendary in the minds of Americans."

He also voiced his understanding that his expertise does not lie in the realm of science, technology or engineering.

After President George W. Bush announced he would nominate O'Keefe, the administrator's oldest son said: "But I thought you had to be smart to do that job." His youngest: "You've got to admit, you're no rocket scientist."

O'Keefe laughed and agreed with their assessment.

He believes his contribution to the agency will be in bringing focus, which will allow NASA to make the best use of its resources.

"There is no scarcity of ideas here, but we have to selectively choose which ones we are going to pursue, and then give people the resources they need to ensure success," O'Keefe said.

O'Keefe said he plans to take a collaborative approach with

O'Keefe's career profile

Sean O'Keefe was sworn in as NASA administrator Dec. 21. Just prior, he served as the deputy director of the Office of Management and Budget.

Before joining the Bush Administration, O'Keefe was the Louis A. Bantle Professor of Business and Government Policy, an endowed chair at the Syracuse University Maxwell School of Citizenship and Public Affairs.

He also served as the director of National Security Studies, a partnership of Syracuse University and Johns Hopkins University, for delivery of executive education programs for senior military and civilian Department of Defense managers.

Appointed to these positions in 1996, he was previously professor of business administration and assistant to the senior vice president for research and dean of the graduate school at the Pennsylvania State University.

Prior to appointment as the secretary of the Navy in July 1992 by President George Bush, O'Keefe had served as comptroller and chief financial officer of the Department of Defense since 1989.

Before joining Defense Secretary Dick Cheney's Pentagon management team in these capacities, he served on the United States Senate Committee on Appropriations staff for eight years, and was staff director of the Defense Appropriations Subcommittee. His public service began in 1978 upon selection as a presidential management intern.

O'Keefe earned his bachelor of arts degree in 1977 from Loyola University in New Orleans and his master of public administration degree in 1978 from The Maxwell School.

NASA's enterprise managers and center directors. He wants to take a hard look at NASA's programs to determine which ones are the most important to pursue.

For example, on the question of whether the Crew Return Vehicle, which would enable the International Space Station to accommodate six crew members vs. three, should be built, O'Keefe said: "First we need to look at the amount of science that can only be done on Station vs. here on Earth to determine how many crew members we need."

If it is determined more crew members are needed, then O'Keefe will push for the resources to make it happen, he said.

"We ought to be doing what we are uniquely qualified to do and let someone else do the other things," O'Keefe said.

O'Keefe believes that the lead center model used by NASA to run its programs may not be the most productive at this point in the agency's development.

The model fosters competition vs. collaboration among centers, he said.

Because large numbers of veteran NASA employees will soon retire, the agency must find ways to fill their spots with qualified workers.

"We need to take a look at hiring at various experience levels, not just entry level," he said.

O'Keefe said he is a believer in the ideas of his mentor, Paul O'Neill, secretary of the Treasury, on "truly great organizations."

O'Keefe outlined and discussed the three attributes of such organizations:

- Associates treat each other with respect and professionalism. People assigned tasks should be trusted to complete them and not micromanaged. "Treat each other the way you would like to be treated."

- Everyone has the resources necessary to carry out their job. "It can't be open-ended. You have to define what's really required." Metrics and measurements need to be used to determine what is necessary.

- Someone noticed. People should only be assigned to do things of consequence, so their efforts need to be noticed and evaluated. "There has to be accountability."

O'Keefe said he is inspired by The President's Management Agenda, which he recommends others read.

The agenda outlines President Bush's push to reform the way federal agencies do business, including giving managers "the freedom to manage."

The agenda is available through a link on NASA Headquarters Homepage and at the Web address <http://www.whitehouse.gov/omb/budget/fy2002/mgmt.pdf>.

COLUMBIA...

(Continued from Page 1)

required.

"Columbia is new again after undergoing more than 100 upgrades and improvements during its OMM at the Boeing plant in Palmdale, California and follow-on processing operations by United Space Alliance (USA) at KSC," said Bill Pickavance, USA vice president and deputy program manager for Florida Operations. "At USA,

safety is our top priority, and we have every confidence that we have an orbiter that is more capable and safer than ever thanks to an outstanding effort by the KSC team."

NASA KSC Launch Manager Ed Mango agreed, "This joint NASA/USA team has worked intensely to bring Columbia back to a safe, ready for flight state. The team's dedication to excellence is evident by the pride and enthusiasm put forth throughout the entire processing flow."

Modifications included installation of the new "glass cockpit," replacing the outmoded analog gauges on board with the latest state-of-the-art flat panel technology to reduce the astronauts' workloads during critical periods.

Other significant changes include a series of safety modifications and the most intensive wiring inspection and repair operation in the history of the Space Shuttle program.

Thanks to the latest streamlining, Columbia for the first time has the

capability to perform limited missions to the International Space Station (ISS) that were not possible before because of the orbiter's excess weight.

After the upcoming Hubble servicing mission and the Freestar research flight this summer, Columbia will undergo additional modifications before possibly going to the ISS in October 2003.

That mission might entail carrying a Spacehab module and a replacement astronaut resident crew.

SERPL...

(Continued from Page 1)

Jan Heuser, program manager for SERPL and the park, is pleased with the progress being made.

“These are exciting times for KSC,” Heuser said. “This park will help us fulfill our mission as a Spaceport Technology Center by enhancing supporting infrastructure and expanding our current spaceport and range technology development efforts.

“We will be able to draw new academic and commercial partners to our Center, helping meet the President’s mandate for more privatization and commercialization in the space program.”

The SERPL, a custom-designed world-class facility for life sciences payload processing and research, is already 100 percent leased. Construction, which is being managed by the State’s contractor, Bovis Lend Lease, is planned for completion by August 2003.

KSC’s Life Sciences program is expected to move to the facility, which will be within the Center’s secured area, by December 2003, said Jose Perez-Morales, NASA project manager for the SERPL and Space Commerce Way.

“Things have been going so smoothly that we think we may be able to beat those deadlines,” Perez said.

A land use plan for the adjacent 400-acre park is being developed and will be submitted to NASA Headquarters for approval. Potential tenants for the park, which will be just outside the Center’s secured area, have already expressed great interest in its development.

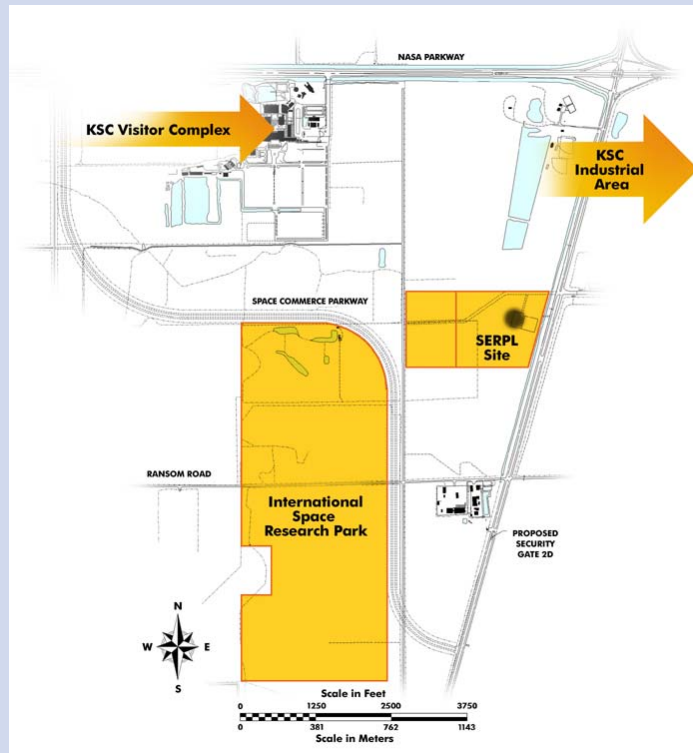
Bordering the park and intersecting Kennedy Parkway will be the new Space Commerce Way. The southern leg of the road is almost complete and construction of the northern leg is expected to begin by May. Construction to complete the second leg likely will take a year.

Space Commerce Way will allow for guard stations and gates on Center to shift giving the public a 24-hour thoroughway to the Visitor Complex from Kennedy Parkway. The new guard stations are being designed to give a more polished look to the Center’s front doors, Perez said.

The State of Florida is partnering with NASA on the park and the SERPL because the projects fit with the State’s economic development plan of attracting high-tech industry, space businesses and pharmaceutical and life sciences ventures, said Tim Franta, director of Business Development and International Affairs for the Florida Space Authority (FSA).

“The State of Florida and NASA are perfect partners,” Franta said. “NASA has the technical expertise and access to space program infrastructure and the State can assist with marketing, financing and promoting the park.”

Extensive advanced planning for the park has garnered praise by the Urban Land Institute and others who have reviewed the park’s preliminary



The site plan (left) for the International Space Research Park and its associated developments, the Space Experiment Research and Processing Laboratory (SERPL) and Space Commerce Way, can be compared to an aerial view (above) of the site. The southern leg of Space Commerce Way is almost complete and the SERPL under construction.

concept and potential, said James Ball, NASA’s International Space Research Park manager.

Tenants for the park will be public and private enterprises that engage in or support research and technology, space product development, or commercialized space services. Efforts are also being made to attract a significant university presence, considered an important element to the project’s long-term success.

A year-long concept development and feasibility study was initiated last May, Ball said.

“We’ve made a lot of progress and learned

that the park’s potential appears to be greater than we had initially imagined. Developing a research park here will be a major step in preparing KSC for growing international and commercial involvement in the ISS, and in support of our efforts to develop KSC as the Spaceport Technology Center.

“In this new era of expanded space research and commercial development in near-Earth orbit, academia and industry will become far more active participants,” Ball said. “Space can no longer be the realm of government agencies alone.”

Remembering Our Heritage

Pioneer 10 keeps going, going

A recent issue of *American Heritage of Invention & Technology* magazine described Pioneer 10, which launched March 2, 1972, as “the spacecraft that will not die.”

NASA contacted the probe, now 7.4 billion miles away from Earth, on the 30th anniversary of its launch.

The lightweight interplanetary probe was launched atop an Atlas Centaur rocket from Complex 36A at what was then Cape Kennedy Air Force Station.

Those involved in its design and launch described it as a mission that would achieve many firsts.

Pioneer 10 was the first spacecraft to travel through the Asteroid Belt. It was the first spacecraft to travel to Jupiter or any of the outer planets. It was also the first man-made object to escape the solar system and required the highest injection velocity (32,000 mph) up to that time.

Pioneer 10 traveled by the moon’s orbit in 11 hours and achieved the longest travel time to reach the primary mission destination. The spacecraft, equipped with 11 instruments, reached the giant planet on Dec. 3, 1973, at a distance of 81,000 miles, after traveling through space for 21 months.

Pioneer 10 sent back more than 500 images of Jupiter and its



Pioneer 10 launched March 2, 1972.

satellites.

It charted Jupiter’s radiation belts – which were estimated to be one million times more intense than the Earth’s Van Allen radiation belts and recorded close-up measurements of the planet’s properties and attributes.

Pioneer 10 also recorded the first accurate measurements of the four Galilean satellites and revealed that Jupiter is mostly a gas-liquid planet. The probe’s accomplishments went beyond expectations.

“The mission overcame many obstacles,” according to John Neilon, Kennedy Space Center launch director for Pioneer 10.

“There were nay-sayers who predicted that the Asteroid Belt

would destroy the spacecraft. We were all confident of mission success. But who would have predicted or even hoped that it would do what it has and still be operating so many years later.”

According to Jim Johnson, KSC project representative for the Pioneer 10 mission from beginning to launch, “Pioneer 10 was the first planetary mission to carry Radioactive Thermoelectric Generators (RTGs) to provide electric energy to the satellite.”

Johnson continued, “RTGs also flew on Voyager and later on the Cassini Mission.”

Pioneer 10 left our solar system in 1983 and continued to explore outer regions and study energetic particles from the Sun and cosmic rays entering our portion of the Milky Way.

Its mission formally ended March 31, 1997, at a distance of 6.28 billion miles from Earth. Its radio signal, at that distance, took more than nine hours to reach Earth.

In November 1999, the U.S. Postal Service issued a commemorative stamp to honor the Pioneer 10 spacecraft. The stamp was one of 15 icons chosen by the Postal Service as representative of the 70’s for its “Celebrate the Century” postage stamp series.

OSO 1 was first in series to study Sun

While John Glenn orbited the Earth Feb. 20, 1962, plans were already under way to launch another groundbreaking mission. The first Orbiting Solar Observatory (OSO 1) launched atop the Delta 8 rocket from Cape Canaveral Launch Complex 17A, March 7, 1962.

“The satellite was the first in a series of eight successfully launched spacecraft designed specifically to study the Sun,” said Jim Johnson, spacecraft coordinator for the mission.

The satellite was manufactured by Ball Bros. Research Corp. for its first aerospace mission contract.

“The satellite looked a little unusual with its three ‘arms’ and fiberglass containers filled with nitrogen for spin control,” Johnson said.

The primary mission of OSO 1 was to measure the solar electromagnetic radiation in the Sun’s ultra-violet, X-ray and gamma-ray regions.

Its last data transmission was Aug. 6, 1963. The satellite re-entered Earth’s atmosphere Oct. 8, 1981.

Women’s History Month dinner

The Society of Women Engineers-Space Coast Section will host a special Women’s History Month celebration March 26 at the Radisson Resort in Cape Canaveral beginning at 5:30 p.m.

The event will begin at 5:30 p.m. and include dinner, two speakers, an interactive trivia game and door prizes.

One of the speakers scheduled is Dr. Pamela McCauley-Bell, president and chief executive officer of Technical Solutions Inc. She is a professor in University of Central Florida’s Industrial Engineering

Department.

Another is Colette Brown, executive director for the Office of Space and Defense Power Systems for the Department of Energy. Brown has represented the DOE at United Nations committee meetings to establish guidelines on the use of nuclear reactors and radioisotope power in space.

Tickets are \$27. For more information or to register, visit www.spacecoast.net/spacecoast/swe/whm.html or e-mail brenda.s.fuentes@lmco.com or kristen.a.kinder@boeing.com.



John F. Kennedy Space Center

Spaceport News

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