



## **1991 Spaceport News Summary**

There were two headers used in 1991, the first one above was used for most of the year and the next one down was used for the issues from April through August.

### **Introduction**

The first issue of the Spaceport News was December 13, 1962. The 1963, 1964 and 1965 Spaceport News were issued weekly. The Spaceport News was issued every two weeks, starting July 7, 1966, until the last issue on February 24, 2014. Spaceport Magazine, a monthly issue, superseded the Spaceport News in April 2014, until the final issue, Jan./Feb. 2020. The two 1962 Spaceport News issues and the issues from 1996 until the final Spaceport Magazine issue, are available for viewing at [this website](#). The Spaceport News issues from 1963 through 1995 are currently not available online.

In this Summary, black font is original Spaceport News text, blue font is something I or someone else provided and purple font is a hot link.

All links were working at the time I completed this Spaceport News Summary.

With this Spaceport News Summary, I am adding the writer, if so noted in the Spaceport News article.

## **Followup From The 1990 Spaceport News Summary**

The 1990 Spaceport News Summary and the respective Spaceport News issue have an article about the Orbiter mockup Ambassador, which was on display at the KSC Visitor Complex for a time, circa 1991. Doing a little looking, [A Field Guide to AMERICAN SPACECRAFT](#) states Ambassador was "...reported partially destroyed...". Regarding Orbiters, mockups and trainers, the aforementioned Field Guide website has a neat list, with associated photos, of where things were/are and although not 100% up to date, it gives a good picture of the subject matter.

[This Field Guide website](#) has similar information about Apollo spacecraft, boilerplates, mockups and models, and is also neat. A Field Guide to AMERICAN SPACECRAFT has other similar neat information, about launch vehicles, lunar modules and else.

Speaking of Orbiter mockups, it looks like there were/are two Inspiration mockups. There was an Inspiration built in California in 1972. [Wikipedia](#) has a read on the California Inspiration. And there is the Florida Inspiration, what was once the 'Shuttle to Tomorrow' at the former location of the Astronaut Hall of Fame west of Kennedy Space Center. [CollectSPACE](#) and [Space.com](#) have reads on the Florida Inspiration.

I took the following photo of Inspiration several years ago at the Shuttle Landing Facility midfield site.



Mentioned in the 1990 Spaceport News Summary, the Dr. Kurt H. Debus Award started in 1990, with the first award going to George Page. The National Space Club Florida Committee (NSCFL) associated web site is at <https://www.nscfl.org/debus-award/>, including previous award winners and other information about NSCFL.

## From The January 11, 1991, Spaceport News

On page 1.

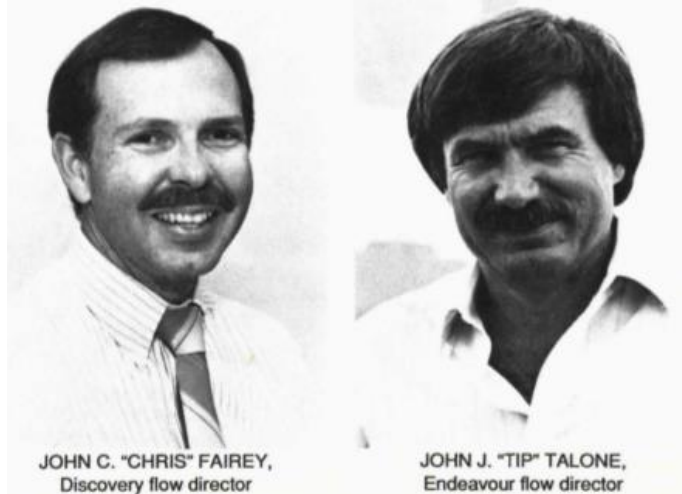


“ST5-39 CREW members pose in front of a stellar background that was created for their official portrait at Johnson Space Center, Houston, Texas. In their partial pressure launch and entry suits are, from left, Charles L. "Lacy" Veach, Donald R. McMonagle, Gregory J. Harbaugh, Michael L. Coats, L. Blaine Hammond Jr., Richard J. Hieb and Guion S. Bluford Jr.”

Also on page 1, “**Kennedy Space Center names two Space Shuttle flow directors**”, by Lisa Malone. In part, the article reads “Two flow directors were recently named for Space Shuttles Discovery and Endeavour. John J. "Tip" Talone was named as flow director for the newest Space Shuttle, Endeavour, which is undergoing construction in Palmdale, Calif. John C. "Chris" Fairey was chosen as flow director for Discovery...

Directing the operations of a Space Shuttle isn't new for Talone, who previously served as flow director for Discovery... Other positions Talone has held at KSC include support requirement engineer, Saturn 1 and Saturn 1B; and launch vehicle test conductor for Saturn 1B and Saturn V on the Apollo, Skylab and Apollo Soyuz Test Project (ASTP) programs...

Fairey's previous positions and duties at KSC include Branch Chief, Flight Element Project Office; Shuttle Project Engineer for 15 Shuttle missions... and test conductor for the Facilities and Environmental Measurement Station in support of Apollo, Skylab and ASTP programs... "My past experience provides a good background for being a Shuttle flow director. I'm looking forward to the new challenges of this job and to the first launch of the year with Discovery," said Fairey.”



On page 4, **“Astronaut presents awards, visits with workers”**. Part of the article states “Astronaut Kevin Chilton presented six Silver Snoopy Awards and visited with employees at two Kennedy Space Center sites on Nov. 30. The awards were given to Russ DeLoach of NASA's Safety, Reliability and Quality Assurance Directorate; Kevin Hoshstrasser and Ed Petti of Rockwell International Corp., Rocketdyne Division; Elroy Williams and Brian Woodward of Thiokol Corp.; and Ardell Thurow of Wiltech... Chilton also visited with Rocketdyne employees in the Space Shuttle Main Engine Shop inside the Vehicle Assembly Building.”



“ASTRONAUT KEVIN CHILTON, far right, visited with Rocketdyne employees in the Space Shuttle Main Engine Shop in the Vehicle Assembly Building. They are standing in front of the first engine to arrive at KSC for orbiter Endeavour.”

Also on page 4, **“STS-39 crew patch released”**. In part, the article reads “NASA recently released the crew patch for the next Space Shuttle mission, STS-39... The

arrowhead shape of the crew patch represents a skyward aim to learn more about our planet's atmosphere and space environment in support of the Department of Defense. Our national symbol is represented by the star constellation Aquila (the eagle) as its brightest star, Altair, lifts a protective canopy above Earth.

The Space Shuttle encircles the spectrum which represents X-ray, ultraviolet, visible and infrared electromagnetic radiation to be measured by a variety of scientific instruments scheduled for this mission... The patch was designed by the STS-39 crew members.”



The Spaceport News mission patch version is on the left and the color version from Wikipedia is on the right.

## **From The January 25, 1991, Spaceport News**

On page 2, “**Employees receive awards, visit with astronauts**”.



Part of the article reads “Astronauts Curt Brown and Mario Runco presented Silver Snoopy Awards to 16 KSC employees and made motivational visits to eight KSC locations during December... Astronauts created the Silver Snoopy Award to honor people who have significantly contributed to the safety and success of the manned space program...”

While at KSC, Astronauts Brown and Runco visited and talked with employees at the following locations: Grumman LPS/CCMS, Complex F; GSA motor pool; TGS Technology and EG&G Repro/Print Shop, Headquarters Building; USBI Assembly and Refurbishment Facility, Hangar AF and Parachute Facility; and Rockwell Shuttle Logistics Depot Building #2, Cape Canaveral...".



On the left, "ASTRONAUT Mario Runco looks at photos and visits with Kristi Bodahl in the TGS Technology still lab, Headquarters Building." On the right, "IN HANGAR AF, Astronaut Mario Runco talks to USBI employees".

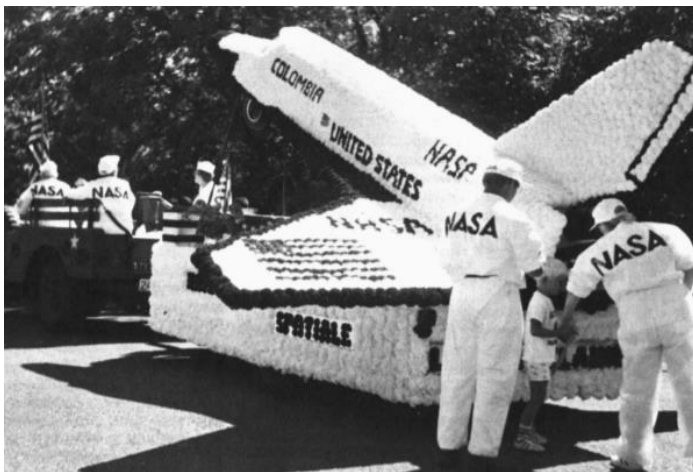
On page 3, "Collector shares creation".



"SPACE MEMORABILIA enthusiast Seymour Blut, second from left, presents a "one-of-a-kind" collection to Center Director Forrest McCartney. Blut created the limited edition collector's item which consists of the STS-36 crew photo and insignia and a stamped envelope that was canceled the day the mission launched from KSC, Feb. 28, 1990. Blut, a GSA employee, wanted to give McCartney the first one from the collection because "it is such a joy to work here." Also present were Blut's supervisor, Dan Smith (left), and Vincent M. Mangino, who helped Blut organize and certify the collection. Blut said he got the idea to put together the collection when he saw the holographic stamped envelope showing in three dimensions the Earth, moon, space station and astronauts. "I like to collect unusual space memorabilia; he explained."

Also on page 3, “**French citizens create floral model of Space Shuttle Columbia**“. In part, the article reads “Across the Atlantic Ocean and 6,000 miles from Kennedy Space Center, residents of a small isolated French village paid tribute to America's space program. In the Ardennes region of northern France, citizens of Chesnois-Aboncourt created a model of Space Shuttle Columbia, decorated it with thousands of flowers and displayed it in a parade in the neighboring village of Rethel...

The floral float took months of planning and involved almost everyone in the small village - population 150. "What joy it gave us to honor the Americans," wrote Huguette Duhaut, whose social organization, La Chatelaine, coordinated the project. " ... this small village in France ... was liberated by the Americans on Sept. 2, 1944. Our hearts went out to you for your courage and bravery... Chesnois-Aboncourt is about 100 miles northeast of the Paris hub."



“A FLOWER-COVERED MODEL of Space Shuttle Columbia is displayed in a parade in northern France.” Notice the spelling; “COLOMBIA”.

On page 8.



“AERITALIA AND MARTIN MARIETTA employees check the fit of the Tethered Satellite System satellite (TSS) with the satellite support assembly in the Operations and Checkout Building. The satellite is a cooperative U.S./Italian program scheduled to fly on Mission STS-46 in 1992.

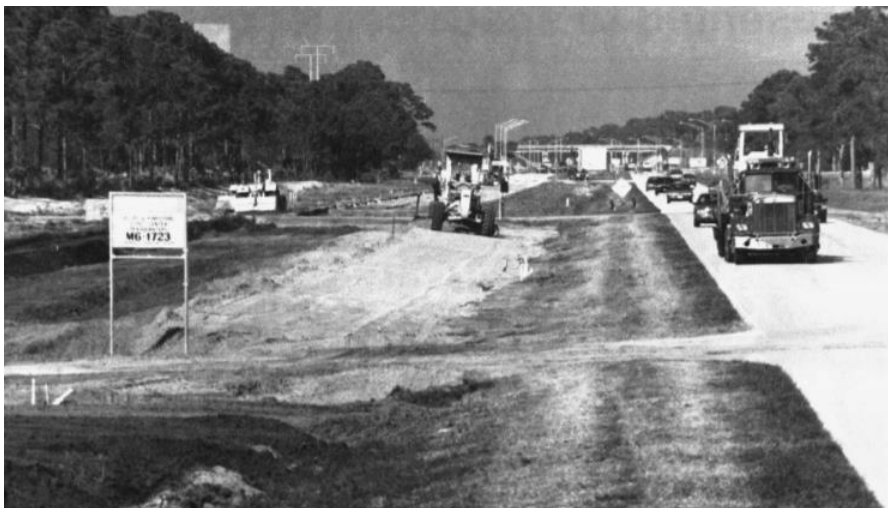
Italian firm Aeritalia built the research satellite which will be released into the upper atmosphere while it remains tethered to a reel in the orbiter payload bay. Martin Marietta is the TSS prime contractor.”

## **From The February 8, 1991, Spaceport News**

On page 7, “**Trees removed for road project**”. In part, the article reads “...Employees who drive on Kennedy Parkway South every day may have noticed that the large Florida pines lining the roadway had to be cut down for the widening of the parkway from two to four lanes. They will be happy to know that the trees will not be discarded, but instead will be "recycled."

Goodson Paving of Sharpes, the firm awarded the contract for constructing the 2.5-mile stretch of roadway, is selling the trees to Georgia Pacific. Georgia Pacific's Palatka, Fla., pulp wood plant will turn the trees into plywood, according to Goodson Paving owner Tom Goodson... He explained that selling the trees is preferable to any other method of disposal, especially in view of time, labor and equipment costs. "Overall, it's easier to sell the trees than to cut them down and burn them," Goodson added.

The KSC portion of the road-widening project continues on schedule. Work is expected to be completed by early August. Road-widening work on the county lanes south of KSC's gates is also progressing smoothly. Schedulers say this portion of the work should be completed in January 1992.”



“ROADWORK PROGRESSES along Kennedy Parkway South. The road-widening project should be completed at Kennedy Space Center in August. Construction on State Road 3, which joins with Kennedy Parkway South, should be completed in January 1992.”

In the above photo, the VAB is in the upper left. The M6-1723 sign, on the left, was for the Property Disposal Office, since demolished, on the west of State Road 3.



## From The February 22, 1991, Spaceport News

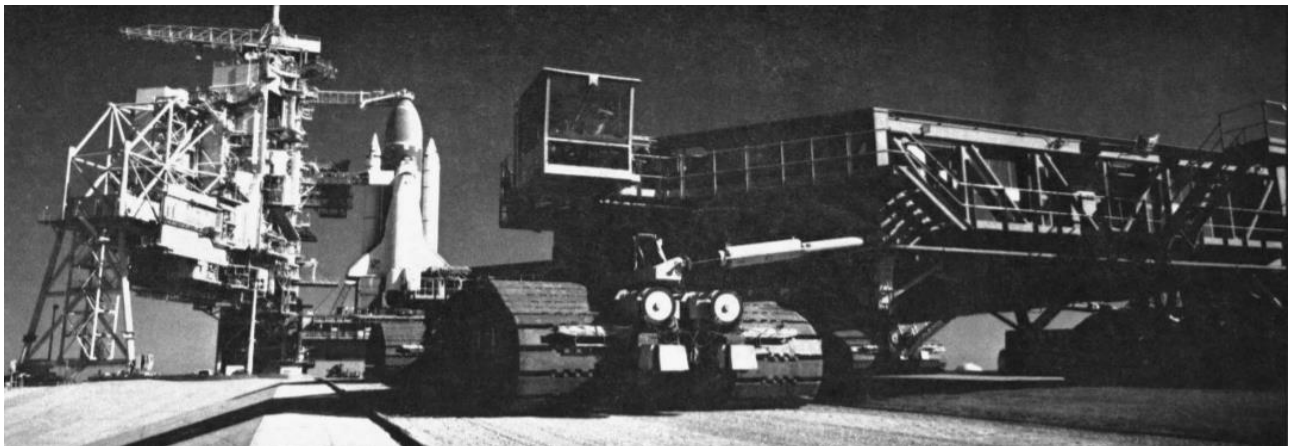
From page 1, "**Space Station Processing Facility contract awarded**", by Mitch Varnes. Part of the article reads "Space Station Freedom took another tum from the road of design toward that of reality on Feb. 19 when KSC Procurement Director Wes Dean announced the awarding of a multimillion-dollar contract to build the Space Station Processing Facility (SSPF)..."

"This is the largest new construction facility undertaken at KSC since the Apollo era," noted SSPF Project Manager Walt Stampley. "The fact that all of the processing area's work stands will be airbearing compatible and that there will be no fixed objects on the floor of the processing area gives us almost infinite flexibility."... The KSC-operated facility will be occupied by about 1,000 NASA and contractor employees....

The SSPF will have more than 63,000 square feet of dedicated payload processing space, which includes a high bay and intermediate bay... Construction is planned to begin about April 1. The building will be ready for occupancy within 1,080 days of ground breaking."

Space Station Freedom would become the International Space Station. Wikipedia has a good read on [Freedom](#) and an extensive read on the [International Space Station](#).

Also on page 1, "**STS-39 vehicle arrives at launch pad**".



"DISCOVERY WAS TRANSFERRED to Launch Pad 39A on Feb. 15 after only five days in the Vehicle Assembly Building. This set a return-to-flight record for time spent on an orbiter in the VAB. The giant crawler transporter, right, leaves the pad area shortly after dropping off the vehicle. STS-39 payloads were installed in the payload bay on the 16th and the Terminal Countdown Demonstration Test occurred Feb. 19-20.

From page 6, "**STS-35 crew members return to space center to say thanks**". A portion of the article states "Members of the STS-35 crew returned to KSC on Feb. 6 to

express their appreciation to employees for contributing to the successful mission... Vance Brand and five other crew members spoke to nearly 300 employees in the KSC Training Auditorium... "The STS-35 mission was the highlight of the year," said Launch Director Bob Sieck. "We look back with a lot of pride." ...

After the presentation, the crew members took separate paths to visit with more employees. They went to 34 KSC sites and met with about 1,000 employees before re-joining at the Orbiter Processing Facility High Bay 1 where they spoke to some 130 employees..."



"DURING A VISIT to the Orbiter Processing Facility, members of the STS-35 crew autographed a launch photo that is displayed in the Forward Thermal Protection System Shop. From left, Pilot Guy S. Gardner, Mission Specialists Robert A.R. Parker and Jeffrey A. Hoffman, Payload Specialists Ronald A. Parise and Samuel T. Durrance and Commander Vance Brand."

## **From The March 8, 1991, Spaceport News**

On page 1, "**Vice president visits KSC**". Part of the article reads "A cheering crowd of 2,500 employees greeted Vice President Dan Quayle when he visited Kennedy Space Center on Feb. 20. "It's great to be here where so much history and triumph is made," Quayle said. His visit was the first from the White House since then Vice President George Bush came here in January 1986. While at KSC, Quayle toured the Launch Control Center and Launch Pad 39A and spoke to members of the STS-39 crew during their practice countdown..."

After his two-hour tour, Quayle talked briefly to KSC employees at the Turn Basin parking lot in the Launch Complex 39 area... "I'm proud that you're keeping America's space program second to none," Quayle said, promising to keep the legacy alive..."

As chairman of the National Space Council, Quayle pledged his support to the space program. "The future for Kennedy Space Center and Cape Canaveral is very bright," he said."



“CENTER DIRECTOR Forrest McCartney gives Vice President Dan Quayle a memento from Kennedy Space Center. Quayle was here Feb. 20 to tour the center and talk to employees.”

From [Wikipedia](#), “The National Space Council is a body within the Executive Office of the President of the United States created in 1989 during the George H.W. Bush administration, disbanded in 1993, and reestablished in June 2017 by the Donald Trump administration. It is a modified version of the earlier National Aeronautics and Space Council (1958–1973)...”.

Also on page 1, “**Atlantis up next**”. In part, the article states “The decision to roll Discovery back from Launch Pad 39A to repair two cracked hinges in the external tank umbilical door drive mechanisms moves Atlantis to the forefront of the 1991 launch schedule. The STS-37 Atlantis mission is scheduled for launch in early April...”

Discovery's hinges will be repaired in the OPF using new parts from Shuttle Endeavour, now under construction at the Rockwell facility in Palmdale, Calif... An extensive analysis was performed on Discovery's cracks and tests simulating the cracks were conducted on Columbia. Data indicates the doors would function properly in zero gravity, however, evidence on what caused the cracks was not conclusive. Slipping the STS-39 mission probably means the loss of one mission this year, Space Shuttle Director Bob Crippen said.”

## **From The March 22, 1991, Spaceport News**

On page 1, “**Launch team readies orbiters for flight**”. In part, the article reads “Atlantis arrived at Launch Pad 39B March 15 in preparation for an early April launch. The 36,000-pound Gamma Ray Observatory, the heaviest unmanned spacecraft, was securely locked in place in the payload bay last weekend. The five-member STS-37 crew participated in the Terminal Countdown Demonstration Test earlier this week. The

official launch date will be set during the Flight Readiness Review, now set for March 26-27.”



“ATLANTIS WAITS for its April launch from Pad 39B.”

On page 2, “**Lockheed employee receives NASA's flight safety award**”. In part, the article reads “John J. Rice of Lockheed Space Operations Co. became the first person at Kennedy Space Center to receive NASA's Flight Safety Award. NASA Administrator Richard Truly presented the award to Rice during a ceremony in Washington, D.C., on March 12. Rice, a quality inspector, discovered a crack in the external tank hinge door actuator mechanism on Discovery on Feb. 18 as the orbiter was being prepared for Mission STS-39...”

Rice is the third recipient of the flight safety award. This award is sponsored by NASA's Space Flight Safety Panel to recognize outstanding individual contributions to flight safety made through design, device or practice by a member of NASA's government industry team...”

Also on page 2, “**Launch team members earn prestigious space club awards**”. The article states “Prompt and effective problem-solving at critical times in launch countdowns has earned six members of the KSC launch team the National Space Club's prestigious Eagle Manned Mission Success Award. The awards were presented March 15 at the club's annual Goddard Memorial Dinner in Washington, D.C.”

Five of the recipients are employees of the Lockheed Space Operations Co.: Susan A. Hunt, senior engineer, Purge, Vent and Drain; George H. Thomas, engineer software, Ground Launch Sequencer; Janiene L. Pape, engineer specialist software, Ground Launch Sequencer; John M. Sterritt, engineer specialist, Main Propulsion System; and Frank M. Travassos, engineer, Ground Launch Sequencer. The sixth is John M. Simon of NASA, lead Ground Launch Sequencer engineer with KSC's Vehicle Engineering Directorate.

Hunt received the award for her response to a problem during the final moments of the countdown for the launch of the STS-41 mission with Discovery and the Ulysses spacecraft on Oct. 6, 1990. A gaseous nitrogen valve apparently malfunctioned at T-31 seconds. She quickly traced the problem to a software anomaly and was able to correct it manually.

Simon, Pape, Thomas, Sterritt and Travassos earned their awards for a quick team solution to a main propulsion system problem which had resulted in a hold at T -31 seconds during the terminal countdown for the launch of the STS-31 mission with Discovery and the Hubble Space Telescope on April 24, 1990.

Expensive, time-consuming launch scrubs were averted in both instances. The awards earned each of the recipients a distinctive plaque and monetary award of \$2,000."

On page 7, "**Shuttle replica draws interesting comments**". Part of the article reads "Listening to the more than 7,000 visitors who tour the Space Shuttle replica at Spaceport USA every day can be a real education..."

The most popular question asked by visitors is, "How do you go to the bathroom in space?" A young girl from Tampa seems to have figured it out when she exclaimed to her classmates, "Hey you guys, come here and see the toilet with a stick shift!"... When the average person first walks inside Ambassador, he or she is usually struck by the payload bay's immensity... especially when compared to the smaller crew quarters. The huge expanse and bowl like sides of the payload bay have left wide-eyed young boys asking if it has ever been used for skateboarding...

Ambassador was built privately and designed solely for public viewing. It is not operational. Still, many people assume Ambassador is flight worthy. As an elderly couple from Canada stood in the parking lot looking at the 68-ton vehicle, the wife turned to her husband and asked, "How did they land it here?" Ambassador was actually shipped in crates and assembled on site at Spaceport USA late last year... Ambassador will be on display through mid-April..."



“A FULL-SCALE MODEL of the Space Shuttle is at Spaceport USA through mid-April.”

## From The April 12, 1991, Spaceport News



This Spaceport News is a sixteen-page issue. This Summary will capture some highlights.

On page 2, **“About this issue”**. A portion of the article reads “Ten years ago, STS-1 propelled us into the Space Shuttle era. This special edition of the Spaceport News relives that historic moment and sweeps us across the intervening 10 years to the present, with a peek at what lies beyond... These scant pages are insufficient to tell a story of this magnitude, for behind every personage or illuminating event lies the contributions of thousands who toil in relative obscurity. The end product of our work here at KSC is the successful launch of a Space Shuttle... Every KSC employee, no matter his or his station, can be proud of their achievements over the past decade...”.

On page 5, **“Workers learned to process orbiters for a new space-flight era”**, by **Lisa Malone**. In part, the article reads “The reusable Space Shuttle, with its 210,000 unique parts, brought a whole new dimension to vehicle processing. KSC planners were

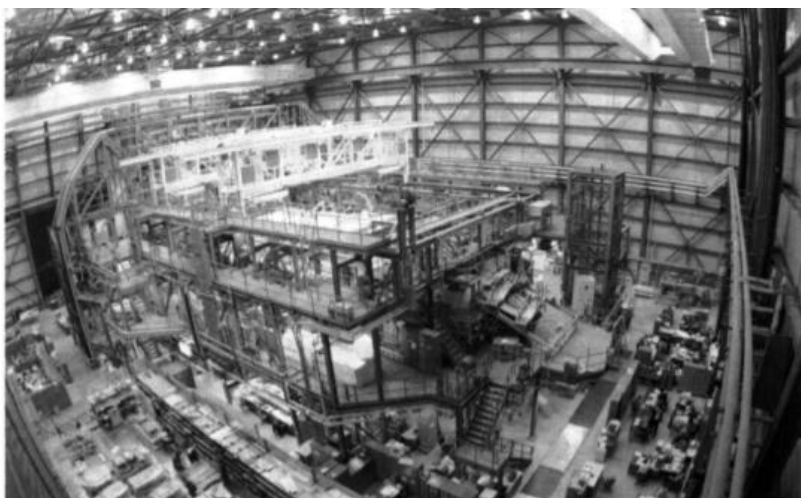
faced with the challenge of not only processing and launching a fleet of sophisticated space planes unlike anything known before, but they also had to keep them flying over and over again. The challenge moved from paper to reality in March 1979, with the arrival of orbiter Columbia for the STS-1 mission. As the KSC processing team soon learned, the task ahead was awesome. Columbia would spend 531 days in the Orbiter Processing Facility, 33 days in the Vehicle Assembly Building (V AB) and 104 days on the launch pad...

"When the Shuttle was still on paper, the program goal was to process an orbiter from start to finish in 160 hours, " said Gene Sestile of Shuttle Operations, who, at the time, was intimately involved in planning and scheduling...

To help with the processing flow, a number of NASA managers were temporarily assigned to work in Shuttle engineering and operations. Ernie Reyes, now KSC's director of Quality and then chief of the Payload Planning and Processing Division, was tapped as KSC's Columbia tile "Czar." When Reyes stepped in, more than 1,700 tile cavities remained on Columbia...

Said Reyes: "I've never had such a good time in my life. Every day was a challenge and you could feel the esprit de corps out there. "There were many unsung heroes at all avenues of the program who made it happen. Under the circumstances, the dedication and pride in the people who worked during STS-1 was unlike any I've ever witnessed," recalled Sestile.

Over the last 10 years, the Shuttle's designers have come up with many modifications to enhance the reliability and efficiency of the Shuttle fleet. "There has been a tremendous effort since STS-1 to improve the processing flow," said Jim Harrington, director, Shuttle Operations. "For instance, it took over 70 days to stack the solid rocket boosters for STS-26R. Compare that to our record breaker, the STS-37 set, which stacked in about 25 days..."



"A FISHEYE LENS captures a view of Columbia inside workstands in the Orbiter Processing Facility (OPF) in January 1980. Columbia spent almost 1 1/2 years in the OPF before its maiden voyage, 10 years ago today."

On page 10, **“They came, they saw, they were impressed”**, by Karl Kristofferson. In part, the article states “They came from neighboring Mexico and Canada . . . from South and Central America . . . from the Middle East, Europe and the Soviet Union . . . from Australia and the teeming Far East... They came from all stations of life, princes, princesses and presidents; statesmen and politicians; actors and actresses; singers and musicians; authors and writers; film directors and producers; athletes and race car drivers...

Among the distinguished visitors were: then Vice President George Bush, Vice President Dan Quayle... Actors and actresses were: Bill Cosby , James Doohan, Dan Ackroyd, Jane Fonda, James Gardner, William Shatner, Leonard Nimoy , Nichelle Nichols, Robert Redford, Carol Burnett, Chuck Norris, John Travolta, Morgan Fairchild...

Entertainers were: Wayne Newton, John Denver, Eric Clapton, Jimmy Buffett, Gloria Estefan and Pat Boone. Other people in the entertainment business were: producer Steven Spielberg, director George Lucas, Star Trek creator Gene Roddenberry and musician Lionel Hampton...

Other notable personalities were: John F. Kennedy Jr., Caroline Kennedy, aeronautical pioneer Hermann Oberth, feminist Gloria Steinem, artificial heart creator Dr. Robert Jarvik,... Boston Celtics' Larry Bird, heavyweight boxing champion Larry Holmes,... and authors James Michener and Ray Bradbury...”.



“GUESTS AND NEWS MEDIA from all over the world line the shores of the turn basin at Complex 39 on April 10, 1981, to view the first launch of the Space Shuttle. The maiden flight of STS-1 was postponed because of a computer timing problem, but most viewers returned on April 12 for Columbia's successful liftoff from Pad A.”



On page 11, “**In retrospect...**”. In part, the article states “From present and former KSC managers whose contributions made the Space Shuttle flight program a reality.”

"At the time of the STS-1 launch, I commanded the Air Force Ballistic Missile Office. But I remember thinking that our national space program had begun an entirely new era. The reusable Space Shuttle would introduce routine and frequent manned missions into space and return to Earth. We have learned over the years that Shuttle launches probably will never become routine because of the complexity of the hardware. Still, we have managed to achieve a frequency of flight that meets the goals of the agency and the nation. "

-Forrest S. McCartney,  
KSC director

"The STS-1 launch count had a higher level of excitement and anxiety than any other manned launch I experienced. The reason was probably the unknowns. First, we had never experienced the effects of SRB (solid rocket booster) ignition ... our only KSC test was the Space Shuttle · Main Engine Flight Readiness Firing. The sights, sounds and data would be a 'first time ever' event. Second, although the team was confident it had done its best to prepare the Shuttle, there was the normal anxiety as to whether our best was good enough. After the completion of orbit insertion with the orbital maneuvering system engine firing, the team confidence ... and elation ... was the highest I have experienced in my career."

-Bob Sieck,  
KSC launch director

"STS-1 was certainly the highlight of my career. I had been involved in a number of 'first-of-a-kind' launch operations, but never one that had as much riding on it as there was on STS-1. With a crew on board, everything had to work right the first time."

-George Page,  
former KSC deputy director and  
STS-1 launch director

"The Shuttle program has established extraordinary maturity today compared to where we were 10 years ago on STS-1. Our launch and processing team today is basically a mix of new young people who have assumed a Jot of responsibility under the guidance of a core of proven veterans. NASA and the civil space program face a lot of challenges in the years ahead. If we are as successful in facing those new challenges as we have been in the decade of the 80s, we will be more than equal to the task."

-Gene Thomas,  
KSC deputy director

## From the STS-1 crew



**INSIDE ORBITER Columbia, STS-1 Commander John Young, left, and Pilot Robert Crippen train for their historic mission.**

*"The Shuttle was working so well, I wanted to stay up there another two or three days and see how it really worked...We could have done it (orbited longer), but nobody would let us."*

—Commander John Young

*"The Shuttle's a marvelous working machine and still the most fantastic...flying machine in the world...Everytime it flies, it's being lifted by thousands of hands."*

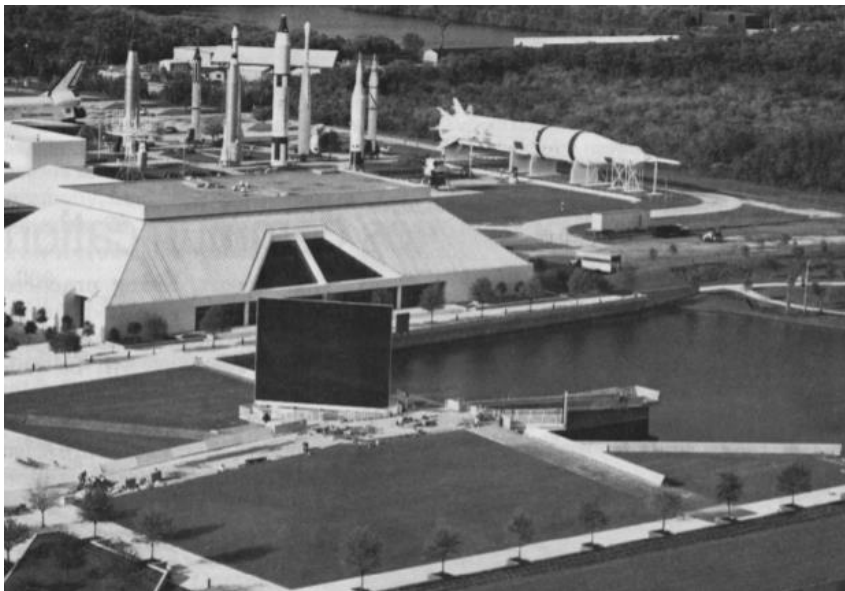
—Pilot Bob Crippen

On page 13, "**NASA's visionaries plan for the future**". In part, the article states "As the 10th anniversary of the first Space Shuttle launch passes, many may wonder what lies ahead for Kennedy Space Center. The Shuttle, of course, will continue to be the focus of KSC activities for the next decade or more... Among the Shuttle's major tasks is to support the assembly and resupply of Space Station Freedom. Assembly is set to begin in 1996, with some man-tended capability achieved the following year. By the turn of the century, Freedom will be permanently manned with crews rotated at regular intervals....".

## From the April 26, 1991, Spaceport News

On page 1, "**Astronaut memorial dedication set May 9**". Part of the article reads "Anyone who has visited or driven by Spaceport USA over the past several months has almost certainly noted a marked change in landscaping and the addition of a unique four-story-high granite and steel structure on the north side of the NASA visitor complex... The monument's existence is primarily due to The Astronauts Memorial Foundation Inc. (AMF), a nonprofit group formed in 1986 by central Florida architect Alan Helman, with support from then U.S. Representative Bill Nelson and U.S. Senator Jake Garn.

The names of 14 astronauts who have died participating in or training for a space mission have been carved through the mirror's granite surface... "This memorial is a fitting tribute to our fallen astronauts and one I think will be well-received by all of us who work here as well as the millions of people who visit KSC each year," said Arnold Richman of NASA's Visitor Center Office... The memorial will be formally dedicated during a private ceremony set for midmorning on May 9..."



"THE POLISHED GRANITE Space Mirror is the focal point of The Astronauts Memorial, located north of Spaceport USA on a landscaped six-acre tract."

Ambassador is at the upper left in the above photo.

On page 2, "**Recognition program promotes communication**". Part of the article states "The first session of the Performance and Information Exchange Program was held April 9 with Center Director Forrest McCartney and Deputy Director Gene Thomas. The program was established this year as a result of an employee suggestion to increase recognition of workers' contributions and promote communications between management and employees... The sessions will be held once each quarter..."



“EMPLOYEES MEET with Center Director Forrest McCartney and Deputy Director Gene Thomas. They are participating in a new program designed to increase communications between managers and employees. Clockwise, from center, Richard Russell, Thomas, McCartney, Jerry Jacques, Daniel Tweed, Anthony Smith, Todd Arnold, Joan Miller, Ellen Dozier and Gordon Perry.”

On page 3, “**Crowds flock to open house**”. About 30,000 people attended KSC's open house April 13 and celebrated the 10th anniversary of the first Space Shuttle launch... Highlighting the open house was a ceremony that commemorated Columbia's launch on April 12, 1981...

The ceremony was held near the Launch Complex 39 area turn basin... "We're here to pay tribute to the men and women who contributed so much to STS-1," said Deputy Director Gene Thomas. "It's our anniversary together," remarked STS-1 Pilot Bob Crippen. "John and I just got to do the fun part." During the ceremony, Crippen, STS-1 Commander John Young and others who worked on the first Space Shuttle shared their memories... "The things the Space Shuttle has been able to do are absolutely fantastic," Young said... Crippen, who is now NASA's Shuttle director, shared Young's enthusiasm. "The next decade is going to be even more exciting."...



“THE ORBITER PROCESSING FACILITY draws a crowd during KSC's open house and 10th anniversary celebration of the first Space Shuttle launch.” [The banner in the photo says “WELCOME TO THE KSC OPEN HOUSE”.](#)

On page 6, “Free fall frames flight vehicle”.



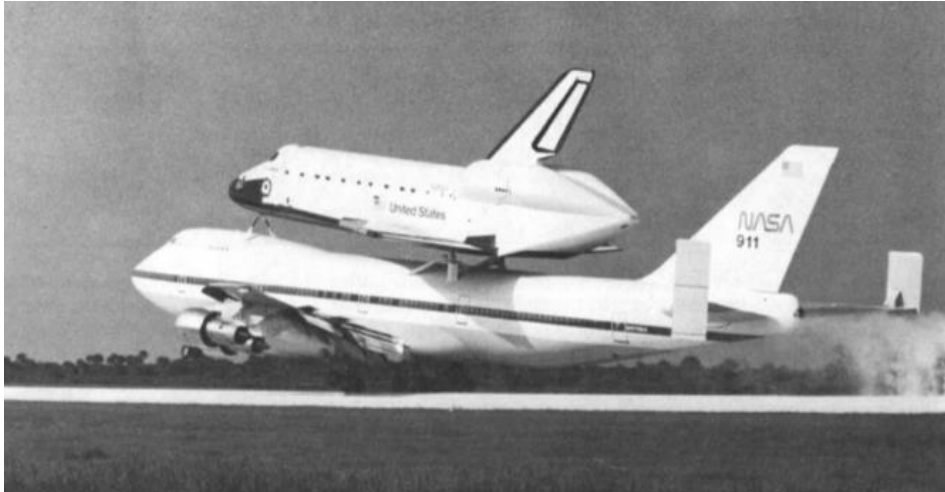
“SKYDIVERS from the Golden Knights, the U.S. Army's premier skydiving demonstration team, join hands high above KSC's Launch Pad 39A on April 2 to frame Space Shuttle Discovery awaiting liftoff on Mission STS-39. Seven skydivers formed a circle as they performed a free fall at speeds up to 120 miles per hour. An eighth skydiver, Sgt. Kevin G. Breaux, was skydiving above the rest of the team to capture this image on film. The team jumped out of a U.S. Army U-21 airplane.”

## **From The May 10, 1991, Spaceport News**

From page 1, “NASA's newest orbiter arrives at Kennedy Space Center”. A portion of the article reads “Hundreds of KSC employees cheered and waved flags as the newest addition to the Space Shuttle fleet, Endeavour, swept down the Shuttle Landing Facility runway atop the 747 Shuttle Carrier Aircraft (SCA) on May 7. Endeavour and the SCA touched down at 9:28 a.m. after the last leg of a five-day ferry flight, including three stops in Texas and one in Mississippi...”

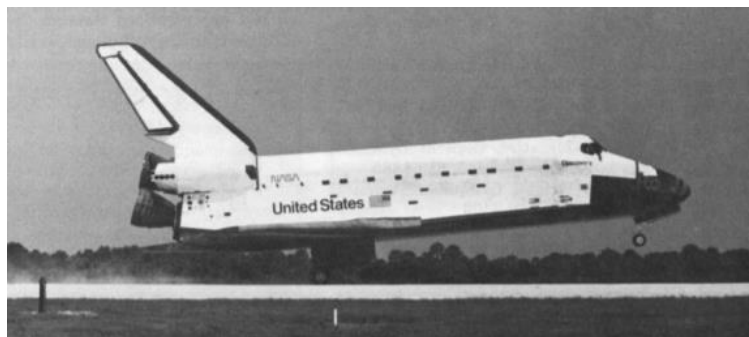
The new orbiter was rolled out of the Rockwell manufacturing facility, Palmdale, Calif., on April 25... Endeavour's first few weeks at KSC will be spent in the Vehicle Assembly Building. The new orbiter will eventually be transferred to the Orbiter Processing Facility for flight preparations...

Two features distinguish Endeavour from its three sister ships. One difference is the drag chute that will aid in deceleration and reduce loads on the landing gear and brakes. The second is the internal plumbing and electrical connections needed to accommodate an extended duration mission capability in the future. Launch of Endeavour is planned next spring on Mission STS-49...”



“ENDEAVOUR ARRIVES at KSC atop the new 747 Shuttle Carrier Aircraft. Thousands viewed the newest addition to the Shuttle fleet after its arrival.”

On pages 1 and 8, “**STS-39 launch**”.



On the left, “SPACE SHUTTLE DISCOVERY thunders off Launch Pad 39A at 7:33 a.m. April 28 on Mission STS-39. The unclassified Department of Defense mission ended May 6 with a landing at Kennedy Space Center. Columbia will be the next Space Shuttle to fly. It will lift off Pad 39B on the STS-40 Spacelab Life Sciences mission in late May.” On the right, “RETURNING TO KSC - Discovery comes in for a picture-perfect landing at KSC's Shuttle Landing Facility, Runway 15. Main gear touchdown at 2:55 p.m., May 6, capped an eight-day flight for the seven-man crew of Mission STS-39. It was the seventh time in 40 Shuttle launches that an orbiter concluded its journey at KSC.”

On page 6, “**Memorial honors KSC employees**”. In part, the article reads “A memorial honoring KSC employees who have lost their lives while working on flight hardware or support equipment was dedicated and unveiled at Spaceport USA during a private ceremony on May 1. Center Director Forrest McCartney presided over the dedication, which was attended by family members and coworkers of KSC employees who were honored...

The memorial features an American eagle, a hard hat and an astronaut's helmet. The statue has been at Spaceport USA since 1976 and served as a monument to all workers-both astronauts and KSC employees-who died while involved in furthering space exploration. The creation of an astronauts' memorial led to the rededication of the memorial as one for all KSC employees.

Engraved on a plaque mounted to the memorial is the following: "These brave men and women are an inspiration to all of us as we continue to reach for the stars." Among those who have fallen: Sidney J. Dagle, Lot D. Gable, John W. Fassett, W.B. Estes, John Bjornstad, Forrest G. Cole and Clarence E. Hailey.”



“AT SPACEPORT USA, Barbara Bjornstad, far right, looks at the memorial that honors KSC employees who died while working on flight hardware or support equipment. Her late husband's name, John Bjornstad, is engraved on a plaque mounted to the memorial. From left, daughter Bonnie Bjornstad, son Brad Bjornstad and grandson Blake Bjornstad.”

## **From The May 24, 1991, Spaceport News**

From pages 1 and 8, “**Memorial dedication honors astronauts**”. In part, the article reads “Feelings alternated between sorrow and joy as nearly two thousand people, including NASA Administrator Richard Truly and Vice President Dan Quayle, gathered at Spaceport USA on May 9 to dedicate Space Mirror, a national memorial to America's fallen astronauts. Located on the north side of Spaceport USA and set on a landscaped

six-acre tract, Space Mirror is a 42.5-foot-high-by-50-foot-wide wall of polished granite. The names of astronauts who have died while furthering the cause of space exploration have been etched through the wall's granite surface...

Participants in the ceremony included former Apollo astronauts Gene Cernan and Jim Irwin, KSC Director Forrest McCartney, The Astronauts Memorial Foundation (AMF) founder and chairman Alan Helman, U. S. Sen. Jake Garn, U.S. Rep. Jim Bacchus, former U.S. Rep. Bill Nelson, Truly and Quayle...

Finally, they all stood as one group while Quayle, Truly and Helman placed a wreath at the monument's base. A moment of silence followed and ended with the releasing of 15 white doves. Astronauts assigned to STS-42 then concluded the ceremony with a missing man formation flyby of the memorial - the missing man was astronaut Manley "Sonny" Carter, an STS-42 crewman who died in a plane crash in March. His name will be added to the 14 names already on the memorial..."



On the left, "VICE PRESIDENT Dan Quayle delivers the keynote address to nearly 2,000 people at the dedication of The Astronauts Memorial. Seated behind him, from left, are The Astronauts Memorial Foundation founder and chairman Alan Helman, U.S. Rep. Jim Baccus, NASA Administrator Richard Truly, U.S. Sen. Jake Garn, KSC Director Forrest McCartney and former Apollo astronaut Jim Irwin." On the right, "FAMILY MEMBERS of honored astronauts watch as The Astronauts Memorial Foundation Chairman Alan Helman (left), Vice President Dan Quayle and NASA Admm1strator Richard Truly share a moment of silence before placing a wreath at the base of the memonal."

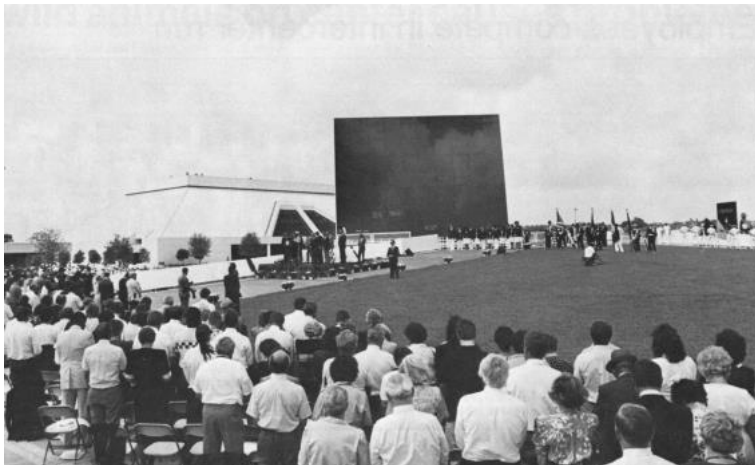
On page 3, "**Astronauts' families express feelings about memorial**", by Melinda Millsap. A portion of the article reads "Fifteen white doves fluttered across the black face of the mammoth 40-foot-tall Space Mirror at Spaceport USA, calling attention to the names of fallen astronauts that were cut through the polished granite wall. They took flight just as The Voices of Liberty from Walt Disney World sang "flying high on golden wings."... This memory, created May 9 during The Astronauts Memorial dedication, will live forever in the minds of those who attended the ceremony - especially the families of astronauts who were honored..."



"Today was a great tribute to the men and women who dedicate their lives for the good of their country and make life better for us all," said Jane Smith-Wolcott, who was married to Michael J. Smith, a member of the STS-51L crew...

"Seeing the names makes you feel good knowing a lot of people who walk by it will think about space and the future," said Edward White III, now 37. He was 13 when his father, Edward H. White II, died during a countdown simulation for a Saturn/ Apollo mission. "This will keep space alive with our children," said Martha Chaffee, widow of Roger B. Chaffee who was a member of the same Saturn/ Apollo mission as White...

Carl McNair Sr. said the families "couldn't possibly forget" their pain, but knowing the memorial was being built has helped him through the years. His son, Ronald E. McNair died on Jan. 28, 1986. The Astronauts Memorial Foundation was established shortly thereafter..."



"HEADS ARE BOWED as former Apollo astronaut Jim Irwin gives the invocation at The Astronauts Memorial dedication on May 9 at Spaceport USA."

From page 2, "**Brewster Shaw oversees Space Shuttle program at Kennedy Space Center**". Part of the article states "After flying on a Space Shuttle mission, Brewster Shaw had his own way of returning to day-to-day living here on Earth - mowing his lawn. "It was a great way to get your feet back on the ground and your head out of the clouds," he explained. Today, Shaw still brings that down-to-earth approach to his job as deputy director for Space Shuttle Operations at KSC, a position he assumed in February 1990 when Bob Crippen moved to NASA Headquarters as Space Shuttle director..."

Shaw now has primary management responsibility for the space vehicle from the time it leaves the Orbiter Processing Facility (OPF) through launch, mission operations, landing and return to KSC... Shaw also heads the Mission Management Team. The team meets two days before launch with Shaw chairing the day's review, as well as the next day's final review and the Shuttle tanking meeting held just prior to external tank fueling operations...

"When things go well, this is a very easy job because you don't have to do much. The launch teams and the others in the Shuttle program do it all for you," he explained. "However, when a problem does arise, we evaluate the launch team's recommendations and decide to continue the countdown or scrub and try again another day."... Shaw's first space flight was as pilot of STS-9 on Nov. 28, 1983. He was also commander of two other missions, STS-61B on Nov. 26, 1985, and STS-28 on Aug. 8, 1989. During these missions, he accumulated more than 500 hours in space...

"I loved flying in space and I'd do it again in an instant," Shaw said. "I can't think of anything that could be more thrilling or more fun for any human being."... A more prominent element in Shaw's office is his view of the Vehicle Assembly Building. He said it constantly reminds him of what he considers to be the "can do" attitude of KSC employees..."



"BREWSTER SHAW, Space Shuttle Operations deputy director at Kennedy Space Center conducts a meeting in his office in the Headquarters Building."

From page 5, "**STS-43 insignia commemorates 30 years of manned space flight**". Part of the article states "The STS-43 insignia portrays the evolution and continuity of the nation's space program by highlighting 30 years of American manned space flight. The Space Shuttle Atlantis emerges from the outlined configuration of the Mercury space capsule..."

The energy and momentum of launch are conveyed by the different shades of gray below the Space Shuttle. In the color patch, the various shades are actually gradations of blue which depict the Shuttle's ascent to space. Once in Earth orbit, Atlantis' cargo bay opens to reveal the Tracking and Data Relay Satellite (TDRS), which appears in gold against the white wings of Atlantis and the stark blackness of space...

The stars on the STS-43 crew insignia suggest the mission's numerical designation. There are four stars to the left of Atlantis and three to the right... The STS-43 crew - commander John E. Blaha, pilot Michael A. Baker and mission specialists James C. Adamson, G. David Low and Shannon W. Lucid - designed the patch."



On page 6, “**STS-40 launch rescheduled**”. In part, the article states “Following the discovery of several technical problems, NASA managers postponed last Wednesday's planned launch of Space Shuttle Columbia. The launch has been tentatively rescheduled for Saturday, June 1. Columbia will carry out the first Spacelab mission dedicated to life sciences research...”.



“STS-40 CREW MEMBERS pose in front of the M113 they used during training for their Space Shuttle mission. From left, Millie Hughes-Fulford, James P. Bagian, M. Rhea Seddon, Bryan D. O'Connor, Tamara E. Jernigan, F. Drew Gaffney and Sidney M. Guiterrez.”

On page 7, “**Exploration spirit portrayed in patch**”. A portion of the article reads “The crew for STS-49, Space Shuttle Endeavour's maiden flight, designed an insignia that captures the spirit of exploration. Seagoing vessels were the means of transport for early explorers who traveled uncharted reaches of Earth and its oceans. To convey this

concept, the STS-49 crew chose the ship HMS Endeavour as the dominant feature of the patch. British explorer Captain James Cook commanded the HMS Endeavour on his first scientific expedition to the South Pacific... Flags flying high on Endeavour's masts bear the colors of the two schools that won the nationwide contest when Endeavour was chosen as the name of NASA's newest Shuttle. The schools are Senatobia Middle School in Mississippi and Talulah Falls School in Georgia.

STS-49 crew members Dan Brandenstein, Kevin Chilton, Pierre Thuot, Kathy Thornton, Rick Hieb, Thomas Akers and Bruce Melnick are scheduled to fly Endeavour next spring."



Also on page 6, "**Celebrating manned space flight**".



THE FIRST AMERICAN IN SPACE, Alan Shepard (second from right), pushes the button launching a 1/14th scale Mercury Redstone Rocket on May 10. The rocket, which was launched from the Industrial Area, commemorated the 30th anniversary of U.S. manned space flight. The Spaceport Rocketry Association (SRA) created the six-foot-tall rocket to celebrate Shepard's historic flight on May 5, 1961. Sitting in front, from left, are SRA member Patricia Delizasoan, Center Director Forrest McCartney, SRA president David Sollberger, Shepard and SRA member Mike Haddad. Shepard thanked KSC employees for their continued dedication to the U.S. space program."

## From The June 7, 1991, Spaceport News

On page 1, "**Columbia crew creates Space Shuttle firsts**", by Lynne Riefler. In part, the article reads "Columbia's lift off on the STS-40 mission marks two firsts for the Space Shuttle program. An American-born Hispanic sits in the pilot's seat and three women are among the crew of seven.

Pilot Sidney M. Gutierrez, born and raised in New Mexico, is the first American-born Hispanic to fly a Shuttle mission. With him are mission specialist Rhea Seddon, who has flown once before, mission specialist Tamara Jernigan and payload specialist Millie HughesFulford, both space rookies. Other crew members include commander Bryan D. O'Connor, mission specialist James P. Bagian and payload specialist F. Drew Gaffney...".



"COLUMBIA IS POISED for flight atop the Mobile Launcher Platform after it was rolled to Pad 398 on May 2. It was set to lift off on Mission STS-40 earlier this week."

## From The June 15, 1991, Spaceport News

On page 3, "**KSC honors employees for contributions to manned space flight**". Part of the article states "In recent months, the Manned Flight Awareness program has honored hundreds of Kennedy Space Center employees for their contributions to the safety and success of manned space flight. In April, 52 KSC employees were

recognized in Washington, D.C. during a commemoration of the 10-year anniversary of the first Shuttle flight. The honorees toured the Goddard Space Flight Center in Greenbelt, Md., and were guests of honor at a reception where STS-1 astronauts John Young and Robert Crippen were recognized...

On May 31, the STS-37 crew returned to KSC to express appreciation to KSC workers for their contributions to the successful mission. While here, they visited 25 areas...and recognized several teams for their contributions to the STS-37 flight."



"STS-37 CREW MEMBERS talk to KSC employees in the Vehicle Assembly Building on May 31. They returned to Kennedy Space Center to thank employees for contributing to the successful mission." From left to right are Jerry Ross, Ken Cameron, Steve Nagel, Linda Godwin and Jay Apt.

On page 1, "**Columbia lifts off on life sciences mission**".

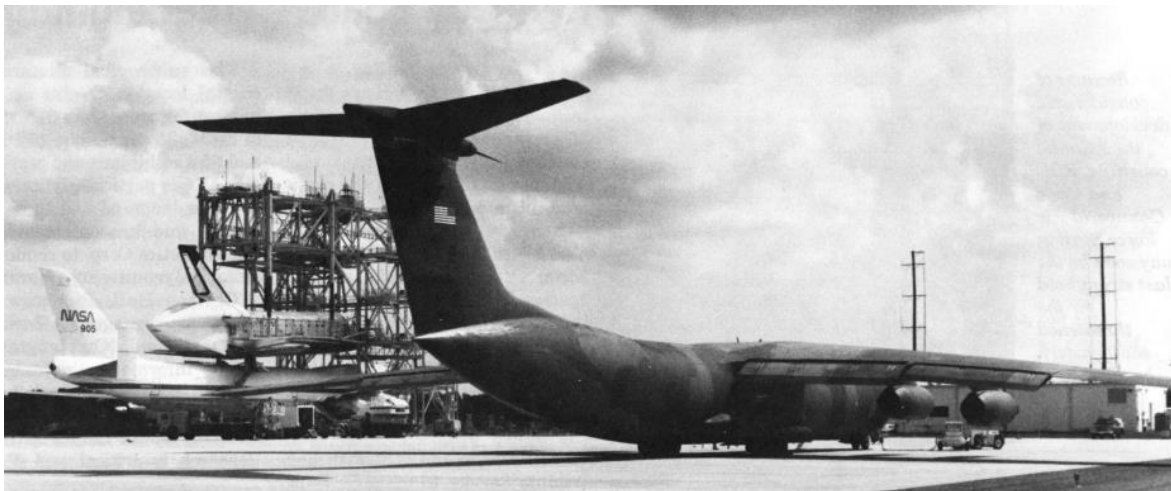


"A NINE-DAY SPACE FLIGHT is off to a sensational start as Space Shuttle Columbia surges off Launch Pad 39B at about 9:25 a.m. on June 5. The primary payload for STS-40 was the Spacelab Life Sciences-1 laboratory. Columbia touched down at Edwards Air Force Base, Calif., at 11:39 a.m. EDT June 14. It was scheduled to arrive at Kennedy Space Center atop the Boeing 747 Shuttle Carrier Aircraft this week."

## From the July 5, 1991, Spaceport News

On page 1, “**Pathfinder leads the way for returning Space Shuttles**”, by Mitch Varnes. A portion of the article reads “Like the unheralded offensive guard who opens a hole for the all-star fullback, the Pathfinder aircraft paves the way for NASA's orbiter-laden Shuttle Carrier Aircraft (SCA) during cross-country jaunts from Edwards Air Force Base, Calif., to the Kennedy Space Center. Typically, an Air Force C-141 or similar cargo transport plane, the Pathfinder is an integral and largely unknown part of the Space Shuttle's return to KSC following an off-site landing...

Dodging clouds, probing for wind shears and generally searching for aerial perils, the Pathfinder flies an average of 20 minutes and dozens of miles ahead of Shuttle orbiters riding piggyback atop one of NASA's two beefed-up Boeing 747 SCA's... The Pathfinder will often fly up, down or around clouds to guide the SCA away from adverse weather. At times, the massive aircraft has even circled over KSC before giving a landing OK to the SCA or diverting it to another landing area...”.



“THE PATHFINDER RESTS on the KSC Shuttle Landing Facility runway after the three-day STS-40 ferry flight from Edwards Air Force Base, Calif. In the background is Space Shuttle Columbia, bolted to the Shuttle Carrier Aircraft, inside the Mate-Demate Device.”

## From The July 19, 1991, Spaceport News

On page 1, the caption for the photo on the following page is “STS-43 CREW MEMBERS stand in front of the Tracking and Data Relay Satellite (TORS-E) payload they will deploy during their nine-day space flight. At launch Pad 39A, from left, are Mission Specialists Shannon W. Lucid and James C. Adamson, Pilot Michael E. Baker, Commander John E. Blaha and Mission Specialist G. David Low. The crew was at the

pad participating in the Terminal Countdown Demonstration Test, a dress rehearsal for launch. Atlantis is set to lift off on Mission STS-43 on July 23.”



On page 2, “**Spaceport USA: Then and Now**”.



“THIS AERIAL PHOTO taken in 1969 shows the first permanent building for NASA's Visitor Information Center at the current Spaceport USA location. The building opened Aug. 1, 1967, off NASA Causeway (foreground) approximately six miles east of Gate 3.”





“THE ASTRONAUTS MEMORIAL Space Mirror, right, highlights this recent aerial view of Spaceport USA. The Space Mirror is located in front of the Galaxy Center which is in the middle of the photo. The Rocket Garden display can be seen in the upper left, and NASA Causeway is in the lower right.”

## From The August 2, 1991, Spaceport News

From page 1, “**Space Shuttles pass in the night**”.



“SPACE CENTER workers waited until a thunderstorm had passed over the area before transferring Discovery to the Vehicle Assembly Building and Endeavour to the Orbiter Processing Facility, Bay 1, around 11:40 p.m. July 25. Discovery is being prepared for Mission ST8-48 in September. Flight processing begins on Endeavour for the first time. Endeavour is scheduled to fly on Mission STS-49 in spring 1992.”

## From The August 16, 1991, Spaceport News

On page 1, “Atlantis completes mission at KSC”.



“Space Shuttle Atlantis streaks skyward as sunlight pierces through the gap between the orbiter and external tank assembly. Atlantis lifted off on the 42nd Space Shuttle flight at 11:02 a.m., Aug. 2, carrying a five-man crew and the Tracking and Data Relay Satellite-E on a nine-day flight...”.



“Pilot Michael Baker leads the STS-43 crew out of orbiter Atlantis after landing at Kennedy Space Center on Aug. 11. Behind him are Shannon Lucid, James Adamson, David Low and John Blaha. Top right, Atlantis touches down at 8:23 a.m. on Runway 15 at KSC's Shuttle

Landing Facility. This was the first planned end-of-mission landing at KSC since 1986. During the mission, the crew deployed the Tracking Data and Relay Satellite-E and performed a number of scientific, medical and space engineering experiments.”

On page 3.



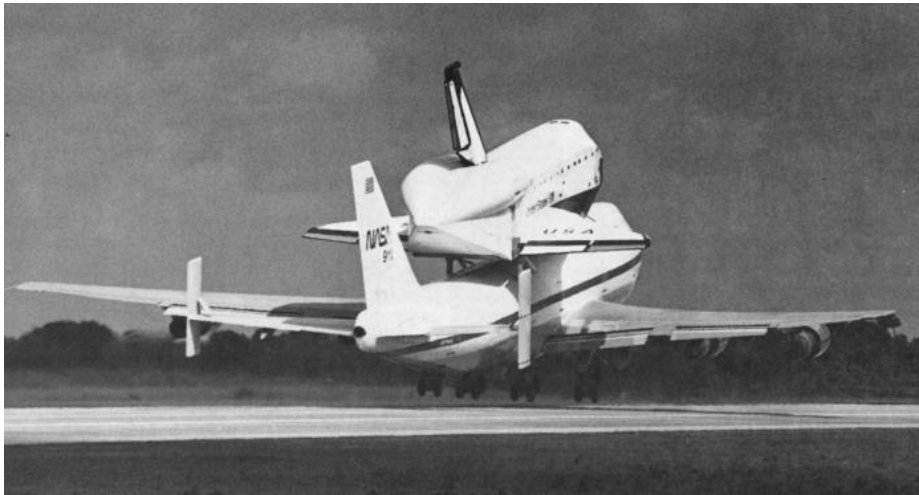
“EXTERNAL TANK No. 44 arrives at Kennedy Space Center on July 29 for Space Shuttle Endeavour's first flight, which is targeted for launch in spring 1992.”

Also on page 3, “**STS-48 crew insignia depicts mission to study atmosphere**”. In part, the article reads “In the STS-48 crew insignia, Space Shuttle Discovery is depicted orbiting Earth after deploying the Upper Atmospheric Research Satellite (UARS). UARS is represented by block letters and a triangle in the upper part of the insignia. The triangle depicts the solar array. Stars below the letters depict the Northern Hemisphere as seen in the fall and winter when UARS will begin its study of Earth's atmosphere...

The bands on Earth's horizon, extending up to the UARS spacecraft, depict the atmospheric study. The triangular shape signifies the relationship among the three atmospheric processes that determine upper atmospheric structure and behavior: chemistry, dynamics and energy. "This continuous process brings life to Earth and makes our planet unique in the solar system," commented the STS-48 crew members who created the insignia.”



On page 8, “**Columbia leaves Kennedy Space Center**”.



“NASA'S FIRST operational Space Shuttle orbiter, Columbia, left KSC Aug. 10 enroute to Palmdale, Calif., atop the 747 Shuttle Carrier Aircraft. It will spend the next six months at the Rockwell manufacturing plant undergoing the most extensive inspections and modifications ever conducted on a previously flown orbiter.”

## **From The August 30, 1991, Spaceport News**

From page 1, “**Newer, wider road eases traffic congestion**”. In part, the article states “Center Director Forrest McCartney zipped through a checkered ribbon in a 1955 Thunderbird as he opened the newer, wider Kennedy Parkway South on Aug. 21. The two-lane stretch of Kennedy Parkway to Gate 2 was widened to four lanes to ease traffic congestion for KSC workers and Spaceport USA visitors... This complements Brevard County's plans to double the width of an eight-mile, two-lane stretch of Route 3 between the Merritt Island Barge Canal Bridge and KSC's Gate 2...”.



“GOODSON PAVING President Tom Goodson, left, dropped the starting ribbon as KSC Director Forrest McCartney and County Commissioner Karen Andreas make the first drive down the newly widened 2.7-mile stretch of Kennedy Parkway South. This section meets with State Road 3, which is also being widened to ease traffic congestion.”

Also on page 1, **“Discovery to land at night”**. A portion of the article states “Kennedy Space Center can expect to see its first Space Shuttle night landing when Discovery touches down at the end of its five-day STS-48 mission. A September launch date for Discovery was to be set at the Flight Readiness Review earlier this week...”.



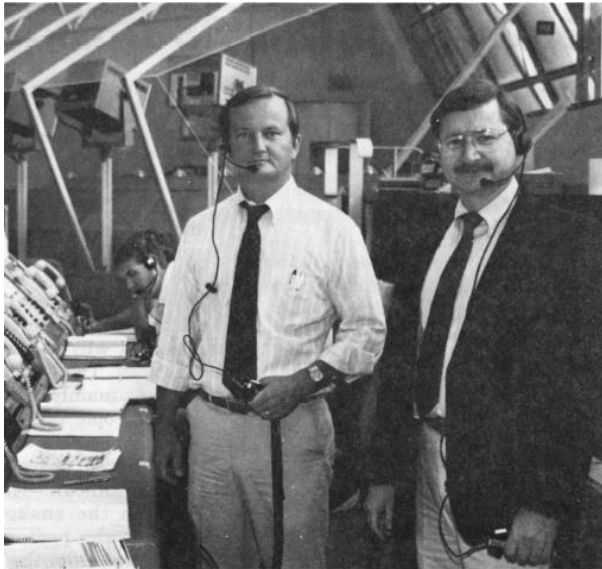
“STS-48 ASTRONAUTS pose for a photo at the 235-foot level of Launch Pad 39A during a dress rehearsal for the upcoming mission.”

Also on page 6, **“Launch team leaders manage Space Shuttle's vital signs”**. Part of the article reads “Two of NASA's launch controllers, Al Sofge and Mike Leinbach, were recently promoted to KSC Shuttle Test Directors (STDs). Sitting at the helm of the firing room during launch countdowns, they oversee the multitude of tasks to prepare the Space Shuttle for launch from T minus six hours through liftoff. As the only two Shuttle Test Directors, Leinbach and Sofge have now assumed more responsibility than as their previous role as NASA Test Directors. They also assist Launch Director Bob Sieck and work on special assignments relating to testing...In addition, on alternating Space Shuttle flows, they are responsible for planning, managing and integrating the activities of the NASA and contractor Shuttle test team...”

Leinbach joined NASA in 1984 as a structural engineer working in the Design Engineering Directorate on the Complex 39 launch pads... He also served as lead designer for the Shuttle Thermal Protection System Building, located at Complex 39. Born in Reading, Penn., Leinbach has a bachelor's degree in architecture and a master's degree in civil engineering, both from the University of Virginia...

Sofge began his career with NASA in 1968 and has served as an electrical engineer for launch pad systems and the mobile launcher platform during the Apollo program. Between Apollo and the Space Shuttle, he helped plan the retrieval of the Shuttle's solid rocket boosters... He received a bachelor's of science degree in electrical engineering

from Christian Brothers College in Memphis and a master's in business administration from Florida State...



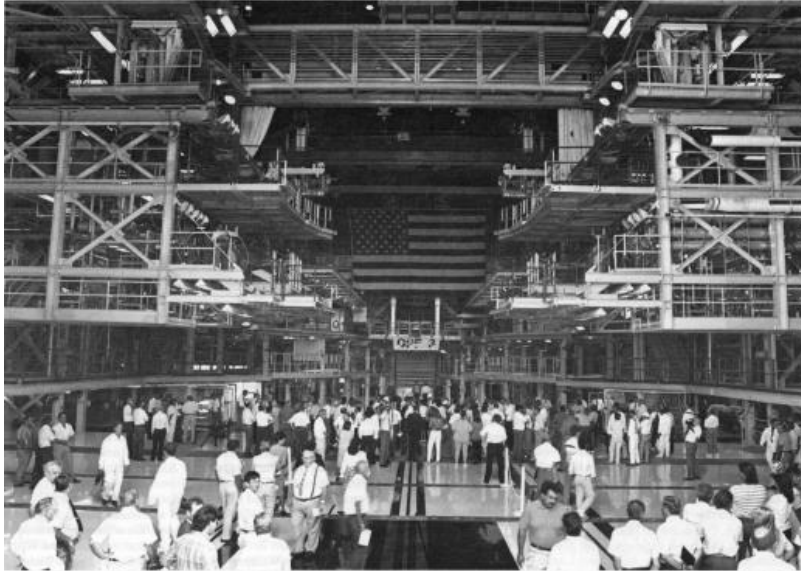
“COUNTING DOWN-Mike Leinbach, left, and Al Sofge, NASA's two Shuttle Test Directors, lead the Space Shuttle launch team during countdowns from their consoles in the firing room.”

## **From The September 13, 1991, Spaceport News**

On page 1, “**KSC dedicates third Orbiter Processing Facility**”. A portion of the article states “Kennedy Space Center's third and newest Orbiter Processing Facility (OPF) was dedicated during a ribbon-cutting ceremony on Sept. 3. OPF Bay 3, formerly the Orbiter Modification and Refurbishment Facility, is located just north of the Vehicle Assembly Building in the Launch Complex 39 area.

The new processing facility for Space Shuttle orbiters is the same size as its two counterpart OPF bays - 197 feet long, 150 feet wide and 95 feet high. Adjacent to the high bay is a two-story, 87,000-square-foot support area... Like Bays 1 and 2, OPF Bay 3 will be used for post-flight deservicing, testing, modifications and preflight processing of Space Shuttle orbiters. The basic structure, completed in 1987, has been used primarily for off-line orbiter inspection, modification and repair work...

The completion of a third processing bay gives managers more flexibility in planning Shuttle processing time lines. Studies have indicated that the number of processing bays should be one less than the number of orbiters in order to maintain an adequate launch rate and meet agency goals...”.



“EMPLOYEES tour the new Orbiter Processing Facility after it was dedicated on Sept. 3. Kennedy Space Center now has three hangars to process its four orbiters for launch.” [OPF-3 is now the Commercial Crew and Cargo Processing Facility \(C3PF\), for Boeing’s Commercial Crew Program.](#)

On page 5, “**American flag portrayed in STS-44 insignia**”. Part of the article reads “The crew insignia for the STS-44 Department of Defense mission carries a patriotic theme. In the insignia, Space Shuttle Atlantis is depicted ascending to Earth orbit on the American flag to expand mankind’s knowledge.

The flag represents the American contribution and strength derived from the mission. “The stars of the flag symbolize our leadership in an exciting quest of space and the boundless dreams for humanity’s future,”... Within the Space Shuttle’s payload bay is a Defense Support Program Satellite which will help ensure peace on Earth. The black background of space, indicative of the mysteries of the universe, is illuminated by six large stars which represent the American crew members and the hopes that travel with them. The smaller stars represent Americans who work in support of this mission...”.



On page 7, “**Star Trek crew visits KSC**”.



“MEMBERS OF THE ORIGINAL STAR TREK cast pose in front of Space Shuttle Discovery during a tour of Kennedy Space Center on Aug. 30. From left, James Doohan, who played Chief Engineer Montgomery Scott; George Takei, who played Mr. Sulu; and Nichelle Nichols, who played Lt. Uhura. They were in the area to attend a convention in Orlando which marked Star Trek's 25th anniversary. Doohan and Nichols have been here several times, but it was Takei's first visit.”

## **From The September 27, 1991, Spaceport News**

From page 1, 3 and 8, “**Mission STS-48 marks beginning of era to study planet Earth**”. In part, the article states “Space Shuttle Discovery began its 13th flight by soaring off Pad 39A and heading north toward a high inclination orbit at 7:11p.m. on Sept. 12. Discovery flew 354 statute miles above the Earth to deploy its primary payload, the Upper Atmosphere Research Satellite (UARS)...

Discovery's night landing, originally planned at KSC, was diverted to Edwards Air Force Base, Calif., because of adverse weather conditions in the local area. Touchdown came at 3:38 a.m. EDT, Sept.18, on concrete Runway 22...”.





On the right, leaving the O&C building, is the STS-48 flight crew. From left to right, are Jim Buchli, Ken Reightler, Mark Brown, Charlie Gemar, and John Creighton.

On page 8, **“Powerful lights illuminate Shuttle runways and launch pads”**, by Lisa Malone. A portion of the article reads “Originally designed to illuminate the battlefield for “Operation Moonglow” in the Vietnam War, NASA uses xenon lights in the Space Shuttle program to brighten runways and launch pads...”

“We have about 137 xenons dedicated to the space program worldwide,” said Barry Miller, searchlight foreman for Johnson Controls World Services, the company that maintains the lights through an agreement with NASA. Astronauts returning from space can see the Shuttle Landing Facility runway from Jacksonville, Fla., when the lights are on. There are 16 xenon lights at the SLF runway. Eight lights are located in groups of four on flatbed trailers at each end of the runway. When the Shuttle glides back to Earth at night, only eight xenons on one end of the runway are turned on. The idea is to have the xenons behind the Shuttle at landing so the flight crew won’t be blinded by the powerful lights.

With each 30-inch searchlight producing one billion candle power, the xenon lights are dangerous to the eyes and can cause blindness. In comparison, it would take almost 600,000 100-watt incandescent light bulbs to produce the same luminescence of one bulb filled with pressurized xenon gas.

"These lights are so bright you can read a newspaper at the opposite end of the three mile-long Shuttle Landing Facility," Miller said. To illuminate the orbiter during launch countdown, 40 xenons are positioned around the launch pad...".



"XENON SEARCHLIGHTS are positioned at the Shuttle Landing Facility on a flatbed trailer by Johnson Controls employees, from left, Barry Miller, Mike Lopez and Dave Ball. Sixteen lights are located at the Shuttle Landing Facility."

## **From The October 25, 1991, Spaceport News**

On page 1; "**Walls rise and bring shape to Processing Control Center**", by Jon Ewing. The article states "Tilt-up construction, a building method not widely used for past projects at KSC, has become the preferred choice in the construction of several new facilities. This is a construction process in which concrete segments of the building are poured into horizontal molds on the ground. They are then lifted vertically and moved into place to form the outer frame of a particular structure.

One major project using this prefabrication process, the Space Shuttle Processing Control Center (PCC), has been under construction for six months and much progress has been made toward its scheduled completion in June 1992. "About 95 percent of the exterior tiltup panels are in place," said Wally Schroeder, NASA facility engineer for the project. Construction efforts will concentrate on the development of the interior structure for the next several months."



On the left, “THIS THREE-STORY 99,000-square-foot facility now being built by The Haskell Co. will support orbiter testing, launch team training and launch processing system maintenance.” On the right, “PIPE BRACES help support and plumb the exterior wall to the new Processing Control Center expected to be completed in June 1992.”

On page 2, “**Space center employee makes U.S. water-ski team, meets pope**”. Part of the article reads “Was it divine intervention that finally got Lee Harrison her spot on the U.S. water-ski team?... After 20 years of training for this dream, one can't help but wonder how this talented athlete has kept her spirits up for so long. "I've worked for many, many years to make the team," Harrison said emphatically. This NASA engineer has devoted practically every spare moment to water-skiing...

Harrison represented the U.S. well in the world-class competition in the World Tournament in Austria. She took fourth in jumping. But that's not all she has to brag about. After her showing in Austria, she went on to capture several awards in the Italian Masters: second in jumping and fourth in slalom and trick skiing. Divine intervention might have helped her win in Italy. After all, she did get Pope John Paul's personal blessing. Harrison and the waterski team met the pope several days before competing in the Italian Masters...

Even though her ultimate goal has always been to make the U.S. team, she's accomplished a lot along the way. She has held the national overall women's title in her age division for 11 consecutive years, from 1981-91. She also won the national championships in slalom and jumping in 1991 and holds national records in slalom, trick and jumping in her class. She set the national women's slalom record in 1989.”



"NASA Engineer LEE HARRISON meets Pope John Paul during a trip to Italy with the U.S. water-ski team."

## **From The November 8, 1991, Spaceport News**

On page 1, "**New Kennedy Space Center director named**". A portion of the article reads "NASA Administrator Richard H. Truly announced Oct. 31 that Space Shuttle Director Robert L. Crippen had been appointed the new director of KSC. Center Director Forrest S. McCartney was asked to continue in his position... until Jan. 1.

Before assuming his position at NASA Headquarters, Crippen was based at KSC as deputy director of Space Shuttle Operations for NASA Headquarters. He is a former astronaut and veteran of four Shuttle missions. In announcing the change, Admiral Truly praised General McCartney. Truly noted the safe return to flight and launch of 18 safe and successful Shuttle flights in three years, with another on the pad for launch in just a few weeks...

"I've had a long and pleasurable career in the government and working at KSC has certainly been a highlight," McCartney continued. "This is the world's best and most talented team for launching rockets and processing payloads..."



CRIPPEN



McCARTNEY

On page 2, “**Drag chute to enhance landing**”, by Lisa Malone. Part of the article reads “Space Shuttle landings will look a little different next year. For the first time, people watching the landing will see a drag chute unfurl behind the Space Shuttle after the main gear touches down. Technicians recently checked the fit of a drag chute on orbiter Endeavour, the first Space Shuttle scheduled to fly with the modification...

“The chute is expected to enhance the orbiter's braking capability at landing and reduce loads on the brakes and landing gear by 30 percent, thereby improving the safety margin,” said Rob Summers, NASA orbiter structures engineer. Using the chute will take energy out of the orbiter faster than just using the landing gear brakes and the rudder speed brake. Shuttle rollout distance on the runway is expected to decrease from a nominal 10,000 feet to 7,500 feet, Summers explained...”.



“LOCKHEED TECHNICIAN RALPH GREGORY FITS a drag chute in orbiter Endeavour to slow the vehicle during landing. The drag chute is located in the orbiter's aft just under the vertical stabilizer and over the No. 1 main engine. The chute compartment adds approximately 400 pounds of weight to the orbiter and measures 25 inches wide by 21 inches high by 40 inches deep. White flexible thermal blankets and black tiles protect the compartment from heat the Space Shuttle experiences in flight.”

From page 7, “**The 1991 NASA Ball**”. Photos, no captions, several of which follow.





## **From the November 22, 1991, Spaceport News**

From page 1, “**STS-44 crew**”.



“INSIDE THE WHITE ROOM at Launch Pad 39A, the STS-44 crew prepares for their launch aboard Atlantis. From left, Pilot Terence “Tom” Henricks and Mission Specialists Story Musgrave (kneeling) and Mario Runco, Payload Specialist Tom Hennen, Commander Fred Gregory and Mission Specialist Jim Voss. They were outfitted in their launch/entry suits to participate in the Terminal Countdown Demonstration Test on Nov. 1. Atlantis is scheduled to lift off with the Defense Support Program satellite on Mission STS-44 Nov. 24.”

On page 2, “**Astronauts visit with employees, present awards**”. In part, the article states “Astronauts Jim Newman, David Wolf and Rick Searfoss gave Silver Snoopy awards to 40 individuals at Kennedy Space Center last month for contributing to the safety and success of manned space flight... In addition to presenting Silver Snoopy awards, astronaut Wolf visited with employees at Spaceport USA, the McDonnell Douglas office in Titusville and the NASA Personnel Office in the Headquarters Building. The last Manned Flight Awareness activity in October was a visit from the STS-48 crew. The crew members returned to KSC on Oct. 21 to express their appreciation.”



“CENTER DIRECTOR Forrest McCartney introduces the STS-48 crew in the KSC Training Auditorium on Oct. 21. From left, McCartney, Mission Commander John Creighton, Pilot Ken Reightler, Mission Specialist Sam Gemar, Launch Director Bob Sieck and Mission Specialists Jim Buchli and Mark Brown.”

## **From the December 6, 1991, Spaceport News**

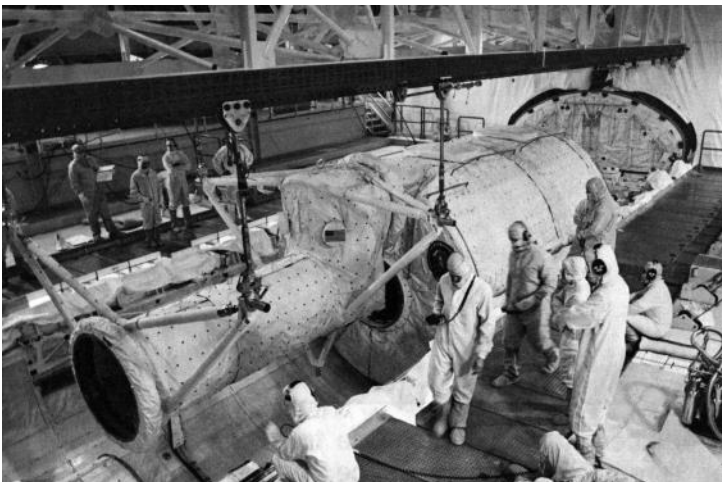
On page1, “**STS-44 launch: A dazzling display**”. The article reads “ATLANTIS LIFTS OFF at 6:44 p.m., Nov. 24, on the sixth and final Space Shuttle flight for 1991. The six-man crew for STS-44 deployed the Defense Support Program satellite six hours and 19 minutes later. During the mission, the crew also conducted medical, space surveillance and cell-culture experiments. This was only the seventh time in 44 Space Shuttle launches that viewers have seen the Shuttle light the night sky.

Atlantis landed at Edwards Air Force Base, Calif., at 5:34 p.m. EST Dec. 1. The mission was previously scheduled to end with a landing at Kennedy Space Center on Dec. 4 before one of the orbiter's three Inertial Measurement Units failed. Although the Space Shuttle can operate and land with only one Inertial Measurement Unit (IMU), flight rules governing an IMU failure called for a shortened mission and a lakebed landing.”



Also on page 1, “**Payload processing for STS-42 Spacelab nears completion**”, by **Mitch Varnes**. A portion of the article reads “With the final Space Shuttle mission of 1991 now in the history books, NASA managers and engineers are turning their attention to STS-42, the first flight of 1992...

KSC workers have spent more than two years developing and processing IML-1, the first of three Spacelab module missions planned for 1992. Like all other Spacelab payloads, IML-1 was integrated and placed through a battery of tests inside the clean room-like environment of the Operations and Checkout Building's high bay. The payload was transported to the Orbiter Processing Facility (OPF) and installed in Discovery's payload bay in mid-November...”.



“ORBITER AND PAYLOAD engineers (above) from Lockheed Space Operations Co. and McDonnell Douglas Space Systems Co. combine efforts to install the International Microgravity Laboratory-1 (IML-1) tunnel into Discovery's payload bay. The tunnel will be used during the mission to provide the astronauts with access from the orbiter to the pressurized Spacelab module...”.



## From the December 20, 1991, Spaceport News

On pages 2 through 4, "**1991 Christmas Coffees**".



On page 6, "**McCartney praises employees for 1991 accomplishments**". The article states:

Dear Team Members,  
1991 has been a great year for us here at the Kennedy Space Center. We can all be proud of our accomplishments.

We prepared six Space Shuttles for launch and safely recovered them. We processed 10 primary and major secondary payloads and supported the launch of nine expendable vehicles. We increased our operating efficiency, we made significant progress in our TQM (Total Quality Management) efforts and our recycling program is proving to be very effective. In every measure, our entire team (technical, administrative and managerial) performed well.

I believe 1991 will go down in the history book as one of the finest ever for KSC. Well done!

I have been extremely proud and consider myself very fortunate to have been a member of your team for these past five years. Everywhere I have looked, I have seen dedicated, caring professionals doing a super job. America is fortunate to have such a fine team at the center of their space program. Thanks for your support and for "letting me" play on your team.

Mrs. McCartney joins me in wishing all of you and your loved ones a very happy and safe holiday season. We hope the year ahead brings you health and happiness. God bless each and every one of you. Warmest regards!

-Forrest S. McCartney,  
Kennedy Space Center Director

Also on page 6.



"IN THE LAUNCH Control Center firing room, KSC Director Forrest McCartney, far right, addresses members of the launch team following the liftoff of Space Shuttle Atlantis on Mission STS-44. Atlantis surged skyward from Pad 39A at 6:44 p.m., marking the sixth and final Space Shuttle flight of 1991 and capping McCartney's tenure as center director. Since he assumed the director's position in 1986, McCartney has overseen the return of the Space Shuttle to flight and a string of 19 successful Shuttle launches. Members of the launch team gave McCartney a standing ovation for his dedication to the American space program. Succeeding McCartney as KSC director in 1992 will be Space Shuttle Director Robert Crippen." [In view, from left to right, are Jay Honeycutt, Jim Harrington, Dick Truly and Bob Sieck.](#)