

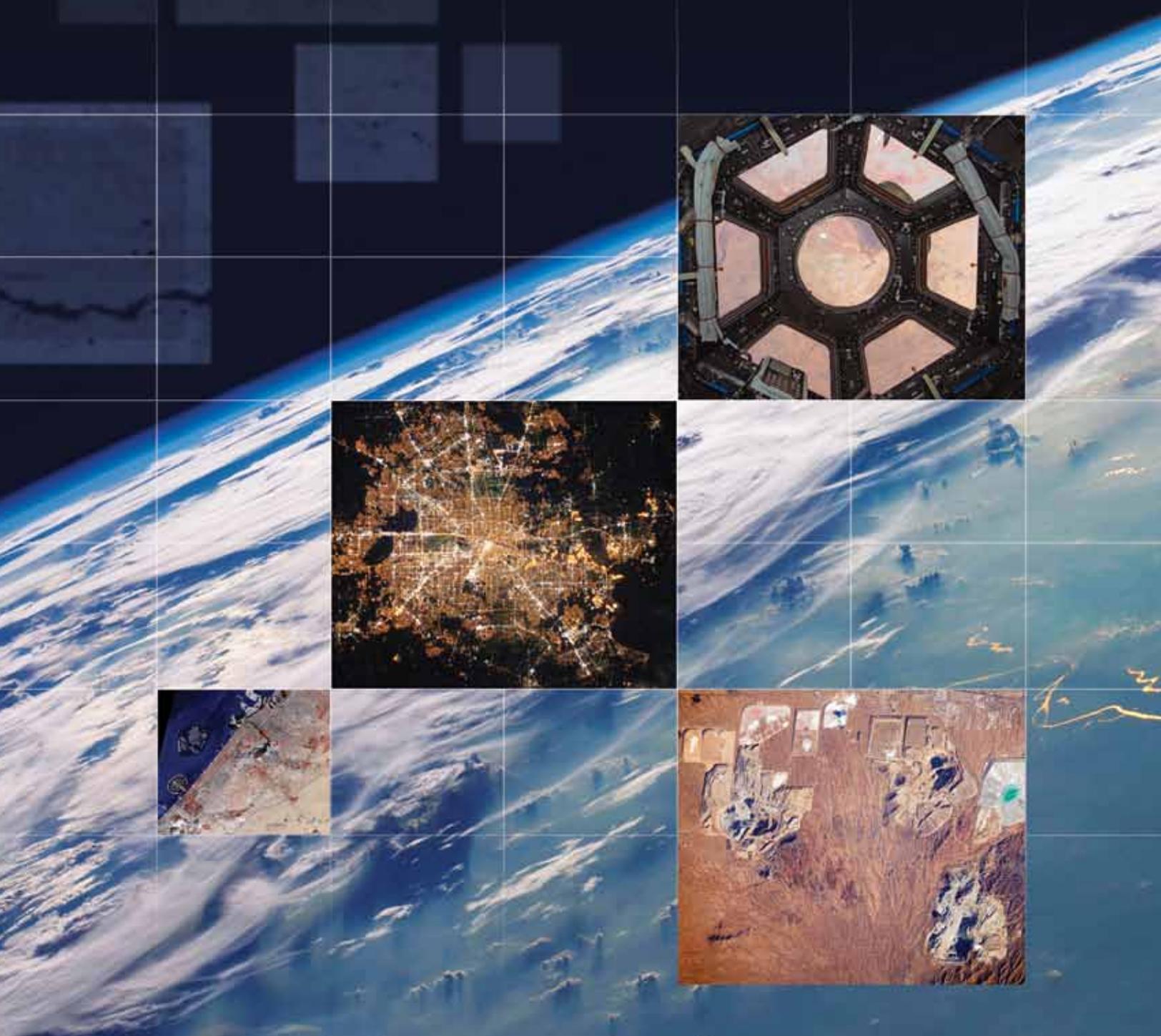
National Aeronautics and Space Administration



# Roundup

Lyndon B. Johnson Space Center

May | 2010



Pictures in time

# Guest Column



## On the cover:

*Photography is not only helping us learn more about our home planet and solar system, it is also an artistic expression of the technological achievements made by humankind throughout history.*



NASA/PHOTO S62-08046

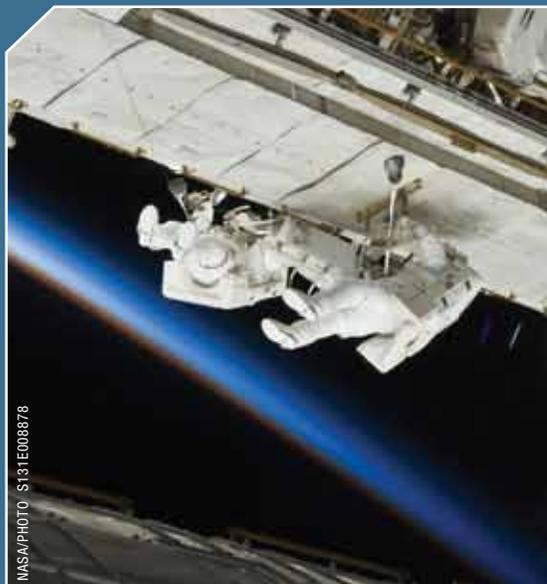
## Photo of the month:

*When we were a “clean slate.” This aerial view, taken in 1961, shows the future site of the Manned Spacecraft Center in Houston. (It was later renamed the Lyndon B. Johnson Space Center in memory of the late president.)*

## “... Mr. Gorbachev, tear down this wall!”

**Certainly** a memorable phrase from recent global history, and one that eventually resulted in a new worldwide reality. These words alone obviously did not make the Iron Curtain fall. They were supported by a strategic, focused, visionary and committed effort over many years to forge the ultimate successes that they intended. It was not an easy path, but anything truly worth doing rarely is.

These historic words came to mind while I was representing the Extravehicular Activity (EVA) Office at a recent International Space Station Acceptance Review. I was looking back at an obstacle of our own, affectionately known as the “Wall of EVA.”



NASA/PHOTO S131E08878

strategically focused on these challenges, eventually resulting in the assembly of one of America’s greatest technological marvels—the International Space Station.

The post-Iron Curtain transformation and completed station assembly were not activities for the meek. Numerous challenges were met and addressed—challenges that might have meant giving up the easier path; however, the focus and passion of the individuals involved kept them going, and now both halves of this analogy have vastly improved international relationships in less than a generation.

Now more than a decade of committed effort later, we are able to look back on the STS-130/20A mission, where we successfully conducted the 140th spacewalk (110 U.S. Extravehicular Mobility Unit spacesuit and 30 Russian Orlan spacesuit) dedicated to the assembly of the station. Each spacewalk presented significant challenges, as anything this complex and integrated does. One hundred and forty times we ventured out into the “backyard,” so to speak, and did some of the most amazing activities accomplished by a society—and returned our teammates safely back inside. It is only through tests like these that great victories can really be savored.



NASA PHOTO jsc2008e140246

**Glenn C. Lutz**  
Manager, EVA Office

In the infancy of the International Space Station Program, a report made some rather eye-catching predictions relative to the number of spacewalks required to assemble a space station in low-Earth orbit. The predictions dwarfed the existing experience base in the arena of EVA, and many thought it represented one of the largest risks to the success of the program. From the graph, you can see why the term “wall” was used and why the climb was considered such a daunting task.

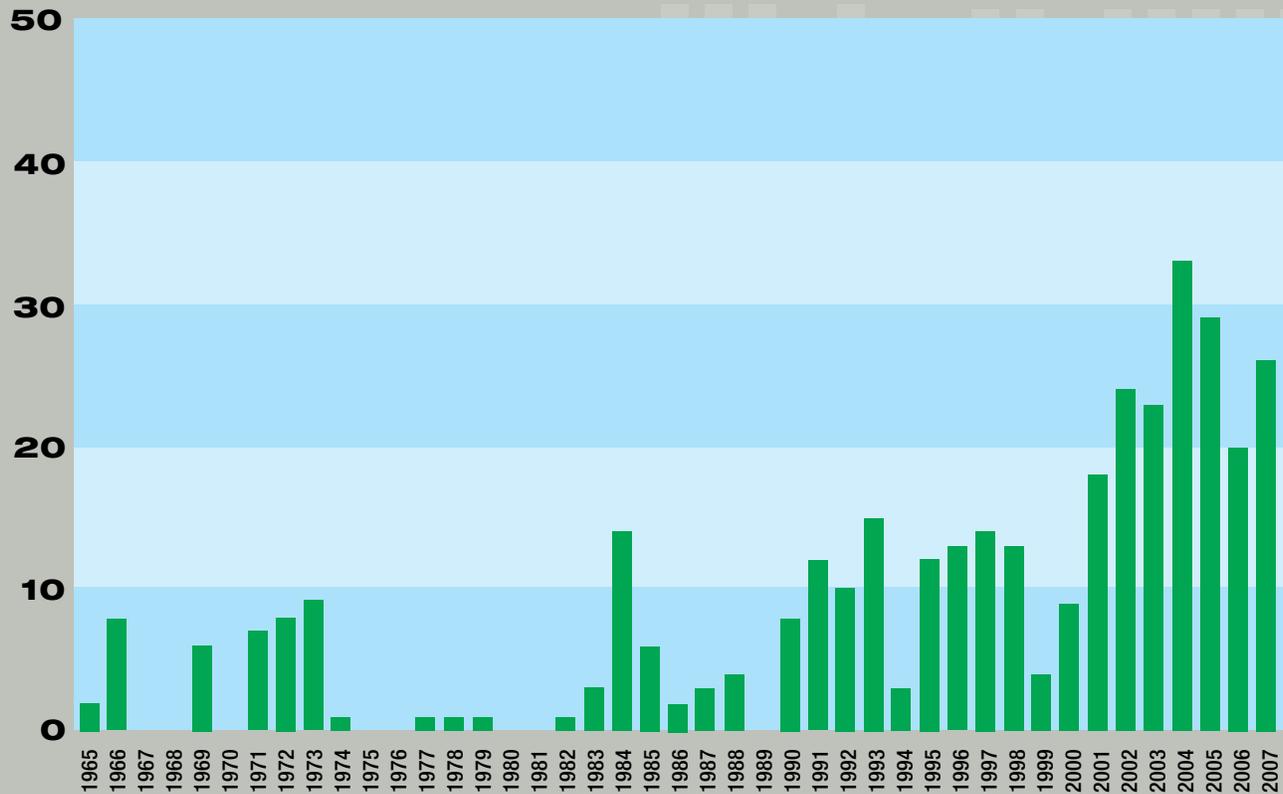
The analogy is not a perfect one, but similar attributes come to mind in comparing the challenges of these amazing international wall-razing accomplishments. Like the Iron Curtain, the Wall of EVA did not become a historic milestone simply with the passage of time. Thousands of dedicated engineers, technicians, scientists, secretaries and astronauts



# Wall of EVA



## EVAs Performed per Year



### *In this edition ...*

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- 4** Say 'Cheese!'
- 5** All I need to know about being a great space program employee I learned from Apollo 13
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- 12** Charting a bold new course

# Say ‘Cheese!’



By Jenny Knotts

## Say “Cheese!”

We all recognize this as the universal signal that a picture is about to be taken, and if you don’t want it to be of you, it’s time to move. Astronauts have been taking pictures of Earth since Alan Shepard Jr. launched on May 5, 1961, and snapped shots from the window of his Freedom 7 capsule from 106 statute miles above our planet.

Today, at an altitude of around 240 statute miles, Expedition astronauts carry on the Earth observation tradition aboard the International Space Station. Now astronauts are trained in scientific observation of the planet, how to use the photographic equipment and techniques to create the best pictures.



MASA/PHOTO ISS022-E-068726

**On Feb. 19, an astronaut captured the above photo—looking into the cupola at STS-130 Commander George Zamka, who was visiting the space station’s “new wing” while the shuttle was still docked to station.**



MASA/PHOTO ISS022-E-5807

**This astronaut photograph shows the Calabria region of southern Italy—the toe of Italy’s “boot”—outlined by the Ionian and Tyrrhenian Seas to the southeast and northwest, respectively. The water surfaces present a mirror-like appearance due to sun glint. The Calabrian Peninsula appears shortened and distorted due to the extreme sideways viewing angle from the station. This highly oblique view also highlights two distinct cloud patterns over the Calabrian interior. Patchy, highly textured cumulus clouds are present at lower altitudes, while grey altostratus clouds are stretched out by prevailing winds at higher altitudes.**

Photography is an integral part of the science being done on station. Scientists on the ground pick the areas of Earth to photograph and then send the list to the astronauts, along with the best opportunities for taking the pictures. The list is periodically updated and is part of the Crew Earth Observations science payload.

Crew members use handheld cameras and a variety of lenses, including an 800mm lens, to take the photos, which are then cataloged for use as educational and research tools. The pictures are also used to create historical records of global environmental change and special geological and weather events, as well as to monitor the growth and variance of human-made features such as cities.

In February, the crew of STS-130 delivered a new

observation deck called the cupola. It has six side windows and a “top” window (which actually looks down on Earth), giving the astronauts a beautiful 360-degree view.

Through their photography of the Earth, station astronauts will build on the time series of imagery started so many years ago, ensuring that this continuous record of Earth remains unbroken.

**“A friend of mine once sent me a postcard with a picture of the entire planet Earth taken from space. On the back it said, ‘Wish you were here.’”**

**– Steven Wright,  
American comedian, actor  
and writer.**

# All I need to know about being a great space program employee I learned from Apollo 13



By Catherine E. Williams

**On** April 6, Johnson Space Center team members heard, from an all-star lineup, the real scoop behind one of the most legendary missions in NASA history: Apollo 13. And while Apollo 13's infamous problem is most definitely past tense, a lot of lessons can be gleaned from its wild ride and its heroes in 2010.



NASA/PHOTO JSC2010EO49938

The illustrious speaker panel for “Telling the Stories of Apollo: A Conversation with Apollo 13 Alumni.” The panel was moderated by Jeffrey Kluger, a senior writer for TIME.

## *On why simply not screwing up is an admirable goal ...*

**Glynn Lunney:** “By the time we came on duty, we were well aware of how deep a hole we were in. It was going over the side of a big ship and getting into a real small ship, in the middle of the Atlantic and probably in the middle of night. What we had to do was figure out a way to get everyone back safely. Don't do anything that's going to make this any worse than it now is. Don't screw anything else up.”

## *On why being young and foolish can sometimes be a perk instead of a hindrance ...*

**John Aaron:** “I was able to walk around the room and see what each operator was doing and view it from that vantage point. I didn't get hung up on the details on what they were doing and concluded, the first thing I gotta do is convince the team that they need to quit chasing this problem and power the Mothership down (the Command and Service Module), a very monumental decision that we had never trained for and never prepared for. (Being) 27 years old helps.”

## *On why losing weight isn't always the answer to our problems ...*

**James (Jim) A. Lovell:** “On Apollo 13, we didn't have a computer for the latter part of the flight to save electrical power, and consequently, Mission Control determined that we were outside of the two-degree quarter coming back in for a safe landing through the atmosphere (and) we had to have an emergency maneuver to get back into that quarter. I got a call from Mission Control and they said, ‘Jim, do you recall on Apollo 8 those emergency procedures that you had at the back of a flight manual ... that in case everything fails this is the last thing, the last resort?’ And I said, ‘Yeah, I think so. I helped develop them.’ After Apollo 8, we thought they were so way out we threw them out of the flight manual in order to save weight. The CAPCOM said, ‘Well ... you're gonna have to use them now.’”

## *On why interference should stay a football term ...*

**Gerry Griffin:** “One of the greatest things about Apollo 13 and the whole era of Apollo was the management that was behind the operations people never tried to interject themselves ... but they asked us, ‘What help do you need? What can we do for you to make the job get done?’ We had this tremendous management support that allowed us to use every resource in the country to come to that conclusion. You talk about teamwork. It was the ultimate teamwork that we had in Apollo.”

## *On why it never hurts to know too much ...*

**Fred W. Haise Jr.:** “I probably knew more about nuts and bolts than I needed to fly the vehicle.”

## *On why confidence is always attractive ...*

**Eugene (Gene) F. Kranz:** “What is the kind of attitude that you must have, what is the kind of belief you must have, when you're working with the crews in the spacecraft? And I liken it to a heart surgeon who has just opened up your chest, you're in the operating room, he's peeled it back ... Look up in his eyes. What do you want to see? *I'm gonna get this guy outta here.* That's the way it has to be.”



NASA/PHOTO 570-35368

To learn more wisdom from the heroes of Apollo 13, visit <http://knowledge.jsc.nasa.gov/>.

Overall view showing some of the feverish activity in the Mission Operations Control Room during the final 24 hours of the problem-plagued Apollo 13 mission. Here, flight controllers and several NASA officials confer at the flight director's console.

# Mission Control **exposed!**

Unique vision of Mission Control through the lens of photographer **Thomas Kellner**



By Laura Rochon

**The** beauty of photography is the ability to preserve for the ages a captured moment in time that will never be exactly the same. And never is an image seen precisely the same by an individual, but rather, is seen through their own perspective.

For German author and artist Thomas Kellner, visual knowledge is at the forefront of his photography. His work is recognized by mosaic-like composites of world-renowned structures, iconic architectures and notable interiors, often filming landmarks and “situations that many people have seen in movies and on the Web, but perhaps never seen in person in their lifetime,” Kellner said.

So, when he photographed at the historic Apollo and Shuttle Flight Control Rooms in March, it was an eight-year-in-the-making “dream come true,” which began with a trip sponsored by FotoFest Houston. He is invited back annually, not only as a photographer but also as a consultant to other photographers, “sharing my experience to help them with their emerging careers,” Kellner said.

“NASA is a big visual producer of images we all grew up with—the rockets, the shuttle, the space station—pictures from space; pictures of Earth ... I want to give the images NASA puts into our world artistic comment,” Kellner said.

Among the landmarks he has shot are the Lincoln Memorial, London Bridge, Roman Forum, Times Square and the Manhattan skyline. Most impressive to him were the Golden Gate Bridge, the awe-inspiring



NASAMARKOWITZ jsc2010e042292

**Kellner, in the Apollo Flight Control Room, using 35mm film and long duration exposure—one-second shutter speed—capturing more light to produce a sharper image. He said interiors are complicated because they’re not self-contained like an object and “force you to think differently in terms of the composition of the image.”**

Kellner works primarily with 35mm film, a material he says children today will not grow up with but significantly made mass photography possible.

“Without 35mm film, you can’t explain Hollywood and the movie industry,” Kellner said. “My intention was to bring the material itself into the image, as in a painting, where you see the stroke of the brush and the pigment on the canvas.”

His innovative, intricate technique involves shooting frame by frame, with each image having its own requirements, special arrangements and shapes.

“To do that—to construct an image out of single pieces—I have to do a sketch, frame it, plan it, write a storyboard for each single step, working in a virtual grid where I can shoot a single frame following a sequence,” Kellner said.

“After processing the film on contact sheets, I don’t cut it into pieces—the final image is not a collage—it’s a photomontage.” (A joining of multiple photographs into a single composite.) The film remains in its original size, but the final height and length is defined by the number of individual frames combined to form one image.

Kellner is wary of rigid labels regarding his work. “Many people call my work ‘deconstructive’ (breaking up an object and putting it back together differently), but there are theories of deconstructivism and they might be right or wrong,” he laughed.

“It’s really complicated—name something without using existing definitions,” Kellner said as he compares this process to Cubism in fine art—a movement pioneered by Pablo Picasso—where artwork is broken up and re-assembled in abstract form.

“I really wanted to create something difficult and different from point-and-shoot photography,” Kellner said. “If you read the images,



NASAMARKOWITZ jsc2010e042309

**Thomas Kellner, seen in the Shuttle Flight Control Room, puts time and thought into each image. Every frame is mapped out on paper in advance, each with its own distinct arrangement. The camera moves to capture that angle, resulting in calculated artwork.**

Stonehenge—one of the oldest known places of architecture—and the birthplace of English photographer Henry Fox Talbot, credited as the inventor of photography. (Talbot’s image of a latticed window in 1835 is the oldest negative in existence.) Most challenging was the Great Wall of China, where Kellner had to climb high enough to get the precise image.

PHOTO THOMAS KELLNER



**Brandenburg Gate, Berlin**

you find they are all shot in sequence. It shows the process, including my thought process. This leaves the viewer free to interpret the new photographic object.”

The optical illusion is the appearance that photos have been shaken, or sometimes just stirred, depending on the level Kellner wants to distort them. His photographs seem to have movement through the fragmenting of the whole. They are always eye-catching, and sometimes provocatively so.

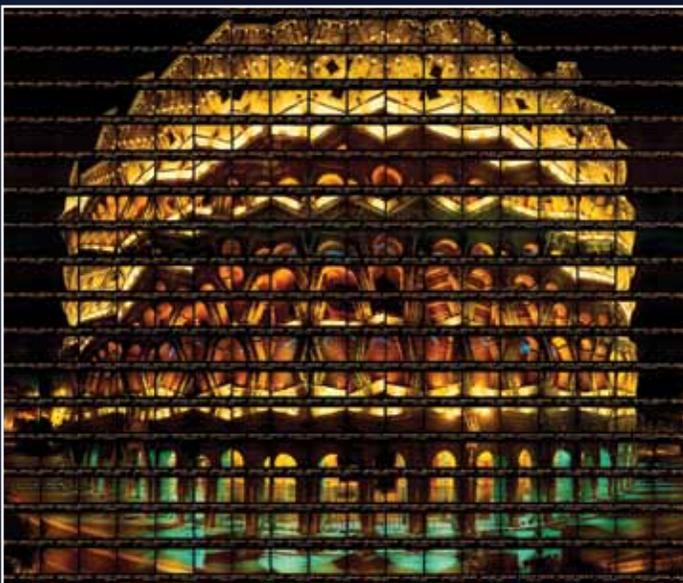
Kellner credits Robert Delaunay, a French painter famous for his use of Orphism—similar to abstract Cubism—as another influence. He also draws great inspiration from what he calls the “American mentality.”

“When I came to America in 2002, this feeling of, ‘If you want it, you can do it!’ The encouraging atmosphere...it is really fantastic,” Kellner said.

He says it’s difficult to survive as an artist in Europe and work across borders, continents and oceans.

“Life isn’t so easy as an artist,” Kellner said. “But, it is possible.

PHOTO THOMAS KELLNER



**The Colosseum, Rome**



**U.S. Capitol, Washington, D.C.**

PHOTO THOMAS KELLNER

And America made me believe that.”

Not that Kellner hasn’t seen great success. He has won numerous prestigious awards, and his work is featured in museums, exhibits, galleries and collections all around the world, including the Museum of Fine Arts in Houston.

Kellner’s Mission Control work will take several weeks to complete, but the artist hopes to return to Houston for a special exhibit for the Johnson Space Center community. And he’s not done fulfilling his dream with NASA just yet. He has witnessed two launches at Kennedy Space Center, an experience he described as “unbelievable—I don’t think I’ve ever seen anything so majestic—the technology of it.”

The ignition on the launch pad lit a spark within him to set his sights on a return to the Cape—but next time to photograph the shuttle on the pad. If you’re going to dream—dream big.

“The picture I would love to do the most with NASA is really impossible—to shoot Earth from the ISS,” Kellner joked.

But anything’s possible in America.

PHOTO THOMAS KELLNER



**Golden Gate Bridge, San Francisco**



By Neesha Hosein

# On the Recovery Act front lines

## Overseeing the Johnson Space Center Hurricane Ike repairs

Leadership plays a significant role in the advancement of any group project, but namely, in the successful execution of the ongoing Ike Phase II repair work here at Johnson Space Center. The work is being funded courtesy of the American Recovery and Reinvestment Act of 2009 (ARRA or Recovery Act).

### Role of the Project Managers

**Project** Managers (PMs) are the leads in construction projects centerwide. A PM is also known as the Contracting Officers Technical Representative. They are responsible for making sure all the contract requirements are met. The PM has to interface with all the support contractor personnel, providing construction monitoring, safety support, quality inspection, environmental support, occupational health and procurement.

Shelia Powell is the chief of the Facilities Management and Operations Division (FMOD). Powell manages a large team that oversees the construction contractors, design architects and engineers and the support-service contracts for maintenance and operations.

Eight PMs lead Ike Phase II projects: Steve Farley, Deryl Francis, Creig Rhodes, Kevin McCue, Juan Etheridge, Richard Tomlinson, Sam Tanksley and Jeff White. They are responsible for projects that encompass work on 20 roofs, 2,381 windows, more than 100 street lights, exterior panels on 36 buildings, loggia ledges on 11 buildings, a hangar, the barge dock and carpeting, ensuring safety and quality requirements are heeded, timely resolution of conflicts and problem-solving. PMs ensure the contract stays on schedule, within budget and with a limited staff.

### Overseeing the ARRA repair projects

“As far as the Recovery Act efforts go, the responsibilities of PMs are the same as normal work because it is all construction similar to their everyday work,” said Steve Farley, FMOD projects branch chief. “The exception for the ARRA work is that it involves more reporting.”

Most reporting is done by Steve Elsner, the program manager, and the PMs provide him with data on project statuses and metrics including cost, schedule, safety and quality. All the Recovery Act work must be completed by September.

“I think of the Recovery Act work as a giant 1,000-piece puzzle,” Farley said. “As we finish a building or project, it is like completing a piece of the puzzle. And it gives you a good feeling to know you



NASA/KEVIN MCCUE JSC2010E050729

Construction has started on Hangar E280 at Ellington Field. It will replace the hangar destroyed by Hurricane Ike in September 2008.

are one step closer to finishing the puzzle. I can’t wait until we put the final piece together in late September. It will be a relief when we complete the large amount of work we were given, and it will give us pride to know that we have completed a very important task for JSC.”

### Complexity and progress

**Some** projects are simple. Building 2 South had carpet replaced that was damaged during Hurricane Ike. The project was completed in December.

Others, like the E280 hangar replacement at Ellington Field, are quite complex.

“This is an unusual project for NASA because it’s a design-build contract, meaning that the same contractor is responsible for both design and construction,” said Kevin McCue, PM. “We just finished installation of 14 foundation piers, 12 of which are five feet in diameter and 50 feet deep to withstand 130-mph wind gusts. The concrete installed for the foundation piers weighs well over 1.5 million pounds.”

This is also the team responsible for securing the center for hurricane preparedness. They are motivated to complete as much roofing as possible prior to hurricane season.



NASA Project Manager Kevin McCue (white shirt) monitors progress of the work on Hangar E280.

NASA/KEVIN MCCUE JSC2010E050723

# Transition Center offers assistance



By Neesha Hosein

**The** Department of Labor, Texas Workforce Commission (TWC) and the Houston/Galveston Area Council - Gulf Workforce Investment Board (WIB) teamed up with United Space Alliance (USA) to operate a Transition Center for contractors facing the retirement of the shuttle fleet. The center is currently functional inside the USA building at 600 Gemini and offers a variety of services.

USA, in partnership with Workforce Solutions—an essential arm of the Gulf Coast Workforce Board—set up this center. It is open to USA employees and subcontractors. While not geared at being a job placement site, the center provides tools and resources to prepare workers for when the Space Shuttle Program concludes.

As for funding, “basically, money goes from federal to state to county,” said Sue Leibert, lead for Shuttle Human Capital. “They work with TWC, and USA provides the facility and furniture. The state board provides staff and training. It’s a partnership. The state pays for qualified career counseling and training.”

The idea of the onsite Transition Center was suggested late last fall by the senior Human Resources (HR) managers at USA. It was swiftly pulled together by USA and the Houston/Galveston Area WIB to support workforce impacts of shuttle retirement. It has been in operation since early February.

## What does the Transition Center offer?

Open daily with flexible hours from Monday to Friday, the center offers much more than résumé and cover letter-writing tips. Counselors are on hand to help deal with stress management, interview skills, effective networking, Internet job searches, financial planning, career changes, starting a business and

preparing for future ventures.

“It is here to help people until they’re laid off, and then the relationship changes (as they are no longer eligible for company benefits),” Leibert said. “This center is to prepare them for the time when they are on their own, shifting gears for help outside the company-based help.”

## Who can benefit from this service?

“The HR community has been planning for shuttle retirement for a number of years,” Leibert said. “They have assessed workforce impacts and what they can do to retain critical skills. Now that we are in the last year of the program, they can start executing some of their plans—all focused on supporting the workforce affected by shuttle retirement.”

Leibert also stated that while the center was designed, developed and implemented before decisions were made concerning changes in the Constellation Program, it will certainly provide services to the folks that will be affected by the proposed end of the program.

## Other opportunities

“USA is also working to provide networking opportunities for employees in the way of job fairs, résumé routing and through coordinated efforts with local workforce agencies,” said Human Resources Director Sherri Lee, Houston Operations.

The center and services will be expanding to a new, larger location in the Clear Lake area that will be accessible by all contractor employees. The Web site for more information is:

[http:// www.wrksolutions.com/employer/aerospace.html](http://www.wrksolutions.com/employer/aerospace.html)



**Johnson Space Center civil servants and contractors can always check the JSC Workforce Transition Web site, which is updated frequently, for the latest in transition news and resources:**

**<http://ma.jsc.nasa.gov/sites/workforce/pages/default.aspx>**

The Transition Centers will provide career aid to those affected by the end of the Space Shuttle Program.

# Spotlight Gilruth Facility Maintenance Technicians

Jerry Hilliard (JH), Ernie Gaitan (EG), David Acosta (DA)

NASA/STAFFORD |jsc2010e054549



The Gilruth Facility Maintenance Technicians, from left to right: David Acosta, Ernie Gaitan and Jerry Hilliard.

*"Our maintenance technicians play a pivotal role in Starport activities by providing all of the 'behind the scenes' support, from setting up for your meeting in the ballroom to ensuring the lapel mic and screen are working properly in the Lone Star Room to maintaining the softball fields for safe play during your softball games. Our guys make sure the Gilruth Center, Building 3 and Building 11 are a safe environment for NASA team members to enjoy," said Lisa Rasco, Communications and Special Events manager.*

**Q: Coolest part of your job?**

**JH:** Working with the audio/visual needs at the Gilruth.

**DA:** Working outside.

**Q: Favorite hobbies or interesting things you do away from the office?**

**JH:** Fishing in Nassau Bay. (I like to catch Crocus, Reds and Sheepheads.)

**EG:** Spending time with my family.

**DA:** Taking my kids to the park and cooking.

**Q: What did you want to grow up to be when you were a child?**

**JH:** (Join) the military.

**EG:** Anything to stay out of trouble.

**DA:** A teacher.

**Q: What would people be surprised to know about you?**

**JH:** That I have been married for 38 years.

**EG:** I was a shipping and receiving manager for many years and I am trained in welding and forklift operations.

**DA:** I am a great cook.

**Q: What is your favorite quote or motto?**

**JH:** "Whatever you do, do it well."

**EG:** "Ask not what your country can do for you—ask what you can do for your country." — President John F. Kennedy

**Q: What is your favorite food?**

**JH:** Red beans and rice.

**EG:** Italian.

**DA:** Fruit.

**Q: What is your favorite sport?**

**JH:** Football. Go Cowboys!

**EG:** Boxing.

**DA:** Baseball and soccer.

**Q: Last good book you read?**

**JH:** The Michael Jackson biography.

**EG:** "The Flight of the Eagle" by J. Krishnamurti.

**Q: Last good article you read?**

**JH:** The Starport Newsletter.

**Q: Who are your heroes and why?**

**JH:** Jimmy, my oldest brother. He would come home in nice cars and clothes. I was always in trouble and decided to change my life to be more like my brother.

**EG:** Roberto Clemente, the best baseball player ever. He played for the Pirates.

**DA:** My brother. He was headed down the wrong path and turned his life around.

**Q: What is the quality you most admire in people?**

**JH:** Honesty.

**EG:** Sincerity.

**DA:** People who don't talk behind your back.

**Q: What does JSC mean to you?**

**EG:** All of the interesting people you get to know. I meet so many people when they come to work out and never know what they do. Then I find out they are directors and managers, but I just know them as "Dan" or "Bob."

**DA:** Safety. We have a great safety program.

## WANTED!

Do you know a JSC colleague or team that does something extraordinary on or off the job? Whether it's a unique skill, interesting work, special professional accomplishment, remarkable second career, hobby or volunteerism, your nominee(s) may deserve the spotlight!

The Roundup shines the light on one special person or team each month, chosen from a cross section of the JSC workforce. To suggest "Spotlight" candidates, send your nomination to the JSC Roundup Office mailbox at [jsc-roundup@mail.nasa.gov](mailto:jsc-roundup@mail.nasa.gov). Please include contact information and a brief description of why your nominee(s) should be considered.

## Innovation reigns at Johnson Space Center

**Innovation 2010**, the first stand-down event geared toward showcasing advances at JSC, reigned supreme on April 28. Sponsored by the JSC Inclusion and Innovation (I&I) Council, objectives for the day included:

- Fostering an environment of creativity and innovative thinking at JSC.
- Exposing the JSC workforce to ideas, issues and perspectives expressed by JSC colleagues outside their normal circle of associates.

- Highlighting innovative initiatives at JSC (including projects implemented as a result of the Fiscal Year 2009 I&I Engagement Teams, such as the Innovation Charge Account, myJSC Personalized Dashboard, JSC Collaboration Center and more).

Next month, the Roundup will feature more tidbits and pictures from JSC's first-ever creative extravaganza.



NASA/BLAIR jsc2010e060400



Photo courtesy of Fernando Echeverria

## Flying across the moon

**The** International Space Station flew across the face of the moon over NASA's Kennedy Space Center in Florida approximately 15 minutes before the launch of Space Shuttle *Discovery* on the STS-131 mission.

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OR CURRENT RESIDENT

# Charting a **bold** new course

**P**RESIDENT Barack Obama visited Kennedy Space Center (KSC) on April 15 to deliver remarks on the bold new course the administration is charting to maintain U.S. leadership in human spaceflight.



*"And on a personal note, I have been part of that generation so inspired by the space program. 1961 was the year of my birth—the year that Kennedy made his announcement. And one of my earliest memories is sitting on my grandfather's shoulders, waving a flag as astronauts arrived in Hawaii. For me, the space program has always captured an essential part of what it means to be an American—reaching for new heights, stretching beyond what previously did not seem possible. And so, as president, I believe that space exploration is not a luxury, it's not an afterthought in America's quest for a brighter future—it is an essential part of that quest," President Obama said during his visit.*

**President Barack Obama (left) exits Air Force One with (from left) U.S. Representative Suzanne M. Kosmas (D-Fla.), U.S. Senator Bill Nelson (D-Fla.), NASA Administrator Charles Bolden and Apollo 11 astronaut Buzz Aldrin after landing at KSC.**



**President Obama tours the commercial rocket processing facility of Space Exploration Technologies, known as SpaceX, along with Elon Musk, SpaceX CEO, at Cape Canaveral Air Force Station.**



NASA/BILL INGALLS

NASA/BILL INGALLS