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Spaceport News

John F. Kennedy Space Center - America's gateway to the universe

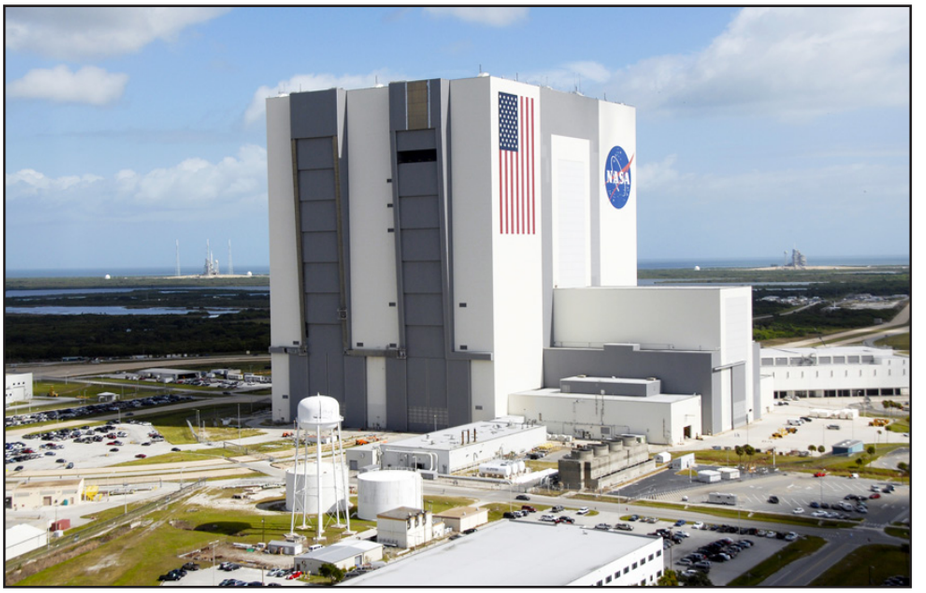
Kennedy stands up Ground Processing Directorate

By Steven Siceloff
Spaceport News

Kennedy Space Center grew by one directorate recently as the Ground Processing Directorate (GPD) came into being Aug. 14. The organization will support operations management, as well as strategies and techniques to launch what could be a variety of rockets and spacecraft from Kennedy in the future.

The directorate will focus mainly on projects with NASA's new Human Exploration and Operations Directorate, which covers operations supporting the International Space Station orbital replacement unit (spare parts), supplies and research processing, Shuttle Transition and Retirement, Launch Services Program, along with support to the 21st Century Ground Systems Program and the Space Launch System heavy-lift rocket.

The directorate also works with the Center Planning and Development Office for host support to potential and new center customers, and integration of launch complex operations.



NASA file/2009

The new Ground Processing Directorate (GPD) will focus mainly on projects with NASA's new Human Exploration and Operations Directorate, which covers operations supporting the International Space Station orbital replacement unit (spare parts), supplies and research processing, Shuttle Transition and Retirement, Launch Services Program, along with support to the 21st Century Ground Systems Program and the Space Launch System heavy-lift rocket.

"Our criteria is that within the first year our customer and partners view us as a valuable member of their team," said Scott Kerr, the director of Ground Processing. He said the ultimate goal for the directorate is to support the emergence of a broad-based launch business.

This will be the first time a processing team for an astronaut-carrying spacecraft and rocket will have to be geared toward more than one design. In the past, the agency focused on one kind of rocket and spacecraft, then moved on to another.

"There is a paradigm shift," said Pete Nickolenko, the deputy director of Ground Processing.

Now, several companies anticipate building spacecraft to take astronauts and cargo to the International Space Station, and those vehicles are expected to be flying in the same timeframe.

"The variety and breadth of what's emerging is very exciting," Kerr said. "It's going to be a lot different world."

That means Kennedy's unique facilities, including the Vehicle Assembly Building, could host several different companies at the same time, all working with NASA to process boosters and spacecraft. He also anticipates a rocket launching from the new 355-foot-tall mobile launcher in the future.

"We know the configurations of the rockets that are being evaluated and considered by the agency, it's just a matter of which one they choose," Kerr said. "We'll then align with the development teams to go build and operate the infrastructure to support it. There's no significant technical problem. We don't have to develop any exotic technologies to support what we believe is coming down the pike."

The group's first task is to make sure nothing slips past them as they make their transition forming the new operation.

"We've been around for 10 hours," Kerr joked. "It's mainly been spent seeing if we dropped anything through the cracks."

The first week of the directorate's life is being spent making contacts with the customers the organization will work with, Kerr said.

"It's important for us to develop strong, cohesive

See **GPD**, Page 3

Inside this issue ...

GAVRT students ready to study mysterious giant planet

By Rebecca Regan
Spaceport News

Famous astronomer Galileo Galilei was well into his 40s when he discovered moons orbiting our solar system's largest planet -- Jupiter. By those standards, there are thousands of students who are light years ahead in their research of the cosmos.

About 8,500 kindergarten through 12th-grade students from the United States and Chile are involved in the Goldstone Apple Valley Radio Telescope (GAVRT) project, which allows them to operate a 112-foot retired NASA radio telescope to study black holes, quasars and planets. They also have the unique opportunity to monitor the health of NASA's spacecraft, including its newest planetary probe to Jupiter -- Juno.

"We try so hard to get students interested in pursuing science, technology, engineering and mathematics (STEM) careers and it's often difficult to get them engaged in a classroom environment," said Shannon McConnell, the Education Public Outreach lead for NASA's Deep Space Network. "To give them something hands-on like the GAVRT project, running a real radio telescope and collecting real data, gives them such an authentic experience."

NASA/Jim Grossmann

On Aug. 5, NASA Administrator Charlie Bolden talks to a group of Goldstone Apple Valley Radio Telescope (GAVRT) students about his adventures as a space shuttle astronaut. The students were at Kennedy Space Center to meet with the scientists behind their newest space tool, Juno, as well as NASA Launch Services Program engineers who were preparing to launch the deep-space probe atop a United Launch Alliance Atlas V rocket.

"We're trying to instill in students a desire to study math and science, learn about engineering because most kids have no clue what engineers do. Most people, when you say 'engineer,' they think about the guy in the front car of a train, and we want to get them exposed to what's available in the field of engineering and technology," said NASA Administrator Charlie Bolden.

McConnell explained that the GAVRT project began as a partnership between NASA's Jet Propulsion Laboratory and the Lewis Center for Educational Research shortly after the large telescope in Apple Valley, Calif., was retired in 1996. Since then, GAVRT students have been involved in engineering projects for the space agency's Lunar Crater Observation and Sensing Satellite (LCROSS) mission to the moon, choosing a landing site for the Opportunity rover to Mars, and infrared astronomy work with the Spitzer Space Telescope.

About 30 GAVRT students, their teachers and mentors traveled to Kennedy Space Center to meet with the scientists behind their newest space tool as well as Launch Services Program engineers who were preparing to launch Juno atop a United Launch Alliance Atlas V rocket on Aug. 5.

Claire and Lydia from Wheeler High in Marietta, Ga., and Sabine from Campbell High in Smyrna, Ga., were among those students. They said they developed their fascination of studying the universe after designing their own radio receiver telescope through NASA's JOVE project when they were attending East Cobb Middle School.

"That's really when we became interested in Jupiter and our teacher got us access to the telescope in California," Sabine said.

At one point last winter, the group had three observation mediums focused on Jupiter, giving the students different perspectives to observe the giant planet, said Fred Stillwell, the girls' former science teacher at East Cobb.

"We had the Radio JOVE antenna up and running, we had GAVRT connected, and we had my 8-inch reflector telescope in the parking lot looking at Jupiter," said Stillwell. "So they could look at the planet visually, they could collect data at 2.4 GHz, and they could see the interaction between Jupiter and its moon, Io, at 20.1 MHz. Very different observations of the same target going on and the conversations between students were interesting as they discussed the results."

"It's been really cool to develop our own interests through GAVRT," said Lydia, who will likely hone in on a literary career after high school. "I'm really looking forward to discovering what's under Jupiter's cloud tops through the Juno mission."

The GAVRT group also was given the opportunity to stick around and see Juno launch from the Banana Creek Viewing Site near Kennedy's Apollo/Saturn V Center. Stillwell, who now is a robotics program director for the Center for Education Integrating Science, Mathematics and Computing (CEISMC) at the Georgia Institute of Technology, said this will be his first launch since watching the final moon mission take off in 1972.

"My friends and I drove to Florida from Raleigh, N.C., stopped on the side of I-95 to watch Apollo 17 launch, got back in the car and drove home," Stillwell said. "Since the Russian Sputnik, I've watched most every other launch on TV and so to see the Atlas launch will be full circle for me."

Beginning in 2016, GAVRT students will begin collecting data alongside Juno's Principal Investigator Dr. Scott Bolton and his team at the Southwest Research Institute in San Antonio, Texas. Their goal will be to provide ground-based radio observations for precisely mapping the gas giant's magnetic field, determining the planet's mass, measuring its water and oxygen to understand how and where the planet formed, and solving the many puzzles of its weather and atmospheric system.

"I'm really looking forward to learning more about the formation of our solar system with the data Juno transmits back to Earth," said Nicolas, a 10th-grader from Colegio La Concepción in Chile. "There's a lot to discover."

Those potential discoveries are what the NASA administrator hopes entices students to continue NASA's goal of discovering what lies beyond our home planet.

Bolden said, "I think that's what's really critical about the work that GAVRT students do. They're actually working with scientists and it's an experience that they'll probably never forget."

NASA

A 112-foot retired NASA radio telescope, called the Goldstone Apple Valley Radio Telescope (GAVRT), allows students to study black holes, quasars and planets. To learn more about GAVRT, click on the photo.

Proposals receive NIAC 'go' for development

By Linda Herridge
Spaceport News

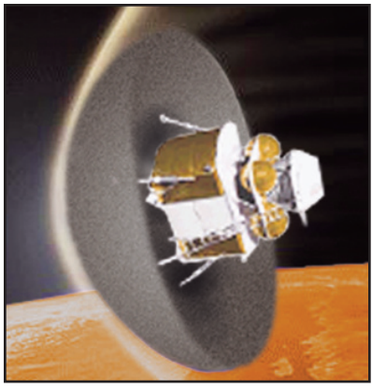
Making spacecraft heat shields from dirt on other planets and using ice to power machines and even spacecraft engines are only two of 30 study proposals recently selected for funding under the NASA Innovative Advanced Concepts (NIAC) program.

Each proposal, from Kennedy Space Center's Engineering Directorate, will receive about $100,000 for one year to advance the innovative space technology concept and help NASA meet operational and future mission requirements.

"The interesting thing about projects like these is that we always learn the unexpected and more," said Engineering Director Pat Simpkins. "These projects will help make exploration affordable and the unknown spin-offs will improve life on Earth."

The first study is the Regolith-Derived Heat Shield for Planetary Body Entry and Descent System with In situ Fabrication. It will be led by Kennedy Principal Investigator and Research Physicist Dr. Michael Hogue, and Co-investigators Robert Mueller, who is chief of the Surface Systems Office at Kennedy, and Dr. Daniel Rasky, director for the Emerging Space Office and senior scientist at Ames Research Center at Moffett Field in California.

Mueller said protecting large and heavy spacecraft from the intense heat experienced during entry and landing on a planet, such as Earth, Mars or Jovian moons, is one of NASA's grand challenges. The group is studying a way to create a spacecraft heat shield from the dirt and other material on the surface of another world. That could lead to a way to manufacture shielding off the Earth, and then just use it for landing, which would save weight and energy you would otherwise need if you were to haul it back and forth between worlds.



NASA image

An artist conception for a regolith-derived heat shield depicted in a Mars-entry scenario for a human mission lander.

Development will take place in the Engineering Directorate's Surface Systems Office and Granular Mechanics and Regolith Operations Laboratory, which has a variety of simulated regolith, or planetary dirt and materials, and the expertise for using them for in-situ resource utilization, according to Mueller.

"During Phase 1 we will fabricate and test 10 regolith-derived thermal protection system heat shield coupons at the Arc Jet facility at Ames," Mueller said. "We hope to develop a new and innovative way of protecting high-mass spacecraft during planetary entry, descent and landing."

Mueller said heat shields fabricated in situ could provide a thermal protection system for spacecraft that routinely enter a planet's atmosphere.

Hogue said it is an exciting and innovative project that has the potential to save significant resources in returning payloads to Earth. "I am really thrilled and thankful for this opportunity," Hogue said.

The second study is In Space Propulsion Engine Architecture Based on Sublimation of Planetary Resources: from Exploration Robots to NEO Mitigation.

According to Principal Investigator Dr. Laurent Sibille with Team QinetiQ-NA ESC at Kennedy, the project focuses on the possibility of accessing the potential energy of ice, a common resource found on many solid-surface planetary bodies in the solar system, and transforming it into a gas that can serve as a source of mechanical energy for deep-space robotic or human missions.

Co-investigators are Chemical Engineer Jesus Dominguez, also with Team QinetiQ-NA ESC, and NASA Physicist Dr. James Mantovani.

Sibille said the large majority of power used in deep-space systems is derived from electrical energy, such as solar panels; thermal energy, such as heat generated by radioisotope thermal generators; or chemical energy, such as fuel cells and chemical propulsion engines.

"NIAC asked for visionary concepts that could potentially change the way we explore and work in space," Sibille said. "Accessing local space resources and transforming their energy state to give additional capability and power to a robotic exploration mission or a human crew facing some new challenge struck us as being one of those promising ideas that merit a deeper look."

Sibille said Phase 1 work will focus on verifying what assumptions about ice properties in space are correct through experiments that show how much gas can be produced from them in different environments. The work will be performed in a vacuum chamber at Kennedy's Space Life Sciences Laboratory beginning in October.

Using water and carbon dioxide, which exist in the form of ice on the moon, Mars, and other worlds in the outer solar system in low-pressure environments, Sibille said the team will use small amounts of heat to transform them into gas.

"The innovative concepts funded under NIAC are imaginative and creative ideas with the potential to mature into technological breakthroughs," said Kennedy's Chief Technologist Karen Thompson. "These efforts meet the challenge given to NASA to investigate visionary, far-reaching advanced concepts as part of the agency's mission. It is exciting that Kennedy is a part of the first set of projects selected under the new NIAC."

"Although not broadly known as a research center in the past, the unique capabilities of the great scientists and engineers at the center come front-and-center from projects like these for both the scientific community and the public, at large, to see," Simpkins said.

He added, "As with all research and development, I hope that the investigators, through the NIAC awards, can move the science of space exploration forward. I also hope that we continue to learn more about what works, and what doesn't, and then continue to pursue the 'art of the possible,' " Simpkins added.

The NIAC program is managed by NASA's Office of the Chief Technologist. For more information about the program, visit **http://www.nasa.gov/oct**.

From **GPD**, Page 1

we're going to work with our many different customers," Nickolenko said.

Kennedy brings a unique experience to the ground support program by virtue of launching astronauts into space for 50 years aboard capsules, moon-bound spacecraft and the space shuttle.

Although the rocket designs are different in the details, Kerr said they all have some fundamental needs and operate on chemicals that NASA has been handling safely for decades.

"The technology has changed a lot in certain areas and in other areas it hasn't changed at all," Kerr said. "We need to focus on doing it all safely."

Kerr comes to the Ground Processing Directorate from the International Space Station Program. He also worked in Kennedy's Engineering Directorate, Center Operations and the Launch Services Program.

"It certainly helps me because I've worked with most of the personnel at the center at one time or another," Kerr said.

The organization is made up of about 200 people from a variety of directorates, including Launch Vehicle Processing, Launch Integration, International Space Station and Spacecraft Processing, Engineering Constellation Projrct Office and other center organizations.

"We've got the right minds and we've got the right talents," Kerr said. "If you point them in the right direction and get out of their way, they can do some pretty amazing things."

‘We Made History! Shuttle Program Celebration’

For a collection of feature stories and videos documenting space shuttle operations and an insider’s perspective of what it took to maintain and fly NASA’s technological marvel, click on any of the photos below.

NASA/Jim Grossmann

Thousands of space shuttle workers and their families gather near Orbit Cafe at the Kennedy Space Center Visitor Complex in Florida.

NASA/Gianni Woods

Five shuttle flags hang above the main stage at the “We Made History! Shuttle Program Celebration” on Aug. 13 at the Kennedy Space Center Visitor Complex. The event was held to honor current and former shuttle workers’ dedication to NASA’s Space Shuttle Program and to celebrate 30 years of space shuttle achievements. The event featured food, music, entertainment, astronaut appearances, educational activities, giveaways and Starfire Night Skyshow.

NASA/Gianni Woods

Kennedy Space Center Director Bob Cabana, left, and NASA astronauts Rex Walheim, Sandy Magnus and Chris Ferguson talk to current and former space shuttle workers and their families.

NASA/Jim Grossmann

Thousands of space shuttle workers and their families gather near Guest Services at the Kennedy Space Center Visitor Complex in Florida for the “We Made History! Shuttle Program Celebration” on Aug. 13.

NASA/Jim Grossmann

Three-time space shuttle astronaut Charles D. “Sam” Gemar signs autographs and takes photos with space shuttle workers and their families.

NASA/Gianni Woods

Recording artist Ansel Brown performs on the main stage during NASA Kennedy Space Center’s “We Made History! Shuttle Program Celebration,” Aug. 13, at the Kennedy Space Center Visitor Complex, Fla.

NASA/Gianni Woods

NASA Administrator Charlie Bolden, left, NASA’s Space Shuttle Program Launch Integration Manager Mike Moses and Kennedy Space Center’s Launch Vehicle Processing Director Rita Willcoxon speak to current and former space shuttle workers and their families during the “We Made History! Shuttle Program Celebration” on Aug. 13.

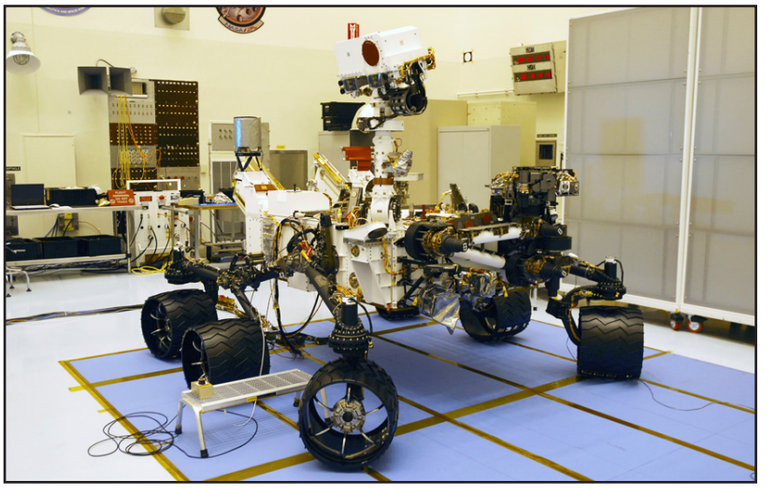
NASA/Gianni Woods

Attending the “We Made History! Shuttle Program Celebration” on Aug. 13 at the Kennedy Space Center Visitor Complex are, from left, NASA astronauts Nicole Stott, Michael Fincke, Greg H. Johnson, Sandy Magnus, Rex Walheim and Chris Ferguson, and Kennedy Deputy Director Janet Petro.

NASA/Jim Grossmann

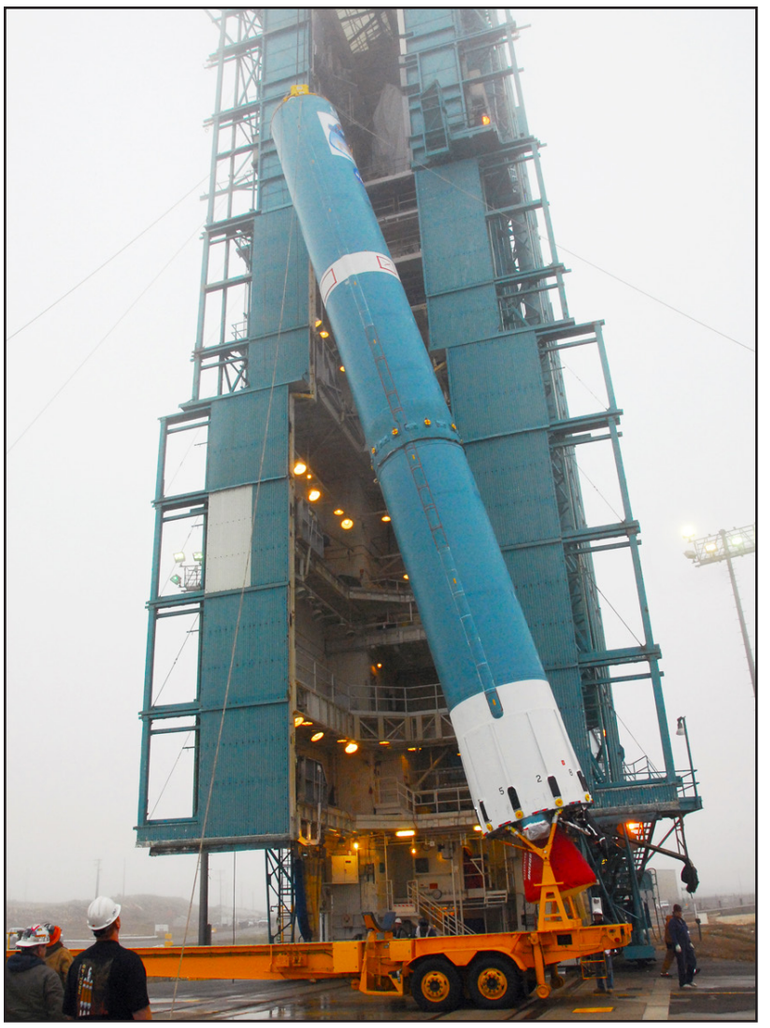
Thousands of space shuttle workers and their families watch a Starfire Night Skyshow celebrating 30 years of space shuttle missions.

Scenes Around Kennedy Space Center



CLICK ON PHOTO *NASA/Charisse Nahser*

The robotic arm of the Mars Science Laboratory (MSL) rover, Curiosity, is stowed against the body of the spacecraft in the Payload Hazardous Servicing Facility at Kennedy Space Center on Aug. 13. Launch of MSL aboard a United Launch Alliance Atlas V rocket is scheduled for Nov. 25 from Space Launch Complex 41 on Cape Canaveral Air Force Station, Fla. For more information, click on the photo.



CLICK ON PHOTO *NASA/Mark Mackley, VAFB*

The first stage of a United Launch Alliance Delta II is lifted at NASA's Space Launch Complex-2 on Vandenberg Air Force Base in California on July 20. The rocket will carry NASA's National Polar-orbiting Operational Environmental Satellite System Preparatory Project (NPP) satellite into space. NPP will be positioned 512 miles above the Earth's surface and will orbit about 16 times each day to observe nearly the entire globe. For more information, click on the photo.

CLICK ON PHOTO *NASA/Jim Grossmann*

NASA's twin Gravity Recovery and Interior Laboratory lunar spacecraft are attached to the spacecraft adapter ring in their launch configuration in Astrotech Space Operation's payload processing facility in Titusville, Fla., on Aug. 10. GRAIL is scheduled to launch atop a Delta II Heavy rocket Sept. 8 from Space Launch Complex 17B at Cape Canaveral Air Force Station, Fla. For more on the GRAIL mission, click on the photo.

CLICK ON PHOTO *NASA/Dimitri Gerondidakis*

Space shuttles Discovery, at right, and Endeavour are parked "nose-to-nose" outside Orbiter Processing Facility-3 (OPF-3) during a unique photo opportunity at Kennedy Space Center on Aug. 11. Discovery, which temporarily was being stored in the Vehicle Assembly Building (VAB), is switching places with Endeavour, which has been undergoing decommissioning in OPF-1. Discovery then will be rolled into OPF-1 and Endeavour into the VAB. In OPF-1, Discovery will undergo further preparations for public display at the Smithsonian's National Air and Space Museum Steven F. Udvar-Hazy Center in Virginia. Endeavour will be stored in the VAB until October when it will be moved into OPF-2 for further work to get it ready for public display at the California Science Center in Los Angeles. For more information, click on the photo.

Remembering Our Heritage

Apollo Program's lessons provide excellent reference

By Steven Siceloff
Spaceport News

One of the men who made Apollo a legendary success said recently there are plenty of lessons from the 1960s-era moon program that can be applied to spacecraft design in the 21st century. And he wasn't talking solely about new technology, either.

NASA needs to avoid engineering arrogance as it develops new spacecraft or helps others develop designs of their own, said John P. Healey, a retired vice president of North American Aviation who made his reputation repairing the Apollo command module program after the fatal fire of Apollo 1. He also spent two years as a consultant on the Orion project, a spacecraft reminiscent of Apollo, but quite a bit larger.

The key to reducing the chances of arrogance, he said, is to have solid communications and clear areas of responsibility for the people designing the spacecraft, the ones building it and those who test its components.

Also, design and build the spacecraft to work right rather than to a schedule. But after the design is correct, stop designing.

"Apollo was a production job," Healey said. "In my case, I had at least three command modules in work all the time. Treat it like a production job. Any program that we have carries people into space will be 20 to 50 years long and you have to look at it that way."

CLICK ON PHOTO *NASA file/1968*

Wally Schirra, who worked closely with John P. Healey, looks out the rendezvous window in front of the commander's station on the ninth day of the Apollo 7 mission. To learn more about the mission, click on the photo.

And, he said, don't leave out the astronauts who will fly in it while designing and building it.

"The guys who were flying it, in my mind, they are the real customer," Healey said. "We had astronauts 100 percent of the time from the time we started on Apollo 7. They would talk to the workers. Now the workers saw the real crew and the camaraderie was just fantastic and as a result of that, kind of the mystery went away."

Healey was brought to North American Aviation as the vehicle manager for the command module. His task: Fix everything wrong with the spacecraft and deliver a working one to NASA for the Apollo 7 mission, the first crewed test flight of the new program. Mercury and Gemini veteran Wally Schirra would be in command. In the process, Healey was setting up a production line for all the command modules that would follow.

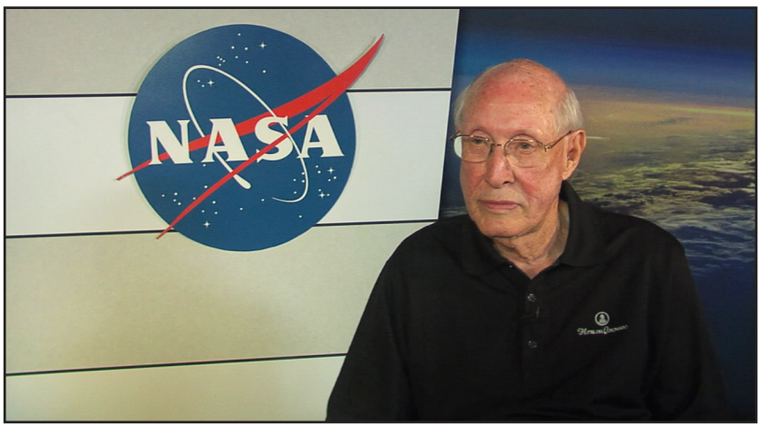
Healey said listening to the astronauts was not the same as doing everything they suggested, however.

"My arrangement with Wally was pretty straightforward," Healey said. "If it was something that was flight worthy or mission worthy or lifesaving, I would listen and make sure it got incorporated. But if it was a new idea off way in the blue, it wouldn't get in."

There were key decisions throughout the process, Healey said, but the main aspect was to change attitudes at the company and at NASA. Suddenly, even the highest-ranking officials were not allowed inside the spacecraft as it was being built, only the five workers who were supposed to be there.

By allowing a very limited number of people to work inside the spacecraft, which is cramped to begin with, the chances to make mistakes or do unintentional damage also are limited, Healey said.

With NASA pointing its next spacecraft well beyond Earth orbit, Healey said the new craft will challenge engineers to develop technologies just as the Apollo Program challenged engineers in the 1960s. A major difference: an Apollo mission lasted less than two weeks. A flight to Mars and back would take at least a year just in flight time, not to mention months on the surface.



NASA image

John P. Healey, a retired vice president of North American Aviation, is best known for his role in the redesign and manufacture of the command modules for NASA's Apollo Program after the fatal fire of Apollo 1.

"First it needs to have living conditions that are uncomfortable but livable," Healey said before adding that a crew will face unprecedented conditions because they will be traveling for so long in a confined area. "Six months there, six months back. They're locked into that 13-foot diameter for that period of time. They better get along."

He said today's designers are up to the task of building interplanetary craft, though.

"I'm not scared or worried about the engineers, I'm really convinced they are quite knowledgeable," Healey said. "They're young, young now being anything below 90."

If the engineers, builders, testers and astronauts are allowed to do their jobs, then Healey said NASA's next exploration craft has a good chance to succeed.

On Oct. 11, 1968, almost two years after the tragic fire of Apollo 1, Healey watched with thousands of others at Kennedy Space Center and millions more on TV as the spacecraft flew into Earth orbit for Apollo 7's two-week shakedown mission.

"Apollo 7, I was never nervous during the building process but on the day of launch I was kind of sitting on the edge," Healey recalled. "It was a first. Did we do everything right? Is (the pilot) going to bring it back?"

Apollo 7 succeeded, and two months later another command module took three astronauts around the moon safely on Apollo 8. Even the failure of Apollo 13 was saved in part because of the strength of the command module's design. In 50 years of humans going into space, the Apollo-era spacecraft still are the only craft to have taken people to another world.

"You can learn from what Apollo did," Healey said. "Not a bad thing to use as a reference."

NASA file/1968

The Apollo 7 Saturn IB space vehicle launches from Kennedy Space Center's Launch Complex 34 at 11:03 a.m. Oct. 11, 1968. A tracking antenna is at left and a pad service structure at right.

NASA Employees of the Month: July

NASA/Regina Mitchell-Ryall

Employees for the month of July are, from left, Michael Dininny, Engineering Directorate; Bryan Song, Launch Services Program; Westly Mosedale, Launch Vehicle Processing Directorate; Sheryl Chaffee, Center Operations; Raquel Nance, Human Resources Office; Krista Jensen, Procurement Office; and Ciara Dupke, Safety and Mission Assurance Directorate. Not pictured are Carol Scott, Commercial Crew Program Office; Sue Waterman, Information Technology and Communications Services; Paul Mogan, Constellation Project Office; and Cathy Gieseler, Engineering Directorate.

NASA Employees of the Month: August

NASA/ Tom Farrar

Employees for the month of August are, from left, Monique McLamb, Information Technology and Communication Services; Mary Hanson, Chief Financial Office; Sheryl Koller, Education and External Relations; Charmel Jones, Safety and Mission Assurance Directorate; Rogelio Curiel, Procurement Office; Gregory Galloway, Engineering Directorate; Gregory Rawl, Engineering Directorate; Bruce Chesson, Center Operations. Not Pictured are Rommel Rubio, Constellation Project Office; Kyle Longstreth, Launch Vehicle Processing Directorate; and Jon Bauschlicher, Launch Services Program.

Looking up and ahead . . .

* All times are Eastern

Sept. 8	Launch/CCAFS: Delta II Heavy, GRAIL; Launch: 8:37 a.m. and 9:16 a.m.
Oct. 25	Launch/VAFB: Delta II, NPP; Launch window: 5:48 to 5:57 a.m.
No Earlier Than Nov. 7	Launch/CCAFS: Delta IV, WGS 4; Launch window: TBD
No Earlier Than Nov. 25	Launch/CCAFS: Atlas V, Mars Science Laboratory; Launch: 10:21 a.m.
No Earlier Than Nov. 30	Launch/CCAFS: SpaceX Falcon 9, Dragon C2/C3; Launch window: TBD
Early 2012	Launch/CCAFS: Atlas V, AEHF 2; Launch window: TBD
Early 2012	Launch/CCAFS: Delta IV-Heavy, NROL-15; Launch window: TBD
Feb. 3, 2012	Launch/Kwajalein Atoll: Pegasus XL, NuSTAR; Launch window: TBD
February 2012	Launch/CCAFS: Atlas V, MUOS; Launch window: TBD
May 2012	Launch/CCAFS: Atlas V, RBSP; Launch window: TBD

Signing opportunity at the SSPF Airlock Door

The International Space Station Program is offering workers a chance to sign a dedicated wall inside the Space Station Processing Facility (SSPF) High Bay.

The final day to sign is Sept. 30.

The SSPF High bay is open from 8 a.m. to 4 p.m. Monday through Friday. Lifting operations may impact signing opportunities so contact the Ops desk at 867-5800.

Floor Operations along with Technician Management and Security will provide oversight to this opportunity.

Sharpie pens will be provided and no logos or graffiti are permitted.

No shorts, capris, sleeveless shirts, dresses or skirts.

John F. Kennedy Space Center

Spaceport News

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