



File

Chipper Astronauts Pass Exams Here

World-famous Gemini 5 pilots Gordon Cooper and Pete Conrad were scheduled to complete a three-day series of medical checkups and debriefings at the Kennedy Space Center today and return to the Manned Spacecraft Center in Houston.

There, following more tests and talks, they will tell the nation of the historic, record-shattering eight-day flight at a news conference.

The jaunty twosome, looking and acting hale and hardy, stepped off a plane at Cape Kennedy's skid strip Monday morning enroute to their quarters in the Manned Spacecraft Operations Building at the Center.

"It's very good to be back here at the place where we spent our last weeks in training," Cooper said.

In response to a reporter's question he replied, "no I'm not tired at all. Are you tired?"

Conrad looked at his watch and said, "I haven't set this since we lifted off. Let's see now, that's about nine days, 16 hours and 43 minutes. Man, it sure is good to be back here."

At the skid strip Florida Governor Haydon Burns, KSC Director Dr. Kurt H. Debus, Deputy Director, Launch Operations, G. Merritt Preston, Major General Vincent G. Huston, Commander of the Air Force Eastern Test Range, and other dignitaries gathered to greet America's newest space heroes.

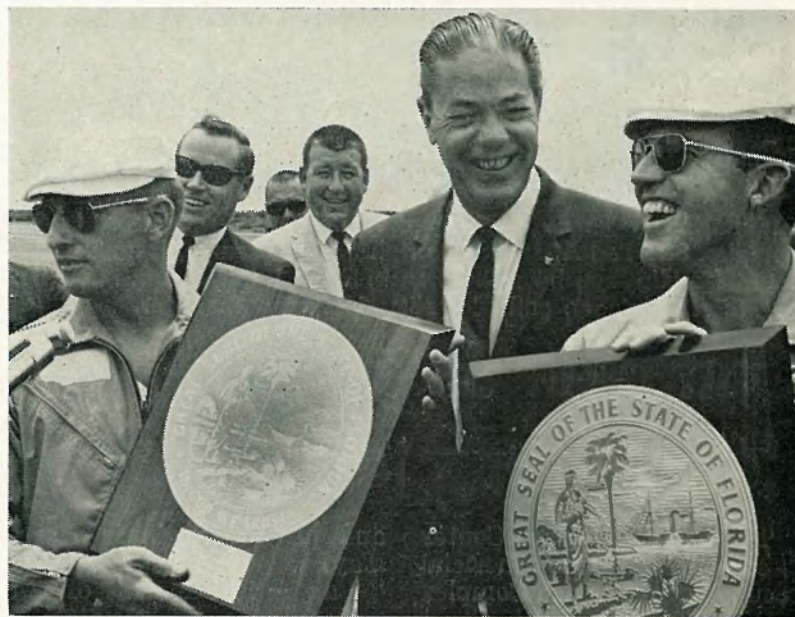
Governor Burns presented each of them with a plaque symbolic of the state seal.

"Florida has long been known as the sunshine state," Burns said. "Now we have no equal as the moon shot state."

Cooper and Conrad, resplendent in aqua colored flight suits and spanking new white caps, showed no ill effects whatsoever from their lengthy journey.

Their flight rewrote the space record book. Among the new world records they eclipsed were these:

—Longest manned space (See ASTRONAUTS, Page 4)



SPORTING jaunty white caps and vivid aqua flight suits, Gemini 5 astronauts Pete Conrad, left, and Gordon Cooper were greeted at Cape Kennedy's skid strip Monday by Florida Governor Haydon Burns, center, who presented plaques to each of them commemorating their record eight-day mission. In the background are Jack King and Gatha Cottee of KSC's Public Information Office, who helped make arrangements for news media representatives to cover the astronauts' arrival.

Center's Costs Cut In FY-65

The Kennedy Space Center exceeded its cost reduction goal of \$7,000,000 by 16 percent in FY 1965, Dr Kurt H. Debus, the Director, has been informed by NASA headquarters.

Overall, NASA effected cost reductions amounting to \$215,150,000.

Frank A. Bogart, who directs management operations for the Office of Manned Space Flight, provided Dr. Debus with a detailed report on the achievements of the cost reduction program.

"I want to thank you and all the people at KSC who contributed to this performance," Bogart said.

One of the items reported by KSC resulted in savings of \$3,450,000. This was a self-aligning and self-sealing bellows ball and socket coupling for use in filling tanks of space vehicles with cryogenic propellants.

During FY 1966, the program will receive new emphasis. Among other items, NASA is seeking to reduce costs for communications, travel, and automatic data processing.

KSC's cost reduction effort is coordinated by the Director of Plans, Programs and Resources. Ernest Swieda is in charge.

Holiday Ahead

This coming Monday — Labor Day — will be a holiday for Kennedy Space Center civil service and contractor employees. Have a good weekend, and drive safely.

FOOD SETUP IMPROVED FOLLOWING INSPECTIONS

The NASA Exchange Council, at the direction of KSC Director, Dr. Kurt H. Debus, has taken immediate steps to insure improved sanitary conditions in the Spaceport's cafeterias.

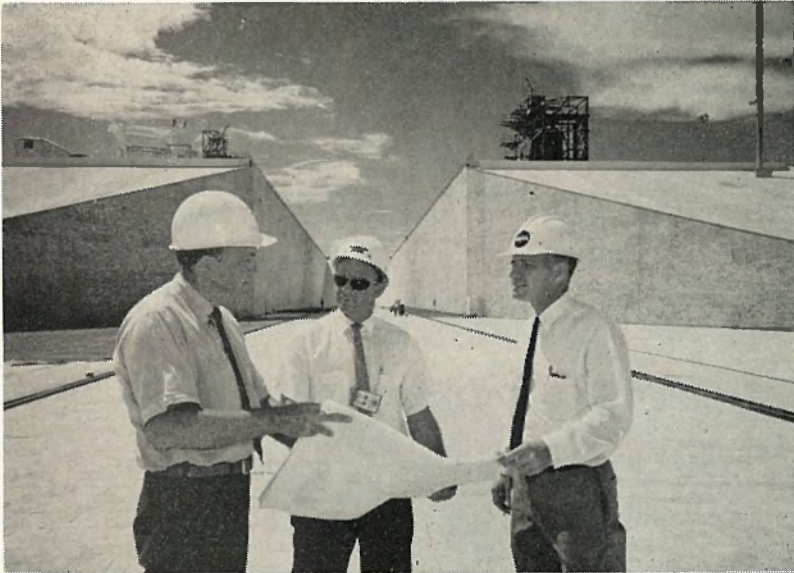
Dr. Debus told the Council to take all necessary action to assure continuing high standards of service at the Center.

Unsatisfactory conditions were found in the main cafeteria during a recent inspection, and were reported in local newspapers.

The food service contractor at the Spaceport, Macke Vending Co., has been subjected to surprise inspections periodically since the inception of its contract over a year ago, and only minor discrepancies had been reported up until the recent inspection.

The NASA Exchange Council immediately stepped in and instituted corrective action.

Another inspection held yesterday indicated the unsatisfactory conditions had been cleared up.



KEY KENNEDY Space Center people involved in work at Launch Complex 39's Pad A, are left to right, James Kanipe, Deputy Chief, Saturn/Apollo Launch Facility Branch; Harry J. May, Launch Complex 39 Project Engineer; and Dick Ellis, 39 Project Manager.

Complex 39's Pad A Ready For Occupancy

The Kennedy Space Center is expected to gain beneficial occupancy of Launch Complex 39's Pad A within the next few days, according to Dick Ellis, Project Manager for KSC.

"There are still a few minor clean up items to take care of," Ellis said, "but for all intents and purposes the pad is essentially complete and ready to be turned over to NASA."

Construction on the \$24.5 million pad began in November 1963. Prime contractor is the joint venture of Blount Brothers Construction Corp., of Montgomery, Alabama, and M. M. Sundt Construction Co., of Tucson, Arizona.

Key Kennedy Space Center personnel involved in the development of the pad have been Frank Burke, Chief of the Saturn/Apollo Launch Facilities Branch; J. T. Roberts, head of the branch's Launch Complex 39 section; Ellis;

and project engineer Harry May.

Pad A is the first of two pads at the Complex to be completed, and will be used for launches of the Saturn V/Apollo lunar vehicles.

The pad, located at the eastern end of Complex 39 a quarter of a mile from the ocean, is octagonal-shaped, and its center is 48 feet above sea level.

A two-story concrete building housing environmental control system and pad terminal connection equipment, and a high pressure gas storage facility are built under the east and west sides of the pad.

A total of 120,000 cubic yards of concrete and 8,000 tons of reinforcing steel were used in the construction.

What's an eight-letter word with seven consonants and one vowel?

Try strength!

John Shinkle Joins Staff At Center

Major General John G. Shinkle, (U. S. Army, ret.), a veteran of more than 30 years military service, has joined the Kennedy Space Center.

He is serving on the staff of Rocco A. Petrone, Director, Plans, Programs, and Resources.

General Shinkle, a graduate of the U. S. Military Academy at West Point, served in the Far East, South America, Europe and at many posts in the United States during his career.

Prior to his retirement late in 1963, he was a member of the NATO staff in Paris, assigned to the Naval and rocket section.

From 1960 to 1962, he was commanding general of the White Sands Missile Range in New Mexico, the overland missile test range for the armed services which now also supports various NASA projects.

Following his retirement from military service, General Shinkle served as a consultant to Northrop Corporation and to the Stanford Research Institute in California.

He is residing at the Pelican Cove Apartments on Merritt Island.

Prevent accidents—find them before they happen.



John G. Shinkle

Directorate Established For Saturn/Apollo

A Saturn/Apollo Applications Directorate has been established in the Office of Manned Space Flight.

The new directorate provides an organization for planning and directing programs which will utilize the technology developed in Project Apollo, the nation's manned lunar exploration program.

Maj. Gen. David M. Jones, USAF, will serve as Acting Director of Saturn/Apollo Applications in addition to his duties as Deputy Assistant Administrator for Manned Space Flight programs. Deputy Director is John H. Disher, formerly Test Director in the Apollo Program Office. Melvyn Savage, who served under Disher as Chief of Test Planning, becomes Apollo Test Director.



ROBERT H. Gray, left, Manager of Goddard Launch Operations, presents Hugh A. Weston, Goddard Delta Operations Manager, with his NASA 10-year service award. The workhorse Delta vehicle has orbited over half of NASA's Earth satellites, and has a record of 30 successful satellite launches in the past five years.

SPACEPORT



NEWS

Published each week by the John F. Kennedy Space Center, National Aeronautics and Space Administration.
John W. King, Chief, Public Information Office
L. B. Taylor, Jr., Editor
Russell F. Hopkins, Staff Photographer



Isaacs

Brickey

Schaefer

Hood

Cardell

Crump

Greenberg

Clarkson

Center's Summer Students Cite Work Experiences

Nearly 100 Kennedy Space Center employees are cleaning out their desks and packing up their personal belongings, getting ready to leave their jobs.

They are the summer students who have been performing a wide variety of significant duties at the Center during the past three months.

They represent schools from the University of Florida to Notre Dame, and have been working in offices ranging from Launch Vehicle Operations to Financial Management.

All of them have found their work at KSC an "education in itself," and they will

GEMINI TELEMETRY GATHERED AT KSC

Telemetry data on the Gemini 5 flight was gathered at two Kennedy Space Center sites during certain spacecraft passes over the area, and the information received was forwarded to the Manned Spacecraft Center in Houston.

Pete Minderman, Chief of KSC's Telemetry Branch, Information Systems, said telemetry sites atop the Information Systems Building and at Changar D on Cape Kennedy gathered data during certain passes when the Gemini 5 was in range.

Minderman said his people were also busy supporting tests of the Gemini 6 spacecraft and of the Saturn IB booster and facility stages at Launch Complex 34.

In supporting both Gemini 5 and 6 at the same time there were occasions when operations had to be split because the two spacecraft were on the same frequency.

Some of the telemetry data gained is reduced and computerized at the Kennedy Space Center.

take back a summer full of experiences when they re-enter their colleges and universities in the next few days and weeks.

Here's a random sampling of the students and their comments on working at the Kennedy Space Center:

"Very definitely, I've learned a lot here," says Bruce Issacs, a senior electrical engineering major at Rensselaer Polytechnic Institute in Troy, New York.

Issacs has been working in the test and development section of Information Systems, running tests on various equipment.

"It's really been a great experience. Aside from learning about instrumentation, I've seen several launches," Issacs said. "I hadn't thought of the space field for permanent employment, but I'm considering it now."

James Brickey is a graphic design major and a senior at the Maryland Institute College of Art. He has been working on chart preparations this summer with the Center's Launch Vehicle Operations.

Benefits Career

"Most of the things I've learned this summer have to do with office procedures. I've found out how a lot of things work administratively, and I expect this will benefit me greatly in my career."

An accounting major at Notre Dame, William Schaefer has been performing contract evaluation and management data work with the Center's Financial Management Office this summer.

"It's been my first time in a real office atmosphere and I've gotten an across the board look at accounting here. Watching the day to day management of operations here has helped me greatly. You can't get anything like that in

a school room setting."

Cameron Hood is an astronautical engineering major at the University of Florida and for the past few months has been doing documentation work with KSC's Plans, Programs and Resources.

"The thing I've learned most and that I think will prove beneficial to me later, is the management side of engineering. Where I've been working all of the managers have engineering backgrounds and they put them to good use."

Jerome Cardell has been a summer employee at the Center although he has completed his collegiate studies. He now teaches advanced math at Bethune Cookman College in Daytona Beach.

Gemini 5 Spacecraft Here For Checkup

The Gemini 5 spacecraft—home for astronauts Gordon Cooper and Charles Conrad for eight days—arrived back at the Kennedy Space Center Tuesday.

Here, in the next few weeks, it will undergo its own type of medical checkup, as technicians run it through a series of tests. First on the schedule was a scrubbing down to free it of salt water, and a de-arming of pyrotechnic devices.

Then all components will get a "quick-look" going over.

Wiley Williams, Manager of Gemini/LEM Operations at the Kennedy Space Center, said Gemini 5 was almost identical in appearance to earlier spacecraft in the program, despite its longer time in space.

"It appears that Cooper and Conrad were real good housekeepers," Williams said. "Their spacecraft was in pretty neat order."

This summer he has been working in data systems at the Center, studying tracking facilities for the Saturn V moon rockets.

"I'm enjoying the experience totally. I've learned more here in three months than I did over a much longer period in school. In a sense I will be able to adapt some statistical problems drawn from my work here for use in teaching my students, and this I feel will be most helpful to them."

Coordination

"My work here has been involved in coordinating efforts with other offices and it's been good experience," says Gerald Crump, a business management major at Florida State University.

He has been handling supply orders this summer for the Financial Management Office.

Mark Greenberg, is a graduate student studying math at New York University. His work at the Center dealt with a variety of duties on the re-activation of Launch Complex 34 for the Saturn IB program.

"I've learned a lot about the practical application of engineering. This is a side of it you can only get through experience in the field," Greenberg points out.

Finally, Earl Clarkson, an industrial engineering major at the University of Florida, has been employed with KSC's Facilities Engineering, where his work has been concerned with planning "inner space" for the Center's thousands of employees.

"My job here has been directly applicable to my field—industrial engineering," he said. "This has given me a good background for my career, and I've enjoyed working with the people here immensely."



The mail is already pouring in congratulating Gemini 5 astronauts Gordon Cooper and Pete Conrad on their record-setting flight.

One of the most unusual packages received at the Kennedy Space Center, reports Dusty Rhodes, Chief of the KSC Mail and Distribution section, contained two orchid lei shipped from Honolulu.

* * *

There's a new game out called "Spaceball," involving switch-hitting terminologies. For example, as one NASA employee reasoned, the launching pads for rockets could be regarded as home plate in baseball, and the space term liftoff could be the baseball equivalent of play ball.

Here's a partial Spaceball glossary: Countdown—scoreboard; Mission Control—umpires; guidance system—coaching staff; tracking station—press box; telemetry data—game statistics; blockhouse—dugout; computer—official scorer; solid rocket—bat; Mercury—a single; Gemini—a double; Apollo—a triple; orbit—home run; liquid fuel—refreshment stand; heat shield—cold drink; reentry—sliding home safely; sounding rocket—a heckling fan; thrust—"Yer out!" (Out of this world that is).

* * *

Parkhill-Goodloe Co., Inc., of Jacksonville, has been awarded a \$158,993 contract for widening and deepening the Saturn barge channel in the Banana River from 100 feet by 8 feet to 125 feet by 11 feet.

Some 700,000 cubic yards will be dredged in the channel from near the Merritt Island barge canal north in the Banana River to the Saturn unloading dock at Cape Kennedy. The work should be completed by early 1966.

For Relief - - A Walk In Space?

Thousands of letters, from youngsters all over the world, pour into the Kennedy Space Center during and following each NASA manned Gemini flight.

The long duration flights of astronauts Jim McDivitt and Ed White, and more recently of Gordon Cooper and Pete Conrad have fostered a new sense of curiosity in the youngsters' minds, and one of the most common questions asked is how the astronauts "go to the bathroom."

For instance, one young lady from the island of Tasmania, near Australia, wrote

recently: "We have been following your space missions with great interest and we have one question—how do the astronauts relieve themselves while in orbit?"

"I have asked several school masters about this but they do not know the answer. One suggested that this was the reason for Astronaut White's walk in space."

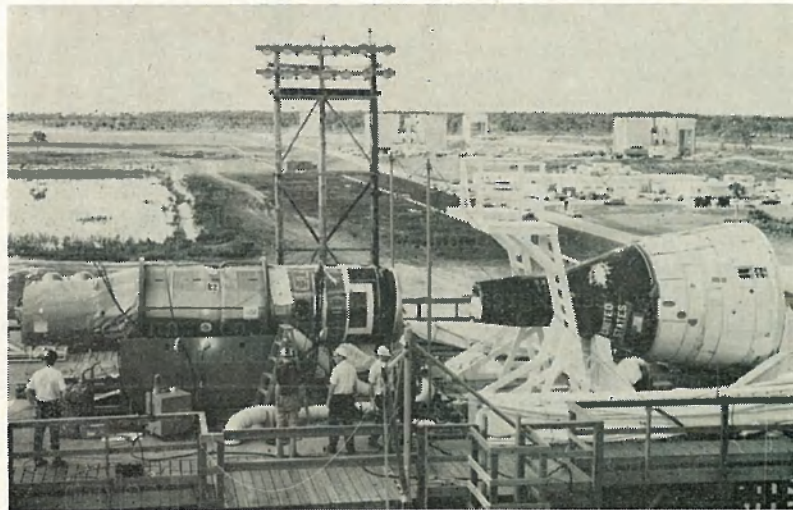
Such, of course, was not the case. Actually, there are two separate systems devised for the collection of body wastes.

A plastic bag with an adhesive lip to provide secure

attachment to the body is used for the collection of feces. It contains a germicide which prevents formation of bacteria and gas.

Following use, the container is sealed, stowed in an empty compartment, and brought back to Earth for analysis.

Urine is collected into a horn-shaped receptacle with a self adjusting opening. The receptacle is connected by a hose to a pump device which either transfers the liquid to a container or dumps it overboard. This system is much like the relief tube in military fighter planes.



KENNEDY Space Center Government and contractor personnel run tests at the Radio Frequency Systems test site on the Gemini 6 spacecraft and the Agena target vehicle. Both vehicles are being checked out in docked and undocked modes.



JIM CULLEN, Chief of KSC's Air Conditioning unit, Maintenance and Operations Branch, received his 20 years civil service award recently. Herman Brunke, acting chief of the branch, made the presentation.

Mariner Still Going

NASA's Mariner IV spacecraft which took the first close photos of Mars, July 14, is still transmitting engineering and scientific data as it continues its long, 570-day orbit around the Sun. It is operating properly and the signals are strong.

The condition of the spacecraft is being telemetered back to Earth along with data on magnetic fields, cosmic dust and levels of radiation.

GEMINI 6 GOING UP

The Gemini 6 spacecraft is scheduled for erection at Launch Complex 19 tomorrow. Mating with the launch vehicle will come later next month, following a series of checkout tests.

Astronauts

(Continued from Page 1)

flight—190 hours, 55 minutes.

—Most orbits for a manned flight—120.

The flight not only clearly demonstrated man's ability to adapt himself to long-duration flights in space, but also gave the U. S. a world leading total of 639 man hours in space and a record number of nine manned flights.

Cooper, of course, by virtue of his earlier Mercury mission, chalked up innumerable marks of his own, including the greatest number of hours spent in space by one man, and being the only person to orbit the Earth on two separate occasions.

Although several experiments could not be completed because of technical problems during the mission the primary objectives were met. These were, principally, to demonstrate and evaluate the performance of the Gemini spacecraft for a period of eight days, and to evaluate the effects of prolonged exposure to the space environment of the two-man crew.

The eight-day mission is about the time required for an Apollo crew to fly to the Moon, explore its surface and return to Earth.

Meanwhile, as the astronauts left the Center for Houston, work continued at KSC on preparations of the Gemini 6 spacecraft.