JAN 14 1972

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

FOR RELEASE:
January 12, 1972
Release # KSC-11-72

REVISED APOLLO 16 PRELIMINARY TIMELINE

The Apollo 16 mission to the Moon is now scheduled for launch 12:54 p.m. EST, April 16, 1972. The first exploration of the Moon's Descartes area will begin 6:59 p.m., April 20, about four hours after landing. Splashdown on Earth is scheduled for 4:30 p.m. EST, April 28.

Apollo 16 was rescheduled from a March 17 launch after problems were discovered with a suit fitting, a lunar module battery, and the docking ring jettison device on the command module.

Spacecraft Commander is Navy Captain John W. Young; Command Module Pilot is Navy Lieutenant Commander Thomas K. Mattingly II; Lunar Module Pilot is Air Force Lieutenant Colonel Charles M. Duke.

The new preliminary timeline follows.

APOLLO 16 PRELIMINARY MISSION PROFILE

As of January 19, 1972:

Launch Window Duration	3 hours, 48 minutes
Translunar Flight Time	71 hours, 23 minutes
Lunar Surface Stay Time	72 hours, 58 minutes
Time in Lunar Parking Orbit	147 hours, 40 minutes
Transearth Flight Time	69 hours, 54 minutes
Total Mission Duration	12 days, 3 hours

EVENT	G.E.T., Hr:Min	DAY	E.S.T., Hr:Min
Lift-Off	0:00	4/16	12:54 pm
Earth Orbit Insertion	0:12	4/16	1:06 pm
Trans-Lunar Injection	2:35	4/16	3:41 pm
Lunar Orbit Insertion	74:03	4/19	2:57 pm
Descent Orbit Insertion	78:01	4/19	6:55 pm

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EVENT	G.E.T., Hr:Min	DAY	E.S.T., Hr:Min
Circularization	97:06	4/20	2:00 pm
Lunar Module Landing	98:12	4/20	3:06 pm
Start Extra Vehicular Activity 1	102:05	4/20	6:59 pm
End EVA 1	109:05	4/21	1:59 am
Start EVA 2	124:05	4/21	4:59 pm
End EVA 2	131:05	4/21	11:59 pm
Start EVA 3	148:05	4/22	4:59 pm
End EVA 3	155:05	4/22	11:59 pm
LM Ascent	171:10	4/23	4:04 pm
Trans-Earth Injection	221:44	4/25	6:38 pm
Command Service Module EVA	241:20	4/26	2:14 pm
Reentry (400,000 feet altitude)	291:23	4/28	4:17 pm
Earth Landing	291:36	4/28	4:30 pm

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

FOR RELEASE:
UPON RECEIPT
KSC-41-72

APOLLO 17 SITE SELECTION

A combination mountainous highlands and lowlands valley region of the Moon designated Taurus-Littrow has been selected as the exploration site for the Apollo 17 mission, presently scheduled to carry out the sixth and final U. S. manned Apollo lunar landing in December 1972.

Apollo 17 is scheduled to be launched no earlier than December 6. The launch window, about 4 hours long, will open at approximately 9:38 p.m. EST. The landing point selected by the National Aeronautics and Space Administration is about 20° north and 30° east of the center of the Moon as viewed from Earth. The site is named for the Taurus Mountains and for the crater Littrow, both of which lie to the north of the site. This site was selected for consideration after a thorough search through the large amount of high resolution photography from Apollo 15.

Taurus-Littrow is a keystone site in the Apollo Program, having been selected to help fill in the major gaps in the developing model of the Moon as based upon Apollo 11, 12, 14, 15 and expected Apollo 16 data. The current model shows a complex Moon which formed about 4½ billion years ago and which was subjected to intense cratering. Apollo 14 and 15 data show that one of the last large basins, Imbrium, was formed by an impact 3.9 billion years ago. It was not until the period from 3.2 to 3.7 billion years ago, however, that the great basins, formed during the intense cratering phase, became flooded by molten lavas originating in the lunar interior. One of the key questions remaining is to understand what happened in the period between 3.7 and 4.5 billion years. Similarly, it is important to understand whether or not the Moon has been thermally inactive for the last 3.2 billion years.

The Taurus-Littrow site is situated just beyond the southeast edge of Mare Serenitatis. Mare Serenitatis is one of the largest lunar mascons. Large, steep-sided mountains of light-colored highlands dominate the terrain and are expected to provide samples older in age and different in composition from those returned from the Mare Imbrium basin on Apollo 14 and 15. Nature has already helped in the sampling as one of the sample sites is a rock slide which contains the debris

-more-

which has fallen into the valley from high up on a 7,000-foot mountain.

The targeted landing point itself will be on the other prime sampling objective which is the very dark non-mare material filling the valleys between the mountains. On occasion the dark material is found in small troughs on the mountainsides, indicating that it once thinly covered the mountains but has eroded off the steep slopes. This observation, plus the presence of volcanic-looking cinder cones, first reported by the Apollo 15 Command Module Pilot Al Worden, indicates to lunar-scientists that the dark material is an explosively produced volcanic ash. The apparently low crater density in the area covered by the dark material also leads geologists to believe it to be among the youngest lunar volcanics. The explosive nature of the volcanism indicates a relatively high content of volatiles or gases, both of which have been exceedingly rare in all lunar samples seen thus far. If the Moon, as the preferred models indicate, has indeed cooled from the outside in, these youngest lunar volcanics should be derived from the greatest depths and may give the first good samples of the deep lunar interior.

The astronauts will use the Lunar Rover Vehicle to transport them to prospective important locations determined prior to the mission and to other points they might select during their exploration. Contingency walking traverses will also be planned to accomplish as many of the scientific objectives as possible.

The astronauts will deploy an advanced version science station, the Apollo Lunar Surface Experiments Package (ALSEP), containing a Heat Flow Experiment similar to that deployed on Apollo 14 and planned for Apollo 17 as well as four new experiments. In addition, two new surface traverse experiments, not powered by the ALSEP Central Station, will be deployed. These new experiments represent second generation scientific approaches to difficult lunar problems.

Three of the six new experiments represent new or improved geophysical techniques of exploring the hidden subsurface properties of the Moon. These experiments are: (1) Traverse Gravimeter, (2) Seismic Profiling, and (3) Surface Electrical Properties. The Traverse Gravimeter will measure variations in subsurface structure and furnish data on such problems as whether the mountains have deep roots or are merely deposits on a uniform subsurface. The Seismic Profiling and Surface Electrical Properties Investigations will measure the physical properties of the lunar interior down to about a kilometer in depth, and will indicate subsurface electrical and mechanical properties, the extent of subsurface layering and the degree of energy scattering at the landing site. Underground water, should it exist, will also be detectable.

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A new ALSEP experiment, the Tidal Gravimeter, to study both the response of the moon to the earth's tidal pull and its response to gravity waves, should they exist in space, will be a fundamental contribution to astrophysics. Two other new experiments will also be part of the ALSEP. A mass spectrometer will measure the constituents of the lunar atmosphere -- the findings of which may be correlated with the mass spectrometers carried previously in lunar orbit; a lunar ejecta and meteorites experiment will determine the frequency and energy of the small meteorites and their ejecta which constantly impact and modify the Moon.

Three new experiments are added to the Apollo 17 orbital science payload. These replace the geochemical investigations and the mass spectrometer. Apollo 17 will be the third mission to carry a large set of orbital sensors in the Service Module. However, three new experiments are under development and production to replace the mass spectrometer, Alpha, x-ray and gamma experiments as well as the subsatellite carried on Apollo 15 and planned for Apollo 16. The first of these, a Lunar Sounder, is a pulsed radar sounder and has the potential for identifying electrical properties and layering of the lunar crust overflown by the spacecraft.

The Lunar Sounder will provide the opportunity to study detailed physical properties of the Moon up to depths of one and a half kilometers and if it exists, to aid in the location of subsurface water. The second, the infrared Scanning Radiometer will provide, for the first time, a high resolution thermal map of portions of the Moon. Thirdly, a Far Ultraviolet Spectrometer will measure the compositional and density variation of the lunar atmosphere. Since this experiment has the capability of measuring these variations as a function of atmosphere height, it will greatly extend the knowledge of the lunar atmosphere that was gained through the use of the original mass spectrometers on Apollo 15 and 16.

The SIM (Scientific Instrument Module) camera system flown successfully on Apollo 15, and planned for flight on Apollo 16, will also be carried on Apollo 17. This system contains the 24" Panoramic Camera, a 3" Mapping Camera and a Laser Altimeter. The Apollo 17 ground track will permit some new areas of the Moon to be investigated and photographed. In addition, where Apollo 17 overflies areas covered by previous missions, the difference in sun angle will provide the photo-geologists with photographs of lunar features at new illuminations. This will greatly aid them in their scientific investigations.

Apollo 17 will be commanded by Navy Capt. Eugene A. Cernan with Navy Cmdr. Ronald E. Evans, Command Module Pilot, and Dr. Harrison H. Schmitt, civilian scientist-astronaut, Lunar Module Pilot.

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NEWS

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Dick Young
305 867-2468

FOR RELEASE:
March 14, 1972
Release # KSC-59-72

KSC TASK FORCE IN SOUTH FLORIDA STUDYING COCONUT PALM DISEASE

KENNEDY SPACE CENTER, Fla.--A five-man task force from KSC is in South Florida this week on a project aimed at controlling a disease infecting that area's graceful coconut palms.

The KSC group will join teams from the Florida Department of Agriculture (FDA) and the NASA Manned Spacecraft Center, Houston, Texas.

"Ours is primarily an observer team, " said J. P. Claybourne, Manager of the Earth Resources program in KSC's Directorate of Center Planning and Future Programs. "We want to train people on the site to develop the capability to provide services such as this when needed."

The KSC group includes a photo interpreter, engineers and instrumentation experts. Equipment includes spectrometers which will be used to determine what film and photographic filters should be used to take photographs in which sick trees can be differentiated from healthy ones.

Photographs taken with the proper films and filters should be able to pick out infected trees before the disease becomes apparent to observers viewing them in normal daylight.

The coconut palm (cocos nucifera) is a South Florida trademark and few tourist snapshots of that scenic area lack one or more in the background to create the tropical "touch".

But these graceful and picturesque trees are threatened by a blight known as the coconut lethal yellowing disease and the NASA groups are using space-developed multispectral sensing techniques to identify diseased trees and bring the disease under control.

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The disease is believed to be carried by the white fly and the affliction is apparently incurable. The distinctive, feathery fronds first turn yellow and then drop. A tree can be rendered topless in three months.

The FDA/NASA efforts will be concentrated in a 50-block area of Coral Gables, south of Miami, and on Little Torch Key, far down in the Florida Keys between Big Pine Key and Key West. It is here that the disease has made its most serious inroads.

The KSC contingent consists of William T. Clearman, Earth Resources Office; Ralph Yorio, Thomas A. Schehl and Wilson Timmons, all of Technical Support, and Jerry J. O' Connor, Installation Support.

The group will work on the coconut palm problem in South Florida early in the week and make an investigation of decline in young citrus trees near Indiantown on their return trip to KSC later in the week.

# # #

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

FOR RELEASE:

DR. DEBUS' STATEMENT

It gives me great pleasure to inform you that the NASA Administrator, Dr. James Fletcher, has selected the Kennedy Space Center as the initial launch site for the space shuttle.

This decision confirms our judgment in recommending KSC for this vital mission. It recognizes the unique capabilities and facilities of this unique launch base, and the superb performance of the integrated Government-industry launch organization.

I am especially grateful to the members of the KSC team who have worked hard and long in connection with the site selection studies - today's decision is ample reward for their efforts.

Once again, we face a challenge to our design competence since it is also the mission and responsibility of this Center to develop launch and recovery concepts and to design and develop the launch support systems and facilities. I have every confidence that we will be ready for the flight hardware when it arrives.

Each of you, in his own way, has contributed to our successes and thus has contributed to bringing about this decision. I want you to know that your efforts are deeply appreciated.

NEWS

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

FOR RELEASE:

Friday, April 14, 1972
1 P.M. EST

SPACE SHUTTLE OPERATIONAL SITE SELECTED

NASA Administrator Dr. James C. Fletcher announced today the selection of Kennedy Space Center in Florida and Vandenberg AFB in California as the sites from which the Space Shuttle will be operated.

The initial launch and landing site will be at the Kennedy Space Center, Florida. This site will be used for research and development launches expected to begin in 1978 and for all operational flights launched into easterly orbits. Facilities for all Shuttle users at the Kennedy Space Center will be provided by NASA, largely through modifications of existing facilities built for the Apollo and other programs.

Toward the end of this decade it is planned that a second operational site will be phased in at Vandenberg AFB, California, for Shuttle flights requiring high inclination orbits. The basic Shuttle facilities required at Vandenberg are planned to be provided by the DOD.

These decisions, which have been concurred in by the DOD, were reached by the Administrator of NASA after nearly a year of study by a Site Review Board chaired by Dr. Floyd L. Thompson, former Director of NASA's Langley Research Center. During the past year, several Shuttle configurations have been under consideration. The site selection decision follows NASA's decision announced March 15, 1972, that the Space Shuttle will use water recoverable solid rocket boosters.

The Ralph M. Parsons Company of Los Angeles supported the board in facilities and cost studies. The Shuttle study contractor teams headed by North American Rockwell, McDonnell Douglas, Grumman and Lockheed contributed conceptual data concerning launch facility requirements as a part of the recently completed Phase B studies.

During the evaluation, the board reviewed data on all available alternatives, including 150 potential launch sites. Personnel associated with the evaluation visited more than 40 sites. Consideration was given to booster recovery, launch asimuth limitations, latitude and altitude effects on launch and landing performance, abort considerations, relative cost, environmental effects, and impact on present and future programs.

Dr. Fletcher stated that the board's studies of all alternatives clearly showed that the Kennedy-Vandenberg combination has cost, operational and safety advantages over any possible single site or any other of sites in the United States.

Preliminary estimates for establishment of the developmental and operational facilities required at KSC are about $150 million. This amount is a part of the total of about $300 million previously estimated by NASA for facilities required for the development production, test, and initial operation of the Space Shuttle.

The operational facilities and equipment required at Vandenberg AFB are expected to cost about $500 million. This amount is compatible with the allowance for facilities in the estimates of future investment costs for Shuttle operations included in the NASA and DOD studies which demonstrated that the Space Shuttle will produce a substantial net savings in future civil and military space program costs.

The Space Shuttle will be a manned reusable space vehicle which will carry out various space missions in earth orbit. It will consist of a manned, reusable orbiter powered by three large liquid rocket engines mounted "piggyback" on a large expendable propellant tank plus two large recoverable solid propellant rockets. The orbiter, about the size of a DC-9 jetliner, will be piloted by two men in space who will fly it back to Earth and land it like an airplane.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

FOR RELEASE:

April 14, 1972
12:00 noon

STATEMENT BY DR. KURT H. DEBUS, DIRECTOR, KENNEDY SPACE CENTER:

The decision to utilize the KSC as the primary launch site for the Space Shuttle program is most gratifying to NASA's launch organization.

I believe this judgment is in the national interest since it assures the continued utilization of this base and the supporting Eastern Test Range.

We recognize the challenge which this presents since KSC had already been assigned the lead responsibility for development of the unique facilities which will be required for processing and launching this new space transportation system.

I am confident that the Government-Industry team will again prove equal to the test. To those officials, organizations and individuals within the community who supported our position during the site evaluation process, I want to convey the thanks and appreciation of the launch team.

# # #

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

FOR RELEASE:

Friday, April 14, 1972
1 P.M. EST

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NEWS

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John F. Kennedy Space Center
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FOR RELEASE:

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Once again, we face a challenge to our design competence since it is also the mission and responsibility of this Center to develop launch and recovery concepts and to design and develop the launch support systems and facilities. I have every confidence that we will be ready for the flight hardware when it arrives.

Each of you, in his own way, has contributed to our successes and thus has contributed to bringing about this decision. I want you to know that your efforts are deeply appreciated.

NEWS

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Dick Young
305 867-2468

FOR RELEASE:
April 26, 1972
KSC Release #88-72

DISMANTLING OF COMPLEXES 34-37 BEGINS MAY 1

KENNEDY SPACE CENTER, Fla.--Stripped of all useful structures and equipment, the remains of Saturn 1/1B Launch Complexes 34 and 37 will be dismantled over a seven-month period beginning May 1.

The General Services Administration's Southeast Region with Headquarters in Atlanta, G., working with KSC to maximize the government's return on disposing of the complexes, has announced that a contract has been let to Southern Contractors Service, Columbia, South Carolina, to tear down the giant structures.

George Harrington, Chief of the Logistics Division of Installation Support at KSC, said a total of $53,856,403 in structures and equipment from the two complexes has been reutilized, "one of the highest returns ever for a program of this magnitude."

The total estimated acquisition value of the two complexes and related industrial property is $147,990,581. The $53,856,403 reutilization figure gives the government a recovery of approximately 37 per cent, unusually high for facilities so highly specialized.

The decision to dismantle the two complexes came after it was decided to conduct all future manned launches from the Spaceport's Complex 39. LC 34-37 were used for 15 Saturn 1 and Saturn 1B launch vehicles, including the launch of Apollo 7, the first manned flight in the Apollo series.

The South Carolina firm bid $15,051 for the remains of the two complexes and is now moving its cranes to Cape Kennedy for the task of dismantling the towering steel structures which are virtually all that is left of the two once-bustling launch facilities.

According to GSA, the seven-month job will begin May 1. The seven-month dismantling proposal offered by Southern Contractors was two months shorter than that offered by other bidders and the Government will save an additional $42,000 in operating costs, giving the Government an adjusted return of $57,051 for the Southern Contractors offer.

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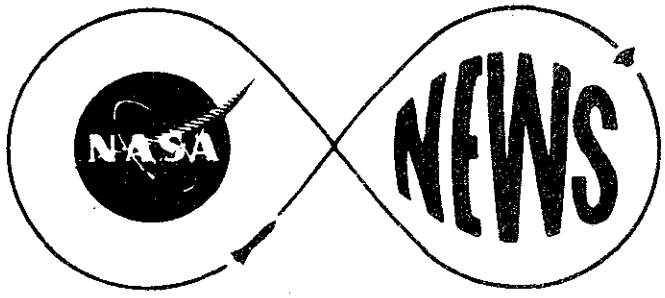
MAY 16 1972



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Dick Young
305 867-2468

FOR RELEASE:
May 16, 1972
Release # KSC-122-72

APOLLO 16 CREW TO RETURN MAY 25

KENNEDY SPACE CENTER, Fla.--Apollo 16 crewmen John W. Young, Thomas K. Mattingly and Charles M. Duke Jr. will return to KSC on May 25 to meet with the Government/industry team that launched them on the nation's fifth lunar landing mission on April 16.

The astronauts and their families will fly in from Chicago and land at Cape Kennedy's Skid Strip at 11:45 a.m.

In the official party will be Mrs. Young and Mrs. Duke plus the two Duke boys, Charles, 7, and Thomas, 5. Mrs. Mattingly is expecting a child in the near future and will not be making the trip.

Center Director Dr. Kurt H. Debus will be the host at a luncheon scheduled for them in the Manned Spacecraft Operations Building from 12:30-1:45 p.m. Approximately 125 Government and contractor managers will be present as the crew discuss their mission and answer questions.

During the hour-long ceremony scheduled for the VAB from 2- 3 p.m. they will meet with and address the thousands of Spaceport workers who played a role in the successful accomplishment of their mission to the Moon's Descartes highlands.

Dr. Debus will be master of ceremonies for the VAB activities and Launch Operations Director Walter J. Kapryan will present the crew with Apollo 16 launch photographs. Music will be provided by a Navy band from Orlando.

The audience will include community leaders, Brevard County school children and a delegation from the Air Force Eastern Test Range as well as KSC personnel.

Following the VAB ceremony, Young and Duke and their families will be flown to ceremonies scheduled for their respective home towns of Orlando and Lancaster, S. C. Astronaut Mattingly will continue on to Miami.

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Young's parents, Mr. and Mrs. William H. Young of Orlando will attend the VAB ceremonies and continue on with him to Orlando to participate in activities scheduled there later in the afternoon.

# # #

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Ben E. McCarty
305 867-2468

FOR RELEASE:
June 1, 1972
Release #KSC-126-72

NEW KSC RADAR SYSTEM TO HELP TRACK, ANALYZE THUNDERSTORMS

KENNEDY SPACE CENTER, Fla.--A new weather radar system with associated equipment has been installed at KSC to help detect, track and analyze thunderstorms threatening the area.

Bill McMurran, Design Engineering's technical representative for the project, said a four-foot parabolic antenna has been placed atop a building at Weather Site B, some two miles north of the Vehicle Assembly Building. It is connected by two coaxial cables to two weather scopes and a photographic console at the weather office in the Manned Spacecraft Operations Building seven miles to the south.

McMurran said that installation of the system has been completed and it will become operational early this month. Cost of the project was $118,000.

He said a unique feature of the antenna is that it has the capability to perform 180-degree sweeps from horizon to horizon, thus giving a complete vertical cross section of clouds.

Richard Urbanek of the National Oceanic and Atmospheric Administration's National Weather Office at KSC said the system will enable meteorologists to begin observing the horizontal growth of cloud formations into thunderstorms at distances up to 40 miles. Vertical observations can be made up to 50,000 feet.

Thus, the radar will give forecasters a detailed picture of the speed and direction of a storm, wind conditions, intensity of precipitation, the possibility of hail and the storm's lightning potential.

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Dick Young
305 867-2468

FOR RELEASE:
June 1, 1972
Release # KSC-130-72

SPACEPORT TOURS SKYROCKET

KENNEDY SPACE CENTER, Fla.--Guided bus tours of the nation's Spaceport set new records in patronage during May and the fleet of buses is being nearly doubled in anticipation of the summer rush.

A total of 72,890 visitors climbed aboard tour buses at the Visitor Information Center during May for close-up views of the sprawling facilities of the Kennedy Space Center and Cape Kennedy Air Force Station.

The May, 1972, figure compares with 47,220 for the same month in 1971 and reflects an increase of 54.4 per cent. The swarms of visitors during May raised the cumulative total for the first five months of 1972 to 519,184, an increase of 30.5 percent over the 397,711 who took the tours during the same period in 1971.

P. A. Fagnant, Chief of the Visitor Information Center Branch, noted that the fleet of buses normally consists of 25 vehicles. This will be increased to 32 on June 12 and to 45 on June 19.

Fagnant pointed out that the single high day for June, 1971, was 4,767 visitors and the average daily attendance during the month was 3,107. An increase of 30 percent in those figures gives projections of 6,200 as the high day for the coming month and an average daily visitation rate of slightly over 4,000.

The additional buses are being added to the base fleet to cope with the expected upswing in attendance.

"We have every reason to believe that this 30 percent increase - if not more - will prevail during the summer months," said Fagnant.

The spring months have been busy ones at the Spaceport's Visitor Information Center.

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During April, a Westfield, Mass., man - John J. Lyons - became the one millionth visitor to attend the informal lectures. The 45-minute lectures outline U. S. manned and unmanned space programs, their goals and accomplishments and the application of space technology for the betterment of mankind.

And in May, the five millionth ticket to be sold since guided bus tours were initiated in July, 1966, was bought by William H. Page of Washington, N.C.

An estimated 20 percent of VIC patrons do not take the bus tours, placing actual VIC patronage over the years in the vicinity of six million people.

Bus tour patronage during 1971 exceeded one million people and participation is conservatively predicted to reach 1.25 million during 1972.

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Dick Young
305 867-2468

FOR RELEASE:
June 2, 1972
Release # KSC-131-72

INTELSAT IV LAUNCH SCHEDULED JUNE 13

KENNEDY SPACE CENTER, Fla.--An Intelsat IV communications satellite is scheduled for launch from Cape Kennedy atop an Atlas Centaur on June 13 at 5:53 p.m.

The new satellite is the fourth in a series of sophisticated synchronous orbit communications satellites provided by Comsat Corporation for the 83-nation International Telecommunications Consortium.

The Atlas Centaur launch vehicle has completed all scheduled tests to date. On launch day, it will be ready to provide over 181,440 kilograms (400,000 pounds) of thrust at liftoff to send the 1360-kilogram (3,000 pound) satellite into a highly elliptical transfer orbit.

Its apogee motor will be fired and it will be placed in a stationary equatorial orbit at 61.4 degrees east longitude over the Indian Ocean. This is approximately 300 miles northeast of the Seychelles Island chain.

James Weir, Unmanned Launch Operations Spacecraft Branch, reports that the Intelsat spacecraft is proceeding through its checkout routine on schedule. The systems performance tests have been completed and the spacecraft passed its de-spin tests last week. On May 26, it was moved to the Explosive Safe Area to be mated with its solid propellant apogee motor.

The spacecraft is now undergoing other final preparations which will lead to its movement to Cape Kennedy's Launch Complex 36- B on June 8 for mating with its launch vehicle.

The satellite will significantly expand communications capability over the Indian Ocean, adding 1,200 high-quality, two-way voice circuits, or four television channels or a mix. The latest Intelsats have a design life-time of five years minimum.

The June 13 launch window extends from 5:53 p.m. to 7:13 p.m. EDT.

# # #

NEWS

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Dick Young
305 867-2468

FOR RELEASE:
June 6, 1972
Release # KSC-132-72

LECTURER BUILDS MODELS FROM 'SCRATCH'

KENNEDY SPACE CENTER, Fla.--Models are a valuable tool in helping Burton Prince, a commentator-lecturer at the Spaceport's Visitor Information Center, explain hardware to visitors.

But model kits of such space items as the Lunar Roving Vehicle (LRV) and the astronauts' Landing and Ascent Model aren't on the market so Prince builds his own, from "scratch" so to speak.

"I've discovered that a model can be worth a thousand words," says Prince.

Burt's most recent creation is a 1/16th scale model of the Landing and Ascent Model used in the KSC Flight Crew Training Building in conjunction with the Apollo Flight Simulators.

Linked to computers, the "L&A" provides an optical input to astronauts practicing for their missions in the simulators. An inverted topographical model of the mission landing site is raised and lowered to give the crew members a lifelike illusion of coming in for a landing on the lunar surface.

To add realism, banks of lights are arranged so that the lighting angle on the simulated lunar surface can be duplicated to match the sun's angle during the actual landing approach.

This complex device is not an easy one to explain and Prince decided to build a model of it to make his descriptions more meaningful.

Prince obtained blueprints of the L&A from the Manned Spacecraft Center in Houston, Texas, and went to work. The job required 300 hours of painstaking work over a five-month period. The materials bill came to $30.

Built of balsa wood, surgical gauze, styrofoam and other mundane materials, the model is painted a medium green to match the real article in the Flight Crew Training Building. Realism is added by a movable optical platform.

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NEWS

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

A. H. Lavender
305 867-2468

FOR RELEASE:
June 7, 1972
Release #KSC -134-72

O'BRIAN YOUTH SEMINAR SCHEDULED AT KSC NEXT WEEK

KENNEDY SPACE CENTER, Fla.--Sixty-five young men from all 50 states, the District of Columbia and five foreign countries will receive a firsthand look at the United States space program during a week-long seminar at the Kennedy Space Center beginning Monday, June 12.

The seminar is sponsored by the Hugh O'Brian Youth Foundation in cooperation with the National Association of Student Councils and NASA.

"Through participation in the seminar these young men will gain a better understanding of the space program," said William Nixon, chief of KSC's Educational Programs Branch. "The program provides the youths an opportunity to view activities in Spaceport operational areas and talk with experts in the space field."

NASA launch officials and astronaut David Scott will participate along with O'Brian.

Center Director Dr. Kurt H. Debus will welcome the group at the opening KSC session Monday and Deputy Director Miles Ross will brief them on NASA programs.

The youngsters, who range in age from 15-16 years and are high school sophomores, were chosen from almost 2 million boys representing 10,000 schools. They were selected on the basis of community and school service, good citizenship and scholarship.

The Monday program includes a tour of the Vehicle Assembly Building where Apollo 17 is in preparation for a December launch, and the Launch Control Center, and briefings on the roles of crawler-transporters and mobile launcher in Apollo launch operations.

The boys are scheduled to view the launch of an Intelsat IV communications satellite from Complex 36, Cape Kennedy, on Tuesday.

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Later in the week Apollo 15 commander David Scott will discuss the Apollo program and brief them on his experiences during his lunar landing mission, and the group will view simulators where Apollo 17 astronauts are training for their mission and visit astronaut medical facilities and spacecraft assembly and checkout areas in the Manned Spacecraft Operations Building.

Visits to the Central Instrumentation Facility and the Unified S- Band Station will provide an overview of data processing and tracking operations.

The 65 youths will visit NASA launch sites on Cape Kennedy and receive a briefing on U. S. unmanned space programs.

They will tour the Air Force Museum, Complex 5-6, launch site of Alan Shepard, the first American in space; Mercury-Atlas and Gemini launch sites and Complex 34, site of the first manned Apollo launch.

They will recieve briefings on future U. S. space programs, including Skylab and the Space Shuttle.

A daily seminar feature is a question and answer period during which the boys will have an opportunity to discuss space activities with space officials and public figures.

Dr. Kurt H. Debus and key Spaceport directors will participate in a closing summation on Friday. With Dr. Debus will be Miles Ross, Deputy Director; Walter Kapryan, Director of Launch Operations; Raymond L. Clark, Director of Design Engineering; Frederic H. Miller, Director of Installation Support; Peter A. Minderman, Director of Technical Support; and George A. Van Staden, Director of Administration.

A farewell dinner is scheduled Friday evening.

The youths will be housed at Patrick Air Force Base.

# # #

NEWS

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Dick Young
305 867-2468

FOR RELEASE:
June 7, 1972
Release # KSC-133-72

MINORITY BUSINESS FIRM AWARDED SPACEPORT KEY PUNCH CONTRACT

KENNEDY SPACE CENTER, Fla.--The Small Business Administration, Atlanta, Ga., acting on behalf of NASA's John F. Kennedy Space Center, has awarded a $507,909 contract to New World Services, Inc., Orlando, Fla.

The cost plus fixed fee contract covers the period June 15, 1972, through June 14, 1973, with an option for one additional year of service.

New World Services will operate and maintain the automatic data processing keypunch services in support of the Information Systems Directorate at KSC. The services will be available to NASA, NASA contractors and other government agencies located at the Kennedy Space Center and at KSC facilities on the Air Force Eastern Test Range.

NASA is actively pursuing efforts to increase the participation of minority business firms in the NASA Procurement Program and the New World Services contract is the largest NASA award to date under Section 8 (a) of the Small Business Act.

The purpose of this provision is to assist and foster qualified minority firms in achieving productive and economic stability in a competitive business environment.

# # #

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Dick Young
305 867-2468

FOR RELEASE:
June 22, 1972
Release # KSC-145-72

SPACEPORT EXTENDS FEDERAL ELECTRIC CONTRACT

KENNEDY SPACE CENTER, Fla.--NASA's John F. Kennedy Space Center has awarded the Federal Electric Corporation, Paramus, New Jersey, a one-year, $19,981,596 extension of its base support contract.

The award covers the period July 1, 1972, through June 30,1973, and extends the contract into its sixth year of performance. The cost plus award fee contract was negotiated competitively and provided for a total of five years with annual renewal of performance.

The latest extension brings the overall value of the contract to $113,975,440.

The Federal Electric Corporation provides numerous launch instrumentation and communications support services for the manned Apollo and Skylab Programs as well as a wide variety of internal communications systems, computer operations and automatic data processing, measurements, instrument calibration and reference standard laboratories.

# # #

NEWS

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Dick Young
305 867-2468

FOR RELEASE:
June 22, 1972
Release # KSC-146-72

HOCK TO HEAD APOLLO/SOYUZ EFFORT AT KSC

KENNEDY SPACE CENTER, Fla.--Robert C. Hock, KSC's Manager for Apollo-Skylab Programs, has been given a lead role in planning the Spaceport's preparations for the joint United States/Russian manned space mission scheduled for 1975.

Dr. Kurt H. Debus, KSC Director, has announced the appointment of Hock as the Center's Program Manager for the first joint manned mission by the world's two leading space-venturing nations.

Other KSC directorates will prepare for, execute and support the international launch in the same manner as they have functioned for the manned missions of Project Apollo.

Dr. Rocco Petrone, Apollo Program Director for NASA will provide overall guidance and will coordinate the efforts of the NASA manned spacecraft centers to prepare for the mission, officially named Apollo Soyuz Test Project (ASTP).

The Kennedy Space Center is charged with launch of the Saturn IB/Apollo with its special docking module designed to permit a link-up of the American Apollo and Soviet Soyuz spacecraft.

The joint mission is the result of agreements reached with Soviet leaders during President Nixon's recent visit to the Soviet Union and follows several years of productive discussions between space experts of the two countries at the Manned Spacecraft Center in Houston, Texas, and in Moscow.

For Hock and his office, the new assignment represents additional responsibilities beyond the Apollo lunar landing series - scheduled to end with Apollo 17 in December- and the Skylab Orbital Workshop Program, which calls for the launch of a space laboratory and three manned spacecraft during 1973.

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"Our relationships will be basically the same," said Hock. "We'll be working with the same program directors at Headquarters and program managers at the other NASA centers."

Hock indicated that planning is not yet sufficiently advanced to pinpoint the facilities modifications that will be needed at KSC to support the joint American/Soviet effort.

KSC has been designated as the prime launch and recovery site for the Space Shuttle which will begin horizontal flight testing in 1976 and is planning and designing the new facilities which will be needed at Launch Complex 39 to support the new program.

A portion of that planning includes maximum utilization of existing facilities in order to reduce program costs.

The international mission means that KSC will retain a Saturn IB launch capability at least through 1975.

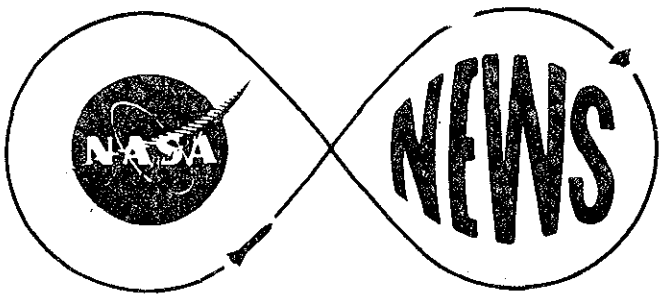
Present planning calls for the ASTP mission to be launched from Complex 39's Pad B. The Saturn IB/Apollo space vehicle will be assembled in High Bay I of the Vehicle Assembly Building atop Mobile Launcher 1.

Mobile Launcher 1 has been reconfigured for the Skylab Saturn IB mission by installation of a 39-meter (128 foot) tall pedestal. It can be reconverted for Saturn V missions by removal of the Saturn IB launch pedestal.

The remaining two mobile launchers will be reconfigured for use in the Space Shuttle Program.

# # #

JUN 28 1972



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

U. Wright Kerns
305 867-2468

FOR RELEASE: 3:00 p.m.
June 27, 1972
Release # KSC-149-72

GENERAL ELECTRIC CONTRACT AT SPACEPORT IS RENEWED

KENNEDY SPACE CENTER, Fla.--NASA's Kennedy Space Center has awarded a $2,734,950 contract renewal to the General Electric Company's Apollo and Ground Systems, Daytona Beach, Florida.

The cost plus fixed fee contract is extended for six months from July 1, 1972.

The extension increases the total value of the existing contract to $12,672,033.

The contract extension calls for General Electric to continue furnishing personnel and equipment for maintenance and operation of the Acceptance Checkout Equipment and Quick Look Data Systems designed and built by G.E.

The contract also provides for continuation of logistic and engineering support to the KSC Director of Launch Operations.

KSC is the nation's primary launch site for manned and unmanned launches having launched all Saturn V/Apollo missions from LC 39 at the Spaceport. Numerous communications, weather and scientific satellites and spacecraft have been launched from facilities at Cape Kennedy and the Western Test Range in California.

# # #

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

U. Wright Kerns
305 867-2468

FOR RELEASE:
June 24, 1972
Release # KSC-150-72

ORLANDO ENGINEERING FIRM RECEIVES SPACEPORT CONTRACT

KENNEDY SPACE CENTER, Fla.--The engineering firm of Howard, Needles, Tammen & Bergendorff of 420 West Grant St., Orlando, Fla. has received an $82,000 fixed fee contract from NASA's KSC.

The contract calls for a preliminary site survey for an aircraft landing facility at Kennedy Space Center, Fla. The contractor will provide all personnel, equipment, supplies, and appurtenances, to perform a topographical survey, subsurface investigation field testing, laboratory analysis, evaluation of results, and a final report.

This Launch Complex 39 site survey is for proposed Space Shuttle Landing Facility.

This period of performance will be June 21, 1972 through September 30, 1972.

The Space Shuttle is to provide a new space transportation capability designed to substantially reduce the cost of space operations and support a wide range of scientific, defense and commercial uses.

The orbiter stage of the Shuttle is to have the capability to reenter the atmosphere and then make a landing on a runway like an airliner.

The Kennedy Space Center is to be the prime launch and recovery site with facilities to be built later at the Air Force Western Test Range in California.

Manned horizontal test flights are scheduled to begin in 1976. with the first manned orbital flights in 1978.

# # #

JUN 28 1972

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Dick Young
305 867-2468

FOR RELEASE: 3:00 p.m.
June 27, 1972
Release # KSC-153-72

GRUMMAN AWARDED SPACEPORT CONTRACT EXTENSION

KENNEDY SPACE CENTER, Fla.--NASA's John F. Kennedy Space Center has awarded a $7.5 million contract extension to the Grumman Aerospace Corporation, Bethpage, Long Island, New York, for mission support of the Apollo Lunar Module at the nation's Spaceport.

The cost plus fixed fee contract requires that Grumman furnish personnel, services, material and program support to prepare for and process Apollo Lunar Modules from arrival at KSC through the prelaunch, launch and postlaunch activities and covers the period from July 1, 1972, through December 31, 1972.

Grumman builds the LM under a contract with the Manned Spacecraft Center in Houston, Texas.

The extension increases the total value of the existing contract to $33.4 million.

Nine of the Grumman-built spacecraft have been flown successfully with five of them carrying American astronauts to the surface of the Moon.

The final spacecraft in the Apollo series is now undergoing checkout here in preparation for the Apollo 17 mission later this year.

Launch of Apollo 17 atop a Saturn V from the Spaceport's Complex 39 is scheduled for 9:38 p.m. December 6.

# # #

NEWS

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

A. H. Lavender
305 867-2468

FOR RELEASE:
June 29, 1972
Release # KSC-159-72

KSC MARKS TENTH ANNIVERSARY

KENNEDY SPACE CENTER, Fla.--John F. Kennedy Space Center begins its second decade of operation as a NASA Center, Saturday, July 1, following a first ten years highlighted by a series of operational successes and individual accomplishments.

Established as the Launch Operations Center on July 1, 1962, by NASA Circular 208, dated March 7, 1962 and signed by Dr. Hugh Dryden, the installation's name was changed to the John F. Kennedy Space Center, NASA, by an Executive Order signed by President Lyndon B. Johnson on November 29, 1963, five days after the death of President John F. Kennedy.

The Center's establishment, with Dr. Kurt H. Debus as Director, was the first of a series of NASA actions to centralize responsibility for the development of launch concepts, the design, development and construction of launch facilities; and launch operations. It was followed by 1965 by the transfer of the Manned Spacecraft Center's manned launch team and the Goddard Space Flight Center's unmanned launch team to KSC.

Circular 208 also formalized the Center's responsibilities for Western Test Range operations.

The Center's origins date much earlier--to the Army Ballistic Missile Agency's Missile Firing Laboratory, headed by Dr. Debus, which became the Marshall Space Flight Center's Launch Operations Directorate after NASA's establishment in 1962; to the Manned Spacecraft Center's manned space flight operations team, headed by G. Merritt Preston, which was responsible for Mercury Atlas and Gemini operations at the Cape; and Goddard's unmanned launch team, headed by Robert H. Gray, which had previously assimilated the Naval Research Center team.

On July 1, 1962, with planning under way for the Apollo program, testing of the Saturn 1 was under way. SA-1 and SA-2 had been launched from recently completed Complex 34. Complex 37 was under construction.

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Planning was under way for the development of what was then called the Merritt Island Launch Area for Apollo/Saturn V, but the Complex 39 and Industrial Area sites were undeveloped and overgrown with reeds and palmettos.

Center Headquarters offices were located in the E & L Building at Cape Canaveral and other Civil Service and contractor personnel worked in offices in the adjacent E & O Building, Cape industrial area hangars and leased buildings in Cocoa Beach.

The contract for the design of the Vehicle Assembly Building was to be awarded in December 1962, and contracts for construction in 1963. Contracts were also to be let for construction of Pad A, Mobile Launchers, the Mobile Service Structure, and the Crawler Transporters. Construction of the Headquarters Building, the Manned Spacecraft Operations Building and other Industrial Area facilities was to begin in 1963.

Establishment of the Merritt Island National Wildlife Refuge on 53,000 acres of KSC was a highlight of 1963. The Refuge was recently expanding to include over 140,000 acres of KSC land and water areas.

Construction of Complex 37 was completed in 1963 and the first launch--SA-5--was on January 29, 1964. Most KSC personnel moved to the new Merritt Island facility in 1964 and 1965, with the MSOB occupied in August 1964 and the Headquarters Building in May 1965.

With completion of major Complex 39 facilities in 1965 and early 1966, the first Saturn V configuration was assembled in the VAB, and on May 25, 1966 the operational capability of the entire launch complex was verified as 500-F was rolled out of the VAB to Pad A as guests and NASA officials watched.

Two visitation programs initiated in the mid-1960's provide the public with a long-desired opportunity to view space facilities and actually experience space launch operations. The first, a Sunday drive-through tour program jointly sponsored with the Air Force Eastern Test Range, was initiated in January 1965. Almost 2,000,000 visitors have been accommodated.

The NASA Tours program, with conducted bus tours of KSC and Cape Kennedy, began in July 1966. Little more than a year later a Visitor Information Center was opened. Since July 1966, NASA Tours has accommodated 5,200,000 patrons and an additional 1,000,000 have viewed space exhibits, displays and film showings, and heard space lectures in the VIC.

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The launch of Apollo 4, the first unmanned Apollo/Saturn V space vehicle, on November 13, was a highlight of 1967. In 1968 the program progressed toward attainment of the goal of landing men on the Moon in the decade of the 1960's with two additional unmanned Apollo/Saturn V launches and the first manned Apollo launch--Apollo 7, launched from Complex 34 on an orbital mission with astronauts Walter Schirra, Donn Eisele and Walter Cunningham.

Men launched from the Center circled the Moon in 1968 on the successful Apollo 8 mission and 1969 was marked by the successful Apollo 9 Earth orbital mission, lunar orbit by Apollo 10, the historic lunar landing by Apollo 11 astronauts Neil Armstrong and Edwin Aldrin--on July 20, 1969--and a return to the Moon's surface by Apollo 12.

Only one Apollo, Apollo 13, was launched in 1971, but unmanned launches continued at a high level at Cape Kennedy and the WTR.

Two Apollo launches, Apollos 14 and 15, for return visits to the lunar surface, and the launch of Mariner Mars, which is now orbiting the red planet and returning excellent photos to Earth, were 1971 highlights, and Apollo 16 and Pioneer launches, the latter for a two-year trip to Jupiter, were important events of the first six months of 1972.

With only one additional Apollo mission--Apollo 17, with a December 6 launch date--scheduled, KSC looks to its second decade with a program that includes launch of a Skylab orbital space station and three astronaut crews who will work and live in orbit for up to 56 days in 1973, an Apollo-Soyuz mission that will mark the first cooperative space venture of the U.S. and U.S.S.R. in 1975, the Space Shuttle, which will be launched from Complex 39 and return to a landing strip north of the VAB in its continuing missions beginning in 1978 and a series of applications and scientific spacecraft launches, including Viking Mars landers.

KSC's annual budget, that reached $490,000,000 in FY 1969, has leveled off at the $300 mission level--$286.8 million for FY 1973--and manpower levels are down from a high of 22,100 in FY 1969 to 15,000 at the end of June 1972.

While further reduction in the employment level is anticipated with completion of the Apollo and Skylab programs, programs of the future are expected to assure a stable employment level through the 1970's.

# # #

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

A. H. Lavender
305 867-2468

FOR RELEASE:
July 10, 1972
Release # KSC-172-72

KSC TO HOST EXPLORER SEMINAR

KENNEDY SPACE CENTER, Fla.--Each of the fifty states of the nation will supply an Explorer for a five-day seminar on the space program to be held next week at the Kennedy Space Center.

The youth organization opened its rolls last year to girls, and six will be among the 50 Explorers attending. Fifteen adult advisors will accompany the group.

Sponsoring the activity, aimed at providing the young people with a firsthand look at Center facilities through a series of tours and lectures is the PepsiCo Foundation, in cooperation with the Explorer organization and NASA.

To choose the participants, the Explorer organization held essay contests in each state, with the topic, "What Is the Future of Space."

The Explorers will arrive in Orlando on Sunday and will be bussed by NASA to quarters at Patrick Air Force Base. They will spend most of their daylight hours at KSC and will participate in Explorer-generated social activities during the evenings.

KSC Center Director Dr. Kurt H. Debus will welcome the group at the opening session Monday. Deputy Director Miles Ross will brief them on NASA programs.

Also scheduled for Monday is a tour of the Vehicle Assembly Building conducted by KSC Chief of Public Affairs Gordon L. Harris. The Explorers will see Apollo 17 being prepared for its December launch. They also will visit the Launch Control Center and will be briefed on the roles of the crawler-transporter and mobile launcher in Apollo launch operations.

A Tuesday tour will include a briefing at the Central Instrumentation Facility and a visit to laboratories in the Manned Spacecraft Operations Building.

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A visit to KSC's Unmanned Launch Operations headquarters at Cape Kennedy on Wednesday will include a briefing by ULO's Chief of the Spacecraft and Vehicle Support Operations Branch, Don C. Sheppard, on the U. S. unmanned space program.

Astronaut Thomas P. Stafford, who gained the rank of Star Scout in the Boy Scouts during his youth, will join NASA launch officials in hosting the Explorers.

Stafford presently is Deputy Director of Flight Crew Operations at the Manned Spacecraft Center, Houston, Texas. He served as commander of the Apollo 10 mission in 1969 that took man into Moon orbit for the first time. He was pilot on Gemini VI, backup command pilot on Gemini IX and backup commander for Apollo 7.

Stafford will conduct a tour of astronaut training facilities on Thursday. Explorers will watch the simulators in the Flight Crew Training Building and then will don white smocks to be shown the surgically-clean Clean Room of the High Bay area of the Manned Spacecraft Operations Building.

NASA's Skylab program, to be conducted during 1973, will be detailed by R. C. Hock, manager of Apollo-Skylab Programs.

Dr. Debus, Ross, Hock and Directors Walter Kapryan, Launch Operations; Raymond L. Clark, Design Engineering; Frederic H. Miller, Installation Support; Peter A. Minderman, Technical Support; and George A. VanStaden, Administration, will participate in a closing summation on Friday.

# # #

NOTE: Media representatives are invited to attend seminar sessions. For specific information on daily programs please telephone 867-2468.

NEWS

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Dick Young
305 867-2468

FOR RELEASE:
July 11, 1972
Release # KSC-173-72

KSC TO APPLY SPACE TECHNIQUES TO EARTH PROBLEMS

KENNEDY SPACE CENTER, Fla.--Advanced planning is underway at KSC for the application of space-developed remote sensing techniques to a wide spectrum of down-to-Earth problems in Florida, Georgia and other regions of the Southeast.

The projects number approximately 18 and range from monitoring the impact of the flooding of a mangrove island by the Brevard County Mosquito Control District to a study of the impact of industrialization and urban growth for the Planning Commission of Albany-Dougherty County, Georgia.

The overall program was discussed by Dr. Kurt H. Debus, KSC Director, in a budget hearing before the House Committee on Science and Astronautics' Subcommittee on Manned Space Flight on March 2, 1972:

"Throughout our planning," said Dr. Debus, "we remain constantly alert to possible applications of space technology to the private sector. Initially, we are concentrating on the application of remote sensing to environmental and resource problems.

"NASA Headquarters recently approved a joint study by KSC, the State of Florida and the U.S. Geological Survey to examine the applications of remote sensing to the management of natural resources and environment...We are expanding this activity to cover a variety of problems common to the Southeastern U.S. and Caribbean region."

Implementing this program is J. P. Claybourne, Manager of the Earth Resources Program in KSC's Directorate of Center Planning and Future Programs.

The basic tool of the KSC program is NASA-6, a twin Beechcraft aircraft modified to carry cameras and other instruments in the bottom of its fuselage. The program will use multispectral photographic equipment, thermal scanners, spectrometers, L-band radar and other sensing devices to provide data for use by participating agencies.

-more-

Visible light constitutes only a very small segment of the electromagnetic spectrum. This spectrum ranges from relatively low frequency radio, television, radar and infrared waves to the ultraviolet, x-ray and gamma ray emissions on the high-frequency side of the scale.

Man's eyes are blinded to the emissions on each side of the visible wavelengths and the development of remote sensors spanning the entire spectral range opens up new "windows" through which to view the Earth and the universe.

Side-looking radar can be used to map geological formations through clouds and vegetation, x-rays aid medical diagnosis, gamma-ray counters can lead uranium prospectors to radioactive deposits and infrared scanners can detect volcanic activity, pinpoint forest fires through heavy smoke and detect crop disease.

Among the more familiar applications of remote-sensing techniques is the use of infrared color film to detect diseased or stressed vegetation before deterioration becomes visible to the naked eye.

This technique will be used in a project being conducted in conjunction with the Brevard County Mosquito Control District on an island in the Banana River south of the Cocoa Beach Recreation Complex.

Claybourne explained that salt water mosquitos will not lay their eggs in water but find mud flats prime nesting spots. The Mosquito Control District is to flood the mangrove-covered island in July to destroy mosquito breeding grounds. But flooding improperly done can destroy the mangroves which hold the island together and play a vital role in the aquatic life chain.

"The purpose of the project is to accomplish the desired mosquito control without destroying the mangroves," said Claybourne. Mangroves can adapt to the flooding by raising aerial roots and infrared photography from NASA-6 will be used to spot symptoms of stress before they become visible to the naked eye.

Healthy trees will appear red or pink in the topsy-turvy world of infrared. trees under stress change to other contrasting colors such as grey or blue.

With these signs to go by, the MCD is enabled to match the pace of flooding to the adaptive response of the mangroves as they send up their aerial roots.

Other projects on the KSC list, with cooperating agency, techniques and objectives, include:

Brevard County Development Administrator. Determination of the most efficient method of monitoring rural and urban development. Black and white and color infrared photography.

Brevard County Development Administrator. Determination of the extent of flooding in the St. Johns River flood plain. Infrared photography will be used to detect vegetation, silt lines and high water marks left by flooding conditions.

Brevard County Development Adminstrator. Monitor beach erosion. Color and color infrared photography will be used to delineate beach erosion and current patterns and determine corrective action.

Brevard County Development Administrator. Detection of sedimentation and vegetation in shallow waterways. Color and color infrared photography will be used in an attempt to establish an economical and effective maintenance program to keep waterways open.

Brevard County Mosquito Control Distict, location of mosquito breeding bodies of water hidden by vegetation, L-Band radar or passive radiometer.

Canaveral Port Authority, monitor sediment deposits and shoal movements which block channels. Color photography will be used to determine its suitability as a tool indicating changes in the clearance of ship channels.

East Central Florida Regional Planning Council. Color and infrared photography will be used to supplement on site monitoring of the increasing contamination of water systems in the Oklawaha River basin.

Brevard County Agricultural Extension Office. Color infrared photography will be used to detect previsual symptoms of stress in freeze damaged citrus. This will permit harvesting of frozen fruit and preservation of undamaged fruit.

Georgia Department of Mines, Mining and Geology. Accurate and comprehensive geological maps of Georgia are not available. Color and infrared photographs will be made of the state to help in the location of mineral deposits, sink holes and construction of hydrological maps and special purpose maps to assist planners.

Georgia Natural Areas Council. Black and white and color infrared photography will be used to acquire information leading to the protection and preservation of selected rivers and streams with special esthetic, scientific and recreational values.

U.S. Fish and Wildlife Service. Color and color infrared photography will be used to determine the density and distribution of spartina grass in a refuge area for the dusky seaside sparrow, threatened with extinction because of changes to habitat.

Division of Forestry, State of Florida. Means of immediate display of thermal scanner data locating and delineating forest fires concealed by thick smoke will be explored. Such current data would be of great value in deploying fire fighting equipment and personnel.

-more-

Florida Department of Agriculture. A determination will be made of the value of spectrometers and multi-spectral photography in early detection of the coconut palm lethal yellowing disease.

Florida Department of Agriculture. A determination will be made of the value of spectrometers and multi-spectral photography in the early detection of young citrus grove decline.

In the latter two projects, early detection of the diseases will permit corrective action to prevent their spreading.

The results of the aircraft studies will be correlated with data to be returned by the ERTS-A spacecraft scheduled for launch from the Western Test Range later this month.

Claybourne stressed that the remote sensing program is in the research and development stage.

"We're still trying to find out what we can do within the state of the art. We're trying to determine where remote sensing techniques are practical and where they aren't."

Results of the KSC aerial surveys and information obtained on a global scale by the ERTS-A spacecraft will help to provide a data base for the much more sophisticated sensors to be carried in the Earth Resources Experiments Package (EREP) to be flown in the Skylab Orbital Workshop scheduled for flight in 1973.

Hopefully, this groundwork will pave the way for development of a fully operational satellite system which will monitor and provide the data for a more intelligent and efficient management of the Earth's resources.

# # #

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Dick Young
305 867-2468

FOR RELEASE:
July 14, 1972
Release # KSC-175-72

TEACHERS TO ATTEND SPACE EDUCATION WORKSHOP

KENNEDY SPACE CENTER, Fla.--A workshop to help teachers translate space age information, science, technology and new discoveries into useable form for the classroom will be held at the Kennedy Space Center July 17 - 28.

The workshop is sponsored by the Florida Space Education Advisory Council in cooperation with KSC's Educational Programs Branch and the Department of Education at Florida Technological University.

The comprehensive curriculum includes rocketry and propulsion systems, unmanned satellites and probes, space communications and telemetry, manned space flight, human and biological factors involved in manned space flight, Apollo mission results, ecology of the earth from space, and future space programs.

Many of the briefings will be conducted in operational areas such as the Vehicle Assembly Building, Launch Control Center, the Manned Spacecraft Operations Building, Delta Launch Complex 17, Atlas- Centaur Launch Complex 36 and the Flight Crew Training Building.

The instructional staff includes Dr. John Armstrong, Dr. Douglas Brumbaugh, Dr. C. B. Gambrell and Dr. Anthony Tesori, all of Florida Technological University; Richard Coup, Ben Casados and Robert E. Wilson, all with the Space Science Education Project, Oklahoma State University, and Tom Anderson, Student Lecture Program, Trans World Airlines.

NASA/KSC personnel serving as instructors will include Clifford A. Bethea, Program Resources Management; Darwin V. Brown, Space Shuttle Task Group; Billy H. Childers, Support Operations; John P. Claybourne, Earth Resources; John T. Conway, Information Systems Directorate; Raymond R. Corey, Educational Programs Branch.

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Robert E. Gorman, Director, Support Operations; Gordon L. Harris, Chief of Public Affairs; Edward J. Hecker, Deputy Chief, Apollo Space Vehicle Office; William D. Nixon, Educational Programs Branch; Ron Paulus, Experiments Branch; Donald E. Phillips, Chief Test Supervisor, Launch Operations; Harold R. Pyles, Chief Operations Control Branch.

William H. Schick, Test Supervisor, Launch Operations; Donald C. Sheppard, Chief, Spacecraft and Vehicle Support Operations Branch, Unmanned Launch Operations; Jay M. Viehman, Educational Programs Branch, and A. N. Wiley, Chief, Industrial Area Operations Staff.

Participating from the Manned Spacecraft Center will be Larry E. Thompson, Chief of the Flight Crew Operations Branch.

# # #

JUL 17 1972

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NEWS

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Dick Young
305 867-2468

FOR RELEASE:
July 14, 1972
Release # KSC-176-72

MARSHALL PERSONNEL TO AUGMENT SPACEPORT PAYROLL

KENNEDY SPACE CENTER, Fla.--Components of the Skylab Orbital Workshop will begin arriving at KSC early this fall and more than 20 per cent of the hundreds of personnel from the Marshall Space Flight Center in Huntsville, Ala., who will be needed to process them are already on hand.

The NASA center in Alabama is responsible for developing all Saturn Workshop elements, including the Orbital Workshop itself, the Airlock Module, Multiple Docking Adapter and the Apollo Telescope Mount.

It is also responsible for developing the more than 50 experiments to be carried on the Workshop and integrating them into flight hardware.

Marshall maintains a Resident Office at KSC with about 15 permanent personnel. This number will be expanded by 30 times until the Orbital Workshop is launched late next spring.

According to Cecil Houston, Acting Deputy Manager, MSFC Resident Office, 83 Civil Service and contractor employees from Marshall are already at KSC. This includes 70 with the Apollo Telescope Mount Launch Preparation Group and 13 with the Saturn Workshop Launch Checkout and Support element.

When the hardware begins arriving this fall, the ATM group will be increased to a total of 350. This includes 100 Civil Service personnel and 250 contractor employees. The contractor breakout includes 75 from the Martin Marietta Company, 125 from the General Electric Company and 25 from other companies with smaller responsibilities in the program.

The group working on Workshop checkout and support will include 96 at its peak. This includes 38 Civil Service, 54 from the Martin Marietta Company and 4 with the McDonnell Douglas Corporation.

The Skylab buildup will include an additional 250 employees in the form of factory checkout teams provided by the contractors. McDonnell Douglas, responsible for the Workshop and the Airlock Module, will have approximately 200 employees in this group. The remaining 50 will be from the Martin Marietta Company, which is responsible for the Multiple Docking Adapter and cluster payload integration.

# # #

AUG 24 1972

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Dick Young
305 867-2468

FOR RELEASE:
Upon receipt
Release #KSC-240-72

KSC MAINTENANCE TECHNIQUES OFFER HOME PROTECTION

KENNEDY SPACE CENTER, Fla.--With miles of structural steel to protect from a highly corrosive seashore environemnt and acres of painted walls to keep spic and span, constant maintenance is the name of the game at the nation's Spaceport.

And many of those techniques offer long term protection, dollar savings and short cuts to homes and businesses.

Like the beachfront homeowner, KSC is confronted with maintaining steel structures which corrode rapidly when exposed to the salty environment of ocean air.

"Steel pad structures are particularly vulnerable," said Ralph R. Uhrmacher, Boeing Company corrosion control engineer in KSC's Maintenance Engineering Branch, a part of the Installation Support Directorate.

"They're expensive and launch critical. They must withstand the blast temperatures of liftoff and survive in an extremely rigorous environment.

Such major Complex 39 structures as the Mobile Service Structure and Mobile Launchers have been given the most effective anti-corrosion treatment available. The cost runs approximately $1.50 a square foot but boatowners, for example, who watch their steel trailers practically melt away under constant dunkings in salt water, might find the results worth the expense.

This treatment calls for sandblasting the steel to remove corrosion products and provide a rough surface. The material is then sprayed with a zinc-rich inorganic plant which seems to do better without a top coat.

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"It is essential that you sandblast," said Uhrmacher, "and it is best to apply the paint in the form of a spray." And the inorganic zinc paints appear to hold up much better than organic ones.

The process is available commercially and is admittedly expensive. But the investment pays off if items prepared this way have a high cost and a long service life.

"This is a wonderful way to prepare your boat trailer," said Uhrmacher.

Inspections of facilities treated in this manner turn up minimal corrosion effects.

Heavy equipment and automobiles, too, require protection against the elements but these items have a predictable lifetime, are not launch critical and the cost of the more expensive treatment can't be justified.

A new treatment technique has been in development and test for items in this latter category for approximately eight months, and looks very promising.

The newer treatment calls for first removing loose rust and paint. Next, the prepared areas only are lightly sanded. A coat of self-priming lacquer is applied to the prepared area. Finally, the whole unit is topcoated. There is practically no preparation of the undamaged paint. Of course, the surface is washed before starting the repaint operation.

The new primer was described by Uhrmacher as a "very unusual type of lacquer which adheres to a poorly prepared surface. This permits us to paint four automobiles, for example, in the time formerly required for one," said Uhrmacher. Final painting can follow within 30 minutes of applying the primer coat. He described the paint as "a modified polyester manufactured only by a small and little known company."

KSC's scores of concrete block buildings are maintained with basically the same materials as used by householders. Exterior masonry is covered with white latex paint with an acrylic base.

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"Mildew is a problem and we use paints with a mildewcide with a non-metallic base," said Uhrmacher. Mercury was the traditional agent used until the dangers of the material became known. "Outside paints should contain large amounts of mildewcide."

KSC's acres of interior wall space are maintained with interior latex paint applied by rollers.

Uhrmacher recommends that maximum coverage should not exceed 400 square feet per gallon.

"There's no prize for stretching paint coverage," said Uhrmacher. "This just means additional coats will be required."

He also recommends the "cross-roll" technique used by KSC's maintenance force.

This calls for rolling on the paint in horizontal swaths for a distance of up to perhaps 12 feet.

"At the end of a half hour," explained Uhrmacher, "the paint will be not quite wet. Then you come back, add just enough paint to keep the roller wet and re-do the area with vertical swaths.

"This smooths out the hills and the valleys and you'll be surprised at the results. The paint distribution is smoother and you get one-coat coverage but you have to use lots of paint in that first coat."

Uhrmacher says "goofs" with painting exterior metallic trim can be avoided. The treatment on galvanized metal prevents "white rust" but causes poor adhesion. Paint literally falls off unless the surface is properly prepared.

The treatment? An eight to 10 per cent phosphoric acid solution or a proprietary material using a phosphoric acid base can be applied to the greasy metal and left for approximately 30 mintues before washing it off.

The treatment acts as a "bond creator" and the paint applied on top stays on and on and on.

Concrete blocks are a major building material in Florida and an inbuilt problem is preventing mortar joints from leaking. This can be done by using stucco or filling the blocks but this is the rough way to go. The texture of the blocks is destroyed by such treatment.

An easier solution is "flooding on" a silicone resin as a first coat. Concrete blocks soak up paint like a sponge but the silicone resin material is water repellent and acts as a sealer.

This treatment provides waterproofing and preserves the textures of the blocks. A latex-base paint is then applied on top the sealer.

He noted that latex is preferred to oil base paints because the oil paints tend to have an odor and be flame-susceptible. An oil base primer, however, is used on new wood as a primer but this is followed up with a coat of a "good, exterior latex."

Uhrmacher does not recommend the use of a paint with a "built-in primer" on new wood.

Uhrmacher, a resident of Satellite Beach, has been in corrosion control work since 1950, working in the field commercially for 18 years before coming to work at the nation's Spaceport in 1968.

# # #

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

FOR RELEASE:
August 22, 1972
Release #KSC-245-72

305 867-2468

APOLLO 17 PRELIMINARY TIMELINE

Apollo 17 astronauts are scheduled to touch down on the Moon's surface at 2:55 p.m. EST, Dec. 11, 1972, where they will conduct the sixth and final scientific lunar expedition planned in the Apollo program.

Astronauts Eugene A. Cernan, Ronald E. Evans, and Harrison H. (Jack) Schmitt are set for liftoff from NASA's Kennedy Space Center, Fla., at 9:53 p.m. EST Dec. 6 with the objective of exploring the Taurus-Littrow area of the Moon deploying scientific experiments on the lunar surface, and conducting extensive experiments from lunar orbit.

Spacecraft Commander is Navy Captain Cernan. Evans, a Navy Commander, is the command module pilot and civilian Schmitt is the lunar module pilot.

Taurus-Littrow, a combination mountainous highlands and lowlands valley region, is an important site in completing the scientific network on the Moon and will offer the opportunity to sample materials from large, steep-sided mountains and dark non-mare material filling the valleys. The landing point is 20° 10' north and 30° 45' east of the center of the Moon as viewed from Earth.

The first lunar surface expedition is planned to begin at about 6:33 p.m. EST on Dec. 11. The second and third are scheduled for 5:13 p.m. and 4:33 p.m. EST on December 12 and 13, respectively. The lunar roving vehicle will be used by Cernan and Schmitt on all three of the seven-hour trips.

The lunar module is scheduled to liftoff the Moon at 5:56 p.m. EST, December 14, and dock with Evans in the Command Service Module at 7:53 p.m.

During the return flight to Earth, Evans will maneuver outside the Apollo spacecraft to retrieve film from the service module experiment bay at about 2:33 p.m., December 17.

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Splashdown is planned for 2:24 p.m. on Dec. 19 at 17.9° South Latitude and 166° West Longitude in the Pacific Ocean.

Longest of any of the Apollo flights, total mission duration is planned for 304 hours and 31 minutes.

Following is the preliminary timeline of Apollo 17 events:

Event	December Date		EST
Launch	6		9:53 p.m.
Translunar Injection	7		1:14 p.m.
Lunar Orbit Insertion	10		2:49 p.m.
Descent Orbit Insertion #1	10		7:06 p.m.
Descent Orbit Insertion #2	11		1:54 p.m.
Lunar Landing	11		2:55 p.m.
Start EVA 1	11		6:33 p.m.
Start EVA 2	12		5:13 p.m.
Start EVA 3	13		4:33 p.m.
Lunar Liftoff	14		5:56 p.m.
Transearth Injection	16		6:33 p.m.
Transearth Coast EVA	17	About	2:33 p.m.
Splashdown	19		2:24 p.m.

# # #

SPECIAL INFORMATION FOR
NASA APOLLO 17 ESCORTS/BRIEFERS

We expect more than 40,000 people on Center for Apollo 17, including the press, dignitaries, educators, scientists, industrialists, NASA employees and dependents. Over 40 buses will carry our friends from Marshall, MSC Goddard, Lewis, Langley, Ames, Flight Research Center and the Headquarters. Some 10,000 will be transported to and from the VAB Viewing Site in a fleet of 300 leased buses. More people, more buses, more of everything. And at night.

As in previous Apollo events, you represent the agency and the Center to our guests. In fact, you may be the only NASA member the guest will ever meet. Hence, what you say, what you do becomes critically important in our effort to enhance understanding of the national space program.

In all likelihood this will be the last time we will launch men to the Moon; certainly there will be a long interval before the next such mission. So there is understandable tendency to talk of Apollo 17 as if it is an end. It is not. The mission concludes a highly successful program unique in our nation's history, which has created the tools, and formed the teams, which will continue space exploration on a more stable, more efficient, and more rewarding basis. Please keep that in mind and convey that message to our guests.

Even as KSC counts down Apollo, the vehicles and spacecraft for Skylab are in process for launch next spring. ULO is counting down two more launches - Centaur with Intelesat and Delta with Nimbus (at WTR) - that will occur later in December. The Government-industry organization for ASTP - our first international manned mission - is gearing up for the 1975 milestone event. And KSC, MSC, MSFC are well into planning for the Space Shuttle. So there is a bright and busy future and much to talk about. We ask that you talk factually and directly, trying to avoid our common error of interpreting our mission in the peculiar language of the trade.

If you don't know the answer, please tell the guest that you will get the facts later or take name and address, and turn this information in to the Guest Center for follow-up correspondence.

You may be asked why NASA accommodates so many people at these launches. The answer is quite simple. Because so many people want to see them. In point of fact, we could not begin to invite all the people who requested access- for every person on Center at this launch at least two more had to be turned down.

The pressure was greater than ever before, which is why we've stretched the facilities as far as possible with due regard to safety.

There won't be enough seats for all the people at the VAB Site. Please express our apologies, although in this setting more people seem to stand than sit in any case.

You will see a very large assemblage of buses. We have put into service all the over-the-road buses available to KSC and some school type vehicles as well. Many of the buses were chartered by groups of guests, including some of those arriving from other NASA centers.

Because of the crowd and the darkness - there should be sufficient light to avoid accidents - we ask that you be especially attentive to your guests, helping them on and off the vehicles, and making sure you can return them to the buses in event of an unexpected problem. Ask your guests to respond promptly to your instructions.

Talk to the bus driver. Ask him to observe the posted signs and the signals or instructions of the Security Patrol. He also has a responsibility for the safe transportation of guests.

If you need assistance, ask the nearest Security Patrolman. He can summon help.

Be sure you understand what is expected of you before you embark with your guests. Then stay with the system.

Thank you for your personal effort to ensure this is the success we expect it to be.

AUG 24 1972

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Dick Young
305 867-2468

FOR RELEASE:
August 22, 1972
Release # KSC-246-72

SKYLAB 2 BOOSTER ARRIVES AT KSC

S-IB-204

KENNEDY SPACE CENTER, Fla.--The Saturn IB booster for Skylab 2 arrived at KSC aboard the NASA barge Orion Tuesday morning and was immediately offloaded for processing in the Vehicle Assembly Building.

This is the first stage of the two-stage launch vehicle which will orbit a manned Apollo spacecraft for rendezvous and docking with the nation's first orbital workshop during the Skylab missions in 1973.

The stage arrival marks the first time in nearly four years that a Saturn IB has been in the processing stage at KSC and the first time that the 1.6 million pound thrust launch vehicle will have undergone flight preparation in the VAB.

The Saturn IB was last launched by KSC during the first manned mission of the Apollo lunar landing series - Apollo 7. Astronauts Walter M. Schirra, Donn F. Eisele and Walter Cunningham were launched on October 11, 1968, on an 11-day Earth orbit mission which proved the flightworthiness of the Apollo command/service module.

The Skylab 2 booster will undergo preliminary processing in the VAB transfer aisle this week and be erected atop a 128-foot-tall pedestal on Mobile Launcher 1 on August 31.

A total of three Saturn IBs will be launched from Complex 39's Pad B during the Skylab Program. The orbital workshop will be launched by a Saturn V from Pad A.

A total of 15 Saturn I and IB launch vehicles were flown by KSC during the 1960s. These launches were from Complexes 34 and 37 at Cape Kennedy, now in the process of dismantling.

# # #

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

FOR RELEASE:
August 30, 1972

C. T. Hollinshead
305 867-2468

NOTICE TO MEDIA:

The Public Information Office has moved from the News Center (parachute building) to Room 1207 in the KSC Headquarters Building. Though phone service may be temporarily interrupted, during the move, 867-2468 will remain the office phone number.

Members of the news media wishing to conduct business with the Information Office should proceed directly to the Headquarters Building after entering the KSC Gate. Three-hour guest parking spaces are available on the street in front of the Headquarters Building or press may use the employee parking area in the rear of the building if all of the visitor spaces are filled.

# # #

The Principal Investigator in the Brevard ERTS experiment is John W. Hannah, Brevard County Development Administrator. Acting as co-investigator is Dr. Garland L. Thomas, a Brevard County Planning Department consultant.

"The basic purpose of our participation is the development of analysis techniques required to use remote sensing data in urban and regional planning," said Hannah.

The data, indicated Hannah, is expected to be useful in a number of fields, including land use planning, agriculture, forestry, hydrology and water management and environmental quality.

"One of the county's greatest problems," said Hannah, "is that of water resources. Cocoa has well fields located in Orange County, Titusville obtains its water from local well fields in North Brevard and Melbourne and the South Brevard area it serves is dependent upon Lake Washington.

"We feel the ERTS-1 data will be helpful in making an inventory and monitoring all our water resources, their quality, their fluctuations and the causes of those fluctuations. This will help us structure a program to conserve these resources and use them wisely."

ERTS-1 data is also to provide an information base for regional planning.

The East Central Florida Regional Planning Council is composed of Brevard, Indian River, Lake, Orange, Osceola and Seminole Counties. Hannah and Dr. Thomas will serve as conduits of pertinent data concerning the entire region.

"Visual interpretation of images of the East Central Florida region made on successive passes will be used to observe changes as a function of time due to the influence of Disney World on this entire region," said Hannah. "Changes in transportation facilities, transportation needs, motels and other tourist-related activities will be observed."

"Systems will be designed to use the continual surveillance provided by satellite in a day-to-day planning type work program, with logs to be kept concerning items of interest to development and environmental planning."

The logs would include such subjects as highway alignment and construction progress, new urban and rural development, crop acreage, water table fluctuation and vegetation destruction as a result of fire or disease.

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Much of the value of the ERTS data comes from its imagery in regions of the spectrum not visible to the naked eye. Visible light constitutes only a very small segment of the electromagnetic spectrum. This spectrum ranges from relatively low frequency radio, television, radar and infrared waves to the ultraviolet, x-ray and gamma ray emissions on the high-frequency side of the scale.

Man's eyes are blinded to the emissions on each side of the visible wavelengths and the development of remote sensors spanning the entire spectral range opens up new "windows" through which to view the Earth and the universe.

In the near infrared region being scanned by ERTS-1, for example, water shows up black and healthy vegetation appears pink or red. But sick trees or plants will appear grey or blue and the symptoms of disease are evident in infrared before they become visible to the naked eye. Barren land, cities and industrial areas show up as green or grey.

Information from ERTS-1 will be correlated with ground observations, high-resolution aerial photographs and the Earth Resources Experiments Package (EREP) to be flown aboard the Skylab orbital workshop missions scheduled for 1973.

"A complete analysis of all levels of data," said Hannah, "will increase the accuracy, justification and implementation of planning procedures and recommendations. This would result in a more uniform, economical and well-planned environment in which the population of the region would reside."

The Brevard/East Central Florida Regional Planning Council experiment is one of three ERTS-1 projects in which KSC's Earth Resources Office under the direction of John P. Claybourne acts as scientific monitor.

The others are a water resource management study with the U. S. Geodetic Survey in South Florida and a study of water pollution in St. Thomas Harbor in the Virgin Islands. The latter study is being conducted in conjunction with the Grumman Ecosystems Corporation and the Marine Resources Development Foundation, U. S. Virgin Islands.

The Brevard County Planning Department and other agencies located in Florida and Georgia already have close ties with KSC's Earth Resources Program Office through a remote sensing program using KSC's NASA-6, a twin-engine Beechcraft aircraft modified to carry cameras and other instruments in the bottom of its fuselage.

Underway or in advanced planning stages are 18 separate projects being conducted by KSC in conjunction with the Brevard County Planning Department, Brevard County Development Administrator, Brevard County Mosquito Control District, Canaveral Port Authority, East Central Florida Regional Planning Council, Brevard County Agricultural Extension Office, Georgia Department of Mine, Mining and Geology, the Georgia Natural Areas Council, U. S. Fish and Wildlife Service, State of Florida Division of Forestry, and Florida Department of Agriculture.

Among the purposes of NASA's Earth Resources Program is the determination of Earth resource data best acquired from spacecraft and the development of the technology for surveying Earth's resources from space.

ERTS-1 is the first of its breed with the second scheduled for launch in 1973.

Its onboard sensors include two separate systems viewing the earth in corresponding 185-kilometer (115-mile) square swaths.

One system, a television system taking images in three bands of the spectrum, has been temporarily turned off pending an investigation of a power surge earlier in the mission.

The other system is returning high resolution photographs in four separate bands to the control facility at Goddard in a steady stream.

Each photograph covers 34,000 square kilometers (13,000 square miles) and the United States can be covered in approximately 500 pictures as opposed to the 500,000 required from high altitude aircraft.

Global coverage is provided on a repetitive basis every 18 days.

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The Air Force rally will be held in the Base Theater at Patrick AFB at 2 p.m. on September 20 with Maj. Gen. David M. Jones, AFETR Commander, as principal speaker.

The NASA rally will be held in the KSC Training Auditorium at 1 p.m. September 21 with Dr. Kurt H. Debus, KSC Director, as featured speaker.

Present for both rallies will be Dr. Maxwell King, President of Brevard Community College and Chairman of the United Way of Brevard County, as well as representatives of the National Health Agencies, United Way and International Service Agencies.

In a recent memorandum to KSC personnel, Dr. Debus noted: "The KSC goal for this drive has been established as $85,000 and it is most important that we attain and possibly exceed the objective. I urge your personal attention and wholehearted support to this worthy endeavor."

The Combined Federal Campaign is designed to meet the employees' wishes for a single campaign, reduce costs to the government and increase contributions to voluntary health and welfare agencies.

The distribution plan calls for 15.8 per cent of the funds to go to the National Health Agencies, 77.8 per cent to the United Way and 6.5 per cent to go to the International Service Agencies.

# # #

The last major procedure in this checkout took place when contractor personnel lubricated connecting pins on the vehicle tracks to prevent pin and tread shoe wear-out.

Final preparations also included parking Transporter 1 outside the VAB High Bay containing Apollo 17, and positioning Transporter 2 under the Mobile Service Structure at its park site along the Crawlerway. (The MSS was moved to the launch pad the day after rollout, providing checkout crews additional access to the 36-story space vehicle.)

Rollout morning started early for Harry Bell, SO's mechanical system engineer for the transporter. Beginning at one o'clock in the morning, or six hours before rollout, Bell helped coordinate the transporter's move into the High Bay to pick up the space vehicle and launcher.

At 3 a.m. Shorty Hughes assumed his position at a console within the transporter's control room, making sure that the entire complex move would be conducted in accordance with preestablished guidelines.

Later, Marty DiPietro, the transporter's electrical system engineer, slid into his control room chair, ready to report electrical malfunctions to the chief engineer coordinating the overall move activity from the Complex Control Center. (The CCC is located in the Launch Control Center.)

Bill Childers, the SO transporter team leader, climbed aboard the vehicle's forward control cab about a half hour before rollout, when the transporter was in the process of jacking the mobile launcher nearly four feet off of its six support pedestals in High Bay 3.

After withdrawing from the VAB with its cargo, the transporter paused for several minutes while its chassis was jacked down to the one foot normal traveling height requirement.

For the next four and a half hours, Childers and his three-man team troubleshot problems, monitored the operational contractor and kept other Support Operations personnel, stationed in the Complex Control Center, abreast of activities.

Childers spent the day riding in the forward operator's cab, and periodically visited other duty stations to verify that all systems were working properly.

DiPietro and Hughes monitored their respective activities within the transporter's control room, located near the middle of the vehicle.

Bell shuttled between the control room and the Crawlerway, verifying that the vehicle's treads were operating properly. The Crawlerway has always been special to Bell, who helped supervise its construction during the 1960's when he was attached to the U. S. Army Corps of Engineers.

Childers noted that the transporter's extremely slow operating speeds usually disorient control room personnel, who must look out a side window to determine which direction they are traveling. "In fact, they have to be told when the vehicle starts moving," he added.

During last week's move to the launch pad, the transporter traveled at an average speed of .7 miles per hour, slowing to .3 miles per hour at hard surface crossings such as the Pad B turnoff.

At Launch Pad A, the transporter was slowed from .7 to .5 miles per hour as it prepared to climb the inclined ramp. Two navigational aids, ground observers and a 400-foot-long section of rope positioned along the ramp, guided the transporter to the six support pedestals which would receive the launcher and rocket.

Talking with Childers via radio and in person, Support Operations system engineer Wayne Parris, of Titusville, determined whether the line-up maneuver was being performed within the required two-inch tolerance allowed. Parris, and his alternate, Bob Laakao, also monitored the usual slight vibrations encountered when a launcher is lowered on to its support pedestals.

Parris is SO's system engineer for the three mobile launchers, the Mobile Service Structure, their support pedestals, flame deflectors, slide wire and launch pad blast room.

A highlight of the rollout took place early in the move when Apollo 17 Astronauts Eugene Cernan, Ronald Evans and Harrison Schmitt took turns driving the transporter.

The four-man team indicated it's looking forward to transporting Skylab and Space Shuttle hardware from the Vehicle Assembly Building to the launch pads, but noted it will have some homework to do in learning about the new configurations.

The teams' enthusiasm probably was best summed up by Shorty Hughes, who said when referring to the upcoming projects: "Bring 'em on."

# # #

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

C. T. Hollinshead
305 867-2468

FOR RELEASE:
September 8, 1972
Release #KSC-259-72

AUTOIGNITION TESTS SCHEDULED

KENNEDY SPACE CENTER, Fla.--Behavioral characteristics of certain fuels will be studied at Kennedy Space Center during tests scheduled for September and October.

Mixtures of liquid oxygen and RP-1 and of liquid oxygen and liquid hydrogen will be poured together to study autoignition characteristic of the fuels. Two hundred and forty pound mixtures of liquid oxygen and RP-1 and 240 pound mixtures of liquid oxygen and liquid hydrogen will be used in the tests.

RP-1, liquid oxygen, and liquid hydrogen are widely used fuels in the space program. They also have a variety of commercial uses, and the data gathered from the autoignition tests will be made available to commercial as well as government users of the fuels.

# # #

NEWS

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Dick Young
305 867-2468

FOR RELEASE:
September 20, 1972
Release #KSC-268-72

SKYLAB ARRIVAL SCHEDULED FRIDAY

KENNEDY SPACE CENTER, Fla.--The Skylab Orbital Workshop which three, three-man crews will call "home" for periods of up to eight weeks during 1973 is scheduled to arrive at Port Canaveral aboard the Point Barrow on Friday.

The Orbital Workshop, a modified Saturn V third stage, has been in transit from the McDonnell Douglas Co. plant at Huntington Beach, Calif., since September 8.

The Orbital Workshop will be offloaded onto a KSC barge Friday in preparation for the move up the Banana River to the Vehicle Assembly Building on Saturday morning.

It is scheduled for arrival at the VAB turn basin at approximately 1:00 p.m. Saturday and will be moved into the VAB later in the day.

In the VAB, the workshop will be given a receiving inspection before it is mated with its Saturn V launch vehicle on September 28.

The Orbital Workshop has a living and working area of 316.5 cubic meters (12,763 cubic feet) and will be orbited during the Skylab 1 mission to form the nucleus of the Skylab cluster which will carry out a broad spectrum of experimental investigations and gain a better understanding of the requirements for a permanent man-made platform in space.

The workshop and associated equipment are now scheduled for insertion into a 435-kilometer (270 statute mile) circular orbit by a two-stage Saturn V in the Skylab 1 mission scheduled for launch on April 30.

Launch is to be from Complex 39's Pad A.

-more-

Approximately 24 hours later, a Saturn IB will be launched from Pad B to carry a three-man crew aboard an Apollo command/service module into space to rendezvous and dock with the orbiting workshop.

Skylab 2 Astronauts Charles Conrad Jr., Dr. Joseph P. Kerwin and Paul J. Weitz will enter the workshop through the airlock module, activate its systems and spend up to four weeks in space before returning to Earth in the Apollo spacecraft.

The Skylab 1 Saturn and the Saturn IB for Skylab 2 have already been erected on mobile launchers in VAB high bays.

The Apollo spacecraft for Skylab 2 arrived at KSC on July 20 and is now undergoing processing in the Manned Spacecraft Operations Building.

The Apollo 17 space vehicle, scheduled for launch at 9:53 p.m . EST on December 6, is now undergoing checkout at Complex 39's Pad A, giving KSC three Saturn space vehicles "in flow" for the first time since the peak of Apollo launch activity in 1969-70.

# # #

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Dick Young
305 867-2468

FOR RELEASE:
September 26, 1972
Release # KSC-270-72

MOST OF SKYLAB HARDWARE NOW AT SPACEPORT

KENNEDY SPACE CENTER, Fla.--The successful launch of Apollo 17 on the final manned lunar exploration mission on December 6 is the Spaceport's most pressing goal but the pace of activity on the Skylab Program is on the upswing.

The arrival of the Orbital Workshop and its Apollo Telescope Mount late last week brought most major items of Skylab hardware into "flow" at KSC and the remaining pieces will arrive before the end of October.

The only major items of Skylab hardware yet to be received are the Airlock Module/Multiple Docking Adapter (AM/MDA) and the Instrument Unit for the Skylab 1 Saturn V which will launch the workshop.

The Multiple Docking Adapter provides docking facilities for the Apollo spacecraft with the Orbital Workshop and the Airlock Module serves as a pressurized passageway between the MDA and the workshop. These assemblies are to arrive at the Cape Kennedy aboard a Guppy aircraft on October 9.

The Instrument Unit - which controls the Saturn V during powered flight - is due to arrive on October 22.

The Orbital Workshop has a living and working area of 316.5 cubic meters (12,763 cubic feet) and will be orbited during the Skylab 1 mission to form the nucleus of the Skylab cluster which will carry out a broad spectrum of experimental investigations and gain a better understanding of the requirements for a permanent man-made platform in space.

The workshop and associated equipment arrived at Port Canaveral aboard the Point Barrow on September 22 and were moved up the Banana River to the Vehicle Assembly Building the following day.

It is now in the VAB undergoing preparations for mating with its Saturn V launch vehicle on September 28.

The Apollo Telescope Mount - the first manned scientific telescope in space - arrived at the Cape Kennedy Skid Strip via Guppy on September 22 and

was immediately moved to the Manned Spacecraft Operations Building where it was placed in a "clean room" to undergo an extensive checkout.

The ATM was received from the Manned Spacecraft Center where it had been since mid-July undergoing extensive thermal testing in a vacuum chamber.

The ATM is to be moved to the VAB in January for mating with the Orbital Workshop.

The Skylab orbital assembly, consisting of the Workshop, ATM, airlock module and docking adapter, will be launched by a two-stage Saturn V from Pad A at Complex 39 in late April, 1973.

Approximately 24 hours later, a Saturn IB will be launched from Pad B to carry a three-man crew aboard an Apollo command/service module into space to rendezvous and dock with the orbiting workshop.

The Skylab Saturn V and the Saturn IB for Skylab 2 have already been erected on mobile launchers in VAB high bays. The Apollo spacecraft for Skylab 2 is now in the Manned Spacecraft Operations Building undergoing checkout.

A total of three manned visits are planned to the workshop cluster. The first visit - by Astronauts Charles Conrad Jr., Dr. Joseph P. Kerwin and Paul J. Weitz - will last for up to four weeks and the remaining two may last as long as eight weeks.

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NEWS

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Dick Young
305 867-2468

FOR RELEASE:
Se October 1, 1972
KSC-282-72

INNER PLANET LAUNCH SCHEDULED FOR OCTOBER, 1973

KENNEDY SPACE CENTER, Fla.--An Atlas-Centaur will be launched from Cape Kennedy's Complex 36-B in October, 1973, to hurl a Mariner spacecraft in a journey of exploration to the inner planets.

Designed to study both Venus and Mercury, the mission will be the first in history to make close approaches to two planets.

NASA has already sent two spacecraft - Mariner II in 1962 and Mariner V in 1967 - in toward the Sun to study Venus but it will mark the first time that a mission has been mounted to perform a flyby of Mercury, closest planet to the Sun.

Neither of the earlier Mariners or Russian spacecraft have photographed the inner planets. Two television cameras aboard Mariner 10, as the 500 kilogram (1,000 pound) spacecraft will be designated after successful launch, will take at least 8,000 pictures of the two planets.

Six other scientific experiments will be conducted to return planetary and interplanetary data, with primary emphasis on Mercury.

A launch "window" of approximately one month in duration will open up in mid-October, 1973. The spacecraft is planned to approach to within 5,300 kilometers (3,300 miles) of Venus in February, 1974, and within 1,000 kilometers (635 miles) of Mercury in March, 1974.

Management of the Mariner Venus-Mercury Project for NASA is by California Institute of Technology Jet Propulsion Laboratory. The spacecraft is being designed and built by the Boeing Co., in Kent, Washington, using much of the technology developed on the JPL Mariner 1969 and 1971 programs.

Launch of the spacecraft atop the Atlas- Centaur will be by KSC's Unmanned Launch Operations.

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The launch vehicle will use the new D-1 Centaur with an uprated digital guidance system which provides greater directional accuracy than those flown previously.

The greater launch vehicle accuracy will allow spacecraft controllers more latitude in use of the limited propellants onboard the planetary probe.

Among the tantalizing options being explored is the possibility of a second flyby of Mercury 18 months after the first.

Mercury's proximity to the Sun (it approaches to within 46.2 million kilometers or 28.7 million miles) has made it an elusive target for astronomers and scientists have many questions about the planet.

What is its shape and how does that relate to its motion? Mercury rotates very slowly, making one complete turn every 59 days. Mercury has a year lasting only 88 days and is less than half the size of the Earth.

What is the nature of the surface morphology and what forces have acted to shape it? What is Mercury's surface temperature and how does it vary from local night to day? Does Mercury have regional color and brightness variations like Mars or the Moon. Does it have an atmosphere?

How strong is its magnetic field and what is the nature of its interaction with the solar wind so close to the Sun?

Scientists still have many questions concerning Venus.

Is there an observable vertical or horizontal or circulation pattern in the visible clouds? What is the form and motion of the mysterious ultraviolet markings which have been noted? Are there holes in the clouds which permit looking deep into the Venus atmosphere?

Venus is 97 per cent of the size of the Earth and approximately one half way to Mercury. Its orbital period (year) is 225 days and it rotates only once every 243 days.

There are two significant "firsts" included in the flight plan. These are the first use of one planet's (Venus') gravitational field to propel a spacecraft on to another and the first exploration of Mercury.

The initial use of the gravity assist technique will provide valuable experience for spacecraft controllers on future missions to the outer planets. NASA has assigned a 1977 Jupiter-Saturn mission to JPL.

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The spacecraft will arrive at KSC approximately two months prior to launch and be moved into Hangar AO on Cape Kennedy for preflight checkout.

An inner planet mission is a different "ball game" than one to the outer planets. On the latter, a spacecraft must be given a high velocity to hurl it further away from the Sun. An inner planet mission entails slowing the spacecraft's speed below that of the Earth to permit it to "fall" in toward the Sun on a prescribed trajectory.

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

FOR RELEASE:
October 31, 1972
Release #KSC-298-72

KSC TO EXPAND VISITOR FACILITY

NASA today authorized construction of two additional buildings to augment the existing visitor facilities at the Kennedy Space Center.

NASA opened a Visitor Information Center August 1, 1967. The facility now provides some 36,500 square feet of air conditioned space housing exhibits, films, a lecture hall, snack bar and ticket sales area for the daily bus tours operated from this location. This facility is open throughout the year except on Christmas Day.

A steady increase in public attendance, accelerated by the opening of Disney World 50 miles away, has crowded the existing facility beyond capacity, especially during peak periods. The new buildings will add some 38,600 square feet of space and will become available to the public by 1974.

The Congress authorized NASA $2.1 million for these additional facilities. Charles Luckman Associates have designed the new buildings. KSC will install additional space exhibits which will complement those in the present Visitor Information Center.

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NEWS

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

Dick Young
305 867-2468

FOR RELEASE:
November 14, 1972
KSC-320-72

NASA ADMINISTRATOR ADDRESSES KSC PERSONNEL

KENNEDY SPACE CENTER, Fla.--Dr. James C. Fletcher, NASA Administrator, visited the nation's Spaceport Tuesday to receive briefings on KSC plans for Apollo 17, Skylab and other NASA programs to be conducted during the 1970s.

Dr. Kurt H. Debus, KSC Director, and members of the Policy Staff made presentations on KSC plans and facilities for Skylab, the Apollo-Soyuz Test Project involving the Soviet Union, Space Shuttle, applications programs and the Viking unmanned Mars missions scheduled for launch in 1975.

Dr. Fletcher made room in his schedule to address a capacity audience of approximately 300 KSC personnel in the Training Auditorium on the agency's plans and its prospects for the future.

The NASA Administrator spoke of Presidential backing for such programs as the Space Shuttle and the joint Earth-orbital mission with the Russians as well as wide-based support in the Congress for a balanced manned and unmanned space program.

Dr. Fletcher noted that the NASA budget had been stable for the past several years after a period of declining expenditures. He indicated it appeared probable that the agency could look forward to a continuation of its present level of effort in the 1970s.

During the afternoon, Dr. Fletcher visited the Vehicle Assembly Building to view the Saturn V/Orbital Workshop and the Saturn IB launch vehicle which will place the first Skylab crew in orbit.

His itinerary include a tour of the Visitors Information Center which is to receive approximately 1.5 million visitors during 1972 and the Manned Spacecraft Operations Building where the Apollo Telescope Mount, Airlock Module/Multiple Docking Adapter and Payload Shroud for Skylab are being prepared for launch late next April.

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Policy Staff members making presentations included Miles Ross, KSC Deputy Director, "KSC Planning Overview"; G. Merritt Preston, Director of Center Planning and Future Programs, "Shuttle Management and Organization Planning"; Raymond L. Clark, Director of Design Engineering, "KSC Shuttle Facilities", and Dr. Robert H. Gray, "Viking Program Planning at KSC".

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
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Dick Young
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FOR RELEASE:
November 15, 1972
Release #KSC-321-72

DRIVE-THROUGH TOURS SUSPENDED UNTIL DEC. 10

KENNEDY SPACE CENTER, Fla. --Sunday drive-through tours of NASA's John F. Kennedy Space Center and Cape Kennedy Air Force Station are being suspended until after the launch of Apollo 17, scheduled for 9:53 p.m. EST December 6.

Sunday drive-throughs of the NASA Spaceport and the Air Force facilities on Cape Kennedy - including the Space Museum - will be suspended on November 19, November 26 and December 3.

Their resumption will be permitted on December 10.

During this period, public tours of the Space Center and Cape Kennedy will be restricted to those operated by NASA Tours from the Visitors Information Center.

The VIC may be reached via U. S. Route 1 south of Titusville or State Road 3 from Merritt Island and the latter route will be closed from November 30 through launch day.

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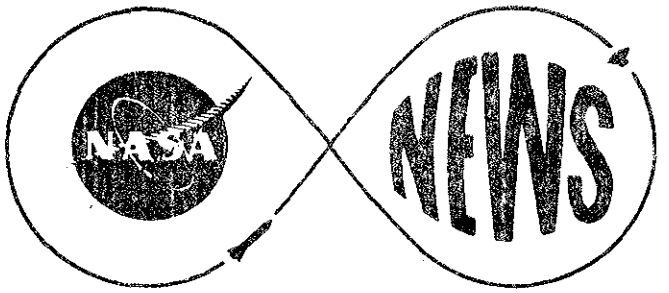

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
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FOR RELEASE:
November 15, 1972
Release #KSC-322-72

NEW WORLD SERVICES, INC. OF ORLANDO RECEIVES ADDITIONAL KSC CONTRACT

KENNEDY SPACE CENTER, Fla.--An addition to the present contract of New World Services, Inc. of Orlando, Fla. for $34,585 has been awarded by the Small Business Administration, Atlanta, Ga., on behalf of the Kennedy Space Center.

The addition to the contract with New World brings the total contract to $542,494, and runs from June 15, 1972 through June 14, 1973, with an option for one additional year.

The award calls for additional Automatic Data Processing Keypunch Services for the Information Systems Directorate at KSC. The service under this contract is made available to other U. S. Government agency personnel located at KSC and the Eastern Test Range.

The contract was awarded under provisions of the Small Business Act, and the Minority Business Enterprise Program to assist qualified minority firms in obtaining government contracts.

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
John F. Kennedy Space Center
Kennedy Space Center, Fla. 32899

A. H. Lavender
305 867-2468

FOR RELEASE:
December 31, 1972
Release #KSC-348-72

EEO PROGRAM STRENGTHENED AT KSC IN 1972

KENNEDY SPACE CENTER, Fla.--A steady increase in the number of minority and female employees at the Kennedy Space Center - in both NASA and contractor ranks - occurred during 1972.

The KSC programs for equal employment opportunity are administered by Herbert M. Huie and Nathaniel Pilate of the Contractor Compliance and Equal Employment Opportunity Office.

Huie formerly was KSC's EEO representative to contractors and Pilate was the civil service EEO officer. However, on September 5, Congress proposed the uniting of the programs and the establishment of a single office. The single office was established at KSC on November 3 with Huie in charge.

He and Pilate report activities directly to the office of KSC Director of Administration G. A. Van Staden.

The single office allows the two men to coordinate efforts to solve common problems. It also affords the EEO program a greater visibility, Huie noted.

During the first 18 months of the EEO program at KSC - from April 1971 through September 1972 - the number of contractor employees at the Center increased by 249 to 11,382, a change rate of 2.2 percent. Female employment during that 18 months increased by 128 persons to 1,240 - an 11.5 percent increase.

The increase in minority personnel during that year and a half was from 609 to 847, a percentage increase of 39.1 percent.

During the third quarter of 1972, KSC contractor personnel increased by 162 spaces, and the minority population increased during the quarter by 70 persons to a new high for the Center of 7.44 percent of the contractor work force.

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Huie said the eventual goal of his office is to have the percentage of minority workers at KSC equal to the percentage of minorities that live in the personnel recruitment area of the Center. "Our office considers Brevard County as that basic area," he explained.

The current minority population in Brevard County, based on the 1970 census, is 9.4 percent.

Huie said the improvement shown so far points up the efforts of the Center's team, working with contractors and the community.

Huie noted that each contractor is required by the Office of Federal Contracts Compliance (OFCC), administrator of the contractor EEO program, to analyze his work force, check out weaknesses in the company's employment profile and establish commitments to overcome such weaknesses. The company sets up its own time basis for the solving of any problem that might be uncovered. A review of such action is made to determine if a good faith effort has been or is being made by the company.

"The biggest job for the contractors is to initiate a positive upward mobility program, insuring opportunities for minority promotion within the corporate structure," Huie pointed out. He feels progress is being made.

Related to this is the placement of minority personnel into all of the various catagories of jobs at the Center, and in significant numbers in each catagory.

Pilate noted the NASA KSC workforce included 2.09 percent minority personnel during April 1971, and this figure had increased to 2.6 percent as the close of the third quarter of 1972.

He pointed out that the NASA workforce had decreased slightly during this 18-month-period and that only a small number of persons had been hired. Despite this, the minority percentage had gone up. This is an encouraging sign, he believes.

Pilate said the KSC EEO Affirmative Action Plan, calling for improvement in utilization of minority and women employees and for increasing employment opportunities for minorities and women at the Center was slowly being implemented.

"The program is concerned with recruitment selection, promotion and training. In time, we hope to correct past weaknesses and to insure that minorities and women are offered increasingly better opportunities in recruitment and selection," Pilate emphasized.

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