

Nation's Hopes Carried Aloft By Shuttle

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CAPE CANAVERAL, Fla., April 12 — For two thunderous minutes this morning, a plume of white fire ascended into the Florida sky before disappearing, and a mighty cheer arose from the crowd below.

"Goodbye, you beautiful Columbia," a woman yelled. In common with approximately one million other spectators, she had spent a mostly sleepless night swatting mosquitoes and listening to announcements. Tears streaming from her eyes, she added, "Come home to us safely!"

For everyone, the launching of the space shuttle had been a great show, as beautiful as a Fourth of July fireworks display. Those who had come just for the show went away satisfied.

For many, the launching was also welcomed as a reaffirmation of America's ability to do difficult things.

Delay Caused Some Disquieting Doubts

For some, the snags that arose at the last minute Friday morning, causing a postponement until today, left some disquieting doubts — doubts that were amplified when it was learned that the shuttle had lost at least a few of its heat-deflecting tiles.

But it seemed good to have American astronauts in space again.

In the 1960's and early 1970's, Americans became accustomed to frequent manned space missions. Then, abruptly, the thrilling countdowns, space dockings and moon landings ended. They seemed to have gone the way of military invincibility, cheap fuel, the sound dollar and even unquestioning confidence in American technological supremacy.

In Laos there is a lusty festival every spring in which big skyrockets are launched into the clouds over the Mekong River, symbolically impregnating the sky to begin the rainy season. Laotians regard their annual rocket festival as a traditional vehicle for rejuvenating society.

America had begun to look forward to its own rocket festivals, but after the docking of an Apollo craft with a Soviet Soyuz, American manned flights ceased. Before today, the last time an American astronaut had been launched into space was 1975, the year the American flag was hauled down in Vietnam.

Unmanned Mission Lacks Some Drama

Of course, America's unmanned planetary probes, including the recent visits of Viking craft to Jupiter and Saturn, have told us more about the solar system than had been known throughout previous human history. But an unmanned mission lacks the flesh-and-blood human drama that draws crowds and television viewers.

Meanwhile, many individual Soviet astronauts have logged more time in space than that of all their American counterparts combined. The European Space Agency and Japan are building rockets and conducting space experiments, too, some of them beyond the current financial reach

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of America's threadbare space budgets.

One American scientist remarked last week, "I'm going to hate telling my son that we used to be first in space."

Those were some of the reasons the space shuttle looked so beautiful to so many.

A crowd of normally boisterous journalists fell silent on the visit they were permitted to make to Columbia's launching pad Thursday night. It was their last close look at the ship before her maiden flight.

An Impressive Close-Up View

For an hour, they stood under the towering cluster of shafts making up the shuttle. As a red sun slid beneath perimeter signs warning against the poisonous snakes that infest the area, one billion candlepower's worth of floodlights blazed against the gleaming white spaceship.

"It's a Hollywood movie set!" one writer exclaimed. "That's about the size of it," an official of the National Aeronautics and Space Administration replied.

The 80,000 people who came to the Kennedy Space Center by special invitation were similarly awed by this most

complex of all spaceships, fitted together like a jigsaw puzzle by 49 different corporations. Among the people invited were retired astronauts, aerospace workers, socialites, novelists, government dignitaries and all kinds of space buffs, many of whom had been here for earlier space launchings.

Some seemed haunted by nostalgia for the great space shots of the 1960's and the sense of American supremacy those missions had evoked.

The last week was a time for reminiscences and reunions of old space hands at traditional hangouts like Ramon's Restaurant in Cocoa Beach. The shuttle became an occasion to catch up on news about families, jobs and scandals. It had been a long time since the last reunion.

But despite the superficially familiar atmosphere here, there have been changes in the nature of space flights since the mid-1970's. This time, the real pilots are not the two astronauts aboard Columbia but the committee of five on-board computers that fly the ship and make all its essential decisions. So important are those five "redundant" electronic brains that the mere failure of one of them to communicate properly with the other four on Friday was deemed sufficient rea-

son to stop the launching.

Things have changed on the ground, too. In 1975, it took 500 people in the firing control room to launch an Apollo mission. But because of the rapid advance in the capabilities of computers, only 150 firing room experts were needed to launch a ship vastly more complicated than the Apollo moon rockets. As shuttle launchings become routine, the number needed is expected to decline to 50.

Everyone here worries about the safety and well-being of the two human beings aboard Columbia, but the new stars of space navigation are computers.

NASA officials designated to talk to journalists seemed curiously out of touch with the changes in emphasis from human to electronic piloting. After Friday's postponement, they were barraged with questions about the precise technical reasons for the unexpected failure of five computers to communicate. But while they seemed eager to talk about the state of health and morale of the astronauts, they seemed unprepared or unable to give detailed answers about the computers, beyond vague analogies with unmeshing gears.

Today's launching lacked some of

the pioneering romance of earlier space flights, and not only because its real captain was electronic rather than human.

The shuttle flight differed from the 1969 Apollo 11 flight to the moon as markedly as the first 1940 lend-lease bomber flight across the Atlantic differed from Col. Charles A. Lindbergh's epochal solo flight in 1927.

Today's launching, as NASA officials reiterated often, was not to achieve novelty but to institute routine: a continuous American presence in space.

Within two weeks, if all goes well, Columbia will be back at her perch here, being readied for the next shakedown flight late this year.

Some compare the shuttle's forthcoming career with the mail planes that opened the first air routes in the 1920's and 1930's.

Endless Possibility of Mishap

While the shuttle is not surveying passenger routes, today's launching did mark the first time a human being had ever been shot from the ground by solid-fuel rockets, the first launch in which the main rocket was fueled by hydrogen and the first time human pilots had gone into space on an untested new spacecraft.

The possibilities for minor or even

catastrophic mishaps seemed endless, despite the public confidence of NASA officials and the astronauts themselves.

To embark in the shuttle, the astronauts John W. Young and Robert L. Crippen therefore needed as much courage and intelligence as the pioneers of civil aviation. But future shuttle pilots, whose main work will be to instruct machines to think and act, will be different in kind from the helmsmen who inspired the seafaring novels of Herman Melville and Joseph Conrad.

Some of the old pilots — Antoine de Saint-Exupéry, André Malraux, Ernest K. Gann and Lindbergh among them — created a literature of flight that long outlived their aeronautical careers. Through them, readers came to feel both the extraordinary beauty and omnipresent danger of flight, and a generation of people became "air minded."

It remains to be seen whether future shuttle pilots may create a literature of space.

For that matter, the shuttle itself may fall short of hopes and expectations. Heady predictions were made for the great zeppelins of the 1920's and 1930's, too.

But whatever the case, America witnessed a great show today.