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# As Gemini Spacecraft Join in Space, US Moves One Step Closer to the Moon

DOUG JOHNSON: EXPLORATIONS -- a program in Special English by the Voice of America.

(MUSIC)

Today, Shirley Griffith and Tony Riggs complete a report about America's second manned space program, Gemini. Its purpose was to bring the United States closer to its goal of landing astronauts on the moon.

SHIRLEY GRIFFITH: To explore the surface of the moon, astronauts must be able to survive outside the protection of their spacecraft. So an astronaut on the flight of Gemini Four, Ed White, took that first frightening step into the unknown. For more than twenty minutes, he floated outside his spacecraft in the emptiness of space.

Astronauts on the next flight, Gemini Five, suffered a number of technical problems. But they were able to survive in space for eight days.

Then it was time to launch Gemini Six. Its crew would attempt a move that would be necessary for any landing on the moon. The astronauts would chase another object orbiting Earth. And they would move their spacecraft as close as possible to it.

However, the target -- a satellite -- apparently exploded after it was launched. So America's space agency, NASA, said there was no reason to send up Gemini Six. NASA decided to move ahead with the next flight, Gemini Seven.

TONY RIGGS: Then NASA considered yet another plan. It would launch Gemini Seven. And, if everything was ready, it would launch Gemini Six a few days later. Gemini Six would chase, and get close to, Gemini Seven instead of a satellite.

Astronauts Frank Borman and James Lovell were the crew of Gemini Seven. They would make the longest, most difficult flight ever. They would spend fourteen days in their tiny spacecraft.

SHIRLEY GRIFFITH: Gemini Seven lifted off from Cape Canaveral, Florida, on Friday, December third, nineteen sixty-five. Workers at the space center examined the launch area. There appeared to be no major damage. The workers quickly moved another huge Titan rocket into place. On top of the rocket sat the Gemini Six spacecraft.

NASA announced that Gemini Six would be launched in the early morning of Sunday, December

twelfth. The timing would put the two spacecraft in the correct orbit to meet in space.

Astronauts Walter Schirra and Thomas Stafford prepared for their flight. They had waited once in a spacecraft that never left the ground. Their first launch had been cancelled because the target satellite exploded. This time, they hoped, things would be different.

TONY RIGGS: On that Sunday morning, Schirra and Stafford were again in their tiny Gemini Six spacecraft atop the Titan rocket. Borman and Lovell, in Gemini Seven, speeded across the United States. The countdown at Cape Canaveral reached zero as Gemini Seven passed overhead.

Frank Borman's disappointed words from space told the story. "I saw ignition...and then shutdown." For some reason, the Titan rocket engines had fired as planned. But then they shut themselves off one second later.

For several tense minutes, the astronauts of Gemini Six were sitting on top of a highly explosive mass of rocket fuel. Schirra waited with his hand on a special device. If he pulled it, he and Stafford would get away safely. If he did not pull it, and the rocket exploded, they would be killed.

With nerves of steel, the astronauts waited. The rocket did not explode.

SHIRLEY GRIFFITH: Once again, Schirra and Stafford climbed out of Gemini Six. Borman and Lovell continued to circle the Earth.

Soon, the public heard the report. A tiny part at the bottom of the rocket had fallen out too early. That tiny part sent a signal to computers that the launch had taken place. The computers immediately shut off the rocket engines.

Space agency officials decided to try one more time. They set the launch for three days later. It would be the last chance for Gemini Six to attempt to meet with Gemini Seven in space. If this attempt failed, the United States would suffer a serious delay in its goal to land astronauts on the moon.

Borman and Lovell continued to circle the Earth, day after day, as workers hurried to meet the new launch date. They were almost three hundred kilometers high. They were moving at twenty-eight thousand kilometers an hour.

TONY RIGGS: December fifteenth, nineteen sixty-five. This was it. What could be an impossible effort in the history of space flight was ready to lift off on its final chance for success.

For the third time, Walter Schirra and Thomas Stafford put on their space clothing. They took their places in the Gemini Six spacecraft. The countdown reached zero just as Frank Borman and James Lovell, in Gemini Seven, passed overhead.

This time, with a thundering roar, Gemini Six rose into the air. As it headed into space, a radio announcer said, "This whole nation pushed that one up."

SHIRLEY GRIFFITH: Now there were four Americans in space. Gemini Six followed Gemini Seven,

but in a lower orbit that moved the two spacecraft closer together. Flight controllers on the ground held their breath. Success was near. Yet failure was still very possible.

The spacecraft were almost two thousand kilometers apart. They needed to get within six hundred meters of each other. Only then would space agency officials consider the project a complete success.

TONY RIGGS: Time passed quickly as Schirra moved Gemini Six closer and closer to its target. Gemini Six was now eight kilometers behind, and twenty-four kilometers below, Gemini Seven. Schirra fired a rocket exactly long enough to put his spacecraft in the same orbit. Then radar on each spacecraft noted the other spacecraft.

Happily, Schirra sent a radio message to Gemini Seven. "We'll be up shortly," he said.

A few minutes later, the astronauts were able to see each others' spacecraft. Success seemed within reach. Only six-and-one-half kilometers separated them. The two spacecraft continued to float together, far out in space.

SHIRLEY GRIFFITH: They moved closer and closer together as they flew across the Indian Ocean. It was about six hours since the launch of Gemini Six. For a while, there was no communication from space to Earth. The spacecraft were too far from any ground station to send clear messages.

Finally, the voice of Thomas Stafford came through the silence of space. "We are thirty-six meters apart and sitting."

Thirty-six meters! That was far better than the six hundred meters space agency officials would have considered a complete success.

In fact, the two spacecraft almost touched each other before they separated. Space agency officials now knew that it was possible to join two orbiting spacecraft. The crew on Gemini Six had made the operation seem easy.

TONY RIGGS: As the American astronauts continued to float through space, they inspected each other and each other's spacecraft. Frank Borman noted happily that after twelve lonely days in space, he and James Lovell finally had company for one night!

The next day, Schirra and Stafford completed their flight. Gemini Six landed in the Atlantic Ocean within twenty kilometers of the rescue ship. Gemini Seven continued to speed on.

SHIRLEY GRIFFITH: On December eighteenth, ground controllers asked Borman and Lovell if they were ready to come home. "Ready! Ready!" the astronauts answered. Gemini Seven landed as perfectly as Gemini Six.

Astronauts Borman and Lovell had been in space more than three hundred thirty hours. They had traveled almost eight million five hundred thousand kilometers.

TONY RIGGS: The flights of Gemini Six and Gemini Seven greatly increased hope that Americans

soon would be able to land on the moon. Schirra and Stafford proved that spaceships could link up while in orbit.

Borman and Lovell proved that humans could survive in space for the time needed to get to the moon and back. The distance to the moon suddenly seemed shorter.

SHIRLEY GRIFFITH: Five more Gemini flights followed. Other spacecraft joined with other targets in space and landed exactly where planned. Astronauts worked for longer periods of time in the hostile environment of space.

The Gemini program had reached all its goals. Now, the United States was ready for the next historic jump into space. It would be Project Apollo. Project Apollo would land men on the moon.

(MUSIC)

DOUG JOHNSON: This Special English program was written by Marilyn Rice Christiano. Your narrators were Shirley Griffith and Tony Riggs. I'm Doug Johnson. Listen again next week for another EXPLORATIONS program on the Voice of America.