

APOLLO 11

First Moon Landing

人类征服太空的历程
(英汉读本)

Michael D. Cole 著
高铁铮 译

广西科学技术出版社



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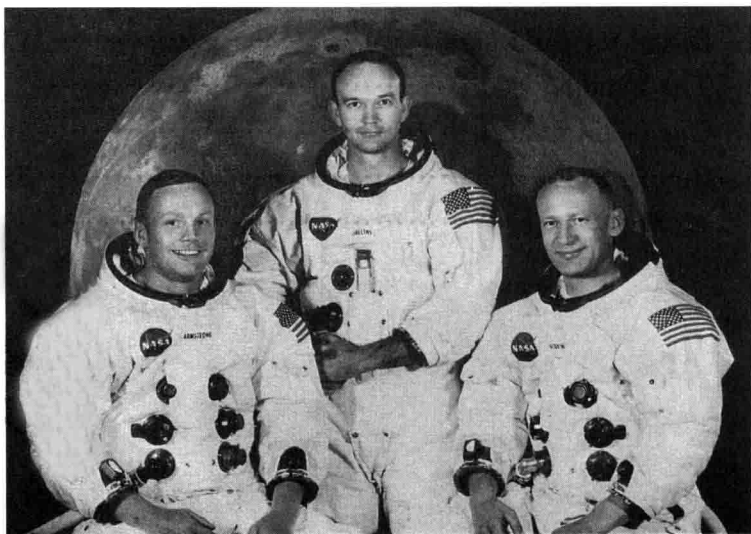
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Neil Armstrong, Michael Collins, and Buzz Aldrin will always be remembered for their heroic and historic flight aboard Apollo 11.



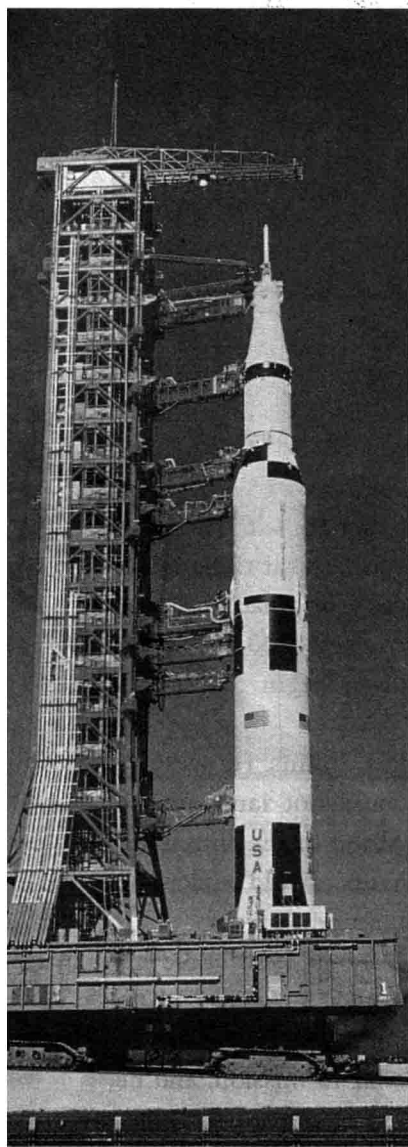
1

The Voyage Begins

It was warm on the morning of July 16, 1969, at Cape Kennedy in Florida. On launchpad 39A sat the mighty Saturn V rocket—the most powerful machine ever built. At the top of the towering rocket—363 feet above the ground—three men waited to begin mankind's most historic journey.

In the right couch was Michael Collins. He was the command module pilot. He would not land on the Moon, but he would orbit the Moon in the command module. The other two astronauts would make the landing on the Moon in the lunar module.

Collins was born in Rome, Italy, in 1930 while his father was stationed there with the U.S. Army. Collins had been an air force test pilot and had already been in space before. He flew in the *Gemini 10* mission, and he



had walked in space. He was married and had two daughters and a son. Collins liked to joke that because there was no TV set on the command module, he would be one of the few Americans who would not see the Moon landing.

In the middle couch was Edwin E. Aldrin. He would co-pilot the lunar module, which was named *Eagle*. Everyone called him "Buzz." It had been his nickname since his childhood in Montclair, New Jersey. He was thirty-nine years old, and he also had been an air force pilot.

Aviation was in Aldrin's blood. His father had been a colonel in the U.S. Army Air Corps and was a friend of Orville Wright and

Awaiting liftoff, the Saturn V rocket sits on the launchpad.

Astronaut Michael Collins piloted the command module of Apollo 11.

Charles Lindbergh. His mother's maiden name was Marian Moon. Aldrin had been in space on *Gemini 12*. He held the record for the longest spacewalk. He was an intelligent and serious man who spoke in the precise manner of an engineer. He was married, with two sons and a daughter.



In the left couch was mission commander Neil A. Armstrong. He was from Wapakoneta, Ohio, where he had earned a pilot's license before he was old enough to drive a car. After flying as a Navy pilot he became an astronaut. He commanded the *Gemini 8* mission. Armstrong was probably the best pilot among all the astronauts. He was married and the father of two sons. His boyish smile made him look much younger than his thirty-eight years. Because he was mission commander, he would be the first person to walk upon the Moon.

These three men were about to experience an extraordinary adventure. All three had been in space

before. All had been proud to serve their country in the space program. But they knew this mission was different.

People all over the world were waiting for the launch. They hoped *Apollo 11's* historic mission to land on the Moon would be a success. People everywhere felt that a part of themselves was going with those three astronauts. Armstrong, Aldrin, and Collins could not escape the fact that this time they did not just represent their country. This time they represented the human race.

The three astronauts suited up in their bulky spacesuits. Then they made the five-mile trip to the



launching pad in a large van. It went over a special remote route to avoid the incredible traffic jam that had been building around the Cape for days. Beaches and parks were full of camper trailers. Lakes and waterways were full of boats anchored where they could watch the launch. All

Edwin E. Aldrin, Jr., was nicknamed "Buzz." He was to be the second person ever to walk on the Moon.

Neil Armstrong will always be remembered as the first person to ever walk on the Moon. Armstrong was the mission commander of Apollo 11.

of them, and the nearly one billion people around the world who were watching the exciting countdown on television, waited to witness the historic moment when *Apollo 11* began its journey to the Moon.



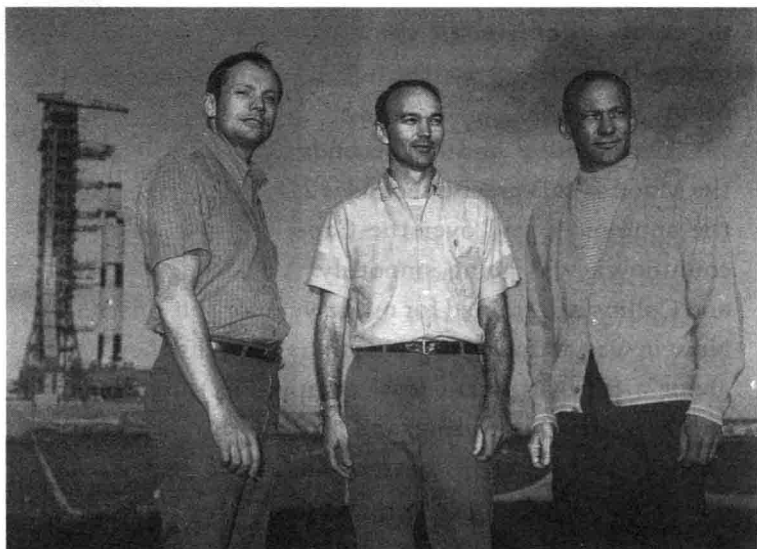
“Two minutes and ten seconds and counting, and the Moon at this precise second is 218,986 miles away,” the announcer said over the Cape loudspeaker. The countdown was going smoothly. Armstrong, Aldrin, and Collins had trained for over a year for this mission. Now it was about to begin. Collins thought they had about a fifty-fifty chance of completing the mission successfully. Armstrong and Aldrin thought their chances were a little better. The three had never discussed the subject with each other.

The countdown swept toward the final minute, then the final seconds. Armstrong wrapped his gloved hand around the abort handle in case the launch went

badly. Aldrin looked at Armstrong and then turned to grin at Collins. They were finally going!

Collins remembered walking to the pad just a while ago. He had watched the frosty steam rolling off the rocket's sides when the warm air met the rocket filled with super-cooled liquid oxygen and hydrogen. He remembered thinking the rocket almost seemed *alive*. Seconds from now, it would indeed rumble to life.

The loudspeaker at the Cape kept the thousands of onlookers counting toward the launch. "We are still go with *Apollo 11*. Thirty seconds and counting.



Armstrong, Collins, and Aldrin pose for a picture in front of the mighty Apollo/Saturn V rocket which would carry them to the Moon.

Astronauts reported, feel good . . . T minus twenty seconds and counting. T minus fifteen seconds, guidance is internal."

All power was now on in the *Apollo 11* spacecraft. Armstrong, Aldrin, and Collins were excited, but their minds were focused on the many tasks that had to be done.

"Twelve, eleven, ten, nine, ignition sequence starts." Flame and smoke gushed from the five main engines of the Saturn V rocket. "Six, five, four, three, two, one, zero, all engines running." The controllers at the Cape pushed the engines to the proper thrust of 7.5 million pounds, equal to the power

At 9:32 A.M. on July 16, 1969, the three astronauts aboard the Apollo 11 launched into their history-making flight.



of more than 92,000 locomotives. Then they released the pad's hold-down clamps.

The mighty Saturn V, all 3,000 tons of it, rose from the launchpad.

"LIFT-OFF! We have a lift-off! Thirty-two minutes past the hour. Lift-off on Apollo 11." It was 9:32 A.M. The rocket's deafening rise through the sky could be seen and heard for miles around the Cape. The huge flaming thrust of the engines created a shock wave that could be *felt* for just as far. The powerful Saturn V climbed through the sky, pushing the three astronauts toward space while the whole world watched.

The exciting launch was a great success. Still, it was hard to believe what was about to happen. In four days, the men of *Apollo 11* would try to land on the Moon.



2

Bound for the Moon

Apollo 11 trailed a tongue of orange flame hundreds of feet long as it shot into space at incredible speed. After only two and a half minutes, the rocket was moving at nine thousand feet per *second*.

Control of the mission was switched from Cape Kennedy to the Manned Spacecraft Center (now called the Johnson Space Center) in Houston, Texas. "Thrust is go all engines. You're looking good," said Mission Control.

"Roger," Armstrong said. The rapid acceleration pushed Armstrong, Aldrin, and Collins back into their couches. The large first stage of the Saturn V burned up its fuel and separated. Moments later the second stage cut in. It burned for about six minutes and boosted *Apollo 11* to 114 miles above the Earth. As they

reached a speed of 15,000 miles per hour, the second stage also separated.

The single engine on the third stage then ignited. It burned for about two minutes. "Shutdown," Armstrong reported, as the engine shut down right on schedule. The three astronauts now felt themselves floating against their straps. They were in orbit around the Earth.

Armstrong, Aldrin, and Collins looked out their windows to see the beautiful Earth below. Their bubblelike helmets let them turn and see in any direction. The headgear covering their heads and ears looked like an old pilot's cap. It included earphones and



two microphones for the astronauts to communicate with Mission Control. The white space suits they wore were made specially to fit each one of them. Each suit cost up to one million dollars.

Switches, buttons, dials, and readouts surrounded them on all sides of their

Apollo 11's powerful rocket booster generated 7.5 million pounds of thrust to send the spacecraft on its journey to the Moon.

positions in the command module (named *Columbia*). All the instruments had to be checked before they fired the third stage engine again to leave Earth's orbit. They removed their helmets and gloves and went to work. Collins folded down the bottom half of his couch and moved into the lower equipment bay. He made navigational sightings and passed out cameras and other equipment to Armstrong and Aldrin. About three hours later they were ready for the next phase of their journey.

"Apollo 11, this is Houston. You are Go for TLI."

TLI meant Translunar Injection. The third-stage rocket engine ignited again and burned for more than six minutes. When it cut off, they were travelling at 24,300 miles per hour. *Apollo 11* had left Earth's gravity and was on its way to the Moon.

"Hey, Houston, that Saturn gave us a magnificent ride," Armstrong told Mission Control.

Now Collins had to show his stuff. He pushed a button and freed the command module (CM) from the Saturn rocket. With his left hand he pushed a control handle forward; this moved the CM ahead of the rocket. Then he turned the CM around to face the rocket. The rocket housed the lunar module (LM) directly behind where the CM had been. Carefully, he moved the CM back to the rocket to dock with the LM. Once they were docked nose-to-nose, he threw a switch and the LM sprang free of the spent third-stage rocket.