

Armstrong, Aldrin Land on the Moon

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"Tranquility Base here," said Armstrong.

"Eagle has landed." From some 60-odd miles above the moon, astronaut Michael Collins in the command ship Columbia chimed in with "fantastic."

The unofficial time of the Eagle's landfall on the moon's Sea of Tranquility was at 9:18 p.m. CET, which was 102 hours, 45 minutes and 42 seconds after blastoff last Wednesday, July 16, from Cape Kennedy, Fla.

The first minutes on the lunar surface were mostly silent, as Armstrong and Aldrin quickly readied everything in their spider-like space taxi for an emergency blast-off from the moon, if necessary.

The initial moments were for a decision on whether to stay on the dusty surface. The spacecraft engine began kicking up dust from the moment it was 40 feet above the surface.

Passed Time

The two landed astronauts passed up their time for a first liftoff should they have needed to make one.

As they rested for the actual stepping on to the moon, earth listeners were told it would be some time before they would get a man's-eye view of the landing.

Armstrong took over manual control for the landing, the space center was informed.

One of the astronauts reported he "wanted a beer." He was promised one by the space center which cheered "a great job by you guys" in the conversation with the Sea of Tranquility landers.

Armstrong's first description of the landing area was terse. He apologized for talking a little longer than planned in his landing.

"The auto-targeting was taking us right into a football field-sized crater," he said, "with a large number of big boulders and rocks—and it required us to fly manually over the rock field to find a reasonably good area."

Varieties of Rock

Aldrin, looking out the window, said, "Almost every variety of rock you could find. The color varies depending on how you're looking at it. Doesn't appear to be much of a general color at all."

He said the rocks were "of every granularity, every angularity."

Space authorities predicted that the easy landing should have preserved the astronauts' television cameras perfectly for good transmission later, including the first moon steps.

The astronauts, who did little chatting on their voyage, suddenly became very communicative after the landing—tossing pattern back to earth.

One of the moon landers told earth: "Sea of Tranquility is no sweat—we'll figure it out all right."

Armstrong told earth: "No difficulty so far adjusting to the gravity of the moon."

The astronauts described angular blocks on the moon's rugged surface.

"It was extremely rough and cratered over the landing target area," they said.

Almost immediately, mission control began referring to the landed men with a new radio call sign, "Tranquility Base," dropping the old code name, "Eagle."

During the descent, Armstrong said, he was too busy with the control panels to pick out some of the required landmarks. Mission control told him not to worry.

"Be advised there are lots of smiling faces here and all

around the world," said mission control.

"There are two up here also," Armstrong beamed back.

"Don't forget the third one up here," said Collins from the orbiting command ship.

"Tranquility Base, you guys did a fantastic job," said Collins.

"Just keep that orbiting base up there for us," Armstrong replied.

"We are in a relatively smooth plain with many craters five to 50 feet in size," Armstrong reported. "We see some ridges. And there are literally thousands of little one- and two-foot craters. We see some angular blocks some feet in front of us, about two-to-three feet in size."

"There's a hill in view on the ground track ahead of us. It's difficult to estimate but it might be one-half mile or a mile away." The normal lunar horizon is 1 1/2 to two miles away.

The excitement of the descent was gripping. The 3,700 mile per hour speed was slowed by the brilliant flame of the descent engine, stark against the black of space.

With the rapidity of a stock market report, the astronauts clicked off their altitude and their forward movement.

Within 10 Hours

Within 10 hours after the landing, Armstrong, Apollo 11's civilian commander, was to plant his left foot on the moon to become the first human being to walk on soil not of his own planet.

There was no immediate indication of any change in the on-the-moon timetable which called for a period of some nine hours before Armstrong set foot on the moon.

(Actually, the moon walk could come anytime after the landing, depending on what Armstrong decided.)

(The original plan was to give the astronauts four hours rest before leaving the LM.)

(The plan was devised, however, before officials knew how well the crew would sleep on their outward voyage and before Armstrong confessed that he probably would be too keyed up to sleep anyway.)

Aldrin was to follow 20 minutes later and for 2 1/2 hours they were to conduct an exploration.

Through the magic of television, much of the world was to have a ringside seat. The astronauts planned to mount a camera 30 feet away from Eagle to provide a panoramic view of their expedition.

22 Hours on Moon

They are to be on the moon nearly 22 hours, firing their ascent engine at 6:50 p.m. CET Monday to start the perilous rendezvous maneuvers leading to a linkup with the orbiting Columbia.

Then, after the long journey home and a Thursday splashdown in the Pacific, they are to enter immediate quarantine for at least 18 days to insure they have not brought back any lunar bacteria that could pollute earth's atmosphere or harm its life.

Voice communications between Eagle and the Houston space center were extremely clear during the whole descent, which went like clockwork.

Armstrong and Aldrin cast off from their mother ship at 1:47 p.m. EDT (6:47 p.m. Central European Time) Sunday, breaking their last bonds with home and ready to ride their space taxi, Eagle, on man's first visit to a foreign planet.

Coming from their radio blackout behind the moon for the 13th time, the Apollo 11 astronauts confirmed the maneuver was perfect.

"The Eagle has wings," said

spacecraft commander Armstrong, who in hours was to be the first man to walk the moon.

Collins in the command ship pressed a button, latches released and powerful springs shoved Eagle away from the mother ship, Columbia.

Armstrong and Aldrin had received the go-ahead for their undocking at 5:56 p.m.

"Looks like you've got a mighty good-looking flying machine there, Eagle," Collins said, "despite the fact you're upside down."

Twenty-five minutes later, with the two ships 40 feet apart, Collins triggered his big spacecraft rocket and shot nearly two miles ahead of the spidery moon lander.

'See You Later'

"See you later," he said, later being 30 hours from then. He would keep his lonely vigil aboard the Columbia patrolling the moon in an orbit some 60-odd miles above, standing by to take them home.

Aldrin, the pilot of the spidery lunar lander, was the first into that strange craft, linked nose to nose with the mothership.

He entered at 2:20 p.m. CET through the tunnel connecting the two ships. About an hour later, spacecraft commander Armstrong slipped through to join him. From then on Armstrong and Aldrin carried the radio call sign Eagle. Collins became Columbia.

At 5:32 p.m., they pushed a button that extended the landing legs of the lunar landing craft, the legs that would take the impact of the landing, an intended four-foot free fall to the surface with the engine shut down.

The astronauts awakened at 12:02 p.m. They took half an hour for breakfast. Then Armstrong and Aldrin donned the heavy protective suits they were to wear when first Armstrong, then Aldrin walk the moon.

Top Condition

Both ships were in top condition, they reported. Armstrong had five and a half hours sleep Saturday night, Collins six, and Aldrin five. It was the shortest rest period on their flight plan.

It was delayed more than 90 minutes while flight controllers on earth tracked down a pesky communications problem. They found the root of their problem in the aim of an antenna. It was quickly fixed.

Then they were given a good-night to rest for the adventure ahead.

Even as the big moment approached, spirits were light, although the men were busy. Mission control beamed up a brief report on the activities of the astronaut families and the morning news.

Aldrin's son, Andy, was given a tour of the space center, Saturday, along with an uncle, Robert Moon, brother of Aldrin's late mother, whose maiden name was Marian Moon.

Mission control noted that one newspaper story urged the astronauts to watch for a girl on the moon accompanied by a large rabbit.

"An ancient legend says a beautiful Chinese girl named Chang O has been living there for 4,000 years," the astronauts were told. "It seems she was banished to the moon because she stole the pill of immortality from her husband. You might look for her companion, a large Chinese rabbit who is easy to spot since he is always standing on his hind feet in the shade of the cinnamon tree."

"Okay," Collins acknowledged for the crew. "We'll keep a close eye for the bunny girl."

Otherwise, the work was fast and deadly serious. On earth, 240,350 miles away, half a world offered prayers for their safety,

In the White House, President Nixon attended a special service dedicated to the mission of Apollo 11. Among those who read at the service was Apollo 8 astronaut Frank Borman. He recited the opening chapters of the Book of Genesis, the same words he and his crew read to the earth from their orbit over the moon last Christmas morning.

Pope Paul, who has repeatedly spoken of the new awareness that the flight of Apollo 11 was offering mankind, addressed the subject again in his weekly Sunday speech. But he cautioned that these new developments of the space age should not become a form of worship. The wonders of technology, he said, should not distract man from the wars and other ills besetting the planet earth.

So it was that Apollo 11 reached this incredible time and place, orbiting the moon every two hours.

They blasted off from Cape Kennedy at 2:32 p.m. CET Wednesday, July 16, 1969. A perfect launch, just a split-second late. The events that followed were just as perfect. The problems that cropped up were small and easily surmountable.

Easy Days

The color television pictures of the shrinking earth and the approaching moon were sharp and unforgettable. Both planetary images took on new meaning, embellished with the aim of Apollo 11.

Thursday and Friday whipped by, the flight plan less busy than on previous shots, to keep the astronauts fresh for the strenuous and daring moments to come. Then at 6:22 p.m. Saturday, July 19, they fired their big spacecraft engine in the direction of their flight, slowing their speed and falling into orbit around the moon.

Aldrin entered Eagle briefly Saturday to ready some of its systems.

"Everything is beautiful in here," he said.

"Everybody is happy as a clam down here," replied earth.

Each pass around the moon, the astronauts studied the pocked and cratered southwestern edge of the Sea of Tranquility where they were to land.

Then for 35 minutes they telecast the breathtaking lunar landscape below them. Crisply they described for the people at home the landmarks they saw on the surface.

"There's a good picture of Boot Hill, 3 minutes and 15 seconds into the descent," Armstrong said, rehearsing for earth the first of the landmarks that would lead them to the landing spot near the crater named Moltke.

Turned Gray

The sun played games with the color of the moon. "At these low sun angles, there's no trace of brown in the moon's color," said Collins from some 62 miles up. "It's now returned to a very gray appearance and like the Apollo 8 crew said, it has the look of plaster of paris to it at this sun angle."

At that boundary line between sunlight and shadow, Armstrong said "It's ashen gray. As you get away from the terminator, it gets to be a lighter gray. And as you get closer to the sun-solar point, you can definitely see tans and browns on the ground."

Directed by the curiosity of men on the earth, they peered deep into the crater Aristarchus. "It seems to have a slight amount of fluorescence to it," Armstrong reported. "The area in the crater is quite bright."

Some earthbound telescopes have seen bright spots in the area which astronomers believe

may be signs of volcanic activity.

Monday after the scheduled hours on the moon, the Apollo astronauts were to blast off from the lunar surface to rejoin Collins in the mother ship. Tuesday, just before 6 a.m. they were to fire their spacecraft engine again and head home and a splashdown Thursday, July 24, in the Pacific their spacecraft and their mission loaded with new clues to the moon.

These are the men making history:

Armstrong, 38, born Aug. 1930, a child of the depression who saved the pennies earned as a delivery boy in hometown of Wapakoneta, Ohio, to learn to fly. He won pilot's license at the age of 16, did not yet have a driver's license. As a child he dreamed the day a man would land on the moon. A graduate of due, and naval aviation at Tusculum, he flew 78 missions in the Korean War, was shot behind enemy lines and captured. He flew the rocket X-15 six times as a test pilot for the space agency, reaching 200,000 feet and a speed of 4,000 miles an hour. He braved death in the out-of-control flight of Gemini 8, making emergency landing, and in the crash of a lunar-lander trainer. A civilian, he is the highest paid astronaut at \$30,000 a year. He has two sons.

Son of Colonel Aldrin, 39, son of a retired Force colonel who knew Wright, rocket pioneer Goddard and Charles Bergh. Born Jan. 20, 1930, Montclair, N.J., Buzz Aldrin's nickname from his parents was a casual student in school, third in his class at Point. He won his doctorate from the Massachusetts Institute of Technology with an orbital rendezvous which was used in Gemini flights. On Gemini 12, he became the champion U.S. spacewalker.

He flew 66 missions in Korea is a devout Presbyterian, a Scout counselor. He has two sons and a daughter.

Collins, 38, who said he is the only one who would not be on the lunar landing because his spaceship had no television camera. Born Oct. 31, 1930, Rome, Italy, where his father was Army general, was a pilot. He is a Roman Catholic, the father of three children, a veteran of the flight of Gemini 10.

Baseball Scores

Sunday's Major League Lineups
By the Associated Press

National League	
First Game	
Chicago	001 000 000-1
Philadelphia	000 000 000-4
Jenkins and Hundley; Jackson, W.	(9) and Ryan, W.-Jenkins, 13-7, L-10, 9-10.
San Diego	000 000 000-0
Atlanta	100 113 01X-20
Kirby, Baldschun (4), Sisk (5), M.	(7) and Campizarro; Jarvis (8), Dider, LP-Kirby (3-12), HR-04, 14th.
First Game	
New York	020 000 000-2
Montreal	000 300 000-3
Gentry and Martin; Waslewski; Brand, W.-Waslewski, 2-3, L-Gentry, HRs-Montreal, M. Jones (16), B.S. Wine (2).	
St. Louis at Pittsburgh, rain	
Houston at Cincinnati, 2, rain	
American League	
First Game	
Detroit	000 000 210-3
Cleveland	200 000 000-3
Lolch, Lasher (7), McMahon (9), Price; Ellsworth, Williams (7) and ez, W.-Lasher, 1-0, L-Williams, 3-2, -Detroit, W. Horton (13).	
Baltimore	000 011 003-7
Boston	001 110 03X-2
Cuellar, Leonard (6), Lopez (6), (8) and Hendricks; Culp, Romo, Landis (6), Lonborg (7), Jarvis (9), (14) and Gibson, Satriano (7), W. (14-9), LP-Cuellar (10-9), HR-2 (4th).	