

JULY 19

6:58 a.m. - Astronauts call Mission Control to inquire about scheduled course correction and are told it has been cancelled. They are also advised they may go back to sleep.

8:32 a.m. - Mission Control signals to wake crew and to start them on breakfast and housekeeping chores.

10:31 a.m. - Collins reports: "Houston, it's been a real change for us. Now we are able to see stars again and recognize constellations for the first time on the trip. The sky is full of stars, just like the nights on Earth."

10:42 a.m. - Armstrong announces: "The view of the Moon that we've been having recently is really spectacular. It about three-quarters of the hatch window and, of course, we can see the entire circumference, even though part of it is in complete shadow and part of it's in earth-shine. It's a view worth the price of the trip."

12:58 p.m. - The crew is informed by Mission Control: "We're 23 minutes away from the LOI (Lunar Orbit Insertion) burn. "You are go for LOI." Aldrin replies: "Roger, go for LOI."

1:13 p.m. - Spacecraft passes completely behind the Moon and out of radio contact with the Earth for the first time.

1:55 p.m. - Armstrong tells Mission Control: "We're getting this first view of the landing approach. This time we are going over the Taruntius crater and the pictures and maps brought back by Apollos 8 and 10 give us a very good preview of what to look at here. It looks very much like the pictures, but like the difference between watching a real football game and watching it on TV-no substitute for actually being here."

About 15 minutes later he adds: "It gets to be a lighter grey, and as you get closer to the subsolar point, you can definitely see browns and tans on the ground."

3:56 p.m. - A 35-minute telecast of the Moon's surface begins. Passing westward along the eastern edge of the Moon's visible side, the camera is focused especially on the area chosen as a landing site.

6:57 p.m. - Armstrong and Aldrin crawl through the tunnel into the lunar module to give it another check. The spacecraft is orbiting the Moon every two hours.

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9:27 a.m. - Aldrin crawls into the lunar module (LM) and starts to power-up the spacecraft. About an hour later, Armstrong enters the LM and together they continue to check the systems and deploy the landing legs.

1:46 p.m. - The landing craft is separated from the command module, in which Collins continues to orbit the Moon.

2:12 p.m. - Collins fires the command ship's rockets and moves about two miles away.

3:08 p.m. - Armstrong and Aldrin, flying feet first and face down, fire the landing craft's descent engine for the first time.

3:47 p.m. - Collins, flying the command ship from behind the Moon, reports to Earth that the landing craft is on its way down to the lunar surface. It is the first Mission Control has heard of the action. "Everything's going just swimmingly. Beautiful!" Collins reports.

4:05 p.m. - Armstrong throttles up the engine to slow the LM before dropping down on the lunar surface. The landing is not easy. The site they approach is four miles from the target point, on the southwestern edge of the Sea of Tranquility. Seeing that they are approaching a crater about the size of a football field and covered with large rocks, Armstrong takes over manual control and steers the craft to a smoother spot. His heartbeat has risen from a normal 77 to 156.

While Armstrong flies the landing craft, Aldrin gives him altitude readings: "Seven hundred and fifty feet, coming down at 23 degrees . . . 700 feet, 21 down . . . 400 feet, down at nine . . . Got the shadow out there . . . 75 feet, things looking good . . . Lights on . . . Picking up some dust. . . 30 feet, 2 1/2 down . . . Faint shadow . . . Four forward. Four forward, drifting to the right a little . . . Contact light. Okay, engine stop."

When the 68-inch probes beneath three of the spacecraft's four footpads touch down, flashing a light on the instrument panel, Armstrong shuts off the ship's engine.

4:18 p.m. - The craft settles down with a jolt almost like that of a jet landing on a runway. It is at an angle of no more than four or five degrees on the right side of the Moon as seen from Earth. Armstrong immediately radios Mission Control: **"The Eagle has landed."**

6:00 p.m. - With everything in order, Armstrong radios a recommendation that they plan to start the EVA (Extra Vehicular Activity), earlier than originally scheduled, at about 9:00 p.m. EDT. Mission Control replies: "We will support you anytime."

10:39 p.m. - Later than proposed at 6:00 p.m., but more than five hours ahead of the original schedule, Armstrong opens the LM hatch and squeezes through the opening. It is a slow process. Strapped to his shoulders is a portable life support and communications system weighing 84 pounds on Earth, 14 on the Moon, with provision for pressurization; oxygen requirements and removal of carbon dioxide.

Armstrong moves slowly down the 10-foot, nine-step ladder. On reaching the second step, he pulls a "D-ring," within easy reach, deploying a television camera, so arranged on the LM that it will depict him to Earth as he proceeds from that point.

10:56 p.m. - Armstrong puts his left foot to the Moon. It is the first time in history that man has ever stepped on anything that has not existed on or originated from the Earth.

"That's one small step for a man, one giant leap for mankind," Armstrong radios. Aldrin is taking photographs from inside the spacecraft.

The first print made by the weight of man on the Moon is that of a lunar boot which resembles an oversized galosh.

"There seems to be no difficulty in moving around as we suspected. It's even perhaps easier than the simulations...."

Feeling more confident, Armstrong begins making a preliminary collection of soil samples close to the landing craft. This is done with a bag on the end of a pole.

"This is very interesting," he comments. "It's a very soft surface, but here and there . . . I run into a very hard surface, but it appears to be very cohesive material of the same sort.... It has a stark beauty all its own. It's like much of the high desert of the United States."

He collects a small bagful of soil and stores it in a pocket on the left leg of his space suit. This is done early, according to plan, to make sure some of the Moon surface is returned to Earth in case the mission has to be cut short.

11:11 p.m. - After lowering a Hasselblad still camera to Armstrong, Aldrin emerges from the landing craft and backs down the ladder, while his companion photographs him.

Armstrong fits a long focal length lens into position on the TV camera and trains it upon a small, stainless steel plaque on one of the legs of the landing craft. He reads: "Here men from the planet Earth first set foot on the Moon. July 1969 A.D. We came in peace for all mankind." Below the inscription are the names of the Apollo crew and President Nixon.

As scheduled, the astronauts set up the first of three experiments.

11:41 p.m. - From a leg of the spacecraft, the astronauts take a three-by-five-foot, nylon United States flag, its top edge braced by a spring wire to keep it extended on the windless Moon and erect it on a staff pressed into the lunar surface.

11:47 p.m. - Mission Control announces: "The President of the United States is in his office now and would like to say a few words to you." Armstrong replies: "That would be an honor."

11:48 p.m. - The astronauts listen as the President speaks by telephone: "Neil and Buzz. I am talking to you from the Oval Room at the White House. And this certainly has to be the most historic telephone call ever made for every American this has to be the proudest day of our lives. And for people all over the world I am sure they, too, join with Americans in recognising what a feat this is. Because of what you have done, the heavens have become a part of man's world. As you talk to us from the Sea of Tranquility, it inspires us to redouble our efforts to bring peace and tranquility to Earth. For one priceless moment, in the whole history of man, all the people on this Earth are truly one."

As the President finishes speaking, Armstrong replies: "Thank you, Mr. President. It's a great honor and privilege for us to be here representing not only the United States but men of peace of all nations. And with interest and a curiosity and a vision for the future. It's an honor for us to be able to participate here today."

The two astronauts stand at attention, saluting directly toward the television as the telephone conversation concludes.