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p. 40

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p. 46

» **PLUS**

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Venus-Mars
meetup p. 50

The story of
premium mirror
makers p. 52

Bob Berman
on the third
dimension p. 13

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**BONUS
ONLINE
CONTENT
CODE p. 4**

Apollo 15

NASA hits its stride

This view from the slopes of Mount Hadley Delta, near St. George Crater, takes in the Hadley Rille. On the left is a boulder that Scott and Irwin sampled. ALL IMAGES

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Scott: Oh, look back there, Jim! Look at that. Oh, look at that! Isn't that something? We're up on a slope, Joe, and we're looking back down into the valley and —

Irwin: That's beautiful.

Scott: That is spectacular!

Armed with the first rover, intrepid astronauts drove lunar science forward. BY MARK ZASTROW

AFTER THREE SUCCESSFUL LUNAR LANDINGS — and the “successful failure” of Apollo 13 — NASA was ready to swing for the scientific fences. The previous landings had been considered test flights, H series missions in NASA parlance, intended to show that landing on the Moon could be done. Apollo 15 would be the first of the J series, with more ambitious scientific objectives.

To meet those goals, Apollo 15’s crew brought all kinds of new and upgraded tools: a percussive drill to collect core samples and plant heat probes; brand-new 500mm telephoto lenses; and, most famously, the “Moon buggy” called the Lunar Roving Vehicle (LRV). Built by Boeing, the rover promised to



Dave Scott and Jim Irwin train for their mission by exploring an artificial crater field created by geologists to mimic a lunar landscape near Crater Lake in Arizona.

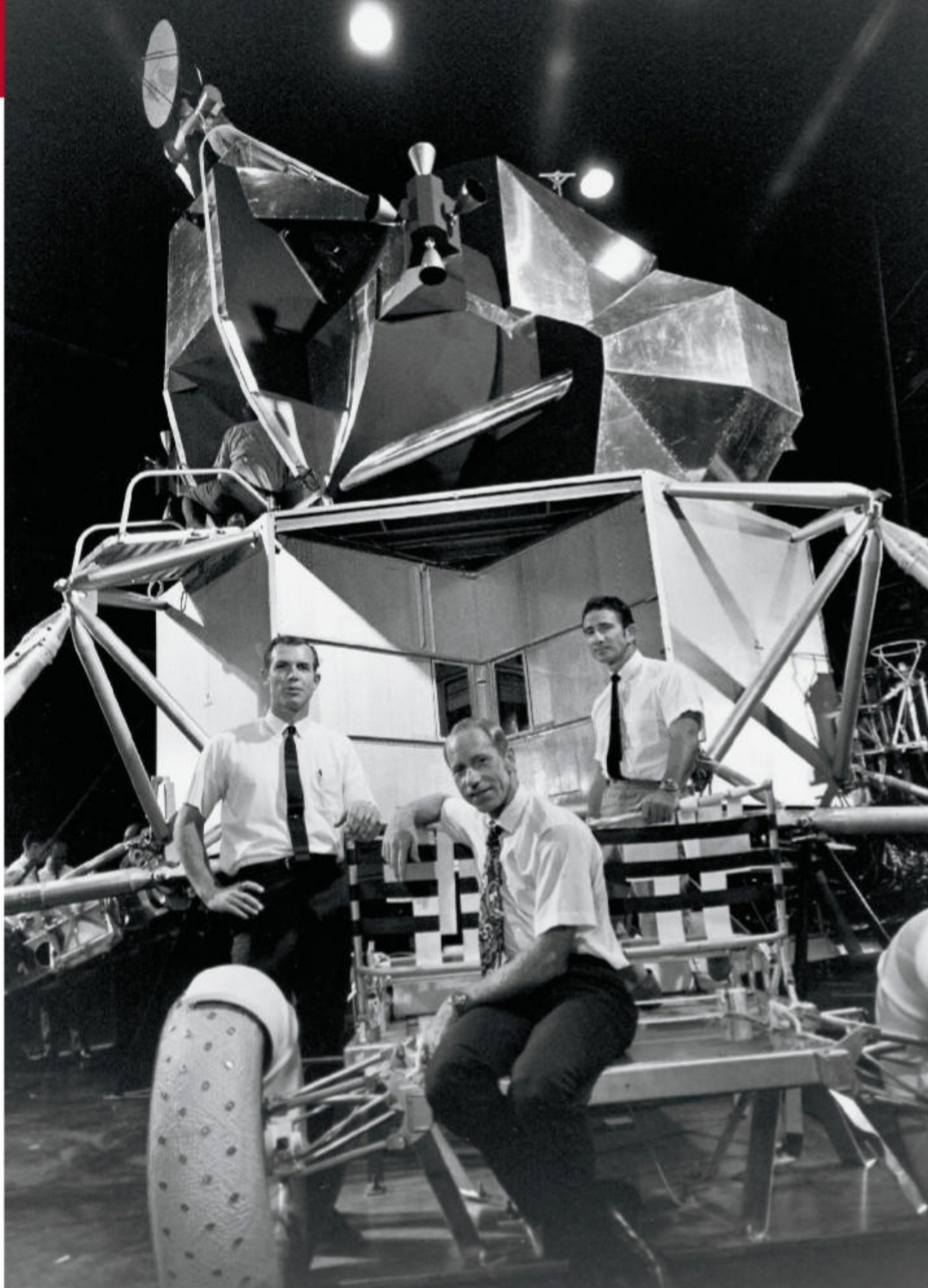
dramatically expand the range of the astronauts’ field expeditions.

After the precision landings of Apollo 12 and 14, NASA also got aggressive with its choice of landing site, the Hadley Plain. This roughly

6-mile-wide (10 kilometers) clearing was hemmed in by the Apennine Mountains and bordered by the 0.6-mile-wide (1 km) meandering canyon called Hadley Rille, which may have been created by volcanic activity. It was a spectacular setting with great geological potential.

Commander David Scott, a NASA veteran, was a perfect match for this mission. More than any other moon-walker to date, Scott embraced the role of field geologist and sought to learn as much as he could under the tutelage of Caltech geologist Leon Silver. His choice of name for the Command Module (CM) reflected his scientific enthusiasm: *Endeavour*, after the vessel that carried British explorer Captain James Cook on his first scientific voyage.





From left to right, Dave Scott, Al Worden, and Jim Irwin pose with a lunar rover simulator in Houston.

Scott was joined on the mission by Lunar Module Pilot James Irwin and Command Module Pilot Alfred Worden, two first-time astronauts who'd joined NASA's corps in 1966. The trio attacked their mission with gusto and a sense of awe that lives on in the transcripts and audio recordings — and here, in this story.

* * *

Apollo 15 lifted off exactly on schedule July 26, 1971, at 9:34 A.M. EDT, keeping to a tight mission timeline that would ensure a favorable Sun angle when Scott and Irwin arrived at the Apennine Mountains on their landing approach. As the Saturn V rocket climbed out over the Atlantic, Scott checked in with his rookie crewmates.

SCOTT: How we doing, Al?

WORDEN: We're doing fine; 63 miles [altitude].

SCOTT: Good.

IRWIN: Everything looks good over here.

SCOTT: OK.

WORDEN: Just — looks just about a hundred feet per second down on the H-dot [climb rate], but everything else looks fine.

SCOTT: OK, I got the big fireball going by at staging. I don't know whether you saw it or not. That beauty really goes.

WORDEN: Yes.

GORDON FULLERTON, CAPSULE COMMUNICATOR (CAPCOM): Fifteen,

Houston. At four [minutes], the



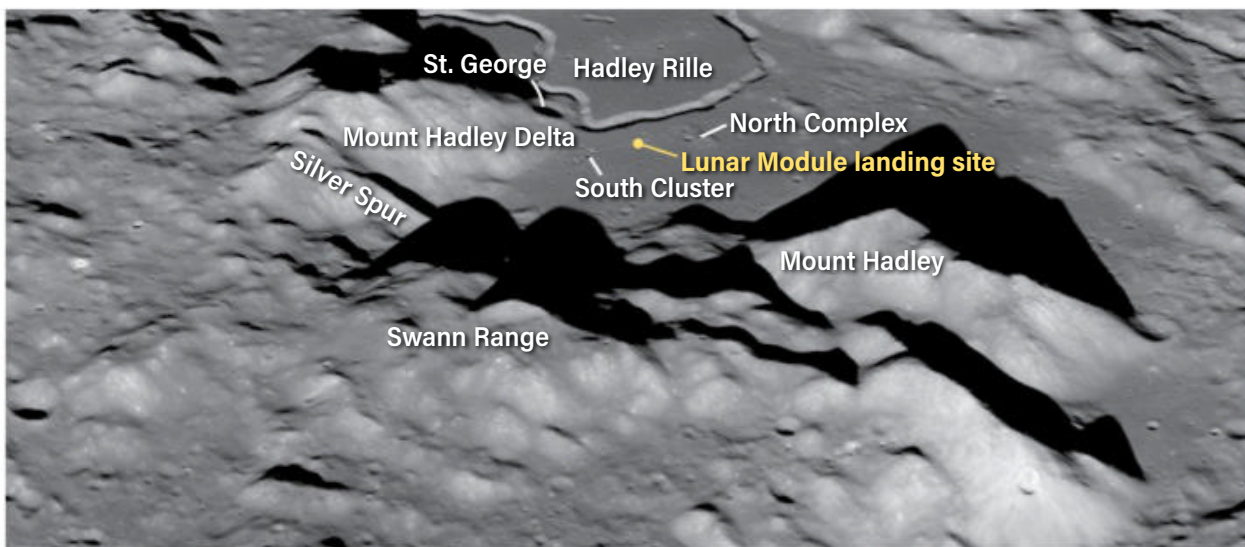
Apollo 15 clears the tower at Launch Complex 39A at the Kennedy Space Center on July 26, 1971.

NASA/J.L. PICKERING



Scott leans in to take a photograph while on geology training in Hawaii.





To clear the Swann Range, the approach path of Apollo 15's LM was at an angle of 26° — much steeper than the 15° path flown by previous missions. NASA/GSFC/ASU/GONETOP/PLAID

guidance has converged. The CMC [Command Module Computer] is go and everything looks good.

SCOTT: OK, Gordo. Looks good up here.

IRWIN: Man, I got the Moon in my window.

SCOTT: Yes, sir. It's out there.

* * *

The three-day journey of Endeavour and the Lunar Module (LM) Falcon to lunar orbit was a calm one, interrupted only by having to troubleshoot a short circuit in the firing switch for the Service Module (SM) thrusters. On the afternoon of July 29, the crew slipped into lunar orbit with a perfectly executed braking burn. As they began their first revolution, the crew tried to relay descriptions to Houston of the geological features they were seeing.

SCOTT: And, you know, as we look at all this after the many months we've been studying the Moon and learning all the technical features and names and everything, why — when you get it all at once, it's just absolutely overwhelming. There are so many different things down there and such a great variety of landforms and stratigraphy and albedo, that's it's hard for the mental computer to sort it all out and give it back to you. I hope over the next few days, we can sort of get our minds organized and get a little more precise on what we're seeing. But I'll tell you, this is absolutely mind-boggling up here.

KARL GORDON HENIZE (CAPCOM): Gentlemen, I can well imagine that a

foreign planet must be a weird thing to see.

As Apollo 15 continued in its orbit just 70 miles (113 km) or so above the lunar surface, the Apennine Mountains began to appear on the horizon — the very mountains Scott and Irwin would negotiate the next day.

SCOTT: And, Karl. We're approaching the Apennine Mountains, and that is indeed a spectacular view.

HENIZE: Roger.

WORDEN: Sure is, Karl. No question about those mountains being there and where we're at with them.

HENIZE: They stand up on your horizon, do they?

WORDEN: Yes, tremendous relief as we approach the mountain, Karl. [...]

SCOTT: Houston, as we cross out of [Mare] Serenitatis into the Apennines, why, it's just — unreal. You know, those are very poor descriptive terms, but the — the mountains jut up [...] here in great relief. I'm sure the guys who've been here before can probably sit down over a cup of coffee and tell you. But the relief is really pervasive.

HENIZE: You're the first man to fly over this mountain range, Dave. I guess

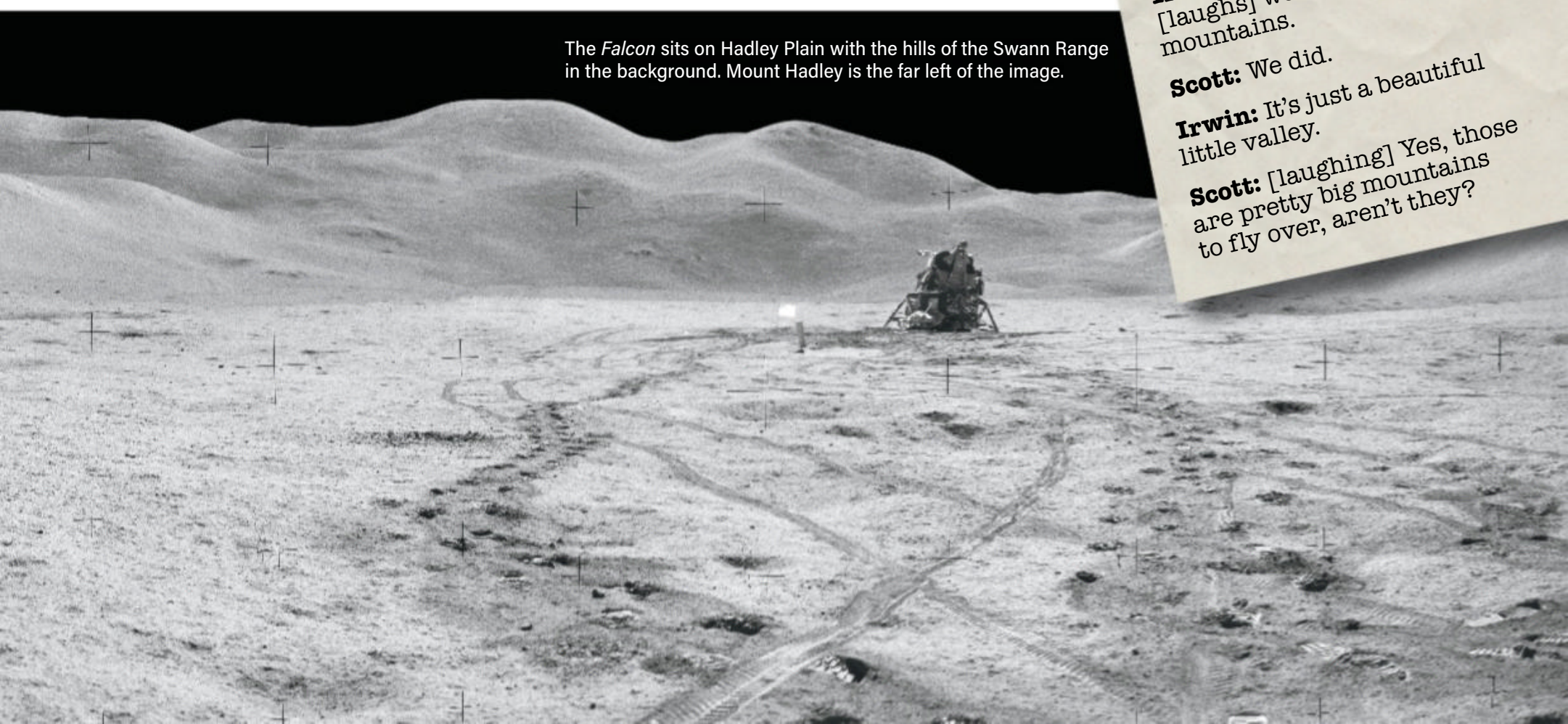
Irwin: I can't believe, uh... [laughs] we came over those mountains.

Scott: We did.

Irwin: It's just a beautiful little valley.

Scott: [laughing] Yes, those are pretty big mountains to fly over, aren't they?

The Falcon sits on Hadley Plain with the hills of the Swann Range in the background. Mount Hadley is the far left of the image.



pretty soon you're going to be over the — over the landing site, aren't you?

SCOTT: Roger. But I'm afraid it'll be dark today.

HENIZE: That's right.

* * *

Scott and Irwin got their chance to see it the next day, when lunar dawn broke over the Hadley Plain. As they descended in Falcon, they soared over the Sea of Serenity, heading for the mighty Apennines. Their landing site, the Hadley Plain, was tucked against the other side of the range. To get there, they descended at a much steeper angle than any previous Apollo mission, cleared a 12,000-foot-high ridgeline (3,650 meters), and shot the gap between Mount Hadley (13,000 feet [4,000 m]) and Mount Hadley Delta (11,500 feet [3,500 m]).

EDGAR MITCHELL (CAPCOM): Falcon, Houston. We expect you may be a little south of the site, maybe 3,000 feet.

IRWIN: OK. Coming up on 8,000 [feet in altitude].

SCOTT: OK.

IRWIN: 7,000 feet.

Through most of the powered descent, the LM was flying on its side, braking with its engine facing forward. As they passed 7,000 feet (2,130 m), the LM rotated to an upright position, allowing the pair to see their surrounding landscape out the windows. Although they'd done extensive simulator training, that didn't prepare them for the awesome sight of Mount Hadley Delta towering nearly a mile (1.6 km) above them.



NASA/DAVID HARLAND/KIPP TEAGUE

Scott took this panorama of Mount Hadley Delta — roughly 2 miles (3.2 km) in the distance — from the top hatch of the LM shortly after landing. The prominent feature on the left flank is Silver Spur, named after geologist Leon Silver. In contrast to the lineations on Mount Hadley Delta, which are mostly thought to be lighting artifacts, the layering on Silver Spur is likely formed by genuine bedrock layers.

That view also helped Scott orient himself and immediately correct the computer's landing trajectory with a hard roll.

IRWIN: P64! [Program 64 was the guidance computer's landing program.]

SCOTT: OK.

IRWIN: We have LPD. [The Landing Point Designator mode allowed Scott to alter the computer's landing target.]

SCOTT: LPD. Coming right.

The rest of the descent was all business as Irwin called out LPD and altitude information to Scott.

IRWIN: You're 200 [feet], minus 11 [feet descent rate]. 150, minus 7. Minus 6. 120 feet, minus 6.

SCOTT: OK, I've got some dust.

The descent continued, until the LM fell the final few feet to the surface, landing with a hard jolt.

IRWIN: Contact! Bam!

SCOTT: OK Houston, the Falcon is on the

Plain at Hadley.

MITCHELL: Roger, roger, Falcon.

[Applause in the background.]

IRWIN: No denying that. We had contact!

A couple of hours later, the astronauts popped open the LM top hatch so that Scott could conduct a short visual survey of the site's stunning landscape. For 10 minutes, he gave a detailed description of what he saw to Mission Control, with the geologists in the back room — where non-flight controller support staff huddled — hanging on his every word. The next day, the pair emerged from the LM for their first proper extravehicular activity (EVA).

SCOTT: OK, Houston. As I stand out here in the wonders of the unknown at Hadley, I sort of realize there's a fundamental truth to our nature. Man must explore. And this is exploration at its greatest.

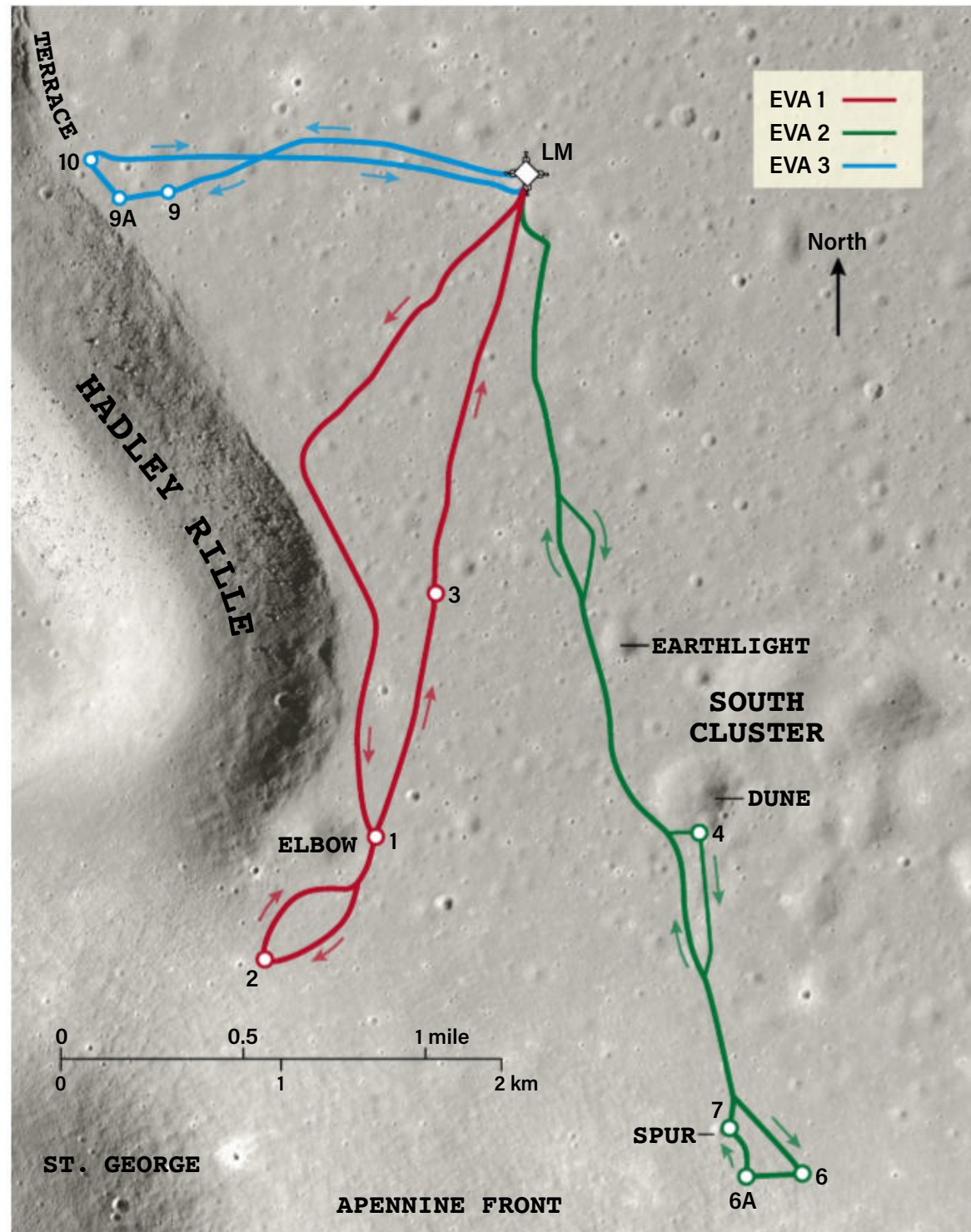
The first item on the agenda was to unload the rover, unfold it, fire it up, and give it a test drive.

LEFT: Scott and Irwin took several samples of soil and glass fragments from this 3-foot-wide (1 m) crater at Station 6 on the lower slopes of Mount Hadley Delta near Spur Crater. At some point after it was collected, the largest one fragmented. CENTER: Some of the fragments are pictured here in the lab at Johnson Space Center in Houston, where each Apollo sample was meticulously processed and documented. RIGHT: This image of a thin section of the sample is a microscope view in polarized light.



ROVING HADLEY PLAIN

The total traverse distance of 17.5 miles (28.2 km) that Scott and Irwin traveled in the lunar rover was more than eight times longer than the two EVAs of Apollo 14, which were carried out on foot. Apollo 15's crew could have covered even more ground, had problems with the percussive drill not forced them to shorten their third EVA.



ASTRONOMY: ROEN KELLY, AFTER ERIC JONES AND THOMAS SCHWAGMEIER. BASEMAP IMAGE: NASA/GSFC/ARIZONA STATE UNIVERSITY

SCOTT: OK, looks like the brake's on, reverse is down, so I'll see if I can't hop in it. [Pause.] That's a reasonable fit.

JOE ALLEN (CAPCOM): OK, Dave. And buckle up for safety here.

SCOTT: Oh, yes. OK, safety belts on. [...] OK, got a detent; we're moving.

ALLEN: Extraordinary.

SCOTT: Hey, Jim, you can probably tell me if I've got any rear steering.

For greater maneuverability, the rover's front and rear axles were both capable of turning.

Scott: Incidentally, Joe, thinking back on something we saw yesterday down towards Mount Hadley, we saw three sort of suggestions of beddings or horizontal linear lines at the base of Mount Hadley. And I got to thinking last night, maybe that was the high-water mark [of lava] for the basin at one time, because there are only three of them down there, and they were unique at the base of that mountain.

Distinct lineations — both diagonal and horizontal — that the astronauts observed on Mount Hadley are visible in this vertical panorama. Post-flight analysis suggested that most of the lineations were lighting artifacts created by the low Sun and long shadows, though some lineations could also be traces of fractures in the regolith. The image also shows some outcroppings at the base, accompanied by darker bands. NASA/ADAM BOOTLE

Irwin: Boy, I can't get over those lineations, that layering at Mount Hadley.

Scott: Boy, I can't either. That's really spectacular.

Irwin: That's really beautiful. Talk about organization!

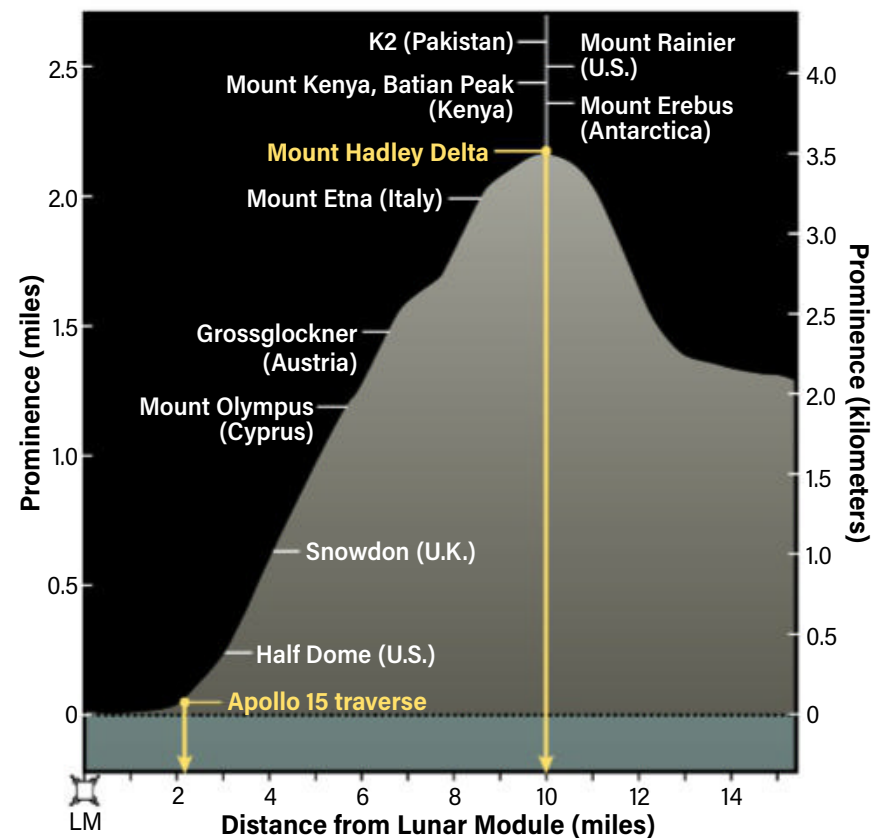
Scott: Yeah, man!



Endeavour soars over the Aristarchus Plateau, which contains the gorge of Vallis Schröteri and craters Aristarchus and Herodotus.

MOON MOUNTAINEERING

The Apennines rival some of the great mountains on Earth in terms of their prominence, or how high their summits sit above the surrounding terrain. Here's how Mount Hadley Delta measures up to some famous terrestrial peaks. *ASTRONOMY*: ROEN KELLY, AFTER NASA/GSFC/ARIZONA STATE UNIVERSITY



IRWIN: Yes, you have rear steering.

SCOTT: OK. But I don't have any front steering.

Despite cycling some of the rover's circuit breakers, they couldn't activate front steering. Nevertheless, they took off to the southwest using only rear steering, heading toward the rim of the Hadley Rille. They followed the canyon around to their first station — Elbow Crater, about 1.7 miles (2.7 km) from the LM, hitting top speeds of 7.5 mph (12 km/h). But they couldn't help but notice interesting samples as they sped across the terrain.

SCOTT: It feels like we need the seatbelts, doesn't it, Jim?

IRWIN: Yes, really do. [...] Boy, it really — really bounces, doesn't it?

SCOTT: Well, I think — there's sort of a — the rear end breaks out at about 10 to 12 clicks [km/h].

ALLEN: Roger, Dave, it sounds like it's like steering a boat, with the rear steering and the rolling motion.

SCOTT: Yes, that's right. It sure is. Hey,

here's a good fresh one [crater] right there —

IRWIN: Yes, I was looking at that one at 1 o'clock to us right now. Very fresh angular block of lighter albedo material on the south rim. [...]

SCOTT: [Laughs.] Man, this is really a rocking-rolling ride, isn't it?

IRWIN: Never been on a ride like this before.

SCOTT: Boy, oh, boy! I'm glad they've got this great suspension system on this thing. Boy.

The pair pulled up to Elbow Crater and began collecting samples, depositing them into collection bags. Scott and Irwin could barely contain their enthusiasm, even when Allen gently directed them to the next stop on their itinerary, St. George Crater, about 2,000 feet (600 m) away at the base of the Apennine Front.

SCOTT: OK, Joe, you want us to press on up to St. George [Crater]?

ALLEN: That's affirmative, guys. Move on.

IRWIN: OK, Dave.

SCOTT: OK. We're on the way. Oh, boy! This traveling! This is great sport, I'll tell you.

IRWIN: The sandpile [training area at Kennedy Space Center] was never like this.

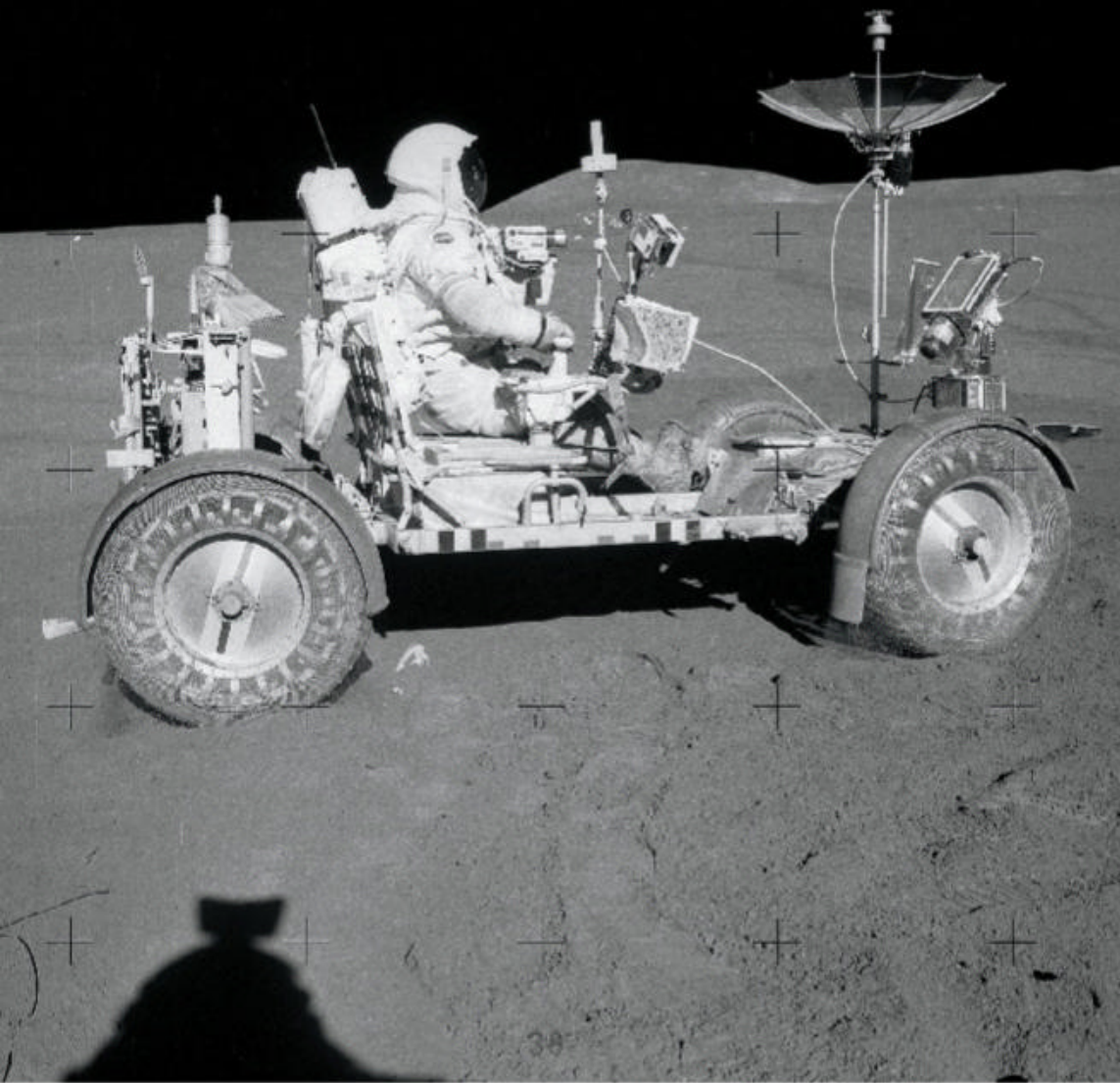
SCOTT: Yeah, man. I wish we could just sit down and play with the rocks for a while. Look at these things! They're shiny, sparkly! Look at all these babies here — gosh! Man!

IRWIN: Come on, Dave. There'll be a lot of them, let's get back.

SCOTT: Can't resist it. [Let's] go find something neat in St. George.

And they did.

SCOTT: There is one boulder! Very angular, very rough surface texture. Looks like it's partially... Well, it's got glass on one side of it with lots of bubbles, and they're about a centimeter across. And one corner of it has got all this glass covering on it. Seems like there's a linear fracture through one side. It almost looks like that might be a



FAR LEFT: The lunar rover kicks up some dust as Scott maneuvers it at the beginning of their second lunar excursion. His right hand is on the T-shaped handle used to steer the vehicle. Just in front of his hand is a traverse map that shows the Hadley Rille along its western edge and the cratered terrain to the east.

ABOVE LEFT: In the foreground of this image taken on the lower slopes of Mount Hadley Delta, Scott has placed his tongs on a boulder for scale. In the background, the rover leans on the 18° slope somewhat precariously, with one wheel off the ground.

BOTTOM LEFT: Scott reaches for a hammer atop a boulder near the Hadley Rille at Station 9A. His left hand is holding a sample bag with at least one sample in it.

contact — it is! Within the rock. It looks like we have maybe a breccia [*a collection of rock fragments cemented together*] on top of a crystalline rock. It's sort of covered with glass — I can't really tell. [...]

IRWIN: It looks fairly recent, doesn't it, Dave?

SCOTT: Yes, it sure does! It sure does! And I can see underneath the upslope side, whereas, on the downslope side, [the soil]'s piled up.

That suggested the rock had been blown out by a meteorite impact and dug into the soil as it came to rest.

SCOTT: Boy, that is really something. Hey, let's get some good pictures of that before we disturb it too much. [...]

ALLEN: Roger, Dave and Jim. [...] And it probably is fresh; probably not older than three and a half billion years.

SCOTT: Can you imagine that, Joe? Here sits this rock, and it's been here since before creatures roamed the sea in our little Earth.

Next, Scott tried to break off a chunk of it.

SCOTT: OK. Let's try the old hammer.

Bring me a couple of bags here, old buddy.

IRWIN: Yeah. Standing by.

Scott began hammering away at the boulder.

SCOTT: [Laughs.] Man.

IRWIN: Get a good one?

SCOTT: No.

IRWIN: Pull hard.

SCOTT: Ah, is that hard!

IRWIN: Well indurated.

SCOTT: Wowee. Ah! Ah! [*The sound of hammer blows are audible, conducted through his suit.*] [...]

IRWIN: Hey, you're knocking off a few fragments.

SCOTT: Yeah.

IRWIN: Probably the best you're going to be able to do.

SCOTT: Ah! After all that instruction I got.

IRWIN: Dave, I think, up on top here, if you hit it, it will break.

SCOTT: Yeah, right here?

IRWIN: Right there. Yeah. [*Pause.*] Yeah, it's coming loose. [*Pause.*] Yeah.

SCOTT: There it is, I got it. Oh, oop.

[*Softly.*] There. That's it, right there.

IRWIN: Boy, that rock is really ready to roll!

SCOTT: There it is.

IRWIN: Yeah, good show.

* * *

The next day started auspiciously: The rover's front steering was suddenly — inexplicably — functional. This made the drive to Spur Crater, some 2.1 miles (3.4 km) south, much easier for Scott.

Geologists hoped that by exploring the lower slopes of the Apennines, the astronauts might encounter ancient samples dating to the era before the Moon's major basins, or mare, had been filled with lava. This primordial material could shed light on the origins of both the Moon and Earth.

They were rewarded: Inside the rim of Spur Crater, they spotted a gleaming rock that became the most famous Apollo sample of all, dubbed the Genesis Rock.

ALLEN: Dave and Jim, [...] is it your impression that you are sampling on the ejecta blanket of Spur Crater, now?

SCOTT: Yes, sir — probably from the deepest part, because we're right on the rim.

ALLEN: Sounds good!

SCOTT: OK, [bag number] 195. Wouldn't you agree with that, Jim?

IRWIN: Yeah. Yes, sir.

SCOTT: OK. Now let's go down and —

IRWIN: Get that unusual one?

SCOTT: Get that unusual one. *[Pause.]*

Here's some dense... And there's another unusual one. Look at the little crater here, and the one that's facing us. There is a little white corner to the thing. [...] OK, there's a big boulder over there down-Sun of us, that I'm sure you can see, Joe, which is gray. And it has some very outstanding gray clasts and white clasts, and oh, boy, it's a beaut! We're going to get ahold of that one in a minute.

IRWIN: OK, I have my pictures, Dave.

SCOTT: OK, let's see. What do you think the best way to sample it would be?

IRWIN: I think probably... Could we break off a piece of the clod underneath it? Or I guess you could probably lift that top fragment right off.

SCOTT: Yeah. Let me try.

As Scott leaned into it, he thought it was a white clast breccia — until a reflection caught his eye, and he realized it was something much rarer.

SCOTT: Yeah. Sure can. And it's a — a white clast, and it's about —

IRWIN: Oh, man!

SCOTT: Oh, boy!

IRWIN: I got —

SCOTT: Look at that.

IRWIN: Look at the glint!

SCOTT: Ah...

IRWIN: Almost see twinning *[a symmetrical crystal pattern]* in there!

SCOTT: Guess what we just found.



Worden took this image of the Lunar Module Falcon out his window as it rendezvoused and prepared to dock with Endeavour.



ABOVE: When Scott and Irwin found the Genesis Rock, it was curiously perched on a pedestal of soil. In this image, the rock itself is the white object on the right side of the lunar dirt pile.

RIGHT: Scott works at the rover at Station 9A at the rim of Hadley Rille, which snakes through this image from right to center. Mount Hadley Delta looms in the background; St. George Crater is at upper right.

NASA/DAVID HARLAND

[Laughs.] Guess what we just found! I think we found what we came for.

IRWIN: Crystalline rock, huh?

SCOTT: Yes, sir. You better believe it.

ALLEN: Yes, sir.

SCOTT: Look at the plage *[plagioclase, a type of crystalline formation]* in there.

IRWIN: Yeah.

SCOTT: Almost all plage.

IRWIN: *[Garbled.]*

SCOTT: As a matter of fact — *[laughs]* Oh, boy! I think we might have ourselves something close to anorthosite, 'cause it's crystalline, and there's just a bunch... It's just almost all plage. What a beaut.

IRWIN: That is really a beauty. And, there's another one down there!

SCOTT: Yeah. We'll get some of these.

ALLEN: Bag it up!

SCOTT: Ah! Ah!

IRWIN: Beautiful.

SCOTT: Hey, let me get some of that clod there. No, let's don't mix them. Let's make this a special — why — I'll zip it up.

IRWIN: OK.

SCOTT: Make this bag, 196, a special bag.

ALLEN: Yes, sir.

SCOTT: Our first one. *[Pause.]* Don't lose your bag now, Jim. *[Irwin laughs.]* Oh, boy!



The Genesis Rock was an instant media sensation. Although it was not, as first thought, a piece of primordial lunar crust, at 4.1 billion years old, it was one of the oldest samples found during the entire Apollo program.

* * *

Over the course of the first two days, Scott and Irwin encountered persistent problems using the all-new power drill, struggling to exert enough pressure for it to make headway when planting probes to measure the Moon's internal heat. The issues came to a head on the morning of their third day on the surface, when they were supposed to retrieve a core sample. Although they eventually succeeded, the delays forced them to cut their third EVA short and forgo exploring the North Complex of craters.

Nevertheless, all the mission's science objectives had already been achieved. The astronauts capped their lunar exploration with a short jaunt in the rover over to the rim of Hadley Rille to collect samples. The rover had more than proved its worth, covering 17.5 miles (28.2 km) over 18 hours and 37 minutes of EVA — a new duration record.

Scott: What do you see there, Endeavour?
Worden: Sure see a nice-looking Falcon coming home to roost.
Scott: Roger.



A crescent Earth rises over the wall of Humboldt Crater in this shot taken by Worden.



Shortly after returning to the LM, Scott and Irwin lit the engine of Falcon's ascent stage and flew to a rendezvous with Endeavour and Worden, who had been keeping busy in lunar orbit with an extensive photography campaign.

On the 10th day of the mission, Houston sprang a surprise over the radio — the voice of their geology tutor Leon Silver greeted the astronauts, kicking off the first and only direct conversation between a geologist and a crew during the Apollo missions.

SILVER: Hey, Dave. You've done a lovely job. You just don't know how we're jumping up and down, down here.

SCOTT: Well, that's because I happened to have had a very good professor.

SILVER: A whole bunch of them, Dave.

SCOTT: That's right. As a matter of fact, so many of them, it's just hard to — hard to remember it all. But we sure appreciate all you all did for us in getting us ready for this thing. [...] I just wish we had had more time, because, believe me, there is an awful lot to be seen and done up there.

SILVER: Yes. We think you defined the first site to be revisited on the Moon. [...]

SCOTT: I hope someday we can get you all up here, too. I think we really

need to have some good professional geologists up here. As a matter of fact, good professional scientists of all disciplines, not only in lunar orbit, but right on the surface, because you all would just really have a field day, where — with your backgrounds and what you know. There's just so much to be gained up here.

* * *

The crew completed one more task before they left lunar orbit: deploying a small, 78-pound (36 kilograms) probe that had tagged along in the SM. This "subsattelite" would carry out space physics experiments and take measurements of the lunar environment. Then they fired the SM's engine to start their journey back to Earth.

The next day, Worden performed a brief EVA to retrieve film canisters from the SM's cameras from his imaging campaign, clambering out of Endeavour and along handholds on the SM in the first ever deep-space spacewalk.

On Aug. 7, 1971, as Apollo 15 barreled into Earth's atmosphere before splashing down at 3:45 P.M. CDT some 330 miles (530 km) north of Honolulu, the astronauts' thoughts of the Moon melted away. On previous missions, moonset — the crews' final glimpse of the Moon as it slipped over the horizon — was a highlight of reentry. But for the astronauts of

Apollo 15, it was our home planet that caught their gaze.

WORDEN: Oh, that's the Earth down there, baby.

IRWIN: Can you see it?

SCOTT: Sure as hell can. Yes, siree, I hope to tell you. [...]

WORDEN: Oh, yes. Hey — oh, man, are we moving, too! Son of a gun! Sheeoo!

SCOTT: Yes, indeedy. You ought to be able to see it out the — out the hatch window.

WORDEN: Oh my, I sure can. Sure a lot of mountains down there. How about that?

IRWIN: S---, I think that's Alaska out there. That would be right, wouldn't it?

WORDEN: Yes. Keep an eye out for the Moon.

SCOTT: Yes, keep an eye out for the Moon.

WORDEN: We've done it. Oh, we've missed it. [...]

SCOTT: Oh, Al —

WORDEN: We were too busy watching the Earth.

SCOTT: Why don't you pay attention to what you're doing there?

WORDEN: Too busy watching the Earth. ♪

Mark Zastrow is senior editor of Astronomy.