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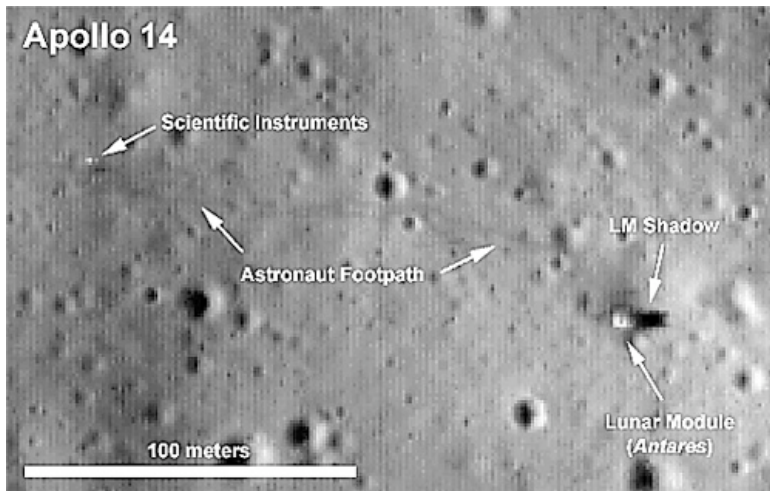
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NASA orbiter offers images of moon landing sites

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NASA / Goddard Space Flight Center

MOON SHOT: The Apollo 14 landing site in a photo released Friday with labels added by NASA.

Two days before the 40th anniversary of the Apollo 11 landing, the space agency releases the photographs of astronaut work sites. The pictures could aid future moon colonists.

By John Johnson Jr.
July 18, 2009

With the 40th anniversary of the Apollo 11 landing just two days away, NASA on Friday released the sharpest images ever taken of astronaut work sites on the moon, showing hardware and soil disturbances left behind by the 12 Americans who visited the lunar surface between 1969 and 1972.

The images, taken over the last few weeks by cameras aboard the Lunar Reconnaissance Orbiter, include some of the 10-foot-tall landing structure called the descent stage. It was left behind when the astronauts returned home and is seen casting long shadows over the pale surface of the moon.



Reaching the moon

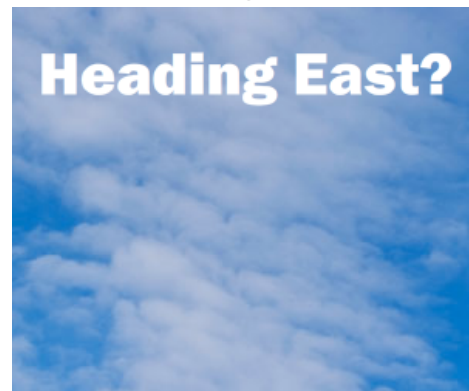


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"It's fantastic to see the hardware sitting on the surface, waiting for us to come back again," Mark Robinson, chief of the camera science team, said in a news briefing in Washington, D.C.



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The Lunar Reconnaissance Orbiter was launched June 18 on a mission to map the lunar surface in preparation for the planned return of astronauts to the moon in 2020. It carries instruments designed to search for ice deposits in sunless canyons and crevices; those deposits could be a source of water and rocket fuel for future moon colonists.

The cameras started clicking away in the last few weeks, as the spacecraft settled into an orbit that brought it as close to the surface as 18 miles. Over the years, Japan, China and India have all sent probes to the moon that have focused on the old Apollo sites. But the Lunar Reconnaissance Orbiter's images of the hardware left behind are the sharpest yet, NASA said, resolving features as small as 3 feet wide.

The reconnaissance orbiter took pictures of five of the six landing sites, missing only that of Apollo 12, which launched on Nov. 14, 1969.

Some of the best images are of the Apollo 14 landing site, where a set of scientific instruments can be seen, along with marks in the topsoil, known as regolith, left by the astronauts walking around in their spacesuits. The pictures also show the tracks of the tool cart the astronauts towed behind them, Robinson said. Apollo 14 launched on Jan. 31, 1971.

As impressed as they were by the images, NASA officials said they expect better quality after the orbiter finishes commissioning its instruments, a process similar to tuning a new musical instrument to get the best sound. Images of the Apollo 11 landing site, for one, are expected to be twice as good in the future, officials said.

Referring to conspiracy buffs who question whether the moon landing of Neil Armstrong and Buzz Aldrin really occurred, one reporter asked if the images show the American flag planted by the astronauts. Robinson said that would be difficult to resolve from space.

"If it's standing, it would be very, very narrow," he said. "We might be able to see its shadow at some point."

But he said he believed the flag was knocked over by the exhaust from the Apollo 11 lunar module's ascent engine as Armstrong and Aldrin lifted off for the trip home. The mission ended on July 24, 1969, when the module carrying Armstrong, Aldrin and Michael Collins parachuted into the Pacific Ocean.

Aside from the curiosity value connected with the images, NASA said the pictures could be important to future moon colonists. Changes in the surface, in the form of new cratering, would help scientists understand how often a particular region on the moon is hit by rocks from space. That information would be important in designing habitats.

The lunar images can be viewed on the NASA website, at www.nasa.gov.

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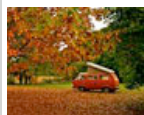
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Home of the Week



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New Zealand by VW van



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