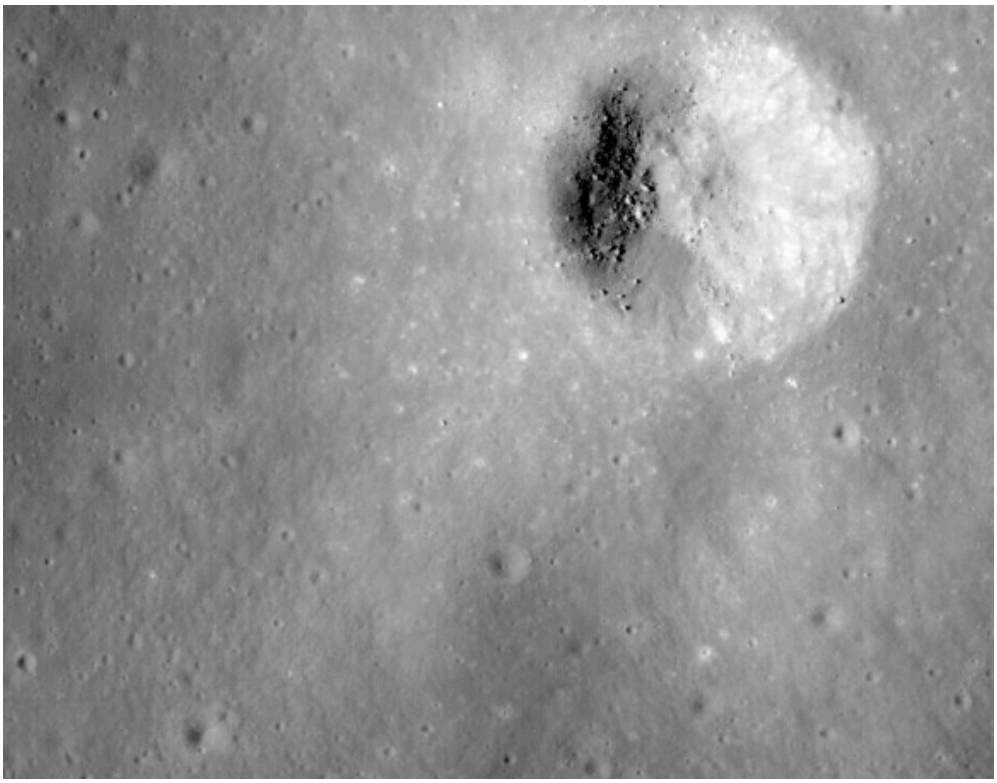
Latest LRO Image Solves Apollo 14 Mystery | Universe Today

August 20th, 2009

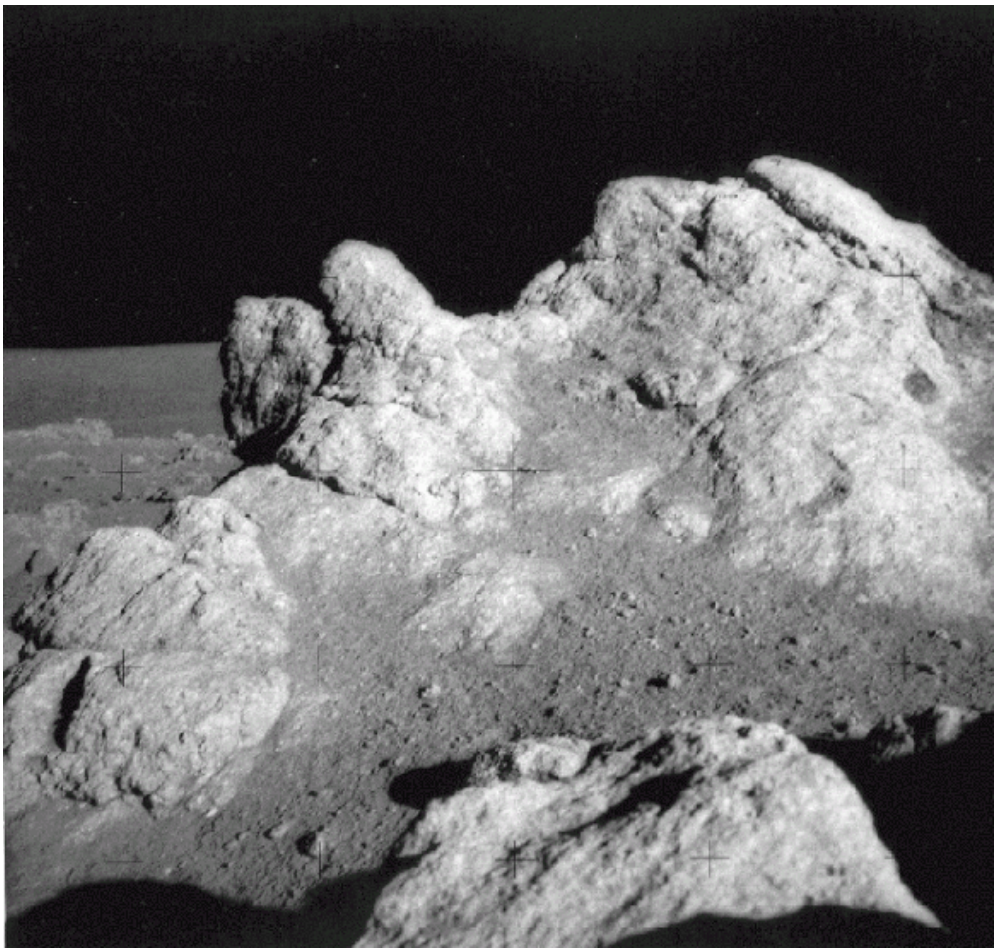
Latest LRO Image Solves Apollo 14 Mystery

Written by Nancy Atkinson ShareThis



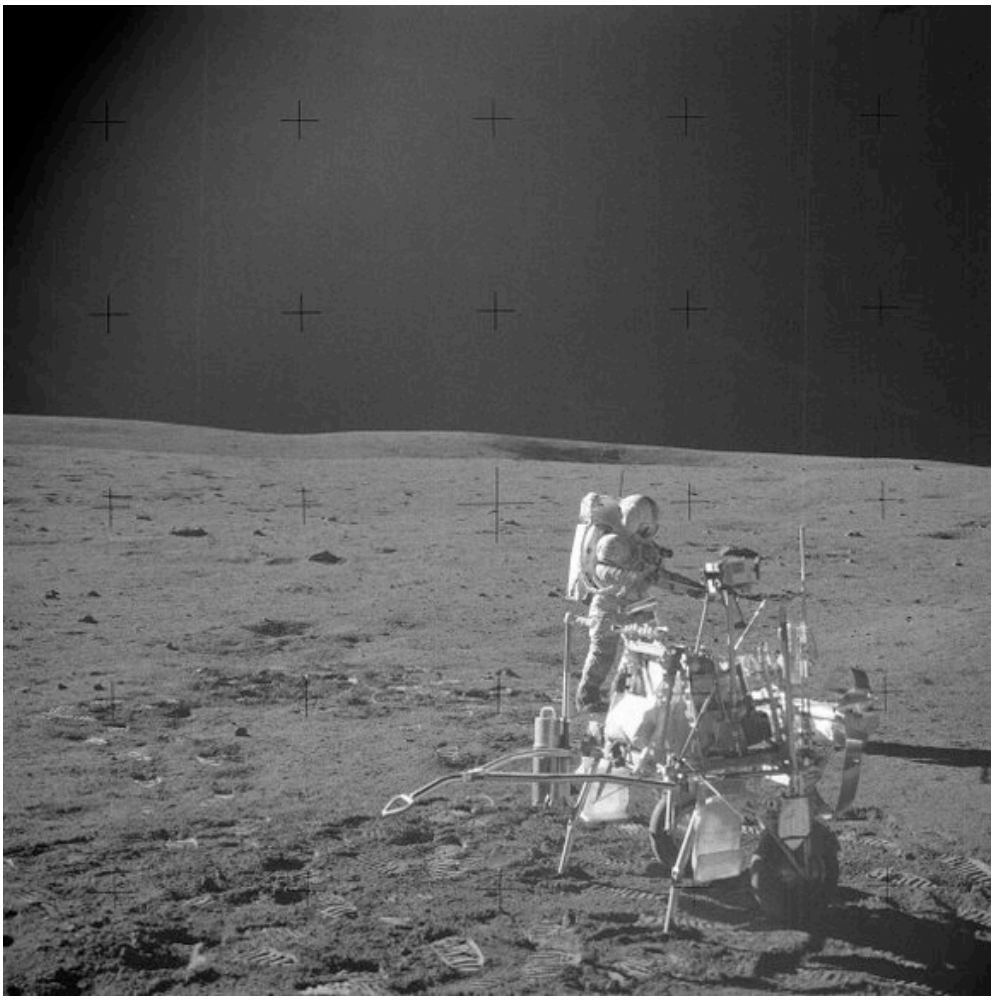
During the second EVA of the Apollo 14 mission on the moon, astronauts Alan Shepard and Edgar Mitchell had a goal of hiking to the rim of nearby Cone Crater in the Fra Maura highlands. But the steep terrain made the going difficult, elevating the astronauts' heart rates. Additionally, without landmarks it was difficult to judge distances and the rolling terrain was filled with similar-looking ridges, so Shepard and Mitchell couldn't really tell if they were close to the rim or not. Realizing time and available oxygen were getting short, Mission Control told the astronauts to head back to the Lunar Module, and although disappointed, the astronauts agreed. But how close did they actually come to the crater? No one knew for sure, until now.

One of the latest images from the Lunar Reconnaissance Orbiter shows new details of the Apollo 14 landing site. If you look closely at the image above, visible are the tracks from the astronauts steps and their three-wheeled MET cart, and you can clearly follow the trail of the astronauts on their "radial traverse." Click the image for larger version if you're having trouble seeing the tracks. Their tracks stop just 30 meters short of the rim, near a dark spot just to the lower left of the crater, which might be Saddle Rock, shown in the image below. Shepard and Mitchell never realized just how close they really were.



This photograph shows Saddle Rock, the largest boulder seen on this mission. Named for its shape, Saddle Rock is 4.5 meters across

On the LROC (Lunar Reconnaissance Orbiter Camera) website, Samuel Lawrence notes that more and different detail is visible on this image as opposed to the initial images released prior to the Apollo 11 anniversary in July because the lighting is different. "This time the Sun is 24 degrees higher above the horizon providing a clearer view with fewer shadows. Albedo contrasts are greater, and more clearly show soil disturbances from landing, astronaut surface operations, and blast off."



The MET cart from Apollo 14. Credit: NASA

Lawrence notes how the term “radial traverse” does not quite do the crew of Apollo 14 justice. "Their journey sounds like a stroll in the park, however the reality is quite the contrary. The hike up Cone crater was quite challenging. For the first time, astronauts traveled out of the sight of their lunar module while hiking uphill over 1400 meters with only a poor map, dragging the tool cart (MET), and wearing their bulky spacesuits. It was an amazing feat that the two astronauts made it to the top of Cone ridge and acquired all their samples. They ended up about 30 meters shy of peering into Cone crater itself, surely a disappointment at the time, but absolutely no reflection on the success of the traverse and the scientific results gleaned after the mission."

Here's an annotated video of the Apollo 14 landing site. North is up, image width is approximately 1.6 km

Source: LROC

Filed under: Missions, Moon

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10 Responses to "Latest LRO Image Solves Apollo 14 Mystery"

1. *IVAN3MAN* Says:
   August 20th, 2009 at 12:57 pm

   Click **here** for the annotated version of the first image above.

2. *mang* Says:
   August 20th, 2009 at 2:11 pm

   A scale would be a big help here.

3. *mang* Says:
   August 20th, 2009 at 2:13 pm

   thanks IVAN3MAN – that helps a lot. Didn't notice at first.

4. *Kevin F.* Says:
   August 20th, 2009 at 2:50 pm

   Thanks IVAN3MAN, I had lost the track before Flank Crater.

Now you're forgiven for your spelling post yesterday.

5. *Aqua* Says:
August 20th, 2009 at 5:16 pm

   An amazing series of images… Like evryone who closely followed the Apollo landings, I've always wondered just how far they were from their goal What 'gets' me is the number of small craters in the region… Must've been a heck of a hike! Good job (Once again) Nancy! The videos rock!

6. *tacitus* Says:
August 21st, 2009 at 1:07 am

   I wonder what the moon hoaxers are saying now…

   Aliens? Robots?

7. *IVAN3MAN* Says:
August 21st, 2009 at 6:22 am

   Kevin F., *mang*, you're both welcome!

   I'm **not** here just to annoy Nancy!

8. *DrFlimmer* Says:
August 21st, 2009 at 7:31 am

   @ tacitus

   That, what they would always yell:

   PHOTOSHOP

9. *ND* Says:
August 21st, 2009 at 11:33 am

   Didn't know they took a shopping cart to the moon.

10. *Sili* Says:
August 21st, 2009 at 11:53 am

    Damn.

    Thanks for the annotation. I'd lost the track too.

    Idly, this time the illusion tricked me and I had to work to make it a crater rather than a hill.

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