The Wildest Moon Landing Conspiracy Theories, Debunked

Becky Little

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The Apollo 11 moon landing on July 20, 1969 was one of the most astonishing achievements in human history. That day, an estimated 530 million TV viewers watched U.S. astronauts Neil Armstrong and Buzz Aldrin take their first steps on the moon. Afterward, the two men and third crew member Michael Collins flew safely back to Earth and landed in the Pacific Ocean.

mankind" had been faked. Conspiracy theories that the moon landing was actually a hoax that the U.S. government had staged to win the space race with the Soviets began to gain traction in the mid-1970s. Although these claims were false and easily debunked, they have persisted to this day. Most of the deniers' "proof" is based on perceived anomalies in the

images transmitted back to Earth from the moon's lunar surface.

Yet just a few years later, some people claimed the "giant leap for

"With few exceptions, the same arguments just keep coming up over and over again," says Rick Fienberg, the press officer for the American Astronomical Society, who holds a PhD in astronomy. He has some first-hand knowledge of this: nearly 40 years ago, Fienberg debated one of the first prominent moon landing deniers, Bill Kaysing, on TV. The initial claims the moon landing was staged came at a time when the Pentagon Papers and Watergate had eroded Americans' trust in their government. But faking the success of the Apollo 11

practically impossible to pull off, says Fienberg. "About 400,000 scientists, engineers, technologists, machinists, electricians, worked on the Apollo program," Fienberg points out. "If in fact the main motivation for believing in the moon hoax that is you don't trust the government, you don't trust our leaders, you

don't trust authority, how can you feel that 400,000 people would

mission would require deception on a grand scale—and would be

keep their mouths shut for 50 years? It's just implausible." Here, we break down some of the most enduring conspiracy theories about the moon landing—and why there's no evidence to support them. 1. The moon landing is fake because the American

flag looks like it is flapping in the wind.



The simple answer is, it isn't flapping, Fienberg says. That's because it isn't an ordinary flag. If the astronauts had planted a

Earth when there's no wind. This wouldn't make for a very appealing photo, so NASA designed special flags for astronauts to take with them (all six Apollo missions that made it to the moon planted an American flag there).

These flags had a horizontal rod inside to make them stick out from

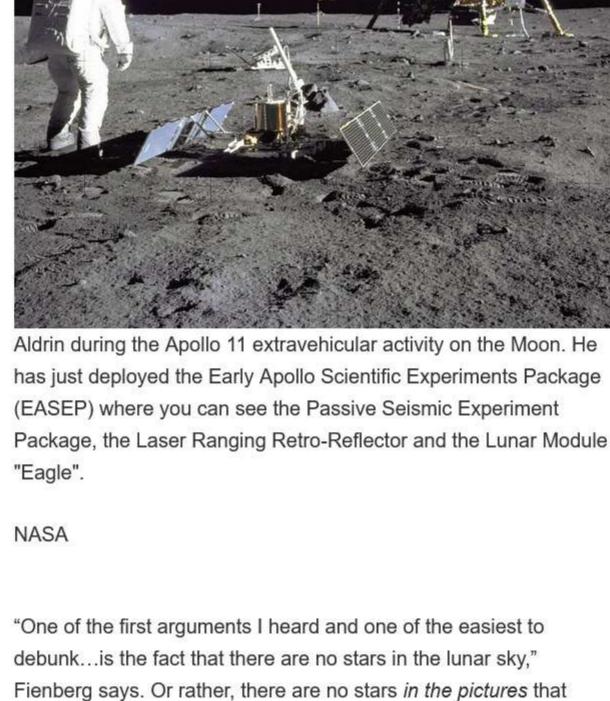
the flagpole. The Apollo 11 astronauts had trouble extending the

rod all the way, and in still pictures, this creates a ripple effect that

makes the flag look like it's waving in the wind. In video images of

regular flag on the moon, it would've hung slack like flags do on

the flag, you can see it only moves while the astronauts are grinding it into the moon's surface. After the astronauts step away, it stays in the same bent shape because of the partially-extended rod. 2. The moon landing is fake because you can't see the stars.



"All of the exposures of the astronauts on the moon are daylight exposures," he explains. "The surface was brightly illuminated [from the sun]. And the astronauts are wearing bright white space suits that are highly reflective." The exposure on the astronauts' cameras was too short to capture the space suits and the moon's surface while also capturing the

comparatively dimmer stars. The same thing happens if you go

onto someone's back porch at night and turn on the lights. Even

exposure camera won't be able to capture them.

aren't right.

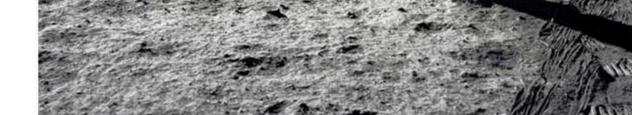
NASA

though you can see the stars from where you're standing, a quick-

3. The moon landing is fake because the shadows

Armstrong and Aldrin took on the moon. But if you've ever used a

camera before, it's easy to understand why.



In images from the moon landing, it is possible to see certain

objects even though they are in shadow. Skeptics argue that if the

Aldrin pictured with the Lunar Module "Eagle."

sun were the only source of light, this wouldn't be the case. Therefore, the fact that you can see some objects in shadow must be the result of special Hollywood lighting. Scroll to Continue The problem with this theory is that although the sun is the main source of illumination on the moon, it isn't the only source of illumination. Another source is the lunar ground, which reflects the sun's light. In the Apollo 11 pictures, "the sunlight is being scattered or reflected off the ground every which way, and some of it-a small fraction but enough to be able to see-scatters into the shadows," Fienberg says. This is why, in some images, you can make out a plaque that Armstrong and Aldrin left on the moon even though it's lying in shadow.

4. The moon landing is fake because you can't see

Armstrong's camera.

surface camera.

NASA

true.

Kubrick filmed it.

Neil Armstrong took this photograph of Aldrin with a 70mm lunar

In one of the pictures from the moon landing, you can see

pointed out that Armstrong does not appear to be holding a

Armstrong clearly reflected in Aldrin's visor. Some skeptics have

camera, so someone else must be taking the picture. But that isn't

Armstrong couldn't walk around the moon with a regular hand-held camera. In his bulky suit, he needed something that was easy to manipulate. The camera he used on the moon was mounted on the front of his suit, which is where his hands are in the reflection.

5. The moon landing is fake because Stanley



was so compelling that some conspiracy theorists later wondered if the government had actually hired Kubrick to film the moon landing in a soundstage (possibly like the one James Bond ran through in the 1971 film Diamonds Are Forever). The thing is, the moon landing footage didn't look real because Kubrick filmed it-Kubrick's movie 2001 looked real because

Kubrick enlisted astronomical artists and aerospace engineers to help him with it. The only "evidence" that Kubrick filmed the moon landing has itself proved to be a hoax.

Denial of America's great progress in space exploration and belief

in these myths is "more of an ideological thing—a political thing—

than it is a scientific thing," Fienberg notes. To those who know the moon landing was real, conspiracy theories that it was a hoax may seem silly and innocuous. But their consequences aren't: they spread misinformation, make people susceptible to other false theories and could earn you a punch from Buzz Aldrin.