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[LRO sees a Moonslide](#)

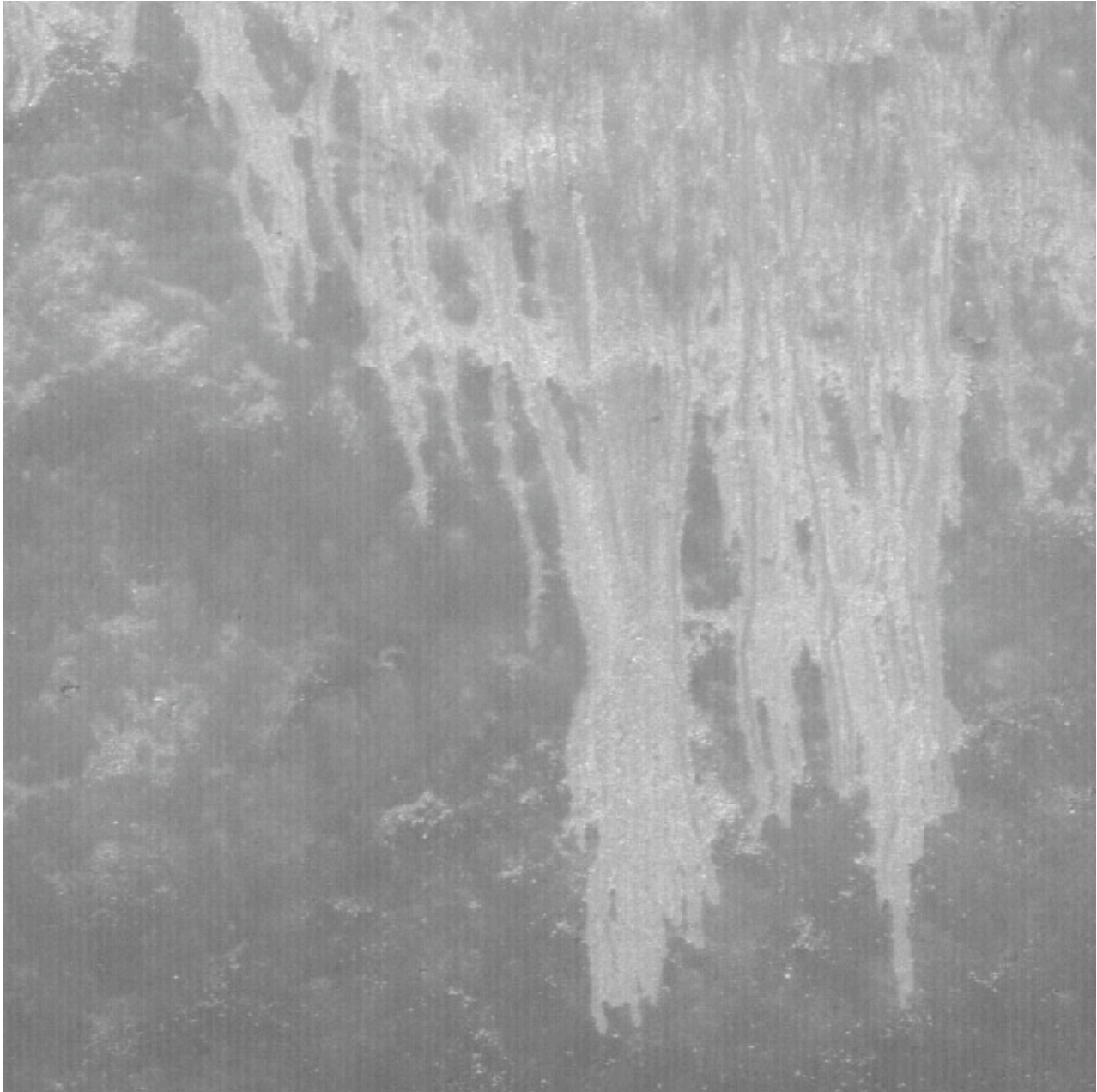


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The hi-res Lunar Reconnaissance Orbiter's camera [captured a pretty cool image](#) of a (what I'm guessing is

an ancient) landslide on the Moon. Check this out:



[Click to embrobdingnangate.]

The slide is down the steep slope of a crater called Marius, located in Oceanus Procellarum, a vast smooth-surfaced area on the Moon (generally called "maria" — singular is "mare" — and easily visible to the naked eye). The crater itself is pretty old; the floor is covered with the same smooth surface as the mare around it, so it predates Oceanus Procellarum which we know is pretty frakkin' old.

The slide is very interesting; what could have caused it? A moonquake, or a nearby impact? Either way, the ground shook, knocking loose rubble at the crater rim which then rolled downhill. And just to give you an idea of the scale here, the image is 510 meters across: you could walk that distance in a few minutes. The fingers of debris are only a few dozen meters across at most! The smallest objects you can see in this image are less than a meter across.

Features like this on the Moon yield a lot of information. Better, as the LROC page notes, this feature can be compared to similar ones on Mars, giving scientists insight into both worlds.

And? It's just really cool. Landslides on the Moon! Look out below!

November 5th, 2009 10:08 PM Tags: [landslide](#), [LRO](#), [Moon](#)
by [Phil Plait](#) in [Astronomy](#), [Pretty pictures](#) | 20 comments | [RSS feed](#) | [Trackback >](#)

20 Responses to “LRO sees a Moonslide”

1. 1. [Dones](#) Says:

[November 5th, 2009 at 10:14 pm](#)

Cool! I love how great the resolution is from LRO. Do we have any idea how old the landslide is?

2. 2. [AKMask](#) Says:

[November 5th, 2009 at 10:30 pm](#)

Carl Sagan ft Hawking – Drops a beat

Hey phil, I saw this on facebook today, and its an amazing song, just wanted to pass it on to someone else who also loves Sagan.

<http://www.youtube.com/watch?v=zSgiXGELjbc>

its from the Symphony of Science Project at <http://www.symphonyofscience.com/>

3. 3. [Emery Emery](#) Says:

[November 5th, 2009 at 11:12 pm](#)

You mean, Look out above!

4. 4. [PlasticRectangle](#) Says:

[November 6th, 2009 at 12:19 am](#)

That seriously looks like water. I know that of course it's impossible, but the resemblance to the gullies and similar things on Mars is just uncanny. Wow.

5. 5. [«bønez_brigade»](#) Says:

[November 6th, 2009 at 1:57 am](#)

That kinda “loosely” resembles the strip mining effects from the recent ‘Moon’ flick.

6. 6. [JohnW](#) Says:

[November 6th, 2009 at 5:55 am](#)

In keeping with your “aresain” comment about Mars, shouldn't this be a “luneslide” or something?

7. 7. [Jack Mitcham](#) Says:

[November 6th, 2009 at 6:38 am](#)

Maybe it was caused by a Judoon platoon on the moon.

8. 8. *Sili* Says:

[November 6th, 2009 at 7:26 am](#)

Brobdingnagify, surely? There're only two ns, not three.

9. 9. *Ken B* Says:

[November 6th, 2009 at 8:28 am](#)

Something crashes nearby. The ground shakes. Rocks and dirt come rolling down the hill, straight at you.

All in total silence.

In space, no one can hear you scream.

10. 10. *LRO ziet een aard- eh... maanverschuiving | Astroblogs* Says:

[November 6th, 2009 at 9:40 am](#)

[...] Met behulp van de Lunar Reconnaissance Orbiter (LRO) heeft men op een steile wand van de krater Marius, gelegen in de Oceanus Procellarum op de maan een soort van maanverschuiving gevonden. Het gebied op de afbeelding is 510 meter breed en de gehele Mariuskrater is 41 km doorsnede. De preciese lokatie is op 11,9 °N en 50,8° W, mocht je in het bezit zijn van een maan-TomTom. Vermoedelijk is de maanverschuiving ontstaan door een seismische oorzaak, bijvoorbeeld de inslag van een nabije meteoriet. De kleinste details op de foto zijn een meter doorsnede, even voor de duidelijkheid! De maan bleek onlangs rollende stenen te hebben en nu weer die maanverschuiving. D'r zit leven in de maan. Bron: Bad Astronomy. [...]

11. 11. *Lewis* Says:

[November 6th, 2009 at 12:00 pm](#)

Phil, There is also a new pic of the Apollo XVII landing site via LRO. It's even better than the others released earlier!

12. 12. *Bryan Feir* Says:

[November 6th, 2009 at 12:23 pm](#)

Ken B@9:

Well, I wouldn't say *total* silence. The rocky surface that you'd be standing on would be quite capable of carrying the vibrations of sound into the suit you'd presumably be wearing, albeit rather attenuated.

I agree it sounds like a wonderful horror movie shot, though: complete silence as you see a suited figure with his arms in front of him as if warding something off, and the rapidly approaching wall of debris only seen reflected in the suit's faceplate...

13. 13. *Ken B* Says:

[November 6th, 2009 at 12:47 pm](#)

Speaking of the Apollo XVII site:

http://wms.lroc.asu.edu/lroc_browse/view/M109032389LE

Are those more rocks tumbling down slopes that I see? About 1/3rd of the way down from the top, where the bright image turns to dark, I see some near-vertical lines, ending in what look like boulders towards the bottom (in the image). For example:

<http://www.hvcomputer.com/temp/M109032389LE-zoom.png>

And, where in the full image is the Apollo XVII landing site?

14. 14. *Ken B* Says:
[November 6th, 2009 at 12:48 pm](#)

Speaking of the Apollo XVII site:

http://wms.lroc.asu.edu/lroc_browse/view/M109032389LE

Are those more rocks tumbling down slopes that I see? About 1/3rd of the way down from the top, where the bright image turns to dark, I see some near-vertical lines, ending in what look like boulders towards the bottom (in the image). For example:

<http://www.hvcomputer.com/temp/M109032389LE-zoom.png>

And, where in the full images is the Apollo XVII landing site?

15. 15. *Ken B* Says:
[November 6th, 2009 at 12:49 pm](#)

Hmm... I'm trying to post another comment, but it won't appear. No "awaiting moderation" notice, either. ???

[edit] Okay, now they've appeared with "awaiting moderation". Strange for the delay. Hopefully, BA can just not approve one of them, since I posted it twice.

16. 16. *Tom* Says:
[November 6th, 2009 at 4:04 pm](#)

The really cool thing about this landslide is that since there's no atmosphere or water to wear it away, and that very little has happened on the moon in millions of years, the question is which is older: this landslide, or the dinosaurs?

17. 17. *Old Geezer* Says:
[November 6th, 2009 at 7:28 pm](#)

Let me quibble for the sake of discussion. I can't see all of the detail, because the image doesn't show the origin of this slide, but I don't think this is really a landslide as much as it is the evidence of a lot of surface rock falling down a slope. Classically, a landslide would involve a large amount of dirt moving as a single mass. Think of any hillside in Los Angeles after a fire and subsequent rain. There is the typical egg-shaped zone of newly exposed dirt above and a big pile of dirt below. What I see here is the pattern of rocks or boulders rolling down the surface of the slope without the underlying

mass being disturbed. If you've seen films of a snow avalanche, you've seen this first movement of snow crumbs along the surface followed by the sudden drop of a mass of snow in the actual avalanche. The moon crumbs fell, but the land beneath did not slide.

Am I missing something or just being too picky? Any geologists out there?

18. 18. *Tom K. Says:*

[November 6th, 2009 at 8:13 pm](#)

Looks like some pretty cool ski slopes. Wonder what the lift tickets cost. All that fresh\really old powder.

19. 19. *Crudely Wrott Says:*

[November 6th, 2009 at 8:57 pm](#)

Stuff moves. Places and paces change but stuff still moves.

20. 20. *Crudely Wrott Says:*

[November 6th, 2009 at 9:03 pm](#)

Oohh! Tom K! Skiing on the Moon.

There was a wonderful short story from the mid 50s (I think , author uncertain) that featured just such a thing. If memory serves, one attaches perforated soles to ones moon boots which exhaust jets of compressed gas carried in back packs. Upon arrival at the summit one would only need to face downhill, activate a valve and take a couple of forward steps. The rest would be gravy (ty).

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• About Bad Astronomy

If you went to BadAstronomy.com and found yourself here, never fear: the BA Blog has moved to its new home at Discover Blogs. The original BA site (with the Moon Hoax debunking and all that) [is still online](#), too.

Phil Plait, the creator of Bad Astronomy, is an astronomer, lecturer, and author. After ten years working on Hubble Space Telescope and six more working on astronomy education, he struck out on his own as a writer. He has written two books, dozens of magazine articles, and 12 bazillion blog articles. He is a skeptic, and fights misuses of science as well as praising the wonder of real science.



Contact me: The Bad Astronomer "at" gmail "dot" com



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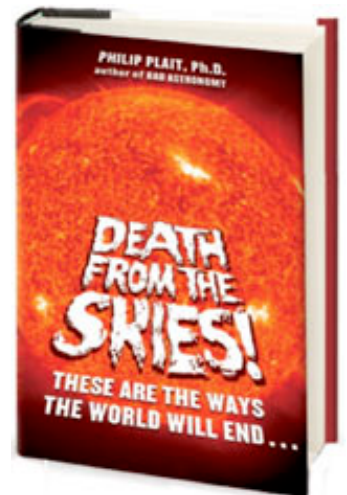
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-- Adam Savage, *Mythbusters*



"Reading this book is like getting punched in the face by Carl Sagan. Frightening, but oddly exhilarating."

-- Daniel H. Wilson, author of *How to Survive a Robot Uprising*

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