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Water On The Moon: LCROSS Kicks Ice!

By [Brian McLaughlin](#)  November 14, 2009 | 9:00 am | Categories: [Science and Education](#)

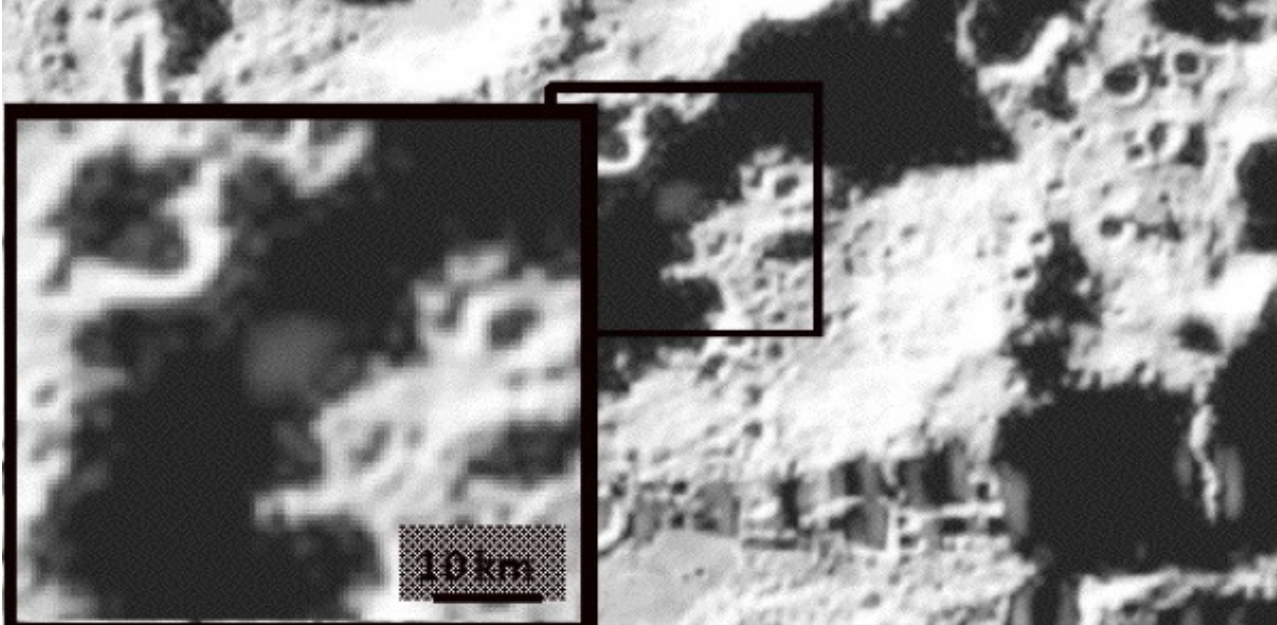


Image From NASA/LCROSS

Is there water on the Moon? The [NASA LCROSS mission](#) has determined the answer to be a [resounding YES!](#) GeekDad has covered the LCROSS mission with an article prior to the LCROSS launch by [Lonnie Morgan](#), a pair of articles on viewing what was hoped to be a visible plume from the impact by [Dana Bostic](#) and [myself](#), and finally a [follow-up to the impact](#) about the process of data analysis and waiting for results.

If you have missed all the coverage, the LCROSS mission impacted a spent Centaur booster into the Moon and captured data from the impact plume with the goal of finding deposits of frozen water. Today, the LCROSS team released their [preliminary findings](#):

The argument that the moon is a dry, desolate place no longer holds water.

Secrets the moon has been holding, for perhaps billions of years, are now being revealed to the delight of scientists and space enthusiasts alike.

NASA today opened a new chapter in our understanding of the moon. Preliminary data from the Lunar CRater Observation and Sensing Satellite, or LCROSS, indicates that the mission successfully uncovered water during the Oct. 9, 2009 impacts into the permanently shadowed region of Cabeus c[r]ater near the moon's south pole.

Congratulations to the entire LCROSS team!

REBLOG 

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Comments (49)

Posted by: Guzelvis | 11/14/09 | 10:17 am

Funny stories of how we attacked the moon <http://bit.ly/4jX5Y2> ... and it surrendered <http://bit.ly/3MKCHC>

Posted by: MikeLicht | 11/14/09 | 10:39 am

Why is NASA really seeking water on the Moon?

see:

<http://notionscapital.wordpress.com/2009/10/21/water-on-the-moon/>

Posted by: Quintus | 11/14/09 | 10:42 am

I find it bit curious that water in space is treated like some anomaly. That the existence of water-ice on the Moon is of course great news. But I'm not really /very/ surprised about it either. All in all, good news. Now we can establish a base on moon and start mining He3 and get that god-damn fusion reactor finally a'rocking.

Posted by: abundy | 11/14/09 | 10:59 am

Can we PLEASE stop littering across the universe and calling it discovery? Its like humans have this desire to throw aluminum trash throughout space. When 'we the people' finally get to see space it is going to be like walking through Central Park after a concert - beer cans, candy wrappers, and confetti strewn about like so much man-made litter.

Don't we have any other ideas for travelling in space? I am no environmentalist but can't we invent ways to bring back everything we take or at least ensure it is disposed of properly. Possibly put the trash in the path of the sun so it can be properly disposed of safely? Until then, let's just watch the moon from the surface of earth and imagine it without our cousin's lander up on cinder blocks in the yard, old glory flying in the breeze, and now trashcans buried in the surface.

Posted by: Vagabondastronomer | 11/14/09 | 11:08 am

@abundy

The problem with sample return missions is cost. NASA's budget is not nearly large enough to do what it would like to, and sometimes short cuts have to be taken. In this case, the only real way to accomplish this task was for a collider to be used; the equivalent of taking a core sample by blowing the core into space. Destructive and a bit messy, yes. But few can argue with its effectiveness.

I'm against the notion of littering up space, make no mistake. However, barring any sudden change and improvement in our ability to go into space, at this point we're doing the best we can. Some of that "litter" has done some great science in the service to humanity. Little pieces of litter with names like Mariner, Pioneer, Voyager, Galileo, Cassini, and New Horizons. Until someone perfects antigravity, this is the best we can do.

Posted by: don_reba | 11/14/09 | 11:18 am

Nice pun there, Brian. 😊

Posted by: qualitypoint | 11/14/09 | 11:20 am

Does it worth spending 79 Million just for getting few gallons of water?
<http://qualitypoint.blogspot.com/2009/11/water-on-moon-official-confirmation.html>

Posted by: nkweric | 11/14/09 | 11:41 am

all of good.

Posted by: Ua41 | 11/14/09 | 12:07 pm

India discovered water on the moon before us
http://en.wikinews.org/wiki/Indian_lunar_mission_Chandrayaan_finds_water_on_moon
Screw NASA

Posted by: kayekoiki | 11/14/09 | 12:12 pm

@ Qualitypoint, thanks; We could start taking care of global warming, disposing radioactive ashes, and air pollutions with 79 million dollars. NASA knows for sure the significance of the Moon; it protects the planet Earth from overheating, now slow and steadily we want to knock it out of it's rotational axis. We are in for surprises from GOD almighty. The Bible never lies; one day, and very soon, these NASA atheists will kneel down and pray for forgiveness. Gospel of St. John,1, verses 1 thru 5.

Posted by: bilbawbaggins | 11/14/09 | 12:43 pm

@ kayekoiki:

'knock it out of it's rotational axis'? You do realise that crashing a centaur and the LCROSS itself into the moon is akin to crashing an SUV into Africa? Would you expect a continent to move because someone had crashed a hummer into a cliff? Try to understand things before you comment on them, and you won't make a fool of yourself.

Posted by: nantg1 | 11/14/09 | 12:49 pm

For many people around the world, the moon is sacred and central to their religious/spiritual belief system. What gives certain people, simply because they are scientists/rich governments the right to litter the moon with metal, damage it, and seek to colonize it when no-one else has agreed to this? How about paying more attention to the devastation currently being caused here on Earth.... We need to put our own house in order rather than going off causing further destruction elsewhere.

Posted by: azphoenixwolf | 11/14/09 | 12:53 pm

We are in for surprises from GOD almighty. The Bible never lies; one day, and very soon, these NASA atheists will kneel down and pray for forgiveness. Gospel of St. John,1, verses 1 thru 5.

Just because some choose to pollute their mindstreams with absurdities (the giant spaghetti monster in the sky), doesn't mean every body else has to. Or pollution with guilt and fear mongering threats of the bogeyman. That is why their pure, brilliant minds can make discoveries, improve life, make progress, and bring light and knowledge to the ignorant. Jealousy is unbecoming. They deserve accolades and support, not a cruci-fiction.

Posted by: pcktftr | 11/14/09 | 1:00 pm

Regarding the comment that "India discovered water on the moon before us", read the article referenced in your comment... It was NASA equipment on the Indian craft that discovered water on the moon. Therefore, India did NOT discover water on the moon before NASA.

Posted by: Vagabondastronomer | 11/14/09 | 1:00 pm

I can respect the importance of the Moon to other cultures. However, we are also facing very real issues here on Earth that, ultimately, have to be faced, and for the most part, the only direction we will be left to will be up. Gerard K, O'Neil said as much in the 1970's; no growing technological civilization can confine itself to the surface of one planet. There will come a time, probably not for a while, where many of our resources will become scarce. This may be some time off, perhaps hundreds or thousands of years if the population is controlled. However, we are still breeding, and our population will eventually reach the point where sheer numbers outstrip our ability to provide for everyone. We can choose; strict control on the population and live in a bubble or check out the local neighborhood (the Solar System) and go from there. Personally, I would prefer it if some of our activities were moved off planet. Of course, I could be wrong and there might indeed be a giant space-going goat headed in this direction...

Posted by: socheltree | 11/14/09 | 1:02 pm

UNICEF claims "Currently, more than 1 billion people lack access to clean water, and 2.6 billion do not have basic sanitation facilities."*

Can we use this water to help them?

* http://www.unicef.org/wash/index_36634.html

Posted by: celestius | 11/14/09 | 1:02 pm

This is an awesome discovery and can only help humanity!

@Ua41: Read again, your link says NASA tech discovered the water.

@kayekoiki: Seriously? Go yammer to your sky-gods in the corner please. Humanity wants to get somewhere worth being now.

Posted by: don_reba | 11/14/09 | 1:14 pm

@nantg1: nothing gives anyone the right to impose his religious/spiritual beliefs on scientists.

Posted by: bakshi_debasish | 11/14/09 | 1:23 pm

I am surprised to read that this post has not mentioned anything about Chandrayaan-I mission conducted by India which in turn supported by NASA research instrument to find this lunar evidence that water-ice exists on the moon. Incomplete information to such an evidence is not really welcomed.

Debasish Bakshi

me_debasish@yahoo.com

India

Posted by: charudutt | 11/14/09 | 1:30 pm

It is a great success for us but there is lot more of work to be done. According to me there must be lot more planets having water and also life so we must try to look and find that out.....And its a request to all viewers plz save the environment by maintaining the disposal of any thing and try to use,recycle and don ever refuse to use a thing in other way

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