

- [Jobs](#)
- [Dating](#)
- [Games](#)
- [Offers](#)

NASA LCROSS Moon crash mission: debris plume spotted

A first image of debris kicked up by the NASA LCROSS mission, which crashed a rocket into the Moon to search for water, has been released.

By Tom Chivers

Published: 10:33AM BST 19 Oct 2009

Scientists had feared that the plume had been too small to be captured, as both observers on Earth and the Hubble Space Telescope failed to spot anything.

However, the spacecraft trailing behind the rocket, which [itself hurtled into the Moon](#) (</science/space/6283819/Nasa-Moon-bombing-LCROSS-mission-crashes-into-Moon.html>) four minutes later, spotted a faint trace of ejecta rising around a kilometre (0.6 miles) into space (<http://www.telegraph.co.uk/science/space>).



NASA's first released image of the plume from the LCROSS impact Photo: NASA

Related Articles

[Nasa's Ares 1-X rocket gets ready for test flight](/science/space/6383882/Nasas-Ares-1-X-rocket-gets-ready-for-test-flight.html) (</science/space/6383882/Nasas-Ares-1-X-rocket-gets-ready-for-test-flight.html>)

[Nasa Moon bombing crash](/science/space/6283819/Nasa-Moon-bombing-LCROSS-mission-crashes-into-Moon.html) (</science/space/6283819/Nasa-Moon-bombing-LCROSS-mission-crashes-into-Moon.html>)

[Moon 'bomb' results could take weeks](http://link.brightcove.com/services/link/bcpid4464161001/bctid44237681001) (<http://link.brightcove.com/services/link/bcpid4464161001/bctid44237681001>)

[Nasa rocket 'bombs' moon](http://link.brightcove.com/services/link/bcpid4464161001/bctid44232936001) (<http://link.brightcove.com/services/link/bcpid4464161001/bctid44232936001>)

[LCROSS missions: Nasa Moon bombing](/science/space/6282346/LCROSS-missions-Nasa-Moon-bombing.html) (</science/space/6282346/LCROSS-missions-Nasa-Moon-bombing.html>)

[Nasa bombs moon in search of water](/science/space/6282590/Video-Nasa-bombs-moon-in-search-of-water.html) (</science/space/6282590/Video-Nasa-bombs-moon-in-search-of-water.html>)

NASA researchers are now analysing the images to try to determine how much material was kicked up and what it is made of.

Earth-bound observers would have been unable to spot any plume that was less than two kilometres high. LCROSS principal investigator Anthony Colaprete [told New Scientist](http://www.newscientist.com/article/dn17996) (<http://www.newscientist.com/article/dn17996>): "I think we are the only ones that have images.

"The ejecta had to only come out and get into the sunlight a little more than a kilometre [high] for us to see it. It only had to rise half as high."

It had been hoped that the plume would rise as high as 10km. But the hollow rocket and the slightly spongy surface of the Moon meant that this failed to materialise.

However, the lightweight impact, instead of a denser, "cannonball"-style design, meant that the crater would be wide and shallow rather than deep, kicking up more of the surface material the researchers are interested in.

Mr Colaprete said: "What we've been able to get with this is a nice, broad area at relatively shallow depth.

"That's kind of nice because we're interested in stuff a metre or 70 centimetres deep." Previous missions have detected hydrogen in the top 70cm of the lunar soil, which indicates that there may be water.

The researchers [hope to have analysed the data](/science/science-video/6282649/Moon-bomb-results-could-take-weeks.html) (</science/science-video/6282649/Moon-bomb-results-could-take-weeks.html>) from the LCROSS impact by mid-November. We will learn then whether there really is water on the Moon.

Hot topics

- [Afghanistan](http://www.telegraph.co.uk/news/worldnews/asia/afghanistan/) (<http://www.telegraph.co.uk/news/worldnews/asia/afghanistan/>)
- [MPs' Expenses](http://www.telegraph.co.uk/news/newstoppers/mps-expenses/) (<http://www.telegraph.co.uk/news/newstoppers/mps-expenses/>)
- [Glasgow North East By-Election](http://www.telegraph.co.uk/news/newstoppers/byelection/) (<http://www.telegraph.co.uk/news/newstoppers/byelection/>)
- [Football](http://www.telegraph.co.uk/sport/football/) (<http://www.telegraph.co.uk/sport/football/>)
- [X Factor](http://www.telegraph.co.uk/culture/tvandradio/x-factor/) (<http://www.telegraph.co.uk/culture/tvandradio/x-factor/>)
- [Telegraph.co.uk: 15 Years Of Online News](http://www.telegraph.co.uk/technology/6545788/Telegraph.co.uk-15-years-of-online-news.html) (<http://www.telegraph.co.uk/technology/6545788/Telegraph.co.uk-15-years-of-online-news.html>)

-
- News
 - UK News
 - World News
 - Obituaries

 - Travel

 - Health
 - Jobs

 - Sport
 - Formula 1
 - Football
 - Cricket

- Culture
- Motoring
- Dating
- Finance
- Personal Finance
- Markets
- Economics
- Fashion
- Property
- Games
- Comment
- Letters
- My Telegraph
- Blogs
- Technology
- Gardening
- Offers
- Contact Us
- Privacy Policy
- Advertising
- A to Z
- Announcements
- Promotions
- Reader Prints
- RSS feeds
- Widgets
- Mobile
- Epaper
- Subscribe
- Syndication

© Copyright of Telegraph Media Group Limited 2009

[Terms and Conditions](#)

[Today's News](#)

[Archive](#)

[Style Book](#)

[Weather Forecast](#)