



Select your city

Search articles from thousands of Examiners

Search input field with Search button

Impress your guests for less SAFEWAY Click For Coupons

- Home Entertainment Business Family & Home Life News & Politics Sports & Recreation

Photos

Phoenix News Baltimore Weather Examiner



Watch launch video of LRO LCROSS: NASA's search for water on the moon



October 8, 8:07 PM Baltimore Weather Examiner Tony Pann

- 1 comment Print Email RSS Subscribe Previous Next

On June 18th 2009, NASA launched a Lunar Reconnaissance Orbiter aboard an Atlas V rocket from Cape Canaveral Air Force Station in Florida. The satellite will relay more information about the lunar environment than any other previous mission to the moon.

The orbiter, known as LRO (Lunar Reconnaissance Orbiter), separated from the Atlas V rocket carrying it and a companion mission, the LCROSS (Lunar Crater Observation and Sensing Satellite). That is scheduled to bomb, or crash into the south pole of the moon in search of water. More information is below the video.

This mission launch was competing with Space Shuttle Endeavor's schedule, since a hydrogen leak and weather had delayed it a few times. It was an accomplished summer for NASA, but was fraught with numerous delays, mainly from bad weather. See more, here, or slide shows below.



Cape Canaveral, FL. Photo courtesy of Scott Andrews

LRO and LCROSS are the first missions in NASA's plan to return humans to the moon and begin establishing a lunar outpost by 2020. The LRO also includes seven instruments that will help NASA characterize the moon's surface: DIVINER, LAMP, LEND, LOLA, CRATER, Mini-RF and LROC.



Popular Articles

- Senate passes \$6500 and \$8000 tax credit extension for home buyers
Restraining order extended against SF 49er great Dana Stubblefield (video)
Watch Shannon Dedrick press conference (videos)
Charges filed against drug suspects in car crash death
DNA solves a 1997 double homicide

Recent Articles

- Fall foliage pictures: Peak leaves around Washington DC and Arlington VA

According to NASA:

Five Things to Know about LRO

- 1. LRO is leading NASA's way back to the moon.
- 2. The primary objective of LRO is to conduct investigations that prepare for future lunar exploration. Specifically LRO will scout for safe and compelling landing sites, locate potential resources (with special attention to the possibility of water ice) and characterize the effects of prolonged exposure to the lunar radiation environment. In addition to its exploration mission, LRO will also return rich scientific data that will help us to better understand the moon's topography and composition.
- 3. Seven scientific [instruments](#) outfit LRO. These instruments will return lunar imagery, topography, temperature measurements and more.
- 4. Launched along with LRO was the Lunar Crater Observation and Sensing Satellite ([LCROSS](#)), a partner mission that will search for water ice on the moon.
- 5. In response to LRO's "Send Your Name to the Moon" initiative, the spacecraft carries a microchip with nearly 1.6 million names submitted by the public. [Click here](#) to view a photo of the microchip containing the names as engineers prepare to install it on the spacecraft.

Space Shuttle Stories: Weather and Technical Delays, Mission Coverage

[Watch Space Shuttle Endeavour liftoff video from July 15 2009](#)

[Space Shuttle Endeavour finally lifts off](#)

[Thunderstorms cause 5th delay for space shuttle](#)

[Space Shuttle delayed a 5th time for bad weather](#)

[Lightning strikes 11 times near Space Shuttle delaying launch](#)

[NASA Space Shuttle weather restrictions](#)

[Space Shuttle Endeavour delayed again as NASA races against the clock](#)

[NASA will launch Space Shuttle Endeavour before moon mission searching for ice](#)

[NASA postpones Shuttle launch](#)

[Space Shuttle Atlantis landing video and mission pictures.](#)

The main science objectives for the LCROSS mission on October 9, 2009 are to:

- 1) Confirm the presence or absence of water ice in a permanently shadowed region on the moon.
- 2) Identify the cause of the hydrogen signatures detected at the lunar poles.
- 3) Determine the amount of water, if present, in the lunar regolith or soil.
- 4) Determine the composition of the regolith in one of the moon's permanently shadowed crater



Thursday, November 5, 2009  
The water that surround Maryland provides an extension to the fall leaf season. The Chesapeake Bay and Potomac River act as insulation agains the ...

[Fall foliage pictures: Peak leaves around Havre de Grace in Harford County](#)



Wednesday, November 4, 2009  
Along the shoreline of the Chesapeake Bay in Harford County, the water helps to keep the air from autumns chill a little longer. This delays the ...

[All Articles »](#)

Related Slideshows

LATEST SLIDESHOW MORE

SLIDESHOWS



Fall Foliage Pictures around Washington DC and Arlington VA

Things to see and do

Today	FRI 06	SAT 07	SUN 08	MON 09	TUE 10
-------	--------	--------	--------	--------	--------



**Arizona State Fair**  
05 Nov 2009 - 12 pm  
Arizona Exposition & State Fairgrounds  
[More special event »](#)



**Downtown Chandler Farmer's Market**  
Dr. A.J. Chandler Park



**Painted Desert Impromptu**  
Petrified Forest National Park and Painted Desert

[See all Events »](#)

4) Determine the composition of the regolith in one of the moon's permanently shadowed crater.

**More Info:**

**LCROSS Lunar Impact**


7:31 a.m. EDT/4:31 a.m. PDT

Friday Oct. 9

We will not be able to see it on the east coast. Despite the threat of clouds and rain, it will be after sunrise. A live NASA TV Broadcast is planned for the LCROSS impacts starting at 6:15 a.m. EDT (3:15 a.m. PDT), Oct. 9, on NASA TV and [www.nasa.gov/ntv](http://www.nasa.gov/ntv).

[Sunrise and Sunset times for Baltimore plus Moon Phase](#)

**NASA Space Shuttle Pictures**



From the launchpad to orbit, and the views back of Earth, a beautiful display of technology and our delicate balance and place overall.

[View Slideshow >](#)

**NASA's Endeavour STS-127 pictures**



Behind the scenes before the launch of Space Shuttle Endeavour from May and June 2009

[View Slideshow >](#)

**More About:** [Moon](#) · [Movie](#) · [NASA](#) · [LCROSS LRO](#)

[ShareThis](#)

 [Report article](#)

**Daily Weather Pages**

- [Live Baltimore Weather Cam, Radar, and Orioles Game Day Conditions](#)
- [Sunrise and Sunset times for Baltimore plus Moonphase](#)
- [Live Ocean City and Delaware Beach Weather](#)
- [Beach Cams: Ocean City and Mid Atlantic](#)
- [New York City live cam weather conditons and map](#)
- [Live Washington DC Web Cam, Conditions and Weather Map](#)
- [Interactive Tropical Satellite Map](#)

**Fall and Winter**

- [Weather 101: When is the average first frost or freeze in Maryland?](#)
- [First winter outlook looks colder with more snow](#)
- [Autumnal equinox is the first day of fall but not equal day and night](#)

**Lightning Safety**

- [Lightning Pictures You Need To See](#)
- [Lightning Safety Video That Can Save Your Life](#)

**My Lnks**

- [Tony Pann's Books and Personal Forecasting](#)
- [Tony Pann's Metaphysical Examiner](#)
- [Weather Talk Radio Tuesdays at 7PM Eastern](#)
- [Justin Berk's Archive of Posts here on Examiner](#)

**Weather 101**

- [What are Rip Currents?](#)
- [What is Storm Surge?](#)
- [Lightning Safey Tips](#)
- [Heat Wave Safety Tips](#)
- [Cleanest Beaches in America: Ocean City and Delaware](#)
- [NASA Space Shuttle launching weather restrictions](#)
- [Weather 101: Autumnal equinox is the first day of fall but not equal day and night](#)
- [Summer Solstice: Longest day but not the hottest](#)

**Climate Change: Global Cooling**

- [Global Warming losing support from American public](#)
- [Arctic Sea Ice shows a recovery but NASA is not telling you](#)
- [G-8 Nations promise to stop global warming but](#)

**Related Articles:**

- [WWII woman pilot to be featured speaker at Pinal County Veteran's Day event](#)
- [Cleveland rapist body count is now 10](#)
- [Fashion week hits Scottsdale](#)
- [Opinion-Editorial: ADOT, Oh, ADOT](#)
- [Burned by junk science](#)

[it's already cooling](#)

- [NASA report of thinning arctic ice is deceiving](#)
- [Unusually cool, wet, and snowy spring raises questions about Climate Change](#)
- [Read scientists open letter to congress: You are being deceived about global warming](#)
- [Why did the EPA smother a scientific report that questioned global warming?](#)
- [No climate change but yes for a different clean energy bill: Skeptics Guide](#)
- [The Gore Effect](#)

**White Marlin Open 2009**

- [2008 Winers Slide Show](#)
- [White Marlin Open Day 1 results bring great weather, big crowds, and big fish](#)
- [White Marlin Open: Largest White in 29 years](#)
- [White Marlin Open Day 3: State record Blue Marlin and a huge Hammerhead Shark](#)
- [White Marlin Open Day 4: A big blue but only half the size of leader](#)
- [White Marlin Open final results for 2009](#)

**Best Slide Shows and Videos**

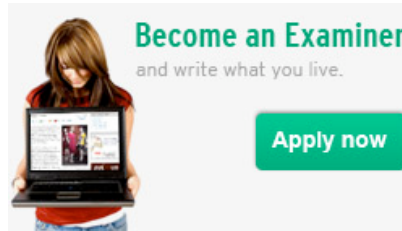
- [Tribute in Lights- World Trade Center Memorial 9/11/09](#)
- [Washington DC at Dusk Full Moon Rising Over Capitol Building](#)
- [Great NASA Space Shuttle Pictures from Summer 2009](#)
- [LA Area Fires From August 31 and September 1 2009](#)
- [LA Area Fire Smoke Cloud Time Lapse Over Skyline 9/2/09](#)
- [Top 10 Cloud Pictures](#)
- [Hurricane Bill: Category 4 on August 19 2009](#)
- [Hurricane Bill Full Story: Category 4 on August 19 2009](#)

**Comments**

A.F. says:

Impact!

October 9, 7:50 AM



Name:

Comments:

100 characters left

**SEND**

**Better together.**

Alltel is now a part of Verizon Wireless.

Not every Alltel customer will become part of Verizon.

See if Verizon will be your new wireless carrier now.



**Find Out**

### Examiner Articles by Category

- Arts & Entertainment
- Bars & Clubs
- Business & Finance
- Careers & Workplace
- Education & Schools
- Family & Parenting
- Fitness & Weight Loss
- Food & Drink
- Gadgets & Tech
- Games & Hobbies
- Health
- Home & Living
- Neighborhoods
- News
- Pets
- Politics
- Recreation
- Relationships
- Religion & Spirituality
- Restaurants
- Society & Culture
- Sports
- Style & Fashion
- Transportation
- Travel
- [View the latest »](#)

### More from Examiner.com

- Associated Press
- Classifieds
- Events
- Examiners
- News By Location
- News By Topic
- Press Releases
- Slideshows
- Stock Quotes
- Today In Photos

### Examiner.com Links

- Join our Affiliate Program
- Blog
- Examiner in the Press
- Careers | Advertise
- RSS Feeds
- Terms of Use | Privacy
- Policy
- Contact Us
- Walden Media
- AEG Worldwide | AEG Live
- Foundation for a Better Life

### Breaking News from NowPublic.com

- World News
- Technology
- Business
- Entertainment & Culture
- Environment
- Health
- Sports
- Style
- Strange

Copyright © 2009 Clarity Digital Group LLC d/b/a Examiner.com. All Rights reserved.