

Search America's #1 News Site

MSN Home | Mail More Sign In

featuring Today Show Nightly News Dateline Meet the Press MSNBC TV NBC Sports

Technology & science Space

Categories

- U.S. news World news Business Politics Sports Entertainment Health Tech & science Space Science Tech and gadgets Games Wireless Security Innovation Travel Local news Weather

Browse

- Video Photos

Disable Fly-out

Marketplace

Credit Score \$0 at CreditReport.com

Scottrade \$7 online trades

Progressive Get car insurance

Start a business Entrepreneur.com

Netflix Try for Free

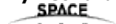
Old moon photos tell new tales Lunar Orbiter Image Recovery Project brings '60s photos into digital era



LOIRP / NASA

The Lunar Orbiter Image Recovery Project is providing a digital makeover of images of the moon taken from NASA spacecraft more than 40 years ago.

By Leonard David



updated 5:38 p.m. MT, Tues., March. 31, 2009

Images of the moon gleaned from NASA spacecraft more than 40 years ago are now getting a 21st-century makeover, thanks to the Lunar Orbiter Image Recovery Project.

Back in 1966 and 1967, NASA hurled a series of Lunar Orbiter spacecraft to the moon. Each of the five orbiters were dispatched to map the landscape in high-resolution and assist in charting where best to set down Apollo moonwalkers and open up the lunar surface to expanded human operations.

By gathering the vintage hardware to playback the imagery, and then upgrading it to digital standards, researchers have yielded a strikingly fresh look at the old moon. Furthermore, the project's efforts may also lead to retrieving and beefing up video from the first human landing on the moon by Apollo 11 astronauts in July 1969.

Story continues below ↓

advertisement | your ad here

Space.com

Japan's Kaguya Probe Slams into the Moon

New Video - 'MOON' Film Trailer

Military Hush-Up: Incoming Space Rocks Now Classified

New Video - Meet the STS-127 Astronauts

Review: Spaceflight for Dummies



Related stories

What's this?

NASA targets moon for a mighty crash

Debate rages over moon water

NASA's moon missions face fuzzy future

Most popular

Most viewed Top rated Most e-mailed

Makeover! Widow goes from gray to red-hot

More massive protests planned in Iran

Eddie Bauer files for bankruptcy protection

Tattoo gone wrong: Stars and gripes forever?

Miami priest in photo scandal weds girlfriend

Sponsored Links

Start Your PMP Career Free Project Manager Webinar - Learn Project Management www.trainingtoyou.com

Windows 7® RC Download IT Pros: Looking for the Windows 7 release candidate? Look no further. Microsoft.com/Springboard/Win

"Your Stimulus Job!" Is Working From Home The Real Deal? We Investigate For You! TheUsaDailyNews.Com

"My Teeth Are Now White" Read the trick, discovered by a mom, to turn yellow teeth white. www.SharonsTeethStory.com

Creative photographers An online community for creative photographers. Register for free. www.OneEyeland.com

Resource guide



Get Your 2009 Credit Score



Scottrade: \$7 online trades



Our rates vs. the others



Find a business to start




Movies delivered - Try free

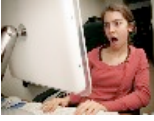
Shop for Desktops

Desktops Video Cards

Ads by **Acblade**



#1 Rule to Build Muscle
Learn how a student gained 10 Lbs. of muscle by obeying this one rule. [Learn more](#)




'We Reveal Colon Cleansers'
Check out this 'Shocking' online report before you take the plunge in trying any colon cleanser... [Learn more](#)

[Miami priest in photo scandal weas ginning](#)
Most viewed on msnbc.com

Video: Space news

Shuttle launch scrubbed
June 17: NASA delays Endeavour's mission until July because of a hydrogen leak. NBC's Kristen Dahlgren reports.



Endeavour set for second launch attempt
NASA officials assessing hydrogen leak
NASA cancels shuttle launch
How to free a stuck Mars rover
NASA's high hopes for new rocket

Video Cards
Flat Panels/LCD




Dennis Wingo, the project's team leader, detailed the group's work in progress during last week's 40th Lunar and Planetary Science Conference.

Teamed with SpaceRef.com, the recovery project's saga is one of acquiring the last surviving Ampex FR-900 machinery that can play analog image data from the Lunar Orbiter spacecraft. Wingo noted that the work is backed by NASA's Exploration Systems Mission Directorate, the space agency's Innovative Partnership Program, along with private organizations, making it possible to overhaul old equipment, **digitally upgrade and clean up** the imagery via software.

The Lunar Orbiter Image Recovery Project is located at NASA's Ames Research Center at Moffett Field, Calif. There, project members are taking the analog data, converting it into digital form and reconstructing the images.

Slideshow



Month in Space
See Russia's red moon, Hubble highlights and other stunning space imagery from May 2009.

Launch

By moving them into the digital domain, Wingo said, the photos now offer a higher dynamic range and resolution than the original pictures, he added.

"We're going to be releasing these to the whole world," Wingo said.

Use of the refreshed images, contrasted to what NASA's upcoming Lunar Reconnaissance Orbiter mission is slated to produce, has an immediate scientific benefit. That is, what is the frequency of impacts on the Moon's already substantially crater-pocked surface?

"We'll be able to get crater counts," Wingo told SPACE.com. "LRO imagery of the same terrain imaged decades ago will provide a crater count over the last 40 years."

Frozen in time

There's also a more down to Earth output thanks to recovery project scientists.

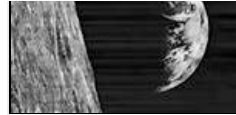
They have used a Lunar Orbiter 1 image of the Earth for climate studies,

Slide show



The first

basically a snapshot frozen in time that shows the edge of the Antarctic ice pack on Aug. 23, 1966.



[Launch](#)

moonshots
See the highlights from NASA's digital archive of Lunar Orbiter imagery, collected in 1966-1967

The team is working with the National Snow and Ice [Data Center](#) in Boulder, Colo. to correlate their images of the Earth with old NASA Nimbus 1 and Nimbus 2 spacecraft imagery that flew at about the same time — in the mid-1960s — as the Lunar Orbiter 1. Nimbus satellites were meteorological research and development spacecraft.

Wingo said that the original Nimbus images may have been recorded on an Ampex FR-900 — so by processing the original Nimbus tapes there is a very good chance that they can provide NASA with polar ice pack data from 10 years earlier.

Lessons learned

One treasure hunt outing by the Lunar Orbiter Image Recovery Project may lead to finding what some term as "lost" [Apollo 11 slow scan tapes](#), Wingo said.

"We don't think they are lost. People have been looking for the wrong tapes," he said, explaining that they were recorded on Ampex FR-900 equipment — not on another type of recorder as previously thought.

Wingo said those Apollo tapes are stored at the Federal Records Center, labeled and ready for a look-see.

"We think for the 40th anniversary of Apollo we may be able to get the original slow scan tapes," Wingo said. If so, the hope is to recover them and give the public a higher-quality, never-before-seen view of human exploration of the Moon.

There is a lesson learned output from recovery project.

In the beginning, very few people thought this could be done ... but now they have seen the results," Wingo said.

[CLICK FOR RELATED CONTENT](#)

[Long-lost lunar photos get day in the sun](#)
[Virginia fireball said to be meteor, not rocket](#)
[Colbert challenges NASA over node name](#)

It is not enough to have 100-year recording medium, Wingo explains. Without the retention of the specific-era equipment that images are archived on, it will be impossible for future generations to recover older NASA or other satellite data, he advised.

This is a general issue, not specific to the Lunar Orbiter program. The retention of critical hardware should be a requirement for flight efforts. The original historic Apollo 11 slow scan images have been lost due to inattention to this critical detail, Wingo concluded.

© 2009 Space.com. All rights reserved. [More from Space.com.](#)

Discuss Story
On Newsvine

Rate Story: Low  High
[View popular](#) 4.5 after 60 ratings

[Email](#)

[Instant Message](#)

[Print](#)

MORE FROM SPACE

Next →

Space Section Front

Shuttle launch delayed until July due to leak

NASA targets moon for a mighty crash

Binary stars host potential planetary disk

Cosmic Log: Inside the rover factory

What's new on the New Space frontier

Debate rages over moon water

7 moon ideas that just might work

Teen knocked down ... by a meteorite?

Ex-NASA head critical of Obama move

Month in Space: Marvelous missions

Space Section Front

Add Space headlines to your news reader:







More RSS feeds from MSNBC.com

Top msnbc.com stories

Iran: 'Intolerable' meddling by U.S.

Obama unveils financial overhaul plan

Shuttle launch delayed until July

NYT: Aftermath of Iranian election

Eddie Bauer files under Chapter 11

NBC News highlights

Tension in Tehran 'escalating'

Swatter in chief takes down fly

Boy impaled by branch is OK

Teen sues over tattoo boo-boo

The new face of Mr. Mom

SPONSORED LINKS

[Get listed here](#)

Earn Your Master's in IT

Bachelor Degree Required For Master's in IT Degree
www.FloridaTechOnline.com

Mortgage Protection Insurance

Pays off your mortgage in the event of your death. Get a free quote!
www.NAALife.com

Equifax - Official Site

Get a Free Credit Report with Equifax 3-in-1 Monitoring Order
www.equifax.com

School of Information Technology

Get free info on ITT's 2 year Business Degree programs today!
www.ITT-Tech.edu

Tempe Mom's Secret To White Teeth

Read The Trick Discovered By A Mom To Turn Yellow Yeeth White In Days!
www.SandysTeethSucess.com

Featuring [Today](#) [Nightly News](#) [Dateline](#) [Meet the Press](#) [MSNBC TV](#) [Newsweek](#)

Categories [Top stories](#) [Local news](#) [U.S.](#) [World](#) [Politics](#) [Business](#) [Sports](#)
[Entertainment](#) [Health](#) [Tech & science](#) [Travel](#) [Weather](#)

About [About us](#) [Contact](#) [Site map](#) [Jobs](#) [Terms & conditions](#)

[News alerts](#)

[E-mail highlights](#)

[RSS & feeds](#)

[Mobile headlines](#)

[Podcasts](#)

[Widgets](#)