



Count down to LDCM Launch: **52** Days (February 11, 2013)

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Note: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Landsat Mission News

Landsat 5 Decommission Plans

The U.S. Geological Survey announced that Landsat 5 will be decommissioned over the coming months, bringing to a close the longest-operating Earth observing satellite mission in history. By any measure, the Landsat 5 mission has been an extraordinary success, providing unprecedented contributions to the global record of land change. The USGS has brought the aging satellite back from the brink of failure on several occasions, but the recent failure of a gyroscope has left no option but to end the mission.

Now in its 29th year of orbiting the planet, Landsat 5 has long outlived its original three-year design life. Developed by NASA and launched in 1984, Landsat 5 has orbited the planet over 150,000 times while transmitting over 2.5 million images of land surface conditions around the world.

For the full announcement, visit the USGS Newsroom:

<http://www.usgs.gov/newsroom/article.asp?ID=3485>

Share your thoughts on this amazing spacecraft and its legacy on the USGS Landsat website:

<http://landsat.usgs.gov/Landsat5Tribute.php>

LDCM will take Landsat 5's position in the 705 km orbit, an 8-day offset from Landsat 7.

LDCM Arrives at Vandenberg AFB

An oversized semi-trailer truck carrying NASA's Landsat Data Continuity Mission (LDCM) has arrived at its launch site at Vandenberg Air Force Base in California in preparation for launch.

<http://www.nasa.gov/centers/goddard/news/releases/2012/12-090.html>

New USGS-NASA Landsat Science Team Announced

The USGS, in cooperation with NASA, has selected an expert team of scientists and engineers to provide technical and scientific input to USGS and NASA on issues critical to the success of the Landsat program. The team, appointed to serve until 2017, held their first meeting December 12-13, 2012 in Washington, DC. The meeting focused on LDCM status team plans for advancing the Landsat mission. Presentations will be posted on the Landsat Science Team website. The team members and their areas of expertise are listed on http://landsat.usgs.gov/Landsat_Science_Team_2012-2017.php.

Landsat 7 Status

Landsat 7 continues to collect 400 scenes per day and downlinks data to stations around the world.

Landsat 7 will fly in an 8-day offset to Landsat 8, providing more frequent coverage than one spacecraft could provide.

Landsat Product Information

Landsat 5 Multi-Spectral Scanner Acquisitions

Since May 2012, the Multi-Spectral Scanner (MSS) onboard Landsat 5 has been routinely collecting data over the U.S. and, to a limited extent, around other parts of the globe. This data has not been available to the public, as there has been no new MSS data acquired for over a decade and the methods to calibrate and process the raw data were not maintained. The effort to provide MSS data continues. Planned release of this newly acquired MSS data is slated for late spring 2013.

Historical Metadata to be Removed

In the summer of 2012, a new metadata structure was rolled out for Landsats 1-7 that would align those products with the metadata available for LDCM. Since this new metadata was introduced, we continued to provide the historical or "old" version. In early spring 2013, likely in March, we will be removing the "old" version of the metadata file. We have detailed information on the website as to the new metadata and the differences between the two (http://landsat.usgs.gov/Landsat_Metadata_Changes.php). If you have questions or concerns, please contact us at: custserv@usgs.gov or 605.594.6151.

New GLS Visualization Interface Released

The newly released USGS EROS Science Processing Architecture (ESPA) GLS Visualization Interface (<http://espa.cr.usgs.gov/ui/>) allows users to immediately download Global Land Survey (GLS) 2010 and GLS-2005 surface reflectance products. GLS 2000 surface reflectance products will be added to the interface in the near future.

On-demand processing requests for surface reflectance data products for many Landsat Thematic Mapper (TM) and all Enhanced Thematic Mapper Plus (ETM+) scenes from 1984 to April 14, 2012 can be submitted through the ESPA Ordering Interface (<https://espa.cr.usgs.gov>). Registration is required; contact custserv@usgs.gov for login details.

Details about surface reflectance data products can be found at <http://landsat.usgs.gov/PLSRP.php>.

Landsat Data Continuity Mission (LDCM)

Stay Informed of LDCM Launch Status

There are many activities just prior to and on launch day to keep you informed of LDCM's status. Launch is slated for February 11, 2013 at 10:04 a.m. from Vandenberg Air Force Base in California. There will be press briefings about a month before launch, with follow-up briefings in the days just prior. NASA TV will show some of the events in the days before launch, as well as the launch itself. As launch approaches, schedules for coverage and locations of events will be posted on the USGS and NASA Landsat pages.

LDCM Launch Social

NASA will host a two-day event for 80 of its social media followers on Sunday, February 10, and Monday, February 11, at Vandenberg Air Force Base in Lompoc, California, for the launch of the Landsat Data Continuity Mission (Landsat 8). Registration will be open from 20 December through 7 January. NASA Social participants will have the opportunity to:

- Hear first-hand accounts by the Landsat Mission science and engineering teams.
- Get a behind-the-scenes tour of Vandenberg Air Force Base's Western Range including:
 - A rare look inside the Western Range Operational Control Center (WROCC), which provides safe control of all launches from Vandenberg. The WROCC includes the control center, mission flight control center, weather center and transportation control center.
 - Tours of the Landsat Launch Mission Control room, the LDCM launch pad & The Vandenberg Heritage Center
 - Vandenberg's on-base private museum, located at historic Space Launch Complex-10. This visit includes historic briefings and artifacts dating to the earliest launches from the West Coast.
- Meet fellow space enthusiasts who are active on social media.
- Meet members of NASA's social media team.

For more information: http://www.nasa.gov/connect/social/social_ldcm_feb2013.html

LDCM's Atlas V Rocket Undergoes Fueling Exercise

http://www.nasa.gov/mission_pages/landsat/news/fueling-exercise.html

LDCM Data Format Control Books Available

The Landsat Data Continuity Mission (LDCM) Data Format Control Books (DFCB) describes the contents of data files and how the data are arranged, the characteristics of the Operational Land Imager (OLI) and Thermal Infrared Sensor (TIRS) instruments, and also contains a list of reference documents. There are three DFCBs available. The Level 1 Data Format Control book describes data products available to the user community. The Level 0 Reformatted (LOR) Data Format Control Book will describe the state of the data prior to creation of the Level 1 products. The Mission Data DFCB describes the data in its rawest form, which is not generally available to the public. DFCBs can be found on the Documentation page (http://landsat.usgs.gov/tools_project_documents.php) or on the LDCM Sample Data Products page (http://landsat.usgs.gov/LDCM_DataProduct.php).

LDCM Sample Data

Data products from the OLI and TIRS sensors aboard LDCM are improved from the current Landsat 7 ETM+ sensor data, including greater radiometric quantization, increased number of bands, and the addition of a Quality Assurance band. Details about LDCM data products and samples of these data are accessible on http://landsat.usgs.gov/LDCM_DataProduct.php. More sample data will be added as soon as they are available.

Tips and Tricks

Using Landsat Surface Reflectance Climate Data Record Products

Landsat surface reflectance climate data record (CDR) products are generated using the Landsat Ecosystem Disturbance Adaptive Processing System (LEDAPS) to create an improved atmospheric corrected product and are distributed as a compressed file package of several data layers in Hierarchical Data Format for Earth Observing System (HDF-EOS). Surface reflectance products can be requested through the EROS Science Processing Architecture (ESPA) Ordering Interface at <https://espa.cr.usgs.gov>.

Once extracted, the HDF file named `Indsr.L7xxxxxxx.hdf` can be opened in any software package capable of reading HDF-EOS. (ENVI, Erdas Imagine, etc.*). Three-band color composites can be created and saved out as a .TIFF or other preferred file and used for scientific interpretation.

Additional details about the Landsat surface reflectance climate data record (CDR) product can be found in the Product Guide at http://landsat.usgs.gov/documents/cdr_sr_product_guide.pdf. Any questions or comments are welcome through [contact.php](mailto:contact@usgs.gov). Please indicate "Surface Reflectance Data/LAI Request" as the topic of regard.

Landsat Image of Interest

The USGS Landsat website (<http://landsat.usgs.gov>) released a new look to celebrate the upcoming launch of LDCM. Information on the launch, data, and schedule will be constantly updated on this site. Sign up for email notifications, RSS feeds, and Mission Headlines. Follow us on Twitter! @USGSLandsat.

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Days To Launch 56

Image of the Week

Mar Chiquita change over time

Headlines

- December 14, 2012 - Witness a bit of history!**
NASA is hosting a social media event at the launch of Landsat 8 in Vandenberg Air Force Base in California in early February. We would like as many Landsat users to attend as possible. Registration is open from December 20, 2012 through January 7, 2013. Please see the NASA webpage for details and restrictions. Hope to see you there!
- November 27, 2012 - Sabers talks about Landsat 8**
Jenn Sabers, Remote Sensing Branch Chief at the USGS EROS Center, answers questions about Landsat science, the Landsat legacy, and the future of the mission in the online magazine *Sensors & Systems*.
- November 7, 2012 - Members of the Landsat Science Team interviewed on SDPB**
Drs. Dennis Helder and David Roy were interviewed on South Dakota Public Broadcasting's *Dakota MIDDAY* about Landsat 8 and their roles in the Landsat Science Team. Listen to the interview on [SDPB's website](#).

LDCM (Landsat 8)

The Landsat era that began in 1972 will carry on with the successful launch of the LDCM in February 2013. Global, synoptic, and repetitive coverage of the Earth's land surfaces will continue at a scale where natural and human-induced changes can be detected, differentiated, characterized, and monitored over time. LDCM is a partnership between NASA and the USGS.

Get Data

- [Landsatlook Viewer](#)
- [GloVis](#)
- [EarthExplorer](#)

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