

Landsat Update

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Mission News

Landsat 9 Status

Landsat 9 remains on schedule for a December 2020 launch from Vandenberg Air Force Base, California. NASA is responsible for developing the space and launch segments, while the USGS is responsible for developing the ground segment and operating the mission after launch. We are currently updating the USGS Landsat website with Landsat 9 mission information, which will be available soon. Until then, please visit [NASA's Landsat 9](#) website for further details about the mission and the instruments it will carry.

Landsat 7 and Landsat 8 Data Acquisition Status

The Landsat 7 and Landsat 8 satellites collect about 1,200 new scenes per day. In addition, the [Landsat Global Archive Consolidation](#) effort continues to add numerous international scenes to the archive. The entire USGS Landsat archive now holds over 6.8 million scenes! All Landsat data is available for download at no charge from [EarthExplorer](#), [GloVis](#), or the [LandsatLook Viewer](#).

Landsat Science Team Winter 2017 Meeting

The Landsat Science Team (LST) met January 10–12, 2017, at Boston University in Boston, Massachusetts. The topics of the meeting included future Landsat capabilities, continuity/backward compatibility, improvements to temporal frequency, spatial and radiometric resolution, signal-to-noise ratios, and new spectral bands. The team received Landsat 9 development updates and USGS Landsat initiative status, specifically [Collections](#) and Analysis Ready Data. LST presentations will be made available on the [Landsat Science Team](#) webpage by Friday, February 10, 2017.

Landsat Level-1 Collection 1 Processing

Upcoming Landsat 8 Data Unavailability and Landsat 7 Satellite Maneuver

Landsat 8 Data Access

In order to implement Landsat 8 Collection 1 Level-1 data processing into the USGS systems, Pre-Collection Landsat 8 processing and data distribution will be unavailable on **Tuesday, February 7**, and **Wednesday, February 8, 2017**.

However, Pre-Collection Landsat 1-7 and Landsat 4-7 Collection 1 Level-1 data will remain available from [EarthExplorer](#), [GloVis](#), or the [LandsatLook Viewer](#).

Landsat 8 Pre-Collection Level-1 data will be made available again on **Thursday, February 9, 2017**.

NOTE: Landsat 8 Collection 1 Level-1 products will start becoming available for download by the end of February.

The [ESPA](#) interface will remain available for Landsat 4-7 orders; however orders containing Landsat 8 scenes will not be accepted until **Thursday, February 9, 2017**.

Landsat 7 Delta Inclination Maneuver (Delta-I)

At approximately 6:15 am CST on Tuesday, February 7, 2017, Landsat 7 operations will be suspended in preparation for the satellite's final Delta-Inclination (Delta-I) maneuver. No data will be acquired during this maneuver. Normal operations and data acquisition are expected to resume by 9:30 pm CST on Wednesday, February 8, 2017.

We apologize for any inconvenience these two events may cause. Please [contact us](#) with any questions you may have.

Landsat 7 and Landsat 4-5 Processing Status

Landsat Collection 1 Level-1 processing started in August and has completed over 1.6 million Landsat 7 Enhanced Thematic Mapper Plus (ETM+) scenes and 1.6 million Landsat 4-5 Thematic Mapper (TM) scenes that are now available to download from [EarthExplorer](#). Processing of these entire datasets will be complete in spring 2017. Visit the Landsat Missions [page](#) to view the Landsat Collection 1 Processing status.

Landsat 8 Processing Schedule

The processing of Landsat 8 scenes into Collection 1 Level-1 data products is scheduled to begin in February 2017, with data becoming available for download from [EarthExplorer](#) by the end of the month. Landsat 8 Collection 1 processing will begin in reverse chronological order with the most recently acquired Landsat scenes being processed initially. Scenes collected over the conterminous United States will be processed and made available first, followed by the rest of the globe.

TIRS Stray Light Correction Implementation

During Collection 1 processing, a number of [changes](#) are being made to Landsat data. For Landsat 8, new software and a new algorithm will also be incorporated to mitigate the impact of stray light in the Thermal Infrared Sensor (TIRS). (Background about TIRS stray light can be found in [Appendix A](#) of the Landsat 8 Data User Handbook.)

Detected shortly after launch in February 2013, stray light allows unwanted light to enter the optical system and reduces the accuracy of temperature measurements of the Earth's surface. In areas of extreme temperatures, such as Antarctica or desert regions, errors can reach as high as 10 degrees Celsius.

When standard calibration techniques failed to accurately adjust the data, scientists at the [Rochester Institute of Technology](#) developed an algorithm which estimates the amount of extra light in each scene and calculates how much light should be removed to make the temperature more accurate. Further investigations may determine if the reprocessed thermal data results in more accurate results using split-window methods.

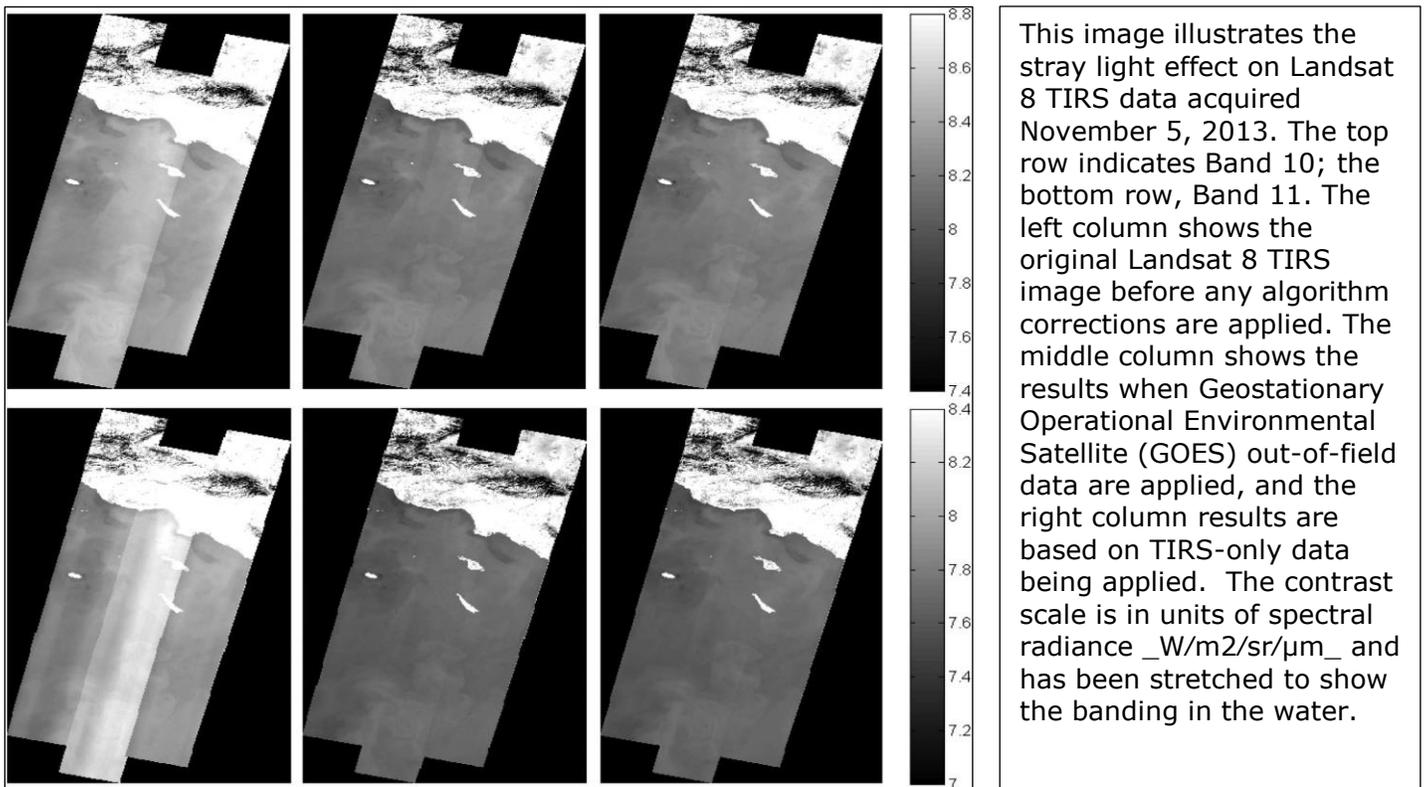


Image courtesy of Matthew Montanaro, Aaron Gerace, and Scott Rohrbach, "[Toward an operational stray light correction for the Landsat 8 Thermal Infrared Sensor](#)," Appl. Opt. 54, 3963-3978 (2015)

Landsat Collection 1 Higher-Level Status

The ability to request Landsat 4-5 TM and Landsat 7 ETM+ Collection 1 Higher-level data products (such as surface reflectance) from the [Earth Resources Observation and Science \(EROS\) Center Science Processing Architecture \(ESPA\) On-demand interface](#) became available on January 12, 2017. ESPA accepts orders for not only surface reflectance but also top-of-atmosphere reflectance, brightness temperature, and CFMask outputs, along with multiple spectral indices derived from surface reflectance data. ESPA allows users to customize output formats, map reprojection, and pixel resizing. Surface reflectance and other higher-level science data products are processed and delivered directly from the ESPA on-demand interface. The [ESPA User Guide](#) provides further information on how to place an order through ESPA.

Processing requests from [EarthExplorer](#) (for surface reflectance data only) will become available at a later date.

Landsat Missions Website News

Landsat Missions Website Unveils New Look

In December 2016, the [Landsat Missions Website](#) received a new look. Since web addresses may now be different, bookmarked URLs may not work and will need to be updated. Please [contact us](#) if you have issues locating content on the new site, or if you have any comments or suggestions about the new website.

Landsat in Action

A new page called "[Landsat in Action](#)" has been added to the Landsat Missions Website that highlights how Landsat data is being used in various research applications and data delivery interfaces to help improve understanding of the environment. If you feel the work you do with Landsat data makes an interesting story, [let us know!](#)

Recently Promoted Landsat Images

[West Africa Atlas Details Efforts to Manage, Preserve Okomu Forest](#). A new atlas named *Landscapes of West Africa: A Window on a Changing World* tells the story of transformations and trends across many lands in West Africa, including this look at the threat of human activities in the Okomu Forest Reserve in southern Nigeria.

[Wildfires Scorch Pampas Region of Argentina](#). Since mid-December 2016, roughly two dozen wildfires in the Pampas region of Argentina have consumed almost 2.5 million acres while unleashing giant plumes of dense smoke above the rural landscapes.

[Marree Man Geoglyph in Australia Does Reappearing Act](#). In June 1998, a pilot discovered a strange sight in the Australian outback that wasn't there before—a huge outline of what appeared to be an Aboriginal man throwing either a boomerang or a stick. It turned out to be a geoglyph, which is a design on the ground typically made of natural elements and best viewed from above.

[Rare Snow Falls at the Edge of Sahara Desert](#). In mid-December 2016, a rarity occurred on the edge of the Sahara Desert in northwest Africa. It snowed.

[Expansion at the Port of Rotterdam](#). A large infrastructure project has changed the shape of the coastline of the Netherlands while increasing the cargo capacity at Europe's largest port.

[As Glaciers Worldwide Are Retreating, One Defies the Trend](#). Many glaciers around the world are losing ice mass and retreating. One such area is the Southern Patagonia Icefield (SPI) in Chile. However, one glacier in the SPI is actually defying the worldwide trend.

Connect/Interact/Contact!

Landsat Missions Website: <https://landsat.usgs.gov>

Get Landsat Updates: <https://landsat.usgs.gov/landsat-updates>

Connect with us!



USGS Landsat: **@USGSLandsat**

NASA Landsat: **@NASA_Landsat**



USGS: <https://www.facebook.com/USGeologicalSurvey>

NASA Landsat: <https://www.facebook.com/NASA.Landsat>



USGS: <https://www.instagram.com/usgs/>

NASA: <https://www.instagram.com/nasa/>

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