



# LANDSAT 7 MONTHLY UPDATE

The Landsat 7 Mission, developed by the National Aeronautics and Space Administration, is managed by the U.S. Geological Survey under authority established by Presidential Decision Directive NSTC-3.

## Program News

### Landsat Metadata

Metadata from Canada, Australia, South Africa, Japan, and Europe continue to be archived successfully. As of November 27, 2001, there were 6,683 L7 IGS subintervals archived for 111,075 Landsat 7 Worldwide Reference System (WRS) scenes. Metadata from Matera, Italy were tested successfully and will be archived at EDC once ESA has complied with the request sent out last month regarding the Horizontal Display Shift field. Thus far, IGSs in Canada, Japan, and Australia are in compliance. Tape ingest for IGS metadata and browse is scheduled to be implemented during the first quarter of 2002.

### EDC Ground Architecture Re-Engineering Phase 1 Completed

The EDC engineering and operations staff recently completed phase 1 of a major, two part ground architecture re-engineering effort. The Landsat Program sponsored this re-engineering effort to accomplish several goals.

1. Lower Program maintenance expenditures by installing new, maintainable computer hardware.
2. Implement a simple, deployable capture system to support contingency capture operations.
3. Automate the archiving of Raw Computer Compatible and LORa data and the distribution of LORp data through the use of a StorageTek near line silo based system called the Landsat Archive Manager.
4. Position the architecture to support additional missions .

The phase 1 implementation accomplishes the first three goals and a portion of the fourth. On November 8th, the Re-Engineering Team completed all phase 1 development and test activities and commenced operations with the phase 1 architecture. During November, the Development Team also completed the Phase 2 Critical Design Review. The phase 2 implementation will accomplish the remainder of the four goals and the fifth. Additionally, during phase 2, the Development Team will streamline the Landsat 7 data flow by transitioning the current Landsat Program interface with the EDC DAAC from the Landsat 7 Processing System to the Landsat Archive Manager System. This change will automate the LAMS LORp production activities and reduce operator workload. Phase 2 is scheduled to complete in April 2002.

## Technical News

### Leonid Activity

As reported in October, the ETM+ instrument was turned off for 19 hours beginning 0500z on day 322, to protect the system from the effects of the Leonid shower activity. The thermal stability of the ETM+, during this 19-hour period, was maintained by image acquisition when the Earth shielded the satellite.

### Landsat 7 Ground Station Milestone

The Landsat 7 Ground Station (LGS) located at the EROS Data Center (EDC) has gone one complete calendar year without losing a single Landsat 7 scene during reception operations. Since Nov 26, 2000, the LGS Team has down linked 52,934 full scenes successfully. The LGS Team also performs satellite reception operations for Landsat 5 and the MODIS (TERRA) sensor. These statistics speak well of the dedication shown by the LGS Operations and support staff as well as the training and certification program that has been implemented to ensure solid image data reception and telemetry and commanding activities in support of the Landsat 7 MOC.

### Data Validation

During the month of November two ground stations, Gatineau, Canada and Hatoyama, Japan, provided LORp data to the USGS for their second biannual validation exercise this year. The Bangkok, Thailand ground station provided the USGS with both Raw CC and LORp data for their first successful data validation. This brings the total number of successfully validated International Ground Stations to fourteen. (The following is a graphic showing the status of the International Ground Station data validation)

## Meetings

### LGSOWG Meeting Summary

The 30th Landsat Ground Station Operators Working Group (LGSOWG) meeting was held in Orlando, Florida the week of November 12th. The meeting was attended by nine out of ten of the Landsat 7 International Cooperators and was also attended by representatives from Russia and Ecuador. Among the meeting highlights was a presentation by the USGS Associate Director Ms. Barbara Ryan on the vision for the future of Land Remote Sensing activities in the USGS. The attendees enjoyed a full week of technical presentations and discussions as well as the opportunity to interact informally during two evening events. A CD-ROM will be mailed out to all participants containing the presentation materials.

## Related News

### Publication News

The December issue of Photogrammetric Engineering & Remote Sensing carries a cover image of the 200,000<sup>th</sup> Landsat 7 scene to put in the U.S. archive. The image was acquired on November 3, 2001, and covers the Santa Barbara, California region. Co-incidentally, the ETM+ instrument was built at the Santa Barbara Research Center.

### Landsat as Art

Staff at the EROS Data center developed a special showing of Landsat 7 data. A local Arts & Science pavilion is hosting an exhibit, "Landsat as Art." Scenes were selected for their aesthetic value rather than their scientific information. Framed images, with captions, are on display for two months. The exhibit, which brings a different visibility to the Landsat data, will be shown in other federal facilities around the country in 2002. International Ground Stations may wish to consider similar exhibits to bring regional visibility to their programs.

### LTWG Meeting

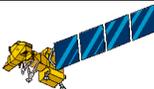
The 11th Landsat Technical Working Group (LTWG) meeting will be held February 4-8, 2002 in Canberra, Australia. The focus of the meeting will be product generation systems. The meeting will be held at the Crowne Plaza Hotel and the formal announcement and logistics information will be emailed out shortly.

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**The Landsat monthly update is an informal communication tool, prepared monthly and distributed electronically to USGS Landsat partners, to provide information about Landsat activities and related topics of interest. Comments, corrections, and queries may be directed to Ronald Beck, USGS Landsat team, at the following e-mail address: [beck@usgs.gov](mailto:beck@usgs.gov)**

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**U.S. Department of the Interior  
U.S. Geological Survey**

		<h2 style="text-align: center;">Status of the IGS Data Validation</h2>				
International Ground Station	Completed Validation	Path / Row - Acquisition Date	Data Format	Biannual Validation Schedule		
<b>Argentina, Cordoba - COA</b>	<b>09/21/01</b>	<b>229 / 76 - 3/6/01</b>	<b>Raw CC</b>	<b>03/04/02 &amp; 08/19/02</b>		
<b>Australia, Alice Springs - ASA</b>	<b>09/26/01</b>	<b>102 / 76 - 8/4/01</b>	<b>L0Rp</b>	<b>03/18/02 &amp; 09/02/02</b>		
<b>Australia, Hobart - HOA</b>	<b>09/27/01</b>	<b>73 / 89 - 8/24/01</b>	<b>L0Rp</b>	<b>03/18/02 &amp; 09/02/02</b>		
<b>Brazil, Cuiaba - CUB</b>	<b>05/25/01</b>	<b>226 / 71 - 10/27/01</b>	<b>L0Rp</b>	<b>11/19/01 &amp; 05/20/02</b>		
<b>Canada, Gatineau - GNC</b>	<b>11/09/01</b>	<b>14 / 32 - 9/12/01</b>	<b>L0Rp</b>	<b>04/15/02 &amp; 09/23/02</b>		
<b>Canada, Prince Albert - PAC</b>	<b>10/23/01</b>	<b>44 / 32 - 9/14/01</b>	<b>L0Rp</b>	<b>04/15/02 &amp; 09/23/02</b>		
<b>China, Beijing - BJC</b>	<b>10/17/01</b>	<b>122 / 33 - 9/1/01</b>	<b>L0Rp</b>	<b>04/01/02 &amp; 09/16/02</b>		
<b>Germany, Neustrelitz - NSG</b>	<b>06/20/01</b>	<b>193 / 27 - 5/13/01</b>	<b>Raw CC</b>	<b>12/17/01 &amp; 06/17/02</b>		
<i>Indonesia, Parepare - DKI</i>	<i>NA</i>	<i>121 / 61 - 06/22/01</i>	<i>L0Rp</i>	<i>TBD</i>		
<b>Italy, Matera - MTI</b>	<b>07/12/01</b>	<b>188 / 32 - 1/2/01</b>	<b>Raw CC</b>	<b>01/07/02 &amp; 07/08/02</b>		
<b>Japan, Hatoyama - HAJ</b>	<b>11/06/01</b>	<b>110 / 36 - 10/15/01</b>	<b>L0Rp</b>	<b>05/06/02 &amp; 10/14/02</b>		
<b>Japan, Hiroshima - HIJ</b>	<b>09/20/01</b>	<b>112 / 36 - 4/4/01</b>	<b>Raw CC</b>	<b>02/25/02 &amp; 08/05/02</b>		
<i>Mongolia, Ulaanbaatar</i>	<i>NA</i>	<i>193 / 27 - 10/02/01</i>	<i>Raw CC and L0Rp</i>	<i>TBD</i>		
<b>South Africa, Hartebeeshoek - JSA</b>	<b>NA</b>	<b>177 / 79 - 4/11/01</b>	<b>Raw CC and L0Rp</b>	<b>TBD</b>		
<b>Spain, Maspalomas - MPS</b>	<b>09/21/01</b>	<b>194 / 42 - 3/1/01</b>	<b>Raw CC</b>	<b>02/11/02 &amp; 07/22/02</b>		
<b>Sweden, Kiruna - KIS</b>	<b>06/13/01</b>	<b>195 / 19 - 5/11/01</b>	<b>Raw CC</b>	<b>12/03/01 &amp; 06/03/02</b>		
<b>Thailand, Bangkok - BKT</b>	<b>11/13/01</b>	<b>129 / 51 - 9/2/01</b>	<b>Raw CC and L0Rp</b>	<b>05/27/02 &amp; 11/25/02</b>		
<b>Bold Text: IGS successfully passed initial validation and / or Biannual Validation.</b>						
<i>Italicized Text: IGS failed data validation.</i>						