

Landsat Ecosystem Disturbance Adaptive Processing System (LEDAPS)  
U.S. Geological Survey (USGS)  
Earth Resources Observation and Science Center (EROS)  
Sioux Falls, South Dakota, U.S.A.

## LEDAPS Release Notes

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### LEDAPS 1.1.1 (December 6, 2012 – USGS EROS)

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#### Indpm:

- Corrected spelling of SATTELITE to SATELLITE in the output metadata.txt file

#### Indcal:

- Corrected spelling of SATTELITE to SATELLITE in the output metadata.txt file

#### Indsr:

- Fixed a bug in cld\_diags.std\_b7\_clear to be based on the sqrt of band 7 and not the band 6 temperature.

#### bin:

- Modified do\_ledaps.py to be a class and to allow an -l or --logfile option to write the output to a log file.
- Added a findAncillary method to the Ledaps class to determine if the required EP/TOMS and NCEP REANALYSIS ancillary files exist for the specified year (all days) or year/DOY.

#### ledapsAncSrc:

- Added source code and scripts to download and process the NCEP and EP/TOMS ozone ancillary products.

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### LEDAPS 1.1.0 (November 27, 2012 - USGS EROS)

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- Developed do\_ledaps Python script which provides error checking on each of the LEDAPS applications.
- Modified the LEDAPS applications to flag additional errors, like missing ancillary data, so that the Python script will catch these errors and exit with an error.
- Cleared fill/gap QA pixels such that QA pixels are never set 'on' for fill/gap pixels.
- Changed the name of the \*.carbon\_met.txt file to \*.metadata.txt. The word "carbon" was residual from original development for North American Carbon Project (NACP).
- Added the units of 'meters' to the GCMDEM.hdf file, given that the units were missing from the file metadata.
- Placed the GCMDEM.hdf, GOLD.txt, GOLD\_2003.txt, and GNEW.txt files on the LEDAPS Google Projects page for easy download. These files are required for processing in LEDAPS.

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### LEDAPS 1.0.0 (October 24, 2012 - USGS EROS)

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#### Indpm:

- Indcsm is no longer called as part of the surface reflectance processing; the internal surface reflectance cloud mask is used instead. Therefore the cloud snow/mask is no longer sent as a parameter for Indsr.
- Updated Indpm based on mods provided by Feng Gao from 1/18/2012.

- restores the solar zenith angle bug fix from the past for NLAP\_W0 format (Greg Ederer)
- fixes a bug when writing the UTM zone (south) into the ENVI hdr file (Greg Ederer)
- added processing for Landsat-4 TM (Feng Gao)
- Updated the metadata tags to work with the newly released LPGS metadata as well as continuing to support the old metadata tags.
- Cleaned up warning messages from compilation.
- Reset the version to 1.0.0 as this is our first official version of LEDAPS for the ESPA system.
- Changed the DataProvider to USGS/EROS.

Indcal:

- Modified calibration of band 6 to flag the saturated thermal pixels in the output brightness temperature product. This is consistent with flagging the saturated pixels in the reflective bands.
- Modified Indcal to write the QA bits for the Indth product (brightness temperature product), including appropriate metadata for the QA band. The QA bits include flags for both fill pixels and for saturated band 6 pixels, consistent with the QA bits for the reflective bands in the Indcal output.
- Cleaned up some compiler warnings and minor bugs when freeing some of the data arrays.
- Reset the version to 1.0.0 as this is our first official version of LEDAPS for the ESPA system.

Indcsm:

- Removed the source code from the repository since it is no longer used by the ESPA LEDAPS processing flow.

Indsr:

- Cleaned up some compiler warnings and minor bugs when freeing some of the data arrays.
- Updated the metadata output to include the surface reflectance based QA bits.
- Reset the version to 1.0.0 as this is our first official version of LEDAPS for the ESPA system.
- Removed Indcsm input for cloud mask. Will use only the internal cloud mask. QA bits are no longer output as a packed set of bits, but instead a separate band is written for the cloud, shadow, fill, etc. QA information and each pixel is either on or off.

Indsrbm:

- cmrbv1.0.f used a hard coded pixel size of 28.5. This has been modified to use the pixel size read from the scene metadata.
- updated to handle the new single QA bands vs. the previous packed bit QA band

bin:

- Modified do\_ledaps.csh to no longer call Indcsm as part of the LEDAPS processing flow.

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 LEDAPS 0.0.0 (November 24 2011 – NASA GSFC/UMD)

