



Landsat Science Team Meeting  
Reston, Virginia

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# The CEOS Constellation for Land Surface Imaging and The GLS 2010 Project

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## 2008 LSI Constellation Goals

- Complete Unfinished Tasks from 2007.
  - Annexes to Declaration of Intent (Cooperative Projects)
    - Enhanced User Access to Mid-Resolution Data
    - Acquisition of Mid-Resolution Data
    - Ground Systems Operations.
  - Standards for Mid-Resolution Systems
  - Data to FRA2010 Project
- Initiate a New RADAR Focus Area.
- **Compile Regional Data Sets (Mid-Resolution) over Selected (TBD) Areas.**



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## Approach to Regional Data Set Compilation

- Establish an LSI Constellation Working Group on Regional Data Set Compilation (WGRDSC).
  - Co-Chaired by John Townshend and Herve JeanJean.
  - Membership from LSI Constellation Study Team (esp. from mid-resolution agencies), as well as the general user community. No requirement for CEOS affiliation.
  - Primarily responsible for defining and performing the tasks required to accomplish the Regional Data Set Compilation Goal.
- ***Terms of Reference*** for the WGRDSC have been written, which outline its primary objectives and provide a general framework for its operation.



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## Role of the WGRDSC

- Select one or two regions (sub-continental or larger in size) for which it will compile mid-resolution data acquired by mid-resolution satellite systems operated by CEOS agencies.
- Develop an Implementation Plan for this activity.
  - Define the strategy for determining what systems can contribute to the specific regional data compilation(s).
  - Outline a plan for determining what existing data can contribute to the compiled data sets.
  - Propose a strategy and schedule for acquiring data needed to complete regional compilation(s) *and* for making those data available.
  - Identify technical and practical problems and issues that likely will and/or do arise during the course of this activity and propose strategies for dealing with them.



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## Role of the WGRDSC (cont.)

- Carry out the Implementation Plan.
- Assist the LSI Constellation Study Team in developing the arrangements with CEOS agencies to -
  - Provide existing data.
  - Acquire and provide data needed to complete the regional compilations.
- Based on results of regional data set compilation, including lessons learned, propose logical next steps for acquiring new data to contribute to GLS 2010.
- Other tasks, as necessary and appropriate.



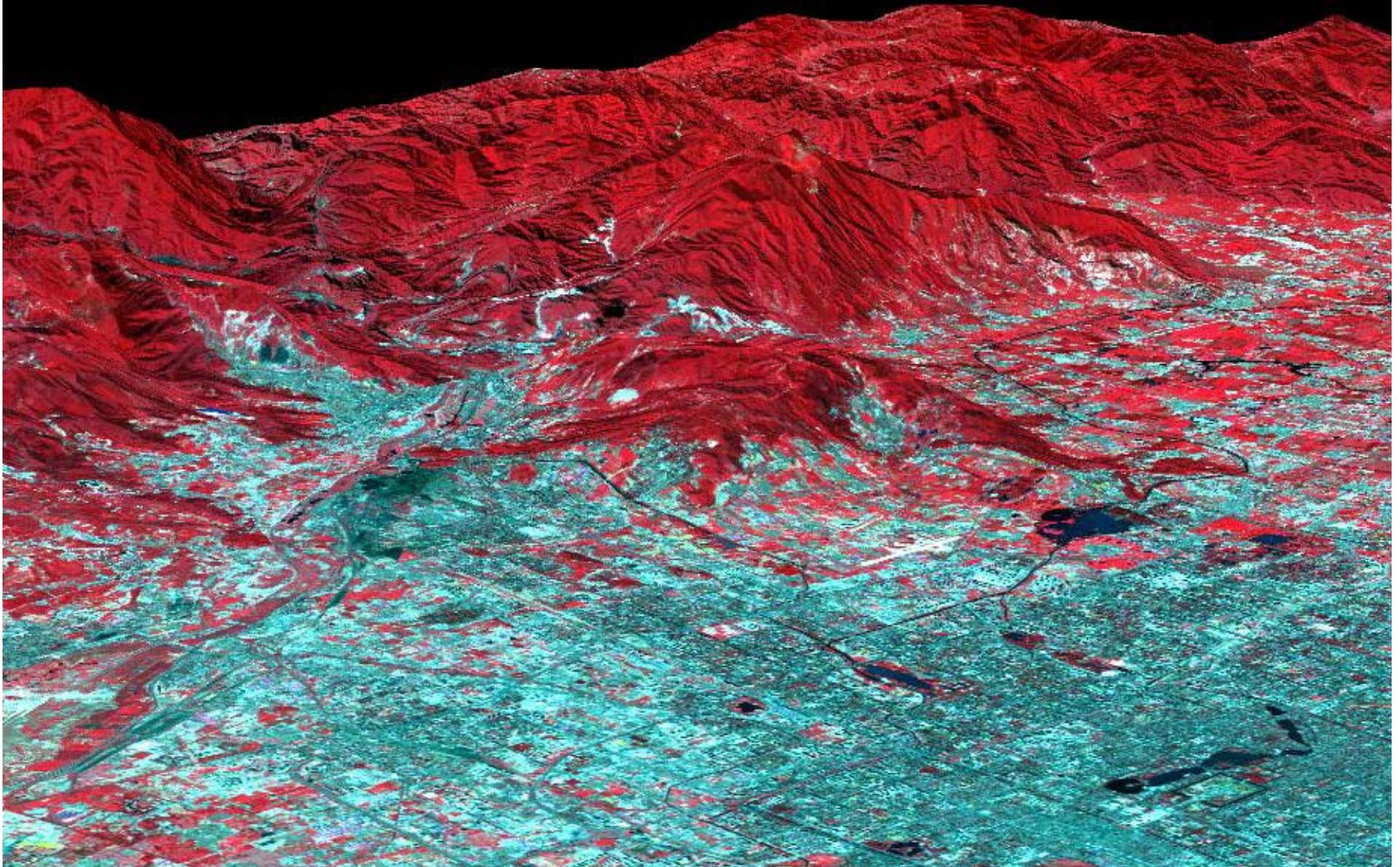
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## Regional Area Selection Consideration

- Responsibility of the WGRDSC.
- However, a recent development likely will be a consideration supporting selection of an area within the reception mask of Brazil's Cuiabá receiving station.
- INPE and ISRO recently signed an agreement whereby INPE will receive RESOURCESAT data for a flat fee.
  - AWiFS and LISS-3 data to be received.
  - No restrictions on INPE's distribution of the data.
- Expect to be receiving RESOURCESAT data by year's end.
- In the meantime, CBERS-2 and Landsat-5 of Brazil would be available to this activity from INPE.



# The New ASTER 30m Global DEM



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## ASTER Global DEM (GDEM)

- Global DEM, at 30m postings, will be produced from ASTER stereo images.
- The GDEM will be a standard ASTER data product.
- It is jointly provided by Japan's Ministry of Economy Trade and Industry (METI) and U.S. National Aeronautics and Space Administration (NASA), in cooperation with METI's Earth Resources Data Analysis Center (ERSDAC) and the United States Geological Survey (USGS).
- GDEM was contributed to, and accepted by, GEO at the November 2007 Summit of Ministers.
- It will be available to all users at no charge to the user.





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## ASTER GDEM Specifications

- Data Posting: 30 m
- DEM Output Format: GeoTIFF, signed 16 bits, and 1 m/DN  
Referenced to the WGS84/EGM96 geoid
- Coverage: 83° N to 83° S
- Special DN Values : -9999 for void pixels  
0 for sea water body
- Accuracies: 20 m with 95 % confidence for vertical  
data (elevation)  
30 m with 95 % confidence for  
horizontal data (geolocation)
- Data Set: 22,895 1° x 1° tiles



## ASTER GDEM Availability

- Public release of the full global data set is anticipated for Spring 2009.
- Data will be available at no cost to all users in the spirit of the Global Earth Observing System of Systems (GEOSS).
- ASTER GDEM will initially be packaged in 1° x 1° tiles, though “seamless” options may be considered in the future.
- Current plans are for data to be jointly released as a standard ASTER data product from:
  - U.S. through Land Processes DAAC and EOS Data Gateway.
  - Japan through ERSDAC Ground Data System.

