Science Support

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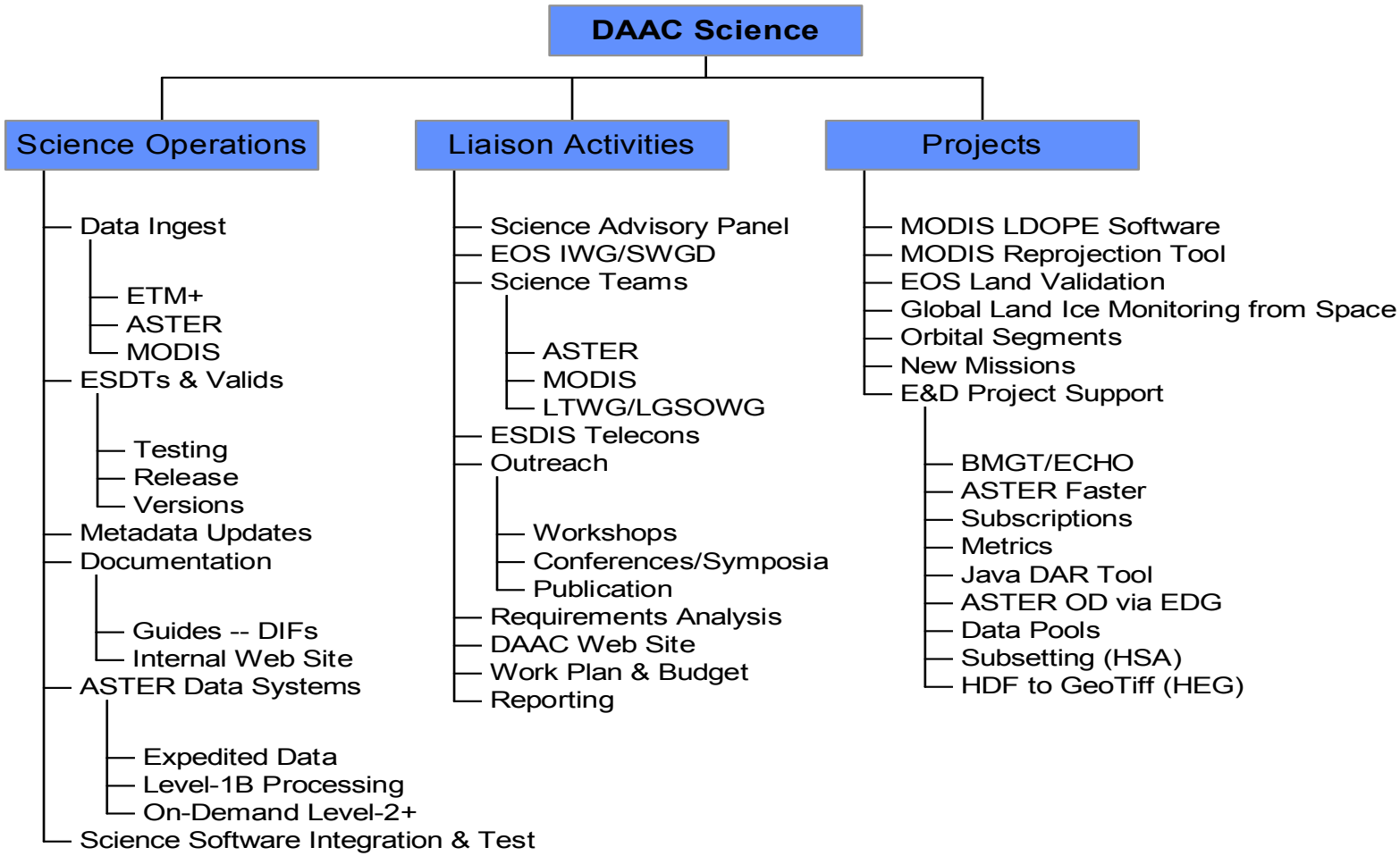
LP DAAC Science Overview



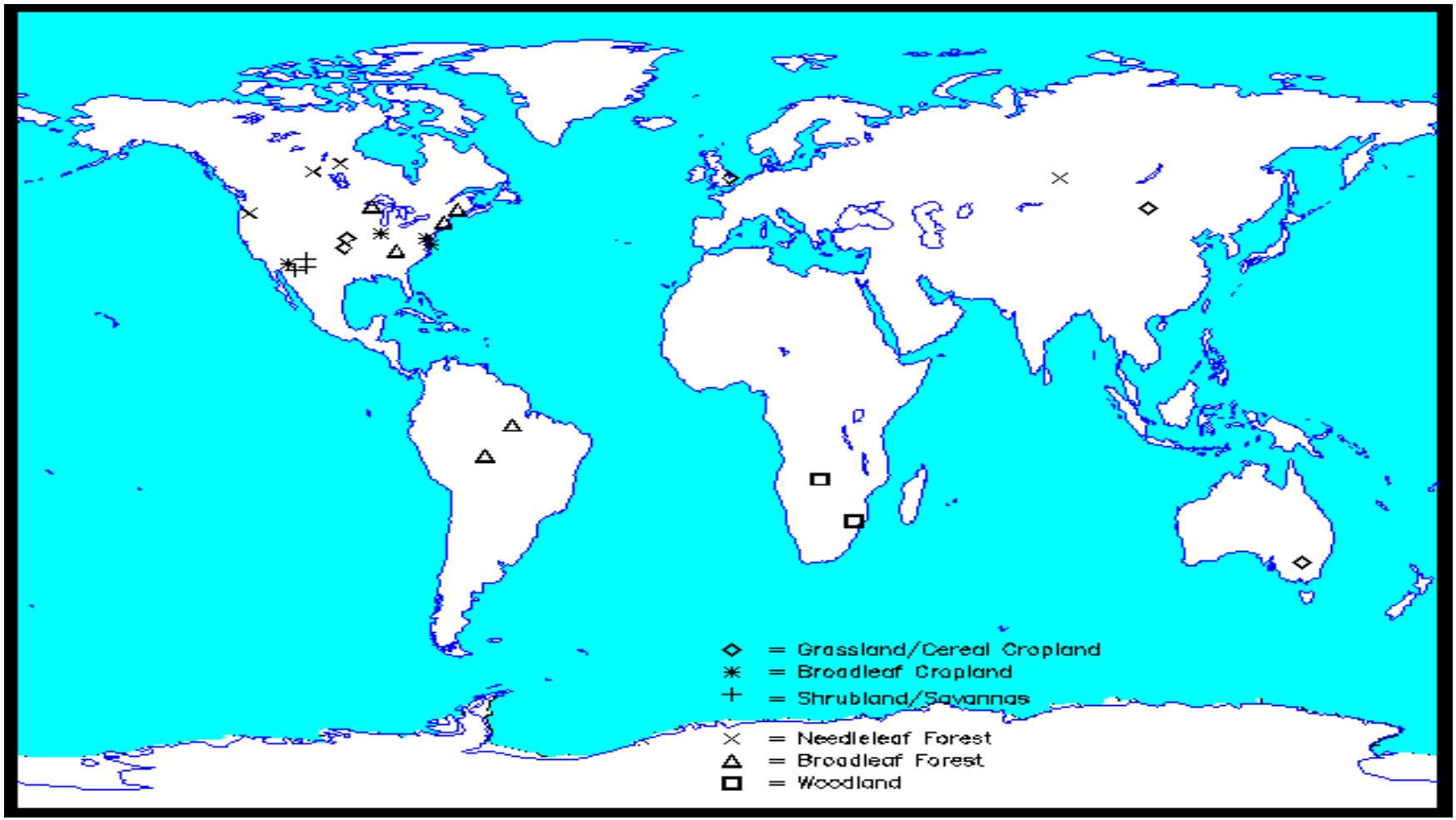
LP DAAC Science Support Activities

- **ECS Science Operations Support**
  - *Key interface* with data providers and internal operations
    - Data ingest monitoring
    - Metadata updates
    - Data Management ('versioning')
  - Cross-DAAC coordination with ECS and EOS Data Gateway
    - Coordinate public release of products
    - Prepare and verify ESDTs, Valids, Guides, DIFs
  - Science software integration and test, 'scripting'
  - User Services and Operations support
  - System testing and verification
  - Liaison activities, Outreach and Workshops
  - LP DAAC Web Site

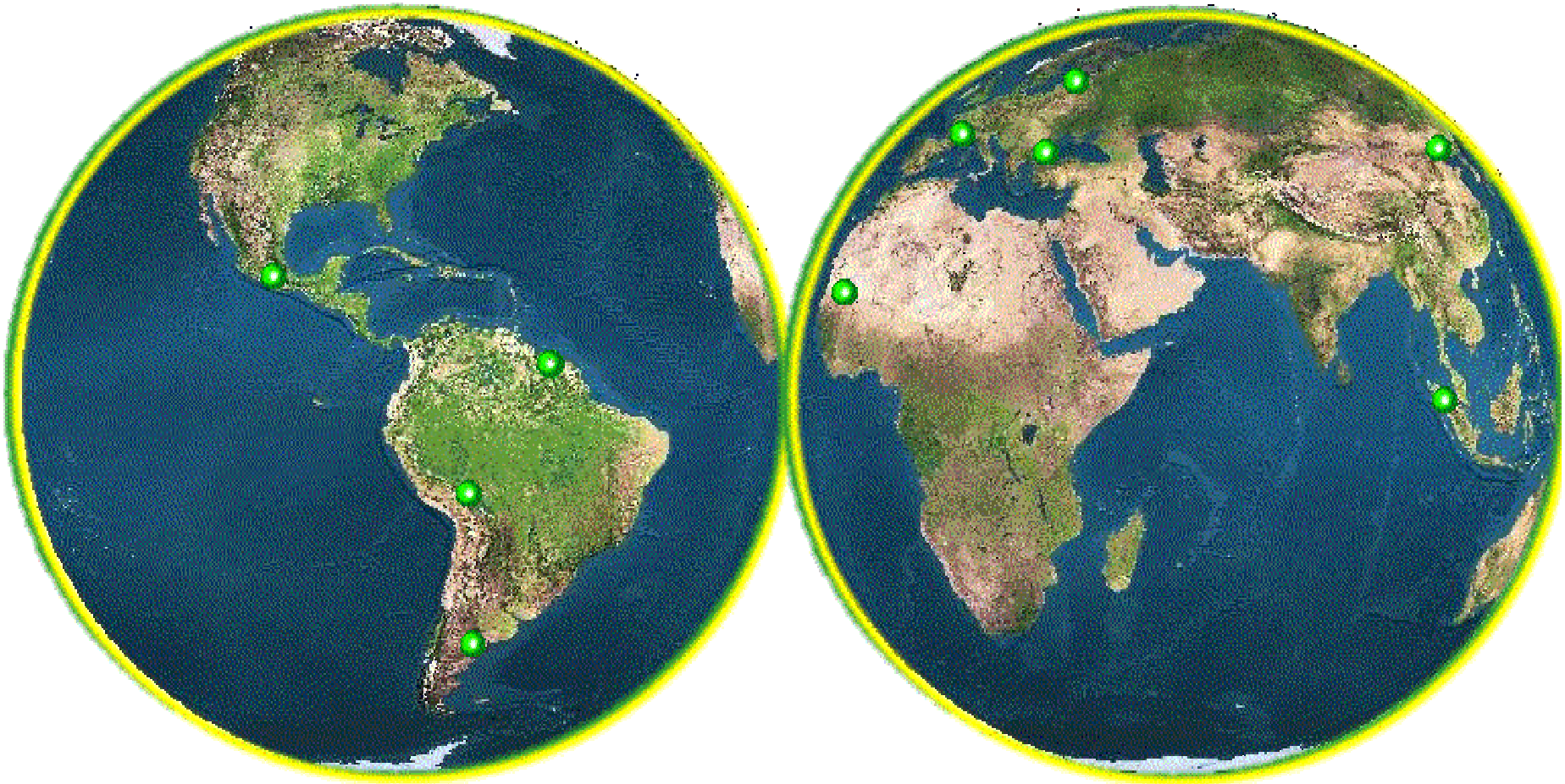
LP DAAC Science Support Activities

- **EOS Land Product Validation Support**
  - Originally started with 24 globally distributed 'Core Sites'
    - Landsat 7 ETM+
    - Geocover
    - ASTER
    - MODIS
    - GLCTS
    - SPOT VEGETATION
  - Coverage expanded to include SAFARI field campaigns and GOFC LAI inter-comparison and VALERI sites
    - MODIS
    - SPOT VEGETATION
  - FTP directories for 76 sites are currently being populated
  - 176 GB online data
  - ~1.5 TB of data for 70 sites were accessed Jan '02 – Jan '03

EOS Core Site Map

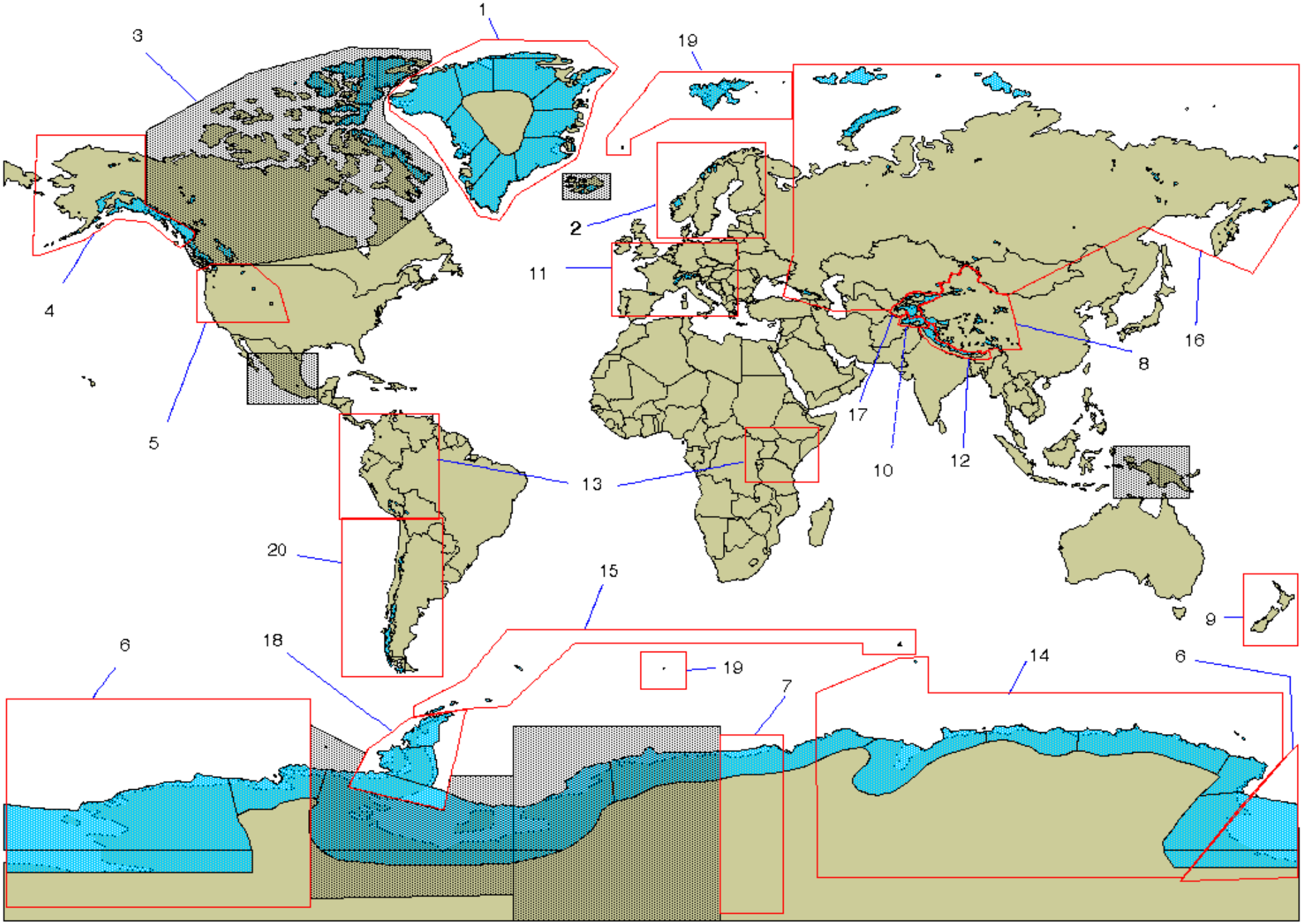


Validation of Land European Remote Sensing Instruments (*VALERI*) Sites



LP DAAC Science Support Activities

- **Global Land Ice Measurements from Space (GLIMS)**
  - Funded through NASA with USGS/Flagstaff and NSIDC
  - USGS/Flagstaff – ASTER DAR submissions, acquisition tracking, project coordination
  - LP DAAC – ASTER metadata export to Flagstaff, establish FTP directories for ETM+ and ASTER data access
  - NSIDC – repository analysis results from Regional Centers and distribution site for access by broader research community
  - International research partnerships – *Regional Centers*
    - Map the the extent key glaciers, ice fields, and proglacial lakes
    - Determine ice facies and surface velocities
    - Deliver maps, attributes, and metadata to NSIDC in electronic format
  - LP DAAC processed 2800 GLIMS scenes from L1A to L1B as part of local ASTER Level-1B processing assessment



Outlines of GLIMS Regions.
As of 1999-04-23

Aster Glacier Footprint Viewer - Netscape

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Bookmarks Location: http://webgis.wr.usgs.gov/website/aster/viewer.htm What's Related

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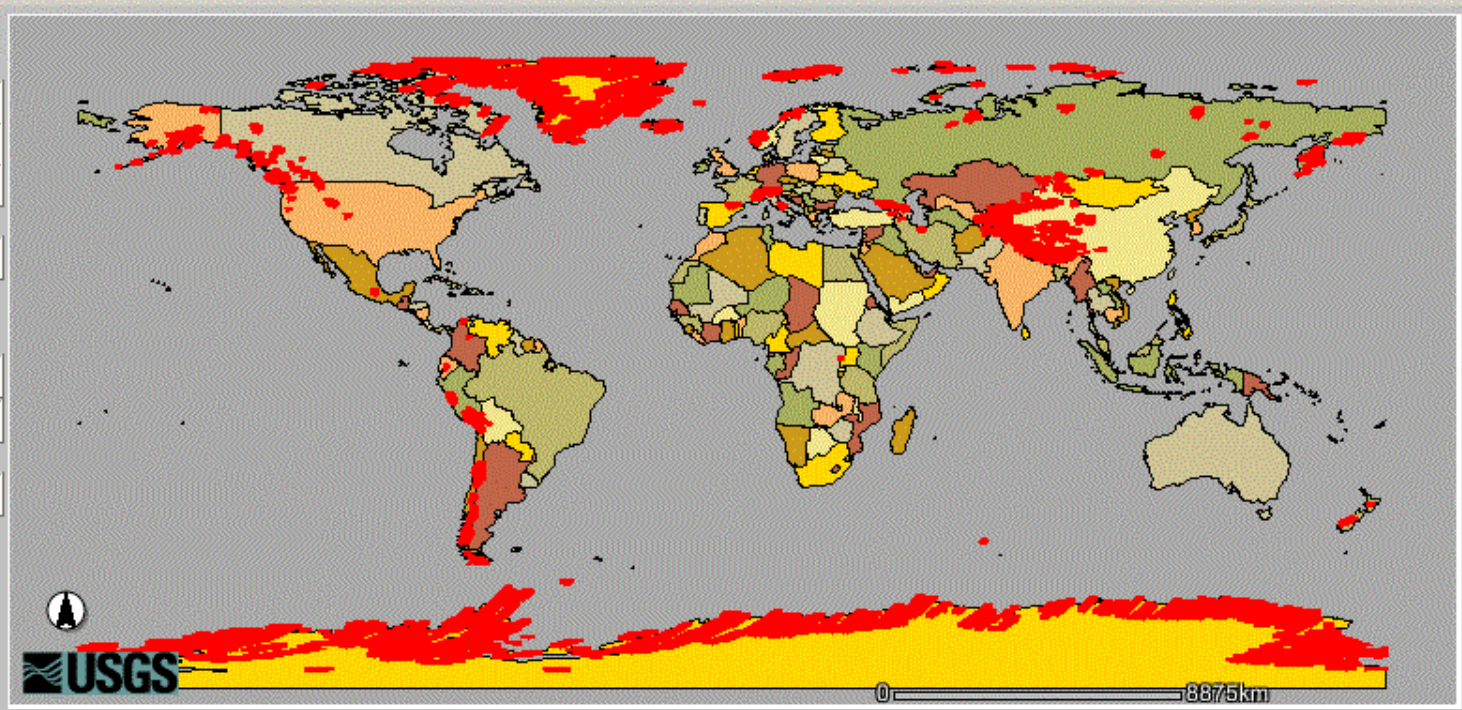

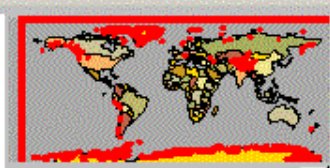

Display Legend

Refresh Map

Current Active Layer:

ASTER level 1B over gla

Layers

Visible

- [x] ASTER level 1B over glaciers
- [ ] ASTER level 1A over glaciers1
- [ ] GLIMS Regions
- [ ] Glacier database
- [ ] Glacier database

ASTER level 1B over glaciers is now the Active Layer

Tool selected = Zoom In

U.S. Department of the Interior || U.S. Geological Survey || Astrogeology

URL: http://webgis.wr.usgs.gov/website/aster/index.htm || Maintainer: thare@usgs.gov || Last Modified: Thu 23 May 2002

Map: -61.34 , -14.74 -- Image: 267 , 212 -- ScaleFactor: .5177111716621245

Start 12:29 PM

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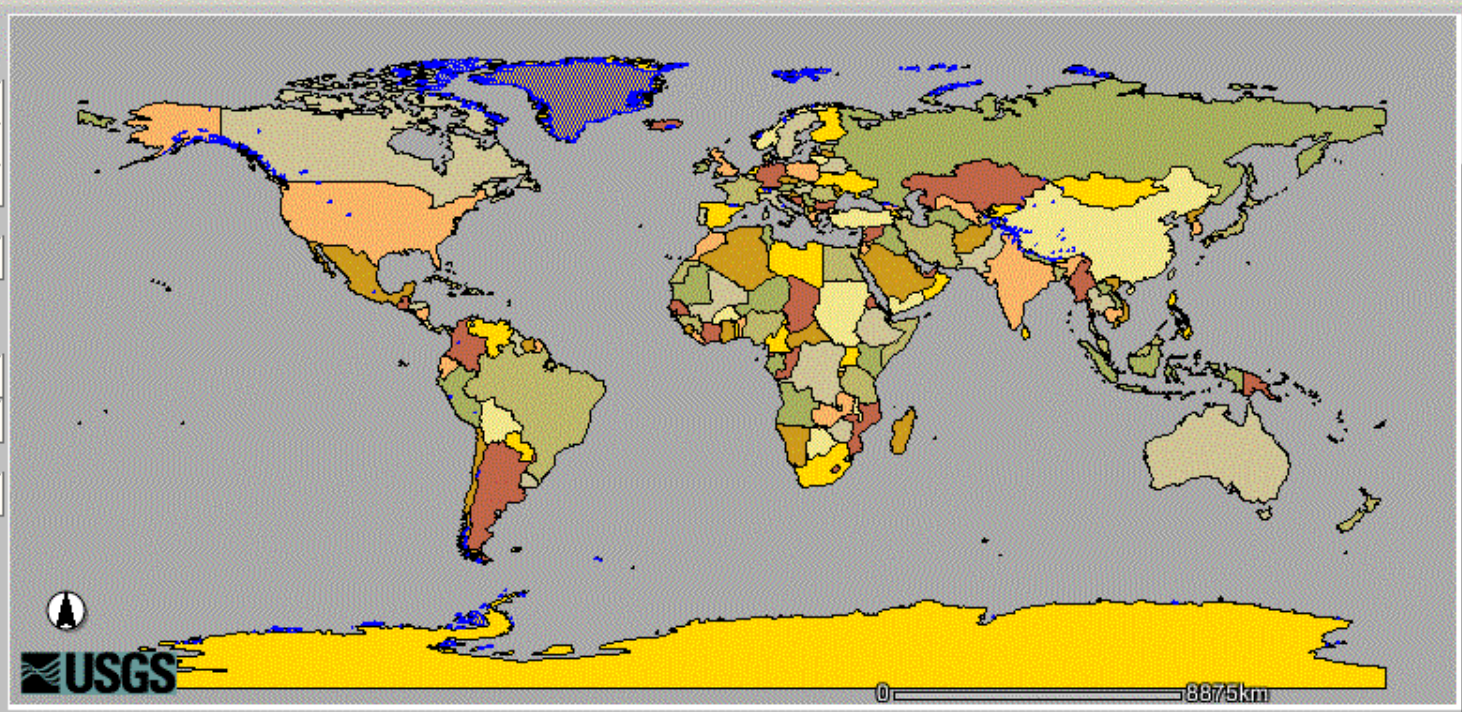

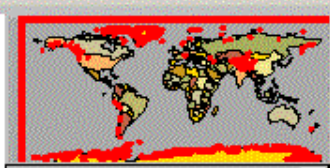

Layers

Visible

- [ ] ASTER level 1B over glaciers
- [ ] ASTER level 1A over glaciers1
- [ ] GLIMS Regions
- [x] Glacier database
- [ ] Glacier database buffered
- [ ] Grid 5x5 degrees
- [x] Country Boundaries (low res)

Refresh Map

ASTER level 1B over glaciers is now the Active Layer

Tool selected = Zoom In

U.S. Department of the Interior || U.S. Geological Survey || Astrogeology

URL: http://webgis.wr.usgs.gov/website/aster/index.htm || Maintainer: thare@usgs.gov || Last Modified: Thu 23 May 2002

Map: -23.03 , -70.14 -- Image: 341 , 319 -- ScaleFactor: .5177111716621245

Start 12:30 PM

LP DAAC Science Support Activities

- **AVHRR Orbital Segments**
  - Acquisition of global AVHRR 1Km data
    - Seeking a minimum of a 1-year overlap between AVHRR and Terra/Aqua MODIS data acquisitions (prior Panel recommendation and user community interest)
    - Level-1B Data for 2000 – 2002 received for the following areas:
      - Australia, South America, North America, W. Europe, Siberia, Japan, Korea
    - Gaps in W. China (Beijing D-3 problems), Indonesia
  - Orbital stitching and global NDVI composite generation remain unfunded
  - Budget reductions may preclude further data acquisitions

LP DAAC Science Support Activities

- **MODIS – AVHRR inter-comparison datasets**
  - The science question is whether the AVHRR and MODIS vegetation indices can be merged into an extended time-series to quantify biophysical parameters
  - The challenge is to make available suitable datasets for comparison and interpretation
  - We've leveraged processing of routine EDC AVHRR processing for CONUS to match MODIS 16 - day VI
  - Scripting against Data Pools for MOD13A2.V003 to search and retrieve from Data Pool for processing by MRT to assemble 16-day VI mosaics for CONUS
  - Explore hosting from 'Seamless' data server with Open GIS Consortium (OGC) compliant web mapping services
  - Extend lessons-learned to Data Pool evolution