Land SIPS: Data Formats and Software Updates

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Operational Interface

- EDOS L0 Processing
- Ocean SIPS L1 code repository
- NASA VCST and GEO
  - L1B and Geo Proc. code and LUT
- NASA VIIRS Land Science Team
  - Science Code Delivery
- LDOPE
  - Science Data
- LP-DAAC NSIDC
- LAADS
  - Science Data
  - L0 - L3/4
  - L1A Proc. code
Data Formats: L1

- LSIPS is transitioning to the NASA VIIRS L1 Datasets:
  - L1A
    - Uses L0 PDS files supplied by EDOS
  - Geolocation
  - L1B
    - Very different from SDRs
    - More like MODIS L1B
    - No Geolocation datasets, only GRing and BoundingCoordinate metadata attributes.

- Data format: netCDF4.2/HDF5
  - CF-1.6 Convention

- 6-minute Granules
Data Formats: L2 Swath

• Is your Swath data going to LP DAAC or NSIDC?
  – YES:
    • Data format: netCDF4.2/HDF5
    • CF-1.6 Convention
    • Meets metadata requirements defined by DAACs and LDOPE
    • Needs metadata xml file as well for ingest at DAAC
  – NO:
    • Data format: SCF’s choice.
      – HDF4 (for now)
      – netCDF4.2/HDF5
    • Meets metadata requirements needed for MODAPS/LAADS and LDOPE

• All swath products are 6-minute granules
Data Formats: Gridded Products

• Is your L2G, L3 Daily L3 n-day or L3 CMG product going to LP DAAC or NSIDC?
  – YES:
    • Data format: HDF5-EOS
    • Meets metadata requirements defined by DAACs and LDOPE
  – NO:
    • Data format: SCF’s choice.
      – HDF4-EOS (for now)
      – HDF5-EOS
    • Meets metadata requirements needed for MODAPS/LAADS and LDOPE
SCF Obtains latest tagged version of code package*

SCF modifies and tests code changes and prepares updates for delivery to LSIPS SSTG.

Prior to delivery, SCF compiles and executes on LSIPS development machine: npp1.

SCF sends code package with test inputs/outputs to LSIPS SSTG Lead. Delivery notice via email to carol.c.davidson@nasa.gov with location and notes on package changes.

LSIPS SSTG integrates, compiles and tests code package from SCF. Test results are shared with SCF as needed/requested to verify code integration.

New version of PGE submitted to CM for tagging, then onto Science Test if needed/requested.

*If update to existing PGE.
Software Updates

• Detailed instructions for obtaining, updating, compiling, testing and delivering code changes are in the document:

   *Science Software Updates in the Land SIPS.docx*

• Instructions for obtaining access to the NASA machine are in the document:

   *AccountAccess_V3.docx*

• Contact LSIPS SSTG Lead for copies of both.
Software Updates, additional notes

• SDPToolkit In use for HDF library functions at LSIPS, but not the MODIS PGSToolkit
  – PGSToolkit library functions need to be removed
• LSIPS uses 64-bit machines
• HDF5 functions in LSIPS OPS Libraries
  – For reading in NASA VIIRS L1B and Geolocation
  – Primarily supports IDPS heritage codes
  – May be useful to others
• Make sure your code is ready to work with correct input/output format
  – netCDF4.2/HDF5 for L1s
  – Mixed types for swath and gridded
    • Double check format types with LSIPS SSTG
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