Land SIPS: Data Formats and Software Updates

Carol Davidson
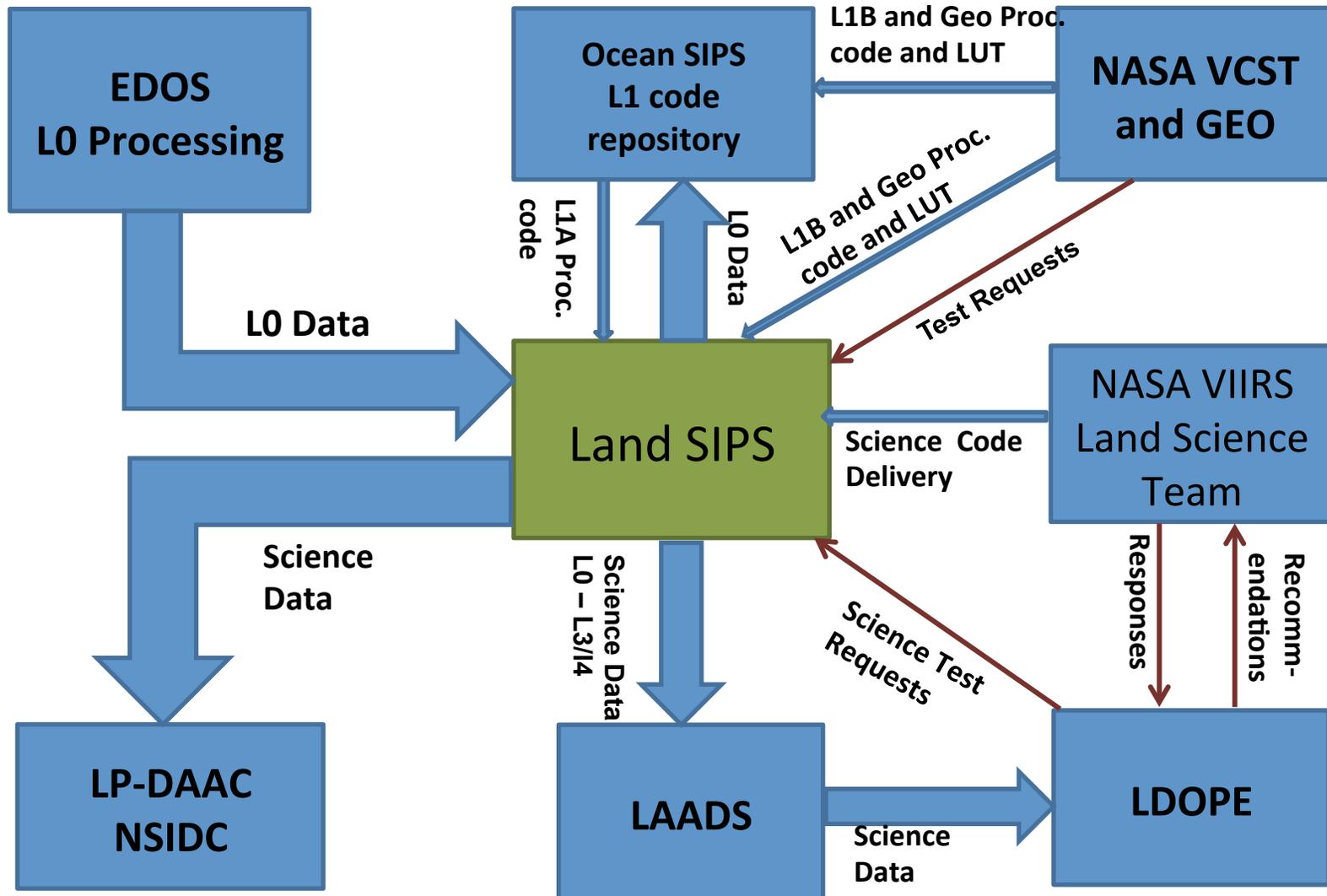
Science Systems and Applications, Inc.
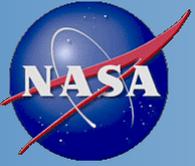
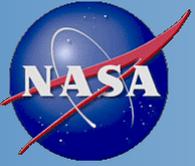**Carol.C.Davidson@nasa.gov**

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**
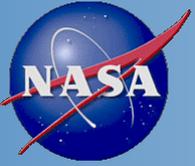 - **CF-1.6 Convention**
- **6-minute Granules**

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

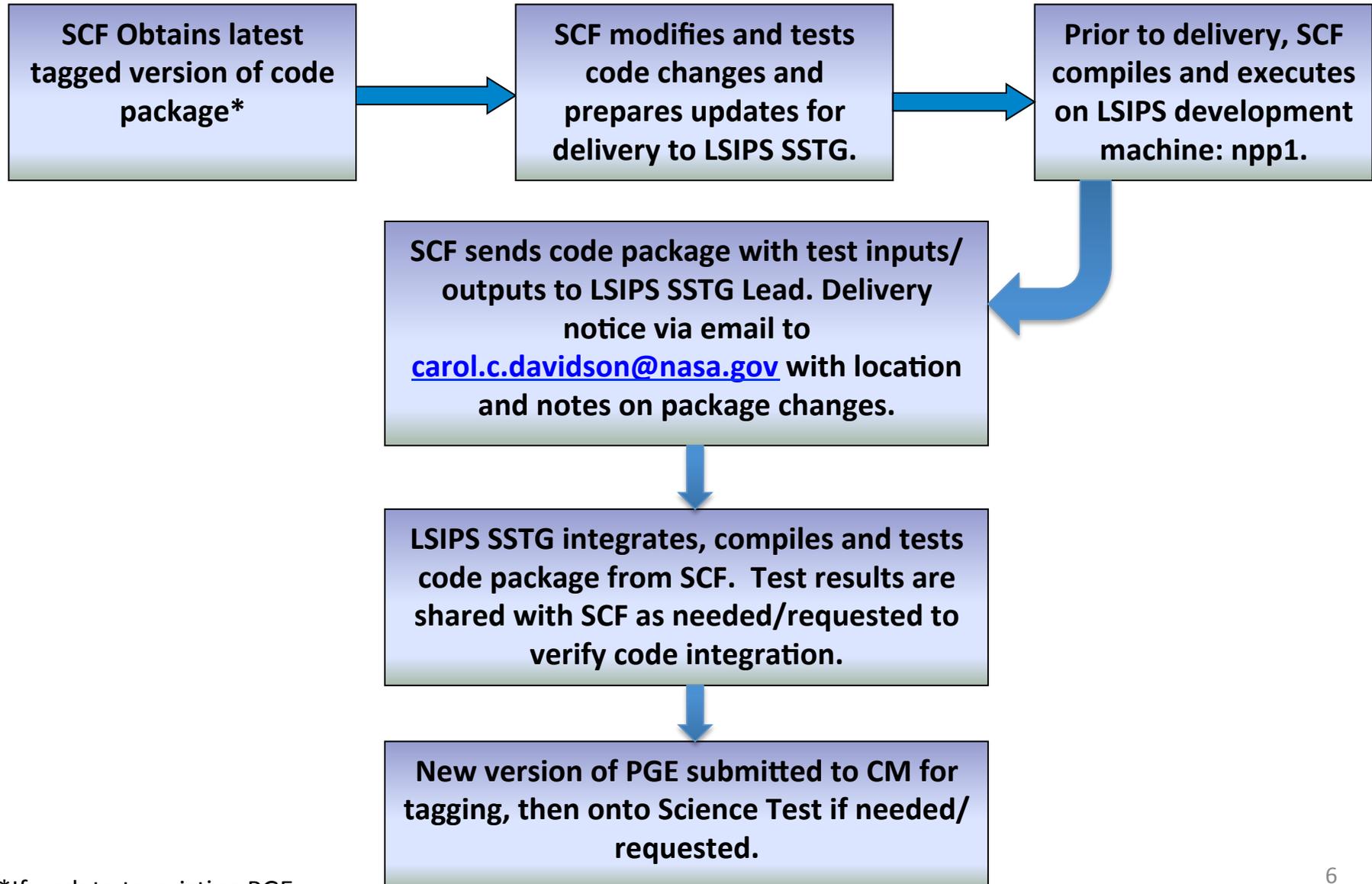- **All swath products are 6-minute granules**

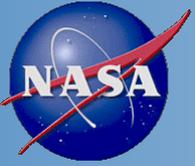# Data Formats: Gridded Products

- **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**

Software Updates Overview

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.
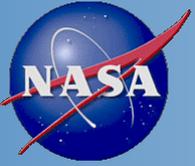
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Software Updates

- **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
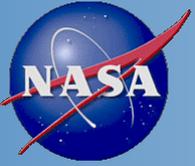
LSIPS SSTG & Data Production Team

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