Change to the Processing Streams at Land SIPS

Generation of VIIRS land records by processing of the IDPS RDRs in AS 3001 and 3002 will cease on March 31, 2016, and reprocessing of the records in AS 3110 will conclude with processing of data from the month of Jan 2016. Aggregation of IDPS generated RDRs, SDRs, and EDRs in AS 3000 will also be discontinued. Instead, the AS 3002 will be reconfigured as a new forward processing stream generating selected suite of land records from processing of the NASA VIIRS L0 data using mix of Land SIPS version of IDPS algorithms and NASA science algorithms currently in operation in AS 3001 and 3002. New science processing algorithms developed and delivered by the NASA VIIRS science teams will be integrated to the new SIPS processing stream in AS 5000 which is currently under development

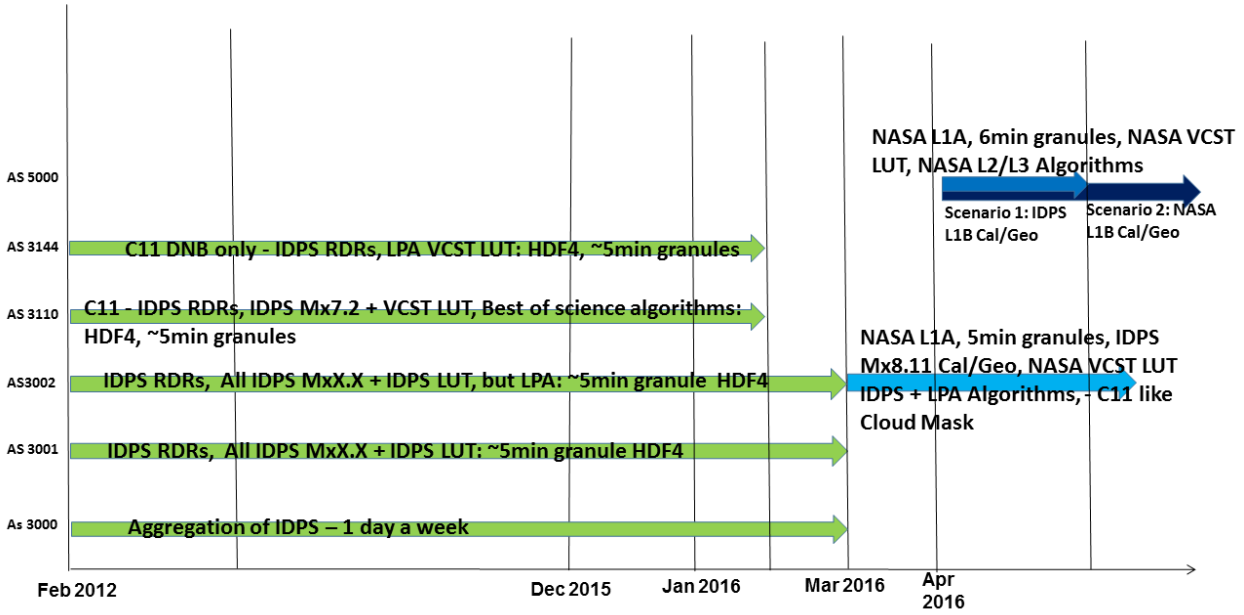
Processing in AS 3000 (to be discontinued on 3/31/2016): This processing stream generated aggregated ~5 min granules in HDF4 format from the native VIIRS SDRs and EDRs generated at IDPS in HDF5 format. Products were available for one global day per week (data from every Saturday) and was being used by Land SIPS for regression testing and verification of Land SIPS generated records in AS 3001, through APUs generated from inter-comparison of records from IDPS (AS 3000) and Land SIPS (AS 3001).

Processing in AS 3001 and AS 3002 (to be discontinued 3/31/2016): These two processing streams used to be the primary forward processing streams at Land SIPS. Processing steam in AS 3001 has been generating full suite of SDRs and EDRs in HDF4 format processing the IDPS delivered VIIRS RDRs aggregated to 5min granules using the operational IDPS algorithms adopted to run on the Land SIPS processing system. The processing stream also generated L3 DDRs (daily and n-day MODIS heritage L2G/L3/L4 tiled products) using the C5 MODIS algorithms adopted to process VIIRS data. Improved versions of the products were generated in AS 3002 using the Land SIPS adjusted version of the algorithms in AS 3001 (IDPS operational algorithm with improvements/changes recommended by the NASA science team). Both archive sets were primarily rolling archives, with retaining period of 30 days for most of the L2 and L3 products. Some of the L3 daily and most of n-day products were permanently archived.

C11 reprocessing (Will conclude with processing of Jan 2016. AS will contain record for the mission period of Feb 2012 – Jan 2016): The C11 reprocessing in AS 3110 will conclude with processing of records for Jan 2016 which is currently in progress. This reprocessing generated L2 SDRs and EDRs and selected MODIS heritage daily and n-day DDRs by processing of the L1B SDRs using the Mx7.2 build version of the IDPS L1B SDR calibration algorithm and the NASA VCST delivered L1B LUTs for RSB/TEB and DNB. Similar to AS 3001/3002, L1B and L2 swath products are in HDF4 format and ~5min granules, and the L3 tiled products are in MODIS tile size and in HDF-EOS format. Most of the L2 and L3 records are permanently archived. Data records in this AS may be maintained until a new collection of records are available from processing of NASA L0 data using the new NASA science team algorithms in AS 5000.

New Forward Processing Stream in AS 3002 (Starting April 01, 2016): New processing stream in AS 3002 will retain the PGE versions (LPA versions) currently in operation in AS 3002, and use PGEs from AS 3001 for products that do not have LPA version available in AS 3002. The current archive from 3001 and 3002 will be merged as new AS 3002, i.e. LPA versions will be retained and products from 3001 will be moved to 3002 if LPA versions are not available for the product. In addition products deemed not needed for NASA science teams and their collaborators in any of their on-going work could be discontinued in this processing stream and old data in the archive for the product could be deleted. Notable features and changes in the processing stream at this time include

- Use NASA L1A generated from NASA L0 (will not use IDPS RDRs)
- Granules are in 5min size (earlier AS 3002/3001 were ~5min from aggregation of IDPS RDRs)
- All products will continue to be in HDF4 and HDF4-EOS
- L1B SDRs will use IDPS Mx8.11 calibration and Geo process with NASA VCST provided LUT
- T (replacement for IDPS RSB-AutoCal)
- Cloud Mask will use Climatology NDVI and daily NISE data (similar to C11 reprocessing)
- Following products will be discontinued: daily VI swath product and its downstream L2G, daily Land surface albedo swath product, L1B brightness pixel, Aerosol EDR, L3 16-day composite BRDF-Albedo, L2G/L3 Snow Density (VCSD)

New Land SIPS Processing/Reprocessing Stream in AS 5000: New science processing algorithms developed and delivered by the NASA VIIRS science teams will be integrated to the new SIPS processing stream in AS 5000 which is currently under development. During the initial phase, and until an approved new NASA L1B calibration algorithm is delivered by NASA VCST, this processing stream will generate products by processing of the L1B generated from the NASA L1A data using the IDPS L1B and Geo process and the L1B LUT provided by NASA VCST. The new NASA L1B and Geo processes, when delivered, will be used to continue processing of the L1B in the forward and also to reprocess and replace the L1B records generated using the IDPS process. However the downstream products will not be reprocessed. Please note that the granules in this processing stream are in 6min size and products delivered to DAAC are in HDF5/netcdf4 format for L1B/L2 products, and in HDF5-HDFEOS format for tiled L2G/L3 products.

Land SIPS: Forward/Reprocessing Plan