



MODAPS - Land Processing Status

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Land Processing Status

- **Land C5 Forward processing is typically 1-2 days behind real time.**
- **C4.1 LST (C4 LST algorithm with C5 L1 input) is processed for the duration of the C5.**
- **C51 Reprocessing**
 - **Completed processing Land Cover through 2011.**
 - **Reprocessing of Burned Area completed. Product to be released to public after completion of review by the Science Team**
 - **Processing of VCF pending generation of model data**
- **NRT (LANCE-MODIS) processing is typically 1.5 hours after observations. All land L2 products generated and distributed. Uses operational C5 land PGEs**
- **Land Products (except snow and sea_ice) are now also available through LAADS. Products that are not archived are generated via POD (Processing On Demand)**



Level 1 Processing Status



- **C6 Aqua L1B, Geolocation, Cloud Mask and Atmospheric Profile**
 - **Reprocessing started in Feb 2012**
 - **Forward processing started on data day June 27, 2012**
 - **Data released to public on July 18, 2012**
- **C6 Terra L1B, Geolocation, Cloud Mask and Atmospheric Profile**
 - **Reprocessing started in Aug 2012**
 - **Forward processing started on data day Sept 30, 2012**
 - **Data released to public on Nov 5, 2012**
- **C6 and C5 forward processing of Terra and Aqua C6 L1B expected to continue for a year after completion of C6 Land reprocessing.**



C6 Processing Readiness



- **Science testing of algorithm changes in progress**
 - **Land PGEs with C6 changes are being readied for production**
 - **Science Tests are being run to verify product specific changes and effect of these changes on downstream products**
 - **Test results are being evaluated by LDOPE and Science Team**
- **Land Reprocessing currently projected to start end of June 2013**
 - **First tier of reprocessing will generate most L2/L2G and L3 products.**
 - **At 50x processing rate first tier of reprocessing will take 6 months**
 - **Second tier will generate new land products (e.g. MAIAC, Simon's LST, new snow products) and some higher order products like Burned Area, Vegetation Continuous Fields, and Land Cover.**
 - **MODAPS is ready to process the second tier products as C6 algorithms become available.**
 - **When first released the new algorithms will be at a Beta maturity. It is likely that they will mature quickly to provisional without reprocessing, we will have to wait and see. Validated maturity (even stage 1) will likely take a year.**



MODAPS C6 and Beyond

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Collection 6 Processing Rates



Plan to finish C6 Land by end of the calendar year

- **24.5 data years from Terra/Aqua MODIS for C6 reprocessing**
- **Level 1 products in LAADS will be used as the starting point for processing**
- **Current start date for Atmosphere reprocessing is end of April.**
- **At 100x for Atmosphere products, C6 will take 90 days to complete.**
- **Current start date for Land reprocessing is end of June.**
- **At 50x for Land products, C6 will take 180 days to complete**
- **Will do the reprocessing in reverse, in 3 year increments. 2010 to present, then 2007 to 2009, etc.**
- **Retrieval of Level 1 products from the archive could be a bottleneck if:**
 - **Distribution of C6 Level 1 significantly increases (>>6TB/day)**
 - **Reprocessing campaigns overlap as this will increase the load on the archive**



Near Real-Time products



- **Near Real-Time LANCE-MODIS and will generate C6 products in parallel with C5 for 1 year to allow applications users time to transition.**
 - **Running C6 in parallel with C5 in LANCE-MODIS systems will increase latency. We do not know how big this impact will be.**
 - **Will explore impact on latency using one NRT processing system (nrt2) to run both C5 and C6 while the other system (nrt1) runs C5 only.**
 - **If latency requirements can't be met running both C5 and C6 on a system, we will run c6 on nrt2 and c5 on nrt1 until we can expand the resources of both near real time systems. This eliminates the desired redundancy we have now with systems in two separate computing facilities making and distributing near real time MODIS products**



VIIRS Reprocessing



- **Reprocess VIIRS Level 1 data products with improved calibration and geolocation LUTs**
 - **Will start in May 2013**
- **Reprocess Land products with “best of” algorithms for the first data year**
 - **Will start in August 2013**
- **Product formats are comparable to MODIS Level 2 and Level 3**
- **Distribution through LAADS**

- **VIIRS has a separate processing system from MODIS but resources can be shifted between MODIS and VIIRS reprocessing. Reprocessing rate is 3.5x - 4x**