

Generation of Level 2 Products from MODIS DB data

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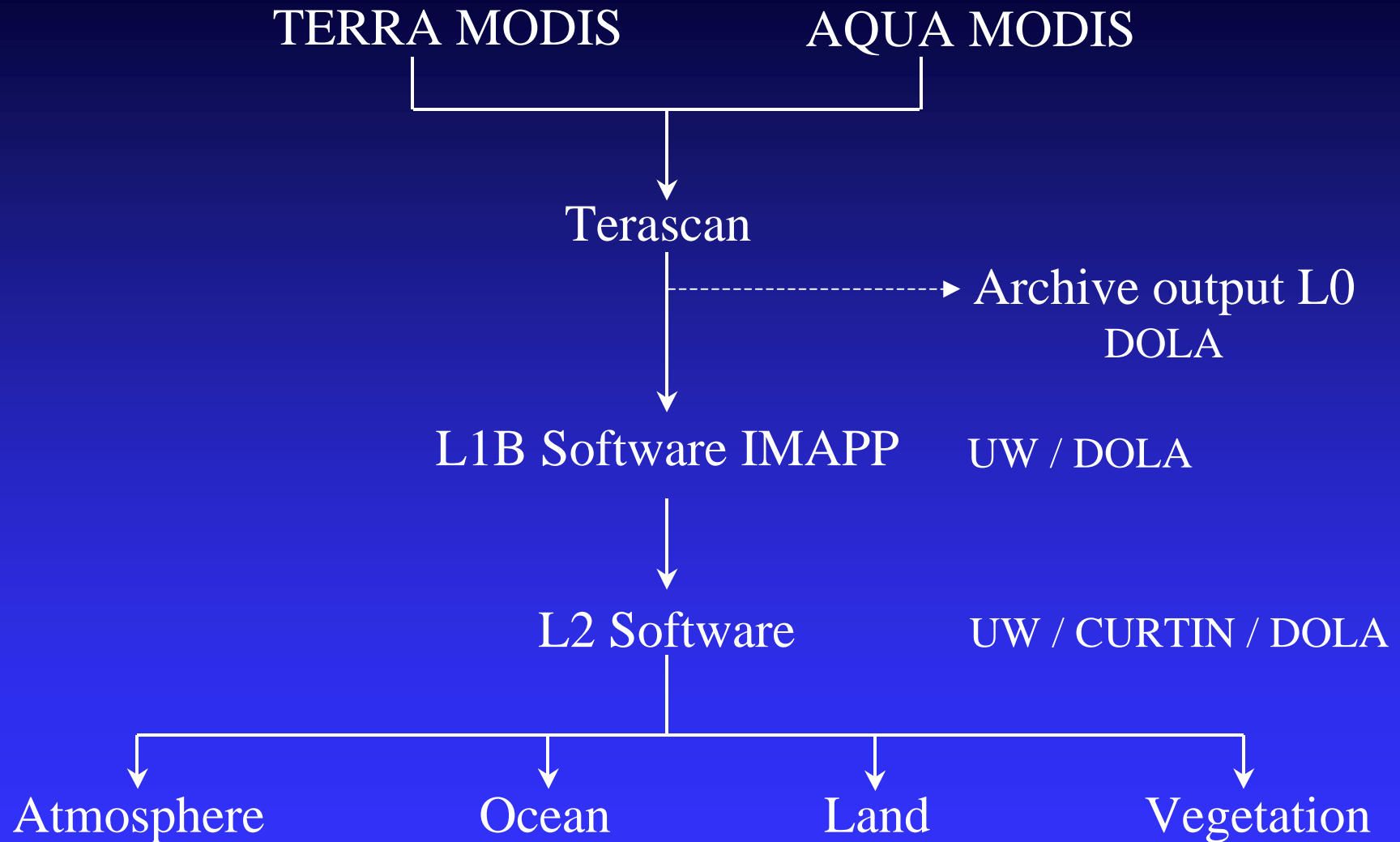
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RSSRG MODIS Team

- A/Prof. Mervyn Lynch Group Leader
- Dr. Brendan McGann Ocean Colour (Sediment)
- Peter Fearn Ocean Colour (Chl-a, CDOM)
- Brendon McAtee Ocean Colour (Subsurface Reflectance)
Sea Surface Temperature
- Leon Majewski Sea Surface Temperature
Ocean Colour (Chla-a)
Fluorescence
PAR
Primary Production
- Jackie Marsden Atmospheric Correction
- Helen Chedzey Cloud Properties

MODIS Processing Scheme



RSSRG MODIS Tasks

- Generation of standard products
- Validation of products
- Development and validation of new products
- Applications

DB Product Generation Considerations

- Level 1 Software
 - NASA, IMAPP
- Level 2 Software
 - Standard algorithms, IMAPP converted algorithms
- Availability of ancillary data sets
 - NASA algorithms require global data
 - Lack of availability for real time processing

RSSRG MODIS L2 Products

- Atmosphere
 - Algorithms for the generation of the cloud mask (MODPR35) and cloud top properties (MODPR06) products have been developed by CIMSS (UW-Madison).
 - Generation of an aerosol research product.
- Land
 - Land surface temperature and emissivity (MODPR11).
- Vegetation
 - Implementation of standard NDVI and absorbed PAR products.
 - Generation of a leaf canopy research product.
- Ocean
 - Sea surface temperature (MODPR25), ocean colour (MODPR18) and fluorescence (MODPR22) product.
 - Subsurface reflectance, CDOM and sediment research products.

Progress: DB Level 2 Ocean Products

➤ Sea Surface Temperature

- Miami currently use NLSST with Reynolds OI SST as the 'initial guess' temperature.
- Use of MCSST to replace Reynolds as input to the NLSST
 - Inaccurate estimate (of MCSST) adversely affects NLSST output. The extent of this error is yet to be determined.

➤ Ocean Colour and Fluorescence

- Atmospheric correction is the most significant source of error in OC data. Current atm. cor. algorithms use NCEP and TOVS data from the days surrounding the overpass.
- DB processing will use the previously received NCEP and TOVS data along with climatological data sets.

MODIS DB SST: TIR and MW

