# L3 Change Summary & Status for C006

Final

## Solar and Sensor Geometry: (DONE!)

- Changed the Solar and Sensor Angles to use the Cloud Top Properties definitions of Day.

## Aerosol combined Land and Ocean: (DONE!)

- Renamed parameters using Aerosol prefix. (All Aerosol-derived parameters renamed)
- Deleted flux and optical depth ratio small parameters. (2 parameters deleted)
- Added Average Distance from the Aerosol Retrieval to the nearest Cloud. (1 parameter added)
- Changed all Multiday averages from Pixel Count Weighted to Unweighted. (All parameters modified)

## Aerosol over Land: (DONE!)

- Renamed parameters using Aerosol prefix. (All parameters modified)
- Deleted parameters related to mass concentration, flux, radiance, and reflectance and others. (12 parameters deleted)
- Added Avg Number of L2 Pixels used in Retrieval. (1 parameter added)
- Added Screening by L2 QA Usefulness Flag to all Aerosol over Land parameters. (All parameters modified)
- Changed all Multiday averages from Pixel Count Weighted to Unweighted. (All parameters modified)

## Aerosol Deep Blue: (DONE!)

- Added Avg Number of L2 Pixels used in Retrieval. (1 parameter added)
- Added AOD Dark Target & Deep Blue Combined. (1 parameter added)
- Added Screening by L2 QA Usefulness Flag to all Deep Blue Aerosol parameters. (6 parameters modified)
- Changed all Multiday averages from Pixel Count Weighted to Unweighted. (6 parameters modified)
- Drop all QA-weighted SDS's for Deep Blue Aerosol

## Aerosol over Ocean: (DONE!)

- Renamed parameters using Aerosol prefix. (5 parameters modified)
- Deleted parameters related to flux, backscattering, mass concentration, and others. (10 parameters deleted)
- Added Avg Number of L2 Pixels used in Retrieval. (1 parameter added)
- Added three Joint Histograms (AE1, AE2, & AODRSO) vs. AOD. (3 parameters added)
- Added Screening by L2 QA Usefulness Flag to all Aerosol over Ocean parameters. (8 parameters modified)
- Changed all Multiday averages from Pixel Count Weighted to Unweighted. (8 parameters modified)

### Water Vapor: (DONE!)

- Drop all QA-weighted statistics.

#### Cirrus Reflectance: (DONE!)

- No Changes.

#### Cloud Top Properties: (DONE!)

- Added Near Nadir versions of CTP, CTT, CEE, CF, and CTH (all aggregated by Day only, Night only, and Combined Day and Night). (15 parameters added)
- Added Low (>680mb), Middle(680-440mb), & High Cloud (<440mb) separation of CTP, CTT, CEE, CF, and CTH through finely binned Histograms (for CTP) and Joint Histograms vs. CTP (for remaining 4 parameters). Note that this was done for both the near nadir aggregation as well as the heritage (full view angle) parameters. Also, all were aggregated by Day only, Night only, and Combined Day and Night. (24 joint histograms added & 6 marginal histograms added)
- Added eleven new Surface Type Fractions and Pixel Counts in the Cloud Top Property retrieval space. (11 parameters added)
- Added Joint Histogram of Cloud Phase (Baum) vs. CTP Near Nadir for Day and Night. (2 joint histograms added)
- Added Joint Histogram of Near Nadir CTP (5km avg) vs. CTP (1km sampled) for Day and Night. (2 Joint histograms added)
- Added Joint Histogram of Cloud Phase vs. CTT (to D3 only, due to lack of space in the E3/M3)
- Change Sunglint\_Fraction to Sunglint\_Fraciton\_Day, a daytime only parameter.

## **Cloud Optical Properties: (DONE!)**

- Delete all QA Confidence Flag related statistics from all Cloud Optical Property parameters. (many SDS's deleted)
- Add Partly Cloudy (PCL) versions of COT, CER, CWP, CF (for primary 2.1 retrieval) for Liquid, Ice, Undetermined, and Combined. (14 parameters added)
- Delete all Combined Effective Radius and Combined Water Path parameters. (2 parameters deleted)
- Change all "Cloud\_Fraction\_(Phase)" parameters to "Cloud\_Retrieval\_Fraction\_(Phase)". (10 parameters modified)
- Add Partly Cloudy (PCL) versions of COT, CER, CWP, CF (for 1.6/2.1 retrieval) for Liquid & Ice only. (8 parameters added)
- Add Standard and Partly Cloudy (PCL) versions of COT, CER, CWP, CF (for 1.6 retrieval) for Liquid & Ice only. (16 parameters added)
- Add Standard and Partly Cloudy (PCL) versions of COT, CER, CWP, CF (for 3.7 retrieval) for Liquid & Ice only. (16 parameters added)

# **Atmospheric Profiles: (DONE!)**

- Fixed long\_name local attribute of Atmospheric\_Water\_Vapor\_Low and \_High to reflect new pressure levels for low and high. (These are different than they were in C5/C51)