ORAC Meeting (RAL)

13/02/2008

Present: *Ludwig Brinckmann, Elies Campmany, Elisa Carboni, Don Grainger, Barry Latter, Caroline Poulsen, Andy Sayer, Richard Siddans, Gareth Thomas and Lin Wu*

1 V2 ANALYSIS:

1.1 Level2

- There are differences in cloud retrieval between V1 and V2:
  - V2 has more high clouds.
  - Errors in V2 decrease in all the parameters
- Ship tracks: automated algorithm returns lots of false positives

1.2 Level3

- Caroline showed many plots comparing monthly means between GRAPE V2 and MODIS.
- Cloud optical depth in Version 2 is not as bad as it was first thought as MODIS also shows a bias to larger values in comparison with ISCCP
- There are some missing clouds at the Equator compared to MODIS (see February mean cloud fraction): TO DO (?) Plot a priori cloud fraction for this month

1.3 Papers

- Aerosol Algorithm (Gareth): No progress
- Aerosol Validation (Richard/Caroline): Caroline showed some plots comparing AVHRR and ATSR-2. Although there is some bias, the agreement is good, specially in some regions (India), but not over land.
- Cloud Algorithm (Caroline): No progress
- Cloud Validation (Elies + Caroline): No progress, but many of the plots produced by Caroline can be used.

2 ALGORITHM:

- Andy showed some plots comparing AATSR and Aeronet for different surface models. Concluded that the SVD based interpolation of MODIS albedo to AATSR wavelengths has a positive effect. No improvement when using MODIS based surface albedo covariance matrices. Discussion followed concerning balance between a priori and retrieval error. TO DO Andy/Don check these have been implemented correctly.
- Ludwig showed some plots comparing cloud top heights from AATSR stereo view retrieval with MISR. Very good agreement.
- Elisa is fixing a matrix inversion bug in the Saharan retrieval with bidirectional reflectance.

3 PROJECTS:

- GLOBAEROSOL
  - Gareth has got dual view working on ATSR/2 data. Does a very good job given that channels come and go and the swath width varies. Has a problem interpreting the filled pixel flag. Noted that the ENVISAT and ERS ATSR observations are about 1/2 an hour apart which may be handy for validation, cloud studies etc.
  - Andy's test of increased angles in LUT showed that the gain was nominal for a large increase in file size and processing time.
- ADIENT
  - Gareth has given some input to the modellers who are meeting on Feb 14th to discuss intercomparison
- DRI
  - now a considerable number of groups involved
  - discussion on making the system automatic i.e. member submit files to an ftp site then cron job plots the comparisons and puts them on the web
- EUMETSAT Imperfect Cloud Study
  - Nothing to report
- Cloud Comparison Study Proposed by Stefan Kinne
  - Richard has told Stephan we would like to be involved

4 Publications/Meetings

- Gareth is reviewing Kokhanovsky book chapter
- Sahara paper
- ESA workshop in Sept.
- Cloud Retrieval Study proposed by Stefan Kinne
- Kohanovsky has proposed an aerosol workshop for 2009

5 OTHER:

- Don requested interesting imagery to be noted on a file in the GRAPE workspace (http://bscw.badc.nerc.ac.uk/pub/bscw
  Please let Don know if you have trouble accessing.
- Don also raised the need for a V3 wish list. Caroline pointed out that there are several irritations with the current output that would be simple to fix and make the results look much better. Points that came up were:
  - sea ice flag
  - snow flag
  - revisit quality control
  - implement latest AATSR calibration corrections
- Next meeting: 11th March at Oxford