Minutes of ORAC Meeting

21st October 2008, Oxford

Present: *Chris Arnold, Elisa Carboni, Don Grainger, Haiyan Huang, Caroline Poulsen, Andy Sayer, Richard Siddans, Gareth Thomas*

1. MERIS/AATSR workshop feedback.

- Generally talks went down well. Bernard Pinty (JRC) made some suggestions about additional outputs (point 7).

2. GEWEX.

- Caroline, Andy and Chris are processing/analysing GRAPE data for the GEWEX deadline around the start of November. First plots to be circulated to the group by the end of the week (Andy/Chris). In case of continued computer delays, we can generate the first plots by downloading data from the BADC.

3. AEROCOM

- Gareth reported on a successful trip to Iceland. Mentioned Cloud Model Output Rewrite (CMOR) data regridding tool. Gareth discussed various comparison metrics being used; one method is to look at cycles via Fourier transform of time series. MISR team are developing a data access tool (AMAPS). Also a description of Stephan Kinne's method of comparing data was given.

4. GlobAlbedo.

- Don't currently intend to participate in the ITT for this (early next year). However Don has pointed out to Simon that he hopes Globalbedo makes use of Globaerosol output and given a little money we could process GlobAerosol V2 with a slightly better algorithm, and output reflectance/albedo products without additional effort.

5. GlobCloud.

- Caroline asked by FUB about this. Caroline & possibly Andy to attend meeting in Berlin in March.

6. New (and not so new) students; summary, ideas and tasks:

- Andy: thesis/postdoc. Mostly focus on clouds, but a few other things to keep in mind for aerosol for the future/pass to Haiyan (e.g. Case II water model, better derived vegetation products, temporal variability of albedo [MPhys], dust/sea ice/ash flags, IR channels, quantification of aerosol direct radiative forcing)

- Chris: Look at GRAPE data, find problems in cloud retrievals, fix problems.

- Haiyan: Look at GlobAerosol data, produce regional report for ADIENT, find problems in aerosol retrievals, fix problems

7. ORAC files/output:

- Suggest adding BRDF, black-sky albedo, proportion of diffuse downwelling flux (blue-sky albedo?) into output files.

- Useful to get at .diag files for e.g. access to averaging kernels. Gareth has some code to read the GRAPE diagnostic structure and will see about updating it for other versions of the code.

8. Processing:

- Post-GEWEX, Andy will reconfigure the GRAPE cluster to run using muscat as the base (with tempranillo storing some data).

- Future of tempranillo/large-scale processing. Don commented the problem was not one of speed but reliability. Caroline has reduced the number of errors occurring with GRAPE processing. This seems like a satisfactory short term solution to complete GRAPE processing of AATSR (although more disk space will be needed, Andy/Caroline to say how much more). Gareth suggested going to quad dual core machines. This seemed like an excellent way of reducing processing complexity and is the front runner for version 3 processing. Don will need to address support from BADC.

- Version control. RAL taking the lead, but no updates yet.

- Output file format (HDF5 vs NetCDF). Stick with HDF5 for now. Gareth has a tool to convert HDF5 to NetCDF; link to it from BADC?

9. MERIS/AATSR synergy.

Peter North's still in early days of his project. Caroline may attend a meeting on it.

10. Progress on papers

- GRAPE cloud algorithm. Nearly there, no updates.

- GRAPE aerosol algorithm. Gareth to decide whether to submit to AMT or RSE.

- GRAPE cloud validation. No updates. Caroline/Elies have previously made a lot of plots for this. Andy to take over from Elies on this.

- GRAPE aerosol validation. Gareth to lead publication so that Caroline can focus on the cloud algorithm paper.

- GlobAerosol papers. Nothing at present.

- SEVIRI + IR. Elisa has added some dust mass estimates.

- Andy's thesis-related paper(s). An ambitious list was proposed. First up would be dual view retrieval.

11. New aerosol models

- Elisa's results using new refractive indices for maritime aerosol. Results change, but not clear how to say what's best.

12. Any other business

- GRAPE website. Andy to see about updating soon.
- Suzanne Bevan from Swansea wants code to read AATSR level 1B in IDL. What we've got isn't what they're after.
- Enquiry from Ling Sun on using our algorithm redirected toward Globaerosol
- Studentships for 2009
    - Lidar (if funded)
    - Comparison with Glomap

13. Next meeting.

Potentially mid November or when GEWEX products are ready for submission – which ever comes first!