

Minutes of NCEO ORAC Meeting

Oxford, 20th May 2009

Present: Chris Arnold, Suzy Ebmeier, Don Grainger, Haiyan Huang (for part), Caroline Poulsen, Andy Sayer, Andy Smith, Gareth Thomas

1. Minutes of previous meeting:
No comments
2. Status of GRAPE/GEWEX and RAL cluster:
Our ice water path results (IWP) look lower than MODIS's by a factor of ~2. Otherwise spatial patterns look reasonable. Don postulated (and later confirmed) that incorrect ice density is being used in our code: we were using 0.525 g cm^{-3} instead of 0.917 g cm^{-3} . Andy will fix the level 2/level 3 files and Chris the GEWEX data (apply scaling factor).
Chris also still to determine appropriate resolution to present MIPAS results at.
Caroline to circulate a summary of the comparison of our results with MODIS.
New disks (barbera1/barbera2) working fine on GRAPE cluster.
Ship track processing continuing.
3. GlobAerosol:
GMV are reprocessing the ATSR-2 dataset due to a problem with orbit timestamps in their version of the code.
Should we process GlobAerosol for 2008/2009? Ideally yes, but where? Also will need to make sure we are using the most recent AATSR calibration files.
Don would like us to have a GlobAerosol website and data portal somewhere here for people to access the dataset. Caroline suggests the BADC is a good option.
4. Student progress:
Chris is still working on improved LUT interpolation but has encountered a few problems where in some cases a bicubic spline is producing discontinuities in forward model gradient. Working on resolving the reason for this, and then making estimates of forward model interpolation error.
Suzy is looking at the effects of volcanic plumes on cloud properties using GRAPE data. She has just begun and is looking at the Saunders volcano for the moment.
Andy (minor) is comparing ORAC dust properties with those from field campaigns with the OPAC-based model we have been using. Asymmetry parameter matches well but the OPAC-based single-scatter albedo and extinction coefficient seem too low. Our component size distributions compare well to SAMUM results suggesting differences arise due to differences in refractive indices.
5. Discussion of next version of ORAC processor:
Andy has collated list of discussion points to circulate shortly before next meeting. Will discuss in-depth at next meeting.
6. NCEO calls:
Mission support call. Will put in a bid for someone to 'clean up' our code for ORAC version 4.
UMITS aerosol. Call for Meteosat Third Generation FCI (next SEVIRI) aerosol algorithm study for improved aerosol models, by end of June. Would be interesting but possibly too short a deadline.
Met Office knowledge exchange. Caroline has spoken with Mark Ringer about putting in a bid to do a GRAPE simulator for the UM and associated analysis.
'SOAP' proposal. Don is proposing a project to do some aerosol measurements on a cruise off the coast of New Zealand. A possible Earth-observation component could look at aerosol and

ocean colour.

7. MERIS-ATSR synergy:
The default SLSTR aerosol algorithm is a synergy one with OLCI (Peter North's group); what do we want to do about this? Will be discussed at next meeting with other future ORAC matters.
8. Symposium on air pollution, University of Reading, 9th July:
Don to decide attendance.
9. Publications:
GRAPE aerosol algorithm. Waiting for reviewer comments on AMTD.
GRAPE aerosol validation. Gareth to circulate draft by end of May.
GlobAerosol trends: No progress.
GRAPE cloud algorithm: Caroline to circulate draft by end of May.
GRAPE cloud validation: No progress.
Land surface/Amazon: Andy is nearly finished processing the AATSR dataset, has got hold of fire count/burnt area data and will attempt to use trace gases. Draft to be circulated by next meeting.
Elisa's dust comparison. Some more plots done.
10. Any other business:
Pierre LeBorgne (?) is looking at aerosol datasets for improvement to SST products. Don to contact about our work.
11. Next meeting: Tuesday 16th June, 10 am, RAL.