

Minutes of the AMMA WP 4.1.3 Paris meeting

16th-17th September 2008.

Present: Brice BARRET (CNRM/LA), Idir BOUARAR (SA), Béatrice JOSSE (CNRM), Kathy LAW (SA), Peter van VELTHOVEN (KNMI), Jason WILLIAMS (KNMI), Xin YANG (UCAM) and Frédéric HOUDIN (SA)

1. Presentations

There were presentations by Jason Williams, Béatrice Josse and Idir Bouarar that will be made available on the AMMA WP4.1.3 website,

http://www.knmi.nl/samenw/campaign_support/AMMA/index.html

Jason presented a comparison of the results for both 2000 and 2006 to investigate differences between the evaluation year and the AMMA measurement year.

Simulations using GFEDv2 for 2006. Idir presented a study of the transport of south African biomass burning and a comparison to the aircraft observations for CO and O₃. The BB-plume of southern hemispheric origin is located too far south in the models compared with the observations. Beatrice presented results from MOCAGE, including a comparison to satellite CO and O₃ observations, and the aircraft measurements. With regard to the tracer experiments it is interesting that she uses both ECMWF and Arpège meteorology.

Furthermore, it was reported that Marielle Saunois (LA) is investigating BB transport, and that, together with Claire Reeves, she is working on a paper on isoprene emissions focussing on the observations.

Frédéric Hourdin informed us that the climate model groups are now also planning tracer experiments. He found our tracer results quite interesting, and suggested publication in a forthcoming BAMS special issue on AMMA.

Status of experiments: *Most of the experiments have been completed and the results uploaded to the FTP site. The remaining experiment (D) should be completed by the end of 2008.*

Emiliano Orlandi also has made model simulations of CO for 2006.

The status of aerosol modelling is unclear with the absence of Bernhard Vogel and the departure of Bruno Guillaume from LA.

2. Emissions fluxes: *We would like to construct a table with NO_x, CO, HCHO, and total TgC emissions. All separate sources should be listed incl lightning NO_x soil NO_x*

3. Actions from last meeting: *Practical points have all been completed*

4. Cooperation with AMMA-MIP (WP4): *Increase the analysis period into the different weekly periods. Hov-Muller diagrams to represent results in latitude/time. Possible future runs using different (improved?) dynamics with passive tracers included – analysis could utilize the passive tracer results.*

5. Protocol for outputs

You should provide data to a lead author in the specified format eg averaged

Aircraft data: ascii at locations specified in position data files provided by KNMI, see http://www.knmi.nl/samenw/campaign_support/AMMA/TRACKDATA/index.html.

Monthly averaged ozonesondes with error bars (monthly st.dev.).

6. Deliverables

*Deliverable on 2006 intercomparison: Jan 2009 (Jason with input from all))
Report on use of (AMMA) observations – Cotonou (Irene, Nairobi - Jason)
ozonesondes, Aircraft flights (Idir+Beatrice), Wet deposition data (e-mail Fabien
inquiring), Mozaic (Brice – the format will be disseminated), Satellite data –
Mopitt/TES (Beatrice/Brice), CMDL/IDAF ground stations. Deliverable should be
complete by Feb 2009. (PvV/BB). Work performed to date will be sent within three
weeks. A Reminder circulated in December 2008.*

7. Potential papers (1/2 page outlines should be completed and disseminated in 3 weeks)

- (i) *BAMS – AMMA issue (convective tracers/CO/O3) (MULTI-MODEL, Jason)*
- (ii) *Isoprene + OH?? (Jason)*
- (iii) *Lightning NOx (requires extra runs) (MULTI-MODEL) – wishlist of output necessary (link with 1.1.2)(Brice)*
- (iv) *Plume transport from biomass burning (LMDZ-INCA, Idir)*
- (v) *Long range transport of CO (TM4, Jason)*
- (vi) *Evaluation of the new L3JRCv2 database (MULTI-MODEL, Cathy Lioussé?)*
- (vii) *Using model output/observations. To investigate uncertainty in the O3 budget in AMMA domain. (link with 1.1.2)*

8. Cooperation with 1.1.2 and 2.4

The potential overlap regarding lightning NOx from satellite (Richter), Future 2030 emissions (lioussé), Ozone budget. Contact will be made with C.Reeves regarding cross-over with work package 2.4 (Peter).

9. Model improvements and AMMA project timing

Wait 6 weeks for delivery of the 5-day emission files from Orlandi otherwise need to pre-process daily files (which will be uploaded to the FTP site). Runs should be complete by end of 2008. The timing of the deliverables is already defined in the WP plan.

All model output will be uploaded to the AMMA-EU model output database by end of July 2009.

The papers should be completed within the AMMA project timeline. The closing for the ACP special issue is July 31st 2009. The sooner the better but at latest by June 2009 in order to allow input from co-authors. Meeting in Early 2009 for WP 2.4 where there may also be a WP 4.1.3 participation. There needs to be reporting in dec 2008 (PvV) and the final report to the AMMA committee at the end of 2009.

Action list:

- Contact Claire Reeves about a joint meeting in Feb/March in Toulouse, and about the plans for a BAMS paper that includes an ozone X-section (Peter, September 2008).
- Wishlist for output for lightning NOx study (Brice, October 2008)

- Provide half-page setups for potential papers (those concerned- see 7, October 2008)
- Give feedback to Lioussé: ground [CO] and [O₃] levels. Compare with MOZAIC climatology for 2002/2003 (Peter, October 2008).
- Report to Ruti about status aerosol intercomparison Vogel/CNRM/ LA (Peter, October 2008)
- Provide input for emission overview, see 2 (all to Jason, October 2008).
- Provide output from last 2006 runs, incl. those with high frequency variability of BB (all, December 2008)
- Deliverable report on 2006 model intercomparison (Jason, January 2009)
- Send reminder about delivering reports on use of observations to Brice and Peter (December 2008)
- Provide these elements (all to Brice and Peter, January 2009)
- Deliverable on observation use (Brice and Peter, February 2009)
- Deadline for distributing ACP draft papers to co-authors (June 2009)
- Deadline for submission to ACP (31 July 2009)
- Upload model output to AMMA database (KNMI, July 2009)