Items discussed (I)

Merged satellite product for validation:

- Stefan will provide a document with his comparisons (MODIS,MISR,TOMS,AVHRR,POLDER)
- dataset without MODIS for validation of analysis

Observations to be used in the first reanalysis:

- MODIS data with a bias correction and pixel-by-pixel error estimate over ocean only (for now)
- Later on investigate use of land retrievals and ratio fine/coarse mode

Observation screening and thinning:

- closest pixel
- Blacklist “problem” area
- ECMWF operational cloud mask (will be made available to the group)

Bias correction for MODIS:

- not recommended to use Remer et al. ’05 (need to come up with our own)

Items discussed (II)

MSG AOD:

- under development, will be used for validation and in the future for assimilation if proven good

4-variable scheme:

-preferred for the assimilation if can be made available in the next couple of months

PM2.5 and PM10:

- Nicolas is going to see how we can get this from his model (PM10 possible; PM2.5 more difficult)

Archiving of forecast and analysis data:

- 6-hourly but daily and monthly means will also be used
- ECMWF will have standard reanalysis archiving time (3-hourly?), but archiving frequency can be increased to hourly

Scoring:

-

Milestones and deliverables

8.5.5.2 WP_PRO_2 : Aerosol assimilation system and reanalysis

Workpackage number WP_PRO_1.2

Objectives:

- Development of generic data assimilation software for aerosols
- Implementation of the AER data assimilation system
- Performing a multi-year trial reanalysis run for aerosol

Deliverables: D_PRO_2.1 First version of AER data assimilation system
D_PRO_2.2 Several years of aerosol analysis

Milestones and expected results for month 13-30:

- **Month 6:** Refinement of generic interfaces to model dynamics, observation and background terms for aerosols in 4D-Var
- **Month 6:** Refinement of generic interfaces in 4D-Var
- **Month 9:** Improvements to the background error covariance model for aerosols
  Initial processing of relevant observation types and preliminary reanalysis
- **Month 9:** Finalization of AER data assimilation system to be used in the reanalysis
- **Month 12:** Test reanalysis runs using optical depth observations
  Work toward inclusion of aerosol-affected radiances
- **Month 15:** Reanalysis runs using optical depth observations
  Work toward inclusion of aerosol-affected radiances
- **Month 18:** Monitoring reanalysis runs