



Networking Activity NA4

Analysis and Results of the absorption photometer workshop

Status Report

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- Loading correction experiments
- 6 instruments in total; 3 High Sensitivity and 3 Extended Range
- Grouped in three pairs, each pair 1 HS + 1 ER
- automatic filter change after 9 hours
- Pair 1 and 2 forced after 3 and 6 hours from start
- Measured during 4 days
- Virkulla et al. (2007) loading correction applied
- $C(\text{corrected}) = C(\text{uncorrected}) * (1 + k * \text{ATN})$
- If C is concentration; k is inversely proportional to wavelength
- If C is absorption coefficient; k is wavelength independent!
- This finding is crucial; it is now possible to apply a new loading correction algorithm (Henzing in preparation) that is based on aethalometer data only. This new correction is also applicable under changing aerosol conditions (load and ssa).
- A correction of the remaining offset (as compared to MAAP or reference absorption) caused by multiple scattering will be based on the relation suggested by Collaud-Coen et al, 2009.