

Title : S6b: Interlinkages between fluxes and effects and measurements including new thresholds
Time : Wed 26 OCT 2011 09:00-10:30
Chair : Claus Beier DTU
Attendees : [Claus has participants list]
Minutes by : Christof Ammann ART

Aim

Presentations:

- Gina Mills: Issues concerning ozone concentration measurements
- Jürgen Burkhardt: Stomatal exchange and particle effects. Occurrence and implications of hydraulic activated stomata
- Alessandro Cescatti: Effect of diffuse radiation on canopy photosynthesis.

Topics discussed with Issue, decisions/conclusions and actions

Issue: Marc Sutton: Which of the manipulation sites need concentration data (NH₃, NO₂) and wet deposition to estimate wet/dry deposition? Only meaningful for open systems?
- Sonja Vidic: can provide protocols (weekly-monthly); explains work with low cost Delta Denuders, needs (low) electric power
- Gina: what about OTC with filtered air?
- Sonja: protocols (sample analysis) for wet deposition are available
- Claus: encourage relevant sites to measure both dry and wet deposition
Action: Claus together with site owners will identify relevant site and will do the contact with Sonja

Issue: Issues concerning ozone concentration measurements (presentation by Gina): adequate and standardised measurement height is important for link to modelling (difference between above and within the canopy, between open field vs. chambers)
- Claus: useful measurements in C1 to be used in C3 effect activities
- Gina: models could be run/compared for C1 sites
Information about non-stomatal uptake would be very useful
- Claus: need for standardisation of climate measurements
- Gina: ICP vegetation protocol exists and can be shared
Decision: ICP protocols will be circulated among the project community and could be improved/adjusted by additional input.

Issue: Presentation by Jürgen on particle effects on stomatal exchange; occurrence and implications of hydraulic activated stomata (with water films across stomata)
- Collect dew samples or leaf washing at experimental sites!?
Sampling strategy: occasional observation on dominating plant species
Analysis for major ions
- Marc, Eiko: Elaborate a plan how this observations will be used
Decision: Jürgen will make an outline on the use of this observation till the C3 meeting early next year

Issue: Measurements related to effect of diffuse radiation on photosynthesis (presentation by Alessandro Cescatti). Net effect of atmospheric scattering

depends on the reduction in total radiation. There is a lack of observations of PAR absorbed by the canopy.

- Additional measurements of PAR components with higher temporal resolution would be useful (costs ca. 4000-5000 EUR).
- Diffuse fraction also relevant for chamber measurements, depending on the type of chambers
- Lina Mercado: Radiation profiles and spectral information would be very useful for validation of models

Decision: Claus: measurements are potentially possible at some C3 sites
 Detailed information has to be provided by Lina and Alessandro concerning efforts and use of data to be discussed in the next C3 meeting

Decisions

Action	Due	Who