

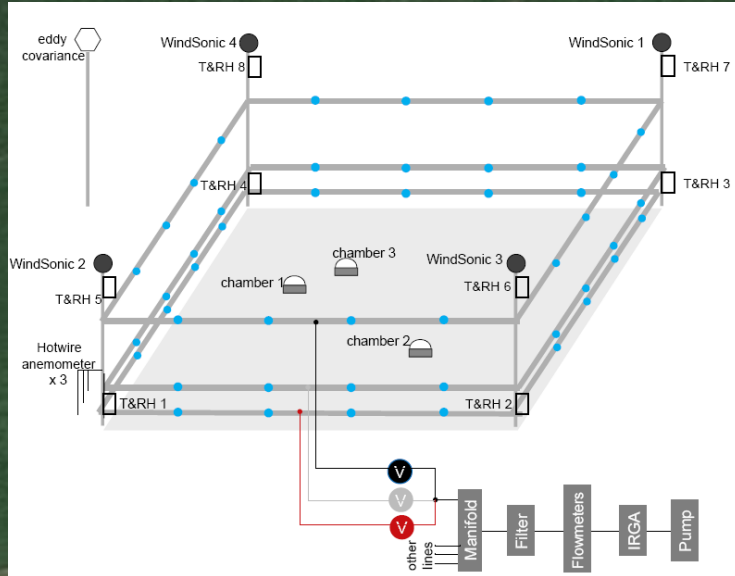
Contribution of the advection terms for NEE in short-statured ecosystems

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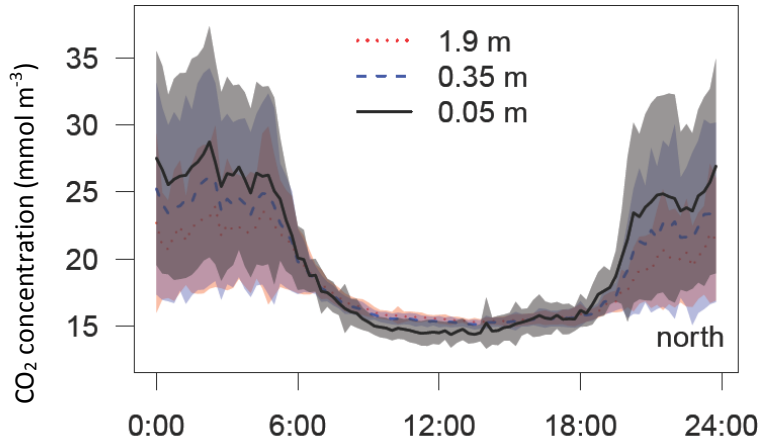


$$\overline{F_c} \approx \overline{F_{c,s}} + \overline{F_{c,h}} + \overline{F_{c,v}} + \overline{F_{c,t}}$$

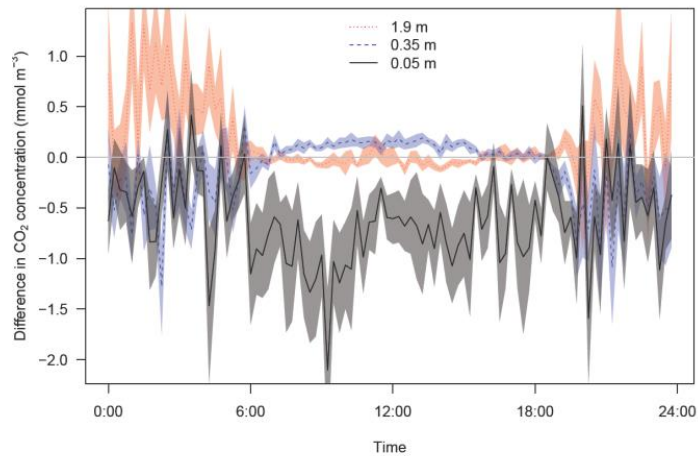
$\overline{F_{c,s}}$ → Chamber measurement
 $\overline{F_{c,h}}$ → CO₂ profile Horizontal wind
 $\overline{F_{c,v}}$ → CO₂ profile Vertical wind
 $\overline{F_{c,t}}$ → Eddy covariance



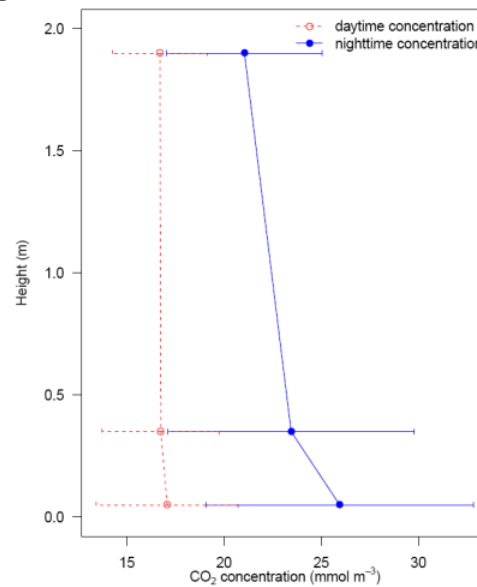
Results



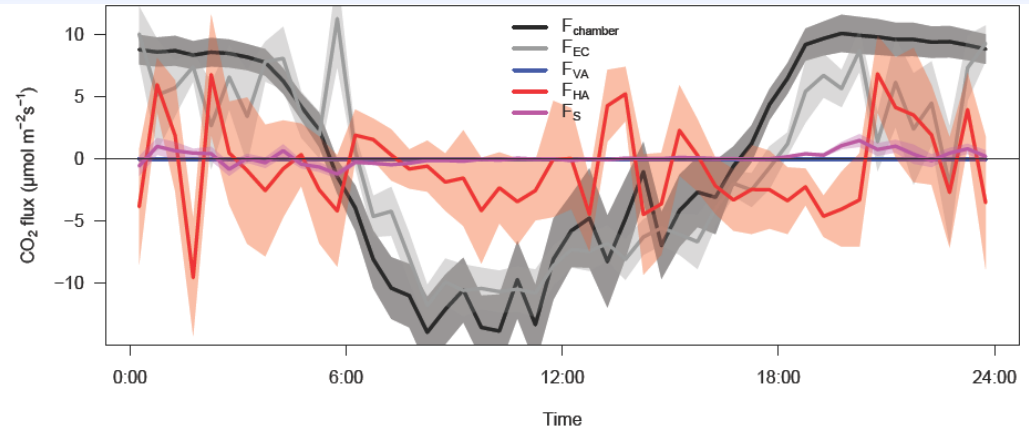
Diurnal variation of CO₂ concentration



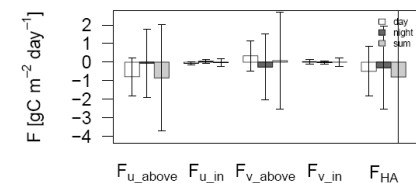
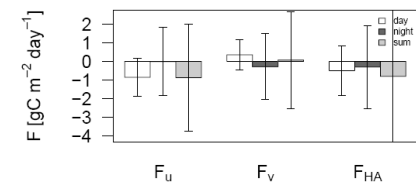
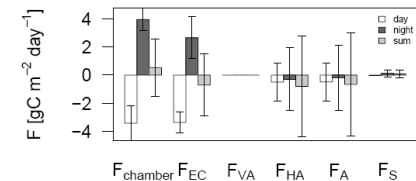
Horizontal heterogeneity in CO₂ concentration



Vertical profile of CO₂ concentration



Diurnal variation of flux components



Contribution of each flux term

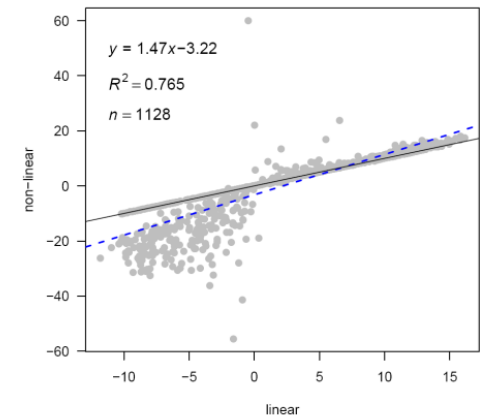
Prospective

We offer:

- CO₂ fluxes of all components in July 2016
- CO₂ concentration at three heights (0 – 2 m) on a 20 m x 20 m wall on 15-min basis
- 2D wind velocity at 2 m every 3 second
- Minutely air temperature and relative humidity at 0.3 m and 1.6 m
- Hourly weather records

We need:

- Vertical wind velocity (w) from eddy-covariance measurement with planar fit method
- Integration with DTS measurement
- Raw data CO₂ fluxes by chamber measurements, 1 – 29 July 2016 (now only 7 – 19 July available)
- Further calculation of chamber CO₂ fluxes



Thank you!