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

Peng ZHAO, Georg WOHLFAHRT (Institute of Ecology, University of Innsbruck)
Matthias ZEEMAN (KIT/IMK-IFU)

\[ F_c \approx F_{c,s} + F_{c,h} + F_{c,v} + F_{c,t} \]

Acknowledgements:
- Katharina Scholz
- Katharina Gerdel
- Karl Krainer

Chamber measurement
CO\(_2\) profile
Horizontal wind
Eddy covariance

CO\(_2\) profile
CO\(_2\) profile
Vertical wind

1 – 26 July, 2016

peng.zhao@uibk.ac.at
Results

Diurnal variation of CO$_2$ concentration

Horizontal heterogeneity in CO$_2$ concentration

Vertical profile of CO$_2$ concentration

Contribution of each flux term

Diurnal variation of flux components
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!

peng.zhao@uibk.ac.at