

BLLAST relevant activities and developments at GFI/UiB

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ongoing activities

- Line has now a 4 year PhD position (Sept. 2014-Aug. 2018) working on 'Turbulence investigations with Remotely Piloted Aircraft Systems (RPAS)'
- we could purchase two quadcopter systems (AMOR) from Burkhard Wrenger/Jens Dünnermann with (potential) momentum and heat flux measurement capability; order placed, arrival expected for February 2015
- internship Christoph Bauer (March-August 2015) to develop and implement a programable 2 axes control unit for directional calibration of turbulence flow sensors
- master project Gerrit-Anke Rau (in collaboration with Tübingen, Jens Bange) on the characterization and application of the newly developed flux measurement system on AMOR

AMOR quadcopter system



Courtesy: Priit Tisler, FMI

planned publications for the BLLAST special issue

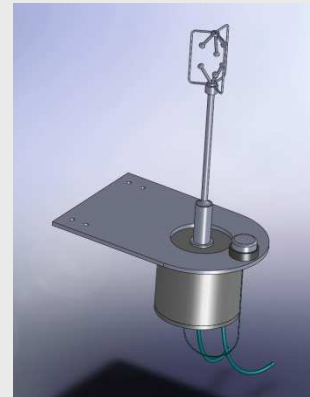
- ❑ Baserud, Jonassen, Kral, Reuder: TKE and velocity variance profiles from SUMO measurements (ACP)
- ❑ Reuder, Båserud, Jonassen: Intensive multi-purpose RPAS operations with SUMO during the BLLAST campaign (AMT)
- ❑ ? El Guernaoui, Reuder, ??????: comparative LES analysis of all IOPs with respect to scaling (w_*, τ) (ACP)

New instrumentation at GFI

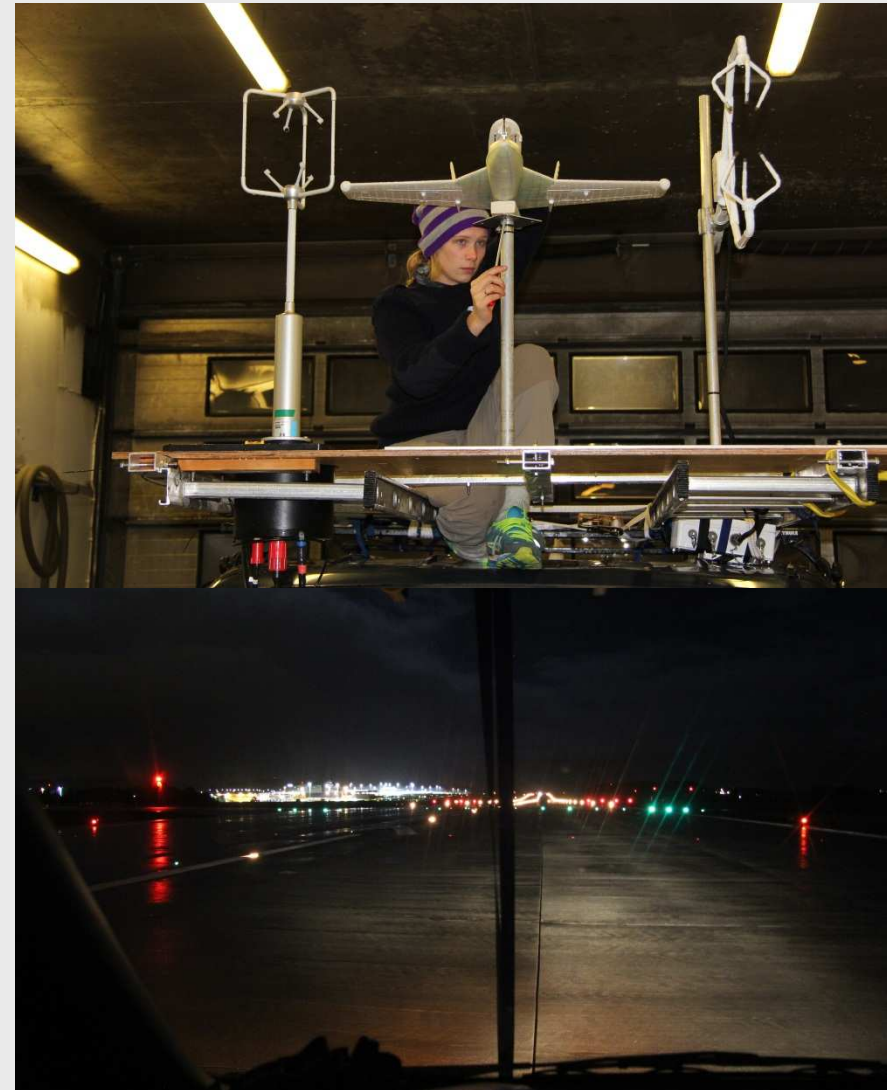
- purchased as part of a National Norwegian infrastructure project for offshore wind energy (OBLO: Offshore Boundary Layer Observatory)
- potential for use in a BLLAST follow on campaign
- 3 sonic Campbell CSAT3 (in addition to the 2 already used in BLLAST)
- 1 scintillometer Scintec BLS900
- 1 Scintec Sodar/Rass system (MFAS with WindRASS)
- 2 microwave temperature and humidity profiler (HATPRO RG4)
- 2 scanning wind lidar systems (WindCube 100S)



SUMO tests



SUMO tests

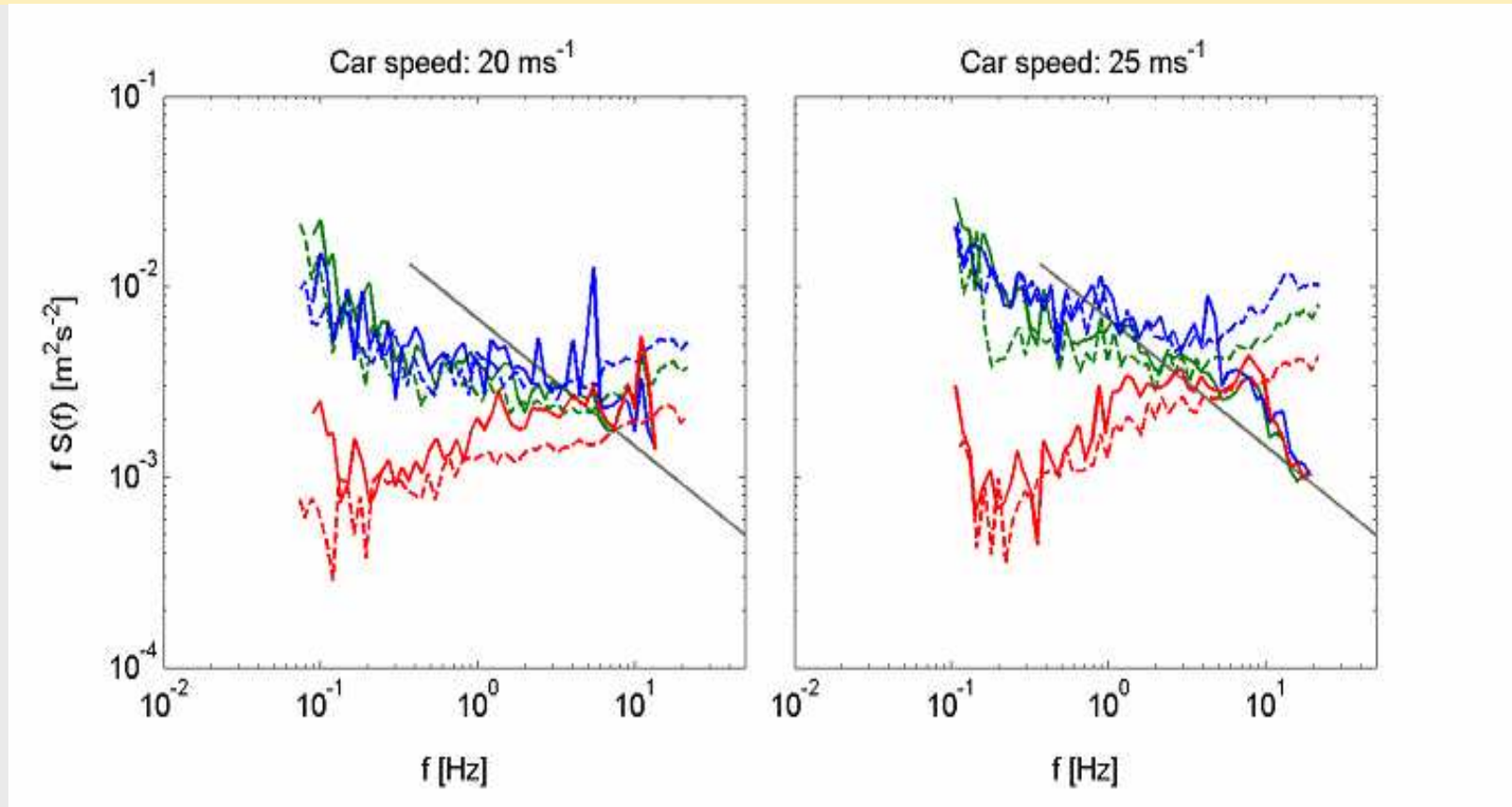


BLLAST workshop, Barcelona, 02./03.02.2015



Geofysisk institutt
Universitetet i Bergen

SUMO tests



solid: SUMO

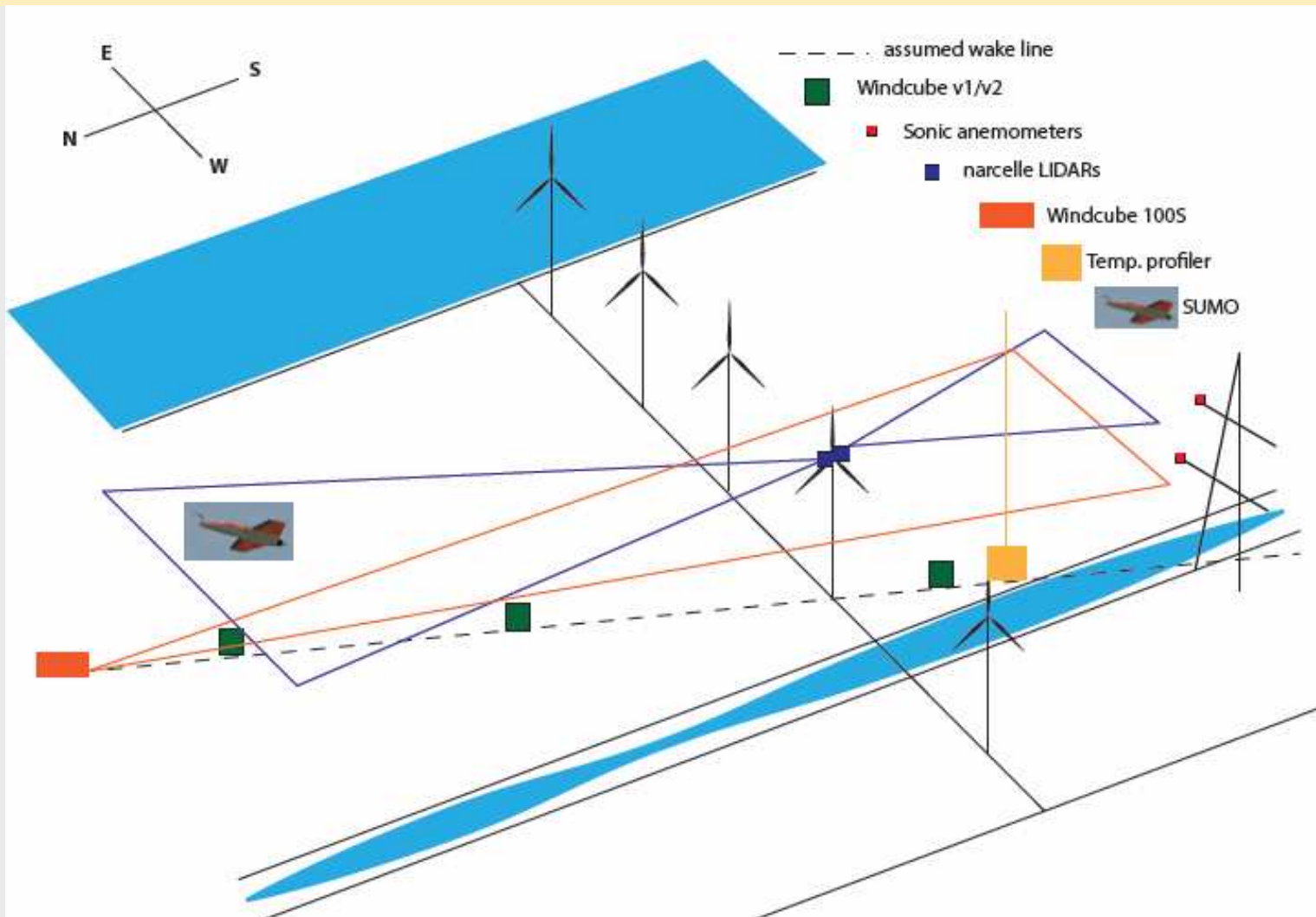
dashed: sonic

u'

v'

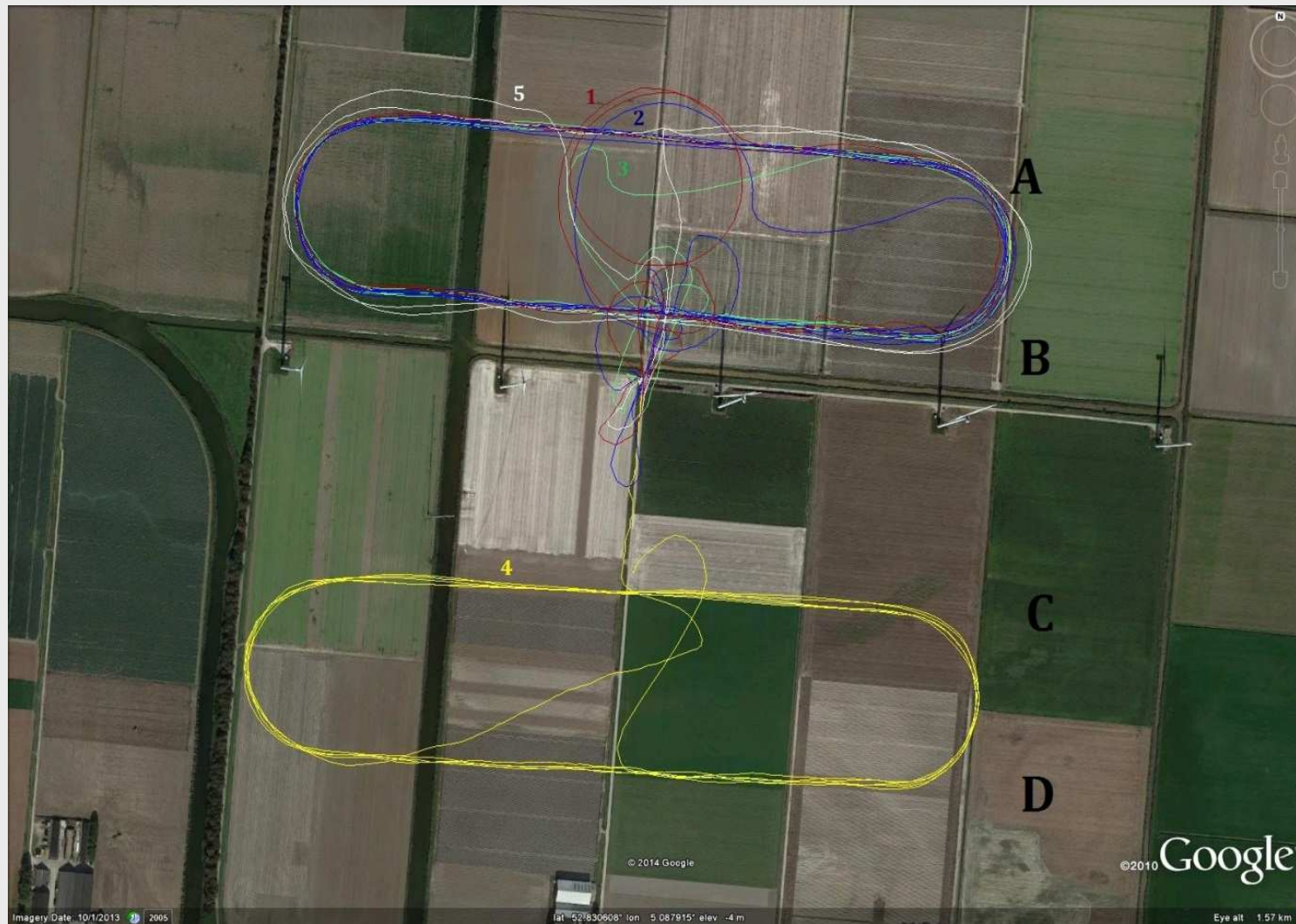
w'

SUMO flights at ECN test site in Wieringermeer, Netherlands

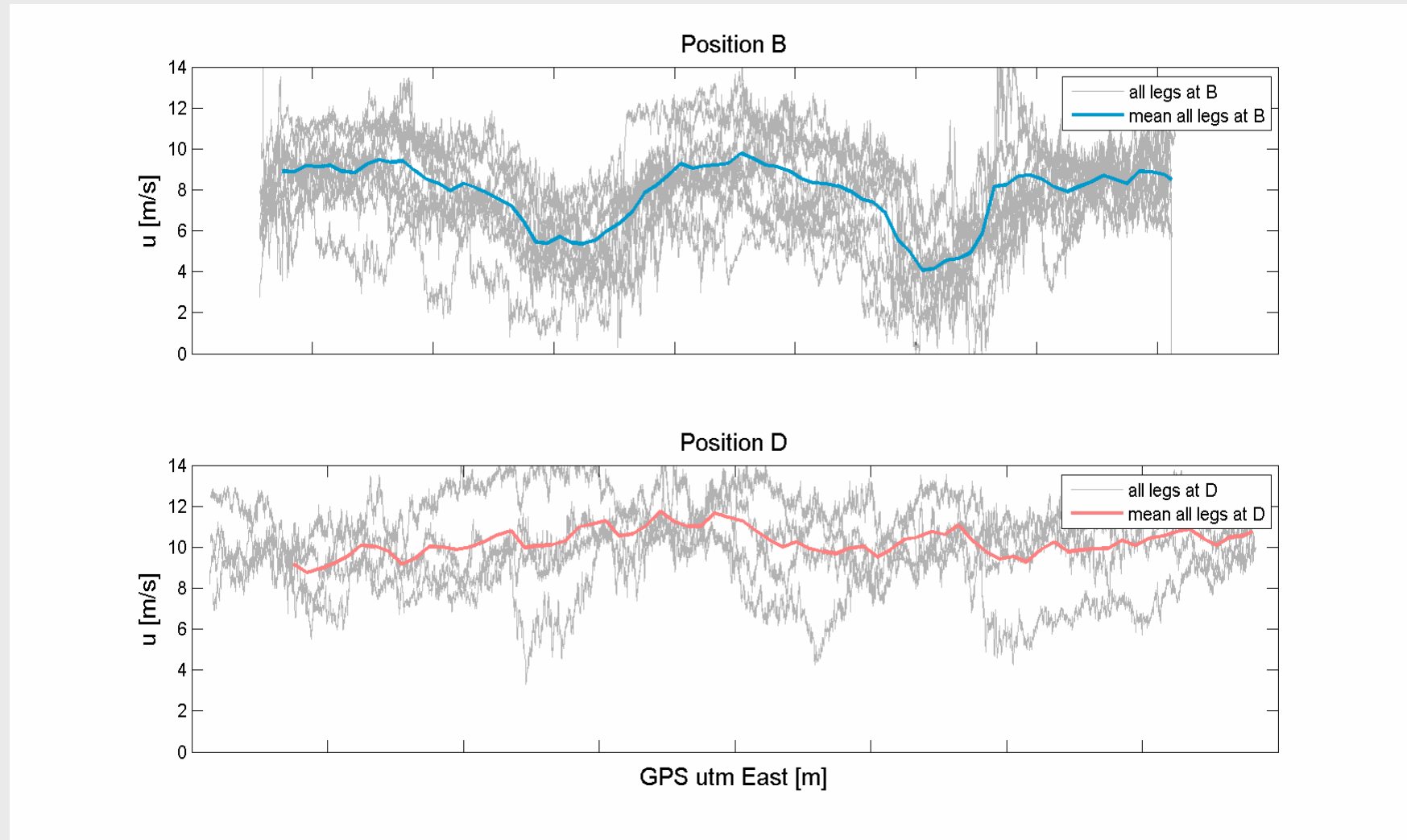


Courtesy: Valerie Kumer, Geophysical Institute

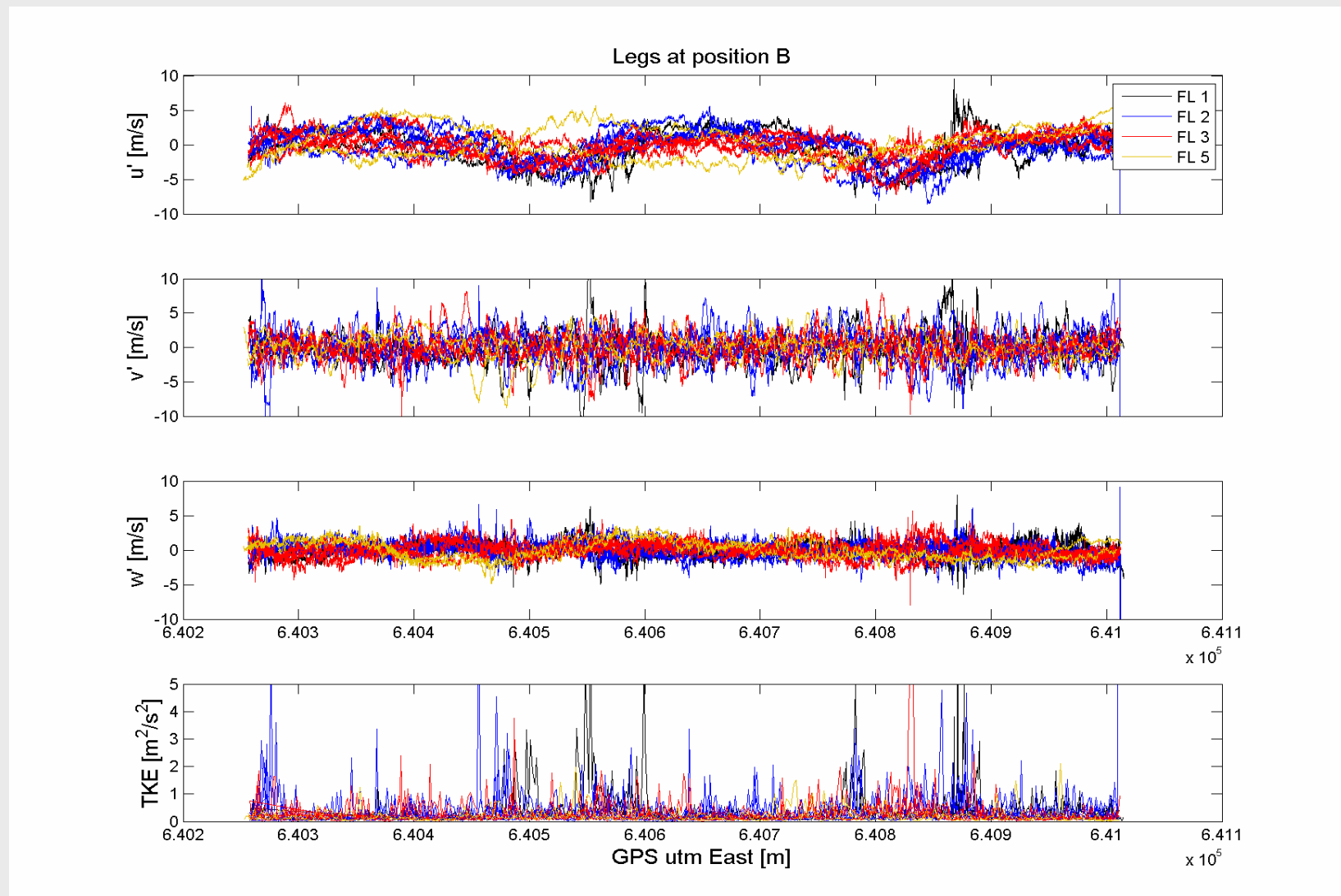
SUMO flights at ECN test site in Wieringermeer, Netherlands



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SUMO flights at ECN test site in Wieringermeer, Netherlands



BLLAST average surface energy balance 23.06.-07.07

work in collaboration with Stephan Wacker and an internship of Jasmin Jäger at GFI

ground heat flux measured at $d=10$ cm

ground heat flux measured at $d=5$ cm

