Author: Oscar Hartogensis
Version: 1.0 (Date: 01-Nov-13)

SODAR WUR-MAQ Supersite1

Instrument:

The Meteorology and Air Quality group of Wageningen University (WUR-MAQ) deployed a Small Flat Array Sodar (SFAS) by Scintec AG. The SFAS is an acoustic instruments for remote measurements of profiles of the three dimensional wind speed and direction and turbulence characteristics in the lower atmosphere.

The instrument is placed on top a small trailer.

Data availability: 01June-14June 2011

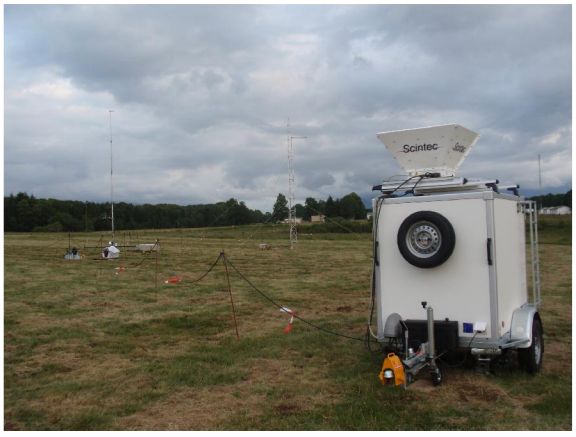
Location:

The SFAS was installed on the so called flux divergence site, which is part of Supersite1.

Latitude: N 43°07'40.3"
Longitude: E 00°21'57.3"

Installation:

Orientation of the instrument with respect to North =308 degrees
Height above ground level: ~2m
These are already take into account in the data.



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Data:

- Data are organized in one text file per 30min, e.g. SODAR_MAQ_20110601_1800.txt
- Timestamp of the data is only available in the filename.
- The rows in the data files represent to height levels.
- The columns in the data files represent the variables.

Height levels (see also *levels_rows.txt*):

10,15,20,25,30,35,40,45,50,55,60,65,70,75,80,85,90,95,100,105,110,115,120,125,130,135,
140,145,150,155,160,165,170,175,180,185,190,195,200

Variables (see also *variables_cols.txt* and pages 20-23 of the Instrument Manual, *APRun_Manual_1_17.pdf*):

speed dir U U[QCC] U[ign] U[siC] U[siD] V V[QCC] V[ign] V[siC] V[siD] W W[QCC] W[ign] W[siC] W[siD] sigU sigU_r sigU_r[QCC] sigU_r[ign] sigU_r[siC] sigU_r[siD] sigV sigV_r sigV_r[QCC] sigV_r[ign] sigV_r[siC] sigV_r[siD] sigW sigW[QCC] sigW[ign] sigW[siC] sigW[siD] {speed} {dir} {U} {V} {W} {sigU} {sigU_r} {sigV} {sigV_r} {sigW} shear shearDir sigPhi sigTheta PGz TKE EDR bck_raw bck bck_ID CT^2 error

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Soil:

Systems	Depth	Variable Names
Barley Group1:		
• SHFP – TNO 31.P series	• 80mm	• SHF1_080mm
• SoilTemp – Pt100	• 40mm	• T1a_040mm
• SoilTemp – Pt100	• 105mm	• T1b_105mm
• SoilTemp – Pt100	• 145mm	• T1c_145mm
Barley Group2:		
• SHFP – TNO 31.P series	• 80mm	• SHF2_080mm
• SoilTemp – Pt100	• 40mm	• T2a_040mm
• SoilTemp – Pt100	• 100mm	• T2b_100mm
• SoilTemp – Pt100	• 180mm	• T2c_180mm

* SHFP - TNO 31.P series lambda=0.25 W/mK, Diameter=100mm,Thickness=5mm