Measuring program and instrumentation of Debrecen-Kismacs

Latitude: 47º 33' 41" N
Longitude: 21º 27' 03" E
Elevation: 124 m
(coordinates are as you see in the GoogleEarth)

Parameter	Instrument
Air temperature (1, 2, 4, 10 m)	Special Pt100 sensor is placed in natural ventillated radiation shield
Relative humidity (1, 2, 4, 10 m)	Vaisala HMP155
Wind speed (1, 2, 4, 10 m)	Vaisala WAA155 cup anemometer
Wind direction (10 m)	Vaisala WAV155 wind vane
Precipitation (1 m)	PG200 weighting gauge is supplied with wind screen
Global radiation (2.5 m)	Kipp&Zonen CMP11 piranometer
Reflex radiation (2.5 m)	Kipp&Zonen CMP6 piranoneter
Downward longwave radiation (2.5 m)	Kipp&Zonen CGP4 pirgeometer
Upward longwave radiation (2.5 m)	Kipp&Zonen CGP3 pirgeometer
Surface temperature (2.5 m)	Campbell Scientific IRTS-P precision infrared temperature sensor
Sensible, and latent heat flux (4 m)	CSAT3 ultrasonic anemometer and LI7500
Soil moisture (as recommended in Campbell user guide)	Campbel Scientific CS616 water content reflectometer
Soil temperature (as recommended in Campbell user guide))	Campbell Scientific TCAV averaging soil thermocouple probe
Soil heat (as recommended in Campbell user guide)	Hukseflux HFP01SC

Data aquisition system is the Campbell Scientific CR1000 datalogger which collects the data of CSAT3 and LI7500, and CR3000 to collect the other parameters.
The sampling rate is 10 Hz in case of CSAT3 and LI7500 with 30 minutes of averaging time. Other parameters are collected in every 3 seconds and the averages are made in every 10 minutes.

In the future we are expanding the measuring program with soil temperature measurements in –50, -100 and –200 cm, soil moisture measurements in –50 and –100 cm, and soil heat flux measurements in –50 cm.