



BBC Campaign Instrumentation

6 ground sites: Cabauw + 5 in regional network.

NB: blue: at radiation terrain (near tower)

Cabauw (06348)

Arrive at Cabauw:

Radars	<ul style="list-style-type: none"> - 1.2 GHz windprofiler + RASS (KNMI) - 3 GHz radar TARA (TUDelft) - 35 GHz radar (KNMI) - 94 GHz radar (IfT Leipzig), test - 95 GHz radar MIRACLE (GKSS) 	July 21/03 06/04 15/09? 30/07
Lidars	<ul style="list-style-type: none"> - 1064nm backscatter lidar (RIVM) - CT75K ceilometer (KNMI) - LD40 ceilometer (KNMI) - CT25K ceilometer (UBonn) 	02/05 28/03 July 30/07
Microwave	<ul style="list-style-type: none"> - 22 channel MICCY (UBonn) During microwave intercomparison also: <ul style="list-style-type: none"> - 89, 154, 176, 180, 182 GHz MARSS (UKMO) - 24, 37 GHz DRAKKAR (CETP) - 24, 31 GHz WVR 1100 (DWD) - 12 channel WVP/TP 3001 (DWD) - 21, 32 GHz Conrad (Chalmers) - 21, 31.5 GHz Trowara (UBern) - 2 channel IRE (St. Petersburg) 	03/04 30/07 June 31/07 31/07 31/07 27/07 28/07
Radiation	<ul style="list-style-type: none"> - SW in & out, SW direct & diffuse, LW in & out (KNMI) - Oxygen-A band spectrometer (UHeidelberg) - IR radiometer (KNMI) - IR radiometer (MICCY, UBonn) - IR radiometer (Asmuwara, UBern) - Albedometer (IfT Leipzig) - Sunphotometer (IfT Leipzig) - CNR1: SW up & down, LW up & down, Eppley: LW, (TUDresden) - 10 m meteo tower, sonic, Ly-α, SW, LW (UUtrecht) - DBSAS scintillometer, LAS scintillometer (Wageningen University) 	ok 27/08 28/03 03/04 29/07 03/09 03/09 12/08 15/08 15/08
Cabauw meteo tower (KNMI), 2 – 200 m	<ul style="list-style-type: none"> - temperature - dew point temperature - wind direction - wind speed 	ok
Tethered balloon, 0 – 1.4 km + AWS +	<ul style="list-style-type: none"> - temperature 	15/08

10 m tower (sonic + Ly- α) (UUtrecht)	- pressure - RH - wind	
Tethered balloon (IfT, German army)	- in situ particle measurements	10/09
Radio soundings - De Bilt (KNMI): 0,6,12,18 UTC - Cabauw (National Army): 3,9,15,21 UTC - Cabauw (UKMO), test RS90 humidity sensors (1 – 13 August)	- temperature - pressure - RH - wind direction - wind speed	ok 13/8 30/07
Other	- GPS receiver (TUDelft) - GPS receiver (UKMO) - Digital video camera (KNMI) - Photo camera (TUDresden) - Total Sky Imager (KNMI)	30/7 30/07 ok 12/08 01/08

Regional network stations (5, +1 backup)

All stations:	- microwave radiometer (see below) - lidar ceilometer LD40 and CT12 (KNMI) - IR radiometer (KNMI) - SW in (KNMI) - meteo: T, P, RH, wind (KNMI)
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Station De Bilt (06260) microwave: IRE St. Petersburg
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Station Deelen (06275) microwave: DRAKKAR, CETP
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Station Gilzerijen (06350) microwave: WVP/TP 3001, DWD

Station Eindhoven (06370) microwave: Trowara, Bern

Station Volkel (06375) microwave: Conrad, Chalmers

Seven more stations (Leeuwarden, Twente, Woensdrecht, Soesterberg, Vlissingen, Valkenburg, Zestienhoven) will have: ceilometer (CT12), meteo, SW

Aircraft measurements

Merlin IV (Meteo France)

Cloud μ -physics (GKSS)	<ul style="list-style-type: none"> - FSSP 100, extended range - Fast FSSP - 2D-C - 2D-P - Nevzorow - PVM - King probe - CCN counter (optional)
Other	<ul style="list-style-type: none"> - Various pressure - Various temperature - Various humidity - Various radiation

Partenavia P68B (IfT Leipzig)

Aerosol μ -physics	<ul style="list-style-type: none"> - PCASP-X - CPC 3010 	Part. diam. 0.1–1 μm Part. diam. >0.01 μm	Part. size distr. Part. concentration
Cloud μ -physics	<ul style="list-style-type: none"> - Fast FSSP (GKSS) - OAP (GKSS) 2D-C - PVM-100A (GKSS) 	Drop diam < 40 μm Drop diam 25-800 μm Drop diam < 40 μm	Drop size distr. Drop size distr <i>LWC, R_{eff}</i>
Radiation	<ul style="list-style-type: none"> - Albedometer (incl. active horizontal stabiliztion) 	Wavelengths 290 – 1000 nm (FWHM 2-3 nm)	Up- and downward spectral irradiances

Also: static air pressure, RH, static air temperature, roll, pitch, heading angles, True Airspeed.
Spare: Nephelometer and PSAP (part. scattering, absorption coeff.).

Cessna C207 T (FUBerlin)

Radiation	<ul style="list-style-type: none"> - casi (imaging spectrograph) - FUBISS (spectrograph) - MIDAC (FTIR)
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