

**CESAR RAINFALL EXPERIMENT 2002 (C-REX'02) – EXPERIMENTAL SETUP
AND FIRST RESULTS**

R. Uijlenhoet (1), S. Heijnen (2), I. Holleman (3), W. Hovius (3), H. Klein Baltink (3), H. Russchenberg (2), H. Stricker (1), J. Warmer (3) and F. van der Zwan (2)

(1) Hydrology and Quantitative Water Management Group, Wageningen University, The Netherlands (remko.uijlenhoet@wur.nl), (2) IRCTR, TU Delft, The Netherlands, (3) KNMI, De Bilt, The Netherlands

Abstract

The Cabauw Experimental Site for Atmospheric Research (CESAR) is a consortium of major universities and research institutes in The Netherlands involved in research regarding ground-based remote sensing of the atmosphere and of the land surface. The Cabauw site, with its 213 m tower for meteorological observations, has been the centre of experimental research of the atmospheric research group at the KNMI since the early 1970s. In the framework of CESAR, an important collection of ground-based remote sensing devices has been added to the original configuration of in situ instruments. Between early September and the end of December 2002, the Precipitation Research Group within the CESAR consortium has coordinated the CESAR Rainfall Experiment 2002 (C-Rex'02). The objective of the experiment was to characterize the space-time variability of rainfall across a range of scales with a view to the quantitative use of ground-based and space-borne rainfall remote sensors (e.g. (E)GPM). Instruments available during C-Rex'02 included a 3 GHz doppler-polarimetric atmospheric research radar, a 35 GHz cloud radar, a 1 GHz wind profiler, a 5 GHz operational weather radar, a 24 GHz micro doppler rain profiler, a Joss-Waldvogel disdrometer, two optical spectro-pluviometers, a 2-D video disdrometer, and a network of rain gauges. With this extensive configuration of instruments, CESAR seems ideally suited to serve as a ground validation site for the upcoming Global Precipitation Mission (GPM), and its European component EGPM.