

### Status Report

## Cabauw Experimental Site for Atmospheric Research (CESAR) Netherlands



Cabauw Experimental Site for Atmospheric Research

Reinout Boers KNMI Netherlands





#### RS92 launch twice a day at de Bilt, distance is 22km and 190 m away from tower



-State variables T, q, u, v (since 1974)

-Wind profiler data (up to 3 km, since 1995) plan is to start 'climate processing' this year, wind climatology is 'in' due to green energy interests

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-BSRN since 2005

-Aeronet, GAW PRF aerosol optical thickness

climate quality



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-GPS water vapor

processed for NWP standards, only very selected processing to climate quality

-Microwave radiometry water vapor

Only selected processing, no intercomparisons with GPS yet

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-Raman lidar water vapor and aerosols [experimental, now established, work towards continuity and standard calibrations still under way, turn key eventually]



#### -Clouds



# The CloudNet classification, using lidar, radar and microwave radiometry. Is now standard output





-Clouds (2)

All-sky camera Nubiscope Cloud processing of BSRN data scanning radar

to be compared to CloudNet classification standards to be made......







# **Other Priorities**

-Aerosol sizing and composition

-CCN counter

-Methane and CO2 time series

-PM2.5, PM10 [part of national standard sites]

-Tower fluxes of q, T, u, v, CO2 at regular intervals on tower

-Soil heat flux, ground water fluxes GRUAN, Norman, March 2009, Boers - KNMI



## Available from

# -http://www.cesar-database.nl/



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## What do I need from this group?

a) Realisme about what can be achieved

 b) awareness of funding pressures (credit crisis has impact on science budgets)

c) awareness that some climate goals may be achieved by means of 'lesser' instruments





#### A climate simulation as a substitute for a climate recordNM [using regional climate model]



For the perfect record, trend is statistically significant *after 30 years*, For sampling with radiosonde every fourth day, 10% error, trend will be statistically significant *after 50 years* 



Institutional considerations:

 Long- term monitoring is still dependent on shortterm funding

2) Adaptation / mitigation to climate change is hot topic, as climate problem is politically solved

