

CESAR: Cabauw Experimental Site for Atmospheric Remote Sensing

Herman Russchenberg¹, Andre van Lammeren², Reinout Boers², Daan Swart³, Harry Ten Brink⁴, Gerrit de Leeuw⁵, Gert Brussaard⁶, Han Stricker⁷, Bertram Arbesser-Rastburg⁸

The Netherlands has an active research community dealing with ground-based remote sensing of the atmosphere. A large number of groups at research institutes and universities operate and develop different atmospheric remote sensing instruments as well as use the data for modelling and validation studies. The experience of the last 10 years revealed that much knowledge is gained when observations are done with the instruments as closely collocated as possible. The initiative is taken to implement such a site at the premises of the KNMI Cabauw observatory. This initiative is named CESAR: *Cabauw Experimental Site for Atmospheric Research*. Within CESAR many ground-based instruments will be operated at the Cabauw observatory. The site will be unique in Europe in its overall capabilities. Only few sites exist around the world that comprise a similar suite of instruments. The CESAR site will be used for

- Monitoring of long term tendencies in atmospheric changes
- Studies of atmospheric processes
- The development of new measurement techniques
- Validation of space-based observations
- Training of young scientists at post-doc, PhD and master level.

¹International Research Centre for Telecommunications and Radar, Faculty of Information Technology and Systems, Delft University of Technology, Mekelweg 4, 2628 CD Delft, The Netherlands
e-mail: h.w.j.russchenberg@irctr.tudelft.nl *corresponding author*

² Royal Netherlands Meteorological Institute, KNMI

³ National Institute for Public Health and the Environment, RIVM

⁴ Netherlands Energy Research Foundation, ECN

⁵ Netherlands for Applied Scientific Research, TNO

⁶ Eindhoven University of Technology, TU/e

⁷ Wageningen University&Research, WUR

⁸ European Space Agency, ESA