

Subject
PhD vacancy
Date

15 March 2006
Number
2005/37

The Observations and Modelling department of the KNMI in De Bilt, division R&D Observations, announces a vacancy for a PhD student (over 4 years) on the subject:

Doppler Wind Lidar for Weather and Climate

General information

As a present for KNMI on its 150-year anniversary the Secretary of State of the Ministry on Traffic, Public Works, and Water Management offered four PhD positions, called OIO. One of these PhD positions has been assigned to the goal of exploitation of the measurements of the “Atmospheric Dynamics Mission - Aeolus” for weather prediction and climate studies. ADM-Aeolus is a “Core Earth Explorer Mission” of the European Space Agency, ESA, due for launch in 2008, see http://www.esa.int/esaLP/ASEI2BUG0SC_LPadmaeolus_0.html.

Context

Future wind profile measurements from space using a Doppler Wind LiDAR (DWL) contribute to a better description of the atmospheric dynamics. The interpretation of the measurement in atmospherically heterogeneous and meteorologically dynamic conditions is not trivial. In particular the representativeness and usefulness of the DWL data in the tropical convergence zone with deep convection, and nearby fast developing lows outside the tropics, require further investigation

The R&D team of KNMI specialises in the detection, signal processing, and information content of the DWL measurements in meteorologically dynamic regions with cloud and aerosol structures. They use both simulated observations, aircraft measurements, and finally, satellite observations. The PhD research will culminate in an interpretation model for the observations and their estimated uncertainties. The latter is crucial for the optimal exploitation of DWL observations in numerical meteorological analyses.

Moreover, the usefulness of the DWL observations in data assimilation schemes will be assessed, and the expected, later realised, beneficial effect on circulation and transport properties of atmospheric circulation models will be determined.

The KNMI R&D team consists, including the vacancy, of 4 specialists who operate in an international context.

Required

The candidate has obtained a Masters degree in Physics, Meteorology, Mathematics, or similar, and has good skills in mathematics and statistics. Moreover, programming skills in Fortran or C are required. Experience with meteorology or lidar technology is a prerequisite. Finally, we require that the candidate is able to deal with complex

information, is result oriented, and can express her- or himself well in the English language, both written and verbally.

Specifics

The PhD appointment is over a period of 4 years.

Location:	De Bilt
Salary:	Start: max. € 1.692,18 gross salary per month (scale 6, step 1) From 1 year onwards max. € 1.796,22 gross salary per month (scale 6, step 3) From 2 years onwards max. € 1.957,42 gross salary per month (scale 6, step 6) From 3 years onwards max. € 2.279,37 gross salary per month (scale 7, step 8)
Selection committee:	Mr. Dr. Ir. Ad Stoffelen (chair) Mr. Dr. Ir. Gert-Jan Marseille (member) Mr. Dr. Jos de Kloe (member) Mrs M.L. Collet-van Laere (member)

Further information about the position can be acquired with Dr. Ir. Ad Stoffelen, telephone +31 30-2206 585 and e-mail Ad.Stoffelen@knmi.nl. Candidates should send their application letter and CV before 10 April 2006 to Mrs. M.L. Collet- van Laere, e-mail laerevan@knmi.nl, with reference to vacancy number 2005/37.

De Bilt, 15 March 2006,
Head Personnel and Organisation,

Mr. P.H. van Noort