Post-doctoral fellowship at CNRM
(UMR 3589 – METEO-FRANCE, CNRS)

Applications are invited for one post-doctoral research fellowship starting in June 2020, at Météo-France, in the Mesoscale Modelling Group of Centre National de Recherches Météorologiques (CNRM) in Toulouse, France (http://www.umr-cnrm.fr/) to work on the following subject:

Use of a land data assimilation system to assess satellite-derived soil moisture estimates

(7.5-month contract)

CNRM develops the ISBA land surface model within SURFEX, an operational modeling platform able to simulate the terrestrial water and carbon fluxes. SURFEX is coupled to a number of atmospheric and hydrological models, and includes a land data assimilation system (LDAS) based on an Extended Kalman filter, able to analyze soil moisture and vegetation biomass at spatial resolutions ranging from 1 to 50 km.

LDAS-Monde is operational at a global scale and satellite-derived products (soil moisture, LAI) are integrated into the ISBA land surface model. The analyses produced by LDAS-Monde account for the synergies of the various upstream products and provide statistics that can be used to monitor the quality of the assimilated observations.

The consistency of several terrestrial ECVs can be made using a cross-cutting quality monitoring technique.

The post-doctorate fellow will contribute to develop the use of LDAS-Monde to assess the quality of existing satellite-derived soil moisture products. This tool will be used together with in situ surface soil moisture observations.

The gross annual salary will vary from about 39000 € to 46000 €, depending on qualification.

Application should be done by email by sending a resume, a motivation letter, and the names, telephone and email address of two referees to:

jean-christophe.calvet@meteo.fr

The closing date for applications is
29 February 2020.

The candidates should have knowledge on data assimilation and possibly land surface modelling and/or remote sensing of continental surfaces. They should be familiar with programming data analysis in Python, with the Linux environment, and with the FORTRAN programming language.

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