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

Applications are invited for one post-doctoral research fellowship starting in March or April 2021, 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 global land data assimilation system (LDAS-Monde) to produce the root-zone soil moisture essential climate variable

(12-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 an open-source platform 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 root-zone soil moisture (RZSM) and vegetation biomass at spatial resolutions ranging from 1 to 25 km.
LDAS-Monde is able to work at a global scale and satellite-derived products (surface 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.
The post-doctorate fellow will develop the use of LDAS-Monde for producing 25-km global daily RZSM using the ESA CCI+ SSM product together with the Copernicus Global Land Service LAI product. She(he) will make numerical experiments to assess the added value of assimilating individual satellite-derived products and improvements with respect to several benchmarks.

The gross annual salary will be 39300 €.

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
20 December 2020.

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

Funding source: ESA.