Centre d'Etude en Météorologie Satellitaire (CEMS)
CNRM/UMR 3589 Météo-France/CNRS
Avenue de Lorraine – B.P. 50747 – 22307
LANNION Cedex - France

Fast radiative transfer model RTTOV for hyperspectral UV-VIS-NIR satellite instruments

Subject: Postdoctoral fellowship of 12 months renewable in fast radiative transfer model RTTOV.

Starting date: **October 1st 2019**

Area of expertise: Atmospheric sciences, satellite observations, radiative transfer model

Context: The open position is to join the CEMS team of the CNRM laboratory (http://www.umr-cnrm.fr/). CNRM is the research laboratory of Météo-France (the French meteorological service) and contributes through the CEMS team to the satellite observation of oceans, atmosphere and clouds. In the frame of the NWP-SAF (Eumetsat project), the CEMS team contributes to the development and validation of the fast radiative transfer model RTTOV (https://www.nwpsaf.eu/site/software/rttov). RTTOV is a world-wide used fast RTM for satellite data assimilation in NWP models.

Workplace: The candidate will be assigned to the "Sondage" team of the CEMS attached to the Centre National de Recherche Météorologique (CNRM-UMR 3589 Météo-France / CNRS). The work will be done at the Centre de Météorologie Spatiale at Lannion (22, Côtes d'Armor).

Duration : 1 year, renewable contract, availability from October 1st 2019.

Main duties and key responsibilities: The successful applicant will be responsible for testing and implementing the extension of RTTOV in the ultraviolet part of the spectrum. This extension is planned for the next version of RTTOV (version 13 due for Q3 2020) in order to simulate hyperspectral UV-VIS-NIR instruments such as GOME-2 or Sentinel 4 or 5. This will primarily entail:

- Testing and validating the RTTOV coefficient generation from line by line models to reproduce atmospheric transmittances in the UV,
- Extending and validating the surface reflectance model in the UV in order to simulate clear-sky observations,
- Testing and validating the RTTOV coefficient generation for hyperspectral instruments in UV-VIS-NIR,
- Reporting the results at NWP-SAF project team, in leading scientific journals and at international conferences.

Qualifications and experience required: The candidate must hold a PhD in atmospheric physics or related discipline. Experience in atmospheric radiative transfer and/or spectroscopy is required. Strong numeracy skills and proficiency in a programming language such as Fortran/Python is required. Basic skills in French will make life easier in Lannion.

Personal attributes: The candidate will have to demonstrate scientific curiosity, autonomy, team spirit, responsiveness, analytical skills and rigor in the interpretation of results and their formatting. He will have to be able to report his activity to the project team. In this context, some trips to Europe are planned.

Salary: The gross monthly salary is between 3280 € and 3890 € based on experience. This includes French social security.

How to apply: Interested candidates should send the following documents by e-mail to Jérôme Vidot (jerome.vidot@meteo.fr) and Pascal Brunel (pascal.brunel@meteo.fr):
- Curriculum Vitae detailing experience in research and other skills. A list of publications and communications in conferences is mandatory;
- A sample of research publication or communication;
- Application letter explaining research interests and motivation for the job;
- The names and contact details of two referees (recommendation letters shall be appreciated but are not compulsory);

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