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The Royal Belgian Institute for Space Aeronomy (BIRA-IASB) is a federal scientific institution located in Uccle (Brussels) next to the Royal Meteorological Institute of Belgium and the Royal Observatory of Belgium; together they are called the Space Pole. BIRA-IASB's principal mission is the development of scientific and technological expertise in the field of aeronomy. This interdisciplinary science studies the physics and chemistry of planetary atmospheres and addresses issues of societal interest such as atmospheric composition changes and their link with climate and air quality. For more information on the institute and its activities, please visit our website at www.aeronomie.be

The division “Sources and sinks of atmospheric constituents” studies the Earth’s atmosphere using a series of different instruments (space-borne or ground-based), possibly combined with model simulations. The division also comprises a team running laboratory experiments and “in situ” measurements to characterise biogenic volatile organic gases emissions. The teams of that division take part in national and international projects, funded notably by the Belgian Science Policy, the European Commission (EC), the European Space Agency (ESA), the European Centre for Medium-Range Weather Forecasts (ECMWF) and EUMETSAT (European Meteorological Satellites). For some of these projects, the IASB research teams have a coordination role.

In the team “Infrared observations and laboratory experiments” (<http://infrared.aeronomie.be>), the emphasis is placed on gas and aerosols remote sensing in the Earth’s atmosphere, using ground-based and space-borne (satellite) high-resolution Fourier Transform Infrared Spectroscopy.

In that team, we are looking for a

Scientist to work on aerosol remote sensing in the infrared from satellite instruments

The successful candidate will participate in the scientific and technical improvement of the existing algorithm that retrieves a three-dimensional mineral dust aerosol product from radiance measurements by the IASI instrument in the thermal infrared range. IASI is the Infrared Atmospheric Sounding Interferometer onboard the METOP satellites. In particular, the candidate will investigate adaptations to the retrieval to make it faster without losing quality. He/she will also investigate adaptations to improve the retrieval accuracy, mainly by modifying the choice of ancillary data required by the retrieval (such as surface characterisation or mineral aerosol parameterisation).

The successful candidate will work closely together with an experienced researcher in the specific field, who will provide help and guidance as needed. The work that will be done by this candidate has direct implications in all the projects at IASB-BIRA dealing with mineral aerosols (funded by the Belgian Science Policy, ESA, ECMWF and the EU), giving a large visibility to the undertaken research. The candidate will become member of a team working with Fourier transform infrared spectroscopy experiments and related retrievals, data analysis and exploitation.

Candidate profile:

- Master or PhD in Sciences or Applied Sciences with interest in atmospheric sciences / climate research
- Scientific curiosity, dynamic, eager to learn
- Interest/competence in programming (different languages available)
- Enthusiasm for team working in an international environment
- Availability for travel (workshops, conferences, ...)
- Good communication skills (oral and written), at least in English

Additional competences considered beneficial:

- Knowledge in atmospheric sciences, in particular atmospheric composition and/or climate change drivers
- Knowledge in radiative transfer and/or retrieval theory and algorithms
- Knowledge of Fourier transform infrared spectroscopy
- Knowledge about mineral aerosols (optical properties, physical properties, emission, transport, deposition, ...)
- Experience with high performance computing
- Knowledge of at least one of both national languages (Dutch or French)

We offer

- A 1 year contract at start
- Salary according to the federal regulations for the scientific career
- Interesting holidays regulations, multiple ways to balance professional and private lives (flexible schedule within the 38 hours week, possibility to work from home, possibility to work 80%)
- Dynamic working environment with international contacts
- Possibility to acquire a bonus for bilinguism (Dutch/French)
- Full refund of commuting expenses when using public transportation, compensation when using the bicycle
- Access to special advantages arranged for the employees of the federal scientific institutions (such as: possibility to follow training, partial compensation of sports / culture subscriptions, compensation for kids holiday "stages", day care for kids 3-12 years during the summer, Fed+ card with access to many advantages, ...)
- Working in a green and pleasant environment in Brussels (Uccle)

If you are interested, you should apply before 15 January 2017, by sending an email with the reference "D21-IASI2017"

to hr-ae@aeronomie.be and martine.demaziere@aeronomie.be with copy to sophie.vandenbussche@aeronomie.be

More information about that position may be obtained from Sophie Vandebussche, by phone +32 2 373 0386 or e-mail sophie.vandebussche@aeronomie.be or from Martine De Mazière, by phone +32 2 373 0400 or e-mail martine.demaziere@aeronomie.be