



VACANCY

BIRA-IASB is looking for a

Research assistant (M/F/X)

Deadline for applications: 2024, 15 September

Tasks, division, context

You will work within the group 'Infrared observations' of the Scientific Division 'Sources and sinks of atmospheric constituents'. The group's specialty is the acquisition and exploitation of infrared spectrometric measurements, in-situ or by remote sensing, for determining the concentrations of trace gases and aerosols in the atmosphere.

The observational data thus obtained are exploited to study changes in the atmospheric composition caused by natural processes and human activities, such as the recovery of the stratospheric ozone layer, climate changes due to emissions of the so-called greenhouse gases, the impact of biomass burning, etc.

The measurements are carried out with Fourier-transform infrared spectrometers from the ground, in the framework of international networks and research infrastructures or measurement campaigns. The group owns instruments in locations highly relevant for studying biogenic and biomass burning emissions (Brazil, Reunion Island) or anthropogenic pollution (Kolkata). The data obtained are also compared and exploited with numerical models of the atmosphere and used for satellite and model validation. The group works in close collaboration with other teams within the institute and national and foreign partners. The researcher to be recruited will contribute to the analysis, exploitation and valorisation of the ground-based measurements. The researcher will work in close collaboration with the other members of the team.

More about BIRA-IASB

The Royal Belgian Institute for Space Aeronomy (BIRA-IASB) is a Belgian Federal Scientific Institute.

Since its founding in 1964, BIRA-IASB has been conducting research and providing public services in space aeronomy, i.e. the physics and chemistry of Earth's atmosphere and other planets, and outer space.

Our scientists use ground-based, balloon-, air- or space-borne instruments and computer models.

www.aeronomie.be

Job description

More specifically, the researcher will contribute to

- The derivation of concentrations of the targeted atmospheric constituents) from both high and low spectral resolution infrared spectrometers using existing inversion algorithms;
- The geophysical exploitation of the derived data;
- The valorisation of the results in the framework of international initiatives such as the validation of satellite data and models;
- The scientific research and scientific service projects in which the team is involved, as well as in the preparation of new projects.

Depending on the specific interests and expertise of the researcher, he/she will take on responsibilities in the team and in (inter)national scientific research and scientific service projects.

Job qualifications

- Hold a degree of Doctor of Sciences or Doctor of Engineering Sciences, preferably in the field of physics or chemistry, or physical engineering (*);
- Have a good knowledge of infrared Fourier-transform spectrometry and/or remote sensing data retrieval methods;
- Have a good mathematical basis and IT competences; mastery of at least one programming language, good knowledge of mixed Microsoft/UNIX/Linux software environments;
- Be a team player;
- Be fluent in English (both spoken and written);
- Have good experience in writing technical/scientific project proposals, reports and publications in peer-reviewed journals.

(*) In the situation where the Master or PhD degree was awarded by a body outside the Benelux, the candidate might possibly will have to apply for an equivalence of the level of studies preceding the PhD in order to prove that this level corresponds to a generic Belgian Master degree. This should only be done after the candidate has been selected for the job and before he/she takes up the job. To obtain the equivalence, you can choose to apply for it at the French or Dutch speaking community of Belgium. You can find more information on this at <https://www.naricvlaanderen.be/nl/erkenningen> or <https://equisup.cfwb.be/>.

Assets

- Experience with ground-based remote sensing data and/or Earth observation satellite;
- Experience in exploitation of geophysical data (modeling, trajectory tools, validation,...);
- Active knowledge of Python;
- Experience of working in national and international research projects;
- Knowledge of Dutch or French.

We offer

- The position is on a contractual basis with a long-term perspective. Salary is according to the federal regulations for scientific contractual personnel. All relevant work experience (public + private sector) will be considered when determining seniority. The contract will be first for one year, with a possibility of one year extension if the candidate fulfils the requirements and is well integrated in the team. After two years, a possibility of an undetermined duration contract can be offered.
- Dynamic working environment with international contacts (space agencies, industry, air quality community).
- Refund of commuting expenses when using public transportation or a bicycle.
- Meal voucher
- Attractive annual leave policy (minimum 26 days per year) and options to balance professional and personal life (flexible schedule and possibility to work from home).
- Access to special advantages arranged for the employees of the federal scientific institutions (e.g. collective hospital insurance and possibility to take part in training courses).
- Pleasant working atmosphere located in a green setting in Uccle, Brussels.
- Access to special advantages arranged for the employees of the federal scientific institutions: museum card, hospitalization insurance, reductions via the Fed + card, etc.
- On-site childcare during school holidays in July and August.



Interested?

Send your CV and motivation letter to:

corinne.vigouroux@aeronomie.be with hr-ae@aeronomie.be in copy

with the following reference: "D21_ researcher assistant".