VACANCY

BIRA-IASB is looking for:

Scientist / Engineer (M/F/X)

Deadline for applications: 14 December 2022
Start date: spring 2023

Job title description

BIRA-IASB is looking for a scientist, or an engineer to contribute to the development of a new class of air quality monitoring instruments. More specifically, the first tasks assigned will be related to the improvement of the "NO2 camera", a spectral imager optimized for the visualization of NO2 concentrations in urban air, and industrial plumes. Besides contributions in the field of air pollution monitoring, and dispersion model validation, the successful candidate will investigate other applications of this instrument, such as airborne applications, or the addition of scientific capabilities (other molecules, particles).

Division and context

The successful candidate will join the Limb Sounding group within the Department of Solar Radiation in Atmospheres to take part in the development of innovative atmospheric remote sensing instruments (spaceborne, airborne, ground-based), and their scientific exploitation.

Responsibilities

- Contribute to the improvement of the NO_2 camera prototype performance
- Participate in the characterization of the spectrometric and radiometric properties
- Refine the different scientific data processing algorithms
- Take part in field campaigns
- Take an active role in future application projects with other air quality institutes
- Explore advanced capabilities involving radiative transfer models and AI-based techniques
- Contribute to scientific publications, present results at conferences and meetings
- Write proposals for new projects
- Expand the scope of the instrument capabilities (more atmospheric targets, airborne applications, etc.

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

Required competences

A successful candidate:

- Possesses a master's degree in mathematics, physics, engineering, or similar disciplines;
- Has concrete experience with applied numerical methods;
- Feels comfortable in performing laboratory work (spectroscopy, radiometry);
- Possesses a driving license (for field campaigns);
- Is able to produce technical documentation in English.

Technical skills

The following elements are not mandatory, but are considered as assets:

- Holds a PhD degree in science;
- Knowledge of the advanced features of MATLAB;
- Knowledge of Python;
- Experience with lasers, optics, CMOS detectors, AOTFs, polarizers;
- Experience with Arduino, or Raspberry Pi;
- Experience with version control systems, including branching.

General skills

- Fluent in written and spoken English.
- Knowledge of French and/or Dutch is a plus.
- Team-oriented.
- Capacity to interact with partners in a multi-lingual environment.

We offer

- The position is on a contractual basis. Salary is according to the federal regulations for scientific contractual personnel.
- Dynamic working environment with international contacts (space agencies, industry, air quality community)
- Refund of commuting expenses when using public transportation or a bicycle.
- Attractive annual leave policy 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).
- Possibility to establish a doctoral cursus in collaboration with a Belgian university.

For technical information about this vacancy, please contact Dr. Emmanuel Dekemper emmanuel.dekemper@aeronomie.be.

Interested?
Send your CV and motivation letter to:
altius-mgmt@aeronomie.be with hr-ae@aeronomie.be in copy
with the following reference: "D41_Scientist".