VACANCY

BIRA-IASB is looking for:

a scientist for laboratory support(M/F/X)

Deadline for applications: July 07, 2023
statute : contractual – full time

Job title description

BIRA-IASB is looking for a scientist to support laboratory activities. The candidate will contribute to the development of the existing BIRA-IASB laboratory infrastructures and activities in the domain of solar irradiance and radiometry.

Division and context

The candidate will join the B.RCLab (Belgian Radiometric Characterization Laboratory), part of the Solar Irradiance and Radiometry group (D42) within the Department of Solar Radiation in Atmospheres (D40) of BIRA-IASB. Since more than 30 years, the D42 section has been involved in the development, radiometric characterization and scientific exploitation of ground-based and space-borne instruments in the fields of solar irradiance measurements and more recently planetary sciences and climate research.

The SOLAR/SOLSPEC instrument on board the International Space Station was the first instrument fully radiometrically characterized in the laboratory. More recently the array detectors (UV, VIS-NIR) of the MAJIS spectro-imager for the ESA JUICE mission and ALTIUS stratospheric ozone mapper instrument were electro-optically characterized in the laboratory, as well as the solar irradiance sensors of the 2-Unit CubeSat INSPIRE-SAT7. B.RCLab is also responsible for the operation of an UV-index Network currently deployed in five locations in Belgium. There is currently an expansion of the D42 and B.RCLab activities.

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

Responsibilities

The candidate will in a general way, contribute to the growth of the B.RCLab activities at BIRA-IASB in the field of ground-based, space sciences and instrumental radiometric characterization through: (i) involvement in general B.RCLab activities to evolve it into a center of excellence (core domains: metrology applied to radiometry, thermal-vacuum), (ii) to contribute to the ongoing projects in which the laboratory is currently involved. B.RCLab possesses several instrumental characterization benches with past, present and future applications and there is a need for additional human resources for experimental work.

More specifically:

- Support for the update of existing facilities for radiometric characterization and the development and validation of new facilities, by managing the use of existing equipment, procurement of new devices and interfacing with custom designed electro-mechanical items developed with Computer Assisted Design (CAD) tools.
- Support for the development of efficient and user friendly Graphical User Interfaces (GUI) that manage the acquisition with Data Acquisition System (DAQ) electronics for the available characterization facilities.
- Support for the development of data analyzing tools, to process the data acquired during measurement campaigns for ongoing projects.
- The applicant will contribute to characterization campaigns of devices under test (for space qualification, calibrations, thermal-cycling using optical and thermal-vacuum equipment). They will be involved in the implementation of a campaign. They will contribute to the documentation (technical notes, measurement plans, reports, etc.) and the quality control (cleanliness, security systems).
- Documentation tasks that targets the positioning of the B.RCLab with new potential users, to strengthen existing national and international contacts.
- Participate to the BIOSPHERE project, mainly for the management of intercomparison campaigns and the post-campaigns data processing.

Required competences

The following elements are mandatory

- Possesses a degree in industrial engineering, master's degree in physics or equivalent (*).
- Experience in instrumental and laboratory environment: feels comfortable in using optical and thermal-vacuum equipment.
- Knowledge of Python or similar programming language.
- Demonstrate experience in programming in a specific language.
- Able to produce technical documentation in English related to laboratory work.

(*) In the situation where the Master or PhD degree was awarded by a body outside the Benelux, the candidate 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/****.*

These elements are not mandatory, but are considered assets

- Knowledge of LabVIEW.
- Experience in thermal modelling and thermal-vacuum techniques.
- Experience in radiometry and optics: feels comfortable in using equipment such as lasers, spectrometers, or detectors (CMOS/CCD, photodiodes).
- Knowledge of miniaturized computing systems such as Arduino and Raspberry Pi.
- Knowledge of version control systems (Git).

General skills

- Fluent in written and spoken English.
- Knowledge of French and/or Dutch is a plus.
- Team-oriented, centered here on an optimized involvement for the B.RCLab.
- Capacity to interact with partners in a multi-lingual environment.

We offer

- The position is full time on a contractual basis (one year, renewable). Salary is according to the federal regulations for scientific contractual personnel basis.
- 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
- Capacity to interact with partners in a multi-lingual environment.
- Possibility to acquire a bonus for bilinguism (Dutch/French)
- Possibility of training (to be followed during working hours)

Procedure

After evaluation of the application letters, the selected candidates will be invited for an interview, or a teleconference.

For technical information about this vacancy, please contact Dr. D. Bolsée: david.bolsee@aeronomie.be

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Interested?

Send your CV and motivation letter to:

David.bolsee@aeronomie.be with hr-ae@aeronomie.be in copy

with the following reference: **"**D42**_ B.RCLab Scientist"**.