



# JOB OFFER

BIRA-IASB is looking for:

## Aspiring Scientist (m/f)

Deadline for applications: March 8<sup>th</sup>, 2021

Start date: May, 1<sup>st</sup> 2021

Statute: Contractual

### Assignment, division & context

Within BIRA-IASB, the Tropospheric Modelling Team is focusing on the emissions of pollutants in the atmosphere, the chemistry and role of chemical compounds involved in the budget of oxidants, and the derivation of emissions of trace gases from satellite observations using inverse modelling methods. More details on our activities can be found at the TROPO website: <http://tropo.aeronomie.be>.

### Job description

In the framework of the EU H2020 SEEDS (Sentinel EO-based Emission and Deposition Service) project, aiming to develop satellite-based estimates of sources and sinks of major atmospheric pollutants, we are looking **for an aspiring scientist holding a recent Master or Doctorate degree in Sciences, for a total duration of three years, starting from May 1<sup>st</sup>, 2021.**

The project aims at an improved assessment of the budget and role of atmospheric pollutants, using an integrated approach combining global satellite observations from the TROPOMI instrument, in situ measurements and chemistry-transport models. In particular, natural emissions from terrestrial vegetation constitute a large source of uncertainty undermining the reliability of air quality forecast and chemistry-climate models. One of the specific goals of SEEDS is to narrow down these uncertainties and derive high-resolution up-to-date natural emissions released by vegetation over Europe, as well as biomass burning emissions. Our approach will be based on advanced inverse modelling methods and constrained by direct chemical observations of formaldehyde retrieved by the TROPOMI satellite instrument.

### 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. The research performed at BIRA-IASB addresses issues of societal interest such as atmospheric composition changes and their link with climate.

For more information on the institute and its activities, visit our website [www.aeronomie.be](http://www.aeronomie.be)

The successful candidate will be in charge of the :

- development and implementation of an optimal methodological framework for the provision of space-based emission data
- derivation of top-down emissions over Europe at high spatial resolution (10 km) and temporal resolution (monthly or shorter), tailored for implementation in the Copernicus Atmospheric Composition Service (CAMS)
- analysis of the derived emissions, evaluation against independent observations and characterization of the associated uncertainties
- quantification of the added value of these top-down estimates for air quality analyses and forecasts.

He/she will present the research results through scientific publications, project reports, communications to project workshops and international congresses.

## Qualifications

### **Required competences:**

- Master or Doctorate degree in Sciences
- Experience in Atmospheric Science
- Experience with data handling and analysis
- Knowledge of programming languages (e.g Python, Linux, Fortran, Matlab, HDF, NetCdf, LaTeX)
- Advanced level in oral and written English, knowledge of Dutch and/or French are assets
- Scientific curiosity, initiative, motivation and team spirit
- Excellent oral and written communication skills, sense for organization, timeliness

## We offer

- The position is on a contractual basis. Salary is according to the federal regulations for scientific contractual personnel.
- All relevant work experience (public + private sector) will be considered when determining seniority.
- Possibility to acquire a bonus for bilingualism (Dutch/French)
- Possibility of training (to be followed during working hours)
- Attractive annual leave policy (minimum 26 days by year)
- Options to balance professional and personal life (flexible schedule) within the 38 hours week
- Pleasant work environment in a scientific institution located in a green setting in Uccle, Brussels.
- Full refund of commuting expenses when using public transportation, compensation when using the bicycle
- Possibility to work from home
- Access to special advantages arranged for the employees of the federal scientific institutions: museum card, hospitalization insurance, reductions via the Fed + card, etc.
- Company restaurant with reasonably priced hot meals and salad bar.
- On-site childcare during school holidays in July and August.
- Dynamic working environment with international contacts.



## Interested?

Send your application (CV and cover letter) to:

[hr-ae@aeronomie.be](mailto:hr-ae@aeronomie.be) with [trissevgeni.stavrakou@aeronomie.be](mailto:trissevgeni.stavrakou@aeronomie.be) in copy  
with the following reference "D23\_TROPO" before March 8<sup>th</sup>, 2021.