The Royal Observatory of Belgium searches a post-doctoral researcher (M/F/X).

Activity group	Recruitment category(ies)	Applications open until
I. Scientific research and experimental development	SW1	15/12/2026

Job description

Purpose of the position

The Royal Observatory of Belgium invites candidates to apply for a position of Researcher for the Gaia-BRASS project (ESA-Gaia and the Belgian Repository of Stellar Spectra). This position is open to candidates holding a PhD in a relevant field.

Gaia-BRASS is a three-year research project aimed at improving the scientific utility of the Gaia DR4 stellar spectra through new methods for radial velocity measurements and the development of an open, interactive data platform.

The position makes a direct contribution to ROB's core mission in the areas of excellent astrophysical research, open data and international collaboration within the Gaia-DPAC consortium, whilst simultaneously strengthening the services provided to the global astronomical community.

In addition, the position offers the postdoctoral researcher unique training in advanced astronomical spectroscopy, time-series analysis, machine learning and scientific data management, and thus the opportunity to build a sustainable and transferable expertise profile that will continue to bear fruit even after the project has ended, including for the refinement of the period-luminosity relations of Miras and long-period variable stars, and the extension of the cosmic distance ladder into the heavily dust-obscured regions of our Milky Way.

Outcome areas

The successful candidate is expected to:

- Develop and validate new methods for measuring radial velocities from Gaia DR4 RVS spectra of M-type stars and long-period variables (Mira variables) and adapt these to the specific challenges posed by molecular bands and atomic spectral lines.

- Systematically retrieve, load, quality-filter and process Gaia DR4 epoch stellar spectra of late-type giants into validated time series of radial velocities, ready for scientific use.

- Distinguish between binary systems and pulsation versus ellipsoidal variability by comparing RV and photometric periods, thereby compiling pure samples of Mira pulsators.

- Makes the resulting RV curves and associated RVS epoch spectra available via the open BRASS platform, including quality flags, metadata fields and interoperable formats.

- Contributes to the refinement of the Period-Luminosity relations of Mira variables, particularly in strongly dust-obscured directions, by combining the new RV data with Gaia photometry and parallaxes and publishes these results in a timely manner in peer-review journals and presents them at international scientific conferences.

Employer

There is one vacancy in the Operational Directorate Astronomy and Astrophysics, at the Royal Observatory of Belgium (address: Ringlaan 3 B-1180 Brussels Belgium).

The activity group for the position is: I. Scientific research and experimental development

Astronomy and Astrophysics: The successful candidate will work within the Astronomy and Astrophysics Department of the Royal Observatory of Belgium (ROB), supported by scientists from Operational Directorate OD3. The successful candidate will work closely with colleagues in OD3.

Royal Observatory of Belgium: The ROB (http://www.observatory.be) is a Belgian Federal Scientific Institution located in the green outskirts of Brussels in Uccle. The ROB is situated on the same plateau alongside two other Federal Scientific Institutions, BIRA-IASB and IRM-KMI.

Skills

Behavioural skills

- **Integrate information**: Make connections between various data, devise alternatives and draw appropriate conclusions.
- **Working in a team**: Create and improve team spirit by sharing your opinions and ideas and by contributing to the resolution of conflicts between colleagues.
- **Achieving goals**: Show commitment, willingness and ambition in order to deliver results, and take responsibility for the quality of the actions undertaken.

Technical skills

- Good knowledge of the principles and methods of scientific analysis of stellar spectroscopy.
- Excellent command of programming in Python.
- Good command of JavaScript and HTML.
- Basic knowledge of SQL, Java, Bash, and FORTRAN.

Assets

- Excellent command of the English language, both written and spoken.
- Experience with scientific databases and scientific data analysis; analysis of algorithms and application of numerical methods.
- Knowledge of MySQL, ADQL, Postgres, database development and maintenance (back-end and front-end)
- Knowledge of complex scientific data visualisation (i.e. scripting with IDL/TopCat/STILTS/Dygraphs).
- Knowledge of Bayesian machine learning methods.

Conditions for consideration

Your profile

- You hold a PhD in astrophysics, solar physics or computer science.

/! *Applicants who have a degree or certificate from a foreign institution who apply for a scientific position for which the tasks are not related to the permanent missions of the institution are exempt from the need for an academic equivalence evaluation.*

Do you wish to apply but your diploma is not written in French?

We invite you to contact the person listed in the 'Contacts' section (selection procedure) to find out if you need to take a language test: Article 7 - Level 1/A.
If necessary, you can register by clicking on the link: www.travaillerpour.be/fr/tests-et-certificats/linguistique/inscription.
In this case, obtaining the language certificate is a prerequisite for selection. For this purpose, the selection committee is responsible for verifying the diploma. Therefore, please register for the language test as soon as possible.

Job offer

Contract and category

Applicant recruited as category SW1

You will be recruited on a fixed-term contract of 1 year (renewable) in the corresponding pay scale SW11 (SW10 if you do not have at least two years of recognised academic experience).

Minimum salary: 57.143,04 EUR SW11 (gross annual salary at the current index rate, legal benefits not factored in).

Benefits

We offer you an interesting job with a social impact, which comes with a number of benefits:

- A good work-life balance
  - (if applicable) flexible working hours of 38 or 40 hours (with compensatory adjustment) per week
  - (if applicable) option of taking compensatory leave for overtime worked
  - (if applicable) offices closed between Christmas and New Year's Day
  - 26 days of paid leave (for a year of full time employment)
  - easy commuting using public transport
- numerous opportunities for self-growth
  - numerous opportunities for training and apprenticeship (during working hours)
- Financial benefits
  - possibility of receiving a bilingualism bonus
  - hospitalisation insurance provided
  - supplementary pension (occupational pension)
  - free use of public transport for commuting between your home and the place of work
  - meal vouchers
  - possibility of receiving a bicycle allowance for travel via bicycle
  - Benefits@Work card
  - a range of fringe benefits (subject to conditions)

Conditions for employment

If you are selected through this procedure, you must – in order to be hired – fulfil the following requirements on the date of selection:

- Enjoy full civil and political rights
- Have fulfilled military service requirements
- Behave in a manner fitting of the requirements of the position
- Hold the necessary degree(s)
- Have the necessary skills and fulfil the requirements listed in the job profile

Procedure

Step 1 – Verification of the participation conditions

You will be considered in the selection procedure if you fulfil all required conditions. Verification will be carried out by the selection board based on the application documents you have submitted. The board will decide whether the qualifications, awards and experiences you have submitted meet the requirements of the position. If they do, you will be invited to continue to the next step of the procedure.

Step 2 – Interview

The interview will take place **online** or at the **Royal Observatory of Belgium**. Further details will be sent to you by one of our employees via email.

During the interview, we will assess whether your interpersonal and technical skills meet the job requirements. We will also ask about your motivation, interest and affinity with the field.

If you fail to attend

If you fail to attend the additional evaluation and/or interview, you will be automatically excluded from the remainder of the selection procedure unless you provide evidence, within three days, that your absence was justified for one of the following reasons:

- illness
- emergency relating to a member of your household (= anyone who lives with the applicant) or family (= spouse or legal cohabitant of the applicant, parents or grandparents of the applicant)
- mandatory presence at your workplace
- disruption or delay to public transport of at least 30 minutes
- force majeure

If applicable, you may request, within 10 days of the interview date, to be interviewed by the board. A new date will then be offered to you.

Notification

If you are not selected in a step, the procedure will end and you will not be invited to any subsequent evaluations in the same selection procedure.
For each step, you will receive a notification of the result.

Equal opportunities and reasonable accommodations

The Federal Administration has an active diversity policy.

Do you live with a disability, with learning difficulties or an illness? If so, you can request accommodations for the selection procedure. Please contact the individual listed under the “Contact persons” section.

Facilities provided for people who are pregnant or breastfeeding

Are you pregnant or breastfeeding your child? If so, you can request access to the relevant facilities. Please contact the individual listed under the “Contact persons” section.

Final result

What happens if you are selected?

Following the selection procedure, an unranked group of applicants will be placed on a short-list. These applicants will be those deemed most suitable to fill the open position in accordance with the conditions for consideration.

How long will this list remain valid?

The short-list of selected applicants will be valid for 6 months, will be created.

Apply

Do you want to apply? Send your application documents by email to Dr Alex Lobel (Alex.Lobel@oma.be) and dir-rob@oma.be , including the selection reference in the subject line.

Your application documents must include:

- an updated CV
- a cover letter (outlining your research interests and relevant experience)
- List of publications
- A letter of recommendation from at least one referee is encouraged (but not mandatory).

The closing date for sending your application is 15/12/2026 (inclusive).

Applications that do not follow the indicated procedure will not be considered.

Contact persons

Concerning the position:

For more information about the position, please contact:

Dr Alex Lobel, Gaia-BRASS Project Coordinator, Alex.Lobel@oma.be

Concerning the selection procedure:

For more information about the selection procedure, please contact:

Dr Ronald Van der Linden, Director General, dir-rob@oma.be

If you want to request a reasonable accommodation for the selection procedure or access to facilities for people who are pregnant or breastfeeding, please also contact this person.