

Post-doc Position

Characterisation of molecules in exoplanets atmospheres

SECTOR: Higher Education Institution

INSTITUTION: Univ. Grenoble Alpes, University of Innovation

One of the major research-intensive French universities, Univ. Grenoble Alpes enjoys an international reputation in many scientific fields, as confirmed by international rankings. It benefits from the implementation of major European instruments (ESRF, ILL, EMBL, IRAM, EMFL*). The dynamic ecosystem, grounded on a close interaction between research, education and companies, has earned Grenoble to be ranked as the 5th most innovative city in the world. Surrounded by mountains, the campus benefits from a natural environment and a high quality of life and work environment. With 7000 foreign students and the annual visit of more than 8000 researchers from all over the world, Univ. Grenoble Alps is an internationally engaged university.

A personalized Welcome Center for international students, PhDs and researchers facilitates your arrival and installation.

In 2016, Univ. Grenoble Alpes was labeled «Initiative of Excellence ». This label aims at the emergence of around ten French world class research universities. By joining Univ. Grenoble Alpes, you have the opportunity to conduct world-class research, and to contribute to the social and economic challenges of the 21st century ("sustainable planet and society", "health, well-being and technology", "understanding and supporting innovation: culture, technology, organizations" "Digital technology").

* ESRF (European Synchrotron Radiation Facility), ILL (Institut Laue-Langevin), IRAM (International Institute for Radio Astronomy), EMBL (European Molecular Biology Laboratory), EMFL (European Magnetic Field Laboratory)

Key figures:

- + 50,000 students including 7,000 international students
- 3,700 PhD students, 45% international
- 5,500 faculty members
- 180 different nationalities
- 1st city in France where it feels good to study and 5th city where it feels good to work
- ISSO: International Students & Scholars Office affiliated to EURAXESS

LOCATION: France, Grenoble

REFERENCES:

CDP-Idex project: Origin of Life

JOB PROFILE (Title): Characterisation of molecules in exoplanets atmospheres

SCIENTIFIC HOSTING DEPARTMENT (LABORATORY'S NAME): IPAG

SUPERVISOR'S NAME: Philippe Delorme

CONTACT: Philippe.Delorme@univ-grenoble-alpes.fr

RESEARCH FIELD: Astrophysics and Planetary Sciences

RESEARCHER PROFILE:

- *Recognized researcher (PhD holder not yet fully independent)*
- *Established researcher (Researchers who have developed a level of independence)*
- Leading researcher (Researchers leading their research area or field)*

JOB PROFILE (Description):

Université Grenoble Alpes invites applications for a 2-year postdoc position in Astrophysics in the field of molecular characterisation or modelisation of exoplanets atmospheres, towards the long term objective of characterising planetary habitability and the detection of biomarkers. The objective is to recruit an outstanding candidate motivated in developing a research topic as part of the Université Grenoble Alpes project « Origin of Life ». The position can start as early as October 2018 and as late as early 2019, and will be hosted at the Institute of Planetology and Astrophysics of Grenoble (IPAG).

The cross-disciplinary project « Origin of Life » (funded by Univ. Grenoble Alpes IDEX, <https://origin-life.univ-grenoble-alpes.fr>) brings together the expertise of astrophysicists, astrochemists, planetary scientists, prebiotic chemists, biologists, geologists and paleontologists. It aims to understand the chemical processes that have led to life on Earth, to define habitability conditions for both Solar System planets and exoplanets, and to detect the most favorable exoplanets where to search for a putative existence of life in a near future. The partner laboratories and the main science topic of « origin for Life » are IBS (extremophile science and metallo-prebiotic chemistry); DCM (prebiotic chemistry); GRESEC (media science); PCV (photosynthetic organisms); IPAG (Interstellar medium, star and planet formation, Exoplanets, Solar System); ISTerre (Earth Science, Solar System) and LECA (Evolutionary sciences, Paleogenetics).

We are looking for candidates that have a strong expertise at least in one of the following topics of the “Origin of Life” project :

- Characterisation of exoplanets atmospheres : molecular content, abundances studies, physical parameter determination
- Observational or theoretical expertise in coupling high resolution spectroscopy and high angular resolution
- Study of the information content of specific wavelength ranges at moderate to high resolution for given science cases, notably to prepare future detection of biomarkers.
- Modelisation of moderate to high spectral resolution observations of future instrumentation (for instance Harmoni@ELT, a possible upgrade of SPHERE@ VLT or JWST), notably to prepare future detection of biomarkers.

Applicants must hold a PhD, with a solid background in observations, theoretical modeling or laboratory astrophysics. The successful candidate will carry out her/his research at the IPAG laboratory, in the exoplanet team. IPAG is very active in the field of exoplanet research and its significant involvement in instrumentation provides enhanced access to ongoing observation programs on SPHERE and HARPS, as well as near future exploitation of SPIRou, NIRPS, and ExTrA. Before applying, we encourage candidates to contact Philippe.Delorme@univ-grenoble-alpes.fr.

Application files should include a research project (2-3 pages), a detailed curriculum vitae with a description of past research, a list of publications and the names of at least two persons who can be contacted for letters of references. Short-listed candidates will be interviewed in July (by video-conference if desired).

Annual gross salary is 28500 euros for a candidate without research experience after PhD. The position is accompanied with a financial support to carry out the research project consisting of up to 10000 euros for basic equipment and travel resources. The postdoc will be employed by the Université Grenoble Alpes that is a major player in higher education and research in France (<http://www.univ-grenoble-alpes.fr/en/>). The position is located in Grenoble, which is a university town located in a beautiful alpine environment.

Required languages: *English*

TYPE of CONTRACT: temporary, 24 months
JOB STATUS (Full time or part time): Full time
HOURS PER WEEK: 35
OFFER STARTING DATE: 1 Oct 2018
APPLICATION DEADLINE: 15 July 2018

ELIGIBILITY CRITERIA

Applicants must hold a PhD degree (or be about to earn one) or have a University degree equivalent to a European PhD (8-year duration)

Applicants will have to send an application letter in English and attach:

- Their last diploma
- Their detailed CV
- Their list of publication
- Their research project
- Letters of recommendation are welcome.

Address to send their application to: Philippe.Delorme@univ-grenoble-alpes.fr

SELECTION PROCEDURE

Application deadline: 15 July 2018 at 17h00 (CET)

Applications will be evaluated through a three-step process:

1. Eligibility check of applications on 20 July 2018
2. 1st round of selection: the applications will be evaluated by a Review Board. Results will be given on 1 August 2018.
3. 2nd round of selection: shortlisted candidates will be invited for an interview session in Grenoble (or by video-conference) before 1 September 2018.