

Researcher in charge of the REVOSIMA marine dataset

Job offer from Institut de physique du globe de Paris | CNRS UMR 7154

Researcher in	Marine Geosciences, REVOSIMA
Duration	2 years (1 year renewable 1 year)
Affectation	Observatoire volcanologique du Piton de la Fournaise, IPGP, La Réunion (Indian Ocean), France
Salary	Depending on experience
Date of publication	06 May 2025
Starting date	30 June 2025
Location	Observatoire volcanologique du Piton de la Fournaise, IPGP, La Réunion (Indian Ocean), France

The institut de physique du globe de Paris

A world-renowned geosciences research institute founded in 1921, associated with the CNRS, a component of Université Paris Cité and employing over 500 people, the IPGP covers all disciplines of earth and planetary sciences through observation, experimentation and modeling, on all scales of time and space.

The research themes are structured around 4 major unifying themes: Earth and Planetary Interiors, Natural Hazards, Earth System, Origins.

The IPGP is also responsible for accredited services in volcanology, seismology, magnetism, gravimetry and erosion. In particular, the IPGP's permanent observatories monitor the 4 active French overseas volcanoes: La Soufrière in Guadeloupe, La Montagne Pelée in Martinique, Le Piton de La Fournaise in La Réunion and the recently reactivated volcanic zone of Mayotte (through REVOSIMA, Mayotte's volcanological and seismological monitoring network).

The IPGP houses powerful computing resources and state-of-the-art experimental and analytical facilities, and benefits from first-rate technical support.

IPGP's training and doctoral studies department offers its students geoscience courses that combine observation, quantitative analysis and modeling, reflecting the quality, richness and thematic diversity of the research carried out by IPGP teams.

Team Department

Presentation of the assignment team and Department.

The IPGP's Volcanological and Seismological Observatories (VSO) are part of the INSU's (CNRS) "Service national d'observation en volcanologie" (SNOV). The missions of the VSO are to 1) Operate observation/monitoring networks for dangerous active French volcanoes in their regional geodynamic and seismic context; 2) Monitor and detect changes in behavior and activity levels to analyze the criticality of the systems, the impact of volcanic activity on the environment and the probability of dangerous phenomena; 3) Transmit scientific alerts on observed phenomena and possible dangerous scenarios to

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the authorities in charge of civil protection; 4) Contribute to knowledge leaps via fundamental research on volcanic systems; and 5) Regularly disseminate information and knowledge to all stakeholders and the general public, with the aim of raising awareness and preventing risks. The IPGP's VSOs regularly publish VONA messages as part of the ICAO's volcanic ash warning system, participate in the Caribbean tsunami warning system (UNESCO) and are part of WOVO (World Organisation of Volcano Observatories). They are the focal points for communication on volcanoes in France and for French civil protection.

The staff recruited will be members of the IPGP's Marine Geosciences research team and of the IPGP's volcanological and seismological observatories (OVS). The work will be carried out at the Piton de la Fournaise Volcanological Observatory (OVPF) on Reunion Island, which is a research and monitoring unit of the Institut de Physique du Globe de Paris within the OVS with 5 researchers (3 from the Volcanic Systems team, 1 from the team and 1 from the IPGP Marine Geosciences team), 3 research engineers, 4 study engineers, 2 assistant engineers and 1 manager. The OVPF is responsible for monitoring the volcanic activity of the Piton de la Fournaise and seismic activity in the area. Since 2020, the OVPF has also been in charge of operational monitoring of Mayotte's volcano-seismological activity as part of REVOSIMA. In addition to this main mission, the OVPF has two other missions: research in the fields of seismology, geophysics and petrology, and the dissemination of knowledge.

The Marine Geosciences team at IPGP is made up of a dozen permanent researchers, several engineers in charge of the team's instrumental facilities and IT, an administrative staff and several PhD and post-doctoral students. The team masters a wide range of techniques, including structural geology, petrology, tectonics, numerical modeling and marine seismology. The team's research activities are based on multidisciplinary data acquired worldwide on-board research vessels. These data are then analyzed on land using advanced methods. The team maintains and develops instruments adapted to seabed observations thanks to its marine instrument park, and is involved in the operation of seabed observatories off the Azores and Mayotte. The team works on three main themes: 1) the formation of mid-ocean ridges and transform faults, 2) subduction zones, 3) intraplate deformation and volcanism, and 4) the observation of active terrestrial processes and oceanic domains via seafloor observatory data.

Missions

> Presentation of the missions within the context

In response to the seismo-volcanic crisis off Mayotte that began in May 2018, the Prime Minister's office and the ministries entrusted the mission of monitoring this volcanic area to the IPGP, so that it could set up the Réseau de surveillance volcanologique et sismologique de Mayotte (REVOSIMA). The Mayotte Volcanological and Seismological Monitoring Network (REVOSIMA) is operated by the IPGP with the support of BRGM, and is under the responsibility of the Piton de la Fournaise Volcanological Observatory (OVPF-IPGP) and BRGM's regional office in Mayotte. Data for this monitoring network are produced by a large consortium of French scientific partners (IPGP and Université Paris Cité, BRGM, IFREMER, CNRS, BCSF-RéNaSS, ITES and Université de Strasbourg, IGN, ENS, SHOM, TAAF, Météo France, CNES, Université Grenoble Alpes and ISTerre, Université Clermont Auvergne, LMV and OPGC, Université de La Réunion, Université Paul Sabatier, Toulouse and GET-OMP, Université de la Rochelle, Université de Bretagne Occidentale, Université Paris Saclay, IRD and collaborators) and funded by the French government (Ministère de l'enseignement supérieur, de la recherche et de l'innovation, Ministère de la Transition écologique et solidaire, Ministère de l'Intérieur, Ministère des Outre-mer).

> Number of agents

At the OVPF, where the work will be carried out, the team is made up of 15 permanent staff (5 researchers, 9 engineers and assistant engineers and 1 manager).

> Position of responsibility

The position is attached to the REVOSIMA Resident Marine Data Manager position.

> For researchers: research project, European project (ERC, Marie Curie...)

Mayotte volcanological and seismological monitoring network (REVOSIMA)



Activities

> Description of the activities

In the context of REVOSIMA, the aim of the position is to further develop and organize the marine part of the monitoring of Mayotte's volcano-tectonic activity, in order to track this activity and understand the relationship between seismicity, tectonic and volcanic structures, deformation processes and fluid migration. As this volcano-tectonic crisis is underwater, the acquisition of geophysical and geochemical data at sea is essential to monitor and understand its activity.

> Main and Secondary

- Give priority to the submission in 2026 or early 2027 of an EMSO (European Multidisciplinary Seafloor and water column Observatory, https://emso.eu/what-is-emso/) application for the Mayotte submarine volcanic zone, then act as scientist-in-charge for this site if the application is accepted.

- Participate in the annual offshore campaign (REVOSIMA MAYOBS33 in 2025; another campaign in 2026), during which a seismological-geodetic seabed network will be recovered/redeployed, dredging will be carried out and various types of data such as bathymetry and geochemical measurements of the water column will be acquired.

This involves:

- Follow up mission reports from the MAYOBS33 offshore campaign.
- Work on DOIs / metadata for campaign files beyond the standard files.
- Work on the analysis of marine data produced by REVOSIMA campaigns at sea, in order to better understand activity in the area.
- Coordinate/contribute information (texts, figures) concerning marine data for REVOSIMA publications (daily review, monthly bulletin, campaign notes and reports, CSS meetings, annual workshop).
- Participate in REVOSIMA governance (Monitoring committee, Working groups).
- Participate as a marine geology expert in meetings of the IPGP Volcanology Expert Committee.

Expected Skills

> Specific training

PhD in Earth Sciences or Marine Geosciences

> Computer tools

- Marine geophysical data processing,
- Processing and analysis of marine geophysical and marine geoscience data.
- Knowledge of marine geosciences and volcanology.
- Interest in marine geophysics and its operational aspects (preparation of campaigns, maintenance of instrumental networks, involvement in the design of new networks).
- Experience of scientific missions at sea and experimental geophysical missions with instrument deployment.
- Software: office automation, python, Matlab, GIS QGIS, Kingdom software, Globe, database.
- Languages: good knowledge of spoken and read English is recommended.



> Professional qualities

- Be autonomous, rigorous, organized and have good analytical skills.
- Enjoy working in a small team, have good interpersonal skills to interact effectively with fellow engineers and researchers in charge of networks and projects.
- Write mission reports and oceanographic campaign projects for funding.
- Promote research and development work (publications, conference presentations, data distribution with metadata and DOI).
- Ability to supervise trainees

Obligations and risks

> Work schedules

Monday to Friday between 8am and 5pm, total of 38h50 per week

> Work attendance

The person recruited will take part in REVOSIMA's H24 voluntary on-call duty, which is shared with that of the OVPF, for routine identification of seismicity, monitoring of network status and dispatch of daily activity bulletins (on average one week every 15 weeks).

In the event of an upsurge in volcanic activity in Mayotte, in support of REVOSIMA, participate in the analysis and scientific management of the activity, like the CNAP staff at IPGP.

> Professional trips

The candidate will be required to carry out oceanographic monitoring and research missions lasting from 1 to 6 weeks in Mayotte in the Indian Ocean, field missions in Mayotte and La Réunion, professional missions to France, in particular Paris for discussions and the annual workshop to present REVOSIMA's activities and results, and even to Europe as part of the EMSO project.

Training and experience required

> Minimum of 1-2 years experience

> Education level or diploma

University doctorate, PhD

How to apply

> CV and cover letter

> Deadlines for application: 6 June 2025

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