Institute of Environmental Assessment and Water Research

CSIC
Consejo Superior de Investigaciones Científicas

Senior Research Technician – Atmospheric aerosol particles Instrumentation and Measurements

(CSIC Professional Profile M2)

The role

The successful candidate will support a research project focused on advancing our understanding of atmospheric mineral dust and its influence on the Earth's climate system. The role involves contributing to field and laboratory activities aimed at quantifying the mineralogy, chemical composition, particle number size distribution (PNSD), optical properties, and radiative effects of Saharan dust in key outflow regions.

The candidate will contribute to the installation and maintenance of the instruments and data collection during the 2-year measurement campaign. The instruments will be installed at three sites in Spain, namely: Montsec (Agér, Catalunya), Sierra Nevada (Granada) and Izaña (Tenerife).

Key responsibilities include:

- Assisting with the installation, calibration, and maintenance of scientific instruments used for atmospheric particles measurements.
- Participating in field campaigns to collect and analyze aerosol samples.
- Performing data acquisition, processing, and quality control of instrument outputs.
- Supporting laboratory analyses related to dust composition and particle characteristics.
- Collaborating with the research team to contribute to scientific reports and publications.

This position offers hands-on experience in atmospheric science, aerosol measurement techniques, and climate research instrumentation within an international research environment.

What do we look for?

- ### Qualifications
  Educational Background:
  Required:
  Bachelor's degree in Physics, Environmental Sciences, Chemistry, Geology, Meteorology, Engineering, or a related field, or, Advanced Vocational Training qualification (Higher-Level Technician)

- ### Professional experience
  The selected candidate is not expected to have prior specialization in atmospheric science or atmospheric aerosol particles research, as training will be provided during the course of the project.

  However, previous experience or familiarity with scientific instrumentation, aerosol measurements, or environmental data acquisition will be considered an advantage. The position is suitable for a motivated individual eager to develop technical and research skills in the field of atmospheric observations and climate studies.

- ## Competences

Technical Competences:

- Basic understanding of physical or environmental measurement principles.
- Ability to learn the operation, calibration, and maintenance of atmospheric and laboratory instruments (e.g., nephelometers, photometers, HI-VOL samplers).
- Familiarity with data acquisition systems and basic data management.
- Willingness to acquire skills in data processing, analysis, and visualization using software tools such as Python, MATLAB, or R.
- Capacity to follow experimental protocols, record procedures, and ensure data quality and traceability.
- Interest in fieldwork and the ability to assist in the preparation, setup, and execution of measurement campaigns.

Interpersonal Competences:

- Ability to work effectively as part of a multidisciplinary research team.
- Good communication skills and willingness to collaborate with researchers and technical staff.
- Responsibility and commitment to the accurate execution of experimental and technical tasks.
- Adaptability and a proactive attitude toward learning new methods and technologies.
- Capacity to work independently under supervision once trained.

Working conditions

- **Contract duration**: **36 months**
- Estimated annual gross salary: Competitive, in accordance with CSIC regulations, including applicable social security and benefits.
- Target start date: 1 February 2026

The group

Environmental Geochemistry and Atmospheric Research (EGAR) Group. The EGAR group is a research team within the IDAEA-CSIC whose work focuses on understanding the chemical and physical processes involved in atmospheric pollution — including emission, transport, fate, and removal of pollutants — and their impacts on human health, ecosystems, and climate.

The group is located at IDAEA in Barcelona (C/ Jordi Girona 18-26, 08034 Barcelona).

The institute

The **Institute of Environmental Assessment and Water Research (IDAEA)** is an environmental research center of the **Spanish National Research Council (CSIC)**. Distinguished by its interdisciplinary approach, our research spans chemistry, biology, toxicology, hydrology, and geology, addressing a wide range of environmental challenges.

At IDAEA, we investigate the origin and health effects of emerging contaminants, the atmosphere-ocean exchange and biogeochemistry of anthropogenic chemicals, paleoclimatic changes, and the use of chemometric tools for big data analysis. Our expertise also extends to water resource management, air quality issues, and circular economy strategies.

Our research is grounded in the One Health concept, recognizing the deep interconnection between the health of humans, animals, plants, and ecosystems. With a strong capacity for interdisciplinary research, we tackle environmental challenges at local, regional, and global scales.

Founded in 2008 and structured into two main departments—Environmental Chemistry and Geosciences—IDAEA was recognized as a "Severo Ochoa" Center of Excellence in 2020, underscoring our scientific leadership and global impact.

We offer a diverse and inclusive environment where no discrimination against disability, gender, nationality, religion or sexual orientation will occur during the selection process.

How to apply?

Those interested may email their **CV** and **motivation letter** to **Marco Pandolfi** at marco.pandolfi@idaea.csic.es, adding “**DUSTPRO contract”** to the email subject.

Deadline: 10 December 2025