

Scientist - Data assimilation for global atmospheric composition

1. Position information

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| Vacancy No.: VN15-58 | Department: Copernicus Services |
| Grade: A2 | Section: CAMS |
| Job Ref. No.: STF-PL/15-58 | Reports to: Deputy Head of CAMS |
| Publication Date: 25 November 2015 | Closing Date: 19 January 2016 |

2. About ECMWF *

ECMWF is both a research institute and a 24/7 operational service, producing and disseminating numerical weather predictions to its Member States. ECMWF carries out scientific and technical research directed to the improvement of its forecasts, collects and processes large amounts of observations, and manages a long-term archive of meteorological data. Satellite and in situ observations provide the information for up-to-date global analyses and climate reanalyses of the atmosphere, ocean and land surface.

For details, see www.ecmwf.int/.

ECMWF has been entrusted to operate the Copernicus Atmosphere Monitoring Service (CAMS) and the Copernicus Climate Change Service (C3S) on behalf of the European Commission until the end of 2020. Copernicus is the European Union (EU) flagship Earth-observation programme. The programme ensures operational monitoring of the atmosphere, oceans, and continental surfaces, and will provide reliable, validated information services for a range of environmental and security applications.

3. Summary of the role

The post-holder will work in the development team of the Copernicus Atmosphere Monitoring Service (CAMS) on the data assimilation of satellite observations of atmospheric composition species in the global assimilation and forecasting system. He or she will work as part of a team to monitor and improve the impact of current satellite instruments and to implement and evaluate the use of new instruments, such as those from the European Sentinel missions.

4. Main duties and key responsibilities

The post-holder will monitor and further improve the use of satellite observations in the data assimilation scheme used for CAMS, which is embedded in the composition version of ECMWF's Integrated Forecasting System (C-IFS). He or she will work with internal ECMWF staff and externally contracted experts to improve the data assimilation code as well as introduce new observational data streams, such as for the upcoming Sentinel missions. He or she will work as part of a team of data assimilation experts and have initially particular responsibilities for the aerosol assimilation aspects.

Key responsibilities:

- To maintain and further improve the CAMS data assimilation system for atmospheric composition
- To introduce new observational data streams in the CAMS global data assimilation and forecasting system, such as for the Copernicus Sentinel-3 and Sentinel-5p platforms, which are scheduled for launch in late 2015 and early 2016
- To integrate mature system developments prepared by externally contracted experts into C-IFS
- To adapt the data assimilation scheme, including tangent-linear and adjoint code, for new model developments
- To monitor the performance of the operational global CAMS data assimilation system and troubleshoot when necessary in collaboration with the CAMS global production team
- To support the production of CAMS reanalyses that will re-process observations of atmospheric composition for approximately the last two decades
- To assist the CAMS user support team in the case of user queries directly related to the expertise of the post-holder

5. Personal attributes

- Excellent interpersonal and communication skills, preferably in an international environment
- Ability to work under pressure and interact with demanding users
- Dedication and enthusiasm to work in a team
- Ability to collaborate with both internal and external experts who will support the development of the CAMS global data assimilation scheme
- Good analytical and problem-solving skills with a proactive approach

6. Qualifications and experience required

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| Education | A PhD degree or equivalent professional experience in meteorology, geosciences, or a related subject with a background in data assimilation. |
| Experience | <p>Experience with developing and maintaining large scientific codes.</p> <p>Experience with data assimilation for atmospheric composition is desirable.</p> <p>Experience with developing codes on high-performance computing facilities is desirable.</p> <p>Programming experience with Fortran or C, and use of modern scripting languages, such as Python, in a UNIX computing environment.</p> |

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| Knowledge, Skills and Language | Candidates must be able to work effectively in English and interviews will be conducted in English. A good knowledge of one of the Centre's other working languages (French or German) would be an advantage. |
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7. Other information

Grade remuneration

The successful candidate will be recruited at the **A2** grade, according to the scales of the Co-ordinated Organisations and the annual basic salary will be **£54,776** net of tax. This position is assigned to the employment category STF-PL as defined in the Staff Regulations.

Full details of salary scales and allowances are available on the ECMWF website at www.ecmwf.int/en/about/jobs, including the Centre's Staff Regulations regarding the terms and conditions of employment.

Starting date: As soon as possible.

Length of contract: Four years.

Location: The position will be based in the Reading area, in Berkshire, United Kingdom.

8. How to apply

Please apply by completing the online application form available at www.ecmwf.int/en/about/jobs.

ECMWF has an Equal Opportunities Policy and applications from all suitably qualified candidates are welcome.

Staff are usually recruited from among nationals of the Member States and Co-operating States.

Staff from non-ECMWF States may be considered in exceptional cases where there is a strong need for a particular competency.

* **The ECMWF Member States are** Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Serbia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

The ECMWF Co-operating States are Bulgaria, Croatia, Czech Republic, Estonia, former Yugoslav Republic of Macedonia, Hungary, Israel, Latvia, Lithuania, Montenegro, Morocco, Romania and Slovakia.