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# VN 20/22 RESEARCH FELLOWSHIP: USE OF ATMOSPHERIC MOTION VECTORS IN NWP

The Research Fellow will join the Earth System Assimilation Section in the Research Department at ECMWF (Reading, UK). The work will be centred around the enhanced exploitation of wind information (Atmospheric Motion Vectors, AMVs) derived from polar and geostationary satellite observations of clouds and water vapour. Working in a team at the forefront of the use of satellite data in Numerical Weather Prediction, the fellow will be in charge of advancing the use of AMVs within ECMWF's operational global weather forecast system.

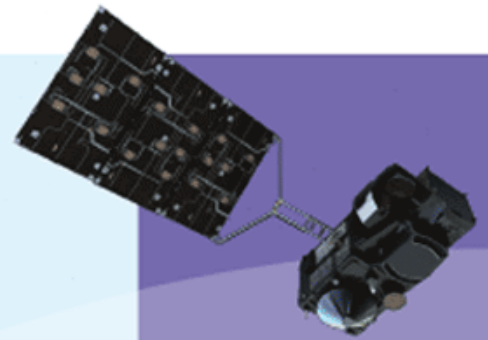
ECMWF is an inter-governmental organisation supported by 34 Member and Co-operating States. It is both a research institute and a 24/7 operational service, producing and disseminating numerical weather predictions to its Member States. ECMWF carries out scientific and technical research directed to the 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](http://www.ecmwf.int).

## DUTIES

Monitoring and assessment of the quality of AMVs from different geostationary and polar satellites (e.g., Meteosat, GOES, Himawari, NOAA, Metop) in the operational ECMWF assimilation system. This includes cross-characterisation with other wind observations, such as from Aeolus, as well as preparation for AMVs derived from Meteosat Third Generation.

Assessment of the interaction between assimilation of AMVs and the derivation of wind information through the direct assimilation of cloud-affected radiances.

Liaison with space agencies (particularly EUMETSAT) regarding AMV processing developments and new advances.



### LOCATION

European Centre for  
Medium-Range  
Weather Forecasts,  
Shinfield Park Reading,  
Berkshire

RG2 9AX UK



### QUALIFICATIONS

University degree in  
Physics, Maths or  
Meteorology or  
equivalent



### LANGUAGES

Candidates must be able to work effectively in English and a good knowledge of one of the ECMWF's other working languages (French or German) would be desirable.



### DEADLINE

29 April 2020

Research and development targeted at advanced exploitation of AMVs in the ECMWF system, for instance through novel ways of interpreting the AMV information, enhanced treatment of random and systematic errors, or through an extended and refined use of AMV datasets.

## SKILLS AND EXPERIENCE

Strong computing skills are essential, with the job requiring the ability to (a) understand and modify the forecasting system, which is mainly written in Fortran-90 and Unix scripts, and (b) make statistical analyses and scientific figures using tools like IDL, Python or Metview;

Good interpersonal and team working skills are also required, with dedication and enthusiasm to work independently as well as in a small team. Strengths in scientific analysis, synthesis and presentation are required, with good time-management skills being highly desirable;

The Fellow should have a good university degree in Physics, Maths or Meteorology or equivalent and relevant research experience, ideally including PhD;

Experience in satellite data analysis and/or data assimilation is particularly desirable.

## EMPLOYMENT CONDITIONS

**DURATION:** The Fellowship is offered initially for one-year, with the possibility of additional two-year extensions, up to a maximum of five years. The start date is expected to be 1 October 2020, or as soon as possible thereafter.

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 £60,590.64 net of tax. This position is assigned to the employment category STF-PS as defined in the Staff Regulations of ECMWF, with the exception of the removal expenditure which is reimbursed within the agreed ceiling laid down by EUMETSAT.

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

The successful applicant and members of their family forming part of their households will be exempt from immigration restrictions.

EUMETSAT is committed to providing an equal opportunities work environment for men and women. Please note that only nationals of EUMETSAT Member States may apply. The EUMETSAT Convention requires that Staff shall be recruited on the basis of their qualifications, account being taken of the international character of EUMETSAT.

## ABOUT EUMETSAT

EUMETSAT is Europe's meteorological satellite agency. Its role is to establish and operate meteorological satellites to monitor the weather and climate from space - 24 hours a day, 365 days a year. This information is supplied to the National Meteorological Services of the organisation's Member and Cooperating States in Europe, as well as other users worldwide.

EUMETSAT also operates several Copernicus missions on behalf of the European Union and provide data services to the Copernicus marine and atmospheric services and their users.

As an intergovernmental European Organisation, EUMETSAT has 30 Member States (Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, The Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.)

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