



UNIVERSITY OF LEEDS

## CANDIDATE BRIEF

**Research Fellow in Satellite Observations of African Tropical Convection,  
National Centre For Atmospheric Science**



**Salary: Grade 7 (£33,797 – 40,322 p.a.)**

Please note due to funding restrictions an offer will not be made above £36,914 p.a.

**Reference: ENVEE1417**

**Fixed term until 31 December 2021**

**Interviews to be held on 9 September 2020**

**We will consider job share / flexible working arrangements**

# Research Fellow in Satellite Observations of African Tropical Convection

## National Centre for Atmospheric Science (NCAS), School of Earth and Environment, Faculty of Environment

**Do you have a background in meteorology, applied mathematics, physics or a related field? Are you interested in using satellite data to better understand convective clouds? Do you want to contribute to a high impact project improving forecasting capability in Africa? Do you want to further your career in the National Centre for Atmospheric Science and one of the UK's leading research-intensive Universities?**

We seek a research scientist with interests in satellite remote sensing of tropical convection to contribute to the African Science for Weather Information and Forecasting Techniques (SWIFT) project, which combines fundamental scientific research into African weather with practical programmes to improve forecasting capability at partner institutions in Senegal, Ghana, Nigeria, and Kenya. This post will similarly include both basic research into using satellite remote sensing data to improve physical understanding of the dynamics of convective clouds over tropical Africa, as well as training African scientists on using satellite products for nowcasting and research. Depending on the interests of the successful candidate, the post could include joining existing collaborations on applying machine learning techniques to satellite-based nowcasting, and could also make use of the Himawari data in anticipation of Meteosat Third Generation.

This post is based at the National Centre for Atmospheric Science (NCAS) at University of Leeds and will be supervised by Dr Jennifer Fletcher and Professor Alan Blyth. The National Centre for Atmospheric Science is the research centre of the Natural Environment Research Council charged with providing research expertise and infrastructure in atmospheric science. The African SWIFT project is part of a growing and long term emphasis in NCAS on application-focused research in the area of Official Development Assistance (ODA). In particular, we have a growing number of projects and overseas partners in the fields of weather and air quality hazards. Whilst this particular post within the African SWIFT project is available initially for a fixed period of 15 months, we are keen to recruit a candidate who will have the skills and capability to develop further in the role and to take an active part in our developing strategy to address research applications of ODA relevance.



You will hold a PhD in a physical science or be very close to attaining it and will have a strong track record of research commensurate with your experience. You will have excellent qualitative and quantitative research skills, communication skills, and an ability to manage your own time.

You will be willing to learn the technical details of implementing an existing nowcasting platform, and restrictions around COVID-19 permitting, you will take two to four trips to Africa, ranging from about four days to two weeks, to train scientists in partner institutions on those details, but alternatives such as virtual meetings might be required.

## What does the role entail?

As a Research Fellow, your main duties will include:

- Working as part of the GCRF African SWIFT project team to ensure that outputs for Work Package 3 – satellite remote sensing – are delivered;
- Evaluating EUMETSAT's NoWCasting Satellite Application Facility (NWCSAF) using quantitative methods;
- Learning from colleagues at NCAS how to set up the NWC SAF (accessing EUMETCAST data including setting up receiving dish, running software, generating plots) and using that knowledge to assist African partner scientists in doing the same, both through occasional in-person (COVID-19 restrictions permitting) visits to African countries and through phone/web communications;
- Generating and pursuing original research ideas in using instruments on satellites to understand convection, in collaboration with other scientists in Work Package 3;
- Communicating or presenting research results through publication and reports, including first author papers and presenting research findings at international conferences;
- Maintaining your own continuing professional development and acting as a mentor to less experienced colleagues as appropriate;
- Contributing to the research culture of NCAS and of ICAS in the School of Earth and Environment, where appropriate.

These duties provide a framework for the role and should not be regarded as a definitive list. Other reasonable duties may be required consistent with the grade of the post.





## What will you bring to the role?

As a Research Fellow you will have:

- A PhD or near completion - i.e. the initial thesis needs to have been handed in at the point of application in a physical science;
- The ability and willingness to travel to partner countries in Africa throughout the project;
- A proven track record of peer-reviewed publications in high impact factor journals;
- Excellent written and verbal communication and presentation skills;
- Good time management and planning skills, with the ability to meet tight deadlines, manage competing demands and work effectively under pressure without close support;
- A proven ability to work well both individually and in a team;
- A strong commitment to your own continuous professional development;
- Willingness and ability to travel to Africa;
- Abilities in computer programming and data analysis, including the use of Linux.

You may also have:

- Expertise in convective cloud physics;
- Expertise in analysis of data from satellite instruments;
- Experience setting up and troubleshooting hardware used in physical sciences (e.g. receiving dishes for satellite data);
- A track record of high quality publications;
- Knowledge of tropical meteorology;
- Experience or willingness to learn machine learning methods.

## How to apply

You can apply for this role online; more guidance can be found on our How to Apply information page. Applications should be submitted by **23.59** (UK time) on the advertised closing date.

To explore the post further or for any queries you may have, please contact:

**Dr Jennifer Fletcher, Senior Research Scientist**

Email: [jennifer.fletcher@ncas.ac.uk](mailto:jennifer.fletcher@ncas.ac.uk)



## Additional information

Find out more about the [National Centre for Atmospheric Science](#)

Find out more about the [Faculty of Environment](#)

Find out more about [Athena Swan](#) in the Faculty

### Candidates with disabilities

Information for candidates with disabilities, impairments or health conditions, including requesting alternative formats, can be found on our [Accessibility](#) information page or by getting in touch with us at [disclosure@leeds.ac.uk](mailto:disclosure@leeds.ac.uk).

## Criminal record information

### Rehabilitation of Offenders Act 1974

A criminal record check is not required for this position, however, all applicants will be required to declare if they have any 'unspent' criminal offences, including those pending.

Any offer of appointment will be, in accordance with our Criminal Records policy. You can find out more about required checks and declarations in our [Criminal Records](#) information.

