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| Research Council | NERC | Band | 6 |
| Post/Job Title | INSTRUMENT OPERATOR/DATA MANAGER | | |
| Division/Department | ARSF | Full/Part Time/Job Share | Full time |
| Closing Date | 13 July 2009 | Interview Date | 31 July 2009 |

BACKGROUND

The Airborne Research & Survey Facility (ARSF) is a key component of NERC National Capability, and is part of a wide portfolio of services and facilities serving the environmental research communities of the UK Universities, and NERC Research Centres.

ARSF, which operates a highly-modified Dornier 228-101 research aircraft, provides the UK environmental science community with high quality data that contributes to the development and validation of Earth-system models. The Facility supports a wide range of interdisciplinary environmental research across the spectrum of the NERC remit and scientific sectors, providing data that is critical to fundamental research into the natural environment and its physical, biological and chemical processes. ARSF contributes to all of the science and technology themes that are the core of the current NERC Science Strategy 2007-2012, and to the strategic goals of the National Centre for Earth Observation. The Facility is capable of operating world-wide in support of Research and Consortium Grants which contribute to international research programmes.

Additional information can be found at <http://arsf.nerc.ac.uk/>

This role is based at the ARSF Operations Office, Gloucester Airport, Gloucestershire.

PURPOSE

This role is driven by a growing requirement for acquisition and management of high quality airborne remotely-sensed and in-situ data.

The primary role of the ARSF is the generation of high quality scientific data in support of NERC funded research. In the last few years the Facility has developed by means of demonstrated world-wide capability and additions to its core sensor suite which in turn has stimulated demand and increasingly novel scientific applications. This has resulted in the growth of the task of airborne instrument operation and data acquisition – and subsequently managing data transfer from the instrument to the data processing and analysis facility - has grown beyond the reasonable capability of existing staff. This task is continuous, and includes negotiation with end users, interpretation of their requirements, planning of data acquisitions, in-flight operation of multiple instruments, download and quality assessment of data, and contributing to calibration and maintenance of the sensors.

The developments described above have thus created a requirement for an instrument operator /data manager, who can work under the guidance of the Instrument Specialist in routine generation and promulgation of scientific data from aircraft instrumentation, and in the maintenance and improvement of both sensors and data management and computer systems.

The ARSF routinely operates in UK and Europe (Greenland to Cyprus); deployments in support of international research projects have taken the Facility to South America, East Africa and Australia. The post holder should thus be willing and able to participate in such campaigns.

Main areas of responsibility will include:

- Airborne operation, maintenance and calibration of the ARSF instrument suite for the acquisition of digital data;
- Mission planning and management;
- Quality control and management of data output
- User liaison and technical support

MAIN DUTIES

The main duties of this role:

- Airborne data acquisition - mission planning and operation of hyperspectral and thermal imaging systems, lidar and digital cameras;
- Data management – analyse and quantify data integrity, configure and backup raw datasets, generate metadata and despatch output the post processing facility;
- Instrument calibration/maintenance – Specim Eagle/Hawk hyperspectral imaging system; Leica ALS50 lidar system, ITRES tabi-320 thermal Imager, RCD105 digital camera, Applanix GPS/inertial navigation system;
- Provision of technical advice – customer liaison and support; assist in development/integration/certification of new and user-provided instruments.

Secondary duties:

- Managing and monitoring of customer QC returns;
- Compilation of operational statistics and Output & Performance Measures;
- Management and update of ARSF website and PR material;

KNOWLEDGE, SKILLS & EXPERIENCE

It is essential for applicants to demonstrate:

- Experience in operation and maintenance of remote sensing /industrial imaging systems or similar electronic /electromechanical equipment;
- Demonstrated IT and PC skills
- Strong communication skills, with fluent written and oral communication and the ability to write clear technical documentation;
- A high degree of motivation, self-reliance, initiative and organisational ability;
- A positive approach to team working, flexibility and change management;
- Mentally and physically fit to spend time in an aircraft and on overseas detachments.

Desirable Skills

The following will be an advantage:

- Familiarity with scientific data acquisition systems, particularly airborne instrumentation;
- Experience in airborne remote sensing or airborne survey or experience in an aviation (or other safety critical) operational environment;
- Experience in the use of GPS navigation systems;
- Experience in handling of real-time or post-processed environmental or geophysical data.

FURTHER INFORMATION

Further information on this role is available from Carl Joseph, ARSF Chief Pilot/Operations Manager, Tel: 01452 859945, Email: cjos@nerc.ac.uk OR Laura Hay JRU Tel: 01793 867249 Email: laura.hay@ssc.rcuk.ac.uk

APPLICATIONS

Individuals wishing to be considered for this post should complete a JRU application form and return it to the JRU by the closing date. Link to application documents can be found at:
<http://jru.rcuk.ac.uk/AllVacancies/default.htm>

Internal applications from non-permanent employees can only be considered if they were recruited to their present post through fair and open competition and have the necessary entry qualifications for the band for which they are applying.

JRU Ref:147/09

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