

AIRBORNE RESEARCH & SURVEY FACILITY (ARSF)

<http://arsf.nerc.ac.uk>



ANNOUNCEMENT OF OPPORTUNITY 2014 MALAYSIA CAMPAIGN (DIRECT ACCESS) CLOSING DATE FOR RECEIPT OF PROPOSALS: **FRIDAY 29 NOVEMBER 2013**

The Airborne Research & Survey Facility (ARSF) invites direct access applications for projects in Malaysia and on the outward leg. The specific dates are TBA depending on the applications but they will be centred around a core funded research grant project. The most likely dates will be **November and October 2014**. Remote sensing will be possible in the Malaysia region and on the transit to Malaysia from the UK. Atmospheric projects that require a roll-change will be possible after completion of the remote sensing work in Malaysia. The Natural Environment Research Council will provide flying time and data processing for approved projects, at no cost to the applicant (*applicants will need to provide their own resourcing for freight costs, fieldwork and data analysis*).

Eligible persons wishing to use the facility in the 2014 Season are invited to submit detailed proposals, including a supporting scientific case, by Friday 29 November 2013. Only the latest application form and guidance notes should be used and the science case and pathway to impact must be included on the application form (section 20 and 21, respectively). The ARSF Steering Committee will review the applications using standard NERC criteria: successful applicants will be notified by February 2013 of their inclusion in the flying campaign. Eligibility information is available via <http://arsf.nerc.ac.uk/howtoapply/eligibility.asp>.

The ARSF will assist as much as possible with advice prior to submission (an informal pre-submission may also be considered). Additionally, an opportunity (~ 1 week) for applicants to respond to reviewer's comments prior to the moderation of grades by the steering committee will be offered.

Applicants **MUST** contact the Head of the ARSF (01452 859945/ [cjios@nerc.ac.uk](mailto:cjos@nerc.ac.uk)) or Science/Operations Coordinator (01452 859945/ gaew@nerc.ac.uk) to discuss requirements and scheduling and issue of an Application Form before and submitting their application.

The ARSF Dornier 228-101 research aircraft and core instruments support environmental research, training, survey and monitoring in many areas:

- **Polar, Terrestrial, Freshwater, Earth and Marine sciences and science-based Archaeology**, through provision of multispectral high-resolution digital and analogue imagery and by the use of the aircraft for geophysical surveys; marine applications are possible over coastal and oceanic waters due to a ~5 hour endurance/~1000 nautical miles range; and
- **Atmospheric science**, through the provision of atmospheric measurements over urban and regional areas thus complementing the capabilities of larger atmospheric science platforms, and by means of support for development of new and novel instruments.

Instrumentation (further information at <http://arsf.nerc.ac.uk/instruments/>)

The core remote sensing instrument suite includes the following:

Leica ALS50-II lidar system (1064nm; hit rate > 1/m²; ~15cm in Z) available simultaneously with the hyperspectral system,
RCD105 39Mpx medium format digital frame camera, integrated with the lidar navigation system,
Specim Owl - full data cube with 100 spectral bands over wavelengths 7.6 - 12.5um with 384 spatial pixels across the swath,
Specim AISA Eagle/Hawk Hyperspectral Imaging System - full data cube with ~500 spectral bands over wavelengths 400-2400nm, and ~1000 spatial pixels in the VIS/NIR and ~300 spatial pixels in the SWIR across the swath **or a**
Specim Fenix Hyperspectral Imaging System - full data cube with ~620 spectral bands over wavelengths 400-2400nm, and ~384 spatial pixels VIS/NIR/SWIR; All hyperspectral imaging spectrometers feed into a dedicated processing line provides radiometrically and geometrically corrected digital data.

Atmospheric instrumentation:

The Dornier 228 offers a versatile platform for user-provided instruments that can be accommodated internally in the cabin (subject to crew or certification acceptance). It should be noted that A **GRIMM optical particle counter** is permanently fitted to the aircraft. An **AIMMS-20** turbulence probe and **49i** Ozone instrument may also be available as core instruments.

Potential users are encouraged to contact:

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