AIRBORNE RESEARCH & SURVEY FACILITY (ARSF)

http://arsf.nerc.ac.uk

NATURAL ENVIRONMENT RESEARCH COUNCIL

ANNOUNCEMENT OF OPPORTUNITY
2010 FLYING SEASON: UNITED KINGDOM & EUROPE (DIRECT ACCESS)
CLOSING DATE FOR RECEIPT OF PROPOSALS: FRIDAY 9 OCTOBER 2009

The Airborne Research & Survey Facility (ARSF) invites direct access applications for UK and European flying in the 2010 (February –November) flying season, for the following periods:

1 February to 10 May; 1 June to 10 September; 1 October to 1 November .

(see 2010 Greece & E Mediterranean Special AO for intervening dates 17 May to 30 May & 13 September to 26 September).

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 fieldwork and data analysis*).

Eligible persons wishing to use the Facility in the 2010 Season are invited to submit detailed proposals, including a supporting scientific case, by Friday 9 October 2009. Only the latest application form and guidance notes should be used. The ARSF Steering Committee will review the applications using standard NERC criteria: successful applicants will be notified by January 2010 of their inclusion in the flying campaign. Eligibility information is available via http://arsf.nerc.ac.uk/howtoapply/eligibility.asp .

Applicants MUST contact the ARSF Operations Manager (01452 859945/ 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 research aircraft and core instruments support environmental research, training, survey and monitoring in many areas:

- **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/~1000nm 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.

Opportunistic Applications: Although normal project applications for flying year 2010 must be submitted by 9-10-2009, the ARSF is able to consider applications based on occurrences outside the applicant's control, e.g. floods, landslips etc. An absolute minimum of 48 hours notice is required for such opportunistic flights and such notice must be supported by a short scientific justification and provision of flight parameters and maps.

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

The core remote sensing instrument suite includes the following:

Specim AISA Eagle/Hawk Hyperspectral Imaging System - full data cube with ~500 spectral bands over wavelengths 400-2400nm, and ~1000 spatial pixels VIS/NIR and ~300 spatial pixels NIR/SWIR; a dedicated processing line provides radiometrically and geometrically corrected digital multispectral data.

Leica ALS50-II lidar system (1064nm; hit rate > 1/m^2; ~15cm in Z) available simultaneously with the hyperspectral system.

RCD105 39Mpx medium format digital frame camera, integrated with the lidar navigation system.

In addition, the following remote sensing instruments can be made available for special applications:

Thermal Broadband Imager *(TABI-320)* – single channel 8-12 microns, 320 spatial pixels.

Large-format RC-10 aerial survey camera with images being supplied in scanned digital form.

Atmospheric instrumentation:

A ***Rosemount probe***, an ***isokinetic air/aerosol intake*** and an ***AIMMS-20 probe*** measuring basic atmospheric parameters (temperature, humidity, wind speed) and turbulence data are available. PMS equipment can be made available by arrangement with the Facility for Airborne Atmospheric Measurements and deployed in the underwing pods. User-provided instruments can be accommodated internally in the cabin and potentially via the underwing wing pylons/ pods and external fuselage hard-points .

Potential users are encouraged to contact:		For additional information, contact:
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