Unit for Landscape Modelling
UNIVERSITY OF CAMBRIDGE

NERC AIRBORNE RESEARCH and SURVEY FACILITY (ARSF) http://arsf.nerc.ac.uk/

NATURAL ENVIRONMENT RESEARCH COUNCIL

ANNOUNCEMENT OF OPPORTUNITY
ETHIOPIAN DEPLOYMENT 2008

CLOSING DATE FOR RECEIPT OF APPLICATIONS: 2 July 2007

A deployment to Ethiopia is planned as a component of the centrally-funded ARSF campaigns in 2008. The deployment will be undertaken primarily in support of a NERC Consortium Grant, located in northern Ethiopia. It is anticipated that this will be for approximately 21 days commencing late January 2008, but the timing may vary due to the need to accommodate user demand, or to exploit favourable weather windows.

There is potential, depending on both demand and security issues, for support of other projects in Ethiopia generally.

Researchers wishing to make use of ARSF services are invited to submit by Monday 2 July 2007:

1. **Detailed proposals, including a supporting scientific case, to be received at Swindon Office; and**
2. **Preliminary Risk Assessments for the ground-based element of the project.**

Please note that the latest application form and guidance notes must be used. Eligibility information and application forms are available via http://arsf.nerc.ac.uk/howtoapply/.

The ARSF Steering Committee will review the applications using standard NERC criteria: successful applicants will be notified in early September 2007 of their inclusion in the flying campaign.

The ARSF will undertake data acquisition, processing of and spectral/lidar data free of charge. It will be the responsibility of the Applicant to ensure that they have sufficient resources available to support the ground-based work and data analysis.

The ARSF supports 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/~1000km range; and
- **Atmospheric science,** through the provision of atmospheric measurements over urban and regional areas, complementing the capabilities of larger atmospheric science platforms.

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

Remote Sensing: The core remote sensing instrument suite comprises an Airborne Thematic Mapper (ATM) and Compact Airborne Spectrographic Imager (CASI-2), and a Specim AISA Eagle/Hawk Hyperspectral imaging system providing data over wavelengths 400-2400nm. A dedicated processing line provides radiometrically and geometrically corrected digital multispectral data. A medium-format digital camera is normally deployed, although a large-format RC-10 aerial survey camera is available for specific applications, such as photogrammetry.

Lidar: in collaboration with Cambridge University's Unit for Landscape Modelling (ULM)**,** a lidar can be deployed simultaneously with the core instrument suite; data processing is undertaken by ULM.

Atmospheric: The ARSF has a standard Rosemount probe; an AIMMS-20 probe measuring basic atmospheric parameters (temperature, pressure,humidity, wind speed) and 3-D turbulence data; an isokinetic aerosol inlet; cabin air inlets; and wing-mounted pods (accommodating standard particle measurement systems). User-provided atmospheric instrumentation can be accommodated via standard 19" racking in a cabin volume of $15m^{3.}$ Some PMS equipment can be made available by arrangement with the Facility for Airborne Atmospheric Measurements.

Potential users are encouraged to contact:
Capt Carl Joseph
Chief Pilot & Operations Manager,
Oxford Airport (Hangar 2),
Kidlington,
Oxon OX5 1RA
Tel: +44(0) 1865 374391,
Email: cjos@nerc.ac.uk

For additional information, contact:
Mr Peter Purcell,
Head NERC Airborne Research Facilities,
Polaris House,
North Star Avenue,
Swindon SN2 1EU
Tel: +44(0) 1793 411649,
Email: ppu@nerc.ac.uk