Who We Are...

Prof. Mathew Williams, Director.

Chris MacLellan, Equipment Manager

Andrew Gray, Operations Manager
The NERC Field Spectroscopy Facility

- Providing support to UK research through:
  - Equipment loans
  - Calibration services
  - Training
  - Optimising equipment for use under different scenarios
  - Advice
  - Collaboration within geosciences
  - Work closely with the Airborne Research Facility
Our Instruments: Spectroradiometers

ASD FieldSpec (350 – 2500 nm)

SVC 1024i (350 – 2500 nm)

Midac M4410 portable FTIR spectrometer
Our Instruments: Sun Photometers

Solar Light Microtops II sun photometers and ozone meters

Cimel CE 318-2 auto-tracking sunphotometer
Our Instruments: Underwater

Walz Diving-PAM
Underwater Fluorimeter

Wetlabs AC-S underwater
hyperspectral absorption

HyperOCR Hyperspectral
Radiometer
Field Spectroscopy In Research

• Field Spectroscopy measures radiance, irradiance, reflectance or transmission properties of vegetation, soil, minerals and water in the natural environment.

• Our Users:
  • Earth observation
  • Plant science and ecology
  • Oceanography
  • Cryosphere science
  • Freshwater ecology
  • Geologists/Volcanologists
A few examples...
Inherent reflectance properties: spectral libraries.

Spectral libraries enable us to “fingerprint” mineral species, allowing remote sensing of minerals or plant species.
Converting reflected radiance images to reflectance.
Validating and calibrating satellite/airborne measurements
Volcanoes/Forest Fires

Characterising gasses within volcanic/fire plumes through absorption spectroscopy.
So, how do I get my hands on a spectroradiometer?

• [http://fsf.nerc.ac.uk/](http://fsf.nerc.ac.uk/)

• Application Deadlines:
  
  • **1st November**: Summer Period Applications - Loans from March to September
  
  • **1st June**: Winter Period Applications - Loans from October to February