**For Official use only**

**Date received:**

**Application number:**

**Alpha rating:**

**ARSF supported:**

Please complete and return to:

**NERC Field Spectroscopy Facility**

**University of Edinburgh**

**Grant Institute**

**James Hutton Road**

**Edinburgh**

**EH9 3FE**

**Tel: 0131 650 5926 Email: fsf@nerc.ac.uk**

*It is a condition of loan that all applicants are expected to present the results of their research at the FSF Users meeting, and all publications arising as a direct result of your loan should fully acknowledge the support of the facility. Failure to do so may jeopardise future loans.*

**1. Principal Investigator (P.I.) / Applicant 2. User (if different from applicant)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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| Name of PI: |
| Status/job title: |
| Address: |
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| Post code:  |
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| User (if different from PI):  |
| Status/job title: |
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**3. Equipment and measurements.**

Please select the instrument(s) you wish to borrow and indicate what types of measurements you will be making.Detailed information regarding instrument specifications is available on our website at <http://fsf.nerc.ac.uk>

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Instrument** | **Wavelength range** |  |  | **Type of measurement** |
| ASD FieldSpec 3 or 4 | 350 - 2500 nm | [ ]  |  | Reflectance | [ ]  |
| SVC HR-1024i | 350 – 2500 nm | [ ]  |  | Radiance | [ ]  |
| GER1500 | 350 – 1100 nm | [ ]  |  | Irradiance | [ ]  |
| GER1500 (under water) | 350 – 1100 nm | [ ]  |  | Underwater radiance/irradiance | [ ]  |
| Cimel Sun Photometer | 7 / 8 channels | [ ]  |  | Underwater reflectance | [ ]  |
| Microtops ozone monitor | 5 channels | [ ]  |  | Underwater absorption/attenuation/CTD | [ ]  |
| Microtops sunphotometer | 5 channels | [ ]  |  | Underwater rad/irrad. & surface irrad. | [ ]  |
| Midac FTIR spectrometer | 5000 – 700 cm-1(2.0 - 14.5 µm) | [ ]  |  | Aerosols | [ ]  |
| Wetlabs AC-S | 400-730nm | [ ]  |  | FTIR Gas analysis | [ ]  |
| Hyper OCR radiometers | 350-950nm | [ ]  |  | FTIR ground radiance/emissivity | [ ]  |
| Diving PAM |  | [ ]  |  |  |  |
|  |
| Ground targets for atmospheric correction of airborne data (Set of 4 – 1 x White; 2 x Black & 1 x Grey (approx 6mx6m wt 40kg)) only for loan with FSF spectroradiometer | [ ]  |
| Field Spectroscopy Accessories - Please Specify: | [ ]  |

**4. Is training required?** (NB if the person USING the equipment has NOT already been trained by FSF, then attending a training course in Edinburgh is compulsory). We provide fully customised, one-to-one training courses tailored to individuals’ needs. We also offer refresher courses for those who have not used the equipment for over 18 months, or if requested.

YES [ ] NO [ ] Refresher course [ ]

**5. Period of Loan** Dates when equipment is required (inclusive)

1st choice:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2nd choice:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**6. Research Project Title** (maximum of 12 words)

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**7. Proposed site(s)** Please provide **place name** and **latitude / longitude** (or national grid area)[[1]](#footnote-1) \_\_\_\_\_\_\_\_\_\_\_

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**8. Other personnel involved in project** (please provide names, affiliation and status)

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**9. Funding type** (tick all that apply). *Please note that loan priority will be assigned to those projects currently in receipt of a NERC Grant or studentship*

**a. Project funding**

NERC Research Grant [ ]  NERC other [ ]  Other academic [ ]  Other [ ]

(specify in section **c**) (specify in section **c**) (please specify below) (please specify below)

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**b. User/studentship funding**

 NERC studentship [ ]  Other studentship [ ]  No associated studentships [ ]

(including NERC CASE or tied studentships)

**c.** **NERC** f**unding details.** If in receipt of NERC funding please provide the full grant or studentship reference number and the title of the project

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**10. Science areas**

**a.** Please indicate which ONE of the following science areas is the most fitting for your application.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Atmospheric | [ ]  |  | Earth Observation | [ ]  |
| Earth | [ ]  |  | Science Based Archaeology | [ ]  |
| Marine | [ ]  |  | Polar | [ ]  |
| Terrestrial & freshwater | [ ]  |

**b.** Please indicate which NERC Science Priority Area is the one most relevant to your requested loan.

|  |  |
| --- | --- |
| **Earth’s life support systems –** water, biogeochemical cycles and biodiversity | [ ]   |
| **Climate change –** predicting and mitigating the impacts | [ ]  |
| **Sustainable economies –** identifying and providing sustainable solutions to the challenges associated with energy, land use and hazard mitigation | [ ]  |
| **Underpinning science -**  used mainly when expenditure relates to the funding categories infrastructure, specialist major infrastructure or major capital projects | [ ]  |
| **Specific research -**  research on science NOT impacting on the first three priority areas | [ ]  |

**11. ARSF applications**

If this application is in association with an Airborne Remote Sensing Facility (ARSF) proposal, please provide the ARSF reference number, PI name, project title, requested flight dates and grade below.

ARSF Application Number \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Principal Investigator \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Full Title of ARSF Project \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Requested Flight Dates \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Grade \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Previous FSF loans**

**a.** Is this application associated with any previous applications to FSF? If so please provide the loan reference number(s), the name of the Principal Investigator(s), and the grade(s) of each.

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**b.** Please list the outputs from your previous loan(s), in terms of publications, presentations etc?

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**13. Research Programme: Scientific background to your proposal**

Please use the space below to give details of the scientific aims and objectives of the project.Please describe in full the purpose of the study and why it is important. You should place the study in the wider scientific context, and cite related work from the published literature. Make sure you provide adequate justification for how field spectroscopy will contribute to your research. Details of how the science you intend to undertake will contribute to scientific knowledge, and how it will fit with the aims of the NERC Strategy “*Science for a Sustainable Future*”should also be included. If your research will be conducted overseas you should provide justification for taking the equipment abroad.

**Science Case:**

**14. Research Programme: Proposed Methodology**

Please use the space below to provide details of the project methodology.This section should include details of how data will be **collected** and **analysed**, how the spectral data will contribute to the project and whether the spectral data will be related to other parameters (and if so what other parameters)

**Methodology: (Note.** This should include the use of Microtops and ground targets if borrowed, as well as spectroradiometers**)**

**15. Your publication record**

Please provide details of your publication record from the past five years in the space provided below. All publications are important, including conference proceedings, reports and poster papers. Those articles which are not directly related to remote sensing or field spectroscopy should also be listed. Please use the additional sheet at the back of the application form if you require more space.

**Publication Record:**

**16. What output is expected from the research? (Please indicate time scale)**

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**17. Declaration**

Note. NERC FSF recommends, and in some cases requires, that FSF equipment be insured for ‘all risks’ for the duration of the loan. The duration of the loan is from receipt of equipment by the applicant until its return to FSF in Edinburgh, this includes during transportation

*I have read and agree to abide by the Conditions of Loan.*

Signature of Applicant \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature of Head of Department \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

or Institute Director

**18. Please use the additional space provided for adding further information you feel may support your application**

**Further information:**

1. *Please note that if you wish to take the equipment out of the UK during your loan you should provide justification for your choice of site in section 12. FSF staff will be able to advise on customs issues, and will provide essential paperwork for your trip, but export and import will be the sole responsibility of the P.I. in charge of the project.* [↑](#footnote-ref-1)