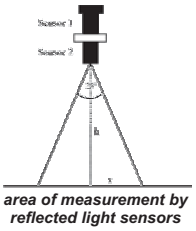
Sensors & Systems for Precision Agriculture

SENSORS & SYSTEMS FOR PRECISION AGRICULTURE

Sensors

- Wavelengths are available for NDVI, RVI, etc to match Earth Observation satellites such as MODIS, SPOT, AVHRR, Landsat, etc.
- Wavelengths can be chosen for studying Biomass Cover, Vegetation Indices & Red Edge Inflection Point for example
- Use our expertise and knowledge to select the correct filtering for your application
- A pair of identical 2-channel sensors are mounted to measure incident & reflected light simultaneously for accurate readings in all daylight conditions
- Sensors are supplied with detailed calibration certificates, showing that calibration is fully traceable to National Standards
- Sensors are completely waterproof & designed for 'life in the field'



area of measurement by reflected light sensors

Logger Choices

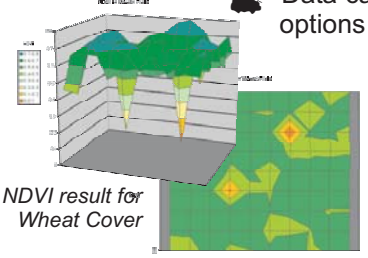
Logger

Logging Meter

- DataHog2, SpectroSense2+ & SpectroSense2.*GPS* meters/loggers are designed specially for light measurements and in particular for the low signal measured from narrow-band filtering. We are specialists in designing light measurement systems and we have over 20 years experience in building specialist systems
- SpectroSense2 meters are portable. They include an NDVI display & mapping function

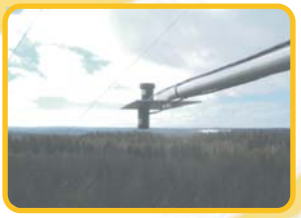
The System

- Sensors can be mounted on the top of an adjustable pole for variable ground area measurements
- Sensors can be mounted on long horizontal poles above a forest canopy or on tractor booms
- Sensors & logger can be added to Flux Towers or Eddy Covariance Towers
- Data can be used with any graphing package, especially those with complex 3D options

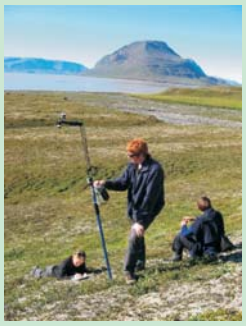


NDVI result for Wheat Cover

MobiLas CANOPY SENSOR - A.Thomsen



Applications



BSES expedition to Greenland. NDVI system used for the study of vegetation characteristics for low arctic vegetation

Studies of vegetation productivity & stress

Light-use efficiency

Red Edge Inflection Point

Monitoring the effects of climate change

Mapping land cover & land use

CO_2 Flux Towers

Vegetation Indices

Ground Truth Studies

Biomass cover

Skye 2-channel sensors on an Eddy-Covariance Tower. Courtesy: Dr Caroline Nichol

4-channel sensors being used as part of a GIS based analysis of ground water quality in Senegal. Courtesy: Dr Rasmus Fensholt

Skye 4-channel sensors are mounted on this microlite aircraft for studying aerosol & radiation interaction
Courtesy: Dr Wolfgang Junkermann

MobiLas CANOPY SENSOR - A Thomsen, Danish Institute of Plant & Soil Science

Overview of Skye Loggers

	SpectroSense2+	SpectroSense2.GPS	DataHog2
Plot location log	✘	✔	✘
Sensor inputs	8	8	16
Incident / reflected measurements	✔	✔	✔
Designed for low reflected light levels	✔	✔	✔
Any daylight conditions	✔	✔	✔
LCD display	✔	✔	✘
NDVI display	✔	✔	✘
Logging function	✔	✔	✔
Waterproof rating	IP54	IP54	IP65
Suitable for long term logging	✘	✘	✔
Portable measurements	✔	✔	✘
GPS mapping	✘	✔	✘
Traceable system calibration	✔	✔	✔
Other wavelengths available	✔	✔	✔
Sensor Library	✔	✔	✘
2 & 4 Channel ratios displayed	✔	✔	✘

Skye Instruments Ltd.,
21 Ddole Enterprise Park,
Llandrindod Wells,
Powys LD1 6DF UK

Tel: +44 (0) 1597 824811 Fax: +44 (0) 1597 824812
Email: skyemail@skyeinstruments.com

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Market Leaders in Specialist Light Sensors & Systems

www.skyeinstruments.com