

# MEASURING PRI



PRI

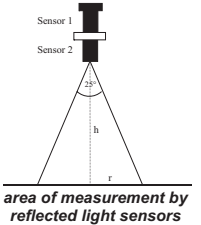
## FOR GLOBAL CHANGE STUDIES

PRI

### Sensors



- ☀️ Skye 2 channel light sensors are calibrated to measure PRI wavelengths centred at 531nm and 570nm with a 5nm bandwidth
- ☀️ Sensor calibration is traceable to UK National Standards
- ☀️ A pair of identical 2-channel sensors are mounted to measure incident & reflected light simultaneously for accurate readings in all daylight conditions
- ☀️ Other similar sensors available for NDVI, RVI, etc to match Earth Observation satellites such as MODIS, SPOT, AVHRR, Landsat, etc.



### Logger Choices



- ☀️ 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

### Logger

### Logging Meter



- ☀️ The PRI Logging system is stand alone, it is battery powered with solar power options
- ☀️ DataHog2 is designed for long-term outdoor logging
- ☀️ Small & compact and can be easily added to an Eddy Covariance or CO<sub>2</sub> Flux Tower
- ☀️ 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
- ☀️ Sensors & logger can be added to Flux Towers or Eddy Covariance Towers



# Applications

Studies of vegetation productivity & stress



Light-use efficiency



Monitoring de-forestation



Monitoring the effects of climate change



Mapping land cover & land use



CO<sub>2</sub> Flux Towers



Eddy-Covariance Towers



Ground Truth Studies



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



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



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



## Overview of Skye Loggers

	SpectroSense2+	SpectroSense2.GPS	DataHog2
PRI sensor compatible	✓	✓	✓
Sensor inputs	8	8	16
Incident / reflected measurements	✓	✓	✓
Designed for low reflected light levels	✓	✓	✓
Any daylight conditions	✓	✓	✓
LCD display	✓	✓	X
NDVI display	✓	✓	X
Logging function	✓	✓	✓
Waterproof rating	IP54	IP54	IP65
Suitable for long term logging	X	X	✓
Portable measurements	✓	✓	X
GPS mapping	X	✓	X
Traceable system calibration	✓	✓	✓
Other wavelengths available	✓	✓	✓

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