KIPP & ZONEN
SINCE 1830

Scintillometers for the measurement of heat fluxes and evaporation at small to large scales

LAS MkII

Remote measurement by Large Aperture Scintillometry

Invisible light beam between transmitter and receiver does not intrude upon the area being monitored

Rapid measurements allow study of fast processes, such as plant transpiration and canopy resistance

X-LAS MkII

Path-averaged measurement of turbulence and sensible heat fluxes, 1 second response time

Representative of a large area

Comparable to grid box size of numerical models and pixel size of satellite images

No flow distortion caused by the instrument itself

Can measure over terrain which is difficult to access, or which you do not want to disturb

OMS
MWSC+LAS/X-LAS

Range from 100 m to 12 km, with eye safe, low power infra-red beam

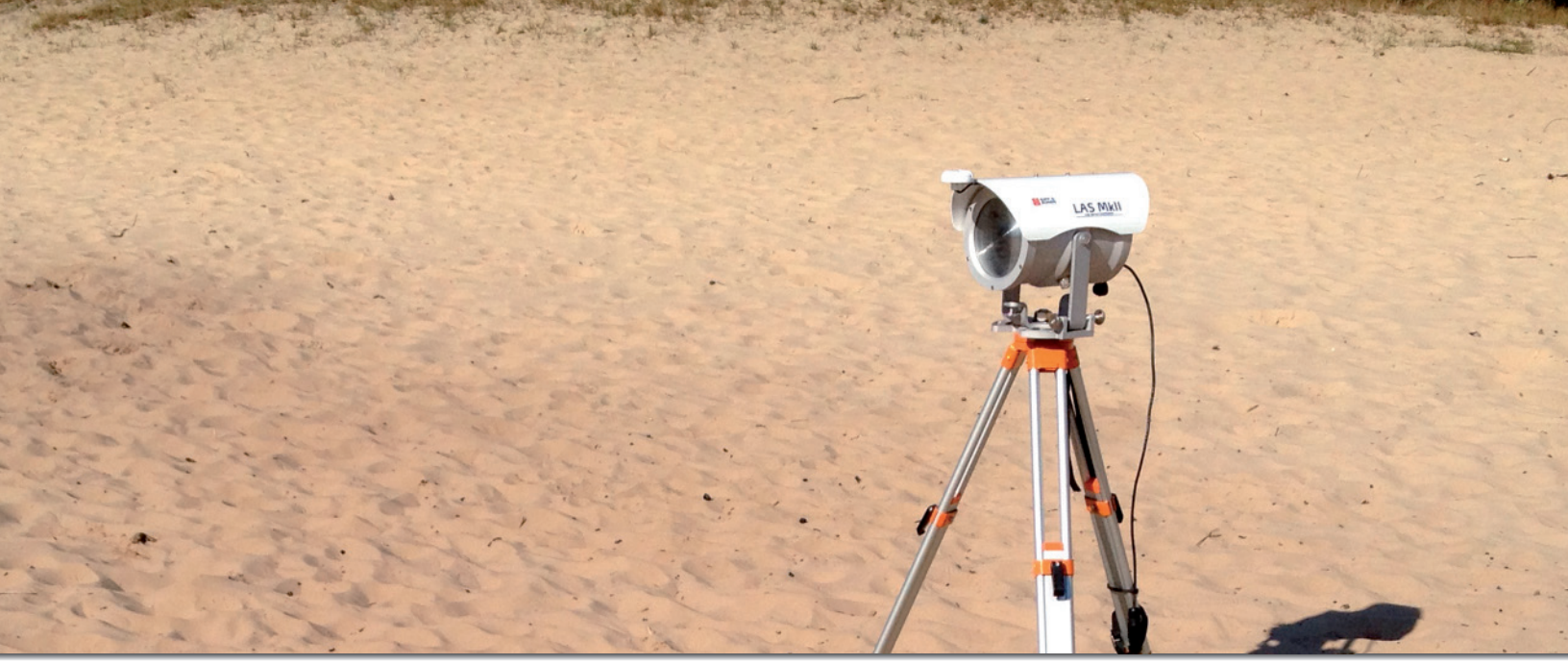
Easy installation
no moving parts, low operating costs

Low power consumption at 12 VDC
allows solar panel and battery power

Stand-alone operation in remote areas
window heater prevents ice and condensation

Digital data processing with real-time display, internal data logger with GPS time-stamp

Optical LAS or X-LAS integrate with a MWSC microwave scintillometer to form an Optical Microwave Scintillometer (OMS) system



							
Application	LAS MkII	X-LAS MkII	X-LAS / LAS MkII + met sensor kit	LAS / X-LAS MkII ET System	OMS (MWSC + LAS / X-LAS)	LAS upgrade	X-LAS upgrade
Optical propagation / Defence	●	●	●	●	●	●	●
Turbulence studies / Micro-meteorology	●	●	●	●	●	●	●
Meteorology / Regional weather forecasting	●	●	●	●	●	●	●
Validating satellite data / Remote sensing / Sensible heat flux	○	○	●	●	●	●	●
Surface energy balance / Climatology			○	●	●		
Hydrology / Evaporation				●	●		
Water management / Optimal timing for irrigation				●	●		
Agriculture and forestry / Plant evapotranspiration				●	●		
Urban studies / Heat island effect / Megacities	●	●	●		●	●	●

Specifications							
Range without aperture reducer	0.25 - 4.5 km	1 - 12 km	0.25 - 4.5 / 1 - 12 km	0.25 - 4.5 km	0.5 - 10 km	0.25 - 4.5 km	1 - 12 km
Range with aperture reducer	0.1 - 1 km	0.25 - 4.5 km	0.1 - 1 / 0.25 - 4.5 km	0.1 – 1 km		0.1 – 1 km	0.25 - 4.5 km

Temperature range: -20 to + 50 °C
Power requirement is 12 VDC, suitable for running on battery and solar power
(230 VAC with optional weatherproof power supply)
Data processing and download software included