

PRECISION SPECTRAL PYRANOMETER

Model PSP

The Precision Spectral Pyranometer is a World Meteorological Organization First Class Radiometer designed for the measurement of sun and sky radiation, totally or in defined broad wavelength bands. It comprises a circular multi-junction wire-wound Eppley thermopile which has the ability to withstand severe mechanical vibration and shock. Its receiver is coated with Parson's black lacquer (non-wavelength selective absorption). This instrument is supplied with a pair of removable precision ground and polished hemispheres of Schott optical glass. Both hemispheres are made of clear WG295 glass which is uniformly transparent to energy between 0.285 to 2.8 μ m. For special applications, other Schott glasses and Infrasil II quartz hemispheres are available. Included is a spirit level, adjustable leveling screws and a desiccator which can be readily inspected. The instrument has a cast bronze body with a white enameled guard disk (shield) and comes with a transit/storage case. A calibration certificate traceable to the World Radiation Reference and a temperature compensation curve is included.



SPECIFICATIONS

- Sensitivity: approx. 9 μ V/Wm⁻².
- Impedance: approx. 650 Ohms.
- Temperature Dependence: \pm 1% over ambient temperature range -20 to +40°C
- (temperature compensation of sensitivity can be supplied over other ranges at additional charge).
- Linearity: \pm 0.5% from 0 to 2800 Wm⁻².
- Response time: 1 second (1/e signal).
- Cosine:
 - \pm 1% from normalization 0-70° zenith angle;
 - \pm 3% 70-80° zenith angle.
- Mechanical Vibration: tested up to 20 g's without damage.
- Calibration: integrating hemisphere.
- Size: 5.75 inch diameter, 3.75 inches high.
- Weight: 7 pounds.
- Orientation: Performance is not affected by orientation or tilt.

EPLAB