



# DIRECT SOLAR RADIATION



## NORMAL INCIDENCE PYRHELIOMETER

**MODEL NIP** incorporates a wire-wound thermopile at the base of a tube, the aperture of which bears a ratio to its length of 1 to 10, subtending an angle of 5°43'30". The inside of this brass tube is blackened and suitably diaphragmed. The tube is filled with dry air at atmospheric pressure and sealed at the viewing end by an insert carrying a 1 mm thick, Infrasil II window. Two flanges, one at each end of the tube, are provided with a sighting arrangement for aiming the pyrheliometer directly at the sun. A manually rotatable wheel (not shown) which can accommodate three filters, while leaving one aperture free, is provided.

The pyrheliometer is mounted on a power-driven equatorial mount for continuous readings as our SUN-TRACKER described on the right.

A calibration certificate traceable to the World Radiation Reference and a temperature compensation curve are included.

### SPECIFICATIONS:

<i>Sensitivity</i>	: approx. 8 $\mu$ V/Wm <sup>-2</sup> .
<i>Impedance</i>	: approx. 200 Ohms.
<i>Temperature Dependence</i>	: $\pm$ 1% over ambient temperature range -20 to +40°C. (temp. compensation can be supplied over other ranges at additional charge.)
<i>Linearity</i>	: $\pm$ 0.5% from 0 to 1400 Wm <sup>-2</sup> .
<i>Response time</i>	: 1 second (1/e signal).
<i>Mechanical Vibration</i>	: tested up to 20 g's without damage.
<i>Calibration</i>	: reference Eppley primary standard group of pyrheliometers.
<i>Size</i>	: 11 inches long.
<i>Weight</i>	: 5 pounds.

## SUN-TRACKER

Model "SUN-TRACKER" Is a two Axis Automatic solar Tracker, to align solar radiation instruments with the normal incidence of the sun from any position on the earth's surface.

Includes a two axis mechanical device and electronics with two stepping motors for a precise orientation of the elevation and azimuth.

The pyrheliometer and other optional sensors are not included.

### SPECIFICATIONS:

Positioning and tracking control by astronomical algorithm running on the METEODATA – 2000/3000C Unit.

Two axis movement: 360° Azimuth; 90° elevation ( $\pm$ 0.1° accuracy)

Optimised Power requirements: less than 3W, from the internal battery of the METEODATA-2000/3000C Unit.

