

THE EPPLEY LABORATORY, INC.

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Scientific Instruments
for Precision Measurements
Since 1917

STANDARDIZATION OF EPPLEY PRECISION INFRARED RADIOMETER Model PIR

Serial Number: 28957F3

Resistance: 702 Ω at 23 $^{\circ}\text{C}$

Temperature Compensation Range: -20 to 40 $^{\circ}\text{C}$

This pyrgeometer has been compared against Eppley's Blackbody Calibration System under radiation intensities of approximately 200 watts meter² and an average ambient temperature of 23 $^{\circ}\text{C}$ as measured by Standard Omega Temperature Probe, RTD#1.

As a result of a series of comparisons, it has been found to have a sensitivity of:

$$3.90 \times 10^{-6} \text{ volts/watts meter}^{-2}$$

The calculation of this constant is based on the fact that the relationship between radiation intensity and emf is rectilinear to intensities of 700 watts meter². This radiometer is linear to within $\pm 1.0\%$ up to this intensity.

The calibration of this instrument is traceable to the International Practical Temperature Scale (IPTS) through a precision low-temperature blackbody.

Eppley recommends a minimum calibration cycle of five (5) years but encourages annual calibrations for highest measurement accuracy. Unless otherwise stated in the remarks section below or on the Sales Order, the results are "AS FOUND / AS LEFT".

Shipped to:
Oregon State University
Corvallis, OR

S.O. Number: 61475
Date: January 30, 2008

Date of Test: January 21, 2008

In Charge of Test:

Reviewed by:

Remarks: