

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: 31226F3

Resistance: 727 Ω at 23 °C

~~Temperature Compensation Range: -20 to 40 °C~~

This pyrgeometer has been compared against Eppley's Blackbody Calibration System under radiation intensities of approximately 200 watts meter⁻² and an average ambient temperature of 24 °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:

$$3.86 \times 10^{-6} \text{ volts/watts meter}^{-2}$$

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 meter⁻². 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.

Unless specified in the Remarks section, this instrument was not modified and the results are "AS FOUND / AS LEFT".

For highest precision, Eppley recommends annual recalibration.

Shipped to:
University of Hawaii
Honolulu, HI

Date of Test: November 15, 2006

In Charge of Test: *R. T. Egan*

S.O. Number: 60957
Date: December 8, 2006

Reviewed by: *Thomas H. Kuk*

Remarks: