

THE EPPLEY LABORATORY, INC.

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Scientific Instruments
for Precision Measurements
Since 1917

STANDARDIZATION OF EPPLEY PRECISION INFRARED RADIOMETER Model PIR

ENTERED
6 Jan 05

Serial Number: 32915F3

Resistance: 680 Ω at 23 $^{\circ}\text{C}$

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

This pyrgeometer has been compared with Precision Infrared Radiometer, Serial Number 29326F3 in Eppley's Blackbody Calibration System under radiation intensities of approximately 200 watts meter⁻² and an average ambient temperature of 25 $^{\circ}\text{C}$.

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

$$3.59 \times 10^{-6} \text{ volts/watts meter}^{-2}$$

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.

Shipped to:
University of Miami
Ft. Pierce, FL

Date of Test: December 10, 2004

In Charge of Test:

S.O. Number: 60123
Date: December 28, 2004

Reviewed by:

R. Eggeman
Thomas D. Kalk

Remarks: