



THE EPPLEY LABORATORY, INC.

12 Sheffield Avenue, PO Box 419, Newport, Rhode Island USA 02840
Phone: 401.847.1020 Fax: 401.847.1031 Email: info@eppleylab.com

STANDARDIZATION OF EPPLEY PRECISION INFRARED RADIOMETER Model PIR

Serial Number: 36732F3

Resistance: 698 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 23°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:

$$3.30 \times 10^{-6} \text{ volts/watts meter}^{-2}$$

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.

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: NOAA/ESRL/DOC
Boulder, CO

Date of Test: February 24, 2011

S.O. Number: 62816
Date: April 4, 2011

In Charge of Test: *Debra L. Shontz*

Reviewed by: *George L. Kirk*

Remarks:



FedID #05-0136490

THE EPPLEY LABORATORY, INC.

12 Sheffield Avenue, PO Box 419, Newport, Rhode Island USA 02840
Phone: 401.847.1020 Fax: 401.847.1031 Email: info@eppleylab.com

January 2008

NOTICE TO USERS OF THE EPPLEY PRECISION INFRARED RADIOMETER, MODEL PIR

Due to the discontinuation of mercury cells and advances in dataloggers/data acquisition systems as well and the general trend to make more precise measurements, The Eppley Laboratory, Inc. will no longer supply new PIR's with the "Radiation Compensation Circuitry" ("Battery Circuit").

We will continue to use the 10-pin connector and from outward appearances, there will be no change but the battery holder-potentiometer-resistor circuit across pins B&C will not be included. Therefore, the "Simple Method" can no longer be employed.

For existing instruments, we can no longer supply batteries as part of calibration or directly and we suggest you switch over to the "Precise Method" as soon as possible.

Please contact us at info@eppleylab.com if you have any questions.

Regards.
Thomas D. Kirk.
President