

National Renewable Energy Laboratory

Solar Radiation Research Laboratory

Metrology Laboratory

Calibration Certificate for Absolute Cavity Radiometer NREL Pyrheliometer Comparisons, NPC-2004

Organization: NASA/LARC-AS&M
Model Number: AHF
Control Unit Serial Number: SG41001207
Heater Resistance: 155.0 Ω
Lead Resistance: 0.066 Ω
Shunt Resistance: 1 Ω
Thermistor Coefficients: 0.0010295, 0.0002391, and 0.0000001568
Calibration Date: 10/03/2004
Environmental Conditions: (see attached Figures)
Procedure: NREL/TP-463-20619

Operator Name: Fred Denn
Serial Number: 31041
Manufacturer Cal. Factor: 1.99992
Default Sensitivity: 0.0105 $\mu\text{v}/\text{W}/\text{cm}^2$
Circuit Resistance: 4.18 Ω

Standards Used:

Serial Number	Operator	WRR*	Calibration Date	Due Date
AHF28968	Reda	0.99866	October, 2000 *	October, 2005
AHF29220	Reda	0.99846	October, 2000 *	October, 2005
AHF30713	Reda	0.99861	October, 2000 *	October, 2005
TMI68018	Reda	0.99848	October, 2000 *	October, 2005

* Ninth International Pyrheliometer Comparisons (IPC-IX), PMOD, Davos, Switzerland

Results with traceability to the World Radiometric Reference (WRR):

- WRR Transfer Factor (WRR-TF) = 0.99764
- Uncertainty (U_{95}) with respect to SI = 0.34 %
- Coverage Factor = 2

Data Analysis by : Ibrahim Reda
Signature : *I. Reda*
Date : 10/14/2004

QA by : Tom Stoffel
Signature : *[Signature]*
Date : 10/14/2004

This calibration certificate applies only to the item identified above and shall not be reproduced other than in full, without specific written approval by the calibration facility. Calibration certificates without signatures are not valid.

