

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: US37030621
Heater Resistance: 155.4 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: 31105
Manufacturer Cal. Factor: 1.9989
Default Sensitivity: 0.0105 $\mu\text{v}/\text{W}/\text{cm}^2$
Circuit Resistance: 2.55 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) = 1.00309
- 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

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