

Absolute Sky-Scanning Radiometer (ASR)

Radiative Processes Working Group

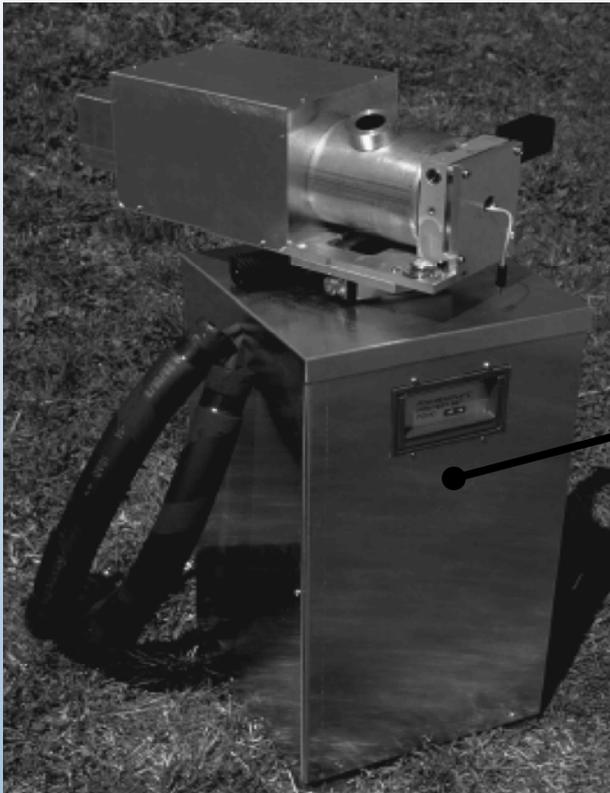
Princeton, New Jersey

November 18, 2008

Tom Stoffel

Interim World IR Standard Group (WISG)

Original* Absolute Sky-Scanning Radiometer (ASR)



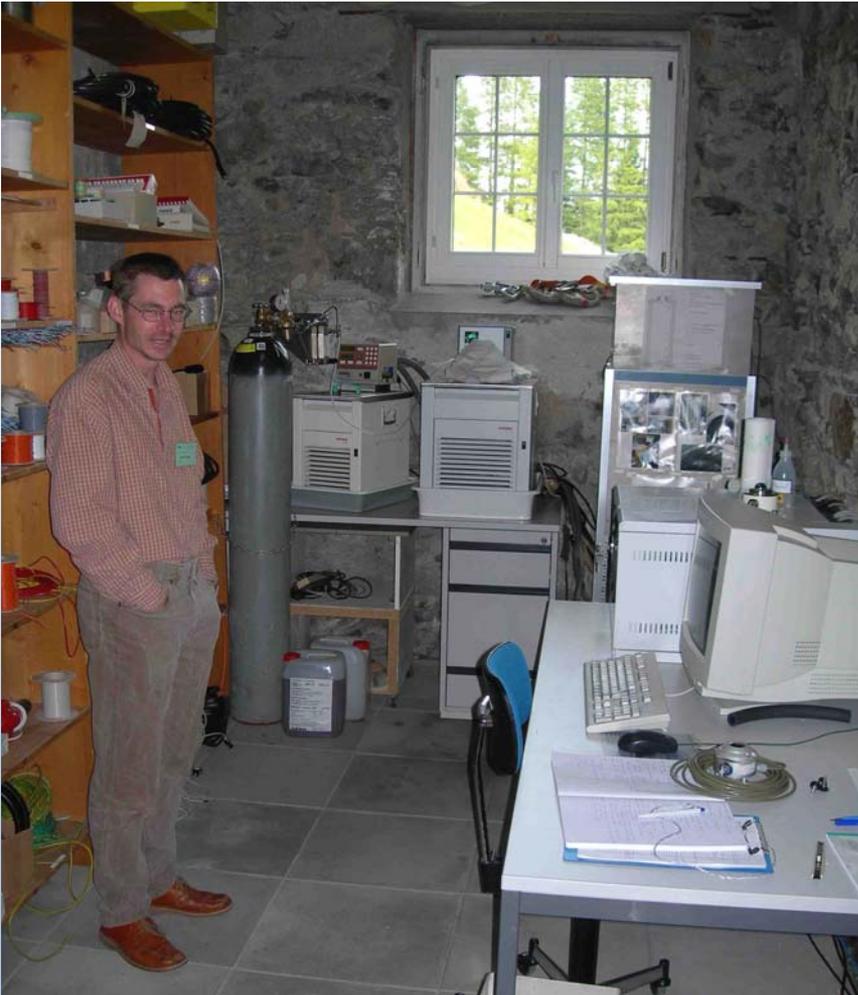
* Rolf Philipona



International Pyrgometer &
Absolute Sky-Scanning
Radiometer Comparisons
(IPASRC)
IPASRC I – Sept 1999 SGP
IPASRC II – March 2001 NSA

Interim World IR Standard Group (WISG)

Cylindrical Blackbody Characterization



Physikalisch-Meteorologisches Observatorium Davos (PMOD)
World Radiation Center (WRC)

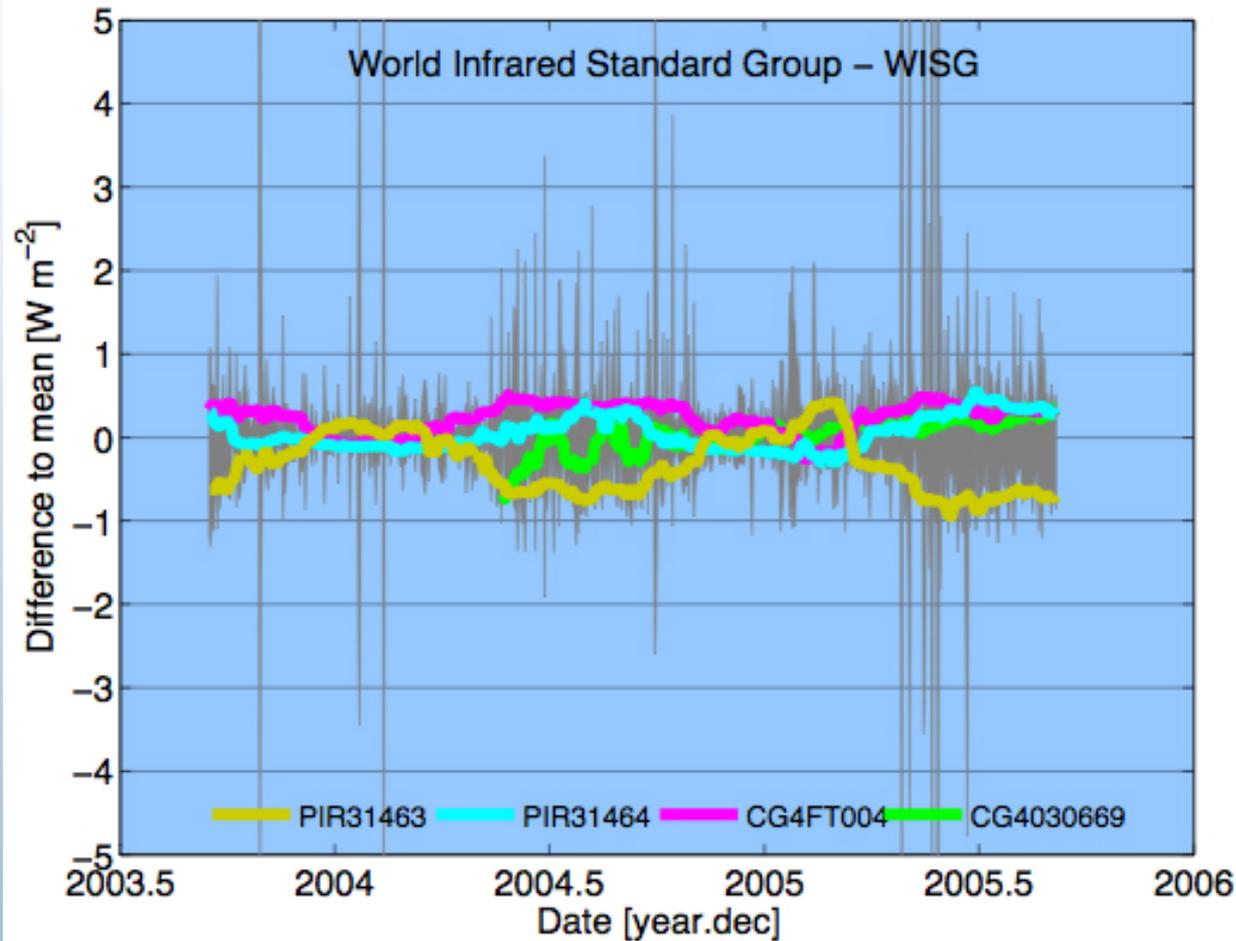
Interim World IR Standard Group (WISG)

Detector-based Standard
Pyrgeometers with IPASRC
and PMOD/WRC Blackbody
Characterizations



2 CG4s + 2 PIRs Adjusted to
Davos Sky Conditions...

World Infrared Standard Group



Pyrgeometer Calibrations

- WISG is *Interim* detector-based standard
- PMOD/World Radiation Center developing:
 - New Pyrgeometer Blackbody Calibration System
 - New Absolute Sky-scanning Radiometer
- Detector-based standards benefit from a variety of well-characterized instruments
 - SBIR for ASR? (~\$200K)
 - NCAR BB inverts pyrgeometers?
 - NOAA BB improvements?
 - NRL BB? BoM? Environment Canada?
 - Others?

WISG Traceability

World Infrared Standard Group



ARM/NREL Reference Group



Transfer Standard Group



SIRS, SKYRAD & GNDRAD PIRs at RCF

