

NOAA GMD Participation in the Eleventh International Pyrheliometer Comparison (IPC-XI) September 26 - October 15 2011 World Radiation Center (WRC) Davos, Switzerland

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The NOAA Global Monitoring Division (GMD) Solar Radiation Facility, as one of three Regional Radiation Centers (RCC) in the World Meteorological Organization (WMO) Region IV (the others being in Toronto and Mexico City), surface radiation measurements are referenced to the World Radiometric Reference (WRR). The WRR is defined by a group of dedicated radiometers maintained at the WRC in Davos. Every five years since the IPC-III was held in 1975, NOAA Solar Radiation Facility standards have participated in a WMO-sponsored pyrheliometer comparison held at the WRC in Davos. Reference instruments from RCCs around the world are brought to Davos for comparison with the World Standard Group defined WRR. Correction factors are established for relating the RCC reference instruments to the WRR. The goal is international standardization of solar irradiance measurements. Four NOAA GMD radiometers and other instrument comparisons were also conducted concurrently with the IPC. A Filter Radiometer Comparison (FRC) was conducted concurrently with the pyrheliometer comparison and optical depth data from participating instruments were compared with the reference sun photometers maintained at the WRC. There also was a comparison of pyrgeometers with the reference WRC black-body calibration system. A NOAA GMD sunphotometer, three rotating shadowband radiometers and a pyrgeometer were also sent to Davos for participation in the FRC and pyrgeometer comparison. A final report summarizing the results of IPC-XI will be published by the IPC-XI host, the Physikalisch-Meteorologisches Observatorium Davos (PMOD). A photograph of the PMOD with observing tables in place for participants and their instruments is shown below in Figure 1. Over seventy individuals from forty three countries participated in IPC-XI.



Figure 1. The PMOD with facilities in place for conducting IPC-XI.