

# IPC-XIV timing and data format

This document describes the measurement sequence and file format to be obeyed by all participants who use their own computerized data acquisition system during IPC-XIV.

## Measurement Series

All irradiance measurements will be taken in series' of 19.5 minutes duration every 30 minutes. Each series will start on either the full or half hour, i.e. on the minute xx:00 or xx:30. The times will be recorded in CET (UTC+1). Please synchronize your computer clock to UTC+1. Network time servers are provided on ntp1.pmodwrc.ch, ntp2.pmodwrc.ch. The start time of the series is the time, when the *first irradiance reading* is taken. Enough lead time will be allowed for preparation and electrical calibration before each series. The base cadence is one irradiance reading every 90 seconds, allowing for 14 irradiance readings in each series. Faster/slower cadences are acceptable if they are an integer multiple/fraction of the base cadence, e.g. 30 sec, 180 sec.

## File Format for Data Submission

Please generate *separate data files for each pyrhelimeter*. You may produce data files for each measurement series or data files for an entire day. The files have to be ASCII encoded and must obey the following format:

```
AHF-32455 ← pyrhelimeter serial number (no blanks)
WRR 1.000000 ← applied WRR factor (should be 1)

2025 10 07 11:54:00 989.36000
2025 10 07 11:55:30 989.21000
2025 10 07 11:57:00 989.19000
2025 10 07 11:58:30 988.97000
2025 10 07 12:00:00 989.90000
2025 10 07 12:01:30 989.57000
2025 10 07 12:03:00 989.36000
2025 10 07 12:04:30 989.21000
2025 10 07 12:06:00 989.19000
2025 10 07 12:07:30 988.97000
2025 10 07 12:09:00 989.90000
2025 10 07 12:10:30 989.57000
2025 10 07 12:12:00 988.97000
2025 10 07 12:13:30 989.90000
```

← YYYY MM DD HH:MM:SS Irradiance [W/m<sup>2</sup>]

Any number of blanks (space) or tabs are acceptable delimiters. The file name must start with the pyrhelimeter serial number and contain the date/time information, e.g. "AHF-32455\_25-10-07\_1154.dat". Data files can be uploaded via FTP.

## Manual Data Submission

A graphical web interface will be provided for manual recording and submission of irradiance readings. The graphical web interface will guide you through the measurement sequence. Participants who do not have an automated data acquisition system should bring a laptop computer or other wireless device with a current web browser.