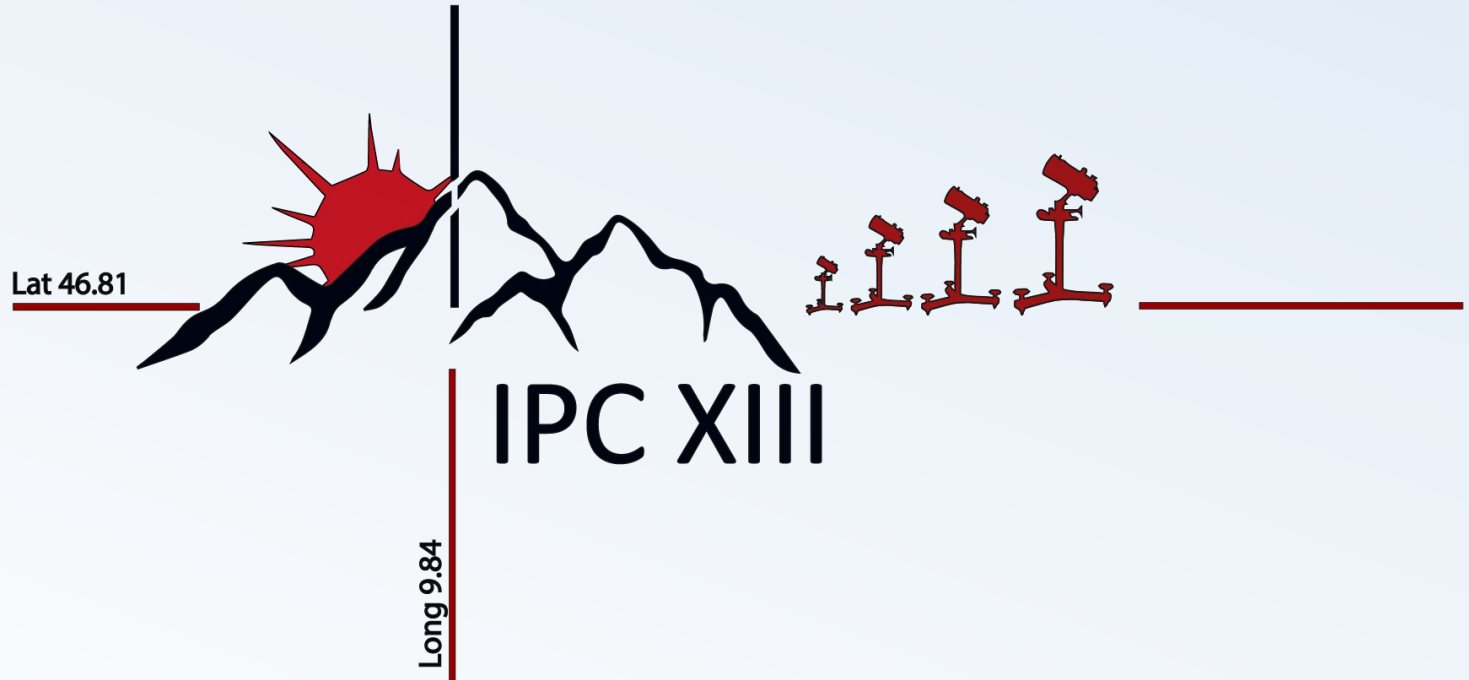


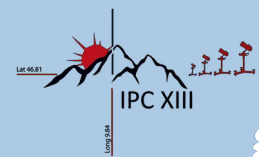
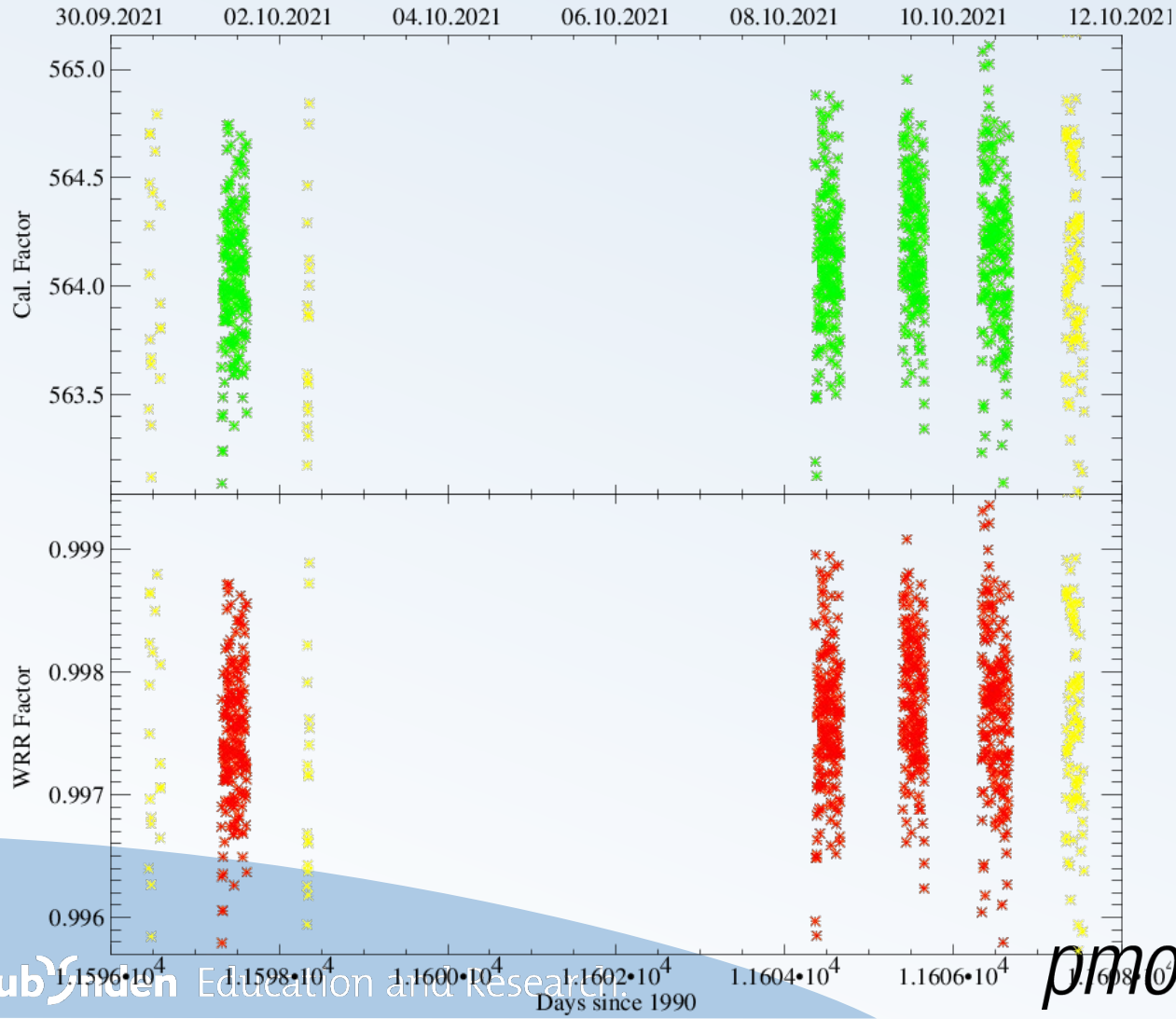
# 13<sup>th</sup> WMO International Pyrheliometer Comparison IPC-XIII Preliminary Results – 27 Sep – 11 Oct



## Data selection criteria

- ✓ *„That the minimum number of acceptable data points be 150 for the PMO2 taken over a minimum of three days during the comparison period“*
  - ✓ 1060 data points on 9 days (after basic outlier rejection)
  - ✓ 725 data points on 4 days (after strict outlier rejection)
  - ✓ 1113 valid WRR points (4+ WSG pyrhelimeters)
  - ✓ 6 valid WSG pyrhelimeters! (after repairing of CROM2L)

PMO2  
(Reference Instrument for WRR: WRR)  
1. 10. 2021 - 10. 10. 2021

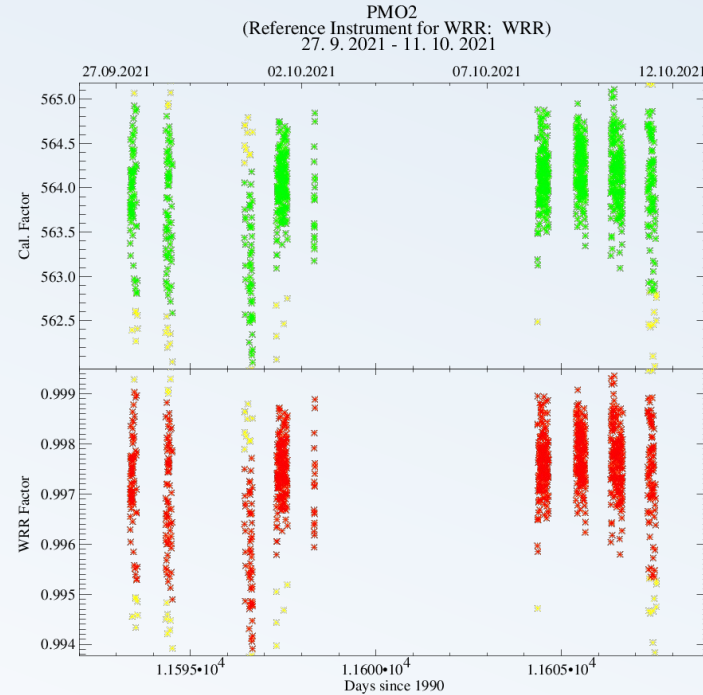


Data selection will be critical!

1.  $AOD_{500} < 0.12$

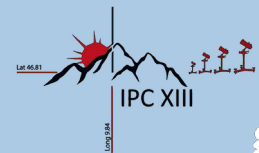
2. no clouds within  $8^\circ$  of the sun

3. Wind speed  $< 2.5$  m/s

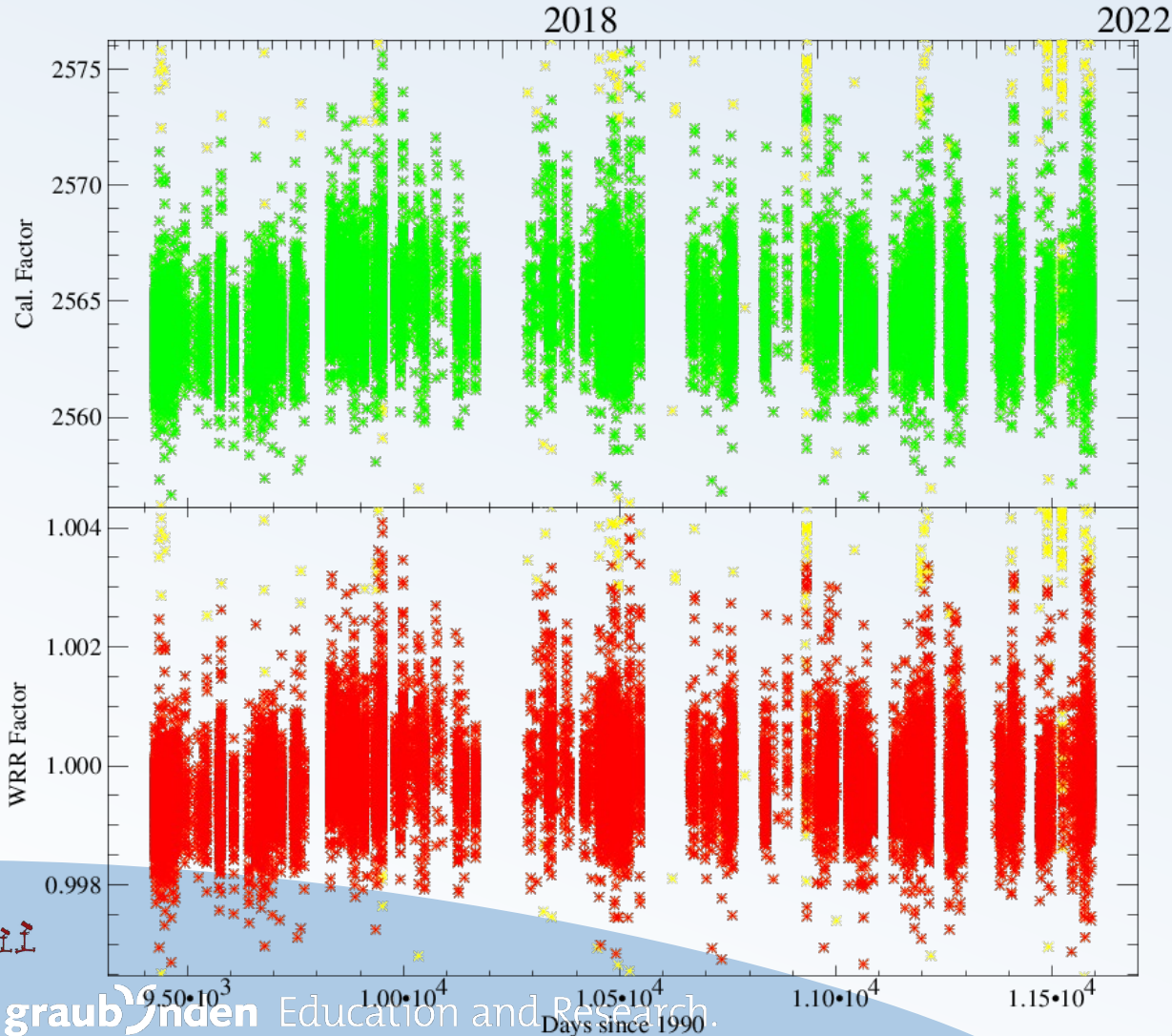


## Stability of the WSG (preliminary!!)

WRR Factors	IPC-XII (2015)	IPC-XIII (2021)	relative difference
PMO2	0.998189	0.998383	194 ppm
PMO5	0.999395	1.000507	1112 ppm
CROM2L	1.003118	1.003226	108 ppm
HF18478	0.998258	0.997637	-621 ppm
MK67814	1.001702	1.002145	443 ppm
PAC3	1.002190	1.001543	-647 ppm



PMO5  
(Reference Instrument for WRR: WRR)  
20. 10. 2015 - 24. 9. 2021

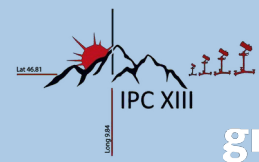


WRR Factor 2015:  
0.998982

Avg. 2015 – 2021:  
0.999781

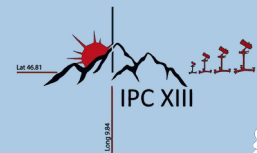
Stability:  
+800 ppm  
-0 ppm/°C

*pmod* *wrc*



## IPC-XIII Statistics (preliminary)

- 56 participants
- from 32 (37) institutions
- representing 23 (27) countries
- operating 113 pyrheliometers



## Next steps

- More solar measurements possibly on Thursday and Friday
- Final data processing including application of data selection criteria
- Approval of the results by the Ad-hoc team
- Publication of the Final Report

