

WORLD METEOROLOGICAL ORGANIZATION

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**COMMISSION FOR INSTRUMENTS AND
METHODS OF OBSERVATION**

ITEM: 3

**INTERNATIONAL ORGANIZING COMMITTEE (IOC) FOR THE
WMO SOLID PRECIPITATION INTERCOMPARISON
EXPERIMENT (SPICE)
Fourth Session**

Original: ENGLISH

Davos, Switzerland
17 – 21 June 2013

SITE REPORT FOR WEISSFLUHJOCH (SWITZERLAND)

(Submitted by Yves-Alain Roulet)

Summary and purpose of document

This document provides site report of Weissfluhjoch (Switzerland) for the 2012/2013 winter.

ACTION PROPOSED

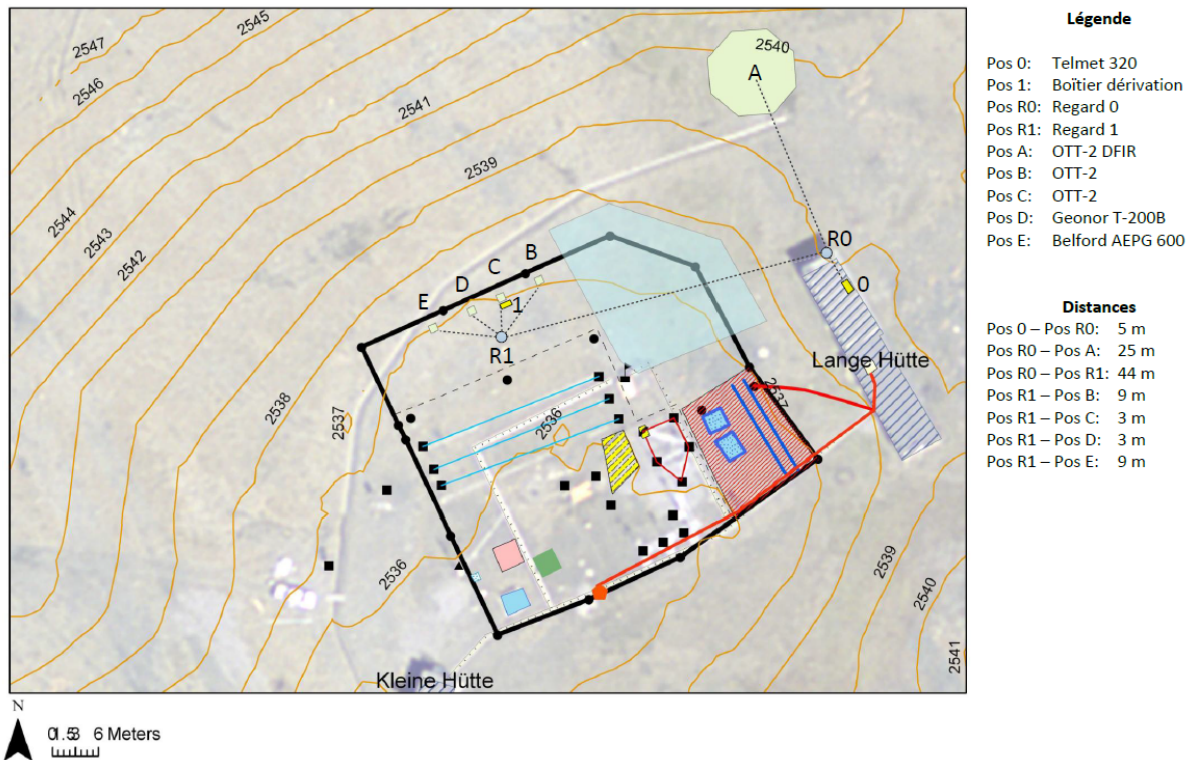
The Meeting is invited to take this information into consideration when deciding on necessary modifications and clarifications on the overall set-up of the experiment and procedures to be followed to ensure best quality observations are collected on all sites and appropriate coordination and data transfer mechanisms are implemented.

Site Report v.1.1

Site:

Date: June 17, 2013

1. Site layout



2. Configuration of references:

Covering: gauge used, heating (hardware, algorithm), sampling strategy, physical configuration (height, shields, etc):

Reference type	Gauge	heating	shield	Data sampling interval	Sampling strategy	Output interval	Height of the rim
R1							
R2	Pluvio2	Yes	DFIR without shield			10 min, 1 min in preparation	350 cm
R3							

3. Changes made during the season 12/13, if any.

- 4-6 February 2013: Installation of 3 Pluvio2 (one in the DFIR, two outside), 1 Geonor 200TB and 1 Belfort
- 8 February 2013: start of data transmission

4. Issues: heating, data quality, vibrations, capping;

Issues noted during the operating of the site related to:

- Vibrations of the mast: no problem yet, but the large amount of snow acts as additional support for the mast. Let's see how it behaves when season starts...
- Grounding: still needs to be completed (when snow has definitely melted...)
- Materials: single alter shield has to be mounted on the Pluvio2 in the DFIR and on one of both installed outside the DFIR (in order to complete the R2 reference)
- Data sampling: 5 Hz
- Data output: currently 10 min, the 1 min is in preparation of implementation

5. Heating report:

- Summary of configurations throughout the winter of 12/13:
 - Hardware:
 - how was implemented;
 - power applied;
 - software:
 - upper limit temperature:
 - lower limit temperature
 - heating interval
 - other factors considered.
- Summary of changes made during the season
None
- Effects noted: e.g. not sufficient melting of snow, too much or not enough heat, evaporation, degrading of gauge performance, increased level of noise; need to extend heating to additional surfaces, etc.
None
- Capping: noted, suspected; signature?
No capping observed
- Changes needed for the future?
None
- Provide pictures!
See separate emails and site report on Monday
- Any other topic of challenge with impact on data, specific to your experience.

6. What has worked well;

The installation was successful, even if performed in Winter with quite a lots of snow (2m.). the collaboration with SLF runs smoothly: support on site and scientific expertise.

7. What has not worked that well: lessons learned;

Planning of the installation, incl. production of metal poles, pads, etc. must be done well in advance before winter, which starts relatively early at the weissfluhjoch.

8. Data available:

- i. # of days of data collected for each sensor on site
Data available from 8 February for all sensors installed on site
- ii. Data transmitted to NCAR
Data stored in our database, transfer to NCAR not initiated yet (waiting for the 1 min data)
- iii. Data QC'd
Automatic QC from the logger and data collecting unit
- iv. Issues in data
None so far, but little analysis have been performed by now

9. Instruments under test: list, issues

- Have you had problems with the instruments under test?
Geonor: we had to produce an electronic interface, as the distance between the instrument and the data logger was too long
Belfort: one transducer was out of order when installed. Spare set was provided by Belfort.
- Have all instruments allocated to your site from Instrument Providers, been installed?
No, they were installed by our technicians
- Has the data been shared with the Instrument Providers?
Not yet
- Have them visited the site?
Steve Eagan, from Belfort (who left the company since then) visited the site last Autumn (before the instrument was installed)

10. Information on the Precipitation Detector(s) used;

experience regarding their ability to detect precipitation (if applicable)

No applicable

11. Commissioning:

- date; 8 February 2013

- configuration at commissioning, see above
- availability of report. Report has already been produced, will be adapted for the meeting

12. *Results to date:*

- summary of preliminary results, if available.
 - Plans for data analysis: focus, interests, timelines, plans, etc....
- Additional installation during summer 2013:
- o Thies precipitation detector
 - o Meteoservis rain gauge
 - o Additional rain gauges (?)
 - o Ancillary measurements: already available from SLF, but might be completed

13. *Interaction Site manager and the IOC and Project team*

- interactions,
- information sharing,
- feedback, etc...

14. *Small things, big impacts?*

What can we do differently?