WMO SPICE Teleconference

|  |  |  |  |
| --- | --- | --- | --- |
| Date | 12.02.2015 | Time  | 14:00 – 16:10 (UTC) |
| Purpose | SPICE |
| IOC member attendees(strike though if not attending) | R. Nitu, B. Baker, ~~J. Hendrikx, H. Liang,~~ Y.-A. Roulet, F. Sabatini, ~~V. Vuglinsky~~ |
| ~~IOC ex-officio member attendees(strike though if not attending)~~ | S~~. Bilish (Australia)~~ C. Smith ~~– D. Yang~~ (Canada), ~~S. MacDonell (Chile)~~ O. Aulamo (Finland) ~~K. Honda (Japan)C. Zammit (New Zealand)~~ M. Wolff (Norway) ~~M. Karzynski (Poland)~~~~TBD (Russian Fed.)~~ R. Rasmussen (USA) ~~L. Lanza (Italy)~~~~S. Morin (France) A. Uriel -~~ S. Buisan (AEMET-Spain)G. Diolaiuti, Antonella - ~~D. Bocchiola~~ (Italy/Nepal)~~Hyelim Kim (Rep. Korea)~~ |
| Other Attendees(optional) | ~~I. Rüedi, M. Earle, F. Boudala, Andy Gaydos, B. Goodison, J. Hoover, P. Joe,~~ J. Kochendorfer, ~~T. Laine, S. Landolt, A. Senese, E. Vuerich, A. Poikonen,~~ A. Reverdin, ~~Gyu-Won Lee,~~ Floor Heuvel, ~~Hee Jin, Kai Wong, L. Leppänen, H.-R. Hannula,~~ E. Mekis, ~~A. Kontu~~ |
| Distribution | All attendees, IOC (including IOC ex-officio members) |
| Moderator | M. Wolff | Recorder | R. Nitu |
|  |  |
| 2nd Teleconference | **Friday, 02:30 UTC – 4:00 UTC** |
| Participation | **Shane Bilish, C. Zammit** |
| Moderator | **R. Nitu** |

Meeting Records (A = Action / D = Decision / I = Information)

| **#**  | **A / I / D** | **Item Description** | **Owner** | **Due Date** |
| --- | --- | --- | --- | --- |
| 1 | **A** | Roy to assess whether NCAR can store all data and graphs generated by SPICE. Roy will follow up with Andy. If not, alternatives need to be explored. | Roy | Feb 26 |
| 2 | **A** | Not all data collected to date has been transferred. Audrey and Rodica to follow up with individual Site Managers, as needed. | Rodica/Audrey | March 02 |
| 3 | **I** | Overview of derivation of Event Data:* To create a data base with clear precipitation data for describing the physics and deriving a mathematical relationship between precipitation loss and wind speed, wind direction, precipitation type, temperature and possibly other parameters (transfer functions)

Data will support, in part, the derivation of results to characterise instrument performance.Event derivation algorithm: documented in Chapter 10 of the reference Report. Interval: 30 min and Threshold: 0.25 mm | Mareile/Audrey |  |
| 4 | **I** | Need to investigate whether a 30 min interval and 0.25 mm threshold are applicable to all sites or a site dependent approach may be needed, to account for drier, windier climates (e.g. Bratt’s Lake)Common approaches for all sites would support the development of relevant transfer functions. | Mareile/DAT | For the Final Report |
| 5.  | **D** | Use the Event Selection algorithm as currently defined; assess results by site and tailor to site specific findings, if needed, with full documentation. E.g. use of longer time periods, e.g. 1 hour, with the same threshold, especially for high wind speeds. | Mareile/DAT | For the final report |
| 5.1 | **A** | Mueller Hut reports data on an hourly basis. The event selection algorithm will need to be tailored to account for this frequency of reporting. | DAT | For the final report |
| 6. | **A** | Revisit the noise study conducted by Mike to asses the noise floor | Mike | April |
| 7. | **A** | Regenerate the plots for Pluvio2 with a 5 min time shift, to account for the timing of Accumulation NRT | Audrey | Feb 27 |
| 8. | **A** | Assess the Pluvio2 data products, to develop a more comprehensive reference data set for the R2, R3 Pluvio based. As defined during SPICE\_IOC-2, aim at defining a “SPICE” algorithm for Pluvio2. | TBD | SPICE-IOC-6 meeting |
| 9. | **A** | Tipping Buckets assessment and derivation of transfer functions require a careful approach, recognizing the fact that they normally need some time to catch up reporting the falling precip (delay between falling snow to melting and the accumulation and tipping of the buckets).The analysis needs to be structured to give them time to “catch up”. The 30 min event approach may not work for TBs.TBs output data based on the number and timing of the tipping of the buckets; thus, the temporal correlation between an event and the timing of the TB report (especially for the start of precip, and for light events), may need to be further assessed (a TBRG bucket tips only when full).Need to assess what happen when the funnel of a TBRG gets filled with snow (heavy events). | DAT/all | SPICE-IOC-6 meeting |
| 10. | **D** | The data analysis and reporting of results for TBs and non-catchment type instruments will need assessment methods that are likely different from those established for the WGs. | all | SPICE-IOC-6 |
| 11. | **I**  | Early results presented show that instruments may perform differently during precip events or non-precip events, thus, the accurate detection of an event is critical and needs to be well understood and documented.  | all | Final Report |
| 12. | **A** | Separate analysis will be conducted for lighter events | DAT/all | Final Report |
| 13. | **A** | Encourage the Instrument Champions to become very familiar with the instruments that they champion and support the DAT with specific information on:* Details on instrument data output;
* Instrument configuration: specifics;
* Instrument diagnostics;
* Preliminary interpretation of the results derived.
 | Rodica | Feb 20, 2015 |
| 14. | **D** | All analysis will be based on 1 minute data from all instruments (the 6 sec data, where available, will be used for in depth interpretation of specific topics, as needed).For Geonor gauges, the baseline for analysis is the accumulation, resulting from the integration of the three wire output, processed, as required. Processing needs to be documented, including if evolving in time.This decision would be revisited, at a later date, if required. | all | Final Report |
| 15. | **A** | Everyone I encouraged to verify independently the procedures for the derivation of event datasets. If done provide feedback to DAT. | all | On-going |
| 16. | **I** | GCW connection: interest in SPICE sites becoming GCW sites (most recently, for Haukeliseter).GCW has proposed the creation of a team on Solid Precipitation Intercomparison, building on the capacity already developed in SPICE. Proposal to be presented at the WMO Congress. |  |  |
| 17. | **A** | Mareile to distribute the deck presented at the teleconference to all team | Mareile | Feb 13, 2015 |
|  |  | **For next teleconference(s)**:* **19.2. R1-R2 (Craig, Kai)**
* **26.2. Uncertainty (John)**
* **5.3. R2-R3 (Roy, Bruce)**
* **12.3. Gauge performance (Floor)**
* **19.3. Data sheet 2 (Roy/Bruce/FAME/Rodica) *(SoG & COST Grenoble !)***
* **26.3. Information on modelling results (Roy) and transfer function 2 (John)**
* **2.4. available for smaller group discussions on transfer functions**
* **9.4. Transfer function 3 (TBD)**
* **16.4. Non catchment type (Yves-Alain)**
* **23. 4. Intensity (Emanuele)**
* **30.4. Data sheet 3**
* **7.5. R0-R1 (Daqing)**

**13.5. (Wednesday): Getting reading for Toronto (Rodica)** |  |  |

Open Actions (strike though actions that were complete since last teleconference, delete actions that were stroked through at time of previous teleconference)

| **#**  | **A / I / D** | **Item Description** | **Owner** | **Due Date** |
| --- | --- | --- | --- | --- |
| **From teleconference of Feb 05 2015** |
| 3 | **I/A** | A number of sensors are reporting only intensity, while the reference is providing accumulation. Need to document in the Data Sheets how the accumulation is derived, and caveats. | DAT | May 2015 |
| 4 | **A** | Provide feedback to Rodica on datasheet proposal, proposing additional type of plots and information that you would like to see in these datasheets (reflecting operational, applications, and research needs) | All | Feb18, 2015 |
| 5 | **I/A** | To determine whether the present event selection method, based on a 30 min interval and 0.25 mm accumulation threshold, would be appropriate for trace events.Requirement for assessment of different time intervals and accumulation thresholds; relevant to different applications (e.g. climate). | All | May 2015 |
| 6 | **A** | Start the development of data sheets with a sample for one instrument and discuss the results; based on these adjust strategy for moving forward.  | Audrey, Mike, Mareile, Rodica | March 12, 2015 |
| 7 | **A** | Circulate list to identify “Instrument champions” for each type of instruments involved in the intercomparisons that would help in analysing/understanding the performance of the instrument, in particular in case of special conditions. | Rodica | 12 Feb. 2015 |
| 8 | **A** | Volunteer as “instrument champion” for instruments you are familiar with. | All | 19 Feb. 2015 |
| 10 | **A** | Provide feedback to Rodica on reference report | All | 18 Feb 2015 |
| **From teleconference of 22 January 2015** |
| 4 | **I/A** | Have a (series of) teleconference of the transfer function subgroup to finalize way forward for TF and to agree on who is doing what. Subgroup tentatively composed of: John, Daqing, Roy, (Mike), Bruce, Craig, Yves-Alain (W. Audrey and Floor), (Eva), Guywon?,Samuel B. | Bruce/Mareile | Feb. 2015 |
| 6 | **A** | Some commissioning reports are still outstanding.  | Site managers |  |
| 7 | **A** | Finalize Marshall commissioning report | Scott/Roy | 29 Jan. 2015 |
| **From teleconference of 15 January 2015** |
| 3 | **A** | Give any input that could help John on defining uncertainty for SPICE (initiate e-mail discussion before dedicated telecon) | All | Before 26.02.2015 |
| 4 | **A** | Look into potential for update on uncertainty analysis from Gochang team.  | Rodica |  |
| 5 | **A** | Follow up on investigation of minimum detectable signal. | Rodica |  |
| 6 | **A** | Recommendation for all SPICE participants to review previous telecons. Actions/decisions could serve as ‘pointers’ for how to proceed with different assignments. Look for items that tie in with specific tasks. | All |  |
| 13 | **A** | Event selection will be applied on the five QC’ed sites (Marshall, CARE, Formigal, Haukeliseter, Sodankylä) and event files will be made available on the NCAR ftp site. | Audrey and Floor | 31.01. 2015 |
| **From teleconference of 8 January 2015** |
| 6 | **A** | Final report will have to provide guidance to Members on how to use the output of the 3 transducers, as some Members use only one wire.Compile documentation on processing of Geonor data. | Bruce | March 2014 |
| 7 | **A** | Carry-out comparison on the difference in results if using one or three wires | DAT | Dec. 2015 |
| **From teleconference of 4 December 2014** |
| 4 | **I/A** | The question was raised if SPICE datasheets should include intensity plots and if they can be represented with the same 30min event periods. Recommendation from Emanuele Vuerich, was to include intensity plots in the datasheets. 1min datasets should be generated first, and then aggregated to other time periods (5, 10, 20min), to avoid losing information (compared to aggregating the data directly in bigger time intervals).In proposal, intensity criteria from FI RI to be applied to calculate intensities for gauges in FWRS.Emanuele to investigate further the intensity component for datasheets.Questions: What is minimum accumulation time needed to produce a ‘reliable’ rate? How does this vary by gauge? Further, how do we define what is ‘reliable’? | Emanuele | TBD |
| 7 | **A** | Mike to prepare and present R3 analysis from CARE site at a future telcon. | Mike | 11 Dec, 2014 |
| 8 | **A** | Roy to present slides on the minimum detectable signal as a function of wind speed. | Roy | 11 Dec, 2014 |
| 10 | **A** | John to prepare powerpoint on the approach for uncertainty he did for the reference report (at a later date, according to his schedule). Needs lots of rain data. | John | TBD |
| **From teleconference of 20 November 2014** |
| 4 | **A** | Apply, as a test case, the proposed procedures to some qc-ed data sets to demonstrate application and potential of the proposed method using the dynamic field calibration method. | Emanuele | 15 Feb. 2015 |
| 5 | **A/I** | All Site managers are reminded to perform calibrations/field controls and document the process and results.  | All | March 2015 |
| **From teleconference of 13 November 2014** |
| 2 | **A** | Production of plots (NS/DFIR ; SA/DFIR ; NS/SA) for selected sites, see below. | Roy | January 2015 |
| 5 | **D/A** | First-pass datasets processed with the current QC will be produced for Haukeliseter, Marshall, CARE, Formigal and Sodankylä. These first-pass datasets could be delivered in two different ways : QCed datasets (Time + Data + Flags) and event selection datasets. These datasets will be provided as a starting point for the following analysis steps : | ~~Audrey/Floor~~~~(Mike)~~Audrey/Mareile/ Floor/ (Mike) | ~~QCed datasets :~~~~December~~Event selection datasets :Mid-December |
| 7 | **A** | It was recognized that additional work is required to further assess the use of the Bucket RT data from Pluvio 2 gauges, eventually in conjunction with the other data fields produced by Pluvio2.  | Mareile/Audrey | March 2015 |
| 8 | **A** | On the processing of Geonor data: many organizations/groups have been using more advanced processing to improve the Geonor accumulation report (CRN, NCAR, Norway, EC, etc), we acknowledge that we may/should revisit the algorithm to achieve similar improvements. At the minimum, we may use a standard dataset and process it with the algorithms we are aware of, and see the differences. | DAT |  |
| **From teleconference of 6 November 2014** |
| 6 | **A** | Manual flagging of data is important when a jump is identified, especially because of capping. Procedure to enable site managers to input that information in the archive following identification of a jump by the QC procedure would be a possibility. Need to assess whether this would be feasible and who should be allowed to perform such flagging. The group suggested that site managers and data-analysers could do that. In case of “conflicts” the last edition would be the right one. If the case a data-analyst would flags data from another site, he would have to inform the site manager.  | Roy, Bruce, John | 20 Nov. 2014 |
| **From teleconference of 23 October 2014** |
| 2 | **A** | Craig and Samuel to follow up on data catalogue; update where necessary | Craig, Samuel | Nov 7, 2014 |
| 3 | **A** | Input from site managers required re: derivation of output data (sampling rates, processing at logger level) | Site managers | Dec 5, 2014 |
| 9 | **A** | Adding of snow occurrence information to the manual observations table of PYRAMID site  | Guglielmina | Nov 7, 2014 |
| 10 | **A** | Sending of Forni data to Craig first (in any format) and then with the right NCAR format to NCAR. | Guglielmina, Antonnela | Next week to Craig, then as soon as possible to NCAR |
| 11 | **A** | The SR50, used to select snowfall events, will be changed for a similar model at Forni site as there may be issues with their current instrument | Guglielmina, Antonnela | For season 2014/2015 |
| 12 | **A** | Sending of elevation change as a result of the change in location of the Forni site. | Guglielmina, Antonnela | At the end of the summer season |
| **From teleconference of 9 October 2014** |
| 4 | **A** | Provide a first draft of the interpretation of terminology used in the project objectives, relative to SPICE specifics, to be used as a starting point for the identification of graphs and analyses to be conducted for the preparation of Data Sheets.  | Roy | Oct 30, 2014 |
| 6 | **A** | Use the opportunity of the review of data availability for assessing the type of plots and analysis that needs to be conducted for meeting project objectives. E.g. developing plots to assess whether there are similarities between climates on different sites, assessment of results on a site by site basis, followed by the corroboration of results, etc | all | End of October |
| 7 | **I/A** | All project members are encouraged to publish results, from their sites, or on proposed methodologies, in the SPICE special issue and to inform the team about their plans. | All | On-going |
| **From teleconference of 25 September 2014** |
| 7 | **A** | Perform R1/R2 analysis for Marshall with respect to both Geonor and Pluvio2 of Marshall in R2 configuration | Kai | Dec 2014 |
| 11 | **A** | Try to get data from the first WMO intercomparison from sites with a shielded/unshielded pair. If available, these data will be sent to Roy for further analysis | Daqing |  |
| **From teleconference of 7 August 2014** |
| 7 | **A** | Finalization of Sodankyla meeting report is still underway. Some presentation summaries are still missing from Antonella, Leena, Niina, Arkady. | ~~Antonella, Leena, Niina,~~ Arkady, Isabelle | 31 Aug. 2014 |
| 15 | **A** | Assess and discuss methods for tying together SoG with event selection; an NCAR or offline? | Craig | Next telecon |
| **From teleconference of 20 February 2014** |
| 8 | **A** | Help raise resources for the CIMO Trust Fund to enable hiring someone for that. | All | On going |
| **From teleconference of 23 Jan. 2014** |
| 12 | **A** | Site Managers to send to Rodica picture that are representative of their sites, which would be used for presentations/posters on SPICE | Site Managers | on-going |
| **From teleconference of 19 Dec. 2013**  |
| 9 | **A** | Follow-up on gauge heights (non-DFIR) | Rodica | Jan 16th |
| 16 | **A** | Send Audrey proposals for any terms to be defined | all | ongoing |
| **From teleconference of 24 Oct. 2013** |
| 2 | **A** | The SPICE report will need to provide feedback on calibration procedures as stated in Geonor manual to inform those using these gauges. Key points:* Gauge levelling
* Compare 3-wire average (requires algorithm from DAT) or individual transducers with calibration load
* Comparison impacts procedure in manual: if errors more than 0.5%, Geonor recommends correction of *A*, *f0* coefficients
* Covering of gauge orifice during calibration
 | Rodica | In the Final report |
| **From teleconference of 20 Sept. 2012** |
| 1 | **A** | Look at vertical wind profile: compare measurements with observations at different heights | John | Aug 2013 |

**Attachments:**

None.