WMO SPICE Teleconference

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| Date | 22.01.2015 | Time  | 14:00 – 15:30 (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 | R. Nitu | Recorder | I. Rüedi |
|  |  |
| 2nd Teleconference | **23.01.2015** |
| Participation | **S Bilish, J Kochendorfer,**  |
| Moderator | **R Nitu** |

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

| **#**  | **A / I / D** | **Item Description** | **Owner** | **Due Date** |
| --- | --- | --- | --- | --- |
| 1 | **I** | Presentation of the expected achievements related to transfer function to DFIR, as discussed during the breakout group during the Sodankylä meeting:1. John and Guywon are using different method to derive TF for selected gauge configuration and depending on wind speed and temperature.
2. Compare the methods – what are the differences?
3. Check for other dependencies
4. Apply at different sites and search for site
5. Can sites be grouped according to these differences?
6. Look into continuous equation vs type-specific equation
7. Refine method
8. Document method
9. Extend to all gauges and accumulation of non-catchment type of instruments.

Additional related tasks:Is it possible to use some combination of sensors for deriving the precipitation type for transger function?Transfer functions based on precipitation type are expected to be more accurate, but will not be working for a huge amount of operational station which do not have the needed additional data. | Mareile |  |
| 2 | **I** | Presentation of existing literature addressing transfer functions | Mareile |  |
| 3 | **D** | Assessing the DFIR uncertainty is important, but the derivation of the transfer functions has to be performed in parallel to make best use of the time. Additional correction based on the DFIR uncertainty could always be added later on. |  |  |
| 4 | **I/A** | Group made a list of topics that may also have to be considered towards deriving the transfer functions. These include: - Uncertainty of the DFIR- DFIR with Geonor vs. DFIR with Pluvio- Uncertainty of the DFIR from site to site- DFIR vs Bush (true precipitation); R0-R1 transfer function- Using DFIR data where we have two DFIRs at the same site- Look into DFIR-DFIR under liquid precipitation events and low-wind-speed-solid precipitation- Operational use of the transfer function (applying synoptic codes of present weather sensors)- Define the transfer function between any of two gauges- Define the transfer function between DFIR and any gauge- Including results  from Julie and Matteo as background information/guidance on defining the further work (Roy could present that)- Challenge of huge scatter in the data, what is causing that?- Storm-to-storm differences (storm type classification?)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 |
| 5 | **I/A** | Everyone is encouraged to publish early results realted to SPICE in the special issue, so that this material could be referred to from the SPICE final report (submitted articles are openly available very soon after their submission, as they are open to comments). It is up to everyone to decide which paper they would like to submit. The team, as a group, will rather be on working on the final report.Send information on the special issue to the whole teamLink special issue to SPICE website. | MareileIsabelle | 31 Jan. 2015 |
| 6 | **A** | Some commissioning reports are still outstanding.  | Site managers |  |
| 7 | **A** | Finalize Marshall commissioning report | Scott/Roy | 29 Jan. 2015 |
| 8 | **A/D** | Publish commissioning report of Marshall site (which has majority of the contributed instruments) on website by 29 January 2015, either in a draft stage, or in its final stage if available. Update website as soon as final version is available. | Isabelle | 29 Jan. 2015 |
| 9 |  |  |  |  |
|  |  | **For next teleconference(s)**:* **29.1. SoG (Craig, Samuel)**
* **5.2. Data sheet (Rodica)**
* **12.2.Event statistics (Audrey, Mareile)**
* **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)**
 | Topic specific |  |

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** |
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| **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 |
| ~~8~~ | **~~I/A~~** | ~~Presented list of topics for data analysis to be addressed by the time of the Toronto meeting. Everyone is invited to express interest for specific topics.~~  | ~~All~~ | ~~15 January 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 27 November 2014** |
| 4 | **A** | Send consolidated reference report to project team | Rodica | Jan 16, 2015 |
| **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 |
| 18 | **D** | Next SoG teleconference will be in January expecting to show some preliminary results. Therefore, QC on SoG data is expected to be done by the end of the year.  | Craig, Samuel | January |
| **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** |
| 6 | **A** | Provide R1 data from Marshall to Kai to conduct similar analysis with respect to both Geonor and Pluvio2 of Marshall in R2 configuration. | Roy | 9 Oct. 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 18 September 2014** |
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|  | **A** | (resulting from Sept 18th teleconference): the Pluvio firmware version for SPICE remains 1.30.1;All Pluvios in SPICE to be reoriented with the strain gauge towards north, to minimize the temperature variation due to the solar irradiance. | All Site Managers | Nov 2014 |
|  | **A** | Establish instrument champions for all instruments under test in SPICE. A champion would be the focal point for the information regarding a particular sensor/system, and would ensure that the information is captured in the Final Report.All are invited to indicate their preference for contributing to the assessment and tracking of performance of SPICE tested sensors.Rodica to set Doodle poll for all to indicate preferences | All team members | Oct 15, 2014 |

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| **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 |
| 11 | **A** | Present a Summary of methods implemented at NCAR in support of SPICE; to be demonstrated during next telecon | Roy/Andy | Next telecon |
| 13 | **A** | Provide a tutorial (demo and written) on how to use all features implemented at NCAR, that are expected to be used by Site Managers, and DAT members | Roy | August |
| 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.