WMO SPICE Teleconference

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| Date | 20.11.2014 | 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~~ |
| Distribution | All attendees, IOC (including IOC ex-officio members) |
| Moderator | M. Wolff | Recorder | **I. Rüedi** |

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

| **#**  | **A / I / D** | **Item Description** | **Owner** | **Due Date** |
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| 1 | **I** | Presentation on the of results of Calibration comparison CARE, 2014 (Emanuele) + experiences from RI Intercomparison on Pluvio2 products |  |  |
| 2 | **A** | Put your questions in writing, so that Emanuele properly understand them and reply to them | John/Bruce | 25 Nov. 2014 |
| 3 | **A** | Share formulas used for the field calibration comparison with project team. | Emanuele | 25 Nov. 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 Sitemanagers are reminded to perform calibrations/field controls and document the process and results. From the attending sitemanagers, the following feedback was given:* Weissfluhjoch: field control/calibration performed with weights
* Sodankyla: field control/calibration performed with known amounts of liquids
* Bratt's Lake/Caribou Creek: field control/calibration performed with known amounts of liquids according to SPICE-documentation
* Haukeliseter: field control/calibration performed with known amounts of liquids according to SPICE-documentation

Not all sites have completely analysed their results, but data and processes are documented. | All | March 2015 |
|  |  | **For next teleconference(s)**:* **27 November 2014**– Reference Report review + preparation of the SPICE Toronto meeting, 2015
* **4 December 2014**– Datasheet proposal (Roy/Bruce) and definition of SPICE uncertainty
* **TBD:** Review of results from field check/calibrations performed at all sites
 | 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 13 November 2014** |
| 2 | **A** | Production of plots (NS/DFIR ; SA/DFIR ; NS/SA) for selected sites, see below. | Roy | January 2015 |
| 4 | **A** | NCAR accepted to provide storage with uploading/downloading function (ftp) for first-pass datasets.  | Andy / Scott | End of November |
| 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 :DecemberEvent 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 |
| 9 | **A** | In preparation of the discussion on Data Sheet content, everyone is encouraged to send to Roy suggestions and perspectives. Roy and Bruce will synthesize and present on Dec 4th. | All | Dec 01, 2014 |
| **From teleconference of 6 November 2014** |
| 3 | **I****A** | Thresholds are applied to each instrument types independently. It is expected that the thresholds will be the same for all instruments of one specific type. Thresholds will be refined iteratively, when experience is gained or when problems are encountered.Selected site managers to provide information on thresholds related to the instruments available on their site to Audrey. | MareielCraigTimo/OsmoRoy/ScottMike/Rodica | 12 Nov. |
| 5 | **A** | Audrey, Floor and Mike presently testing the outcome of the QC procedures implemented at NCAR and those off-line on CARE data. Other sites’ data will be tested soon. |  |  |
| 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 30 October 2014** |
| 5 | **A** | Number of questions on the implementation on the QC and event selection procedures have to be answered/reviewed by the team. As most participating instruments are located at NCAR, US team will address these question as a priority. | Scott / Roy | 10 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 |
| 5 | **A** | Review concept of data sheet taken into account above interpretations during teleconference | All | Early Nov. 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 |
| 8 | **I/A** | Update on R2-R3 analysis. Comparison on catch efficiency experienced in Marshall and Haukeliseter, more specifically on the analysis of the R3 (catch efficiency of single alter gauge vs unshielded gauge).Both measurements and model calculations suggest that the shape of the transfer curves are depending on site climatology. Typical particle sizes of the snow seems to be a possible explanation for these differences. It was suggested to classify the data after different temperatures to see how that relates to the shape of the curves.Even if sites have a typical “sort of snow”, not all events will be typical and transfer functions for single events might not follow the climatology of the station. If possible (enough data) these should be studied as well.Roy to provide input for the Reference Report on use of R3 vs R2. | Roy | Oct 15, 2014 |
| 10 | **A** | Rodica to contact site managers with requests for site descriptions for the Reference Report | Rodica | Oct 9, 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 |
| 12 | **A**  | Organize data analysis meetings in near future to assign duties; teams conducting parallel analysis an option | Mareile/Rodica | Sept |
| 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 |
| 17 | **A** | Retrieve data for R1-R2 assessment from FMI | Craig |  |
| 19 | **A** | Mike to report on uncertainty assessment of Geonors and Pluvios using John’s approach | Mike | Dec 2014 |
| **From teleconference of 20 February 2014** |
| 3 | **A** | Sites to clearly document issues on heating, as well as on all interactions with manufacturers. | All | On-going |
| 4 | **I/A** | Commissioning reports have only one entry for Data sampling frequency and data acquisition frequency. It is recommended that all sites provide both values. Site tracking form should be updated if needed to capture this information. | Audrey / Craig | 24 Feb. |
| 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** |
| 2 | **A** | Follow up with sites which have not provided the Commissioning Reports and obtain status and commitment for completion | Francesco | August 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 |
| 20 | **A** | Develop specific recommendation for QC procedure of SoG data.  | Craig (with SoG team) | 28 Feb. 2014 |
| **From teleconference of 19 Dec. 2013**  |
| 9 | **A** | Follow-up on gauge heights (non-DFIR) | Rodica | Jan 16th |
| 14 | **A** | Contact Niina Puttonen to help with analysis of reference uncertainty using Sodankyla data, focussing on low-wind conditions | Mareile | 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 |
| 8 | **A** | Status of data transfer to NCAR to be monitored and documented regularly, shared; specifics of procedures TBD | Rodica/ Audrey | On going updates |
| **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.