

General Comments:

The manuscript describes measurements recorded at two Canadian precipitation intercomparison sites. The history of the sites, along with a description of the measurements recorded at the sites is described. The relationship between the measurements and WMO-SPICE is also discussed, and the important fact that there are more data

5 available from these sites than was included in WMO-SPICE is made clear. Large uncertainties in solid precipitation measurements are accurately described as the motivation for both WMO-SPICE and the dataset that the manuscript describes. In addition, the testing of WMO-SPICE transfer functions serves as a nice example of using the measurements to help advance precipitation research.

My primary criticism of the paper is that it does not include many significant and new scientific developments.

10 Other than the testing of transfer functions shown in Figure 7, the content of the manuscript is mainly descriptive and historic. I admit however that this may be an unfair criticism, as the stated scope of the journal is to promote “the reuse of high-quality datasets” rather perhaps than present new science. The present manuscript does appear to have less analysis and new results than some of the recent ESSD manuscripts I looked over, but this impression may be due in part to my own unfamiliarity with the focus of the other ESSD manuscripts I found. In addition, ESSD
15 does appear to publish some other similarly descriptive manuscripts. So this criticism should be taken with a grain of salt. I am not suggesting that the manuscript be rejected on this account, but it would certainly strengthen to paper to include more new and interesting results.

The manuscript is generally well written and presented, but some mainly small editorial and technical recommendations are made below.

20 Specific Comments:

P. 1, l. 16. Replace “issues” with a more specific word. And rewrite or delete, “It is also fortunate that”.

P. 1, l. 26. Reword, “and reduced to monthly” – it is awkward as written.

P.1, l. 35-36. Rewrite “The systematic bias issues in the measurement of snowfall” as “Snowfall measurement biases”.

25 P. 2, l. 3. Citation error – Kochendorfer et al. didn’t publish anything relevant in 2016.

P. 2, l. 36. Change “represents” to, “are”. Not sure how to resolve this, but I think “data” are plural, and “data set” may be singular, so it isn’t clear if “are” or “is” would be more appropriate – make it consistent. Consider deleting “represents a high quality precipitation data set” all together, as it doesn’t add much.

P. 3, l. 1. Why does the data “represent” a contribution? Rewrite this sentence more succinctly.

30 P. 3, l. 16. Change, “tree heights *averaging* about 2 to 3 m”, to, “tree heights *of* about 2 to 3 m.” Change “opportunistic” to “opportune”. Arguably this sentence and the one before it should be changed to past tense as well. The tense changes from present to past somewhat arbitrarily throughout this paragraph. It is probably just easier to stick with past tense. For more general guidance: <https://www.nature.com/scitable/topicpage/effective-writing-13815989>

35 P. 3, l. 26-28. Clarify what is meant by “not reported” – is it excluded from the dataset or just the manuscript? Maybe there is a clearer way of describing this? Or if it is included in the dataset “not reported” can probably just be removed.

P. 3, l. 32. Remove the word “site” from “site SWE”.

P. 4, l. 1. Change “crossing” to, “and crossed”.

P. 4, l. 11. Typo – change “*am* R.M. Young...” to “*an* R.M. Young...”.

P. 4, l. 13. Clarify if the Stevenson screen was fan aspirated or naturally aspirated.

5 P. 4, l. 26 - 27. Change to, “although *they* generally kept...”.

P. 5, l. 10 p 6, l. 21. Change Section 3.3 – 3.5 to mainly past tense.

P. 5, l. 31 – 35. I like this approach, and the description is clear. But unless you plan on publishing it elsewhere, describe the BFU filter in more detail. For example, what types of numerical techniques were used, and is this software available for others to use? This manuscript would be a good opportunity to publish the method, and it

10 would also help give the manuscript a bit more substance.

Figure 5. The font size used throughout the figure is too small. It is difficult to read.

P. 6, l. 34. Change, “were a contribution” to, “were contributed”.

P. 7, l. 9. How was ~30% calculated? Based on the figure it looks like prior to the missing data, the SA was only under-adjusted by ~25% $((150 \text{ mm} - 115 \text{ mm})/150 \text{ mm})$.