

Interactive comment on “The Quantification and Correction of Wind-Induced Precipitation Measurement Errors” by J. Kochendorfer et al.

S. Buisan (Referee)

sbuisans@aemet.es

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GENERAL COMMENTS

Overall this is a well written paper that should be published.

The methodology and the description of the experiment is complete and precise and can be reproduced by other scientists. The methods are clearly outlined and clearly support the conclusions. This is very important for the scope of this special issue.

My big comment is that more gauges at Norwegian site could have clearly helped in the analysis.

Another possibility would be to include in the study other sites to support the concepts of “Universal Transfer Function” and “various measuring sites”. This could be the ob-

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jective of another related article.

More description of Norwegian site is needed in comparison with the description of US site

SPECIFIC COMMENTS

Page 2, lines 20-21: provide a citation for “ The collection of rain . . . “

Page 3, line 10: Why it was “unexpected”?

Page 4, site descriptions: In NOR site you use snow depth and in US site snowfall accumulation. Please use the same variables for consistency

Page 4, site descriptions: A figure with location of the sites, pictures and layout of the sites could be useful.

Page 4, line 19: “several gauges . . .” why these gauges were not included in the analysis? Problems with dataset?

Page 5, line 5: I don’t understand the term “porosity”

Page 6, lines 15-17: “The 10 m wind speed . . . “ it seems more a conclusion than a description of the site. In addition, it is confusing to me the sentence “ 10 m wind . . . produced more accurate precipitations corrections . . .” because later in the discussion section it is recommended to use wind speed at the gauge height.

Page 7, line 6: Where the present weather detector was located? Inside DFIR? Maybe you should reference presentation on non-catchment technologies at TECO 2016 where the limits of these instruments were presented Why data from present weather detector from NOR site was not used in the analysis? It would be really useful and also consistent to have the same Figure 2(US site) for NOR site.

Page 8, lines 19-20: please consider to describe briefly the methods for NOR site

Page 9, lines 10 -13: please refer to figure 5 to state that “SDFIR data . . . was the most

comparable to DFIR” or add a citation

Page 11, lines 10 – 13: I don’t understand

Page 13, lines 6 -13: Did you test the results using the same number of events for both sites? It would be a good experiment to see if the results were independent of the number of events used. Another explanation for the bias could be the wide range of wind speeds at NOR site making more difficult to obtain an accurate transfer function for NOR site.

Page 14, lines 21-23: Do you think that wind adjustment is more difficult at NOR site because of higher wind speeds and turbulence? Any study related to this? Consider more discussion and citations

Page 14, lines 25-33: Consider including that “10 m is standard according WMO guidelines and widely used in National Weather Services”

Page 14, line 31: “snow depth . . . campaign . . . maximum of 2m . . . “ it is confusing to me because previously it was written that snow depth reaches 3m

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