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Interactive comment on "Early instrumental meteorological observations in Switzerland: 1708–1873" *by* Yuri Brugnara et al.

Anonymous Referee #2

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This review is about the article "Early instrumental meteorological observations in Switzerland: 1708-1873" by Y. Brugnara et al. The authors digitized a large set of old hand-written meteorological observations from several obervation stations around Switzerland, and are describing their stragy and conversion problems along the way.

I consider this article very interesting and I also appreciate the work that was done by the authors and students to get this work done. The article is also well written and explained, so I have only a few comments and minor requests.

The first one is regarding Fig 1: I think you should reconsider your color choice here. It is hard to distinguish between the red (air temperature) and pink (air temperature (daily means)). Same for air pressure/air pressure (daily means). Especially, when you have short or broken intervals, like e.g. ZH01_Zuerich_Bruegger). I understand that

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Discussion paper

you want to keep the colors of similar variables close, but in this case it causes more confusion than insight. I would propose to use a wieder color scale here.

The same "color problem" applies to Figure 3: Without reading through the text it is hard for me to distingish between the different shades of red.

Page 4, line 104: I understand the plan to address the uncertainty in another paper. However, often the next paper takes a while to get published and the users of the data are left hanging with no uncertainty estimate. If you could give a benchmark or an estimate-range for this current dataset with respect to uncertainty, then it would help a lot. The user can take this number until you provide a better and more accurate estimate.

page 5, formula (1a/b) : How reliable do you consider these conversion formulas? Is there a reason why you chose second degree polynomial? It would help a lot, if you could provide an uncertainty estimate. Without graphical or tabular support, it is difficult to get a a feeling for this correction.

p 6. Formula (2)/Fig 5a) : I am not quite sure, if I see the advantage of Eq 2 to the adjusted M. du Crest. Do you have any mathematical support for Eq. 2? Like a lower mean deviation from the observation points? Did you make any statistical tests of your linear regression?

p 7, line 195 : You should mention here, that "corrected" pressure values are makred differentlty in the meta data. It gets only mentioned 2 pages later and its therefore easy to read over it.

4 Conclusions

This chapter is very short. I think, it could be expanded a little bit. it would be nice to have a short summary about possible sources of uncertainty. Users of the data will need some benchmark numbers, especially with respect to error estimates or quality assurances. Perhaps also some guidance, how to use the data, e.g. if it isib possible

to filter this data to get higher or lower accuracies.

My Regards.

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