

Interactive comment on “The Rofental: a high Alpine research basin (1890 m – 3770 m a.s.l.) in the Ötztal Alps (Austria) with over 150 years of hydro-meteorological and glaciological observations” by Ulrich Strasser et al.

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The authors present a very thorough overview over the research data available for the Rofental catchment in Austria. The data sets described include meteorological data, runoff data, glacier data and snow and glacier observations made with terrestrial and airborne laser devices. Nearly all data sets are presented with their respective sources and availabilities which makes it easy for interested researchers to access them. Along with the data the paper presents multiple relevant studies that have already been conducted and published using the presented data sets. This overview will certainly help

C1

researchers across the cryospheric community who are looking for suitable datasets for a variety of applications. Overall this paper, in my opinion, presents a very nice contribution to the ESSD journal and should be helpful for a variety of interested research groups.

The language is adequate and the presentation clear and concise. I would therefore recommend publication after some (very) minor revisions (see specific comments).

Specific comments:

P.2 line 4 This sentence is extremely long and awkward to read. Maybe split into two after “Alpine environment”.

p.3 line 18,19 It should be either “are” and “farms” or “is” and “farm”.

Figure 2: Is there a chance of including elevation contour lines in this figure? Or alternatively could you provide a Table with the elevations of all stations shown? This information is scattered throughout the paper when discussing the individual stations, but I think it might be beneficial to bundle the information in a single spot.

p.5 line 20 You have not defined the acronym AWS. While it is a very common acronym you still might want to define it the first time you use it.

p. 8 line 13 What do you mean by “measuring two-monthly in the summer”? Are these two months sums of precip? Please clarify.

p 9. line 14 Here you write automatic weather stations. If you have defined it before you might want to use AWS here.

p 10. Line 11: Which hut are you talking about?

p. 12: line 4: In the figure caption you mention a “glaciological method”. In the text you mention using stakes, aerial photos, satellite observations and laser scans. I assume the glacier balances shown in Figure 4 are based on stake measurements but I would recommend clarifying this.

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p. 14 Figure 5: What are the lines along with the correlation equations and R^2 factors? I assume these are trend lines but I would recommend mentioning this in the text and/or the caption and maybe even add a couple sentences of discussion on these, if you are showing them in the Figure.

p. 15 line 10: How was the glacier contribution to streamflow determined? Please include a short description of the method used.

p. 17 line 16: Remove “such” at the beginning of the sentence.

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