

Open question – just a clarification/ suggestion, which you can follow or not

**R2.40 Comment:** l 273ff: The discussion of Figs. 11 and 12 could use a bit more detail. I think these are some of the main results in this paper and I find it a bit hard to follow. In particular Fig. 12b is only discussed very briefly.

**Response:** Are there any specific details you would like to be discussed?

Response:

After re-reading this part of the manuscript, I think my request was about a matter of taste whether results and discussion should be mixed or not. I was missing a discussion of the results of the two Figures, especially Fig. 12b, but I you are actually providing a short assessment in the Discussion section.

You formulated the following objective: *“In the following, we want to investigate whether sites with greater riming and total precipitation also experience more intense precipitation, or if the increased totals are just due to longer precipitation duration”*

This is answered in Fig. 12:

*“Neglecting the outliers Neuhaus and Feldberg, there is almost no correlation between number of precipitation hours and riming events for the remaining sites (grey box in Figure 12a with a pearson correlation coefficient -0.06). In Figure 12b, we see the correlation between riming events and average precipitation rate, with a focus on stronger precipitation events of at least 1 mm h<sup>-1</sup>. The correlation coefficient is 0.36 (grey box in Figure 12b, omitting the Feldberg radar).”*

I would have liked to read a more to-the-point discussion of the initial question you asked, whether this means that riming and precipitation intensity are linked or not. You are mentioning it in the Discussion, and I over-read it the first time: *“riming and total precipitation hours are uncorrelated, while there is a (weak) correlation between riming and precipitation rate.”* Then you list other studies relating riming and precipitation intensity.

To me as a reader, a more concise interpretation of the results of Fig. 12 in the context of these other studies would have helped understand the results easier. You can consider trying to bring them more to the point, or leave as is.

Here is what I got out of the text, maybe this is of use to you:

- There are several other studies pointing to such a correlation
- In this present study, you do observe a correlation, albeit weak, but it also makes sense that this relationship is hard to observe.
- This study is the first one to consider many equidistant sites in the same climatic region, and shows the influence of orography (as well as natural variability?)