

Interactive comment on “Simulating the temperature and precipitation signal in an Alpine ice core” by S. Brönnimann et al.

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Many thanks for the review, which points to improvements of the comparison between different precipitation data sets and measures used. The suggestions are incorporated in the revised manuscript.

1) We add additional analyses of precipitation in various data sets, including a climatology (precipitation days and amounts) and a comparison of the fraction of precipitation falling during those precipitation days that mutually agree.

2) We are not sure whether we correctly understand the reviewer. It seems that the referee suggest's a new measure: In addition to annual mean temperature and precipitation-weighted temperature the reviewer suggests mean temperature on pre-

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cipitation days (which may be less sensitive to mis-representation of precipitation amounts than precipitation-weighted temperature). We add an analysis of this new measure to our paper.

3) We add a figure panel showing the annual mean precipitation time series and then a sentence on correlations for a wet period (1945-1967) and a dry period (1971-1993). However, the number of degrees of freedom is low and the two periods have a different quality, which makes comparison difficult. Output from model simulations might be more helpful.

4) We add information on the significance levels and autocorrelation. Note that we do not use 3yr or 5yr running correlations in our paper.

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