Interactive comment on “Southern westerlies in LGM and future (RCP4.5) climates” by Y. Chavaillaz et al.

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Summary

I would like to invite the submission of a revised paper for publication in Climate of the Past. The comments of the two referees are distinctly positive in recommending this work fit for publication. However, they each raise several minor comments that I would like to see addressed in a revised document.

I feel that the most substantial point to address is that of the differing treatment of Antarctic orography. Reviewer 2 raises this issue when talking about figure 5, and I have spotted something similar on fig. 2. Although this could be a non-issue, it has the potential to be caused by e.g. mislabelling of the CMIP data files with important consequences for your work. The majority of the others comments appear cosmetic (as may be this one). The point about further defining the location of the jet-stream by Referee 1 is also brought up Referee 2 in their question about the existence of multiple jets in fig 2, so I feel that this must be clarified.

Technical Comments

p3699, l13-16. I understand this justification, but the wording is a little awkward. Try “the upper-level jet is driven by a combination of...” instead of “mixes driving by”

Figure 2. The way the missing data is handled seems a little strange (i.e. the blue contours around the Andes). Perhaps doing a block fill in gray would help differentiate these regions from those with little change.

Figure 3. The titles should be on the X-axis and include units. Then the caption could be made such that you don’t need to read the associated text.

p3701, l10. Momentum is misspelt.

P3705, l3. “These two factors” to “the two factors”