Comment on cp-2022-6
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Community comment on "South American Monsoon variability over the last millennium in paleoclimate records and isotope-enabled climate models" by Rebecca Orrison et al., Clim. Past Discuss., https://doi.org/10.5194/cp-2022-6-CC1, 2022

This is a useful contribution that analyzes hydroclimatic variability in tropical and subtropical South America for the last Millennium. The authors use palaeoclimatic and modeling data. Time series of the proxy results are shown in Figure 2. It is clear that hydroclimatic trends for the key pre-industrial climate anomalies (Medieval Climate Anomaly, MCA; Little Ice Age, LIA) may be spatially different. It would be good if the authors can display the proxy-based hydroclimatic trends in a clearer way. Which regions got wetter/drier during the MCA and LIA? Please add arrows wetter / drier to the charts. Lüning et al. 2018 have mapped out such trends for the MCA of Africa: https://doi.org/10.1016/j.palaeo.2018.01.025 See Figure 4 of that paper. The influence of the Atlantic Multidecadal Oscillation and other well known modes of variability are discussed for Africa. What role do parameters such as Southern Annular Mode (SAM), AMO or ENSO play for SAMS in South America? Can you illustrate all isotope proxy records individually in the Supplement? It would be good to see how uniform or different these individual records are.

It would also be good if you can briefly discuss the potential impact of temperature variability of the Last Millennium in South America. The MCA and LIA are well represented in parts of the continent. See the synthesis published by Lüning et al. https://doi.org/10.1016/j.quaint.2018.10.041 Did the warmer climate during the MCA and the colder climate during the LIA have any impact on hydroclimate? Worth discussing.