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Earth System Dynamics
Discussions
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Interactive comment on "Evaluating the dependence structure of compound precipitation and wind speed extremes" *by* Jakob Zscheischler et al.

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General comments:

The manuscript presents a new methodological tool to compare compound extreme distributions between different datasets. The ability of a model to reproduce the behavior of compound extremes is of fundamental importance to assess climate related risks and to predict the evolution of such compound extreme events with climate change. The new metric is based on the Kullback-Leibler divergence. It is tested on different pairs of models and allows the comparison between different models regarding compound extreme distributions.

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Discussion paper

Âă I find the manuscript well-motivated and clearly written, even for non-specialists of climate. The new metric seems promising and the statistical analysis made with it is well described and seems solid. The interpretation of the results is convincing to me, although my knowledge of climate models is limited.

ÂăSpecific comments:

It is not mentioned whether the results are stable against different partitioning of the extremal region.ÂăYou could add a few words about it : Are there partitions that are more suited than others? What made you chose this particular partition?

Technical corrections:

-l 29 : 2 times the word 'studies' -l 144 : behavior -l 240 : may result

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Discussion paper