Nonlin. Processes Geophys. Discuss.,
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Nonlinear Processes in Geophysics
Discussions
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Interactive comment on "Vertical profiles of wind gust statistics from a regional reanalysis using multivariate extreme value theory" *by* Julian Steinheuer and Petra Friederichs

Anonymous Referee #2

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The authors present a novel approach to modelling hourly peak wind speed using a generalized extreme value (GEV) distribution with height and time dependent parameters. These GEV parameters are functions of several covariates from the COSMO-REA6 reanalysis. The presented results are convincing and the paper is well written. There are only minor inaccuracies requiring clarification:

P2,L44-46. Ensemble model output statistic is often referred as non-homogeneous regression, so I don't see any reason for treating the two notions here separately.

P4,L85. I don't see the reason of formulating Gnedenko's theorem. I would just cite it and define the GEV distribution.

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P4,L105. What do the authors mean by "generalized height".

P10,L271. Please clarify the sentence "We conclude ... " as something seem to be missing here.

Typos:

P2,L47. "In order to generate" instead of "In order generate"

P3,L78. "We pre-select" instead of "We pre-selection"

P5,L138. "All scores are evaluated" instead of "All scores are evaluation"

P7,:181. "COSMO" instead of "COMSO"

P11,L33. "therefore" instead of "therefor"

P26,Figure 11. In the legend I would write "30% neutral (b), and 11% unstable (c) cases."

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