

Thank you for your effort in understanding the capability of WRF model in reproducing the hazards associated with derechos. I enjoyed reading your manuscript and have a few suggestions to improve the manuscript.

A flowchart for the model simulation steps is missing from the manuscript. It is an important component, especially for a research paper that uses multiple model simulations and sensitivity cases. Authors should refer to the latest papers that demonstrate flowchart for the WRF model simulations, they can either provide references or produce a new flowchart for the reproducibility of similar WRF model simulations. Here are some suggestions for the relevant list of WRF literature:

Kumar, M., Kosović, B., Nayak, H.P., Porter, W.C., Randerson, J.T. and Banerjee, T., 2024. Evaluating the performance of WRF in simulating winds and surface meteorology during a Southern California wildfire event. *Frontiers in Earth Science*, 11, p.1305124.

Saleh, N., Gharaylou, M., Farahani, M.M. and Alizadeh, O., 2023. Performance of lightning potential index, lightning threat index, and the product of CAPE and precipitation in the WRF model. *Earth and Space Science*, 10(9), p.e2023EA003104.

Line 405: change “where XXX indicates” to “where XXXX indicates”

The font sizes of axes, ticks, titles, etc. are non-uniform in most of the figures (for example, Figures 9 & 10). Please be sure to make them uniform. The figure resolution needs to be enhanced for better readability as they appear to be of low resolution in the current version of the manuscript. In addition, some of the figure captions are inadequately written without sufficient information for the reader. Make sure to be consistent with the results and discussions provided.