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Discussions
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Interactive comment on "Changes in the simulation of instability indices over the Iberian Peninsula due to the use of 3DVAR data assimilation" *by* Santos J. González-Rojí et al.

Anonymous Referee #2

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In their study, González-Rojí et al. investigate three different convective parameters obtained from two dynamically downscaled WRF model runs over the Iberian Peninsula. Over a 5-year period, the convective parameters from the WRF runs are quantitatively evaluated with sounding data and spatially investigated for different seasons. In addition, the spatial distribution and variability of the convective parameters is investigated and related to certain precipitation characteristics from the literature. The authors found that WRF runs with 4Dvar assimilation best reflect the convective situation.

General comments:
Overall, the work is well structured and written with a good balance of text and figures.

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Discussion paper

My main concern is that large parts of the paper are rather descriptive in the sense that mainly the figures are described and not interpreted. Reasons for the discrepancies found between the data sets are not given - although that would be most interesting and would increases the scientific value of the paper.

Specific comments:
See Supplement

Please also note the supplement to this comment:
https://www.hydrol-earth-syst-sci-discuss.net/hess-2020-53/hess-2020-53-RC2-supplement.pdf

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