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Interactive comment on "Development and evaluation of spectral nudging strategy for the simulation of summer precipitation over the Tibetan Plateau" *by* Ziyu Huang et al.

Anonymous Referee #1

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A nicely written manuscript about downscaling of global reanalyses for regional climate modeling studies. I have no major comments, there are some spelling mistakes and incomplete sentences, but I am sure they will get corrected during the editing process.

I was missing a slightly more in-depth dynamical interpretation of why the best performing set of parameters improved the skill of WRF as an RCM.

Line 119-120: (incomplete sentence) Why did you use Yonsei scheme? I am assuming it is for the PBL.

Line 145: Is the 'ktrop' option for spectral nudging now available to the larger audience of WRF users?

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Line 276: 'transporting emissions - which emissions?

Line 285: By 'drag force', do you mean orographic blocking? What is the convergence of the water vapor? Please clarify.

Line 315: It would be very instructive to overlay the 'ktrop' model level on figures 7 and 8. Is WRF using a terrain-following vertical coordinate? I imagine that the 'lid' is not horizontal at all - does that change your conclusions about how and where the nudging is applied?

Line 395: If I understand you correctly, the best results were achieved with SNnoT, nudging only the winds and geopotential, from the top of the PBL through the domain top, while not forcing the temperature and humidity at all?