



Supplement of

Changes in the simulation of atmospheric instability over the Iberian Peninsula due to the use of 3DVAR data assimilation

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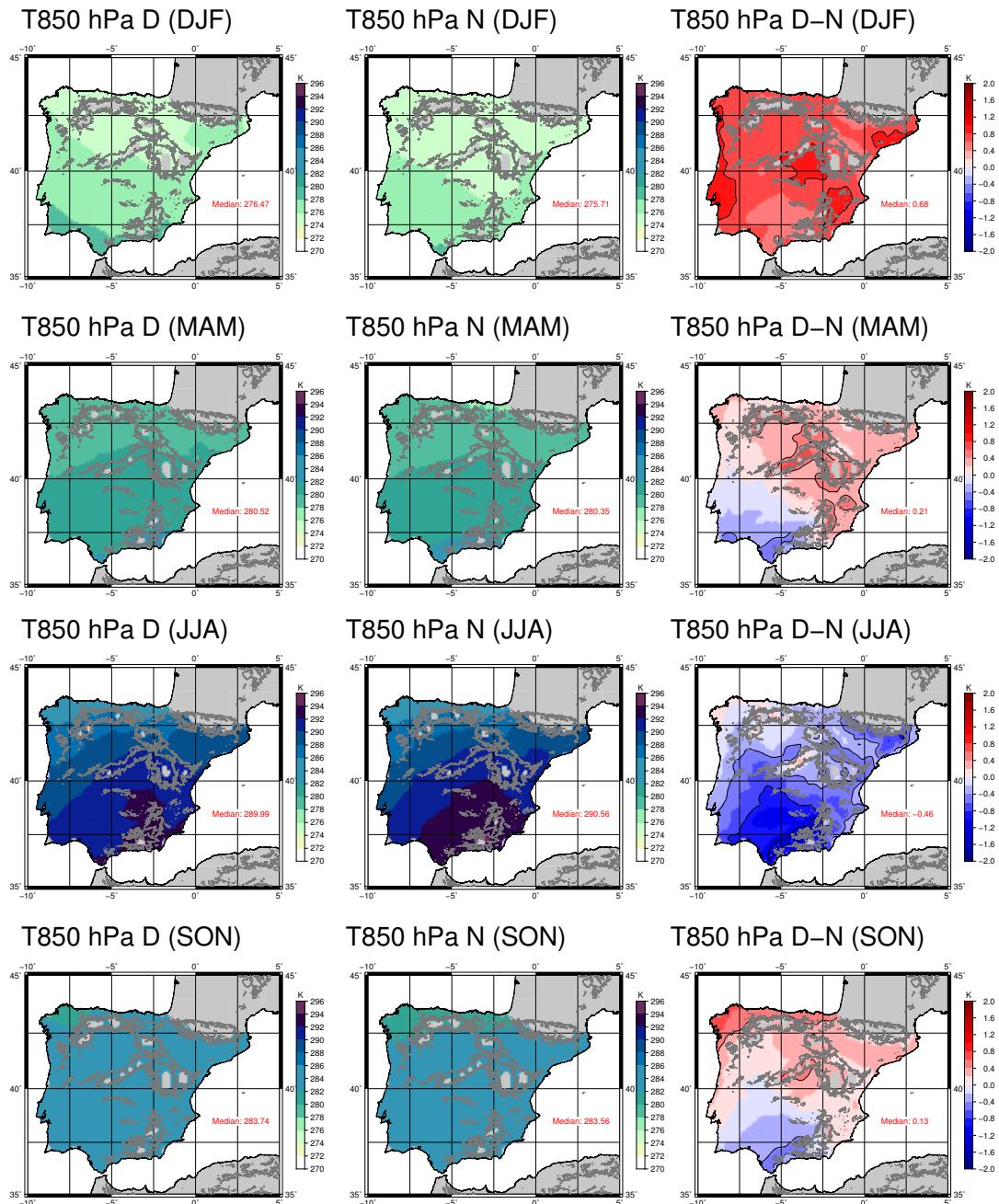


Figure S1. Spatial distribution of mean temperature at 850 hPa for period 2010–2014 over the IP as computed from N (first column) and D (second column) for winter and summer. The third columns presents the difference between both WRF experiments (D–N). The median value (K) is in the bottom right corner of the plots.

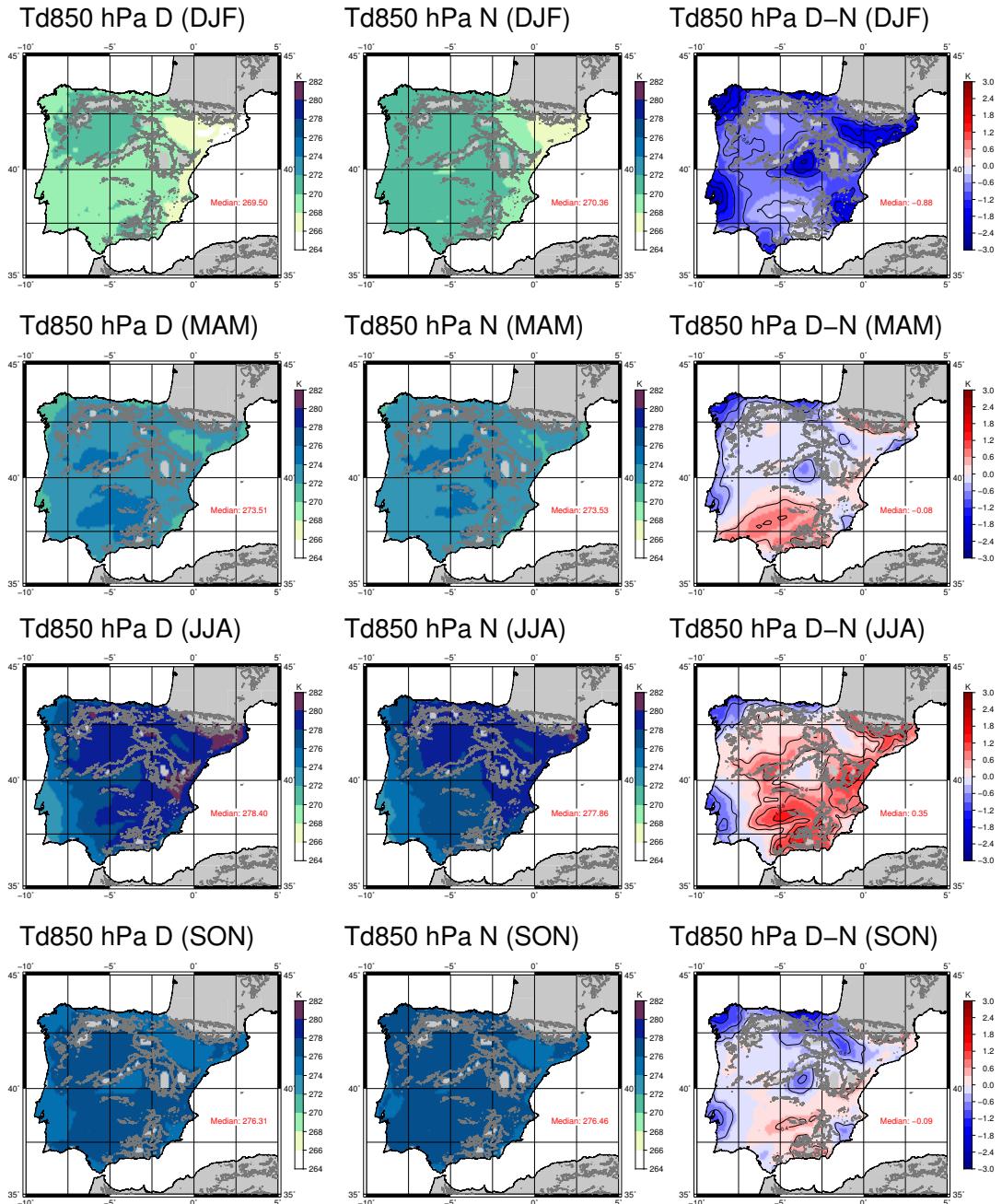


Figure S2. Same as Figure S1 but for dew point temperature at 850 hPa.

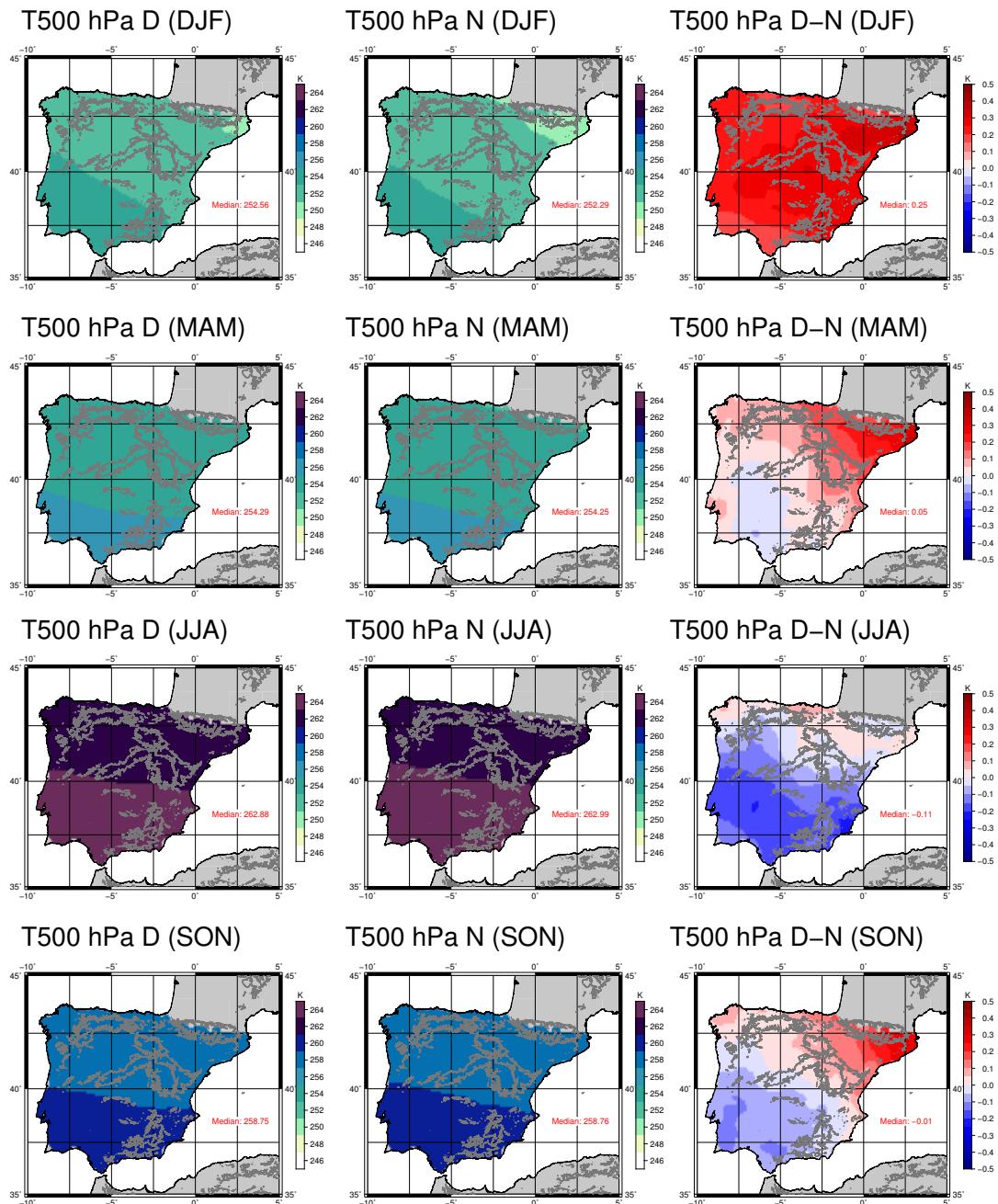


Figure S3. Same as Figures S1 and S2 but for temperature at 500 hPa.

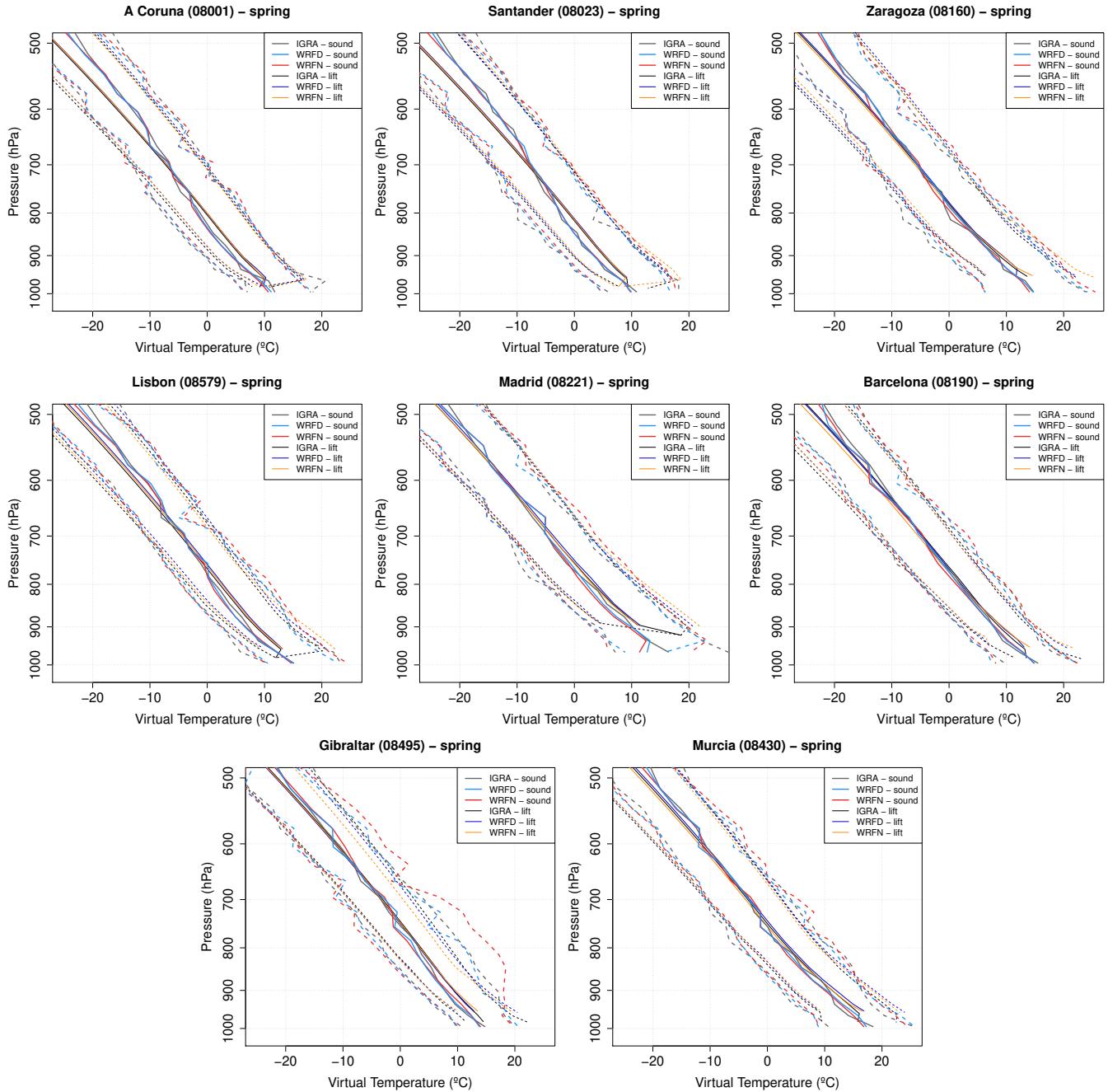


Figure S4. Vertical profiles of virtual temperature for the sounding levels and for the lifted parcel during spring. The dashed lines represent the 5 and 95 percentiles, and the solid lines the median.

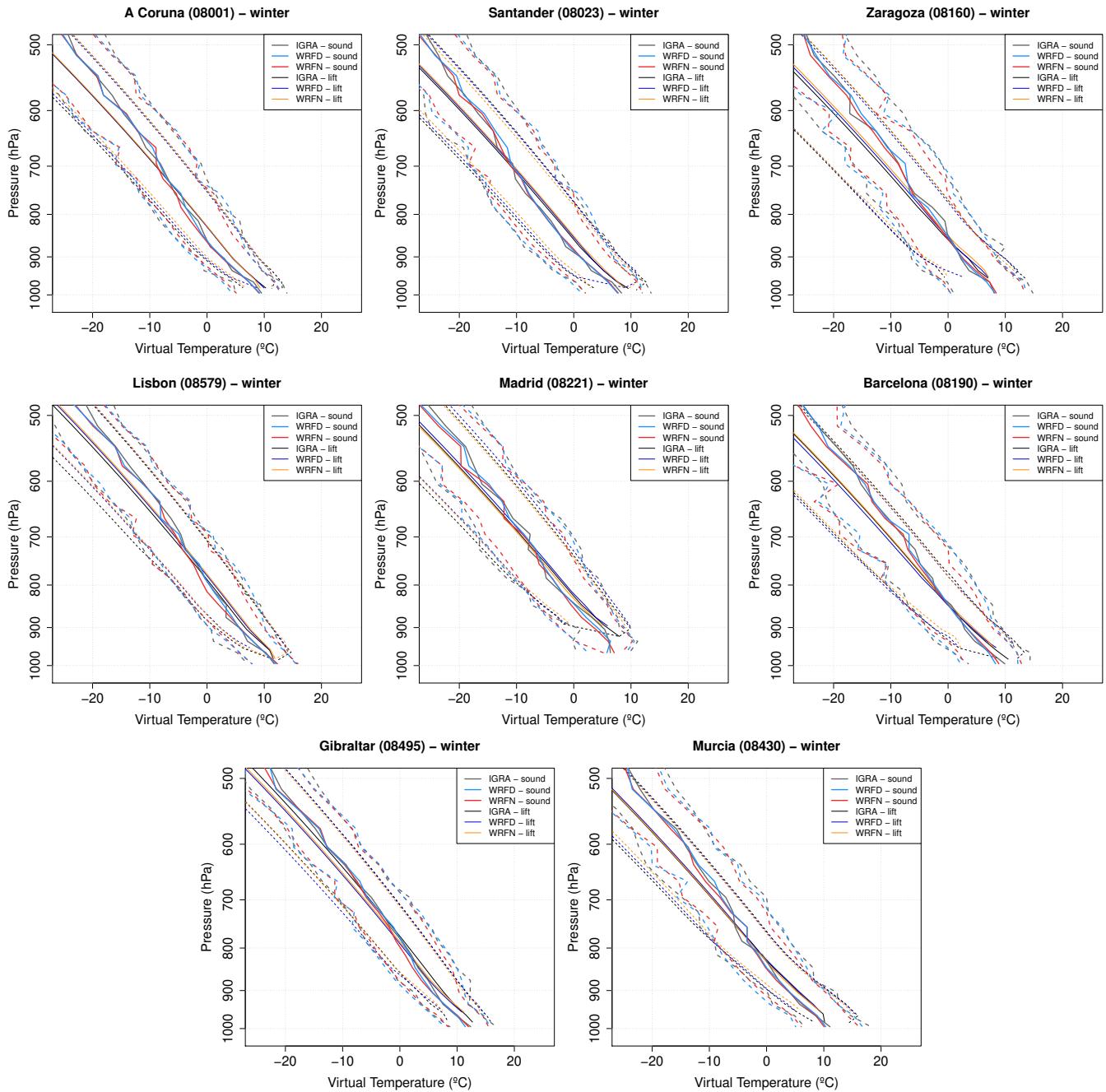


Figure S5. Same as Figure S4 but for winter.

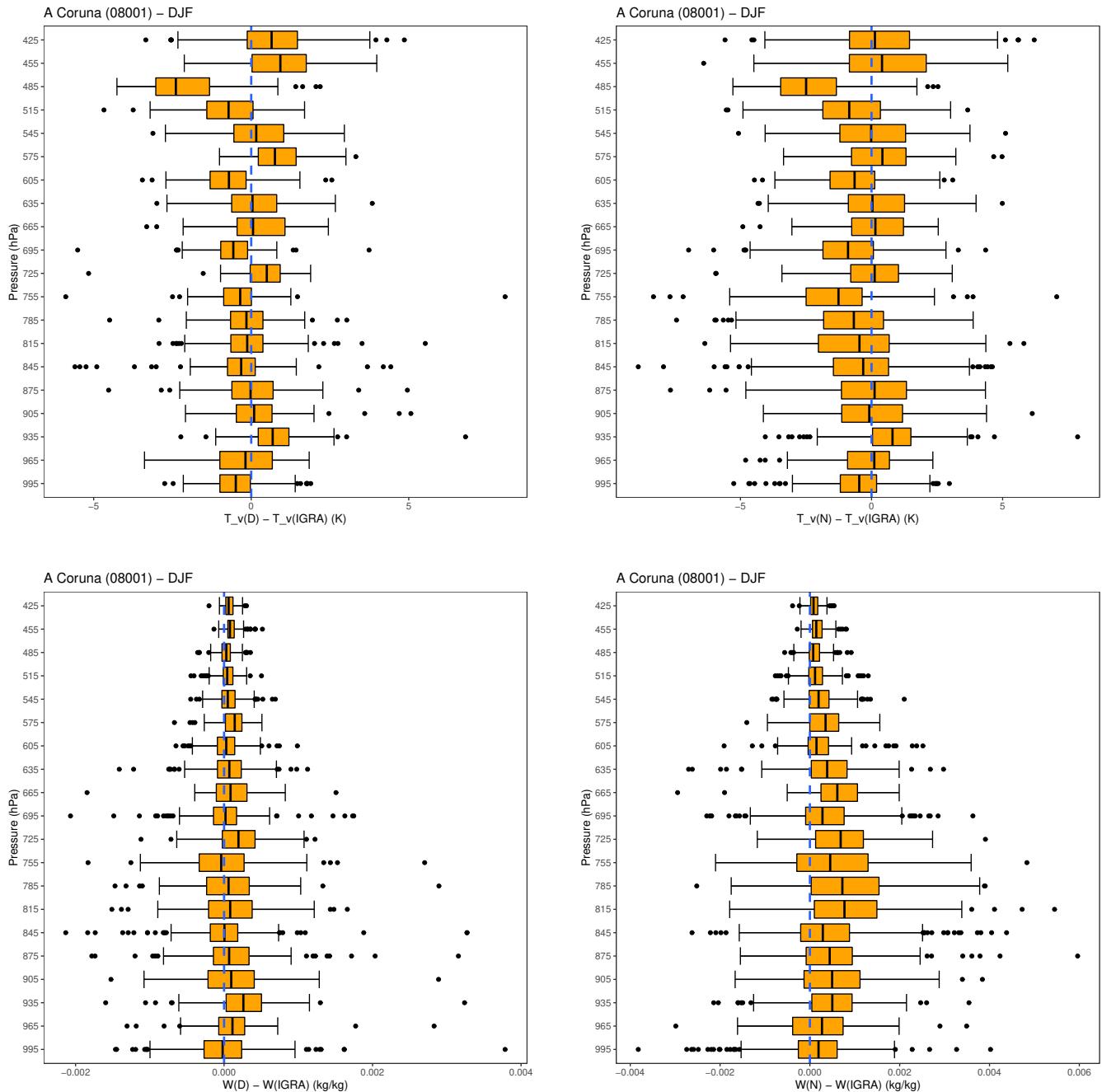


Figure S6. Vertical profile of the differences of virtual temperature (K, upper panels) and mixing ratio (kg/kg, lower panels) in A Coruna during winter from the D simulation minus IGRA (left column) and the N simulation minus IGRA (right column).

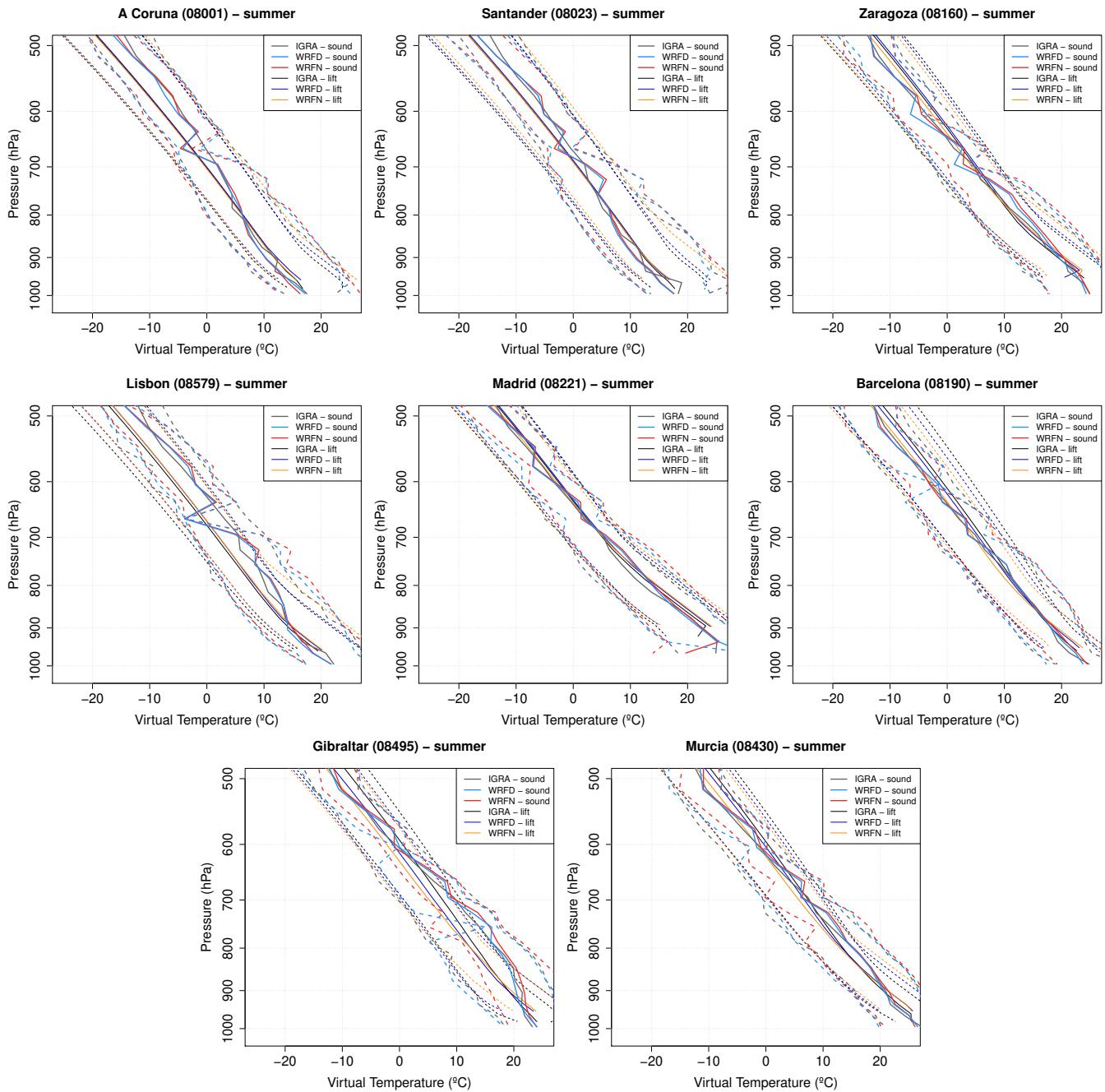


Figure S7. Same as Figures S4 and S5 but for summer.

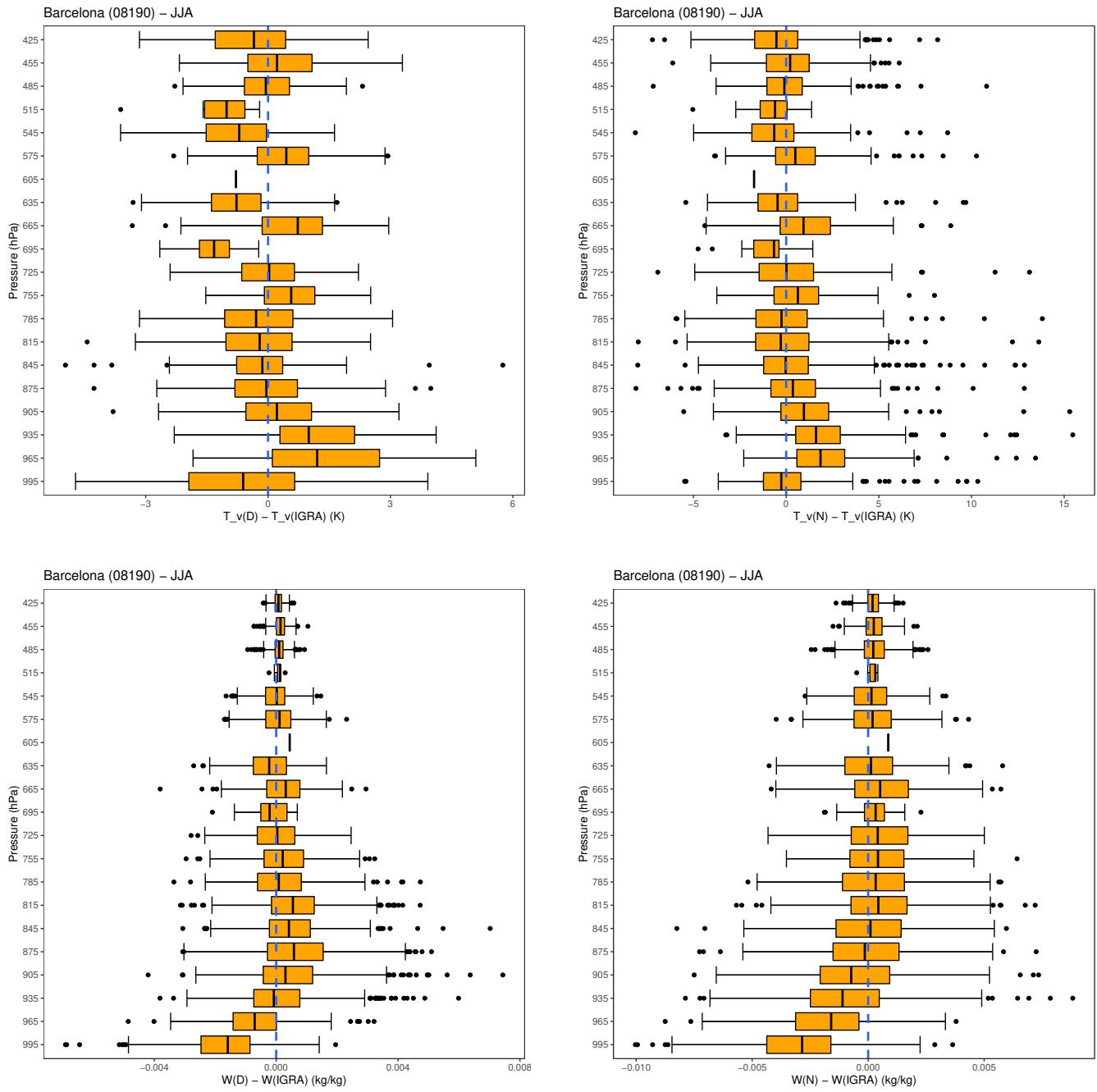


Figure S8. Same as Fig S6, but for Barcelona during summer.