Supporting Information for "Atmospheric Rivers in the Eastern and Midwestern United States Associated with Baroclinic Waves"

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Contents of this file

Introduction This supporting information file provides (1) a satellite overview of a specific Midwestern US AR event discussed in the introduction and discussion sections, provided to give context for those unfamiliar with the event; and (2) duplicates of Figure 1–4 in the main that show the sensitivity of the composites to choice of atmospheric river detection tool (ARDT) and to the choice of location on which the composites are centered.

References

Tan, J., Huffman, G. J., Bolvin, D. T., & Nelkin, E. J. (2019, dec). IMERG V06: Changes to the Morphing Algorithm. *Journal of Atmospheric and Oceanic Technology*, *36*(12), 2471–2482. Retrieved from https://journals.ametsoc.org/view/journals/atot/36/12/jtech-d-19-0114.1.xml doi: 10.1175/JTECH-D-19-0114.1

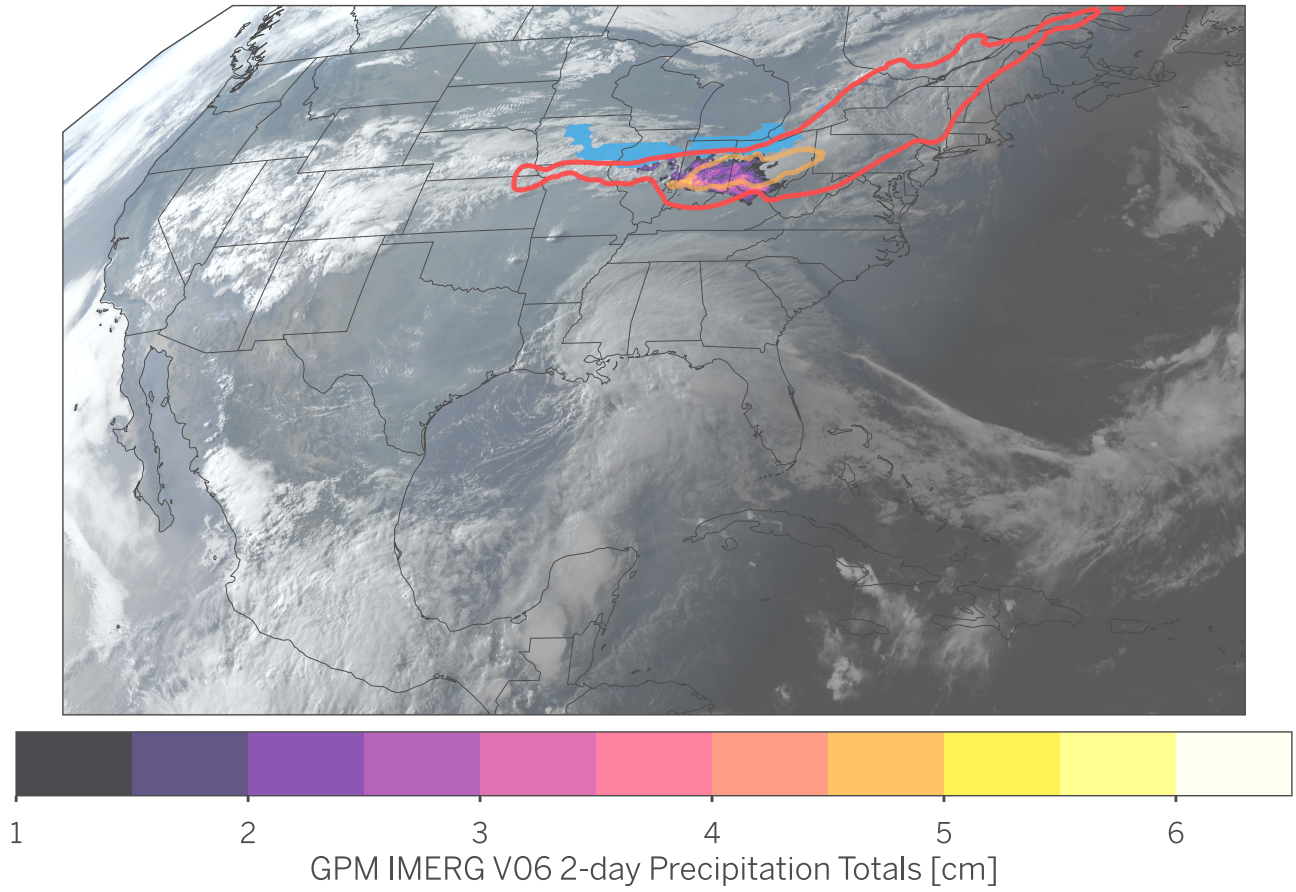

Figure S1. An objectively-detected frontal zone (blue shading), mesoscale convective complex (orange contour) and AR (red contour), detected in ERA5, overlain on geostationary satellite imagery from 03 UTC on June 19, 2021. Two-day precipitation totals from Global Precipitation Measurement mission (GPM) IMERG V06B (Tan et al., 2019), associated with this event, are shown as shaded contours.

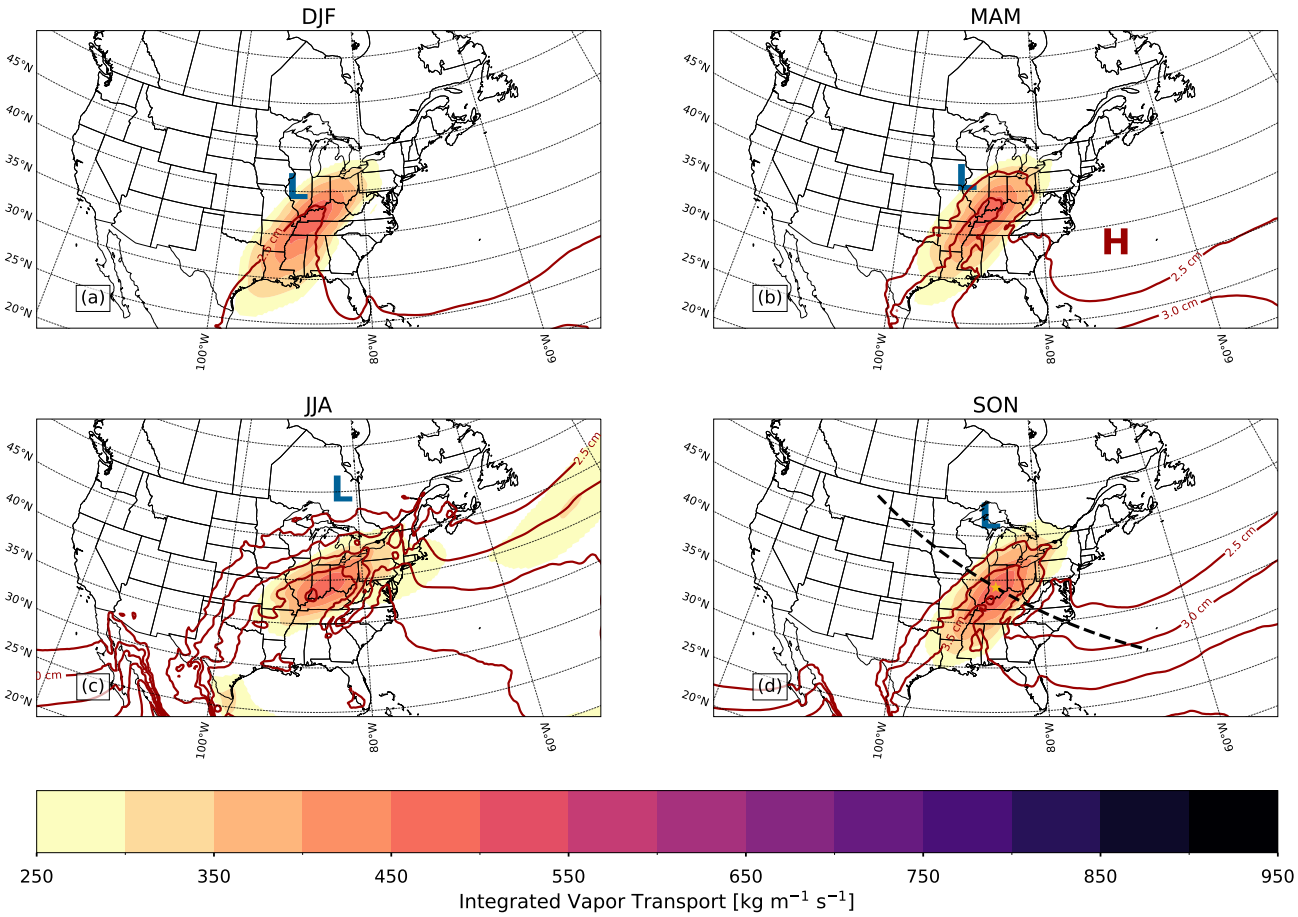

Figure S2. As in Figure 1, but using the guan_waliser ARDT and centered on Bloomington, IN.

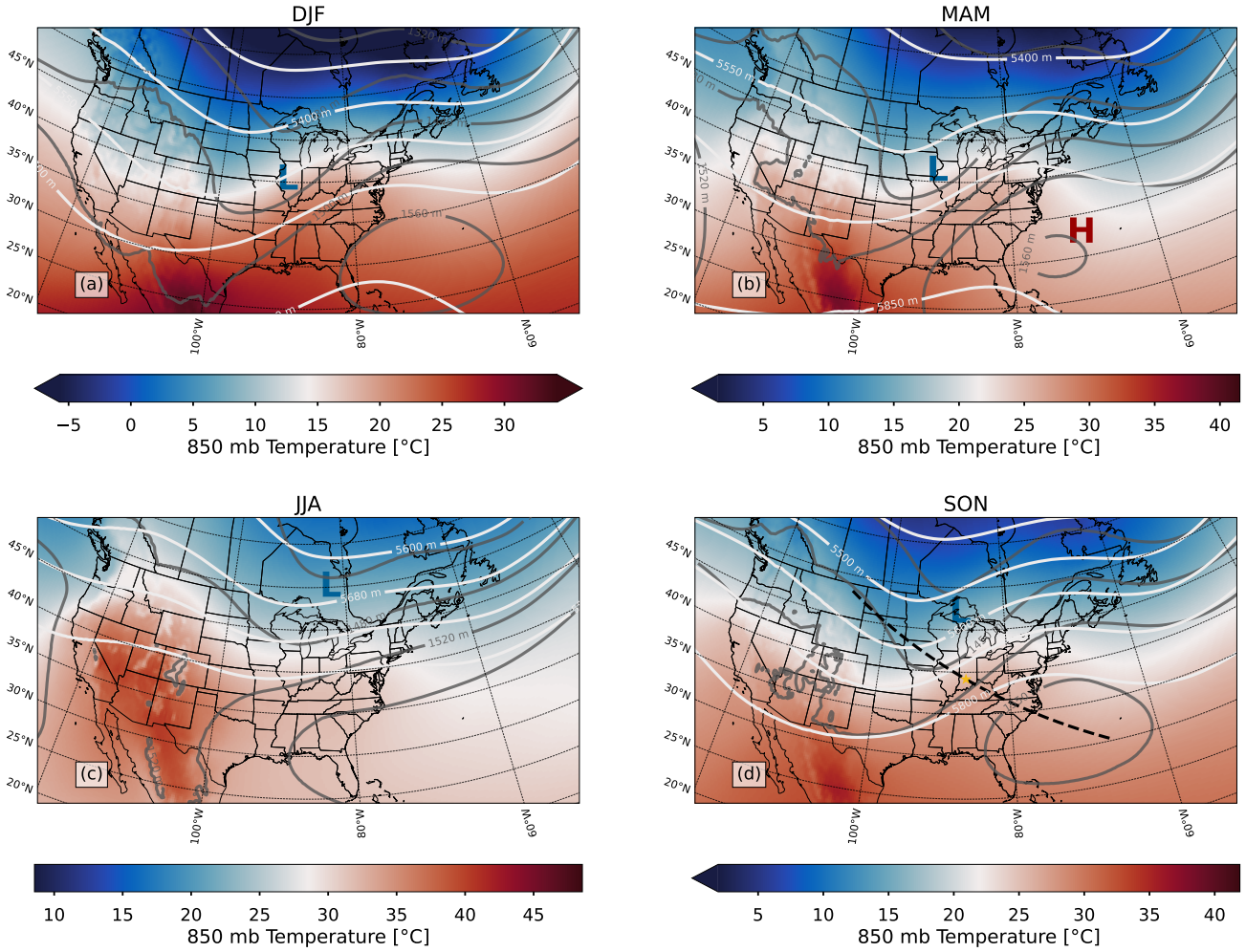

Figure S3. As in Figure 2, but using the guan_waliser ARDT and centered on Bloomington, IN.

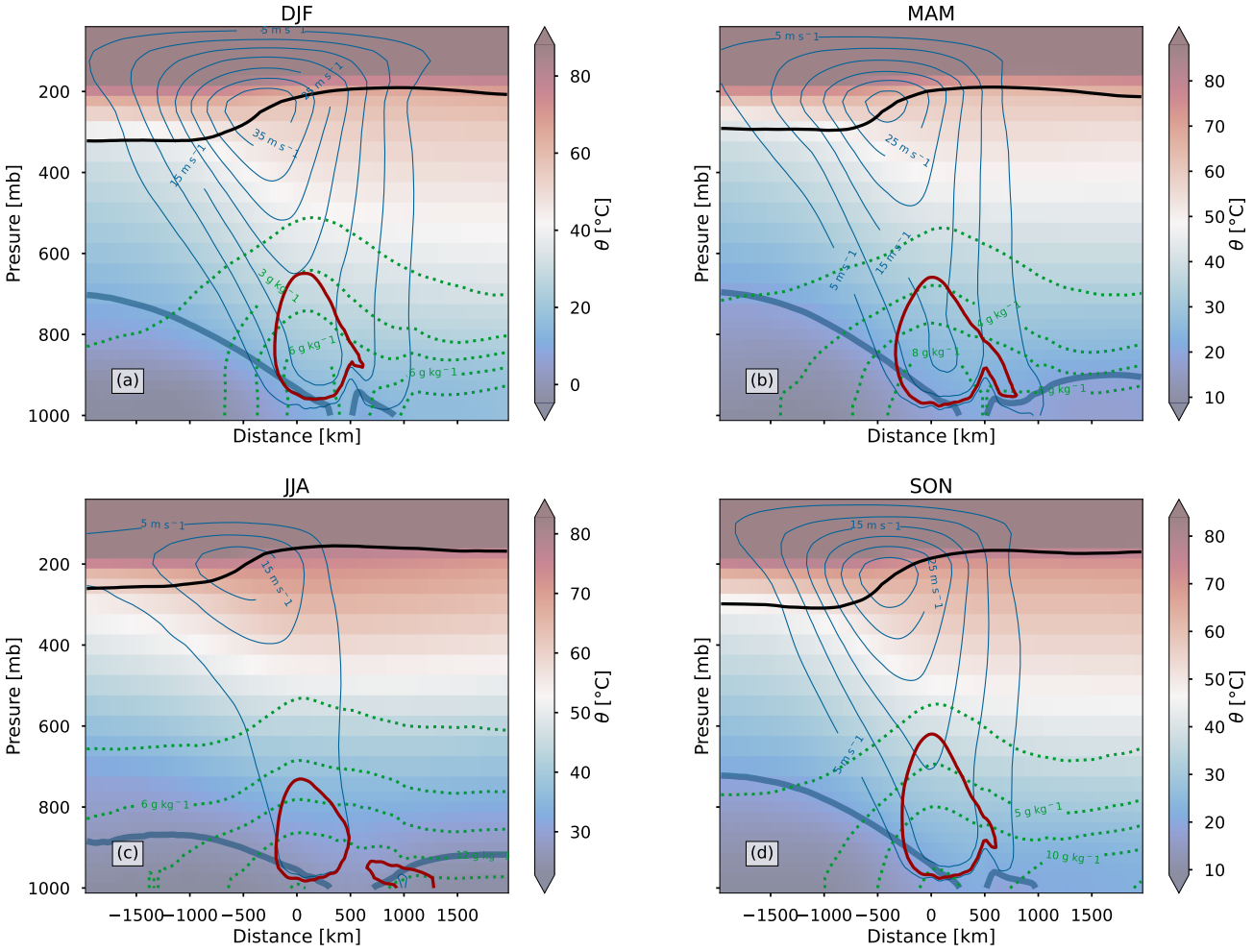

Figure S4. As in Figure 3, but using the guan_waliser ARDT and centered on Bloomington, IN.

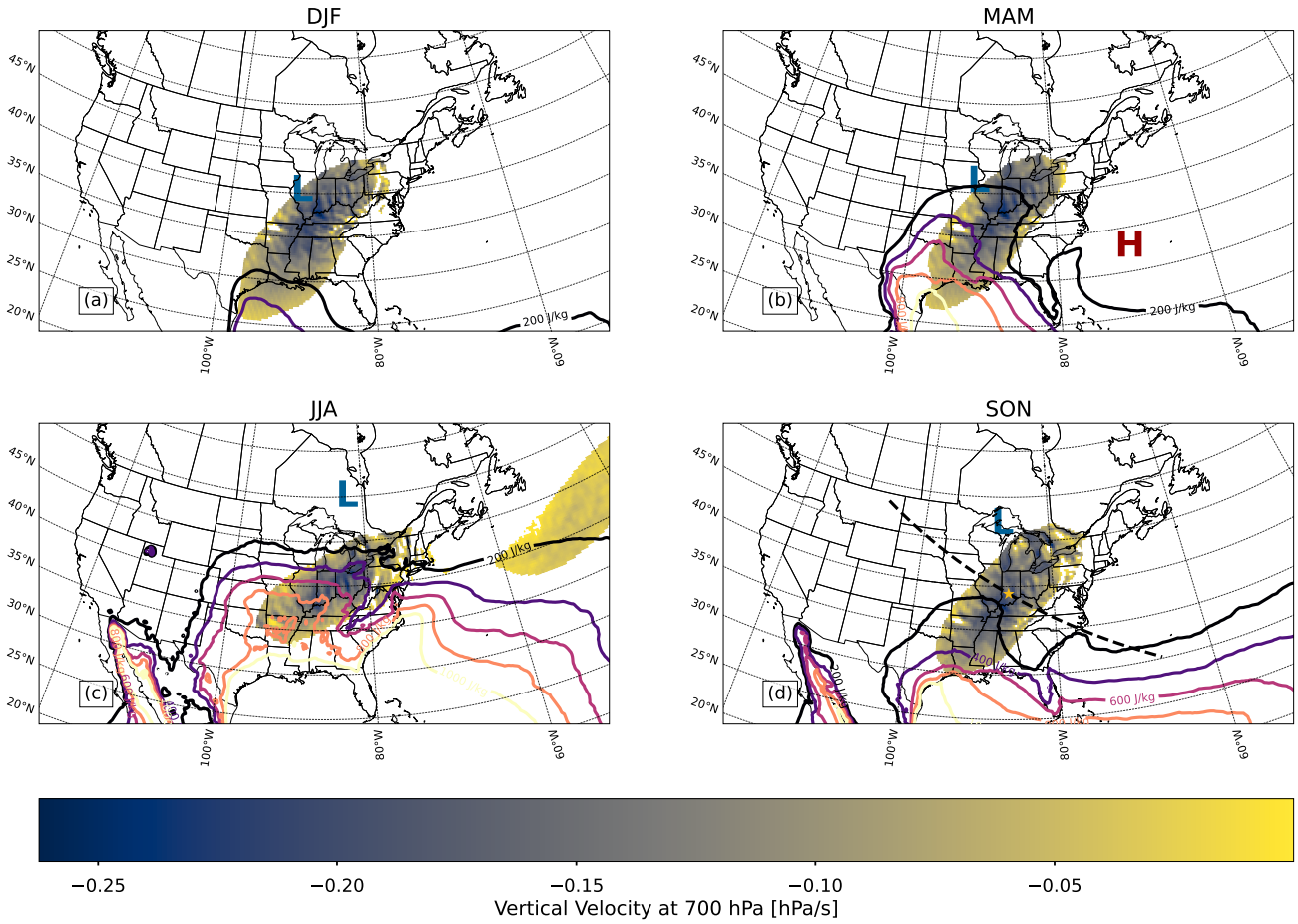

Figure S5. As in Figure 4, but using the guan_waliser ARDT and centered on Bloomington, IN.

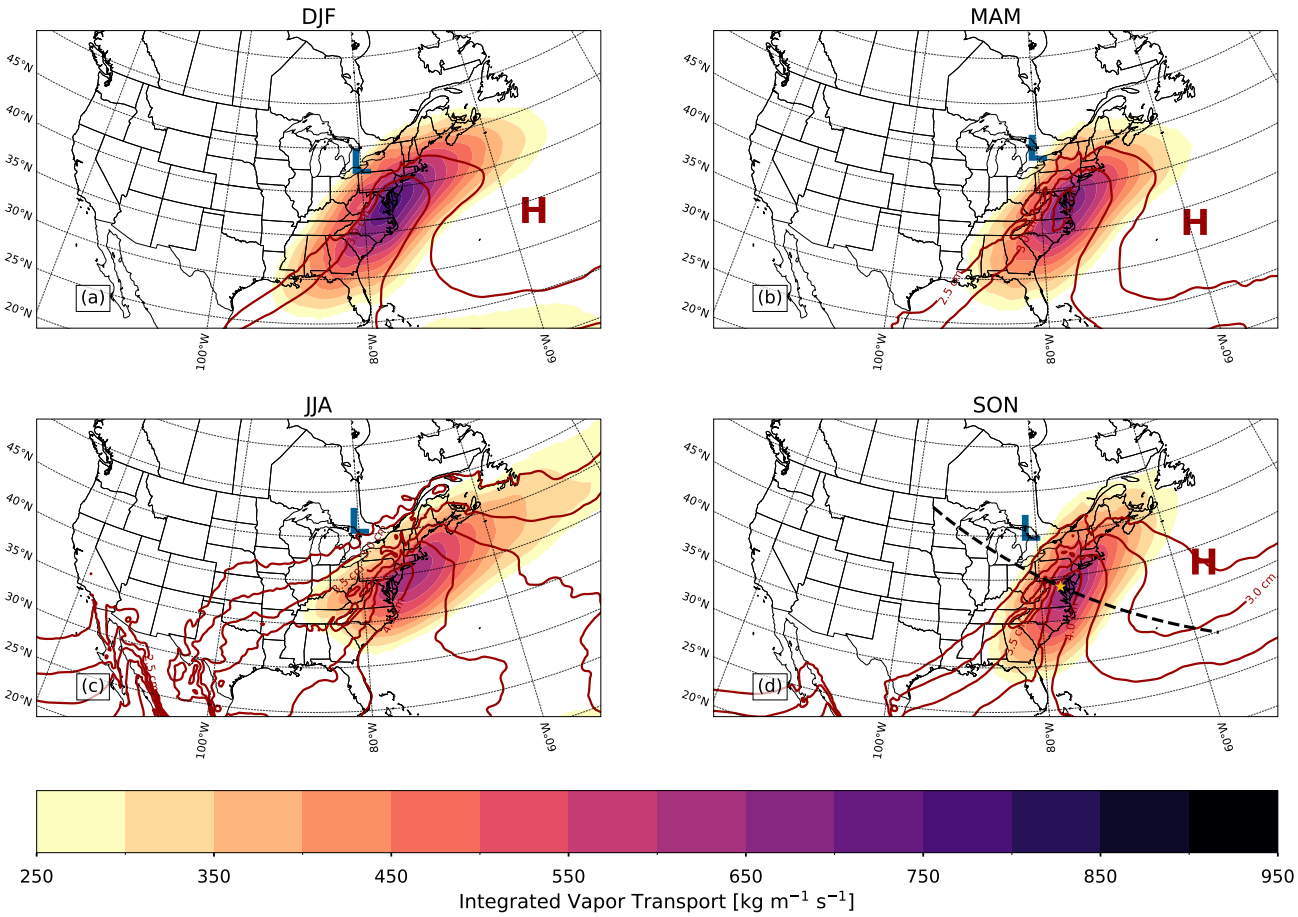

Figure S6. As in Figure 1, but using the teca_bard_v1 ARDT and centered on Washington, DC.

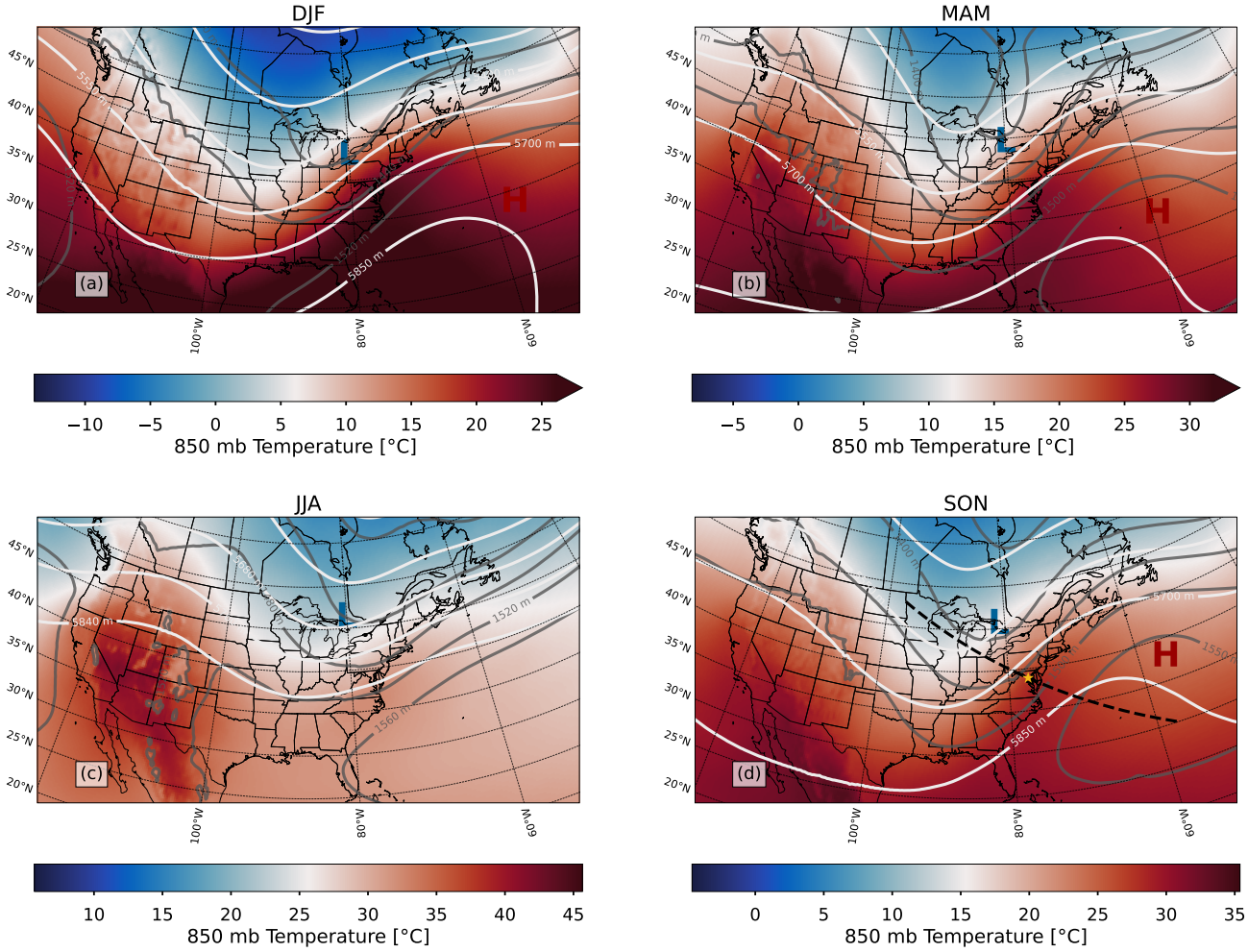

Figure S7. As in Figure 2, but using the teca_bard_v1 ARDT and centered on Washington, DC.

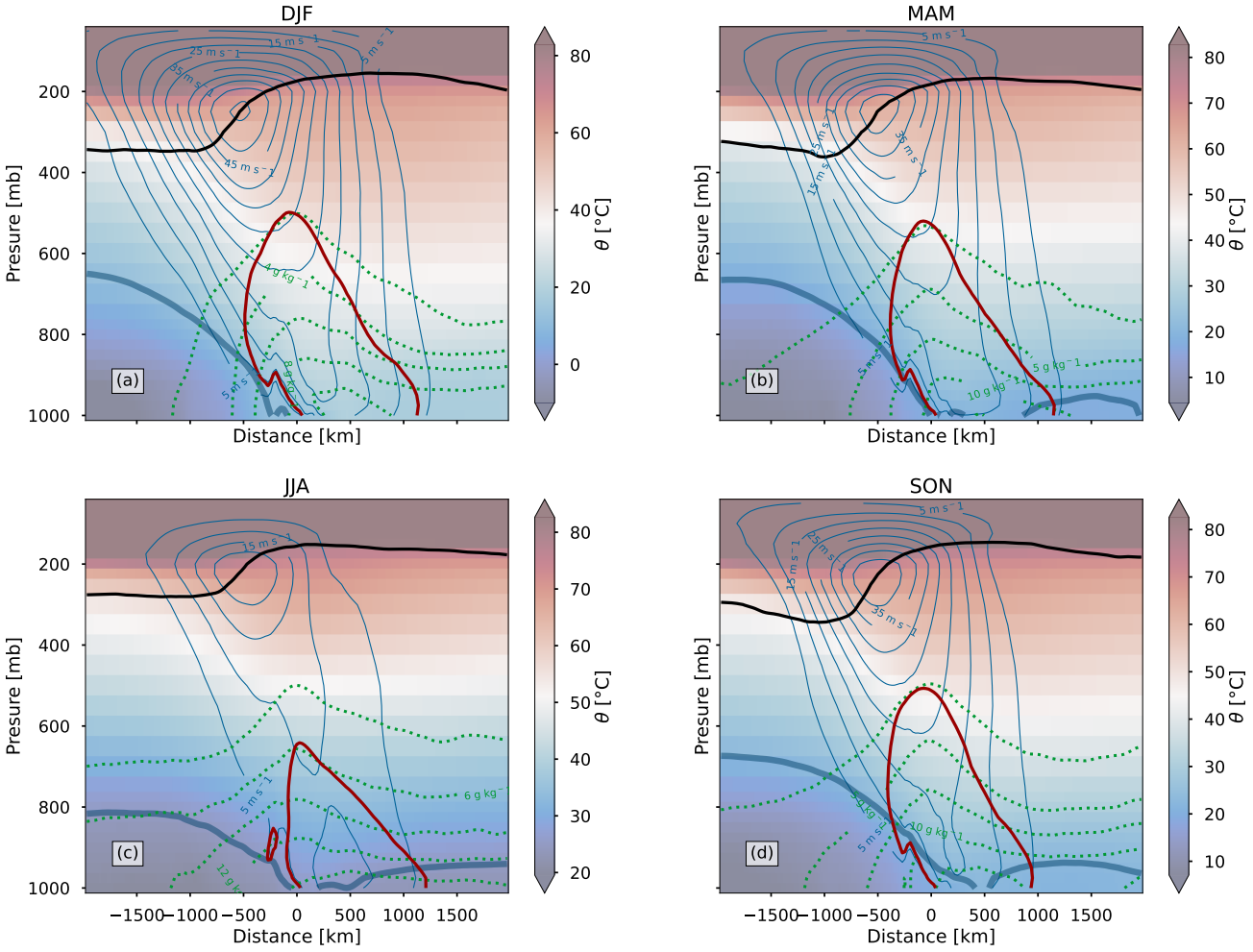

Figure S8. As in Figure 3, but using the teca_bard_v1 ARDT and centered on Washington, DC.

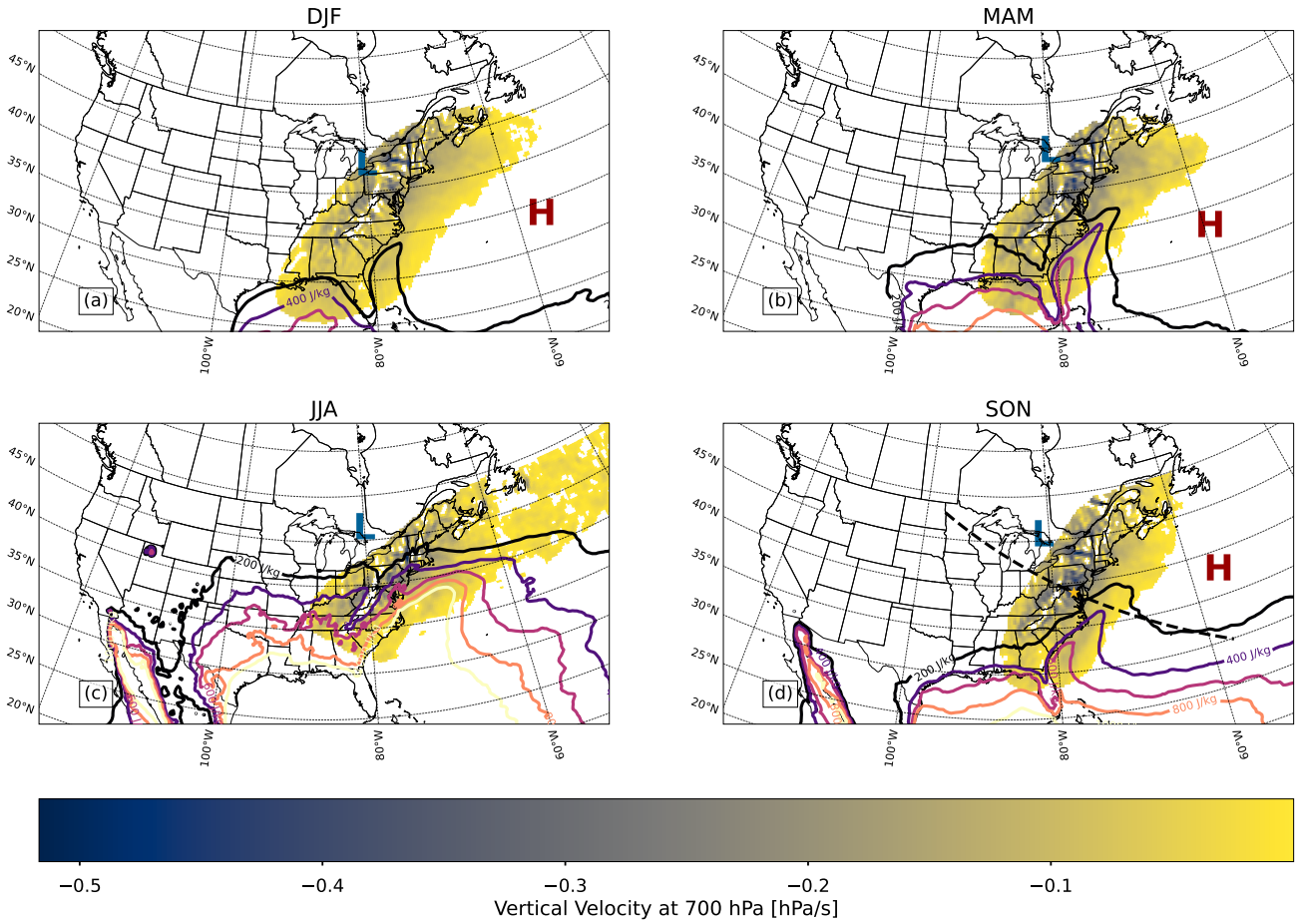

Figure S9. As in Figure 4, but using the teca_bard_v1 ARDT and centered on Washington, DC.