

# Electronic Supplementary Material to: Simulating Aerosol Optical Depth and Direct Radiative Effects over the Tibetan Plateau with a High-Resolution CAS FGOALS-f3 Model\*

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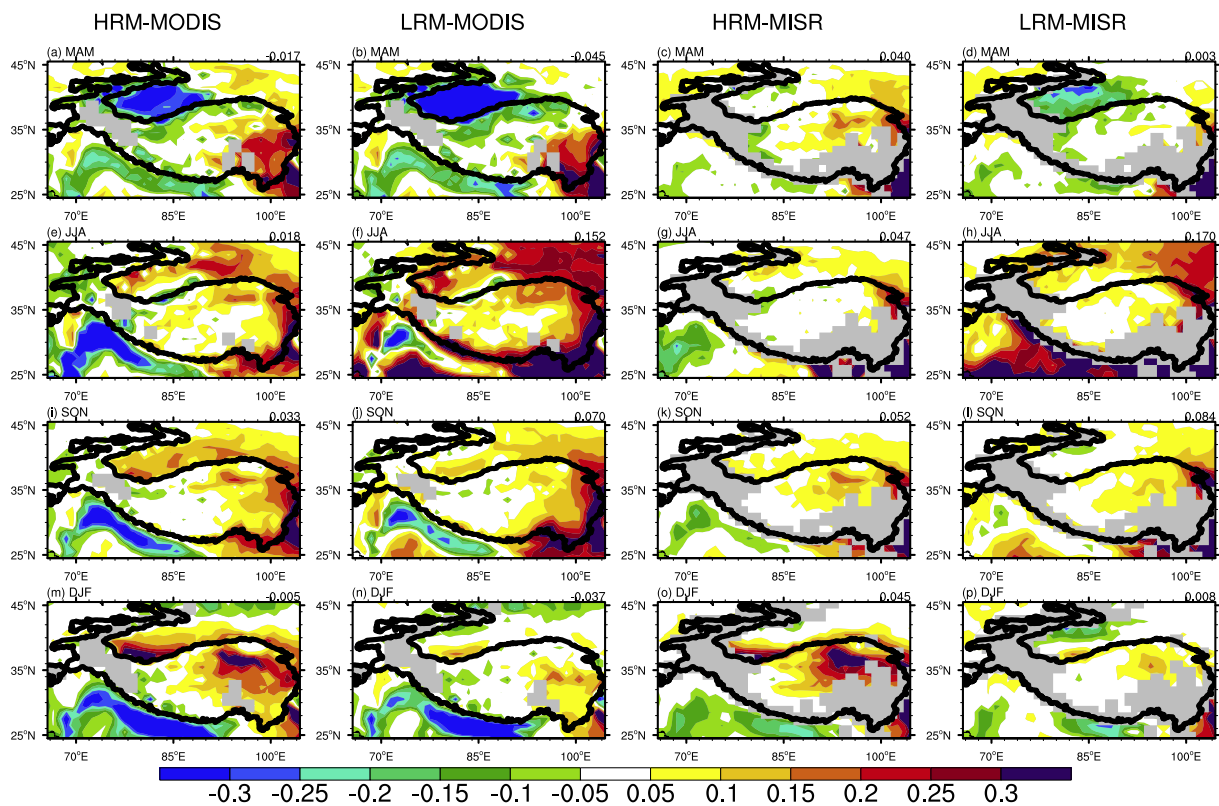
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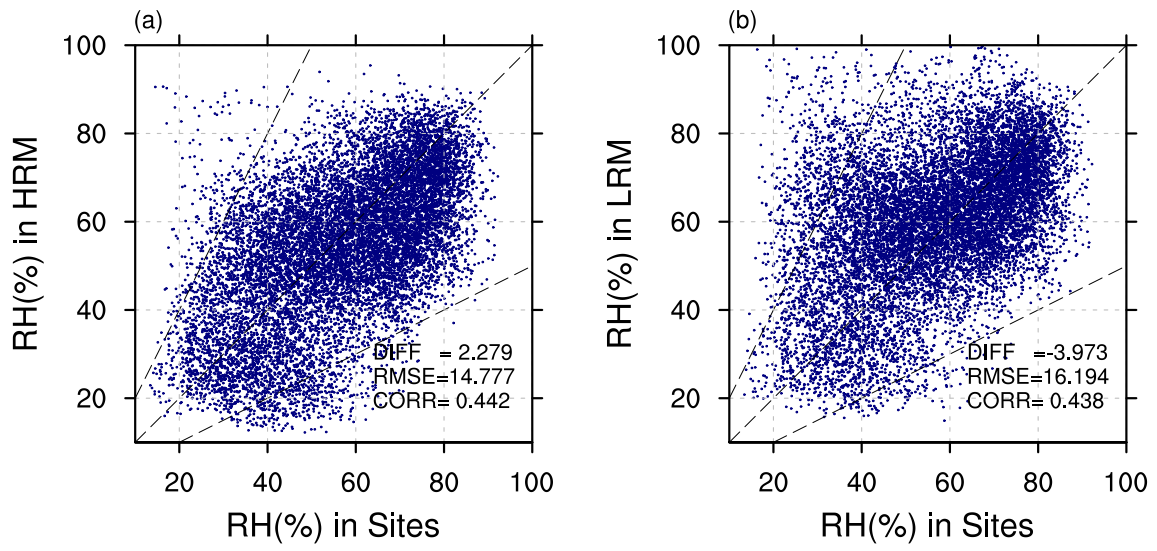
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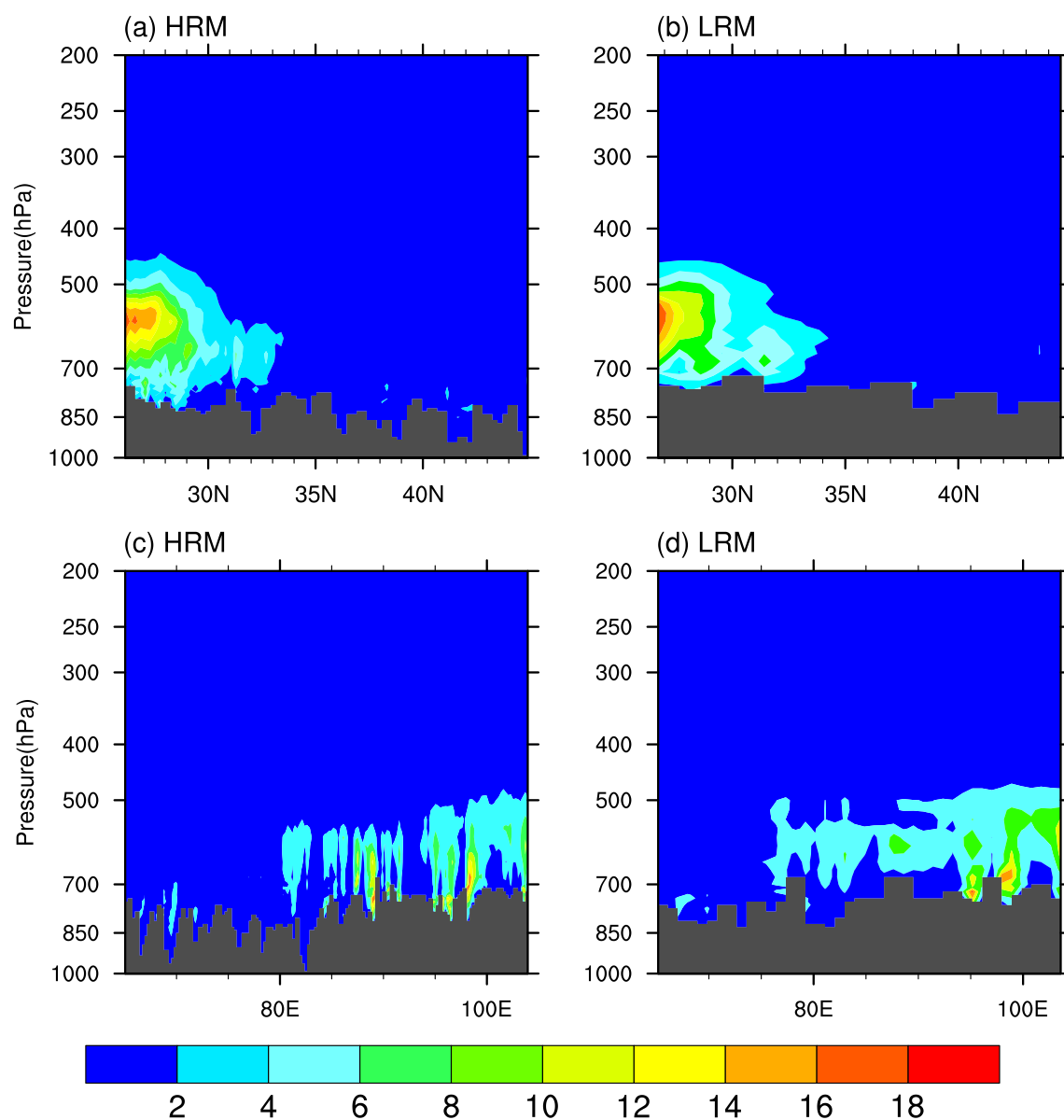


**Fig. S1.** The seasonal mean differences between the modeled AODs from HRM and LRM and satellite-retrieved AODs from MODIS and MISR. March–April–May: MAM, June–July–August: JJA, September–October–November: SON, and December–January–February: DJF. The seasonal mean over the TP is shown at the top right of each subplot.

\* The online version of this article can be found at <https://doi.org/10.1007/s00376-022-1424-8>.



**Fig. S2.** Scatterplots comparing RH among models (HRM (a) and LRM (b)) and observations.



**Fig. S3.** Comparisons of the vertical structure of the liquid water content ( $\text{g m}^{-3}$ ) over the Tibetan Plateau between the HRM and LRM.