Geoscientific Model Development

Supporting Information for

Amending the algorithm of aerosol-radiation interaction in WRF-Chem (v4.4)

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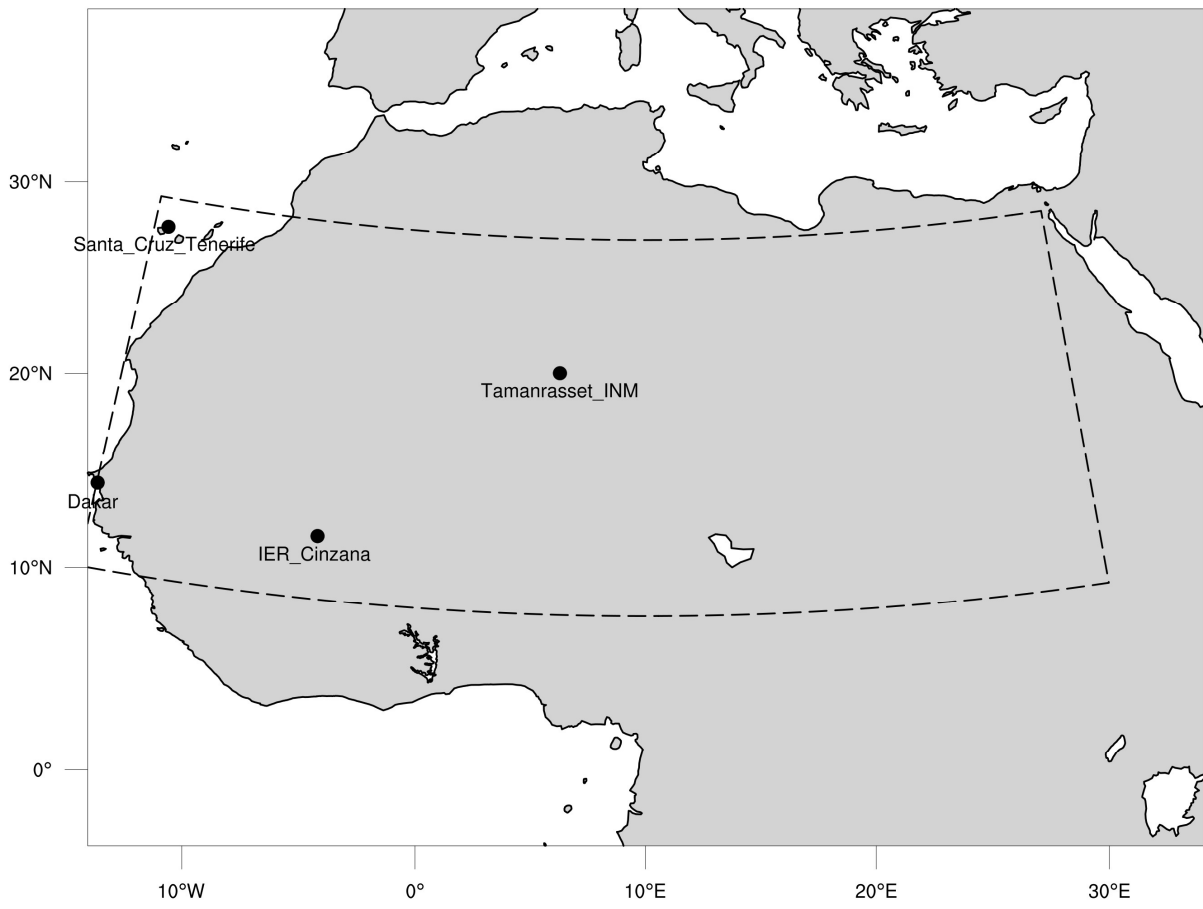
Figure S1. Locations of selected AERONET stations over dust-dominant areas in Sahara.

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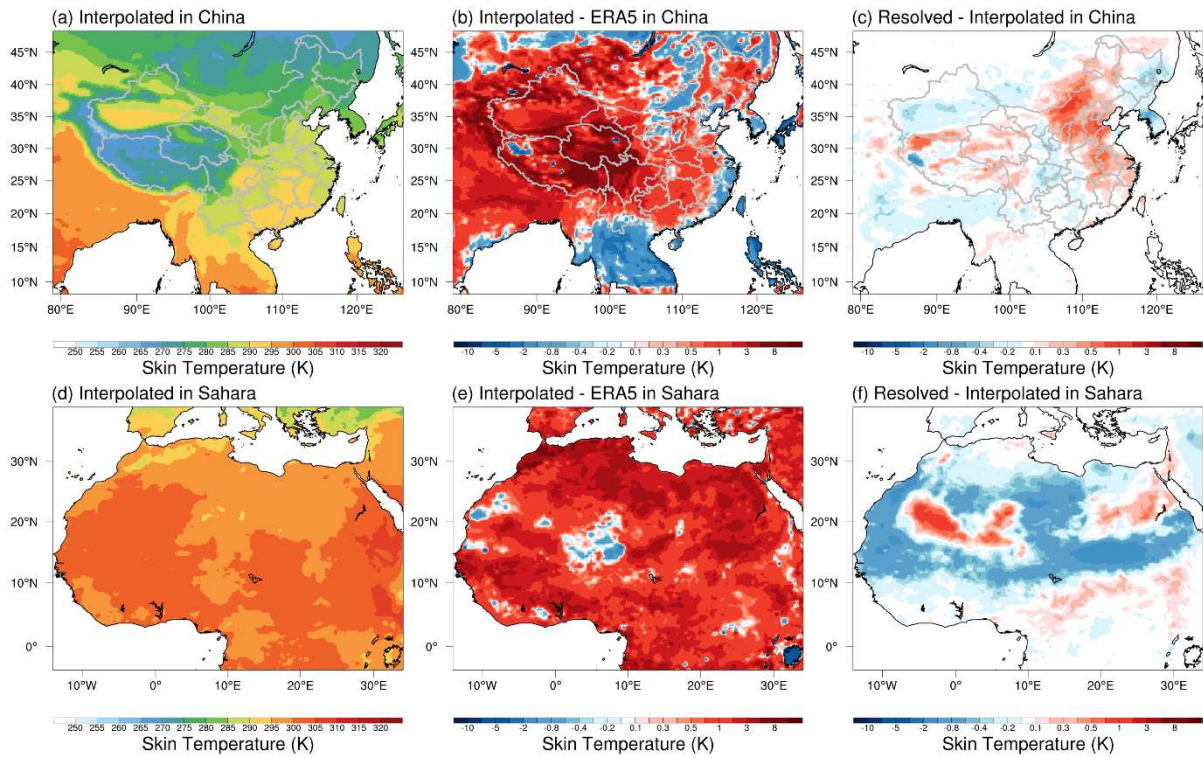
Figure S2. (a,d) Spatial distribution of skin temperature in China and Sahara, respectively; **(b,e)** The difference in skin temperature between "Interpolated" method and ERA5 results in China and Sahara, respectively. **(c,f)** The difference in skin temperature between "Resolved" and "Interpolated" method in China and Sahara, respectively.

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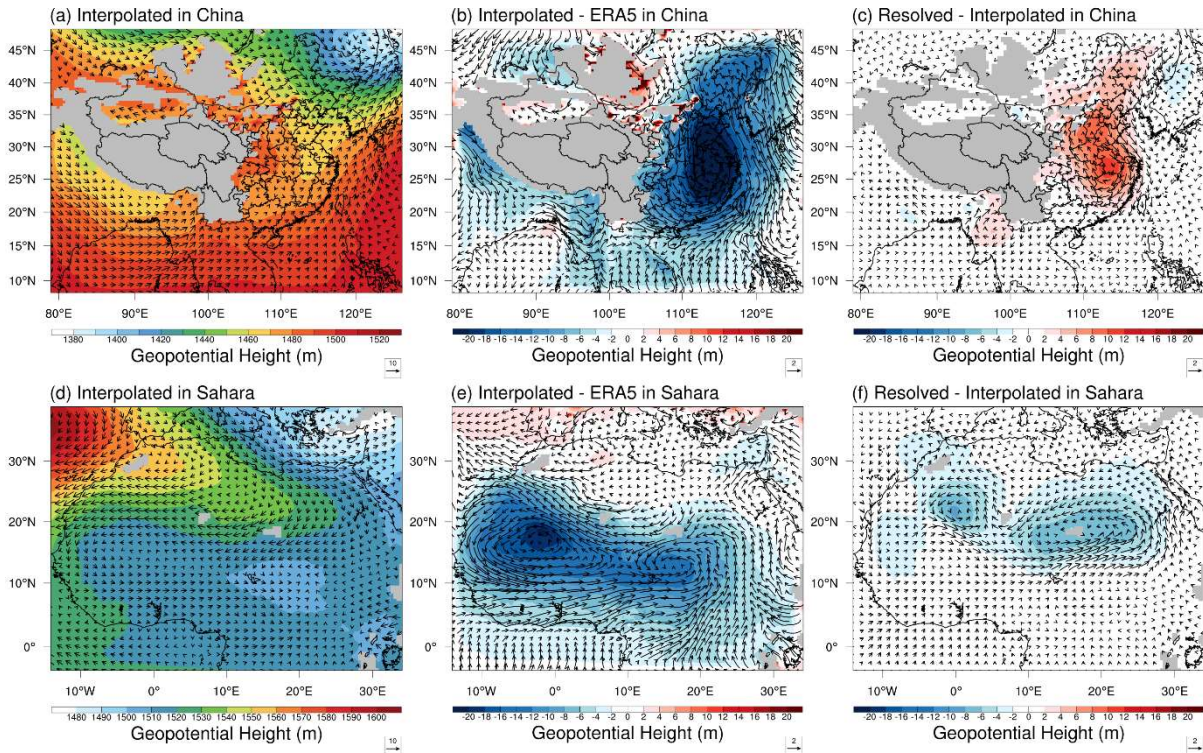
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47 **Figure S3. (a,d)** Spatial distribution of geopotential height and wind field in China and
48 Sahara, respectively; **(b,e)** The difference between "Interpolated" method and ERA5 results
49 in China and Sahara, respectively. **(c,f)** The difference between "Resolved" and
50 "Interpolated" method in China and Sahara, respectively.
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