

# SUPPLEMENT TO: A GLOBAL PERSPECTIVE ON AEROSOL FROM LOW VOLATILITY COMPONENTS

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5 **Figure S1:** Traditional simulation organic aerosol concentration and change in total OA from traditional to revised simulation. Total OA includes POA and all forms of SOA. Level 1 is closest to the surface. Level 7 is approximately 4 km in altitude and 600 hPa at the center. Note that the color bars use different scales. Simulated concentrations for the present day traditional simulation show the maximum season-  
10 ally averaged concentration in the lower right corner of each panel. Simulations use GEOS-4 meteorology at  $2^\circ \times 2.5^\circ$  for year 2000. See Section 3.1 of main manuscript for discussion.

**Figure S2:** December-January-February 2000 surface total OC concentration relative to traditional (non-volatile POA) simulation. OC includes POA and all forms  
15 of SOA. Sensitivity simulations are outlined in Table 6 (main manuscript). Simulations use year 2001 meteorology from the GISS GCM III at  $4^\circ \times 5^\circ$  resolution. Figure S.2 is the same as Figure 8 in the main manuscript with the only exception being that Figure S2 uses year 2001 and Figure 8 uses year 2000.

**Figure S3:** December-January-February 2000 surface total OC concentration relative to traditional (non-volatile POA) simulation using GEOS-4 meteorology at  
20  $2^\circ \times 2.5^\circ$  horizontal resolution. Tests are outlined in Table 6 (main manuscript). Panel (a) shows the difference between the traditional simulation and the revised simulation. Panel (b) shows the difference between the traditional simulation and a simulation in which POA emissions are doubled to obtain the SVOC emissions  
25 (compare to panel (c) of Figure 8 in the main manuscript).

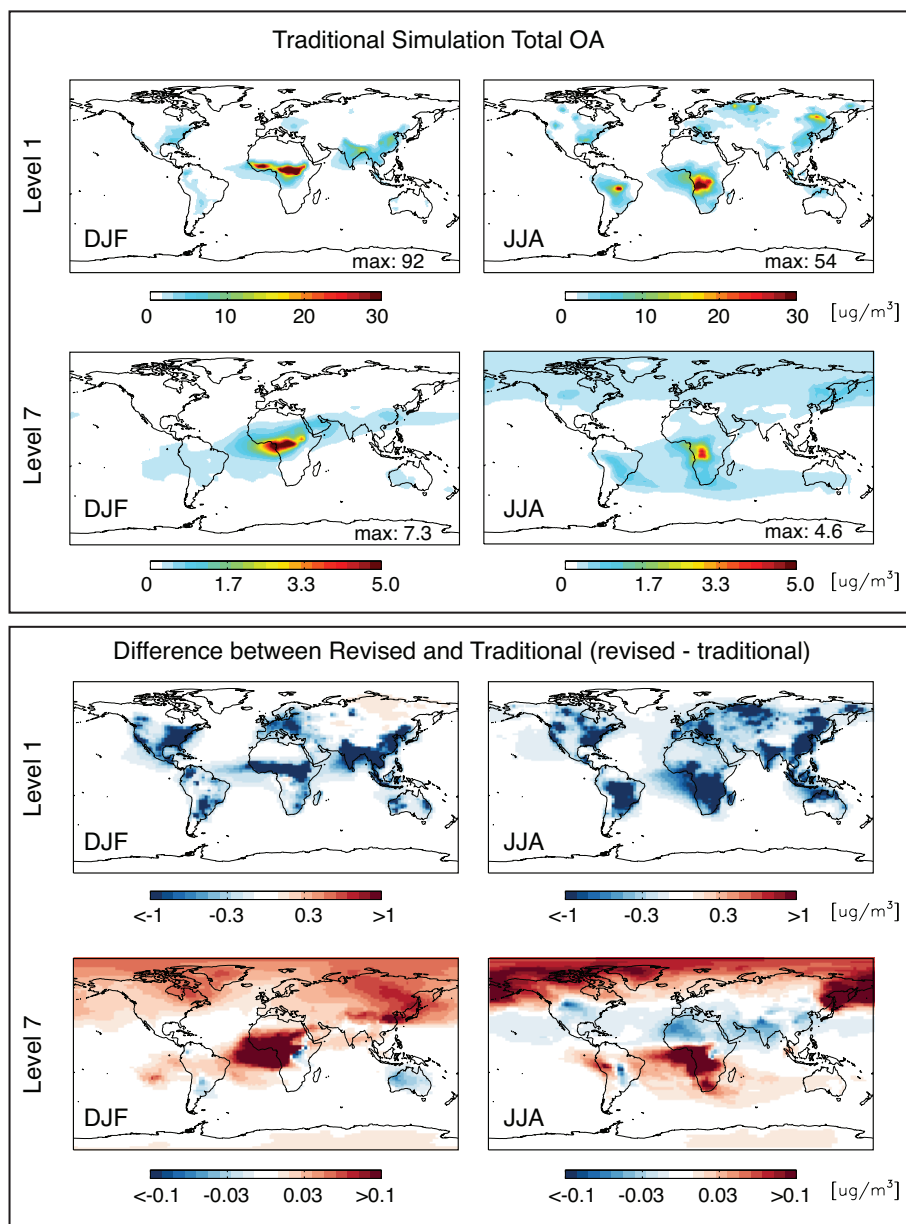


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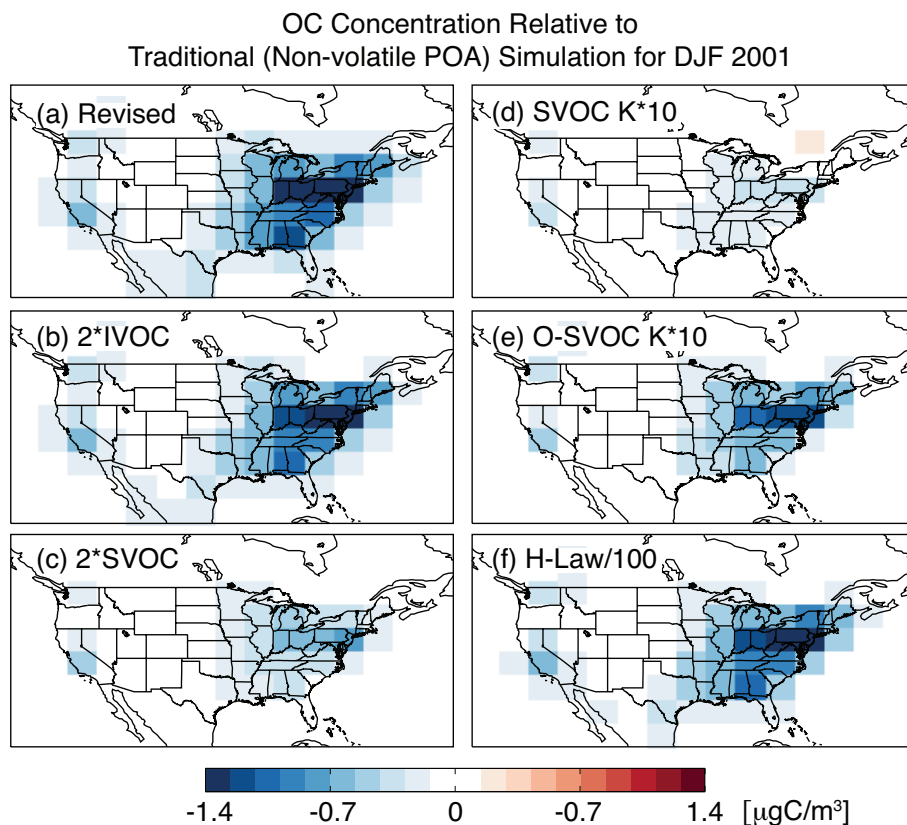


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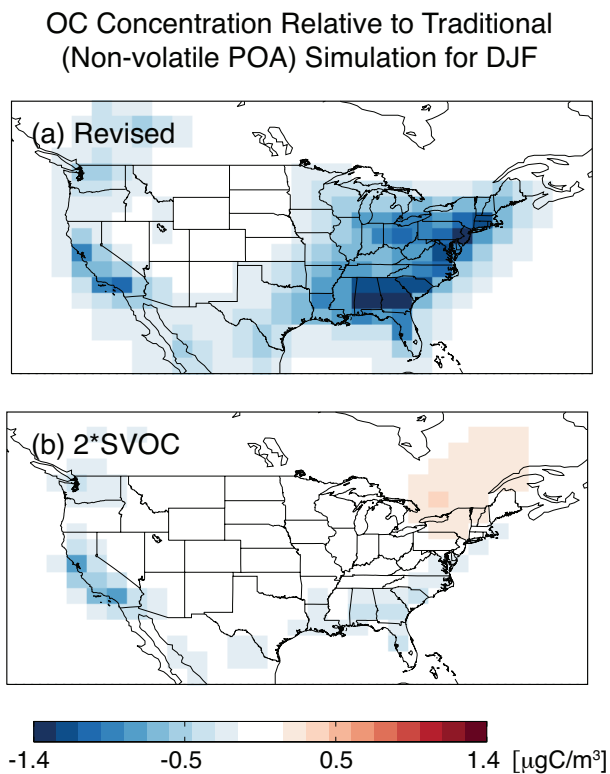


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