Supplement of Atmos. Chem. Phys., 24, 13445–13456, 2024
https://doi.org/10.5194/acp-24-13445-2024-supplement

Atmospheric Chemistry and Physics
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Supplement of

Technical note: Quantified organic aerosol subsaturated hygroscopicity by a simple optical scatter monitor system through field measurements

Jie Zhang et al.

Correspondence to: Jie Zhang (jzhang35@albany.edu)

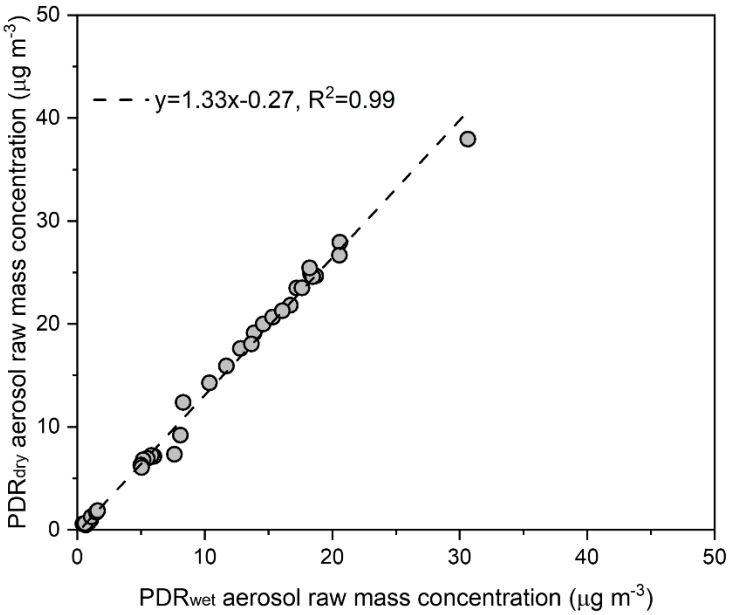

Figure S1. The head-to-head-correlation scatterplot between the two pDRs under the lowest relative humidity conditions reported by PDR_{wet} (RH < 45%)

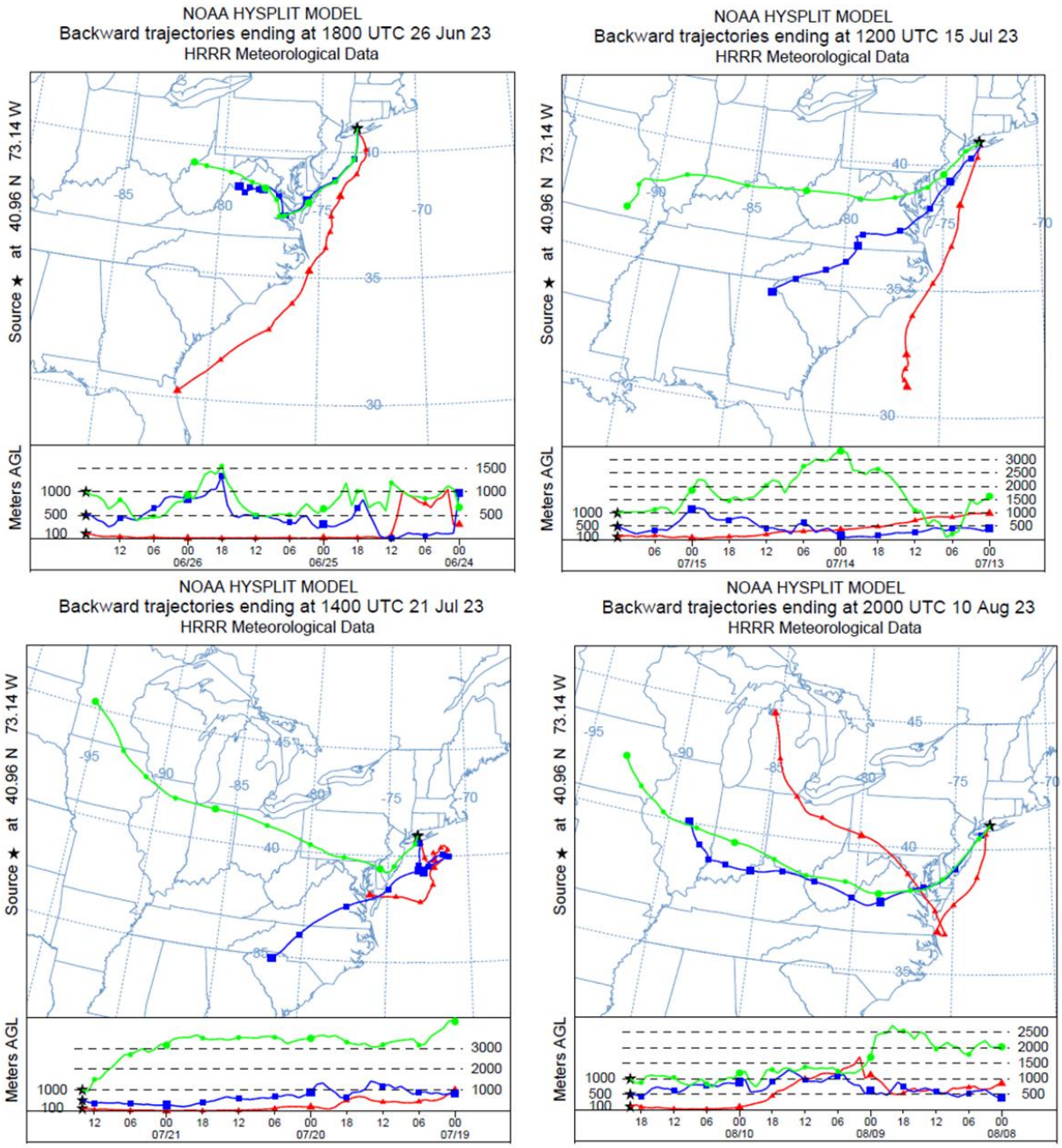

Figure S2. The representative back trajectories of each subperiod (P1, P3, P5, and P9) of Group1(urban) with aerosol having urban sources

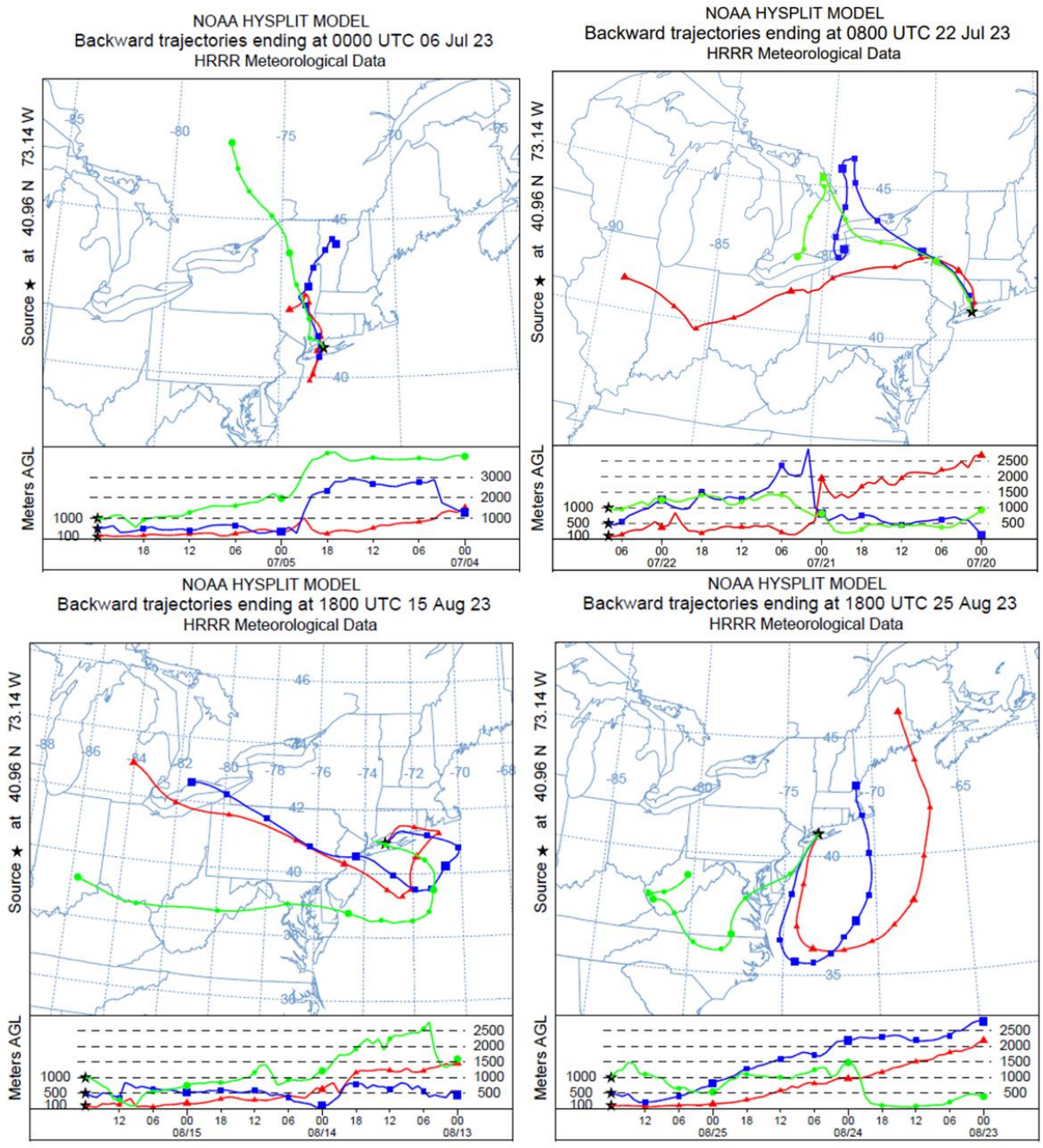

Figure S3. The representative back trajectories of each subperiod (P2, P6, P10, P11) of Group2(rural) with aerosol having rural sources

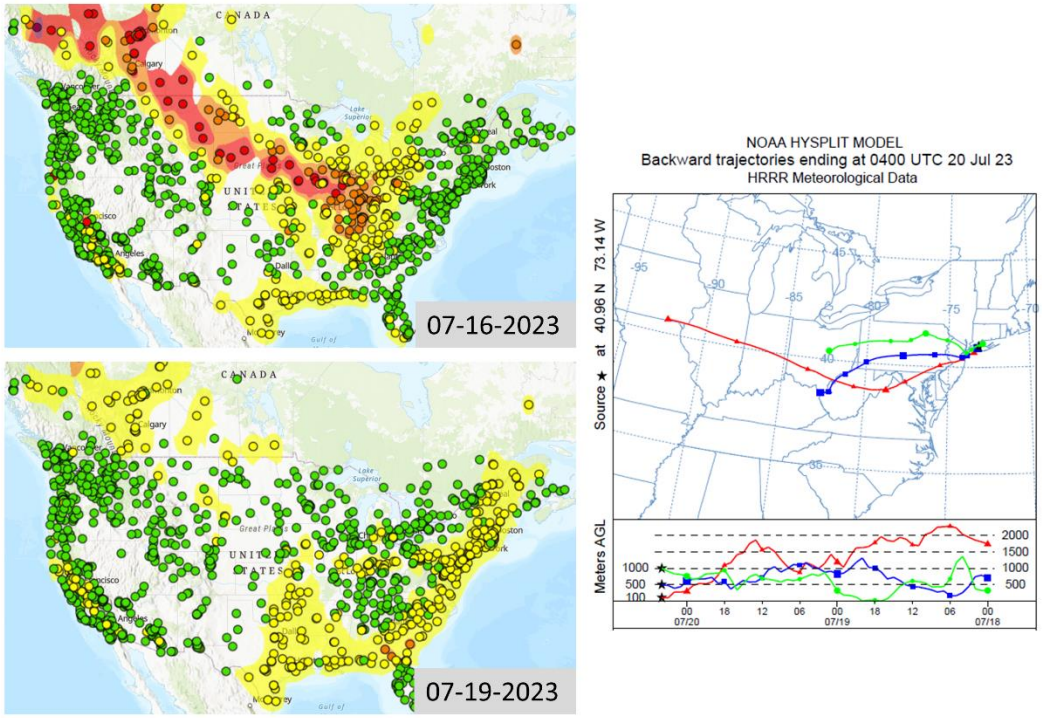

Figure S4. The representative back trajectory on July 19 of P4 of Group3(wildfire) when aerosol affected by the wildfire plumes, with the $PM_{2.5}$ AQI distribution map on July 19 verifying the wildfire plumes influence and on the previous date (July 16) showing the place of original wildfire and its transport.

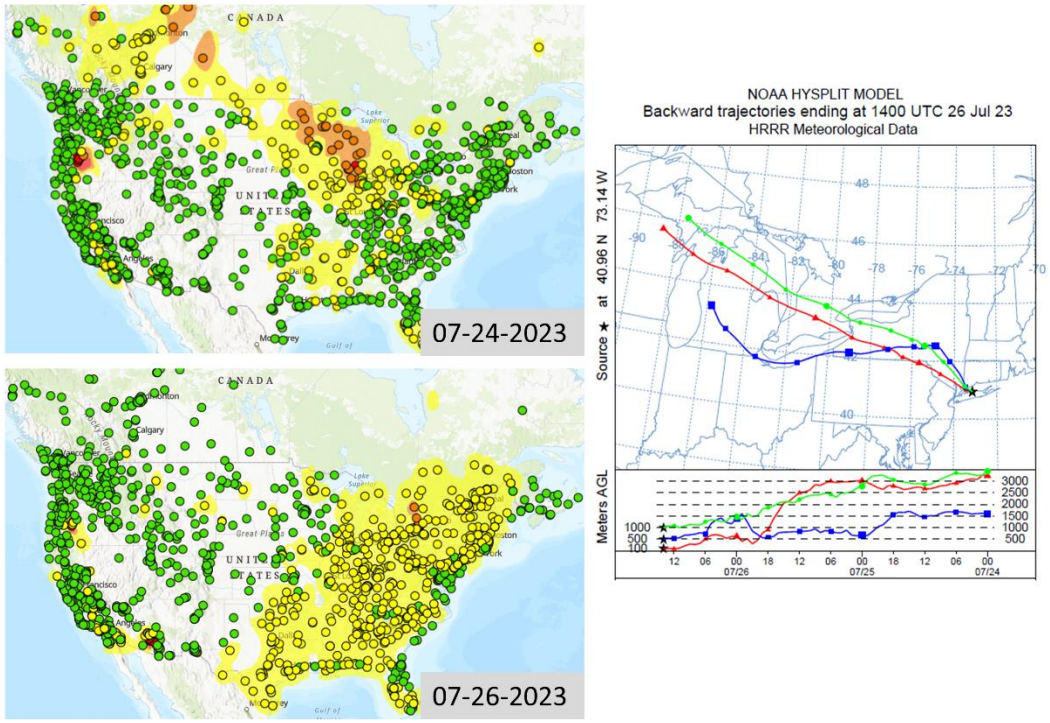

Figure S5. The representative back trajectory on July 26 of P7 of Group3(wildfire) when aerosol affected by the wildfire plumes, with the $PM_{2.5}$ AQI distribution map on July 26 verifying the wildfire plumes influence and on the previous date (July 24) showing the place of original wildfire and its transport.

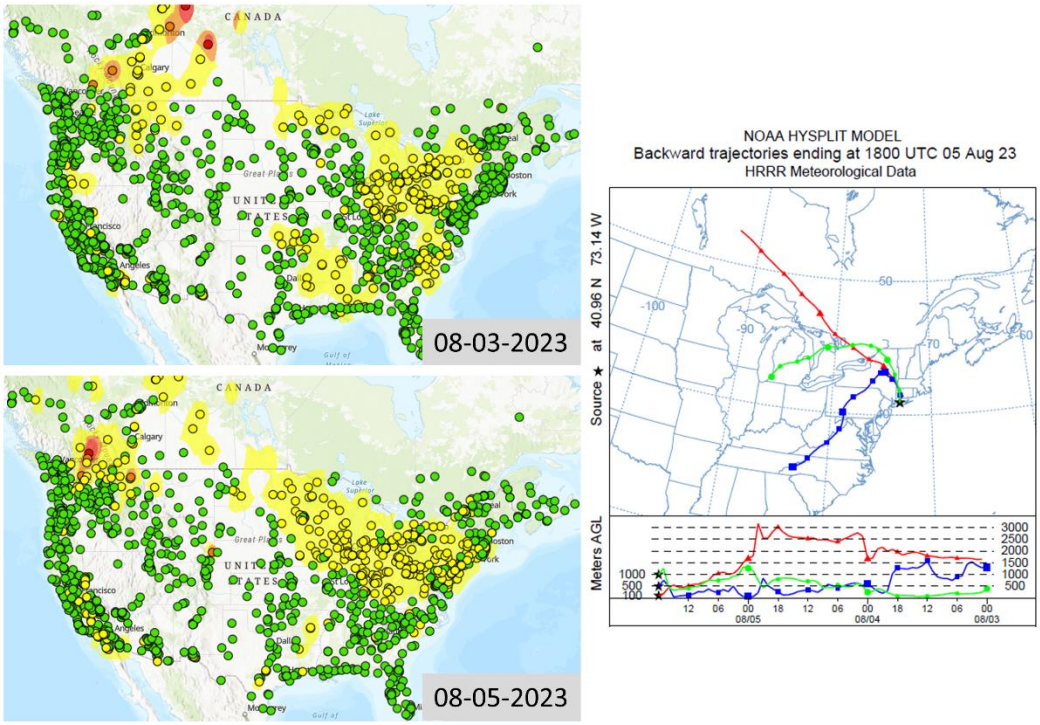

Figure S6. The representative back trajectory on Aug. 05 of P8 of Group3(wildfire) with aerosol affected by the wildfire plumes, with the $PM_{2.5}$ AQI distribution map on Aug. 05 verifying the wildfire plumes influence and on the previous date (Aug. 03) showing the place of original wildfire and its transport.

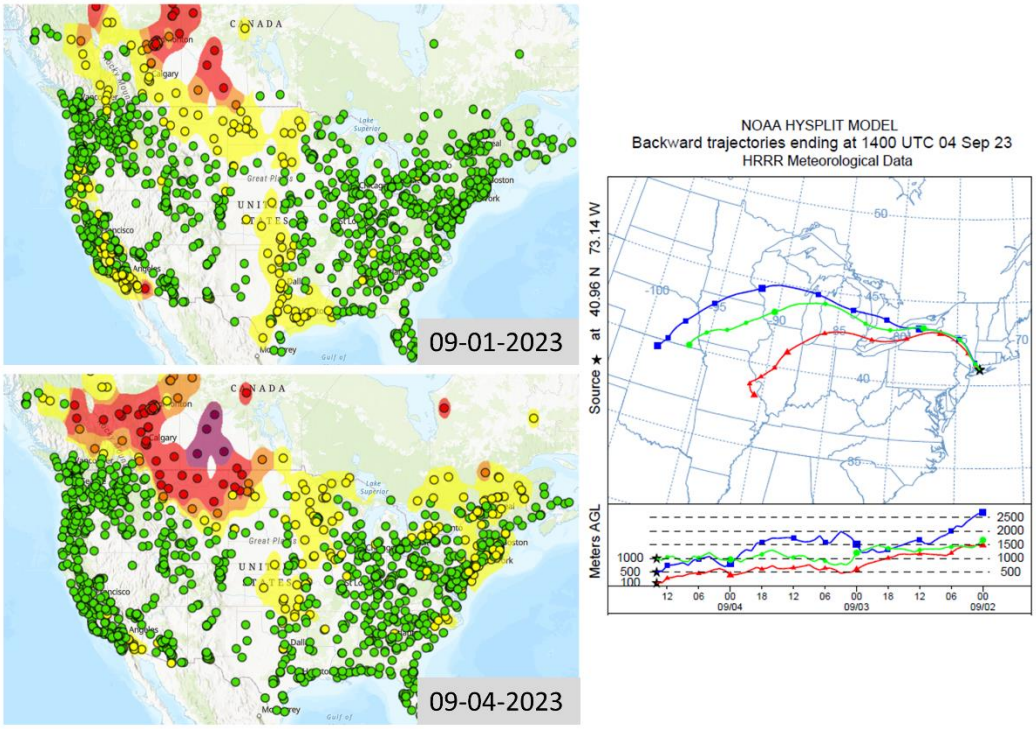

Figure S7. The representative back trajectory on Sep. 04 of P12 of Group3(wildfire) group with aerosol affected by the wildfire plumes, with the $PM_{2.5}$ AQI distribution map on Sep. 04 verifying the wildfire plumes influence and on the previous date (Sep. 04) showing the place of original wildfire and its transport.

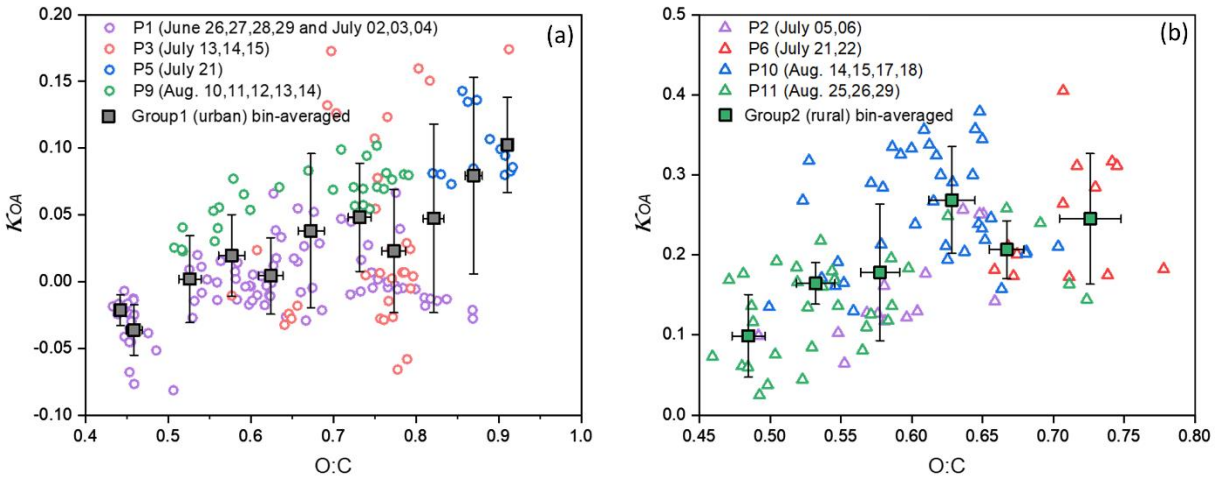

Figure S8. (a) The relationship between bin-averaged κ_{OA} and O:C for Group1(urban) with the urban aerosol sources (in grey squares with their standard deviation as error bar), and the relationship between κ_{OA} and O:C of each subperiod of Group1(urban) with a time resolution of 1-hr. (b) The relationship between bin-averaged κ_{OA} and O:C for Group2(rural) with the rural aerosol sources (in green squares with their standard deviation as error bar), and the relationship between κ_{OA} and O:C of each subperiod of Group2(rural) with a time resolution of 1-hr.