Environmental Science: Atmospheres

Supporting Information for

Improving Model Representation of Rapid Ozone Deposition over Soil in the Central Tibetan Plateau

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Introduction

The supporting information includes four supplementary figures.

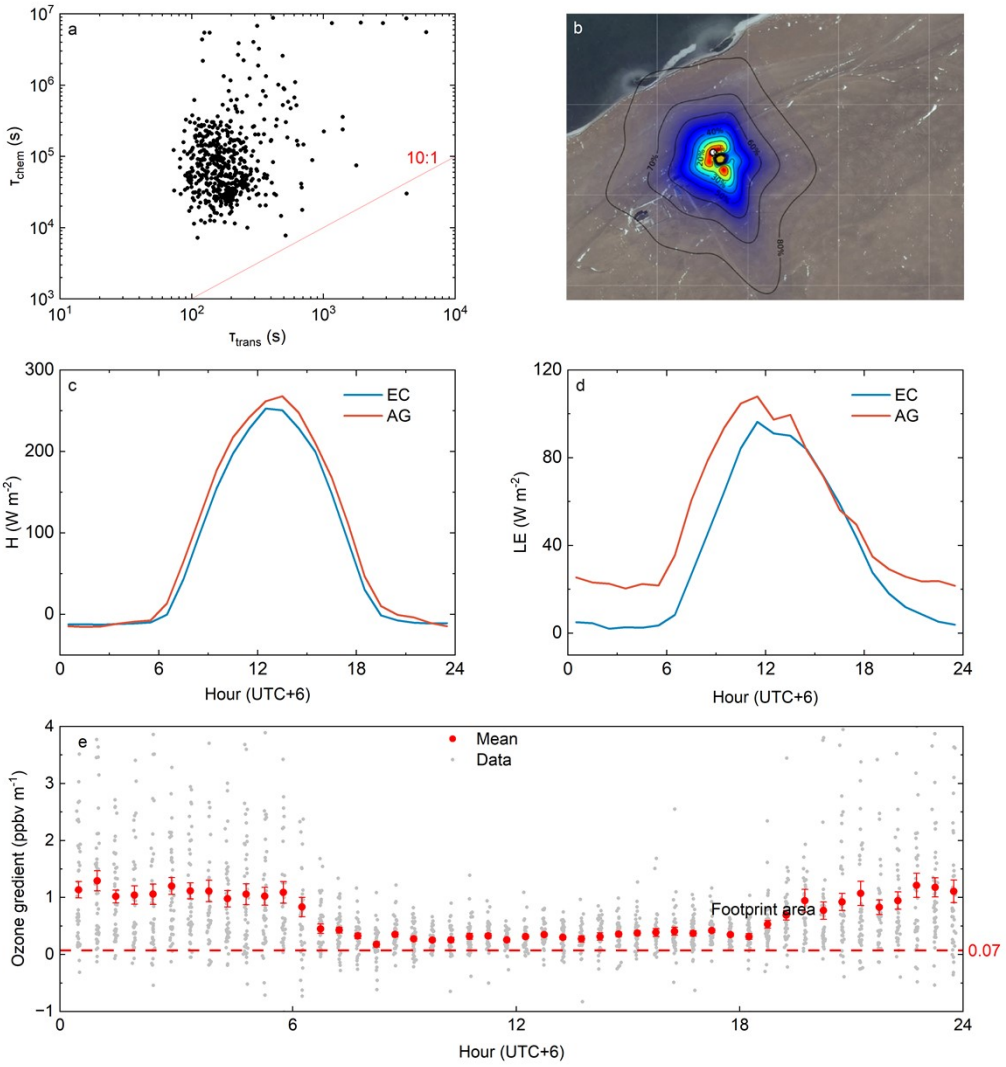

Figure S1. Tests of quality control. (a) Comparison of the turbulence transport time of ozone (τ_{trans}) and the chemical reaction time (τ_{chem}) of ozone with NO. (b) Footprint area in entire observation period. Comparison of (c) sensible heat flux (*H*), (d) latent heat flux (*LE*) between observation of the eddy covariance method and the aerodynamic gradient method. (e) Diel profile of ozone gradient.

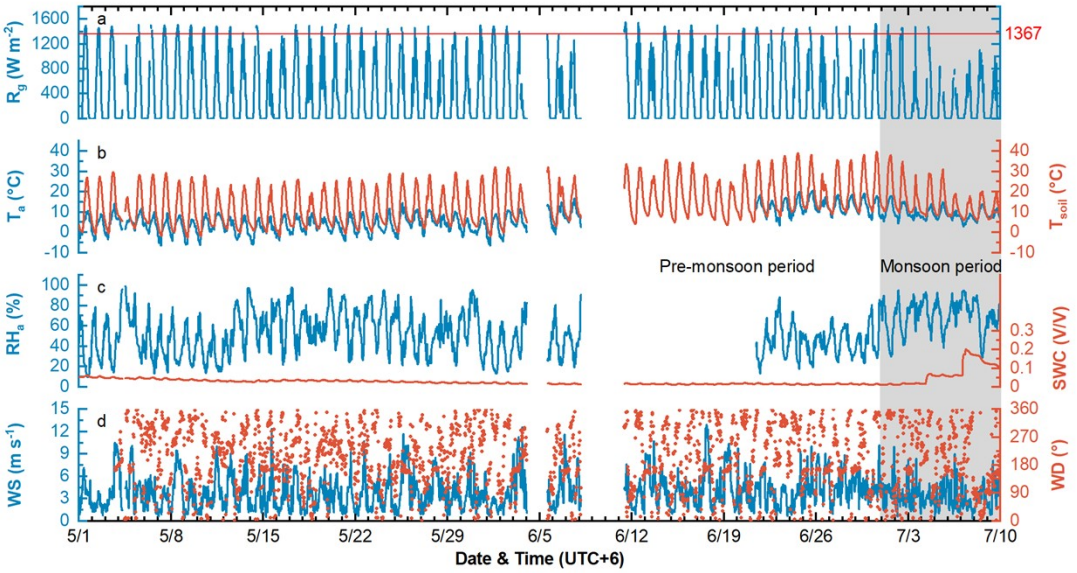

Figure S2. Time series of meteorological parameters and soil characterization parameters associated with ozone deposition. (a) solar radiation (R_g), (b) air temperature at 1.8 m (T_a) and soil temperature at -5 cm (T_{soil}), (c) air relative humidity at 1.8 m (RH_a) and soil water content (SWC), (d) wind speed at 1.8 m (*WS*) and wind direction (*WD*).

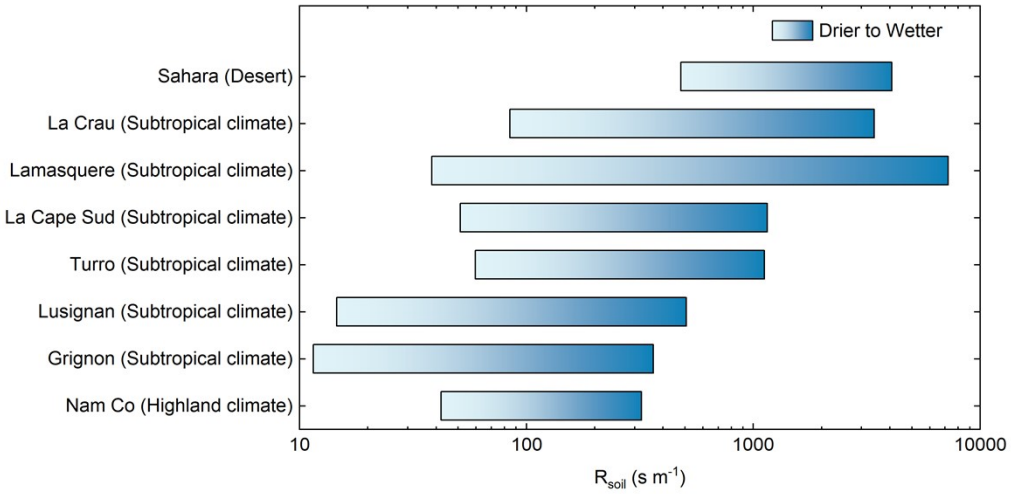

Figure S3. Comparison of soil resistance (R_{soil}) at NMC site with R_{soil} over bare soil sites. Data from [1–3].

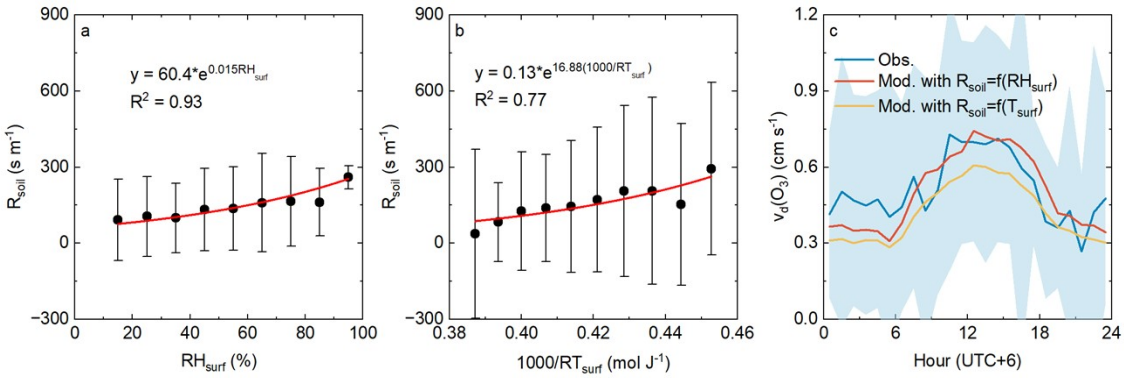

Figure S4. *R_{soil} as a function of (a) RH_{surf} and (b) T_{surf}.* Dots are block mean data with ranges of 10% for RH_{surf} and 5 °C for T_{surf}. (c) Comparison of observed v_d, simulated v_d using R_{soil} as a function of RH_{surf} and T_{surf} with input meteorological data from observation. Time alignments are performed to data used for comparison.

References

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