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Supplement of

Sources of nitrous acid (HONO) in the upper boundary layer and lower free troposphere of the North China Plain: insights from the Mount Tai Observatory

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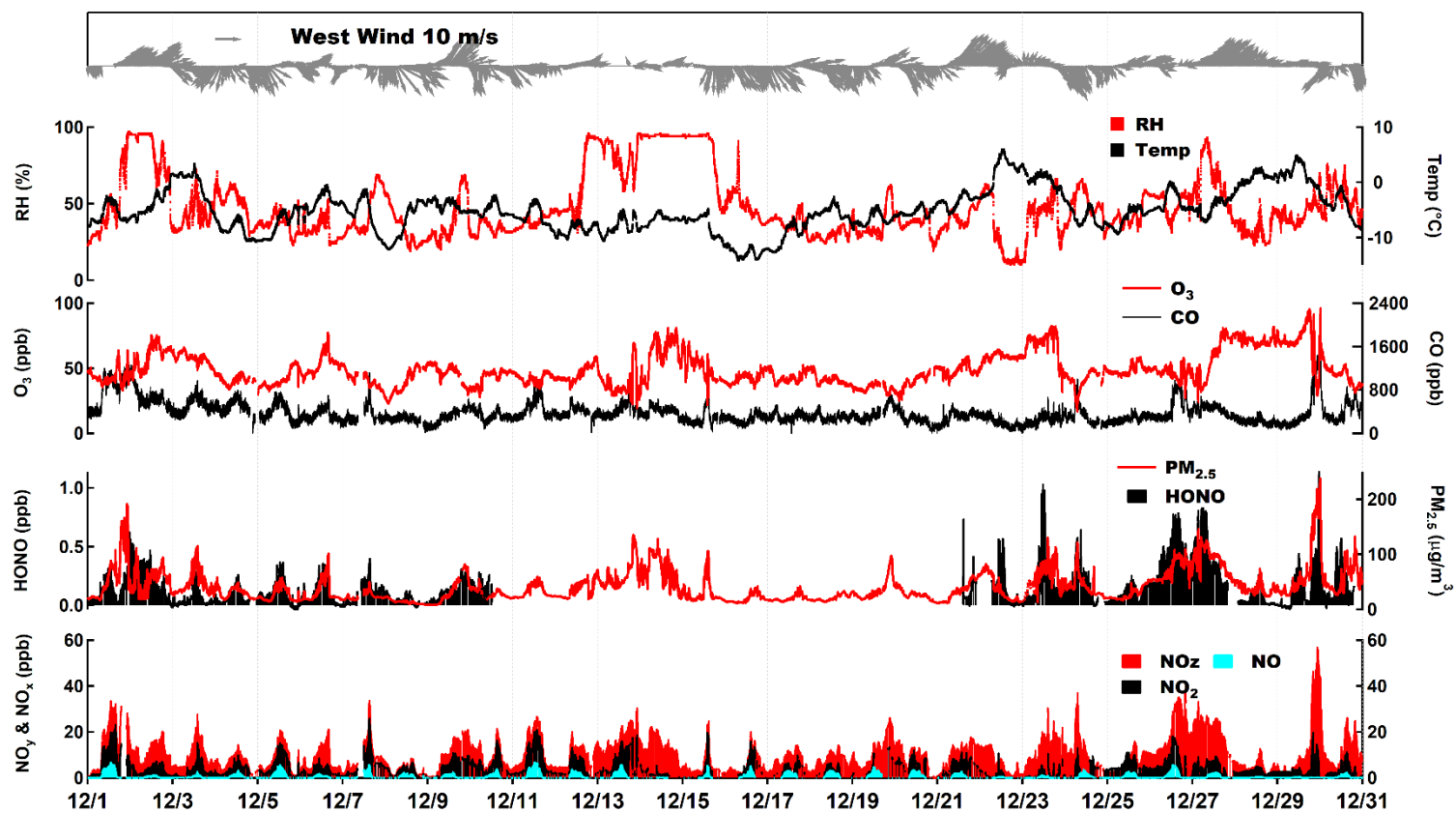


Figure S1. Time series of HONO and related parameters measured at Mt. Tai in winter 2017. The gap of measurement data was mainly due to the instrument failure and maintenance.

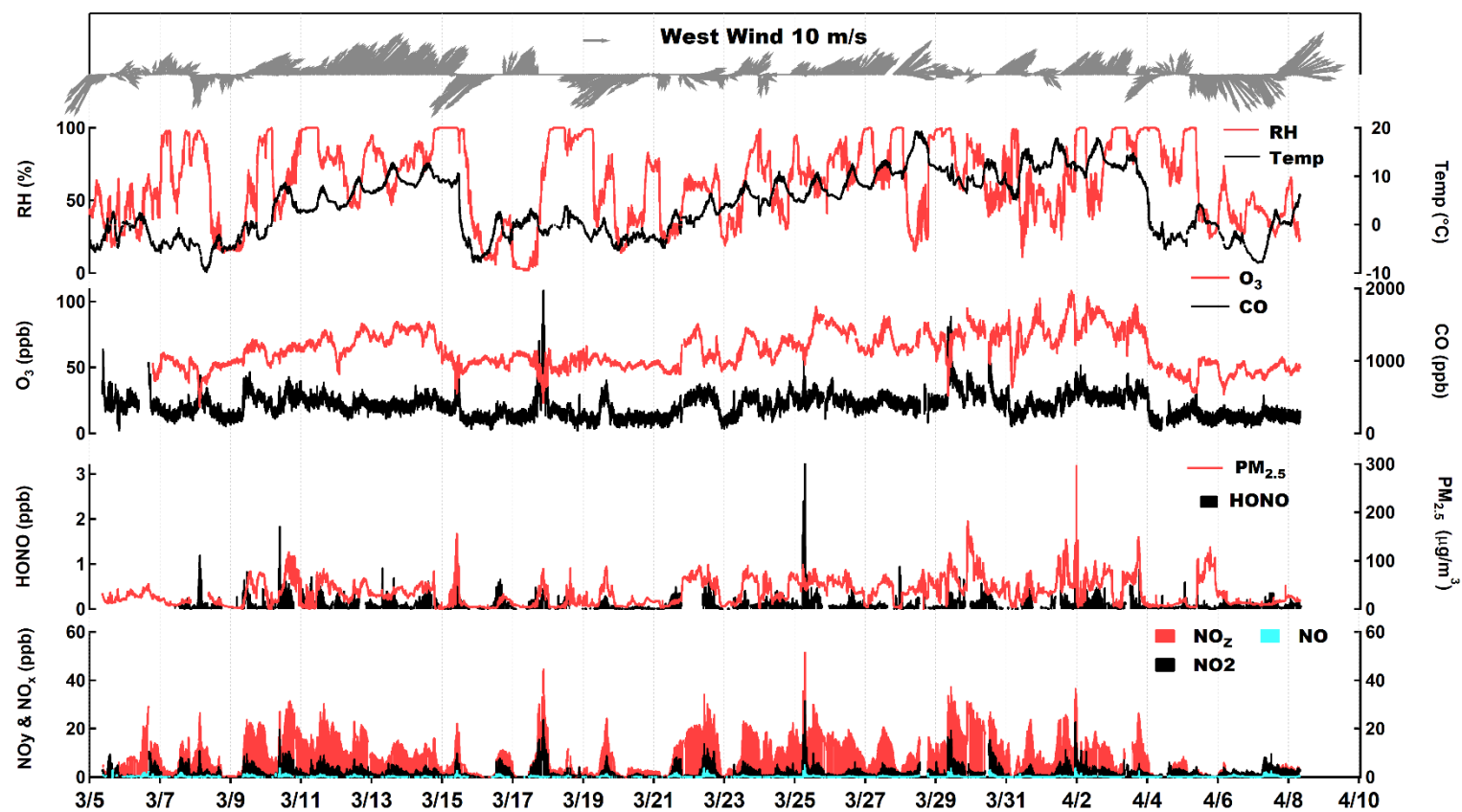


Figure S2. Time series of HONO and related parameters measured at Mt. Tai in spring 2018. The gap of data was mainly due to the instrument failure and maintenance.

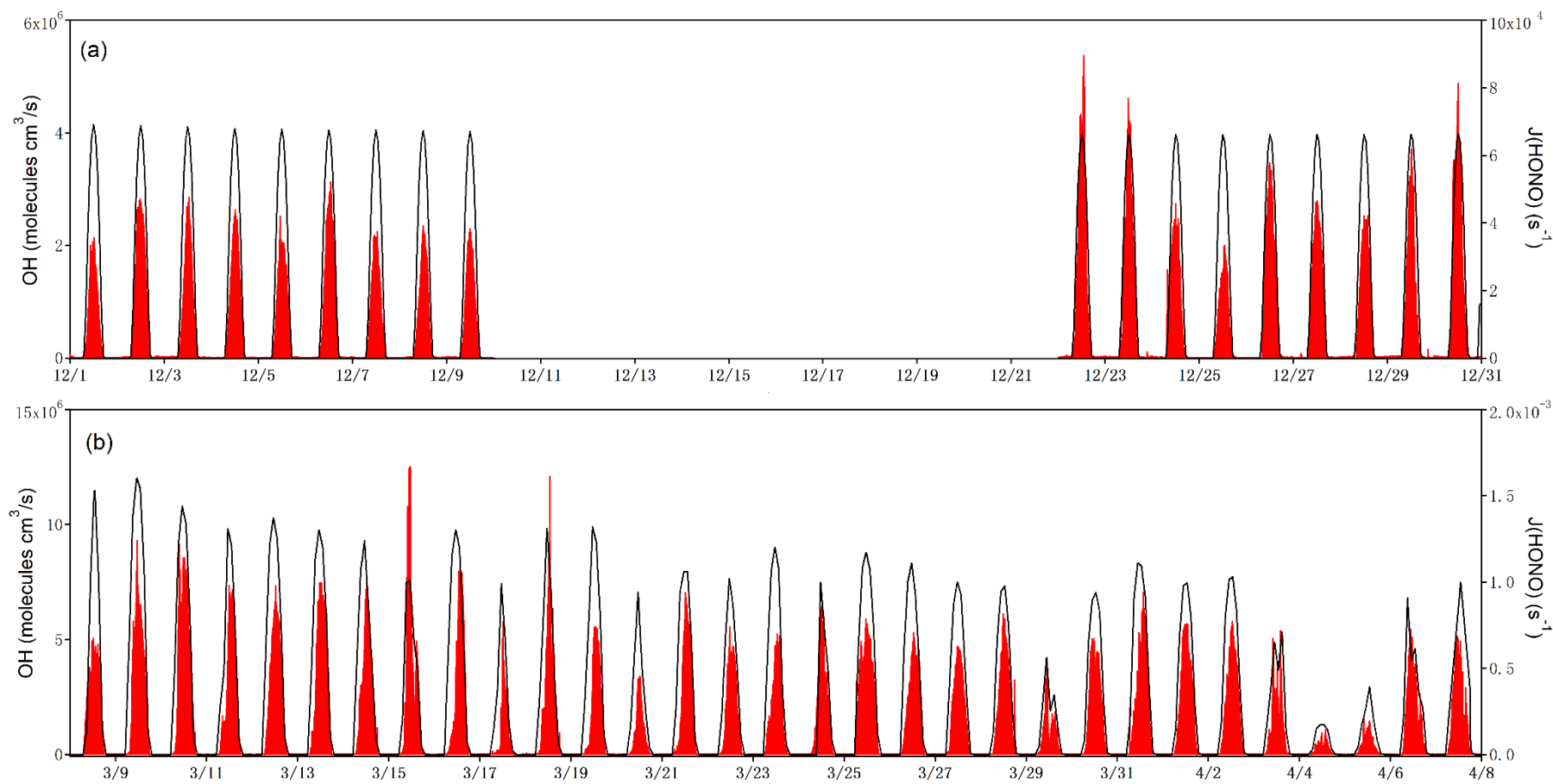


Figure S3. Time series of model-simulated OH concentrations (red) and measured-derived of J_{HONO} (black) at Mt. Tai in (a) winter 2017 and (b) spring 2018.

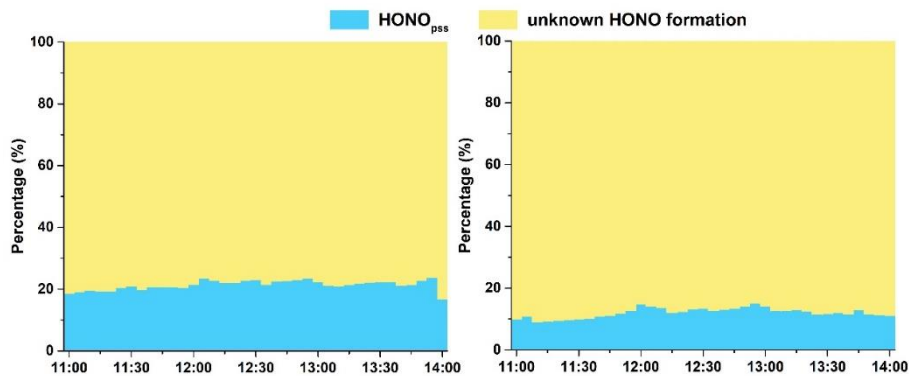


Figure S4. Relative contributions of $[\text{HONO}]_{\text{PSS}}$ and unknown HONO formation to the observed HONO around noon in winter (left) and spring (right) at Mt. Tai.

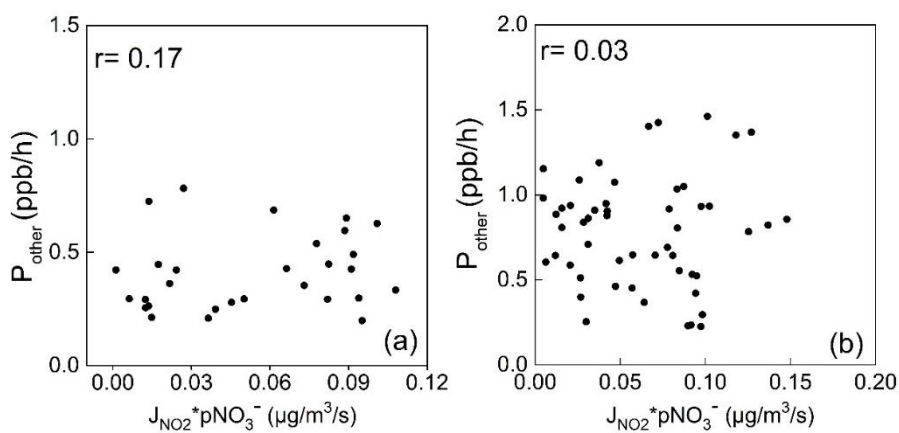


Figure S5. Scatter plots of the additional daytime HONO source strength (P_{other}) with $J_{\text{NO}_2} * p\text{NO}_3^-$ in (a) winter 2017 and (b) spring 2018.

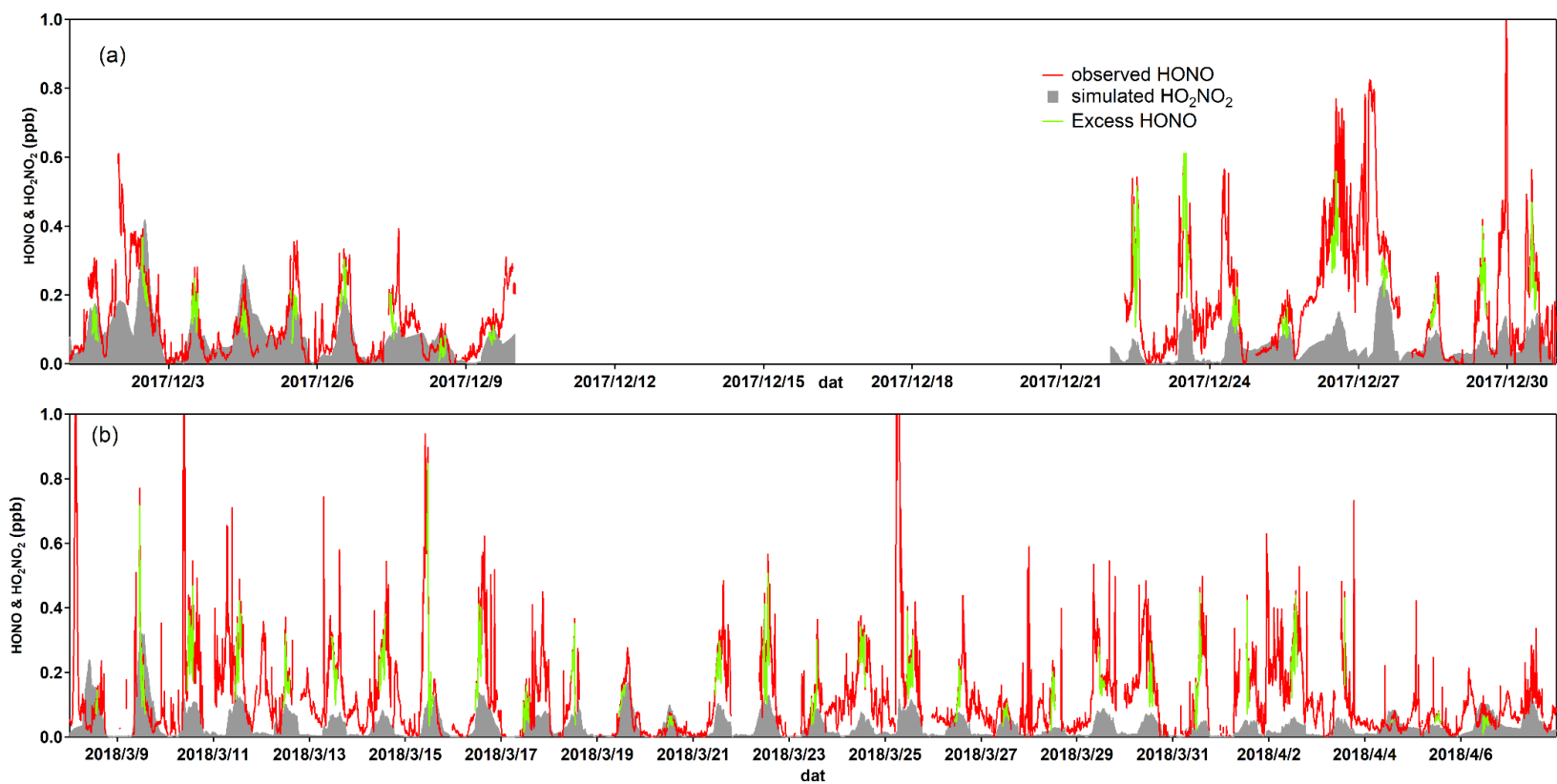


Figure S6. Model simulated HO₂NO₂ concentrations (grey) and comparison with the measured HONO (red) and excess HONO (green; measured HONO minus [HONO]_{pss}) at Mt. Tai in (a) winter and (b) spring at Mt. Tai.

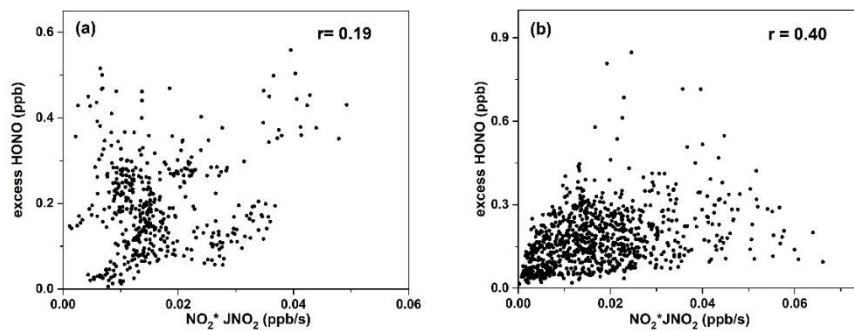


Figure S7. Scatter plots of excess HONO (measured HONO minus [HONO]_{pss}) versus [NO₂]*J(NO₂) at Mt. Tai in (a) winter and (b) spring.

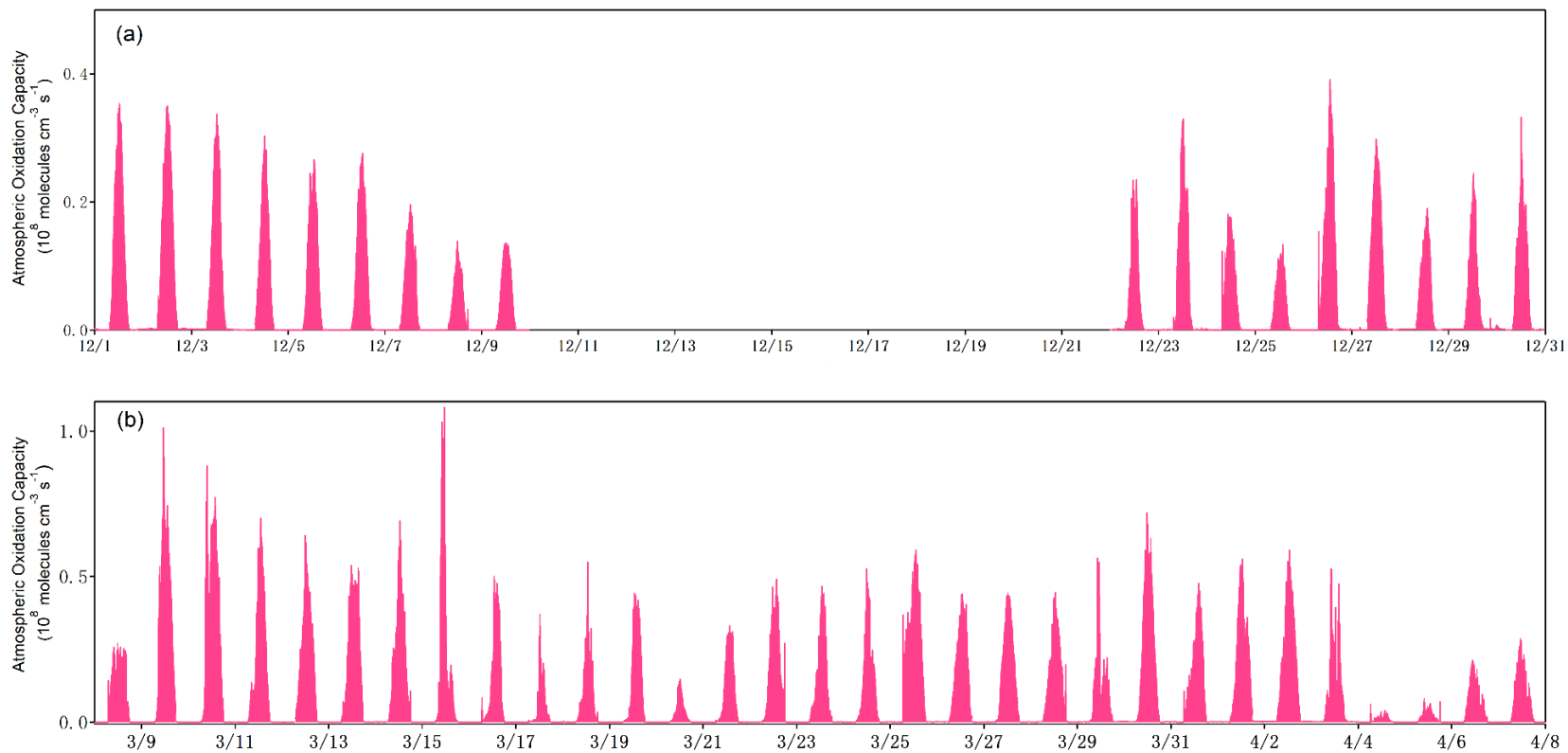


Figure S8. Model-simulated time series of atmospheric oxidation capacity (AOC) at Mt. Tai in (a) winter 2017 and (b) spring 2018.