



Supplement of

Variations in surface ozone and carbon monoxide in the Kathmandu Valley and surrounding broader regions during SusKat-ABC field campaign: role of local and regional sources

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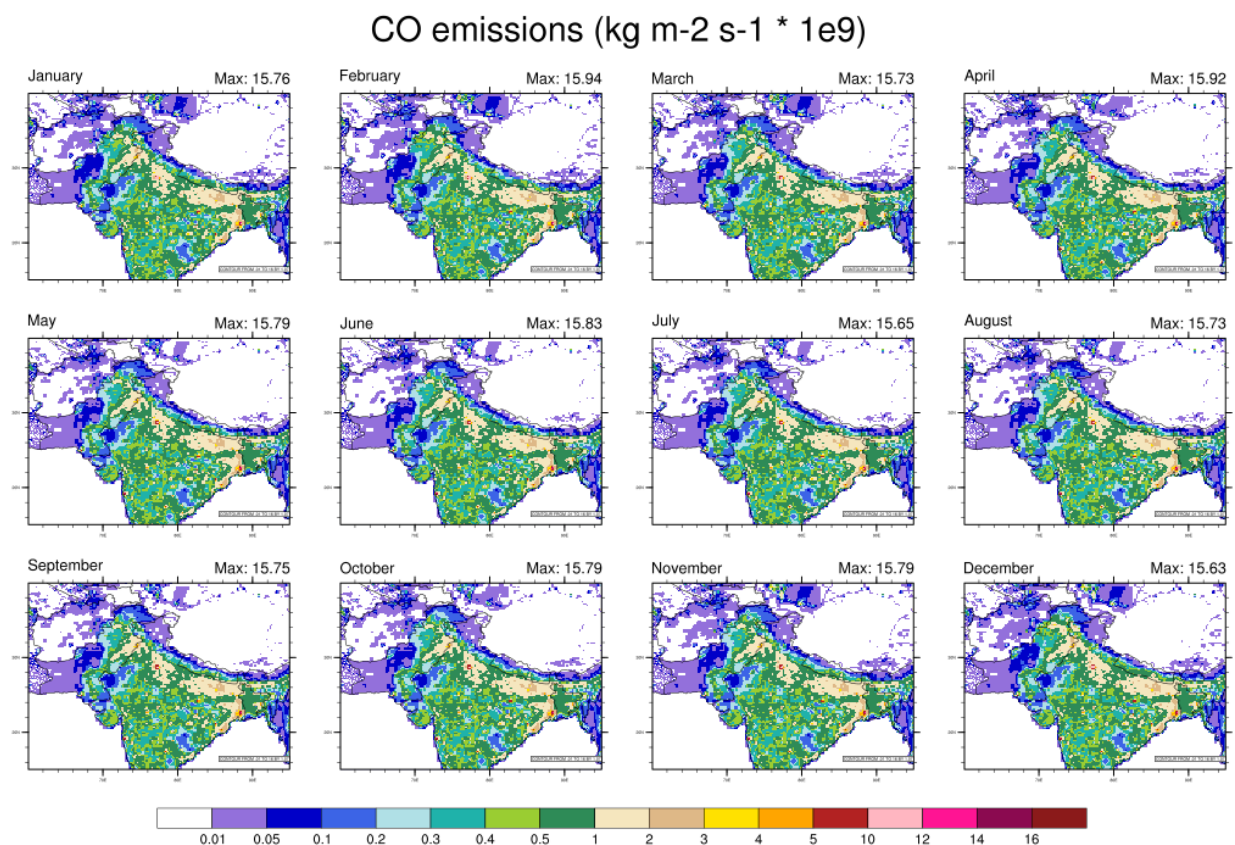


Figure S1: Spatial distribution of CO emissions from the HTAP V2 inventory during different months over the model domain.

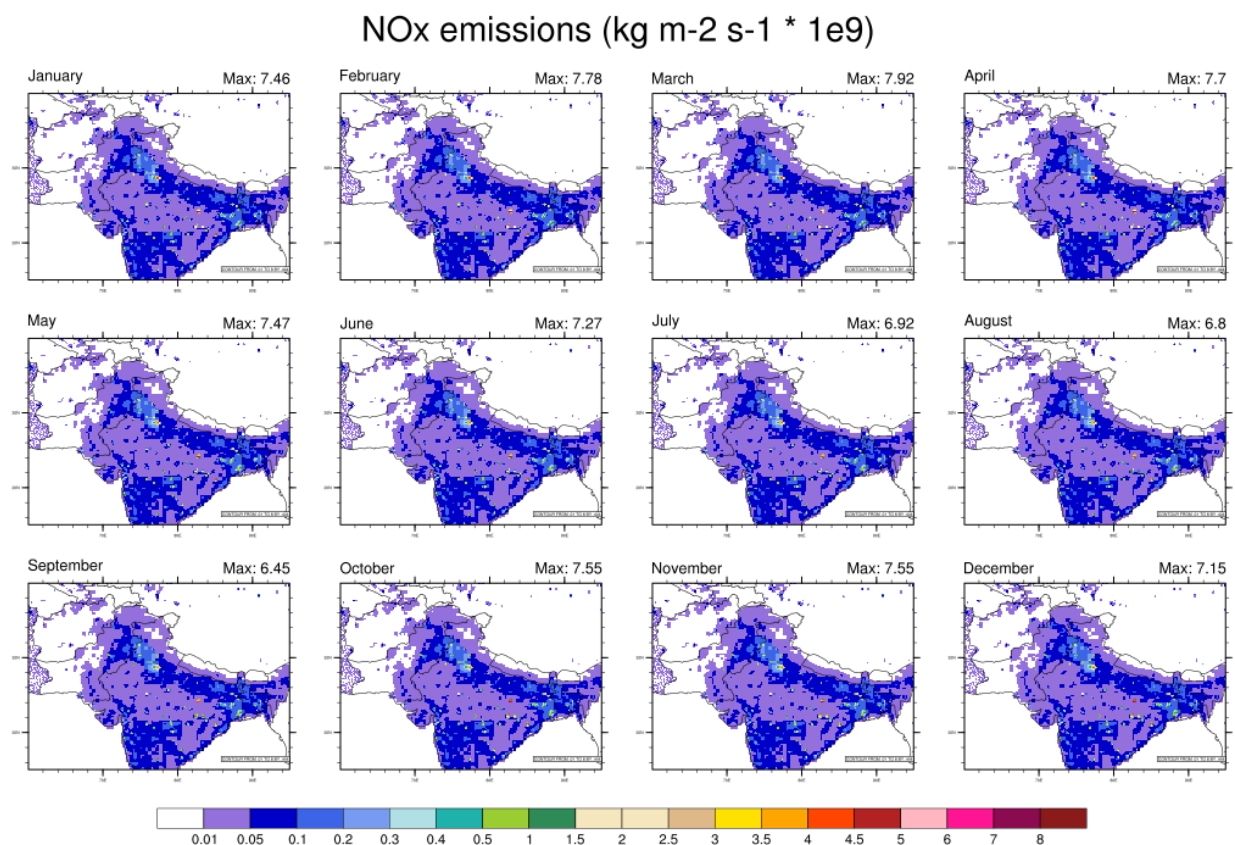
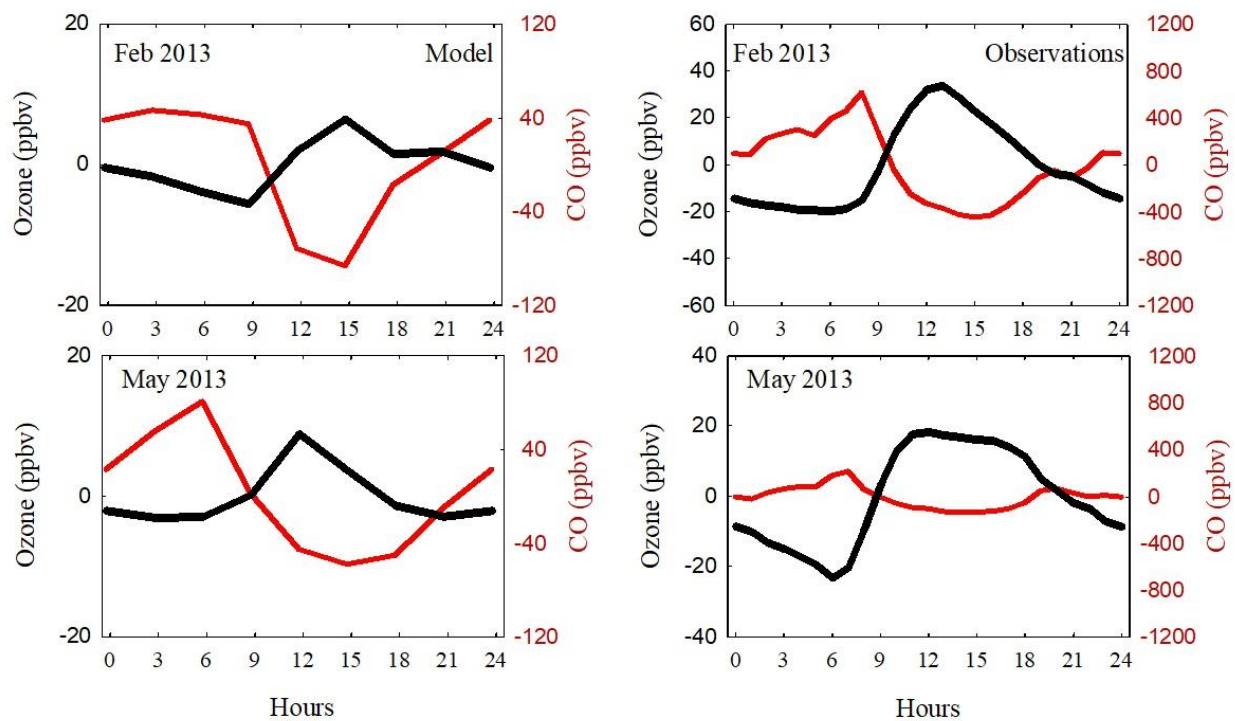


Figure S2: Spatial distribution of NO_x emissions from the HTAP V2 inventory during different months over the model domain.



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32 **Figure S3:** Model simulated normalized average diurnal variations in ozone and CO during
 33 February and May 2013. A comparison with observations is also shown.

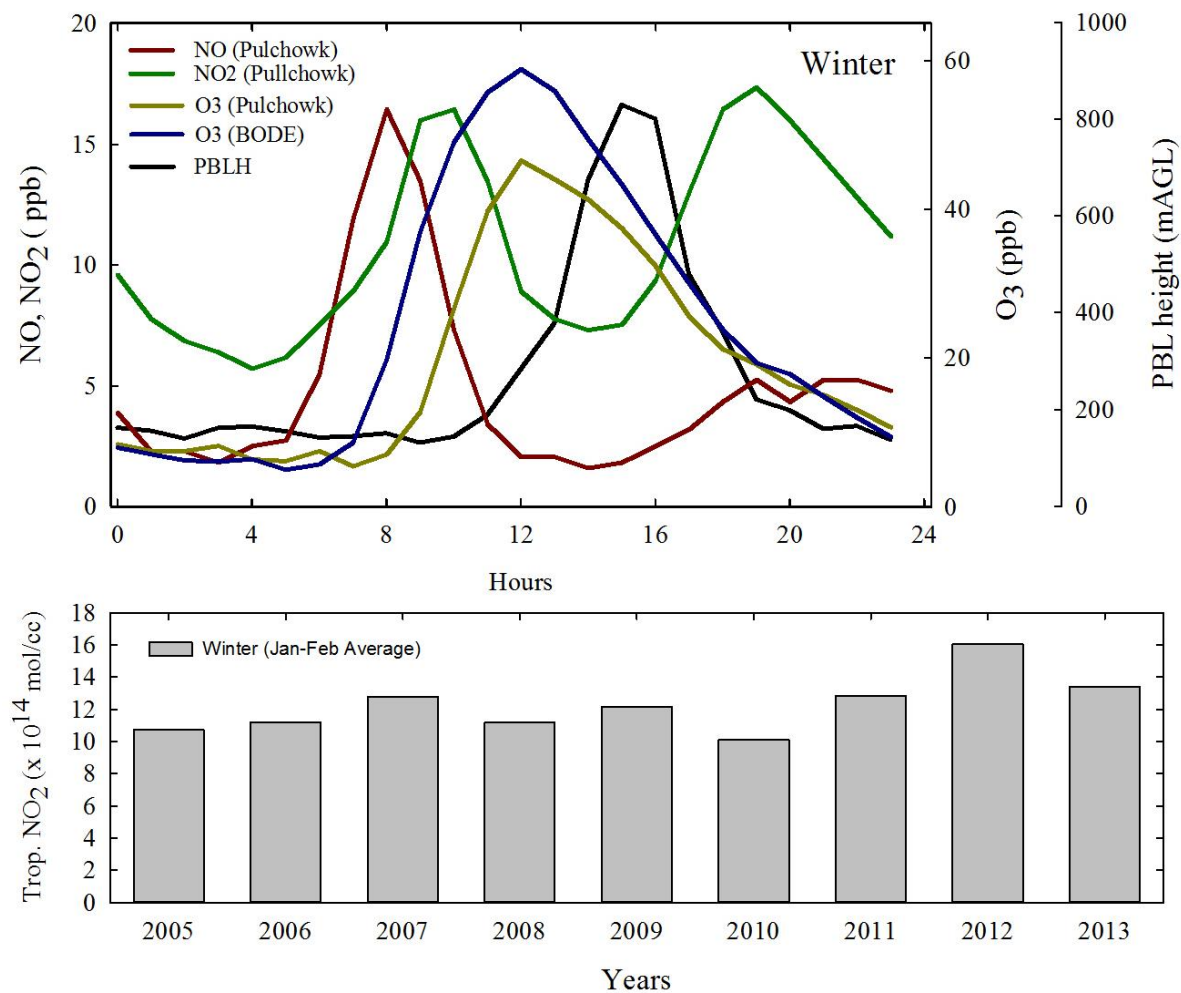


Figure S4: Top: monthly averaged diurnal profile of NO, NO₂, O₃ and PBL height during winter season. Bottom: time series of OMI tropospheric column NO₂ data for winter seasons (2005-2013).

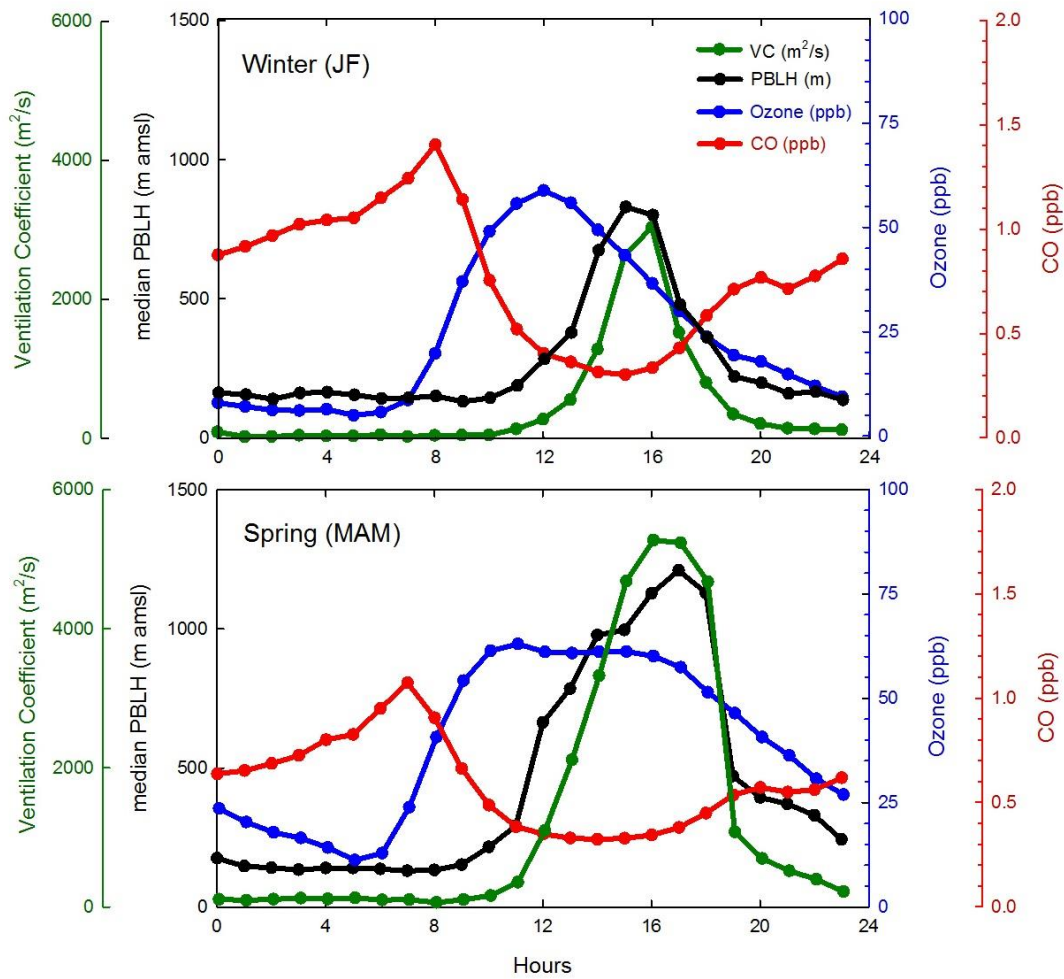


Figure S5: The average diurnal variations in ozone, CO, median PBLH and Ventilation coefficient during winter (top) and Spring (bottom).

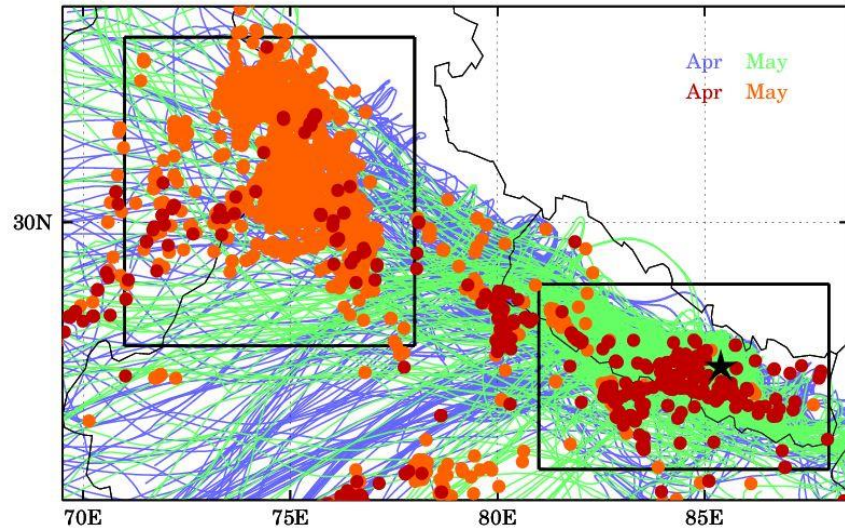


Figure S6: Spatial distribution of MODIS fire counts during April (red dots) and May (orange dots) 2013. Underneath is daily HYSPLIT backward trajectories during April (blue lines) and May (green lines) initiating from Bode (black star). The two black boxes indicate two hotspots of fire counts during this period.

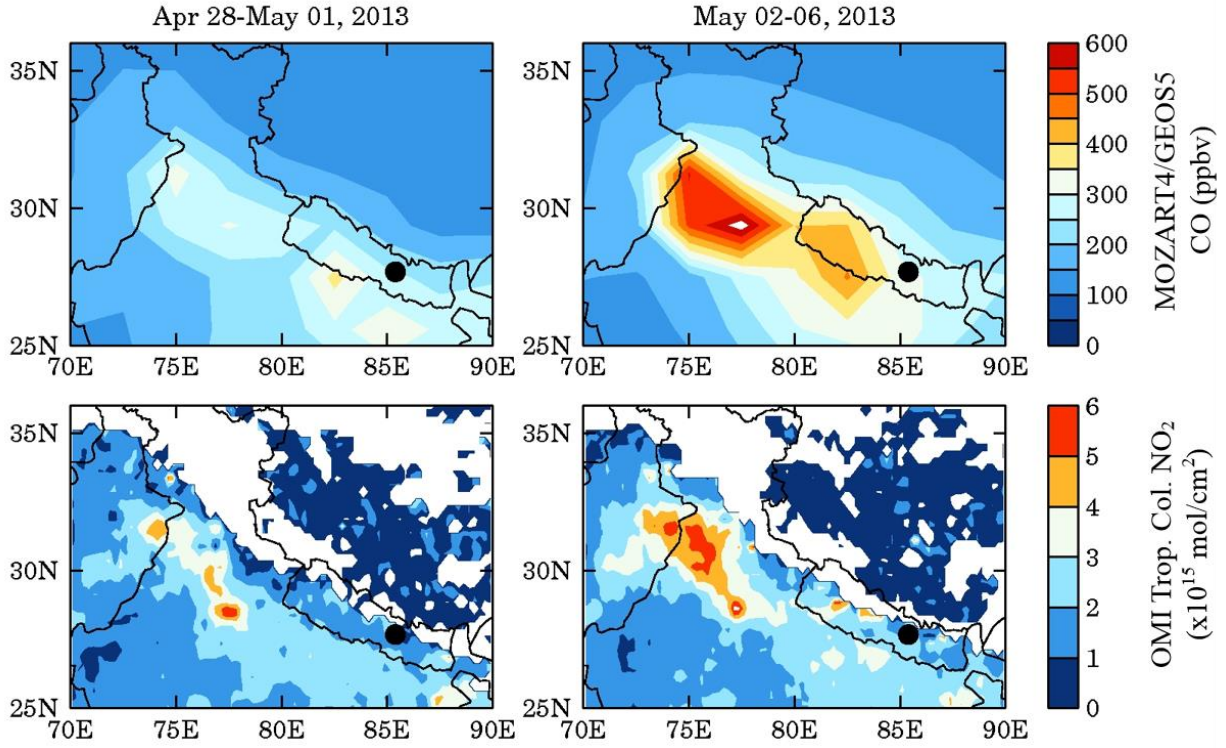


Figure S7: (Top panel) MOZART CO levels before the event period (28 Apr – 1 May 2013; left) and during the event period (2-6 May 2013; right) at 992 hPa. OMI tropospheric column NO₂ during these two periods (Middle panels). HYSPLIT 4-day back air trajectories during April 30th and May 4th 2013. Black symbol in all these figures indicates Bode supersite, Nepal.