



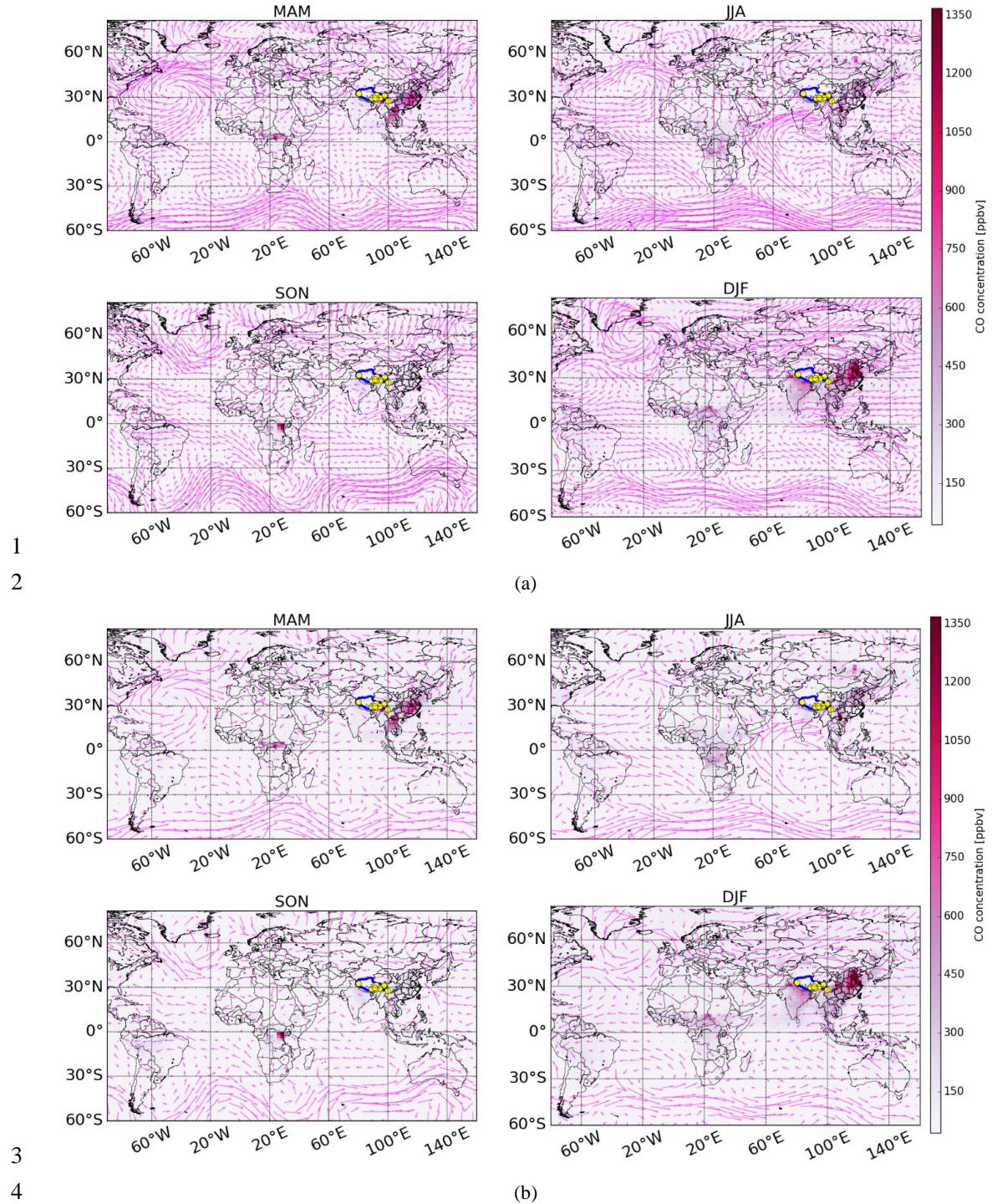
*Supplement of*

## **Quantifying variability, source, and transport of CO in the urban areas over the Himalayas and Tibetan Plateau**

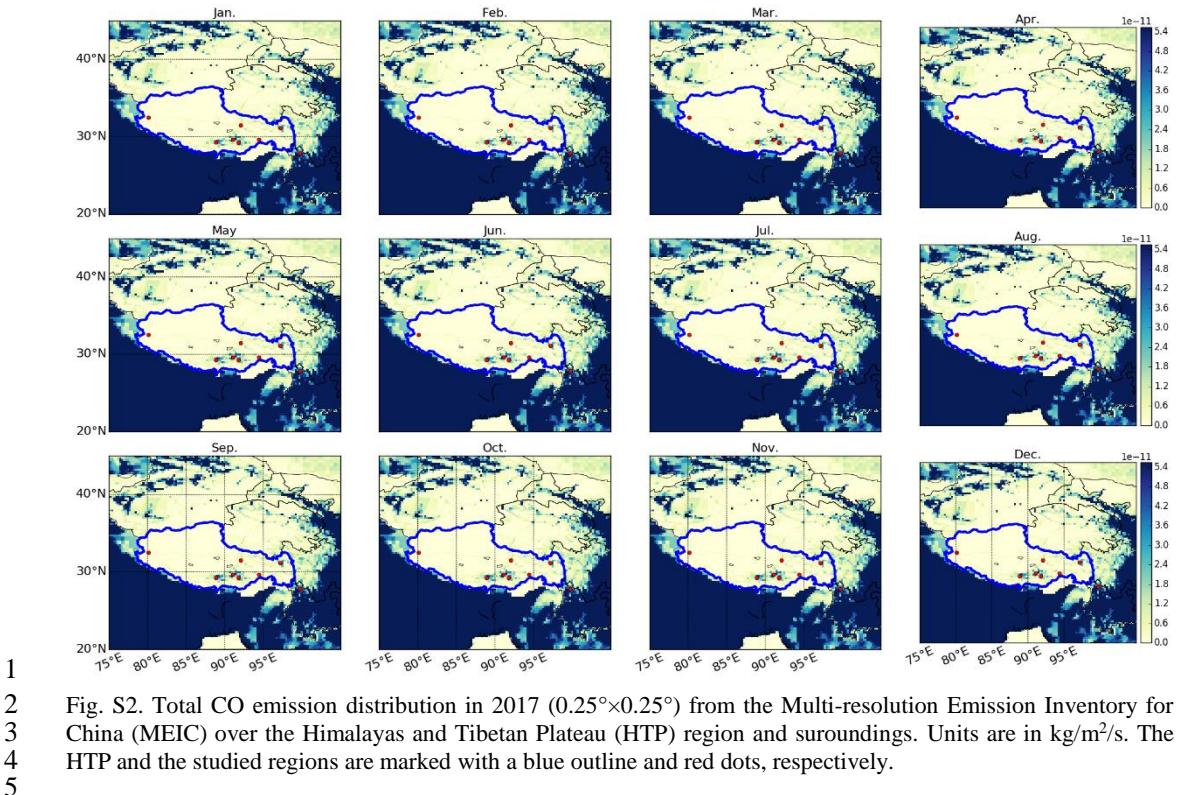
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5 **Fig. S1.** Comparison between GDAS-1 meteorological fields ( $1^{\circ}$  latitude  $\times 1^{\circ}$  longitude) used for back trajectories  
6 calculation and Goddard Earth Observing System-Forward Processing (GEOS-FP) meteorological fields ( $2^{\circ}$  latitude  
7  $\times 2.5^{\circ}$  longitude) used for GEOS-Chem simulation. The arrows represent the mean horizontal wind vectors at 500  
8 hPa. Spatial distributions of CO VMR in the GEOS-Chem tagged CO simulations in different seasons are also shown.  
9 The HTP and the studied regions are marked with a blue outline and yellow dots, respectively. (a) and (b) are  
10 meteorological fields from the GDAS-1 and GEOS-PF dataset, respectively.



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Fig. S2. Total CO emission distribution in 2017 ( $0.25^\circ \times 0.25^\circ$ ) from the Multi-resolution Emission Inventory for China (MEIC) over the Himalayas and Tibetan Plateau (HTP) region and surroundings. Units are in  $\text{kg/m}^2/\text{s}$ . The HTP and the studied regions are marked with a blue outline and red dots, respectively.