

Change of CO concentration due to the COVID-19 lockdown in China observed by surface and satellite observations

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Introduction

Supplementary material for “Change of CO concentration due to the COVID-19 lockdown in China observed by surface and satellite observations” by M. Zhou et al. Figures that help with the interpretation of the results, but could not be included in the main manuscript are included here.

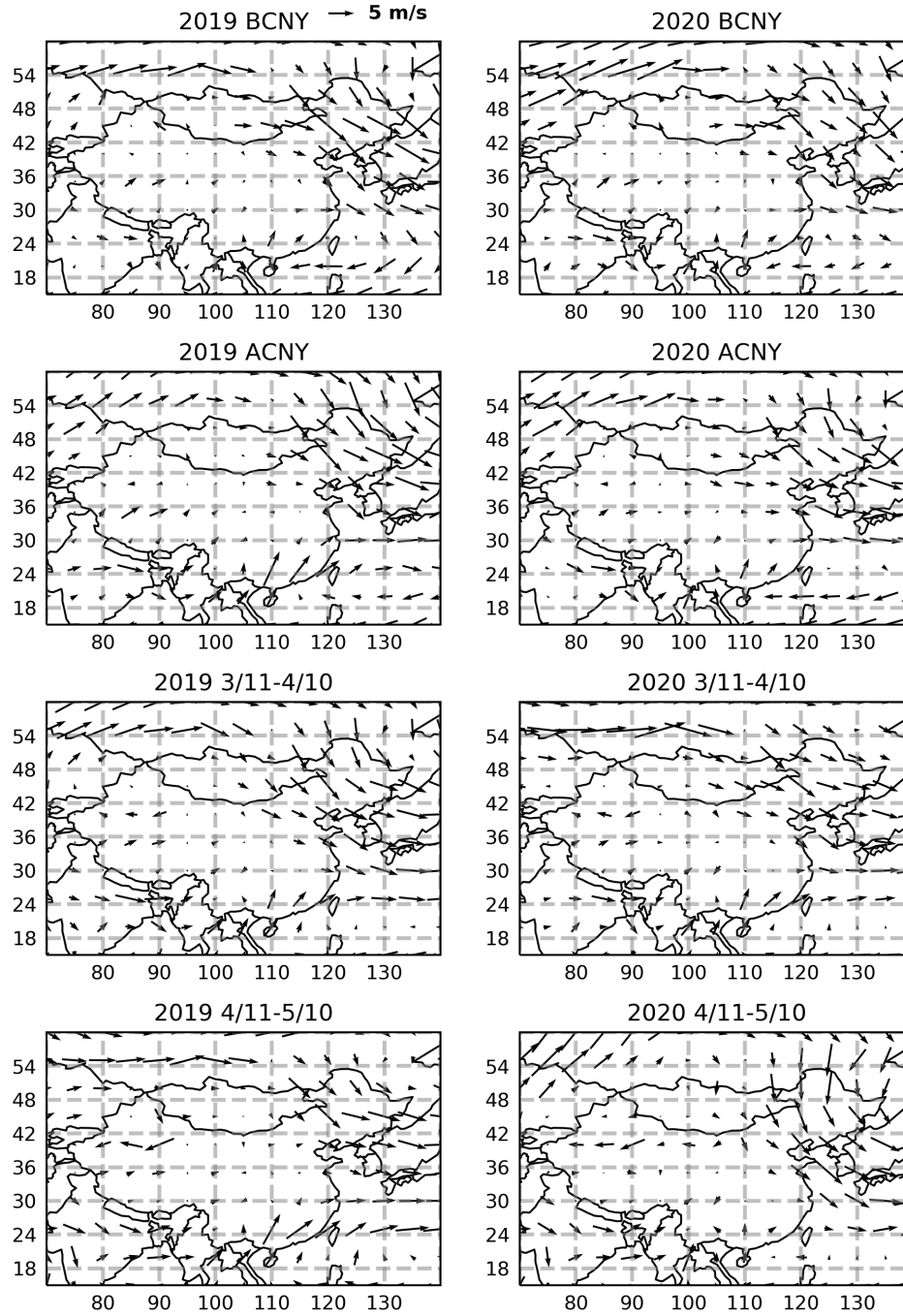


Figure S1. The wind at 850 hPa above China during the four periods in 2019 (left) and 2020 (right) from ERA5 reanalysis data.

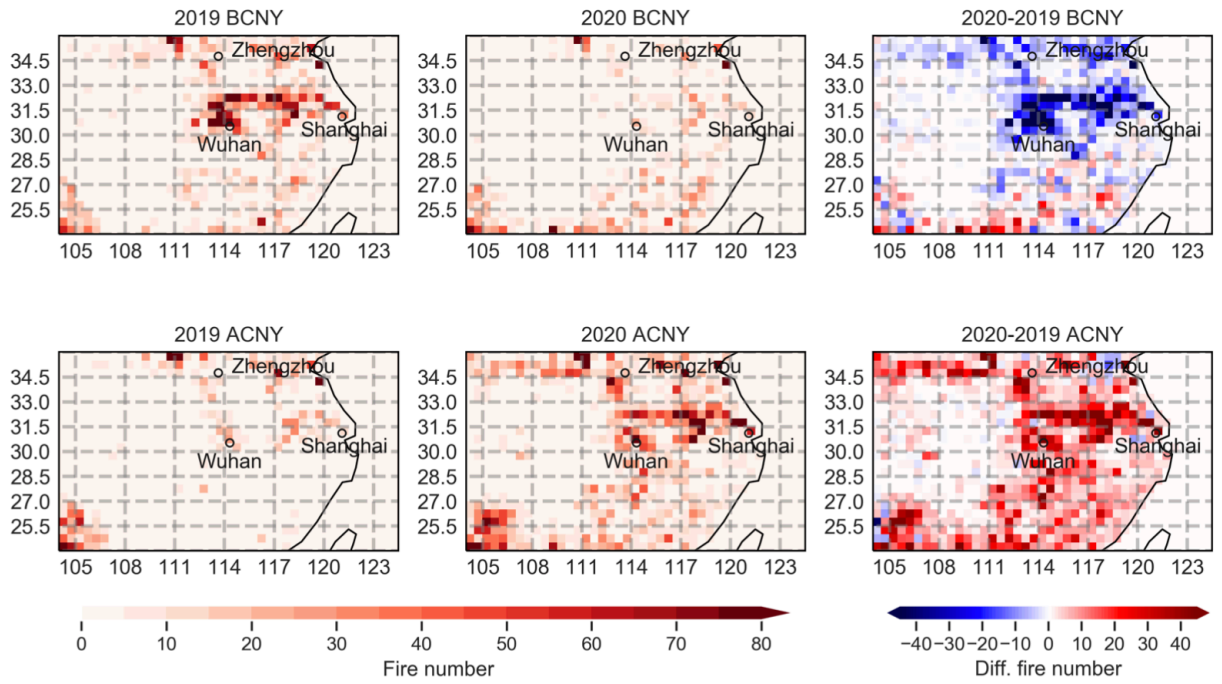


Figure S2. The number of fires observed by VIIRS satellite in $0.5^\circ \times 0.5^\circ$ (latitude by longitude) grids around Wuhan during BCNY and ACNY in 2019 (left) and in 2020 (middle), and the difference in number of fires between 2020 and 2019 (right).

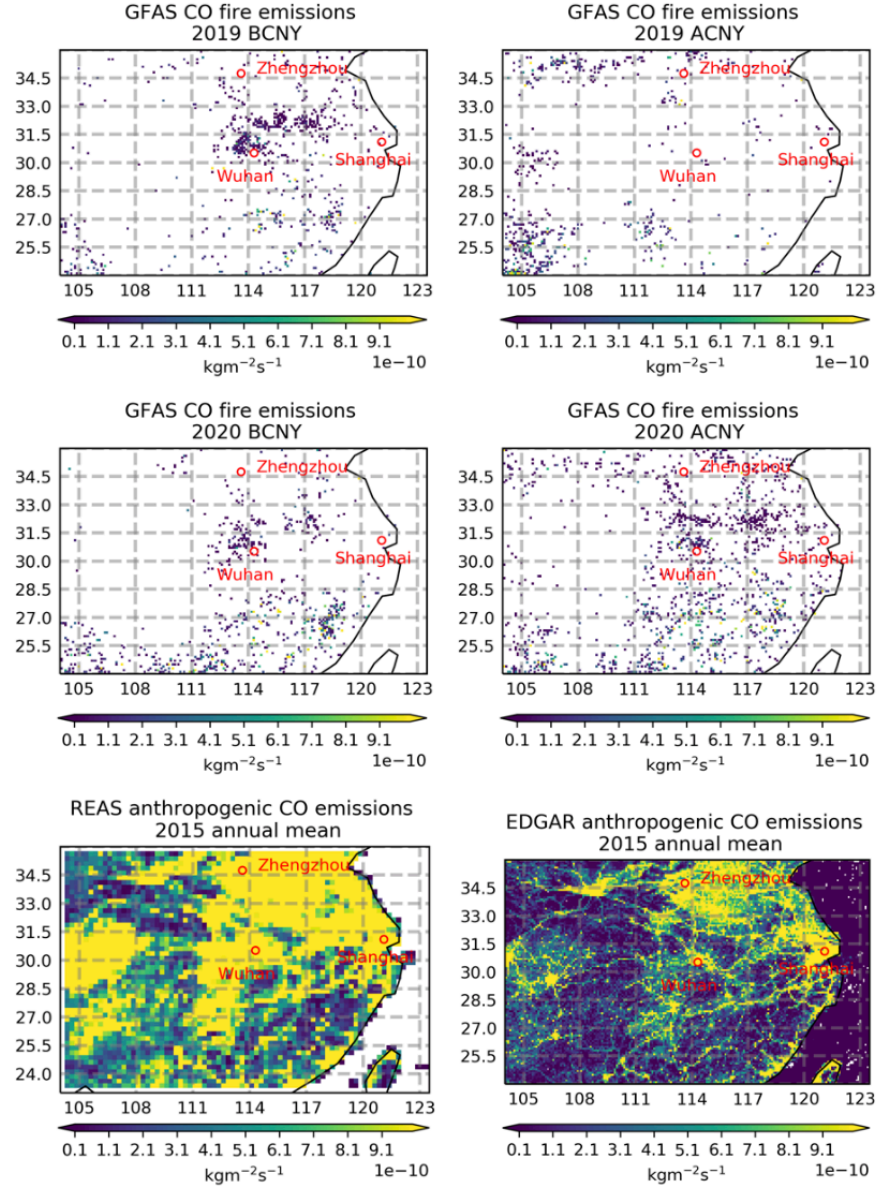


Figure S3. The CO wildfire emissions from the GFAS dataset with a spatial resolution of $0.1^\circ \times 0.1^\circ$ during BCNY and ACNY in 2019 (upper panels) and 2020 (middle panels), together with the CO annual mean anthropogenic emissions from REASv3.2 ($0.25^\circ \times 0.25^\circ$) and EDGARv5.0 ($0.1^\circ \times 0.1^\circ$) in 2015 (bottom panels).

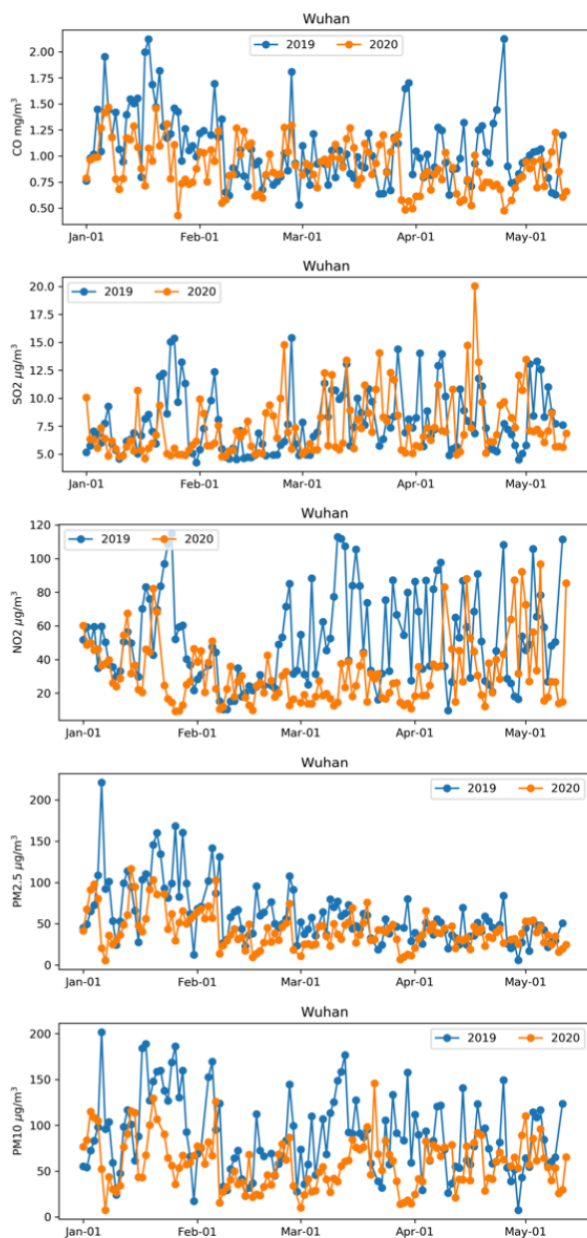


Figure S4. The time series of surface CO, SO₂, NO₂, PM_{2.5} and PM₁₀ daily means in Wuhan between 1st January and 11th May in 2019 and 2020.

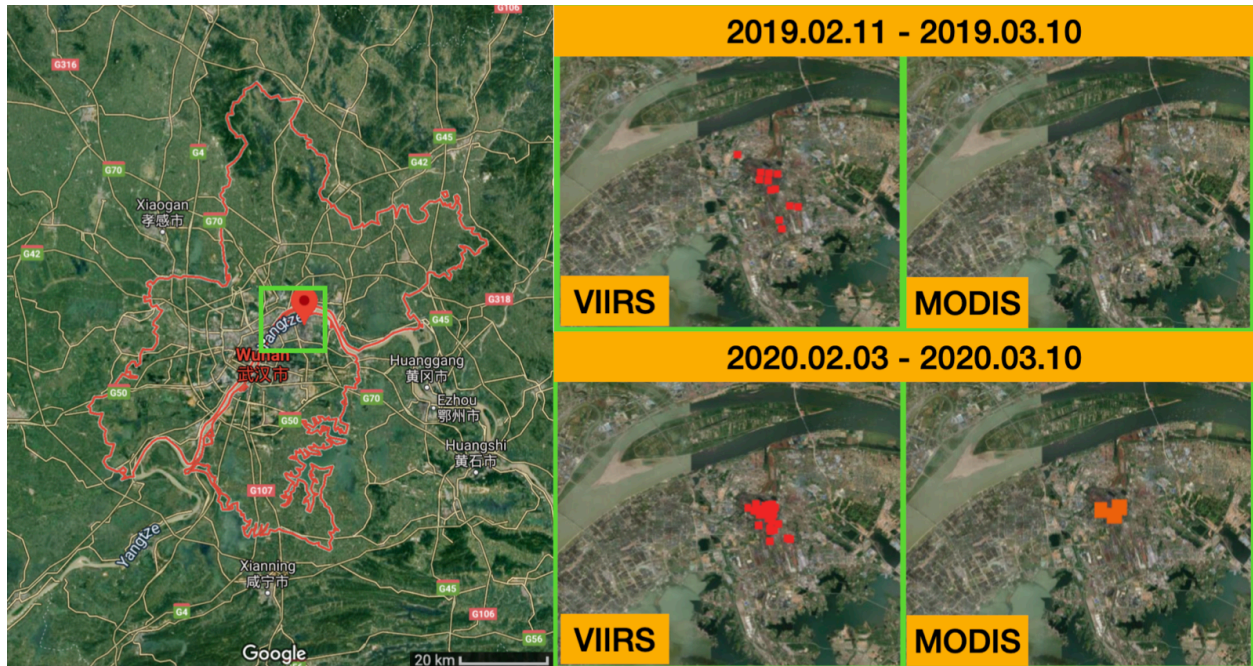


Figure S5. The map of Wuhan and the location of the Wuhan pingmei wugang joint coking company (red dot), together with the number of fires above this coke company observed by VIIRS and MODIS satellites during ACNY in 2019 and 2020. The map is adapted from google.