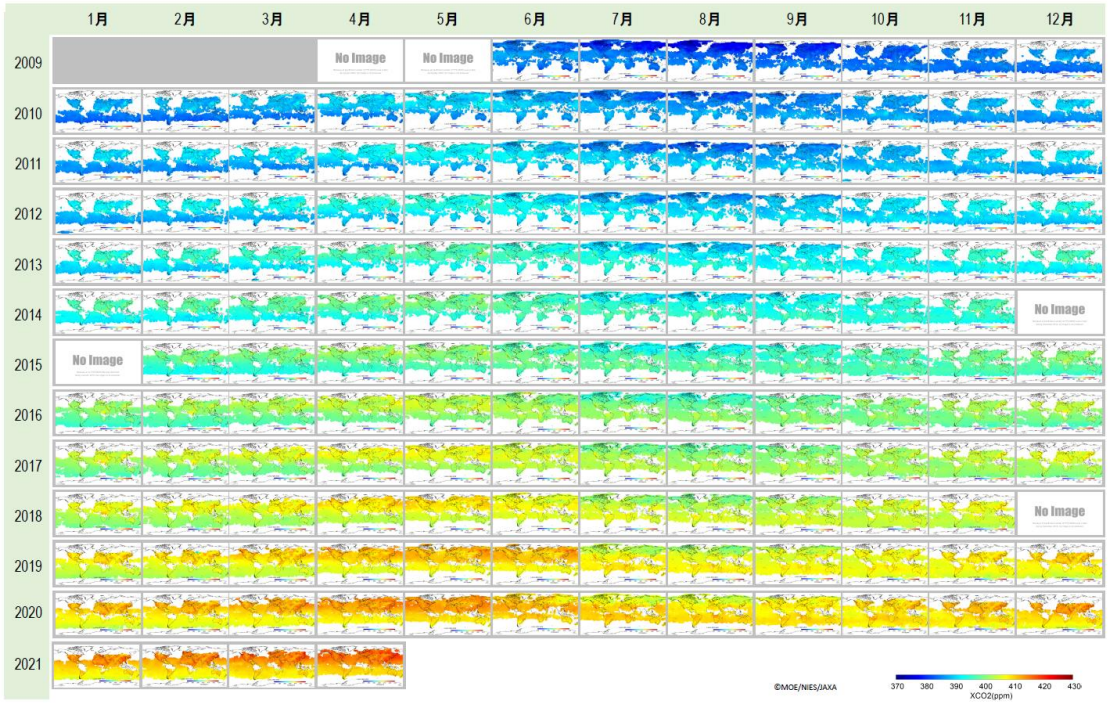
Urban CO_2 flux from GOSAT partial column

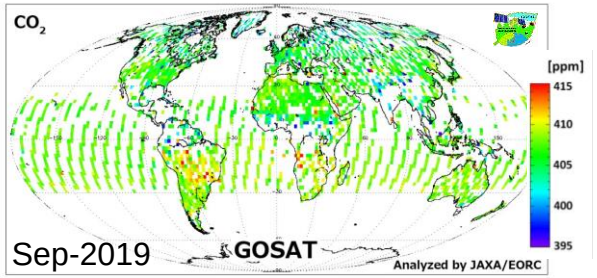
EORC GOSAT GHG tropospheric partial-column product

GOSAT total-column CO_2 density in 12 years since 2009



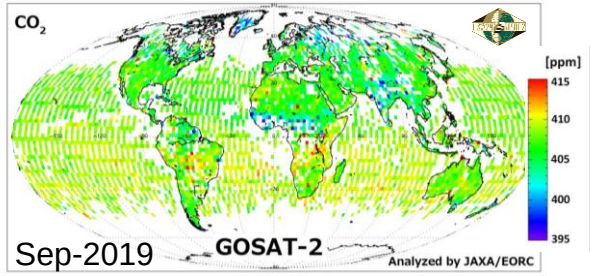
CO_2, CH_4

Jan2009 –



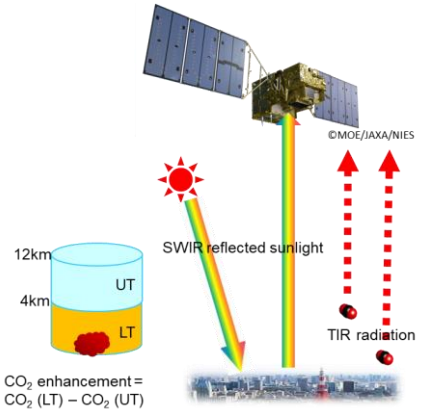
CO_2, CH_4, CO

Oct2018 –

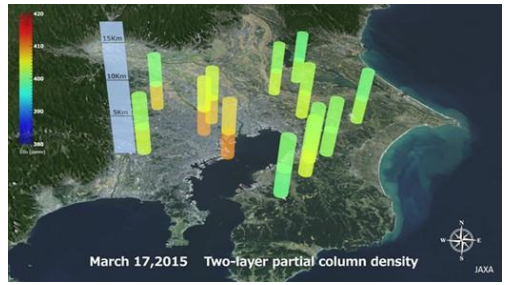


https://www.eorc.jaxa.jp/GOSAT/Global_GHGs_Map/index.html

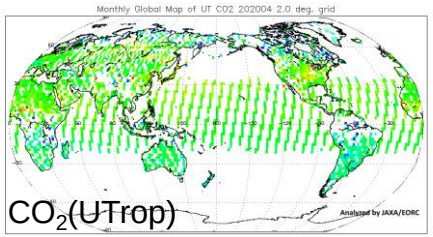
Tropospheric partial-column density of CO_2 and CH_4 from GOSAT for detecting enhanced urban GHG emission signals by using both SWIR and TIR bands

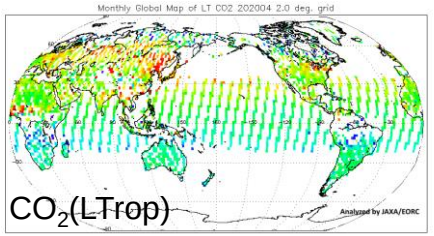


Target observations over urban cities

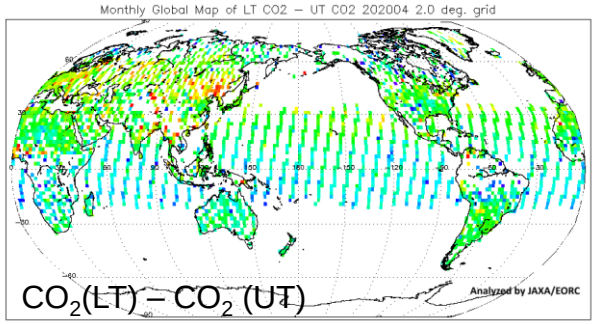


EORC tropospheric partial-column products





CO_2 enhancement = CO_2(LT) – CO_2(UT)



https://www.eorc.jaxa.jp/GOSAT/GPCG/index_GOSAT.html
https://www.eorc.jaxa.jp/GOSAT/GPCG/index_GOSAT2.html

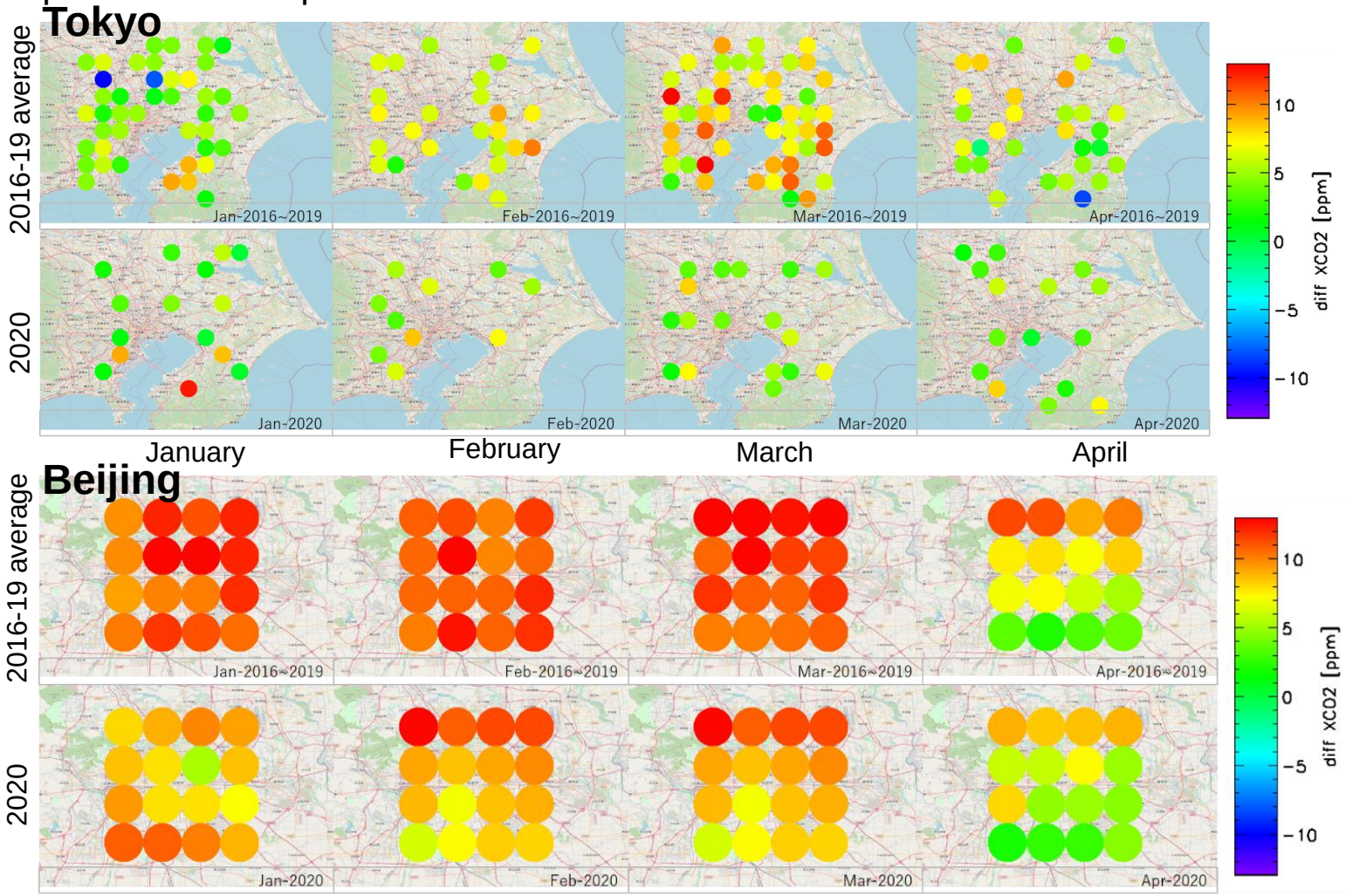
SHIOMI, Kei, JAXA (shiomi.kei@jaxa.jp)

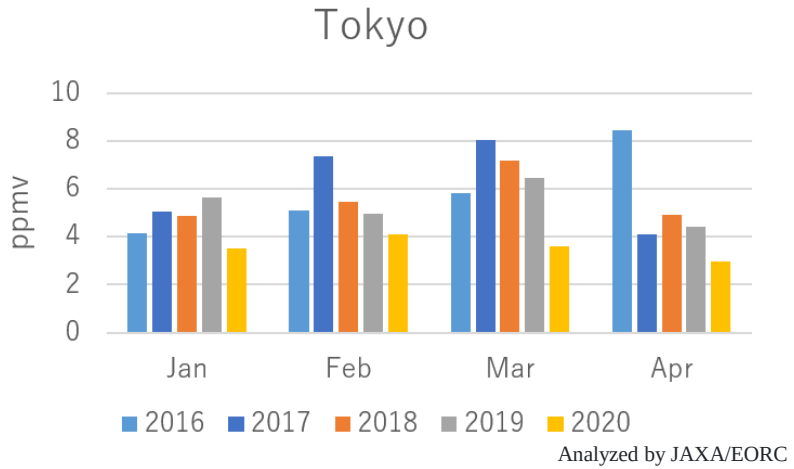
Urban CO_2 flux from GOSAT partial column

CO_2 enhancement change over urban cities by COVID-19 effect

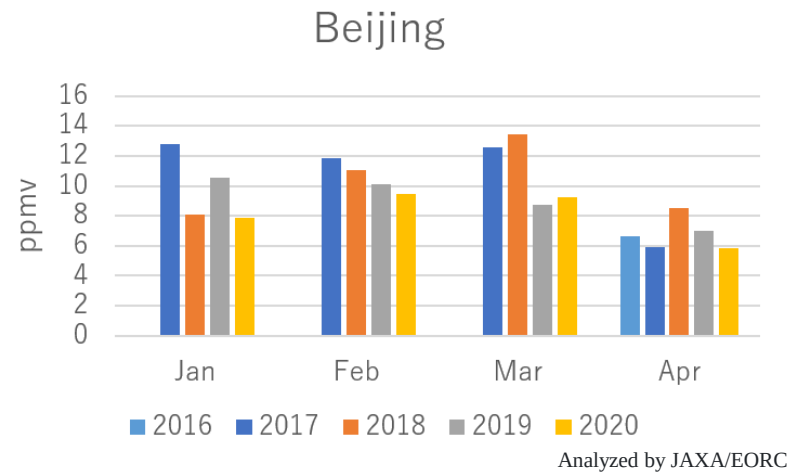
GOSAT target observations are optimized over urban cities to detect local emissions. The GOSAT shows atmospheric CO_2 enhancement in 2020 is smaller than the previous years over Tokyo, Beijing, and other cities.

The city emission or local source emission rate is estimated from measured CO_2 enhancement inverse proportion to the wind speed with a simple model.





Analyzed by JAXA/EORC



Analyzed by JAXA/EORC

https://eodashboard.org/

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SHIOMI, Kei, JAXA (shiomi.kei@jaxa.jp)