« CNES & CNRS COVID-19 Related Activities «

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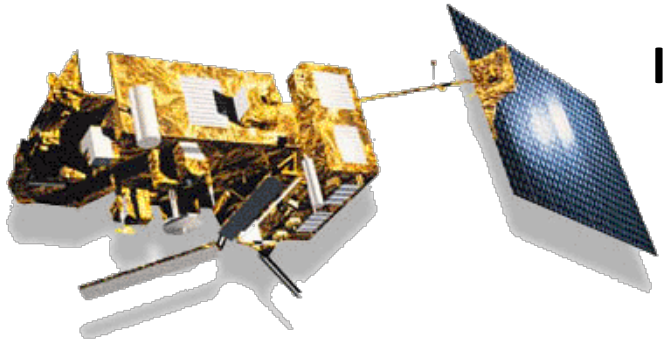
Observations from space & pollution : the missions

(Presentation to French Gov on 7 may2020)



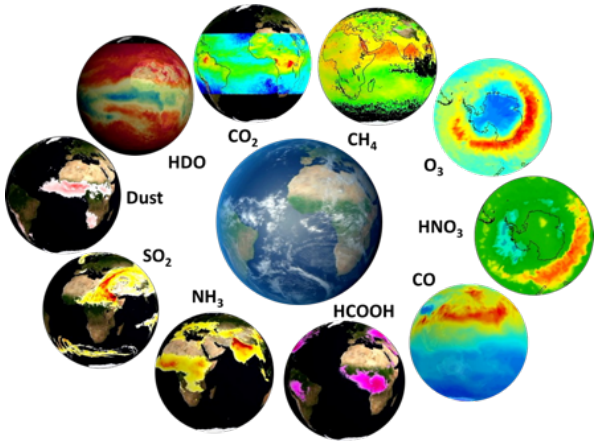
IASI detect more than 31 Species CH4-NH3-O3-CO

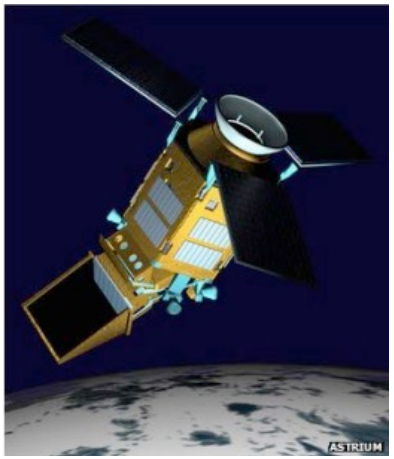
Onboard 3 satellites METOP A, B, C

(CNES/EUMETSAT)

Pixel : 12km

Swath : 2000 km





TROPOMI /Sentinelle 5P

(Copernicus/ESA)

Pixel : 3.5x7 km2

Sawth : 2600 km

Product	Spectrometer	Application
Ozone	UV, UVIS	Ozone layer monito
NO_2	UVIS	Air quality forecast
CO	SWIR	Air quality forecast
CH_2O	UVIS	Air quality forecast
CH_4	SWIR	Climate monitoring
SO_2	UVIS	Air quality forecast detection
Aerosol	UVIS, NIR	Air quality forecast detection
Clouds	UVIS, NIR	Climate monitoring
UV-Index	UVIS	UV index forecast

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IASI Observation in Europe during COVID-19 : CH4

Work of LMD-CNRS, Cyril crevoisier

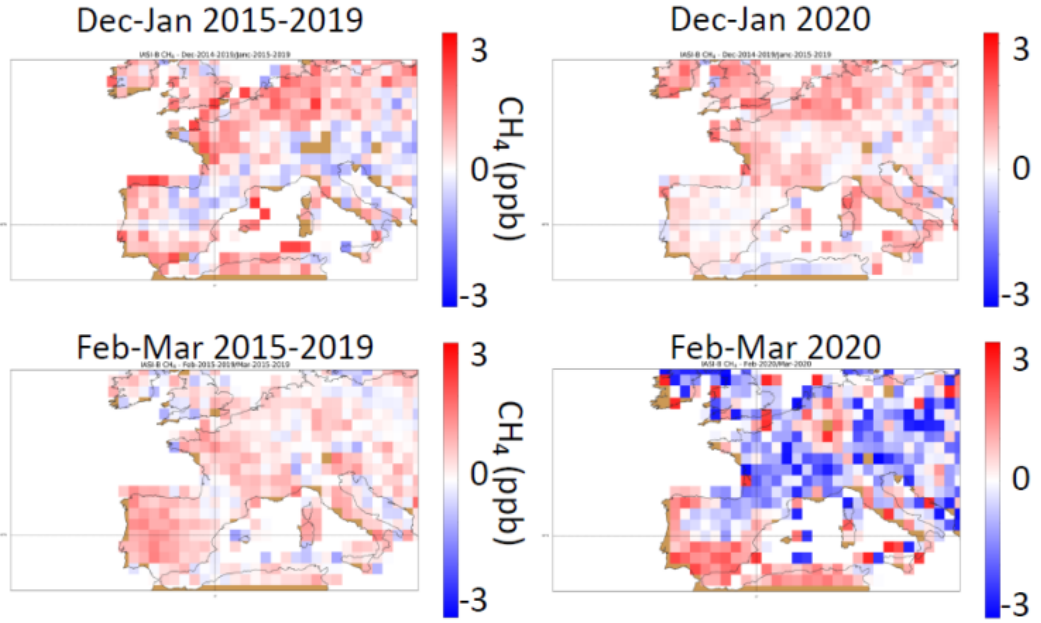
Difficulties

- ✓ Small signal : diluted in atmosphere
- ✓ Strong seasonnal variations

Special cartography

- ✓ Anomaly removing tendance on seasonal cycle
- ✓ Comparaison of this anomaly 2020 versus previous years

Over Europe



Signal small but visible of diminution of CH4, (TBC in futures sudies)

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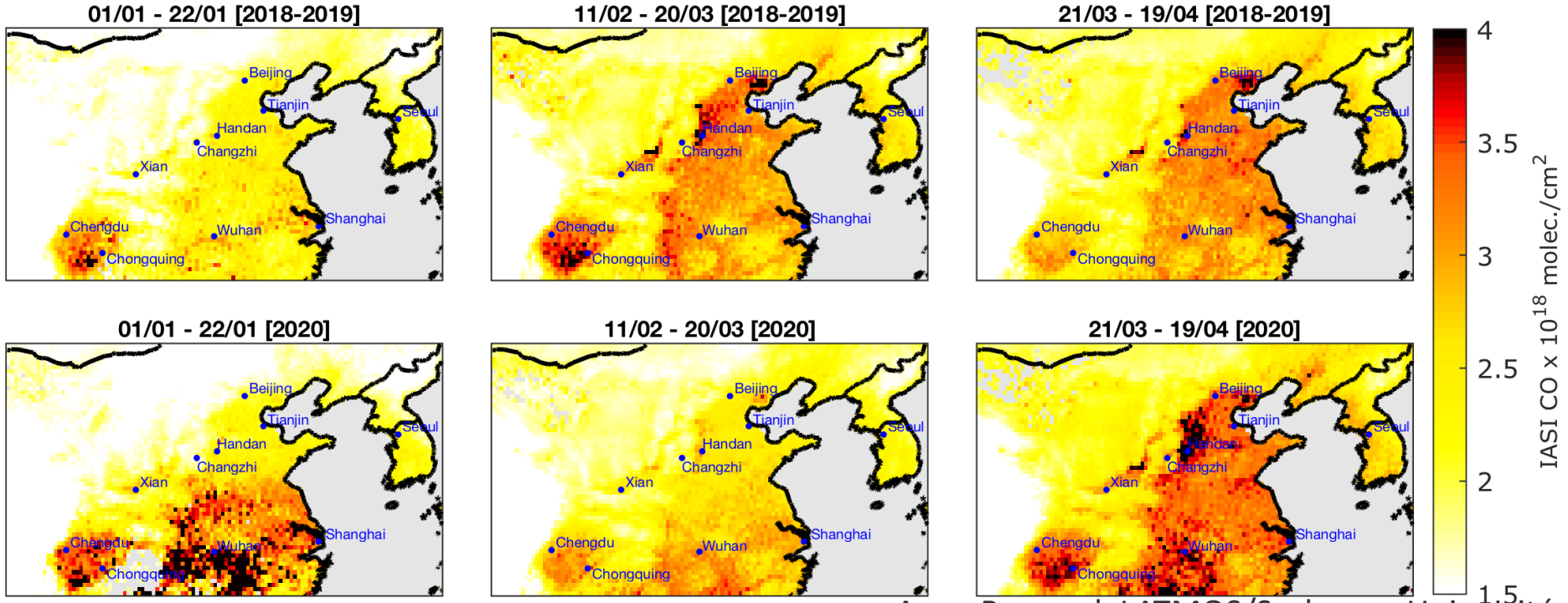
IASI Observation in China during COVID-19 : C0

Work of LATMOSCNRS, Cathy Clerbaux



Anne Boynard, LATMOS/Sorbonne Université

IASI Data : CO

https://iasi.aeris-data.fr/covid-19/

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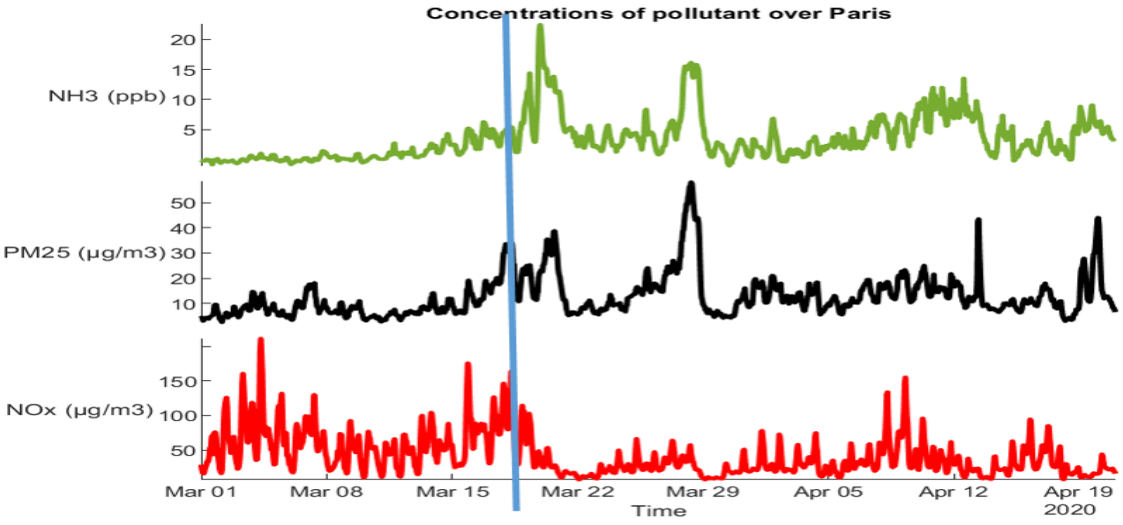
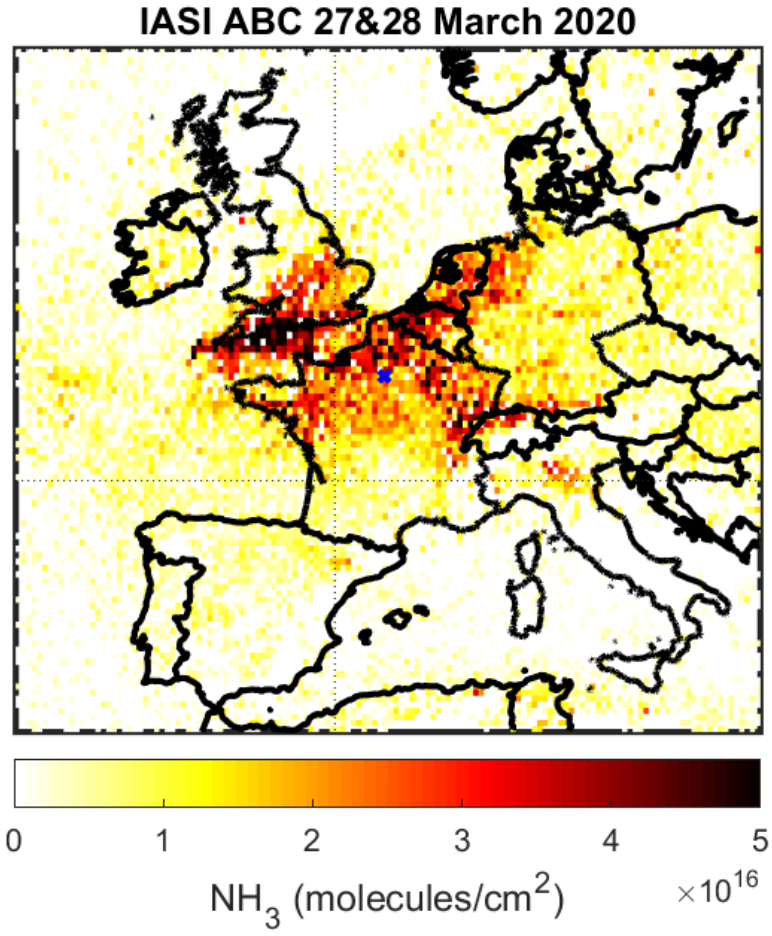
IASI Observation over France during COVID-19 : NH3

Work of LATMOSCNRS, Cathy Clerbaux



NH_3 observations over Paris (miniDOAS), along with ground-base AQ data (NO_2 and PM – Airparif)



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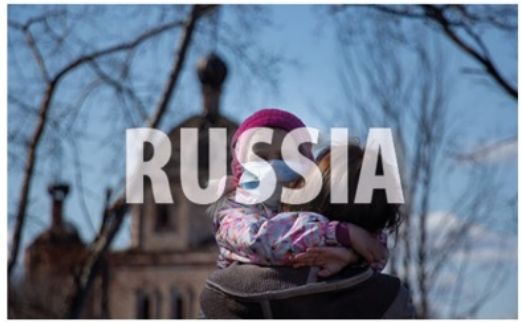

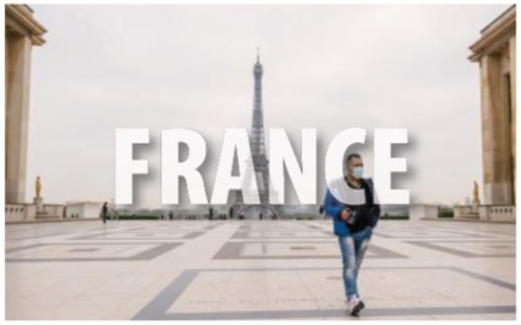

More plots : CO, NH3, ozone for EU, US, India, China, etc.
for IASI and TROPOMI here: https://iasi.aeris-data.fr/covid-19/

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