DLR Covid-19 Activities

D. Loyola et al. (DLR)

CEOS AC-VC 16, June 12th, 2020
GOME-2A/B Tropospheric NO$_2$ – Operational Product from AC-SAF (DLR/EUM)

GOME-2A/B: Johannesburg

May

March

2019

2020

Courtesy P. Valks (DLR-IMF)
Combining satellite, in-situ & models – Tropospheric NO\textsubscript{2} in Lombardy/Italy

Model calculates air constituents using mean pollution emissions and the prevailing meteorological conditions in 2020.

Modelled simulations are subtracted from the current ground measurements. Shutdown led to 45% reduction of NO\textsubscript{2} pollution.
TROPOMI/S5P Tropospheric NO$_2$ – Research Product from DLR

March-April

This analysis contains modified Copernicus Sentinel-5 Precursor data (2018-2020) processed by DLR.
TROPOMI by BASCOE Tropospheric Ozone – Research Product from DLR + BIRA

- Reduction of tropospheric ozone over Europe in 2020 compared to 2019
  - Related to COVID-19 restrictions?

[Graphs showing data comparison between 2019 and 2020 for various locations: Brussels, Paris, Munich, Milan.]

Courtesy K.-P. Heue (DLR-IMF)

This analysis contains modified Copernicus Sentinel-5 Precursor data (2018-2020) processed by DLR.
Up to 90% fewer condensation trails due to reduced air traffic over Europe

Model calculates the coverage of natural clouds and cirrus clouds produced by aircraft contrails based on current weather data and air traffic data from 2019 and 2020.

Large coverage reduction from contrail cirrus clouds, with an increased optical thickness of the ice clouds, in 2020.

Courtesy L. Bugliaro et al. (DLR-PA)

BLUESKY campaign with Falcon and HALO

https://www.dlr.de/content/en/articles/news/2020/02/20200520_fewer-condensation-trails-due-to-reduced-air-traffic.html