SOLFEO, Spaceborne observations over Latin America for Emission Optimization applications (2019-2020)

European Space Agency, EO Science for Society

SOLFEO OMI-based fire emission estimates over South America

* Introduction

The top-down fire emission estimates are derived using the adjoint of the MAGRITTE chemistry-transport model run at 0.5°x0.5° horizontal resolution (Müller et al., 2019, Bauwens et al. 2016, Stavrakou et al. 2015, Müller and Stavrakou, 2005) and constrained by tropospheric HCHO column densities from the OMI satellite instrument over 2005-2017. The HCHO data are documented in De Smedt et al. (2018) and are available via http://www.qa4ecv.eu. The data were corrected for biases based on FTIR observations (cf. final SOLFEO report). The top-down emissions are available from **https://emissions.aeronomie.be/index.php/omi-based/fire-sa.** A short description of the project and results are summarized in the following press release: https://eo4society.esa.int/2020/02/19/first-tropomi-based-emission-estimates-over-south-america/.

* File format and contents

Monthly OMI-based emissions are provided in NetCDF data format and cover all years between 2005 and 2017. They are expressed in kg VOC/gridcell/month in a regular grid at a spatial resolution of 0.5°x0.5°. Longitudes range from 32°W to 85°W and latitudes from 15°N to 34°S.

* Additional information

The dataset is described in detail in the final report of the SOLFEO project.

* References

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