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

European Space Agency, EO Science for Society

SOLFEO OMI-based isoprene emission estimates over South America

* Introduction

The top-down isoprene 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 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/isoprene-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 isoprene emissions are provided in NetCDF data format for all years between 2005 and 2017. They are expressed in kg isoprene/m^2/s 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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