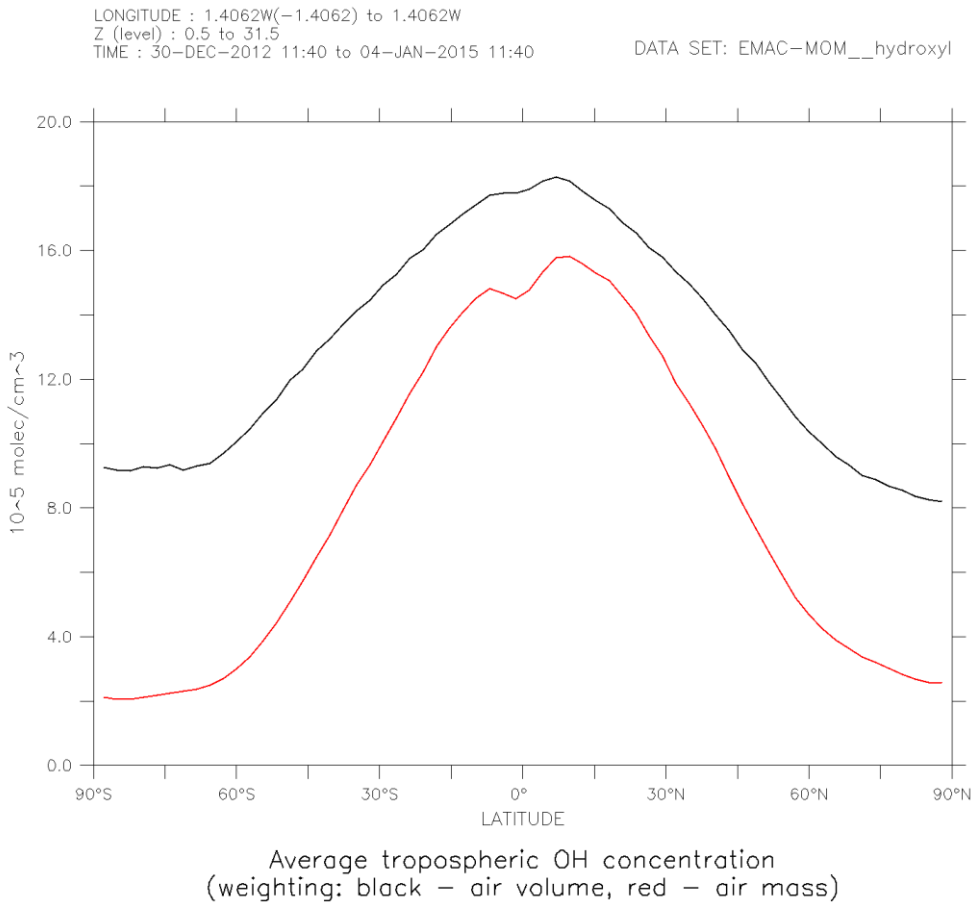
Atmospheric hydroxyl radical (OH) distribution simulated with the EMAC model & Mainz Organic Mechanism (MOM) chemical kinetics

This dataset contains the output from the simulations with the EMAC model/MOM kinetic chemistry mechanism presented in Lelieveld et al. (2016) study, in particular the computed atmospheric hydroxyl radical (OH) abundance and related model fields facilitating usage/comparison of these results with other estimates. The data container format is netCDF v.4 (compressed); please refer to the container variables/attributes for the extended information.

Note that average species mixing ratios/concentrations can be computed in various ways, depending on the objective of the analysis (see Lawrence et al., 2001, for details). Here, in addition to the model output, we present the sample script (see ave_OH_concentration.jnl, to be used with NOAA Ferret software, https://ferret.pmel.noaa.gov) which demonstrates the calculation of the annual OH tropospheric concentration zonal averages using air mass and volume weightings (see the figure below).



Please, cite this dataset and the study by Lelieveld et al. (2016) should you use this data.

References

Lelieveld, J., Gromov, S., Pozzer, A., and Taraborrelli, D.: Global tropospheric hydroxyl distribution, budget and reactivity, *Atmos. Chem. Phys.*, **16**, 12477–12493, doi:10.5194/acp-16-12477-2016, 2016.

Lawrence, M. G., Jöckel, P., and von Kuhlmann, R.: What does the global mean OH concentration tell us?, *Atmos. Chem. Phys.*, **1**, 37–49, doi:10.5194/acp-1-37-2001, 2001.