

Forecast and Evaluation Data belonging to paper:

## **Forecasting system for Urban Air Quality with automatic correction and web service for public dissemination**

*by:*

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### **Content:**

#### **Delta v7 for Evaluation**

Deltav7.zip contains the files for evaluation of the forecasting system's performance in year 2021 by using the DELTA Tool version7 (Thunis et al., 2012; Janssen and Thunis, 2020), developed by the European Commission's Joint Research Centre and working group WG1 (Assessment) of the Forum for Air Quality Modelling in Europe (FAIRMODE) initiative. The files have been used for the evaluation in our paper.

DELTA Tool v7 can be downloaded after registration from:

<https://aqm.jrc.ec.europa.eu/section/assessment/>

After unpacking the zip folder, the contained files should be copied over an existing installation of DELTA Tool v7 on your computer.

The folder structure in the zip folder is:

data / modelling / forecast2021

    / monitoring / forecast2021

resource

When starting DELTA Tool, the Scenario "2021" and Model "MODHHDT" can be selected in the Data Selection section.

#### **Forecast 2021**

Forecast output files in netCDF format are provided as zipped tar packages for each month of year 2021. Each tar file contains one month of hourly forecasted 2-D surface fields with concentrations of NO, NO<sub>2</sub>, O<sub>3</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, CO, SO<sub>2</sub> in separate netCDF files for each day. The surface fields are given on regular lat/lon-projection with 100 m horizontal resolution. The netCDF files can be viewed using ncview on Linux systems or Panoply on Windows and Mac operating systems.

Panoply Data Viewer can be downloaded from NASA Goddard Space Flight Center:

<https://www.giss.nasa.gov/tools/panoply/>

References:

Thunis, P., Georgieva, E., and A. Pederzoli. 2012. "A tool to evaluate air quality model performances in regulatory applications." *Environmental Modelling and Software*: 38, 220–230. doi:10.1016/j.envsoft.2012.06.005.

Janssen, S., and P. Thunis. 2020. "FAIRMODE Guidance Document on Modelling Quality Objectives and Benchmarking, version 3.2." JRC Technical Report, JRC120649, EUR 30264 EN. Publications Office of the European Union, Luxembourg. ISBN 978-92-76-19745-4. doi:10.2760/30226.