

Reply to Dr. Vadim Soldatov (essd-2020-317-RC2)

We would like to thank Dr. Vadim Soldatov for appreciation of our work and for providing us with a few practical suggestions

As was suggested by the reviewer, (***“The complete data sets are accessible as Excel files, both original and corrected. The format is clear, comprehensible and undoubtedly usable. Although my personal preference is to use more specific formats, such as netCDF or HDF. Plain ASCII text would do as well, as it allows for the direct comparison of two corresponding files line by line.”***), we uploaded the data in the plain ASCII format to <https://doi.org/10.5281/zenodo.4308022> (original data) and to <https://doi.org/10.5281/zenodo.4308036> (homogenized data).

The reviewer also mentioned that the manuscript is ***“somewhat lengthy”***. In the revised manuscript we summarized the COI history in Tables 1-3 of the revised manuscript leaving as well many details for those potential users that will need to resolve ambiguities they might encounter using the COI historical data (e.g., if they will need to take care of the urban noise).

Thus, we combined the information from the main text Table 2 and Tables S1-S3 from the supplement to make four new tables (Tables 1-4 in the revised manuscript) with the metadata and the correction values for the H (Tab. 1), I (Tab. 2) and Z (Tab. 3) elements updating them also with the information from the main text. Also all details about the instruments (specific names and numbers and installation options) are moved from the main text to the Supplement (Table S3). Also, the Table 1 from the original manuscript is also moved to the Supplement (Tab. TS2 in the updated Supplement). Other Tables in the supplement are not changed but renumbered accordingly to the main text changes.

Accordingly to the comments of another reviewer, Figure 1 from the original manuscript is transformed into Fig. 1 and 9 of the revised manuscript. Fig. 1 of the revised manuscript shows the COI original (observed) series and the COV-OBS model prediction. Figure 9 of the revised manuscript (now it is the last figure of the main text) shows COI observed and corrected series (final correction to the level of 2015).