

Review of 'Quantification of major particulate matter species from a single filter type using infrared spectroscopy – Application to a large-scale monitoring network' by Debus et al:

Editors Comments:

Thank you for your responses to the reviewer comments, which you seem to have addressed in full. I have a few minor comments that I would like to see addressed before final publication. First, please specify how the maps in Figures 5 and S10 were built. I cannot find details on how the interpolation between sites was handled. Second, you may want to consider editing Fig 5 so that the site markers are easier to see - even at full zoom the outlines are faint.

Thank you for your comments and for catching my oversight in discussing how the contours were made on the new maps. Below is the text I have added to the manuscript followed by a revised Figure 5 which the site markers in black (instead of gray).

Maps of annual median values of the reference method concentration and performance metric are generated for each aerosol component. Isopleths on the maps were calculated using an ordinary Kriging algorithm which are intended to guide the eye to capture the regional nature of the concentrations and performance quality. For the MDL plot, the difference between the % of samples below MDL for the reference method is subtracted from the % below MDL for FT-IR to indicate if the reference method or FT-IR have more samples below MDL.

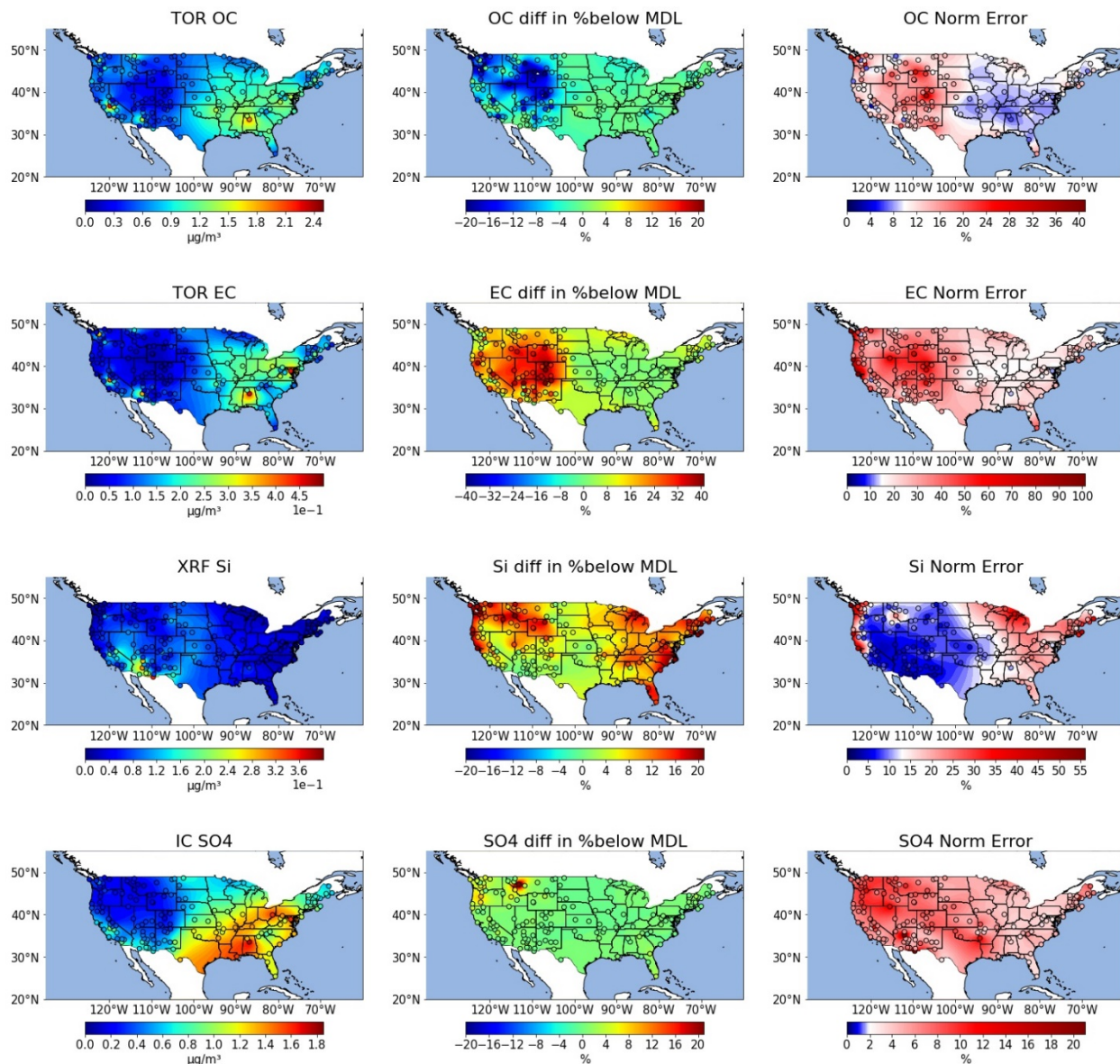


Figure 5. Annual median reference method concentrations (left), difference in % below MDL (middle) and normalized relative error (right) per site for OC, EC, silicon, and sulfate for CONUS for 2015. For the MDL plot, sites in green and blue indicate that the FTIR has the same or fewer samples below MDL than the reference method. Sites in yellow and red have more samples below MDL for FTIR than for the reference method. For the relative error maps, the median relative error of the reference method estimated using methods described in Table 1 is white. For sites in blue, FTIR has lower relative error than the reference method and sites in red are higher.