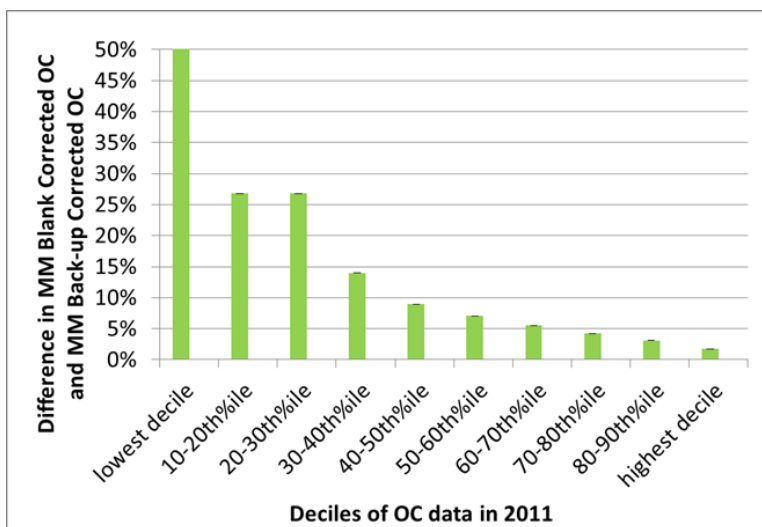


Posting type	Advisory
Subject	Change to artifact correction method for OC carbon fractions
Module/Species	C/OC
Sites	All
Period	January 1, 2005 – current
Recommendation	Be aware that the OC artifact correction method has changed. Data downloaded from the FED website after April 2015 has the revised artifact correction method applied to OC fractions.
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Supporting information

OC carbon fractions reported in the IMPROVE network are artifact corrected to account for gas phase adsorption of OC onto quartz filters. The reported OC fractions are the measured OC value minus the artifact correction value. For data downloaded prior to May 2015, OC fractions were artifact corrected using the monthly median OC fractions from back-up quartz filters, located downstream of the primary quartz filter at a few sites. The revised artifact correction method, approved by the IMPROVE Steering Committee in April, 2013, utilizes the monthly median blank filters collected at a few sites in the network. Blank filters have no air pulled through them but are loaded into sample filter cassettes and remain in the sampler the same length of time as the samples (~ 7 days).

The impact of this change for 2011 data is shown in the figure. For samples below the 50% percentile of OC data, this change produces a 10% or greater increase in the reported OC. For the lowest decile of data there is a 50% increase in reported OC. In the highest 40% of data, the increase in reported OC is ~5% or less. Further information on this topic can be found at http://vista.cira.colostate.edu/improve/Publications/GrayLit/035_OCArtifactRec/IMPROVE_CSN_OCArtifactRec.pdf.



Impact of artifact correction change on OC in 2011