

Interactive comment on “Predicting ambient aerosol thermal-optical reflectance (TOR) measurements from infrared spectra: extending the predictions to different years and different sites” by M. Reggente et al.

Anonymous Referee #2

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Review of the article (amt-2015-280) titled “Predicting ambient aerosol thermal-optical reflectance (TOR) measurements from infrared spectra: extending the predictions to different years and different sites” by M. Reggente et al. for publication in Atmospheric Measurement Techniques.

This work aimed to evaluate if a previous method developed to measure elemental carbon (EC) held true for PTFE air samples collected from additional sites in a different year. More specifically, this study investigated an alternative to the analytical method thermal optical reflectance (TOR) to measure atmospheric EC utilizing Fourier Trans-

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port Infrared Spectroscopy (FT-IR) using a partial least squares regression. This new method is beneficial for EC and air quality studies since it is non-destructive and allows multiple species of interest to be qualified alongside.

The authors greatly expanded their previous study’s sample size and added an additional year and used a sophisticated statistical approach to demonstrate that the FT-IR methodology was comparable to the TOR approach with a few exceptions. The additional sites and year added to the confidence in this model. Overall, it strengthens the FT-IR approach for use in EC measurements, which will have added benefit to air quality studies.

Please also note the supplement to this comment:

<http://www.atmos-meas-tech-discuss.net/8/C4407/2015/amtd-8-C4407-2015-supplement.pdf>

Interactive comment on Atmos. Meas. Tech. Discuss., 8, 12433, 2015.