Atmos. Meas. Tech. Discuss., 7, C5191–C5202, 2015
www.atmos-meas-tech-discuss.net/7/C5191/2015/

Atmospheric Measurement Techniques Discussions

Interactive comment on "The "dual-spot" Aethalometer: an improved measurement of aerosol black carbon with real-time loading compensation" *by* L. Drinovec et al.

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Received and published: 20 March 2015

Please check the reply to all three referees in the PDF supplement.

The requested changes to: Fig. 1; Fig. 2a, 2b, 2c; Fig. 4a, 4b; Fig. 9a, 9b, 9c; were made, and Fig. 12 was added to a new section 3.7. The detailed captions to figures can be found in the text of the reply.

Please also note the supplement to this comment:

http://www.atmos-meas-tech-discuss.net/7/C5191/2015/amtd-7-C5191-2015-supplement.pdf

Interactive comment on Atmos. Meas. Tech. Discuss., 7, 10179, 2014.

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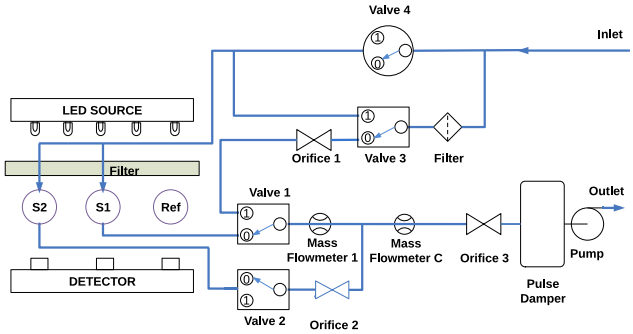
Interactive Comment



Mode	Valve 1	Valve 2	Valve 3	Valve 4
Bypass	1	1	0	1
Warm-up / clean air	0	0	1	1
Measurement	0	0	0	0
Flowmeter calibration	0	1	0	0

Fig. 1. Figure 1. The AE33 flow diagram.

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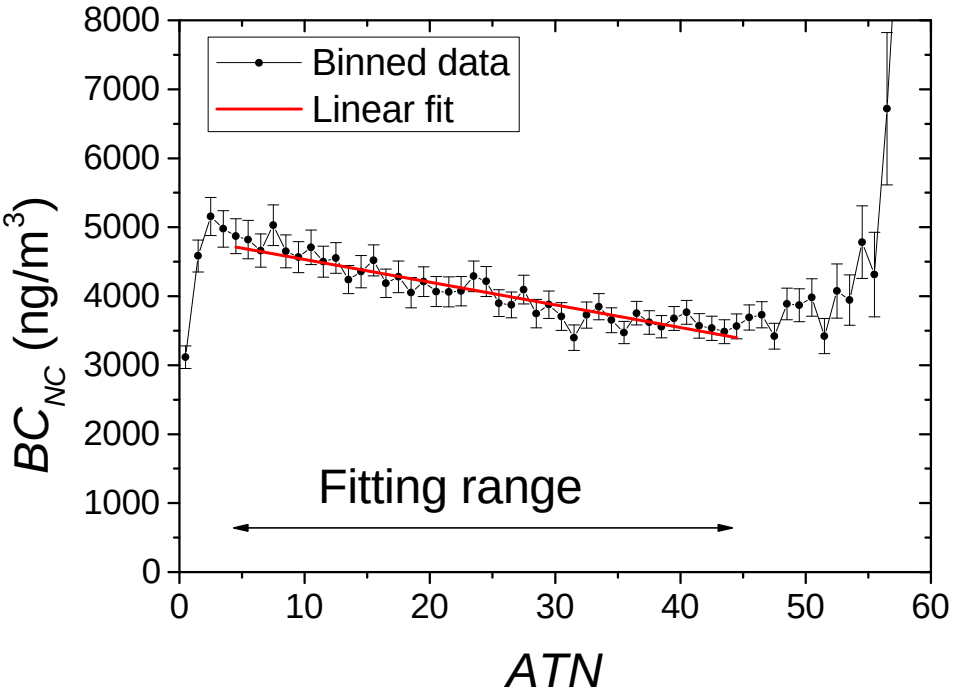

Fig. 2. Figure 2a. An example of the analysis of the filter loading effect BC(ATN).

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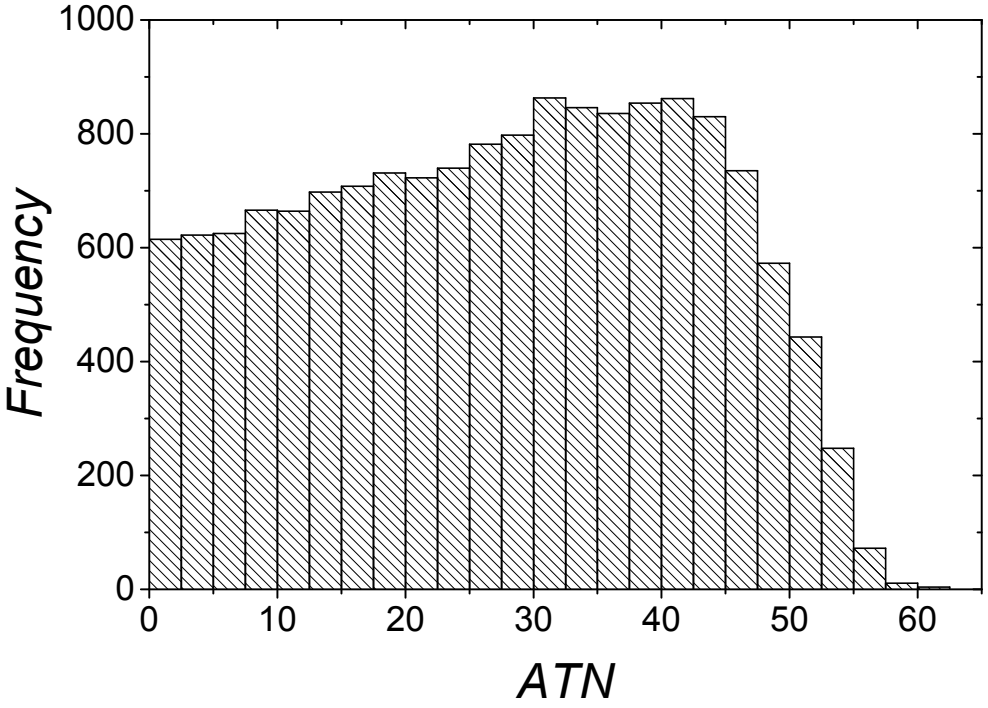

Fig. 3. Figure 2b. Frequency distribution of the number of measurements.

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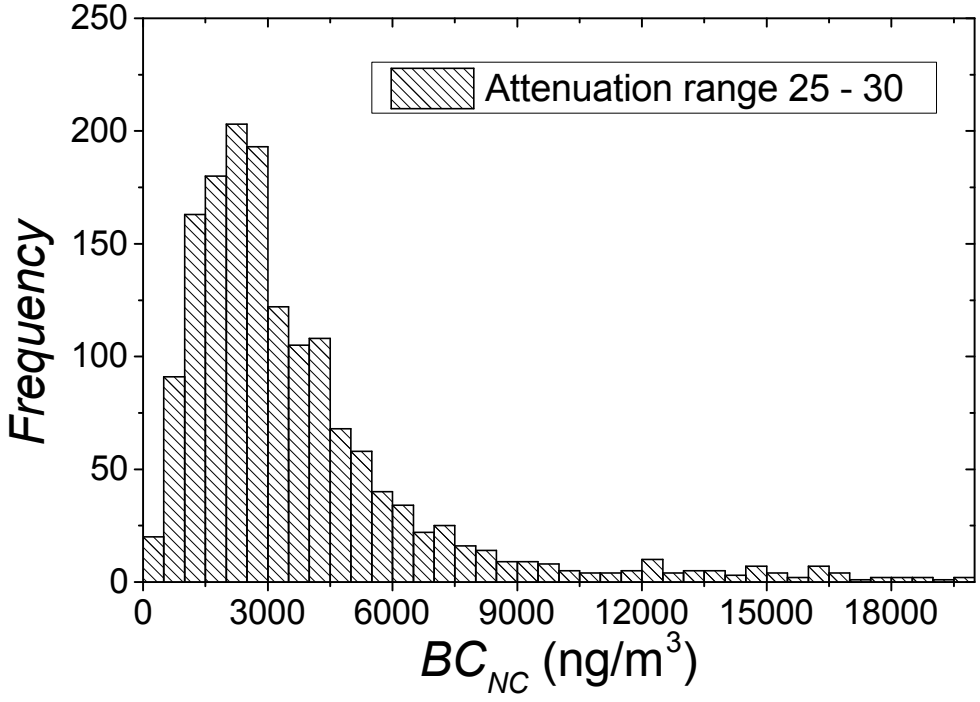

Fig. 4. Figure 2c. BC frequency distribution.

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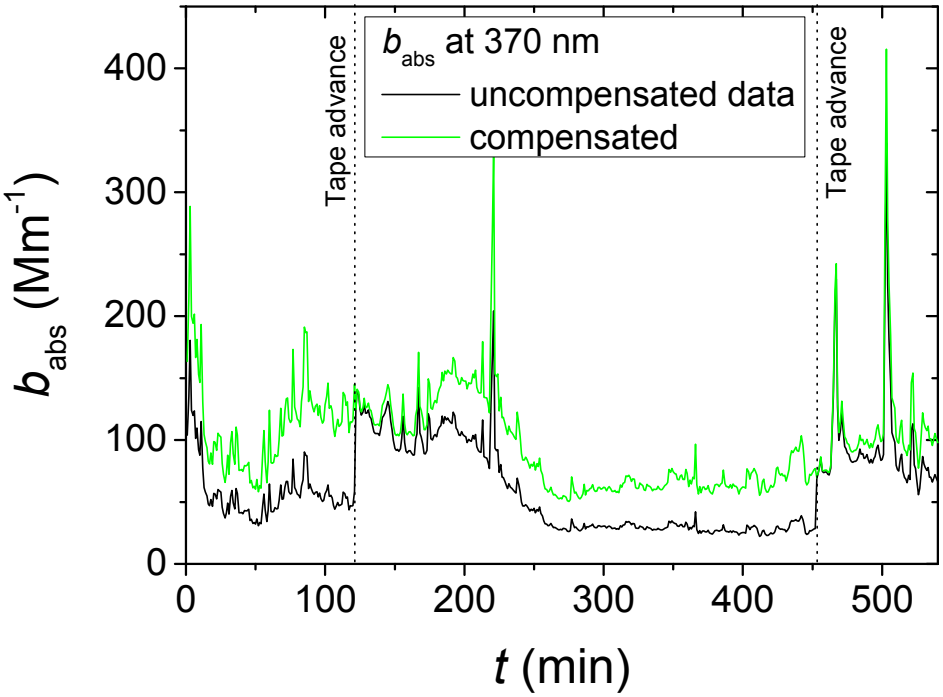

Fig. 5. Figure 4a. Comparison of the uncompensated and compensated b_abs time series measured at 370nm: raw and compensated data.

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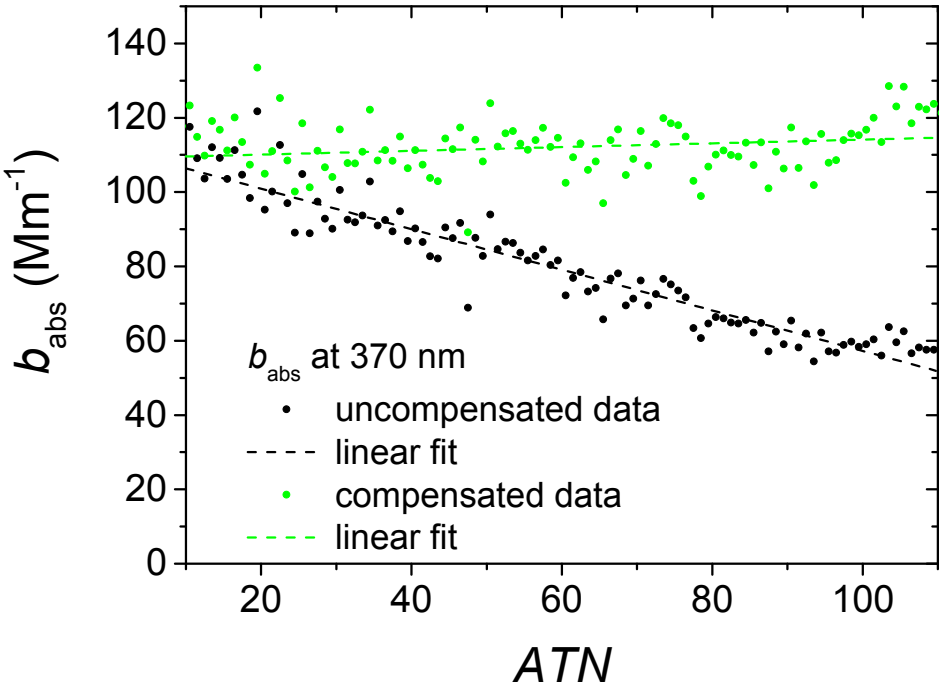

Fig. 6. Figure 4b. babs (ATN) analysis of raw and compensated data for the whole campaign.

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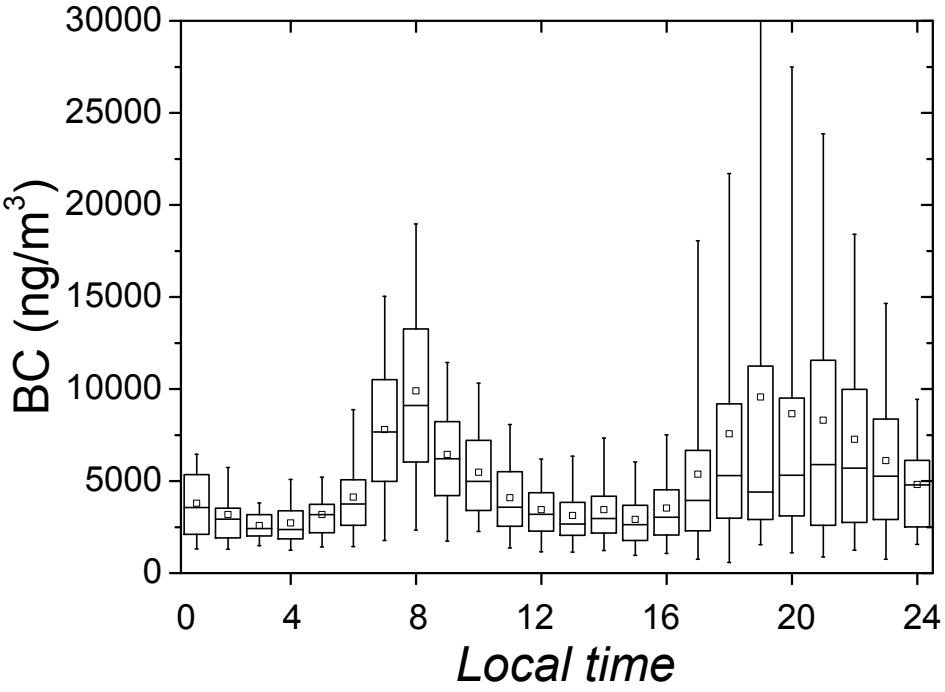

Fig. 7. Figure 9a. Diurnal plot of BC.

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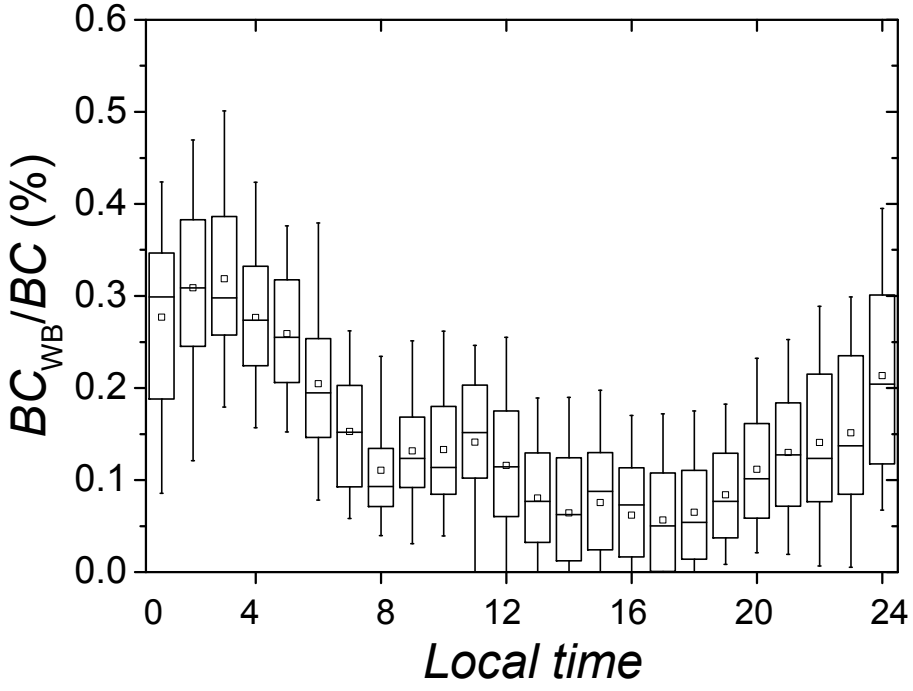

Fig. 8. Figure 9b. Diurnal plot of contribution of biomass burning to total BC.

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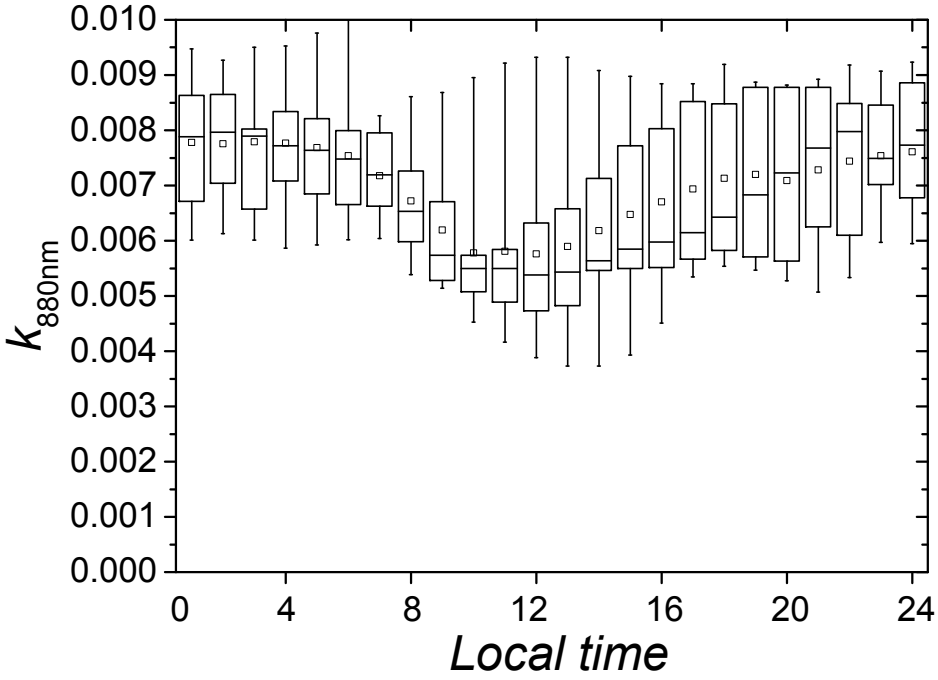

Fig. 9. Figure 9c. Diurnal plot of the compensation parameter k at 880 nm.

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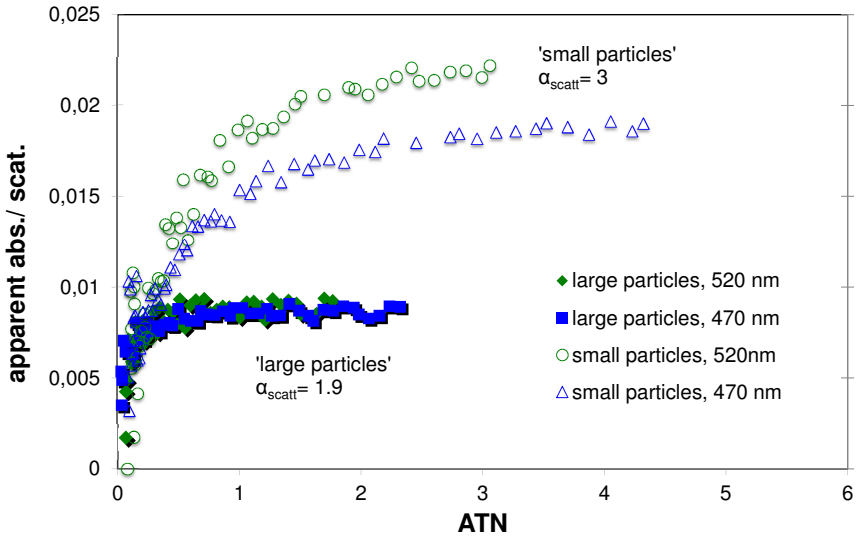

Fig. 10. Figure 12. The AE33 instrumental cross-sensitivity to scattering – the ratio of apparent absorption coefficient and the scattering coefficient as a function of attenuation (ATN).

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