Dear Jochen,

many thanks for your assessment and suggestions! We adressed all points as detailed below (our answers in blue).

Best regards,

Thomas

Overall, the manuscript is long but relatively easy to read. I only have a number of technical issues I think you should address before it is published:

In Table 9 you use "?" in two cells in the LIDAR ratio row. I don't think it will be clear to a reader what this means. If the calculations were not performed, then it is more appropriate to use "n/a" to express that the results are not available. There may be other alternatives, but whatever you use has to be clear to the reader.

We replaced the ,?' by , not quantified**' and added the following informatiom below the table:
**uncertainty was not assessed for 18 June 2013, because thecontributions from the coarse and fine mode at both wavelenghs arevery different (see Tab. A28). The uncertainty is thus much larger than on 08 July 2013.

Figure 8, x-axis label in left plot: Change ".. signa" to "…signal".

Corrected

Fig 13: Can you please check the y-axis label vs caption. The label is "SCD(fit)/SCD(RTM)" while the cation refers to a (d)AMF ratio. Those are not necessarily the same quantity. So which one are you plotting?

We corrected the y-axis to dAMF(fit) / dAMF (RTM)

In the figure labels you use (d)AMF, (D)AMF, and DAMF, in the text its (d)AMF and dAMF, while equation 3) defines it as dAMF. You may want to go over the text and figures and make sure you use the same name throughout the masnucript.

We changed the labels consistently to dAMF or (d)AMF We also added the following clarification after equation 3:

Note that in this paper the following notations are used:
AMF: air mass factor
dAMF: differential air mass factor
(d)AMF: air mass factor and/or differential air mass factor
(similar notations are used for the (d)SCDs)

Figure A1: Units are missing

The units are added.

Line 1987 in revised manuscript: change "surface-near" to "near-surface"

Corrected

Figures A9, A12, A15a, lower right plots: Should be dAMF as y-axis label

Corrected