

Interactive comment on “One year of Raman-lidar measurements in Gual Pahari EUCAARI site close to New Delhi in India: seasonal characteristics of the aerosol vertical structure” by M. Komppula et al.

Anonymous Referee #1

Received and published: 15 February 2012

The publication of the work presented by M. Komppula and its coworker is about systematic lidar measurements of aerosol performed during a year in India in the framework of the EUCAARI project. This work provides interesting new data and several parameters derived from lidar measurements have been calculated. However methods are not presented and then the methodology nor the accuracy can be evaluated. A lot of results are presented according to seasons with no significant differences (according to error bars) and no comments, interpretations and conclusions have been given so far. This work needs to be considerably improved for data interpretation to be

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published in ACP. Details of the main comments

1. The method to compute backscattering profiles and AOD are not explained and no references were given. Please explain how backscattering coefficient are calibrated. Same comments for AOD (P 31129 line 20-24).
2. All the results present through figure 3 to 8 shows large error bars, suggesting that none of the results are significant. Authors should comments better the significance and comments about what should be noticed.
3. A lot of different parameters were derived from the lidar measurements but no interpretation nor comparison with other locations were given.
4. The publication terminates by what we are expected to see in the publication. I suggest to suppress this advertisement (p 31137 line 17-24) and provide some scientific conclusions to the work.

Minor comments

P 31125 line 2 ; Abstract- 3+2 is not informative, please give more details or remove

P 31125 line 26: This sentence is too polemic. It gives the impression that the Indian coauthors do not participate to the publication. "Countries" and "battle" are not appropriate. I suggest "Observations in this polluted area are crucial for climate changes."

P 31126 line 6: Please specify by whom and give references.

P 31129 line 8: replace "a rain" by "rain"

P 31129 line 20-24: This part is not clear for a non-lidar person.

P 31132 line 6: "a bit" instead of "bit". This sentence is not clear it needs to be rephrased.

P 13132 line 13: replace twice "in the" by "during". Add "the" before "lowest".

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P 31137 line 21: put capitals at Optical Thickness

P 31144 figure 1: consider removing the small map that does not give any useful information. Also consider providing the Gual Pehari location with may be other EUCAARI sites.

Interactive comment on Atmos. Chem. Phys. Discuss., 10, 31123, 2010.

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