

# ***Interactive comment on* “Evaluation of cloud base height measurements from ceilometer CL31 and MODIS satellite over Ahmedabad, India” by S. Sharma et al.**

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General comments:

The paper entitled “Evaluation of cloud base height measurements from ceilometer CL31 and MODIS satellite over Ahmedabad, India” by Sharma et al. is well written, nicely organized and presents very good quality work on the clouds and their characteristics using ground based ceilometer observations over a western location of India. Authors presented and discussed the comparison of satellite retrieved cloud parameters with ground based measurements which are very much in need for realistic representations of clouds in numerical modeling. In view of increasing demand and requirement

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of good quality cloud products from the space borne instruments and ground observations, this study is very much topical and significant. These findings presented in this work will be useful to demonstrate and further improve the future modeling activity of convective data assimilation which have sufficient potential to improve the weather prediction at very-high resolution.

Authors have done good analysis and presented their findings with appropriate discussions. With strong importance of ground based continuous observations and their applications to evaluate satellite data, I strongly recommend this work for publication with following minor corrections.

Specific comments:

1. In the abstract of the paper, some more quantitative findings viz. difference between Ceilometer CBH and MODIS retrieved CBH, etc., should be included. So reader will get a better insight of the results presented in the manuscript.
2. In first line of introduction, authors stated that clouds are crucial for weather and climate prediction without any reference. Appropriate references should be included.
3. Only at the first place the abbreviations like, MODIS, etc. should be written in full expanded form and abbreviated form should be used rest of the manuscript.
4. Authors discussed specific locations like Thiruvananthapuram, etc. by name only. Global community may not recognize these locations by name only. The geographical coordinates must be included along with the names throughout the manuscript.
5. Unit of CBH must be uniform throughout the manuscript. Use unit “km” throughout the study and follow journal’s standard in writing numbers and units.
6. In table 2, strict formatting and other changes should be incorporated like unit of time, etc. Ceilometer provided multi-layer cloud base heights. Specify which cloud base height are used for comparison purposes.

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7. Axis title and labels are very small in most of the figures. Legends and descriptions inside of the figures are not properly readable. In general quality of most of the figures (Axis titles, writings in side figures, legends, etc.) needs to be improved before publication.

8. At several places in the manuscript there are grammatical and editing errors, so manuscript should be carefully proof read.

Recommended for publication with minor corrections.

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Interactive comment on Atmos. Meas. Tech. Discuss., 8, 11729, 2015.

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