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Atmospheric Measurement Techniques Discussions

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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Authors would like to thank reviewer for reviewing our manuscript. We are thankful for very encouraging comments and suggestions about the quality of our paper and finding it suitable for publication in reputed journal. We incorporated all the suggestions and comments which helped immensely in improving the quality of our manuscript. Point by point responses for all comments are given below:

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.

Reply: We have done needful in revision. Text is added in revision. (Lines 17-19 in the revised manuscript)

"CBH retrieved from MODIS is ∼1.955 and ∼1.093 km on 25 July 2014 and 01 January 2015 respectively, which matches well with Ceilometer measured CBH (∼1.92 and ∼1.097 km)."

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.

Reply: Comment is incorporated in the revised manuscript. Appropriate references are added in the revised manuscript. (Lines 30-31 in the revised manuscript)

Bauer, P., Auligné, T., Bell, W., Geer, A., Guidard, V., Heilliette, S., Kazumori, M., Kim, M.J., Liu, E.H.C., McNally, A.P., and Macpherson, B.: Satellite cloud and precipitation assimilation at operational NWP centres, Quarterly Journal of the Royal Meteorological Society, 137(661), 1934-1951, 2011.

Errico, R.M., Bauer, P., and Mahfouf, J.F.: Issues regarding the assimilation of cloud and precipitation data, Journal of the Atmospheric Sciences, 64(11), 3785-3798, 2007.

Shah, S., Rao, B.M., Kumar, P. and Pal, P.K.: Verification of cloud cover forecast with INSAT observation over western India, Journal of earth system science, 119(6), 775-781, 2010.

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.

Reply: We have done needful in the revised manuscript as suggested by reviewer.

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.

Reply: Comment is incorporated in the revised manuscript. Geographical coordinates are included for locations. (Line 42 in the revised 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.

Reply: Comment is incorporated in the revised manuscript. Unit “km” is used throughout the manuscript for cloud top height (CTH) and cloud base height (CBH).

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.

Reply: We have modify table 2 in the revised manuscript as suggested by reviewer. CBH1 is used for comparison with MODIS retrieved CBH.

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.

Reply: All the figures are modified as suggested by reviewer.

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

Reply: Comments are incorporated in the revised manuscript.

Please also note the supplement to this comment:
http://www.atmos-meas-tech-discuss.net/8/C5302/2016/amtd-8-C5302-2016-supplement.pdf