

## Replies to Reviewer #1 Comments/Suggestions

First, we wish to thank the reviewer for providing comments/suggestions which improved the content of the manuscript further. The authors have addressed all the comments raised by the reviewer and incorporated in the revised manuscript.

Main Comments:

Page 2, line 59-60: Improve sentence: "Saha et al. (2017) reported that lower lower tropospheric instability is reducing".

Reply: This line has been modified in the revised manuscript as follows:

*Chakraborty et al. (2017a) and Saha et al. (2017) reported a weakening in lower tropospheric instability over few Indian stations due to increasing pollution levels using reanalysis datasets.*

Page 4, line 130: Cut one dot "(2016)..".

Reply: This correction has been done in the revised manuscript.

Page 4, line 149: Add a blank between 31 and kmph ("31kmph").

Reply: This correction has been done in the revised manuscript.

Page 5: line 177: Cut one dot "way..".

Reply: This correction has been done in the revised manuscript.

Page 7, line 247: Change "from Sea" to "from sea".

Reply: This correction has been done in the revised manuscript.

Page 7, line 272: Change "a t-tset analysis" to "a t-test analysis"

Reply: This correction has been done in the revised manuscript.

Page 8, line 302: Improve sentence "significantly at par with CAPE"

Reply: This line has been modified in the revised manuscript as follows:

*Hence it follows that it is not the lower tropospheric moisture (below 700 hPa) but the remaining amount which is increasing significantly for all regions. Now, as this growth in upper tropospheric moisture is analogous with a parallel rise in upper level CAPE, hence there should be a possible association between these two factors which needs to be investigated.*

Page 20, Fig. 1: Change "4 stations in the NC" to "4 stations in the CI"

Reply: This correction has been done in the revised manuscript.

We thank the reviewer once again for the help in pushing us forward to improve the manuscript content.

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