

Intercomparison of wind speed, temperature, and humidity data between dropsondes and aircraft in situ measurements

Review Report

The manuscript seems to be well structured and the study carried out is explained relatively well, most notably following the amendments implemented. Incidentally there are some improvements that can be implemented. Please note that although for each suggested change some examples from the manuscript have been reproduced here, not all instances of each suggested change are being highlighted in this report and the manuscript should be reviewed in its entirety for the amendments suggested below.

1. The term 'We' (first person plural) is being used throughout the manuscript. In scientific reporting the usual practise is to use the passive voice such as 'It should be emphasized...' instead of '...we emphasize...' (line 120) and 'Intercomparisons of RH were conducted...' instead of 'We conduct RH intercomparisons...' (line 154), and '...it was decided...' instead of '...we decided...' (line 160), etc. Please review for all the manuscript.
2. Line 163 – Should the term in brackets read 'Sect.' instead of 'Text'?
3. There are some grammatical errors which may result in the text being misinterpreted or misunderstood entirely. Although the following are some examples, there are other instances in the document where the sentence structure may be improved to enhance the readability and understanding of the document. The following are some examples:
 - a. Line 178 – should the term used be 'compute' instead of 'computer'?
 - b. Line 229 – 'We note that for some geophysical variables compared in this work, there were times when data were collected and thus there were not a full set of 555 pairs to compare.' This sentence maybe misinterpreted, rephrasing should be considered.
 - c. Line 300 – '...which afford the only way with ACTIVATE in situ data to compare horizontal changes at a fixed vertical level...' this maybe misinterpreted, rephrasing should be considered.
 - d. Line 378 – 'Figure 6 intercompares wind speeds from the TAMMS-dropsonde pairs two different ways.' This is not completely clear, rephrasing should be considered.
4. It has been also noticed that there is significant use of colloquial language. This is not the norm in scientific reporting and should be avoided:

- a. Line 207 – I suggest that the phrase ‘apples to apples’ be replaced with a non-colloquial term/phrase such as ‘appropriate’.
 - b. Line 398 – ‘To dig deeper into wind speed intercomparisons, we stick...’ the use of terms ‘dig deeper’ and ‘stick’ should be avoided. I suggest that alternative phrasing should be used.
 - c. Line 536 – ‘Our results are comparable to what is reported in the literature (Table 1) although it is not an “apples to apples” comparison...’ – rephrasing should be considered to avoid the use of colloquial language.
5. Line 461 – **‘Intercomparison of T and RH’** – Parameter symbols should be avoided in titles and subtitles. This is also a question of writing style. One may use parameter symbols only in formulae, and always use the full parameter names in the text. For example in Line 474 ‘Relative humidity data values did not agree as well as T due...’ the manuscript switches between full parameter names and parameter symbols in the same sentence. I suggest that consistency is maintained throughout the manuscript, as already suggested in this point. The entire manuscript should be reviewed to address this inconsistency.
6. Lines 536-553 should not form part of the conclusion. This part should be at the end of the ‘Results and Discussion’ section. The ‘Conclusion’ should only be reporting the main findings of the research being presented in the paper, and potentially any further research emanating from this study.