

The Connor et al. paper is thorough and should be highly useful to the TES user community. I recommend acceptance subject to the authors addressing the following general and specific points (which should be easy to do). The technical points/typos indicated at the end should also be addressed.

General points:

The main point is that the authors should provide details of the motivation for this work in the Introduction (e.g. before paragraph starting L. 20) and Conclusions. Why should one be interested in TES data? Who would use it?

A number of statements need to be quantified, clarified. See the specific points below for details.

Specific points:

P. 1726

L. 2: Please quantify the agreement “with each other”.

P. 1727

L. 12: Why will much less error be shown for the case mentioned?

P. 1729

L. 16: Do you refer to a micro-window here or to a window?

P. 1730

L. 1: To help the reader, identify the window regions.

End of Section 2: There is no reference to Fig. 3 in the text, and the next figure to be discussed is Fig. 4 (beginning of Section 3).

P. 1731

L. 16: Why is the crucial value of the wind speed 6 ms<sup>-1</sup>?

P. 1733

L. 2: What is expected?

L. 9: Does the value of -0.16 come from a Figure?

P. 1734

L. 1: The lags mentioned indicate a semi-annual cycle – could you comment on this?

L. 20 and Fig. 6: Could you explain the large negative spikes?

P. 1735

L. 8: Why should the bias not have a deleterious effect?

P. 1736

L. 15: What is  $n$  in Eq. (4)?

P. 1740

Table 1: Is it microwindows what is being shown? (Numbers are different from those mentioned in p. 1725.) If so, please indicate. Also, the frequency ranges for 1B2 and 2A1 are the same. Is this correct?

Technical points/typos:

P. 1724

L. 12: Replace “;” with “:”.

L. 13: I think it should be “ocean;”.

L. 22: “(L2),”.

P. 1728

L. 2: Introduce acronym for SST (even though you have done so for RTGSST). Make sure all acronyms are introduced (in abstract and main body of the text).

P. 1729

L. 27: I suggest “provide evidence that”.

P. 1730

L. 15: Would “longer tails” be better?

P. 1731

L. 7: I suggest “-0.07 K, respectively, for TES minus AIRS differences” – am I correct in this assumption?

L. 26-27: I think you mean “the expected daytime TES measurement”.

P. 1732

L. 5: I think you mean “The expected nighttime TES measurement”.

L. 7, Eq. (2): Should this have -0.13 K as the last term?

L. 20: “Equator”.

L. 25-26: Do you mean the difference has the correct sign? I suggest “reduced” instead of “muted”.

P. 1733

L. 28: I suggest “plot demonstrates”.

P. 1734

L. 18: I suggest “Figure 7 shows”.

P. 1736

L. 4: “test chosen is the”.

L. 7: “normally distributed”.

L. 10: “data. The Mann-Kendall”.

P. 1737

L. 10: “and demonstrate”.

L. 23: “period can be assumed”.