General Comments:

The observation data of this work is new and valuable and provides a further validation in the seasonal variability of the accuracy of OAflux products in the South China Sea. It seems that the accuracy of OAflux products varies with the change of prevailing monsoon over the SCS, this is very interesting. The study found that the OAFlux overestimates (underestimates) U (Qa) throughout t he year, and the better estimate were found in winter and spring than in summer and autumn. This should be of essential for the air-sea interaction research community in the South China Sea.

Specific comments:

The function/aim of COARE3.0 should be given some more explanations. Why you choose COARE3.0 instead of other method to derive SHF and LHF? Authors pointed out that the sea surface temperature Ts is the key variable to determine the differences of sensible heat flux from OAflux products and in-situ observations. It seems that Ts has better accuracy in winter and spring than in summer and autumn. In Page 8, Line 28-30, author mentioned the influence of cloudy days could be the reason for the inaccuracy of Ts derived from AVHRR and the cloud mount can be related to the outgoing long wave radiation (OLR) shown in Fig. 7. OLR is related to the cloud amount, but as I know that OLR is generally obtained by the satellite remote sensing. It cannot be directly observed by the instrument installed on the flux tower introduced in the paper. Besides, the variable shown in Fig. 7 is downward long wave radiation (DLR), so the content of this part is inconsistent and confusion. So, I guess the original intention of the authors is to use the observed DLR to infer the cloud cover. DLR can be used as an indirect variable to infer the cloud cover and its value mainly depends on the air temperature. The larger area cloud cover and the thicker of the clouds will lead to the stronger atmospheric heat preservation and will further result in the strengthening of DLR. Therefore, I suggest the authors to change OLR in Lines 28-30 into DLR to accord with the Fig.7, or use the other OLR datasets derived from satellite observations to infer cloud cover.

Minor comments:

The abstract is not concise and coherent enough, and needs to be revised. And, the authors should adjust the range of X-axis, Y-axis and the regression line in Figs 3c and 3d. Same problem appears in Fig 6, Figs 8-10.

The MS need to be edited carefully. There are several obviously misspelled and improperly used words in the MS. For example,

Line 17, ‘summer_autumn’ should be summer, autumn

Line 21, ‘diminish’ should be ‘were diminished’

Line 21, Definition of ‘Ta, U, Qa, Ts’ should be given as these variables are first mentioned in the MS.

Line 23, ‘summer_autumn period’ should be summer-autumn period

Line24, ‘is observed’ should be ‘was observed’

The label of each subset in Figure 1 should be placed in order.