Dear editor,

We appreciate very much for the valuable comments of our manuscript. These opinions help to improve academic rigor of our article. We have carefully revised the manuscript based on your suggestions and the format requirements of the journal. The changes we made based on the editor's comments have been highlighted with a yellow background in the revised manuscript. In addition, we also checked and corrected the spelling and symbols of the entire manuscript, and rewritten sentences that were not clearly expressed. The specific modifications are as follows:

#### **Editor's comments:**

1. Full name and abbreviation. For example, add and complete the full names of SODA and IOB.

Thank you for pointing out. Based on your suggestion, we have made corresponding modifications in the revised manuscript.

2. Tense issues. The correct tenses should be: Someone FOUND that something IS (or DOES). i.e., past tense on people's work but present tense on the finding since it's already known knowledge. You sometimes use the correct tenses but sometimes don't. Some of the incorrect tense usages are highlighted, but please check throughout to make these corrections.

Thank you for pointing this out. We have checked the manuscript throughout and revised the sentences in the revised manuscript.

3. Inaccurate expression. For example, changing 'deeper' to 'more detailed', changing 'drawing' to 'making plots', changing 'at this time' to 'in these years', and changing 'ignored' to 'did not consider'.

Thank you for pointing out. Based on your suggestion, we have made corresponding modifications in the revised manuscript.

- **4.** Symbol issues. For example, change the '\*' to 'x' symbol throughout. Thank you for the reminder, and we have replaced '\*' with 'x'.
- 5. Rewrite the sentences. For example, rewriting repetitive sentence (line 381-383) or long and convoluted sentence (line 417-420).

Thank you for pointing out. According to your suggestions, we have revised the contents as follows: "ENSO can not only directly affect the temperature changes in the AS through atmospheric bridges (Lau and Nath, 2000; Chowdary and Gnanaseelan, 2007), but also indirectly regulate the temperature changes by

influencing the IOD (Behera et al., 2006)". "Its development, extinction, and interannual variation should be regarded as a coupled ocean-land-air process. In this way, we can capture its variation characteristics, dynamic mechanisms, and influence on various sea-air interaction processes more comprehensively and accurately."

## **Additional modifications:**

# 1. Use of symbols.

We have verified and corrected the use of some easily confused symbols, such as the accurate use of hyphen '-' and minus '-'. (line 16, 21, 20, 24, 224, etc.)

# 2. Accurate use of professional terms.

We have verified and corrected the professional terms in the paper to ensure their accurate use. For example, we have replaced 'out break' with 'onset'. (line 43,44, 232, etc.)

### 3. Rewrite sentences.

We have rewritten some vague or complex sentences to make them more accurate and clear. For example: "We investigated the characteristic and causes of the intraseasonal variability in the ASWP using heat budget analysis, and explored the relationship between the interannual variability of the ASWP and large-scale modes using lead-lag correlation." (line 97-99)

Thanks again for the suggestive comments of the editor!