

## ***Interactive comment on “Role of NAO and ENSO in the anomalous precipitation in the southern part of China – study on the two contrary high impact weather and climate cases” by Qiuxia Wu***

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Dear Referr 1:

It's pleasure for us to have a chance to get your comments for this manuscript!

Question 1: The events considered in this study are hand-picked ones, how robust the conclusions would be for similar case situations as addressed in this study. Are there any other years or events with combination of ENSO/NAO situations occurred over China before such as the ones used in this study. I don't see any mention about this in the text. How can we generalize the outcomes of this study? I understand it is

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going to be a big task, although a few sentences are mentioned (Lines 430-435), this rationale needs to be further highlighted for the readers about the above.

Just as mentioned in line 430-435: “Due to a specific combination of these factors, each catastrophic wet or drought case had a unique cause. To understand better the particular physical processes responsible for each high impact weather and climate event, it was important to carry out the case study, which could improve the prediction skill of natural hazards to a certain extent.”, that is, because each high impact case had a unique cause, this paper is focused on the case study on the two specific cases, not other cases, also the title of this paper made a clear description of the target of this paper. So, how can we generalized the outcomes of this study is beyond the task of this paper. Moreover, the two specific events in this study are not hand-picked ones, the line 30-35 made a clear introduction about their economic and societal importance for their high impact quality.

Question 2: Given the gravity of this study and results, the dynamical scenario associated with the two events keeps repeating in many places, it needs to be made concise and precise. The authors need to work on reducing the redundancy. The text content is amply long and this primarily needs to be looked at, the manuscript needs substantial editing of texts and shortening of text so that the essence of the results is more visible to the readers.

The necessary repeating of the dynamical scenario associated events is highly permitted and favorable to make a clear explanation for the dynamical scenario of the relative physical processes, it is suitable and not redundancy.

Question 3: The contents of the figures (e.g., Figure 3; Lines 83-100) are generally not very clear (means to all figures), and I was not able to assess the contents in tune with the text. Labelling (a,b,c,d) for the sub-figures will be easier and the corresponding can be referred in the text to ease the reading. Also the figure captions are too long.

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The Figure 3 caption had a necessary and suitable description for this figure, it makes easier for readers to understand what the figure is saying, so it is not too long. Why not to carefully read the caption of Figure 3, then that would provide you a better understanding of line 83-100.

Question 4: Although overall grammar is good, the narration appears more of conversing nature at certain places, though it is a minor concern which can be revised easily. The author is seriously advised to sit with experts for grammar (right from beginning to the end of the manuscript for the ĩñĆow to be in one tense) – I see that it keeps changing a lot. Some minor things I quote below, although the entire text needs a thorough check. a. Line 79: “Thus, we hypothesize that the NAO works together....” b. Line 83: should it be “in accordance with...” c. Line 91: “However, a thorough investigation has not been carried out on how the two factors worked out to set up the relevant large-scale atmospheric circulation anomaly which is the focal point of this study” d. Line 135: “...calculated following Takaya et al.(2001) as follows: ” (no need to mention C5 here). e. Line 140: “represents” in place of represented. f. Line 167: “iniñĆuencing” in place of “affected” g. Line 246: Remove “to” h. In most places, the word “tended” can be “tend” or “tends” (e.g., Line 290) i. Concerning the lines referring the subtropical jet, you refer this as “entrance region of the Asian subtropical jet” ... not as “entrance of the subtropical jet” appears to be vague. j. Line 425: “...an educated guess”

About a. Line 79: “Thus, we hypothesize that the NAO works together . . . . .”, I checked the manuscript and found that the line 79 in my manuscript is “Thus, we assumed that the NAO worked together . . . . .”, so I think you mean the word “hypothesize” is better than “assumed”? Actually, I checked the dictionary, saying that the two words means “to think that something is true but without having proof of it”, that is, they have a similar meaning. Thus, this one is not better than that one. Moreover, in scientific paper, the past tense should be used to give a description of our work. So, the word “assumed” is correct.

About b. Line 83: should it be “in accordance with ...”, I checked the manuscript

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and found that line 83 in my manuscript is “pressure in the upper troposphere and an induced strong subsidence of air according with a convergence”, you mean “in accordance with” is better than “according with”? I checked the dictionary, saying that “in accordance with” means “according to a rule or the way that sb says that sth should be done”, and “according with” means “to agree with or match sth”. So I think my word is better.

About c. Line 91: “However, a thorough investigation has not been carried out on how the two factors worked out to set up the relevant large-scale atmospheric circulation anomaly which is the focal point of this study”, I checked the manuscript and found that line 91 in manuscript is “However, no anyone did a thorough study on how the two factors worked together to set up the relevant large-scale atmospheric circulation anomaly, which was focused on in the study.” You mean your sentence structure is better than mine? I don’t think so!

About d. Line 135: “...calculated following Takaya et al.(2001) as follows: ” (no need to mention C5 here), I checked the manuscript and found that line 135 in my manuscript is “calculated using the formulation of Eq. (C5) in Takaya et al. (2001) as follows:”. First, Takaya et al. (2001) mentioned more than one equation to calculate of the wave activity flux, so it is necessary to mention which specific equation was used by us, and our expression is OK.

About e. Line 140: “represents” in place of represented.”, I want to say that, in scientific paper, the past tense should be used when we talked about our work. So, “represented” is OK.

About f. Line 167: “inŕuencing” in place of “affected”, I checked the dictionary, saying that “affect” means “make a change in sth”, and often passive, so, “affected” is OK.

About g. Line 246: Remove “to”, I want to say that the word “to” should be necessary in here!

About h. In most places, the word “tended” can be “tend” or “tends” (e.g., Line 290),

the answer same to e, that is, the past tense should be used in the description of our work. So, “tended” is OK.

About i. Concerning the lines referring the subtropical jet, you refer this as “entrance region of the Asian subtropical jet” ... not as “entrance of the subtropical jet” appears to be vague. I checked the manuscript from the beginning to the end, and I found the phrase “subtropical jet” appears 13 times, and every time they are appearing as a structure like “the Asian subtropical jet”. So there is no vagueness in this paper.

About j. Line 425: “...an educated guess”, I don’t know what you mean? I checked the dictionary, saying “a guess that is based on some degree of knowledge, and is therefore likely to be correct”.

Thanks for your hard work on this manuscript!

Best Wishes

Qiuxia Wu

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