

Interactive comment on “China’s historical record in the search of tropical cyclones corresponding to ITCZ shifts over the past 2ka” by Huei-Fen Chen et al.

Huei-Fen Chen et al.

diopside0412@yahoo.com.tw

Received and published: 12 October 2018

Dear reviewer,

We have tried to do our best for collecting the raw data of SOI index (Yan et al, 2011), and NAO data during 2ka. We find that only has a little positive relation coefficient ($R^2=0.156$) between the TC number of south China and La Nina-like stage, because we lack the historical data from Japan and Philippines. In this study we only can get the historical data from China. In order to collect the same time range of NAO index, we found two references as follows (Ortega et al., 2015; Trouet et al., 2009) but we cannot get raw data from the authors. We had tried email to them, but no response for

C1

us. Therefore, we only can use digital plotting to get the possible data, and we find all data are not linear time interval. If we want to compare our TTC2 (the northward and southward of TC track) with the NAO, we need get the same time interval. However, the time in our research is correct while that of SOI and NAO are simulated from many core data. The dating of C14 has it problem and the time shift may happen in the core data. So, we only can get preliminary pattern of the new figure. In our data, also has some problem that some period lacks historical record, so you will find that some TTC2 proxy lack data before AD1450, if we have more TC from Japan the result should be very different. We think this need more work to combine the TC data from other places to finalize the track relation with NAO. We will add this in our discussion section. Do you think this should be added in supplement file or in the main text?

Figure explanation: (1) What is the TTC2? It was calculated from the $(x_i)/total(x_i) * (position\ factor)$. x_i means the number of TC in that province and total (x_i) means total number of TC in South China. Position factor from the south to the north province is -2, -1, 0, 1, 2, 3, 4. So, when the larger TTC2 value means the TC moving to northward. (2) The SOI was recalculated from Yan et al. (2011) for an average of every 10-year (3) The NAO Trouet was recalculated from Trouet et al. (2009) for an average of every 10-year (4) The NAO mc was recalculated from Ortefa et al. (2015) for an average of every 10-year

References: Ortega et al. (2015) A model-tested North Atlantic Oscillation reconstruction for the past millennium. Nature 532, 71-74, doi:10.1038/nature14518.

Trouet et al. (2009) Persistent Positive North Atlantic Oscillation Mode Dominated the Medieval Climate Anomaly. Science 324, 78-80.

Interactive comment on Clim. Past Discuss., <https://doi.org/10.5194/cp-2018-86>, 2018.

C2

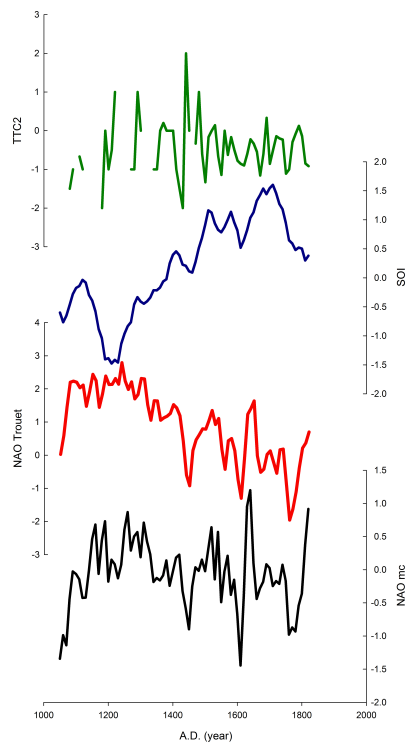


Fig. 1. Tracks of TC (TTC2) compared to SOI and NAO phase

C3