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Climate of the Past Discussions

Interactive comment on "Forced and internal modes of variability of the East Asian summer monsoon" *by* J. Liu et al.

Anonymous Referee #1

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General comments

This paper has investigated and contrasted the major modes of interannual variability of East Asian summer monsoon (EASM) and the major mode of seasonal evolution of EASM. The characteristics in precipitation pattern associated with these modes are analyzed. It has shown that the ITCZ and subtropical EASM precipitations are out of phase and Meiyu rainfall and precipitation in the central North China for the interannual variability mode while the ITCZ and subtropical EASM precipitations are in phase for the seasonal evolution of EASM. The fundamental differences in these modes are instrumental in understanding EASM variability on the different time scales. The paper is generally well written. However, there are some minor issues that need to be addressed. Detailed my specific comments are given below and hope they will be useful

for authors to clarify various points and to improve the quality of the paper. The paper is therefore suitable for publication in Climate of the Past subject to a minor revision.

Specific comments

1. Line 9 on page 651. Need to clarify whether the PC1 minimum tends to occur in developing or decaying La Nina years before 1990.

2. Line 17 on page 651. Are developing or decaying La Nina conditions for these five out of the six years listed? Need to clarify.

3. Lines 10-20 on gape 652. One important feature of SST anomalies associated with EOF1 shown in figure 3 is the developing positive SST anomalies in the tropical Indian Ocean and over Maritime continents. What is the role of these SST anomalies for the formation of anomalous WNP anticyclone? Need to comment and clarify.

4. Line 12 on page 653. Need to clarify how the ENSO-induced anomalous Walker cell influences EASM.

5. Lines 32-33 on page 659. Wang and Xu (1999) is not cited in the paper.

6. Figure 2 on page 662. Need to give a scale of wind.

Interactive comment on Clim. Past Discuss., 4, 645, 2008.