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

Anonymous Referee #2

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Review Comments on "Forced and internal modes of variability of the East Asian summer monsoon" by J. Liu, B. Wang and J. Yang

General comments and recommendation

In this study, the authors have revealed the dynamical structure and origins of the major modes of interannual variability of East Asian summer monsoon (EASM) and discussed their differences with the major modes of seasonal variability. Based on the diagnostic results, they have presented a suggestion for the definition of a strong East Asian summer monsoon. The presented findings are instrumental in understanding the orbital and interannual modes of variability in EASM. I found it an excellent journal article in need of only minor revisions before publication. Therefore, my recommendation is accepted with minor revisions. Comments:

1. Page 657, Lines 14-16: Based on the analyses of data during the period of 1979-2006, the authors argued...
that a strong EASM should be defined as abundant Meiyu, because such a definition captures the variability of the leading mode. The sequence of EOF modes depends on the time period. Since the recent decade of 1979-2006 is featured by an excessive rainfall along the Yangtze River valley, the corresponding mode appears as the first mode. If we perform corresponding analysis by using data prior to 1979, the first mode may be featured by an excessive rainfall over North China. A simple examination by using either PREC or CRU data may answer this question. This comment is only for the authors’ consideration. 2. Figure 1 is not clear, please revise it. 3. The wave train in Figure 4 is not clear, how about using zonal wind?

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