Comments on “On the Role of Westerly Wind Anomalies in the Development of the 1982-1983 El Niño” by Webb

According to a series of model simulation experiments, the present study investigated the causes of the low sea levels that developed in the western Pacific around North Equatorial Trough in the development of 1982-1983 El Niño. The author suggested that the low sea level was due to the increased wind shear that developed just north of the Equator during 1982. Generally, the manuscript is more like a report rather than a research paper. There are too many figures which some of them should be merged to compare easily. Many plots of model experiments are shown, while physical progresses or mechanisms are less discussed. Some major comments are in the following.

Major comments

1. Several references about the influences of westerlies on El Nino are missed, i.e., Rasmusson and Carpenter (1982), McPhaden (1999), Li et al.(2005); Wang et al.(2011) and et al.

Li C, Pei S, Pu Y (2005) Dynamical impact of anomalous East-Asian winter monsoon on zonal wind over the equatorial western Pacific. Chin Sci Bull 50:1520–1526

McPhaden MJ (1999) Genesis and evolution of the 1997–1998 El Nino. Science 283:950–954

Rasmusson EM, Carpenter TH (1982) Variations in tropical sea surface temperature and surface wind fields associated with the Southern Oscillation/El Nino. Mon Weather Rev 110:354–384

Wang, X., C. Wang, W. Zhou, D. Wang, and J. Song, 2011: Teleconnected influence of North Atlantic sea surface temperature on the El Niño onset. Clim. Dyn., 37, 663-676

2. In Section 3, the author should give the observed sea level changes to validate the model simulations. In addition, this part including texts and figures are too much. About half of figures are used in Section 3, which is not necessary. It is suggested

to briefly introduce that the application of the Occam is suitable for the study.

3. Figures 13 and 16: Which figure is the “top” figure?
4. It is said that the anomalous westerly winds is associated with Madden Julian Oscillations, but there are any evidences. Pls confirm it.
5. The author showed so many plots of modeled SST, SSH and surface velocities and compared them. It is better to show the differences among them to make readers easily compare them.