

## ***Interactive comment on “Teleconnection analysis of runoff and soil moisture over the Pearl River basin in South China” by J. Niu et al.***

### **Anonymous Referee #1**

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This manuscript (hess-2013-361) investigates the teleconnection between two climatic patterns (ENSO and IOD) and the hydrological processes over the Pearl River Basin using wavelet methods. The study in this paper is suitable for the scope of the journal, and the paper is readable. However, some revisions should be carefully done for making the manuscript improved enough for publication.

Several main comments and suggestions are stated in the following: 1. Overall, the paper lacks sufficient background materials to provide the context for the study and previously relevant studies about this issue in the Pearl River basin. The background described in “Introduction” is too simple, and the main difference between this study and previous studies is not clearly explained. 2. The potential significance of this study is not explained enough. Although some conclusions have been speculated, but

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they are not enough, and the importance of the conclusions is not expressed. As a result, I do not ensure the importance and significance of this study. 3. The title of the Section 2.2 is “Runoff and soil moisture”, but the authors mainly discussed the VIC model, model simulation and large-scale climatic patterns in this section. The section 2.2 should have a more suitable title. 4. The Section 3 mainly describes the wavelet methods used in this study. I suggest that some contents about the wavelet function used and wavelet methods in “Introduction” moved here. 5. In Figure 2 in Section 4, I do not understand why the annual periods of these monthly series are not obviously? Can the authors explain this point? 6. In Section 5, the authors mainly investigate the influences of climatic patterns on droughts and floods in the study area. There are many relevant studies about this issue, what is the relations and difference between this study and other relevant studies? 7. This paper uses many contents in the reference (Niu, 2010), so it may be more suitable to add some relevant contents to more clearly explain these topics in this paper. 8. Need wordsmithing and language editing in the manuscript. 9. Some new relevant references could be added.

Overall, the paper lacks sufficient background materials to provide the context for the study and previous studies about the issue. The potential significance of this study is not explained enough. Therefore, I do not recommend the publication of the paper.

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