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Hydrology and Earth System Sciences Discussions

Interactive comment on "Dryness/wetness variations in China during the first 50 years of the 21st century" *by* J. Q. Zhai et al.

Anonymous Referee #2

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This discussion paper reports an interesting exploratory analysis of the variations of monthly precipitation data as simulated with the ECHAM5/MPI-OM. Although concise and easy to read, it is felt that certain information is missing and some critical analyses of the modeled precipitation should be given in order to enhance the scientific value of this study. IN particular, the following issues should be addressed:

1. As indicated in the paper "Precipitation anomaly also indicates that the annual changing trend is different before 1980", however there is no analysis given to explain the what has caused the difference. It seems that only an averaged comparison over the whole China does not guarantee the regional differences in trends which is actually the emphases of this study.

2. The paper has reported the comparison of spatial distribution of mean annual rain-

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fall during 1961–2000 between the observed and modeled, but given the discrepancy under 1., this does not seems a correct way of comparison, because the modeled and observed obviously have different trends before and after 1980, so a separate analysis might provide some more insights.

3. A brief explanation of the three IPCC scenarios would help the reader to understand the analysis better. Not everybody remembers all the details of the emissions.

4. On p. 1390, L3, IDW is mentioned, one could only guess that this refers to the inverse distance weighted method. If so, it should be mentioned.

5. In the conclusion, the authors should report clearly the uncertainties in the model simulations and the implications to their conclusions based on the suggestions under 1,2.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 6, 1385, 2009.