Clim. Past Discuss., 8, C58–C59, 2012
www.clim-past-discuss.net/8/C58/2012/

Climate of the Past Discussions

Interactive comment on "Winter temperature variations over middle and lower reaches of the Yangtze River during the past three centuries" *by* Z.-X. Hao et al.

Anonymous Referee #2

Received and published: 22 February 2012

The paper is an interesting work on temperature reconstruction using documentary data on frequency of snowfall days in a large region in China. I think that the manuscript would improve if the authors take into account the following comments: 1) Is the ML-RYR a climatically homogenous region? Is possible to construct a regional index using 5 stations (1906-1950), 8 stations (1853-1905), or 24 stations (1736-1852)? How do you construct the regional index? Averaging? 2) You must include (and discuss) statistics of the calibration/verification procedure (period 1951-2007). 3) More detail in the description of documentary data (and treatment of information collected) is desirable. Do you have more data sources corresponding to the more antique period? There is a loss of variance due to the regression model in the calibration period. But, in addition,

when you work with documentary data, you have a loss of variance due to the fragmentary character of this type of data. Although the interpretation of historical documents is correct, it always possible to find new data sources, and therefore, new data, which allow refine the reconstruction. In other words, the 'absence of evidence' is not equal to the 'evidence of absence'. How have the authors faced this problem? 4) How affect the number of stations to the reconstruction of the regional series? It is obvious that uncertainties change over time, depending on the number of stations. Have the authors tried to correct possible bias due to changes in the number of stations? How do you "combine" different subseries? In the Figure 2, it would be desirable to distinguish between different subperiods. 5) Please, improve the quality of Figure 2, I cannot see error bands. 6) Please, explain the legend in the caption.

Interactive comment on Clim. Past Discuss., 8, 103, 2012.