**Climate
of the Past
Discussions**

Interactive
Comment

Interactive comment on "Precipitation variations of Longxi, northeast margin of Tibetan plateau since AD 960 and its relationship with solar activity" *by* L. Tan et al.

Anonymous Referee #3

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The publication by Tan, Cai, Yi, An and Ai is a valuable original contribution, certainly within the scope of CP. The paper makes paleoclimate data from China available which otherwise would be unknown to the international community. The conclusions are substantial and the scientific methods are well explained. The presentation is clear, but the English is poor and strongly needs improvement by a native speaker (which I am not).

The authors compare their paleoclimate data with the atmospheric 14C record as a reflection of solar activity. However, delta14C contains a system component which perturbs the solar signal to some extent. System effects are caused by the large 14C reservoirs (the ocean, atmosphere, biosphere) and the exchange between them.

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Therefore the 14C production rate would be a better proxy to compare with. See e.g. http://www.cosis.net/abstracts/EGU05/07552/EGU05-J-07552.pdf It might be useful to contact J. Beer, R. Muscheler or another representative of the cosmogenic isotope community to get such production data.

There is one publication which I would like to advise to include (under 5.3) as a reference as it gives the most impressive paleo-record of solar forcing of climate change in Europe: Magny M. 2004. Holocene climate variability as reflected by mid-European lake- level fluctuations and its probable impact on prehistoric human settlements. Quaternary International 113: 65-79. Based on a high correlation of his lake level record with delta14C, Magny concluded that solar variability was a major driver of climate in Central Europe.

Interactive comment on Clim. Past Discuss., 3, 1037, 2007.

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