

## ***Interactive comment on “A model-data comparison of the Holocene global sea surface temperature evolution” by G. Lohmann et al.***

**G. Lohmann et al.**

gerrit.lohmann@awi.de

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Our work is related to Holocene SST trends, and in our case we concentrate on the last 6000 years until the pre-industrial climate. The models applied are listed in Braconnot et al. (2007) and in Lorenz and Lohmann (2004). The simulated pattern of temperature trends are consistent with proxy derived paleo-temperatures (Leduc et al., 2010) and theoretical approaches (Laepple and Lohmann, 2009). We find however that the model under- and/or the data overestimate the magnitude of Holocene temperature trends. Part of the differences in the magnitude of Holocene SST trends between model simulations and derived paleo-temperatures can be reconciled by considering shifts in seasonality and habitat depth. We extensively discuss possible mechanisms for both the models and the interpretation of the proxy derived paleo-temperatures.

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The word "prediction" is not mentioned at all, the cited models are indeed also used for climate projections.

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