Nonlinear Processes
in Geophysics
Discussions

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Interactive comment on "Nonstationary time series prediction combined with slow feature analysis" *by* G. Wang and X. Chen

G. Wang and X. Chen

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Dear Referee,

We appreciate your interest to our article and your comments.

To make an additional comparison, the best prediction skill was achieved when four climate modes were used as nonlinearly interacting inputs to the prediction model to predict global temperature in the former paper by Wang et al, 2012 (Wang et al :Directional influences on global temperature prediction. Geophys. Res. Lett., 39, L13704, 2012), where the results of the statistical prediction method of persistence have been shown. As for the prediction experiments shown in Figure 2 and 4 present the forcing model works better for just a very few steps, this may due to the chaotic or nonstation-

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ary nature of the two signals (both theoretical and observed data), predictability is lost fast. In equation 4 W* means raw weight coefficients of slow feature vectors before the input signal is normalized and orthogonalized. The desired slowest signal is given by the smallest eigenvalues and eigenvectors with principal component analysis.

Interactive comment on Nonlin. Processes Geophys. Discuss., 2, 97, 2015.

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