

Interactive comment on “An empirical stochastic model of sea-surface temperature and surface wind over the Southern Ocean” by S. Kravtsov et al.

Anonymous Referee #1

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Comments on the paper: os-2011-52

Title: An empirical stochastic model of sea-surface temperature and surface wind over the Southern Ocean
Author(s): S. Kravtsov, D. Kondrashov, I. Kamenkovich, and M. Ghil

General comments: I like the paper which is written in a clear and honest style. State-of-the-art methods are used to construct an empirical stochastic model of sea-surface temperature and surface wind over the Southern Ocean. Such model is potentially very useful in filling gaps in observed data, which are present in almost all measurements in the Geo-sciences. In this respect, the advancement in this field is important to a wide

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variety of fields.

Specific comments: The authors do not hide the fact that although their model is non-linear it does not manage to reproduce the skewness of the original data (fig. 7, left row). I would be interested to know if the authors have an idea how to overcome this problem, because (as it seems to me) there is no point in continuing exploring such methods when they are unable to reproduce even the third order moment of data. This "negative" result is important to realize for other researchers in the field.

Technical corrections:

- p. 1904 line 9-10. This is somehow a function of the scale of the SST anomaly, which should be mentioned.
- Beginning of section 4.2 please mention which model is used.
- The paper mentions dashed and solid lines (in legends and in the text) which are red and blue (especially fig 5)
- At least one of the references is wrong, please correct.

Interactive comment on Ocean Sci. Discuss., 8, 1891, 2011.

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