



Interactive comment on “Seasonal mean pressure reconstruction for the North Atlantic (1750–1850) based on early marine data” by D. Gallego et al.

D. Gallego et al.

Received and published: 7 October 2005

Probably the main issue addressed during the interactive discussion is the impact of the low coverage wind data used for our SLP reconstructions. Of course this was also our main concern and consequently, most of the treatment previous to the application of the orthogonal spatial regression was specifically developed to assess and minimize the problems of low coverage (by building an objective method to limit the study area and select the calibration-verification periods). Notwithstanding this, there is no doubt in the effect of the decrease of data in the reconstruction (as suggested by the decrease in the spatial correlation prior to 1900 in the figure 8 of the manuscript), though this correlations does not always assure the quality of the reconstructed temporal series (see our reply to M. Dima in the discussion forum for further information). In this regard, the high values of the reconstructed SLP anomalies for some years and regions are not infrequent and they are due to the input data uncertainty, as already commented in the discussion section. In fact, one of the contributions of the paper is the proposal of

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guidelines to optimize any possible incorporation of new data.

Apart from this issue, several interesting suggestions have been proposed to clarify the presentation. The substitution of the complicated “table 3” by a new figure or the incorporation of coordinates to the maps constitute good examples. Their incorporation to the revised version will improve the presentation of the paper.

In the technical aspects, some precisions, probably not clearly established in the original manuscript, were suggested. A detailed list can be consulted in our replies in the discussion forum. As a summary we could list the following:

-To establish explicitly the importance of the greater relative error in SLP in the tropical regions.

-To specify the type and exact subset of the ICOADS product used in the calibration phase (ICOADS 2x2 monthly summary statistics, version 2.1).

-To clarify several terms which could lead to confusion to those readers not familiarized with logbook data.

The inclusion of these remarks will add precision to the paper and they will be incorporated in a revised manuscript.

As a final statement, we would like to point out that, despite the discussed inconvenient of the CLIWOC data, the paper provides a carefully evaluated and useful application of the currently available database. A new SLP reconstruction has been developed for an area and a period where no other data were available. The results are quite promising but, perhaps more important, the manuscript can inspire new works as:

-The incorporation of the new data in multiproxy approaches (currently our team is working in this line, as commented in the response to M. Dima in the discussion forum)

-The use of the experience gained to trigger new efforts of abstraction of the logbooks not yet included in the database (as an example, about 90% of the British logbooks

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remain undigitized).

-To inspire new teams from different countries to search for yet unknown or unexplored logbook archives.

Interactive comment on Climate of the Past Discussions, 1, 57, 2005.

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