

Interactive comment on “Early ship-based upper-air data and comparison with the Twentieth Century Reanalysis” by S. Brönnimann et al.

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REFERENCE TO THE PAPER: “Early ship-based upper-air data and comparison with the Twentieth Century Reanalysis” (authors: S. Bronniman, G. P. Compo, R. Spadin, R. Allan, and W. Adam) The expansion of climate products back to the earlier periods of observations is highly desirable for better understanding of the past climate and for more realistic comparison of the past climate with the projections of future climate. To evaluate these climate products, their comparisons with observed data is needed. However, we meet the problem of lack of regular and free of spatial gaps observations – the early observations, including early ship upper-air observations, look just episodic in time and do not provide dense spatial coverage. Anyway, we need to provide intensive search of new pieces of historical observational data, and

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their accurate assessment, processing and comparison with existing products. Any piece of early observational data, even small, is valid for this process. Having this in mind, we can consider the objectives of the paper as valid and actual one. The authors demonstrate careful and accurate efforts in managing and processing the data of the upper-air observations from two ship cruises. Comparison with the most appropriate climate product -the Twentieth Century Reanalysis Project, - is provided. The results are discussed, the agreements and disagreements are carefully assessed case-by-case. The general impression of this paper is highly positive. There are not recommendations on major revisions. However, several revisions are desirable, though these revisions look minor. First. It is desired to explain in more certain way what was the input into the 20CR just for the regions and periods of both cruises – it will make it more clear if the results of comparisons are promising. Second. As the disagreements between the observed data and 20CR are discussed case-by-case, the clearer authors' position in each case should be expressed on what is more “truth” (observations or 20CR, or both are suspected as errors). Third. The results of this paper are valid for formulating the authors' vision of new efforts in early reanalyses projects. This vision should be a plus of paper.

Please also note the supplement to this comment:

<http://www.clim-past-discuss.net/6/C1199/2010/cpd-6-C1199-2010-supplement.zip>

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