

## ***Interactive comment on “Introduction to special issue: the TransBrom Sonne expedition in the tropical West Pacific” by K. Krüger and B. Quack***

### **Anonymous Referee #2**

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I can imagine some relaxation of standards for publication of an introductory paper such as this might be permissible, given that the main findings will be more fully discussed later in the issue. However, I believe that this manuscript needs to convey more details and results from the expedition to be publishable. As it stands currently, it is a report of the meteorological conditions experienced on the expedition along with a very brief mention of a few results. It does convey the goals of the expedition, but does not sufficiently inform the reader about all the experiments that were conducted in pursuit of those goals. Perhaps a table is warranted indicating such things as the full range of measurements that were conducted, the frequency of observation, the techniques used, and ancillary data that assisted in the interpretation of observations made ship-board, and also reference to papers in the special issue in which these measurements are further discussed.

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Comment

The abstract promises a presentation of scientific goals, meteorological and oceanographic background, and a highlighting of the main research findings. The first two of these items are covered within the text, but the last is not. No mention of main findings is made in the conclusion. In the main text only a few research findings are mentioned quite briefly, and these findings are not reiterated in the conclusion. One not too surprising or unique finding mentioned in the conclusion ("Anthropogenic and natural source areas were identified to play a role for the origin of the trace gases measured during the expedition") is not supported by any trace gas measurement data. This conclusion appears to be inferred from measured wind directions and calculated back trajectories. Different air mass origin regimes are described, but no trace gas data indicating the uniqueness of these different regimes is presented. It seems prudent to provide some trace gas data in this introductory manuscript to generate some interest in the reader for studying the related papers that will presumably appear in the special issue.

With respect to the items reviewers of ACP papers are asked to consider, certainly this paper concerns a topic of interest to the ACP community, but it needs to more strongly point to the novel data that are to be discussed within the special issue. Substantial conclusions are not reached in this paper; I suggest that the authors draw more from the papers that will appear in the special issue. Very few substantive conclusions are drawn and those relating to trace gases are not supported by presentation of data.

Minor issues: Line 18, p 1405, unclear text "1-min respectively 10-min averages"? Line 21, p. 1406, a seven degree drop in air temps is suggested when it appears as if air temps are increasing steadily. . . also, peak SST at 31 is mentioned, and maximum SAT (air) temps of 28C seem opposite to what is apparent in the figure. Is the legend/caption incorrect?

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Interactive comment on Atmos. Chem. Phys. Discuss., 12, 1401, 2012.

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