



São Paulo, May 28, 2012

Dear Dr. Zahn

Please accept our revised version of the manuscript *Changes in the Intermediate Water Mass Formation Rates in the Global Ocean for the Last Glacial Maximum, Mid-Holocene and Pre-Industrial Climates* (paper 2012PA002290; co-authors M. Goes, L. Murphy, and E.C. Brady). The paper was substantially revised and improved. As requested, we addressed all the suggestions and comments made by the reviewers, and answered point-by-point their concerns, adding one colored mark in the text to facilitate the interaction with each reviewer. One of the reviewers asked for the inclusion of the water mass transformation calculation using atmospheric fluxes. We did not feel the need to include such analysis, first because it would increase the size of the manuscript considerably by adding a comparison between the two methods, without adding new information, and second because we improved the methodology and description for the detection of water masses formation density ranges.

We believe that with this version the manuscript gained more focus and clarity, as was expected, and is now suitable for publication in *Paleoceanography*.

Sincerely

Ilana Wainer

Ilana Wainer and co-authors.