

## ***Interactive comment on “Nordic Seas total dissolved inorganic carbon data in CARINA” by A. Olsen***

**Anonymous Referee #1**

Received and published: 27 October 2009

The manuscript describes dissolved inorganic carbon data obtained in the areas of the northern North Atlantic, Barents Sea and waters to the east of Spitzbergen, thus representing an important constituent part of the CARINA project. I can characterize the manuscript as a well-written, detailed and precise description of the above mentioned data subset and recommend it for publication after introducing minor corrections. My specific comments are:

Page 183, Table: there are three parameters which have different names (day month year) in the data product and the same name – DATE – in the exchange file. Is it correct?

Page 187, Lines 8ff. Please, specify why the level of 1900 dbar was selected as an upper boundary for the sample depths to be analyzed. Also, page 188, Lines 10ff.

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I assume, the natural variability is low below this depth, but a bit more quantitative description would help more than a simple link to another paper by A.Olson.

Page 187, Lines 11ff. The spread of the data is explained both by time and spatial variability in the data. The data within the cross-over area a not simultaneous.

Page 189 Lines 9ff. Indeed, Fig.2 indicates the deep TTO data being 4umol/kg lower than for 316N and 58GS. On the other hand, cruises 135-58JH and 137-58JH are even more biased (positively), and cruises 135-58JH and 176-74JC are biased below - 8umol/kg. For this reason, the straight line drawn to show a long-term change since the TTO time frame is not very persuasive, it is rather misleading. I also suggest to change colors of the data points for Fig.2, as black and deep-blue are not easily distinguishable from each other. One could use green instead of blue, for instance.

The data caption for this figure should explain what the vertical bars mean.

Page 198. Table. Give units for TCO2 standard deviation

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Interactive comment on Earth Syst. Sci. Data Discuss., 2, 181, 2009.