Interactive comment on "Air-sea CO$_2$ fluxes in the Atlantic as measured during the FICARAM cruises" by X. A. Padin et al.

Anonymous Referee #1

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Overall comment:

The first part of the manuscript is well written and all details are good explained. In this part I have only minor suggestions. The “Results and Discussion” part contains a lot of information and is hard to read. Since the manuscript deals with the huge amount of biogeographical provinces and a temporal range of 8 years it is hard to follow and also the tables don’t help to understand the text. My suggestion is to structure the discussion part analogue to chapter 2.4. More (and bigger) figures might help to understand the complex dataset.

Specific comments:

Ch. 2.2. and 2.3. Since only 2 standard gases are used to calibrate the instrument an
estimation about the accuracy should be given somewhere in one of these sections.

Table 1: The information in this table is not necessarily needed. It can be an appendix or deleted.

Table 3: It’s not easy to understand the table. Since the table shows the coefficients in Eqn. 4 the columns should be named accordingly: Not Lon(E), lat(E), but A, B, C . . . Then the coefficient should have the same order as in the equation: The chl not in the end.

Figure 2: There is too much information in one figure. It is impossible to see differences for any parameter and for the different colors.

Figure 3: It is much harder to get any information out of this figure. First a,b,c . . . are not explained and second it is too small to distinguish between circles and squares. Even the labels of the axes are too small.

Technical comments:

p. 5592, l.5: the year of the Takahashi reference is 2009.

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