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***Interactive comment on “On CO<sub>2</sub> perturbation experiments: over-determination of carbonate chemistry reveals inconsistencies” by C. J. M. Hoppe et al.***

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I just remind the authors of the fact that Wanninkhof et al. (1999) and Millero et al. (2006) have forcefully questioned the reliability of those measurements for dissociation constants of carbonic acid in artificial seawater, I suggest the authors should focus on the evaluation of Mehrbach et al. (1973) and Millero et al. (2006) constants that made in real seawater.

**References**

Mehrbach, C., Culberson, C.H., Hawley, J.E., Pytkowicz, R.M., 1973. Measurement of the apparent dissociation constants of carbonic acid in seawater at atmospheric

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Millero, F.J., Graham, T.B., Huang, F., Bustos-Serrano, H., Pierrot, D., 2006. Dissociation constants of carbonic acid in sea water as a function of salinity and temperature. *Mar. Chem.* 100, 80-94.

Wanninkhof, R., Lewis, E., Feely, R.A., Millero, F.J., 1999. The optimal carbonate dissociation constants for determining surface water pCO<sub>2</sub> from alkalinity and total inorganic carbon. *Mar. Chem.* 65, 291-301.

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Interactive comment on *Biogeosciences Discuss.*, 7, 1707, 2010.

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7, C267–C268, 2010

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