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**Biogeosciences Discussions**

# *Interactive comment on* "The large variation in organic carbon consumption in spring in the East China Sea" *by* C.-C. Chen et al.

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Please find our response to comments of both Reviewers C6670 and C6674 as a pdf file from "Supplement". In addition, the figures in the revision were also included for your reference.

Please also note the supplement to this comment:
http://www.biogeosciences-discuss.net/9/C8288/2013/bgd-9-C8288-2013-supplement.pdf

Interactive comment on Biogeosciences Discuss., 9, 16533, 2012.



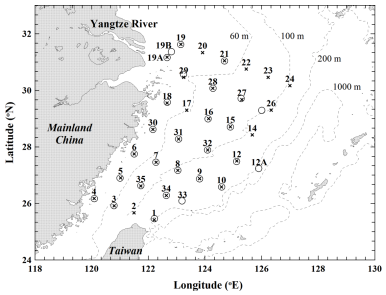


Fig. 1. Map of stations in the spring of 2009 (x) and 2010 (○) in the East China Sea (ECS) with the station number above the mark. Bottom depth contours (dashed lines; 60, 100, 200 and 1000 m) are also shown; this is also the case in Figs. 2, 3, and 7.

**Fig. 1.**

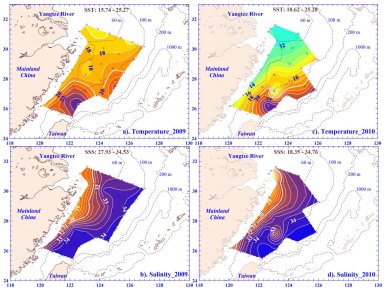


Fig. 2. Contour plots of surface water temperature (SST) and salinity (SSS) of the ECS in 2009 (a, b) and 2010 (c, d), with contour lines of SST = 20 ℃ and SSS = 31 were bolded for reference. Contour intervals of temperature and salinity are 1 ℃ and 0.5, respectively.

**Fig. 2.**



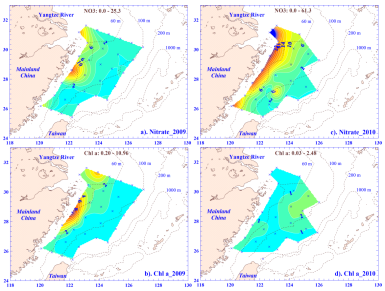


Fig. 3. Contour plots of nitrate and chlorophyll *a* (Chl *a*) in the surface waters of the ECS in 2009 (a, b) and 2010 (c, d). The contour intervals of nitrate and Chl *a* are 2 μM and 1 mg Chl $m^{-3}$, respectively.

**Fig. 3.**

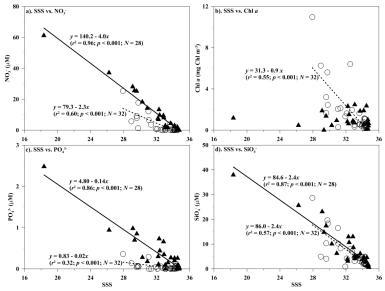


Fig. 4. Relationships between salinity (SSS) vs. a) nitrate ($NO_3^-$), b) chlorophyll *a* (Chl *a*), c) phosphate ($PO_4^{3-}$), and d) silicate ($SiO_4^-$) of the surface waters in the spring of 2009 (○; dashed lines) and 2010 (▲; solid lines) of the ECS. Both *p* and $r^2$ values of linear regression are also shown if statistical significance was evidenced.

**Fig. 4.**



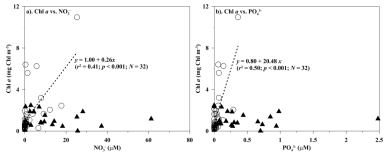


Fig. 5. Relationships between chlorophyll *a* (Chl *a*) vs. a) nitrate ($NO_3^-$) and b) phosphate ($PO_4^{3-}$) of the surface waters in the spring of 2009 (○; dashed lines) and 2010 (▲) of the ECS. Both *p* and $r^2$ values of linear regression are also shown if statistical significance was evidenced.

**Fig. 5.**

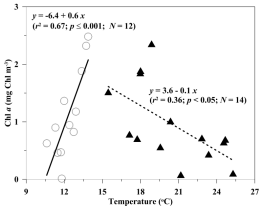


Fig. 6. Relationship between Chl *a* and temperature in the surface waters in the spring of 2010. Linear regressions between Chl *a* vs. temperature < 15 ℃ (○; solid line) or temperature ≧ 15 ℃ (▲; dashed line) with $r^2$ and *p* are also shown.

**Fig. 6.**



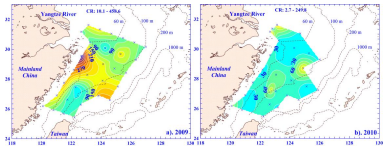


Fig. 7. Contour plots of planktonic community respiration (CR) in the surface waters of the ECS in (a) 2009 and (b) 2010, with a contour interval of 30 mg C $m^{-3}$ $d^{-1}$.

**Fig. 7.**

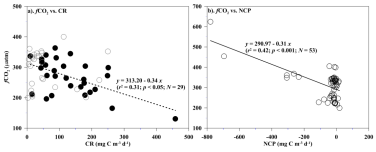


Fig. 8. Relationships between fugacity of $CO_2$ ($fCO_2$) vs. a) planktonic community respiration (CR) in the surface waters and b) net community production (NCP = PP–CR) in the spring of 2009 (●; dashed line) and 2010 (○; solid line). Primary production was used the measured values where incubation performed. Both $p$ and $r^2$ values of linear regression are also shown if statistical significance was evident.

**Fig. 8.**