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5, S506-S507, 2008

Interactive Comment

## Interactive comment on "Nitrification and inorganic nitrogen distribution in a large perturbed river/estuarine system: the Pearl River Estuary, China" by Minhan Dai et al.

## **Anonymous Referee #2**

Received and published: 10 May 2008

General Comments This paper describes the nitrification process in the Pearl River estuary during 3 seasons. They found that the nitrification process was influenced by temperature and oxygen concentration and that nitrification contributed significantly for 20-30

Specific Comments 1)It is not clear why the nitrification rates were lower in the PR estuary than other estuaries with very high NH4 concentrations such at the Scheldt estuary.

2) If temperature is one of the main factors controlling nitrification rates, then why were the maximum nitrification rates found in March when water temperatures are near their minimum. 3) P. 1564 line 20 - explain more clearly what are the 2 groups of nitrifiers. 4)

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P. 1566 - line 23-25. This important statement/conclusion should be in the abstract. 5) P. 1565 - line 17 - you say that "oxygen is one of the most important factors interplaying with nitrification, yet in the abstract and conclusion you state that temperature is the most important and that oxygen concentration is of secondary importance.

Technical P. 1564 line 16 - should be were (not was) Table 1 legend - should be hydrography (not hydrograph) Fig 1 legend - should be March (not Marcch) p. 1548 - line 21 - remove the semi-colon since this is not a complete sentence – should be –nitrification rates with special —

The MS needs another revision to correct other errors in English and typos.

Interactive comment on Biogeosciences Discuss., 5, 1545, 2008.

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