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Interactive comment on “Partial pressure of CO₂ and CO₂ emission in a monsoon-driven hydroelectric reservoir (Danjiangkou Reservoir), China” by S. Y. Li and Q. F. Zhang

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Interactive comment on “Partial pressure of CO₂ and CO₂ emission in a monsoon-driven hydroelectric reservoir (Danjiangkou Reservoir), China” by S. Y. Li and Q. F. Zhang

Li and Zhang syli2006@163.com (Li S.)

Dear referee, thanks for your comments. We could accommodate your comments. We agree your opinion that the effects of rainfall pH on soil CO₂ and thus riverine pCO₂, here although we have no rain water chemistry in the upper Han River basin, while according to our study on rain water chemistry in the Wuhan city close to

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the Lower Han River and also along the Yangtze River (data unpublished, the data are provided in the supplementary document). The initial rainfall is acidic while the following concentrated rainfall during monsoonal period is close to neutral or little basic (see Fig. S3). Based on the comments, we divided the entire data into two categories (wet and dry) for each station (Han Res., Dan Res., Dam and River below the Dam). A new Table is provided (see Table 3), and the scatter plots for some key variables are supplemented in Supplementary Documents. We then correspondingly revised the text in the section 4.2. In addition, we need to point out that our further study will quantify the sources (soil CO₂, rock weathering and atmosphere) of DIC using carbon isotope.

Please also note the supplement to this comment:

<http://www.biogeosciences-discuss.net/10/C6105/2013/bgd-10-C6105-2013-supplement.pdf>

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