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Comment

## ***Interactive comment on “Input and output of dissolved organic and inorganic nitrogen in subtropical forests of South China under high air pollution” by Y. T. Fang et al.***

**Y. T. Fang et al.**

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Response to comments by Anonymous Referee # 1

Authors answer to minor comments:

1 Abstract &#8211; Add the work was carried out over two years (2004-2005). A: We will mention it in second sentence &#8220;&#8230;in a region of South China under high air pollution over two years (2004-2005), to investigate &#8230;&#8221; in the revised version.

2 L1-3 P4136 The phrase is unclear. Check the English. A: The sentence will be changed to be &#8220;The nitrogen (N) emissions to the atmosphere and thereby N

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deposition to forest ecosystems are increasing rapidly in Southeast Asia, but little is known about the fate and effects of elevated N deposition in forest ecosystems in this warm and humid region.

3 L15 P4139 was not were; A: Will be corrected.

4 Ch 2.3; Add a definition for DIN A: will add it as suggested;  
dissolved inorganic N (NH<sub>4</sub><sup>+</sup> and NO<sub>3</sub><sup>-</sup>);.

5 L19 P4142 were; not were; A: Will be corrected.

6 Figs 2-4; Difficult to understand. Please use different line styles for the different datasets. precipitation; not precipitation;, throughfall; not throughfall; A: Will use different line styles, and the spelling will be corrected. More detailed explanation like the following to address the confusion will be added in Fig.2-4: N concentrations in precipitation (a) were measured in both wet-only collectors (automatically open during rain events) and bulk collectors open continuously. Throughfalls (b) and soil solutions (c) were collected from Pine, Mixed, and Old-growth forests separately. In addition, the symbols of forest types in Fig. 8 will be changed to agree with the previous figures.

7 L10 P4143 The meaning is unclear to me: as there were no difference between bulk and wet deposition, then you used the means of the three collectors in open air. The means between what? To do what? Something is missing here. A: The writing will be changed to the followings: There were no clear differences in the concentrations of NH<sub>4</sub><sup>+</sup>-N, NO<sub>3</sub><sup>-</sup>-N, and DON between bulk precipitations and wet-only collections (Figs. 2-4), suggesting very little contribution of dry-deposition to overall N input. Thus, the means of two bulk collectors and one wet-only collector in the open area were used to estimate the N input in precipitation.

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8 Table 2; It is unclear what the letters indicate. You say; differences among treatments within the same forest;. Which treatments? Maybe; differences among forests within the same water collection type;. A Change to be: SE in parentheses ( $n = 3$ , for N fluxes only). Significant differences ( $P < 0.05$ ) among three forest types were indicated by different letters.

9 L26 P4143 Please show the statistics of this weak correlation A:  $r^2$  and P value will be shown.

10 Fig.6 caption; ;to calculate throughfall; not ;to calculated for throughfall; A: Will be corrected.

11 Ch. 4.1. ; Although the contribution of dry deposition is very small, it should be better quantified and discussed relative to temperate and boreal forests, where dry deposition may contribute about one third of total N. A: The main objectives of the present study are to quantify the input-output budget of N in three forests in subtropical South China, but a sentence will be added describing the general situation of the contribution of dry deposition (percentage, e.g.) in temperate forests.

12 Literature ; have a look at Magnani et al 2007 Nature 447:848-850, suggesting temperate and boreal forests are not N saturated. A: Will take into account in the revised version and mention it in appropriate place.

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Interactive comment on Biogeosciences Discuss., 4, 4135, 2007.

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