

## ***Interactive comment on “Impacts of tropical cyclones on hydrochemistry of a subtropical forest” by C. T. Chang et al.***

### **Anonymous Referee #1**

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#### General comment:

This paper investigates impacts of typhoons on the biogeochemistry of subtropical forest eco-system by using the observation data of rain and streamwater at observation site in Taiwan. The authors have shown that a considerable impact of typhoons on the variation of nutrient for the forest eco-system. They have also shown that the streamwater chemistry is very resilient in response to typhoons. These new findings are interesting and worth publishing. I recommend acceptance after minor revision.

#### Specific comments:

1. Page 4544, Line 8: “quaintly” should be “quantity”

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2. Page 4547, Line 17: “Proportionally more H<sup>+</sup>(26%)” should be “Proportionally more NO<sub>3</sub><sup>-</sup>(42%)” 26% is within the range of 26%-37%.

3. Page 4547, Line 22: “except for NO<sub>3</sub><sup>-</sup>” The ratio is also large for NH<sub>4</sub><sup>+</sup>.

4. Page 4548, Line 16 (also Conclusion 2): “storm rating system that includes rainfall would be far more useful” National Weather Service (CWB of Taiwan) issues a quantitative precipitation forecast (QPF) along with any typhoon forecast, which is a more detailed rainfall forecast for the specific region affected by typhoon. I do not think the storm rating with rainfall is better than QPF, although the skill of QPF should be improved further in the future. Authors should write what can be done to reduce the impact of typhoon on the eco-system if a better rainfall forecast is available.

5. Page 4549, L26 (also in conclusion and abstract): “10kg<sub>ha</sub>-1yr<sup>-1</sup> (25% of total output)” Where does this number come from? It is not consistent with Table2, in which the number is 15 kg<sub>ha</sub>-1yr<sup>-1</sup> (40% of total output).

6. Page 4553, Conclusion 5: Authors have shown a considerable impact of typhoons on the variation of nutrient, but have also shown a large resilience of the streamwater chemistry. I wonder if the authors conclude that the final impact of the typhoons on the forest eco-system is not so large because of the resilience, or even though the impact is still large and need to do something to reduce the typhoon impacts.

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