

Dear Dr. Frank Dentener,

Please find below our itemized responses to the referees' comments. We have addressed all the comments, and incorporated the comments/suggestions in the revised manuscript.

Thank you very much for your consideration.

Sincerely,

Xiuying Zhang and Lei Liu

On behalf of all co-authors

Response to Referee #1

The authors appreciate the valuable suggestions given by Referee #1 for improving the quality of the manuscript. Detailed responses to each comment are given below (in blue).

Some smaller issues:

Figure 4/5 explain what is meant with: “fertilizer plus N manure”?
Emissions/N-application rates?

We mean it from N application. We have added it in the captions of Fig. 4 and 5.

Figure 8 label with regions are quite clogged. Improve presentation way.

We have revised Fig. 8 as follows:

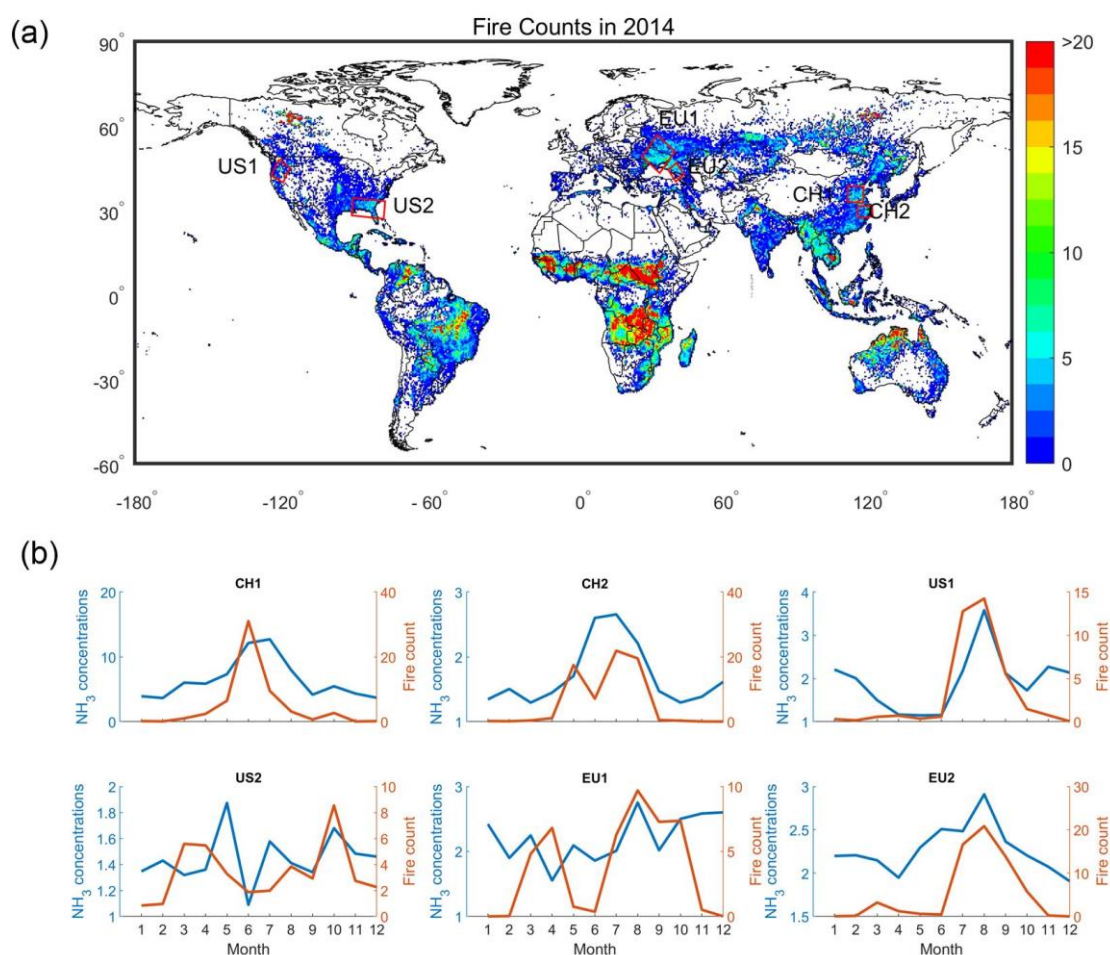


Fig. 8 MODIS fire counts in 2014. (a) Spatial distributions of MODIS fire counts. (b) Monthly variations of fire counts and surface NH_3 concentrations in biomass burning regions in China, the US and Europe.