

## ***Interactive comment on “An extreme CO pollution event over Indonesia measured by the MOPITT instrument” by F. Nichitiu et al.***

**Anonymous Referee #2**

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**Review of “An extreme CO pollution event over Indonesia measured by the MOPITT instrument” by Nichitiu et al**

This paper is an attempt of one explanation of why there was an anomalous CO maximum seen by the MOPITT instrument during a period of intense fires in the year 2006 over Indonesia. Based on evidences from different satellite data (TRMM for the monthly estimate of accumulated rainfall and flashes (LIS), MOPITT for CO total column, MODIS, ATSR for fires location), the authors deduced a possible physical relationship between fires, aerosols, thunderstorms and lightning that could increase the CO. This paper is clearly written and the conclusions seem to me convincing. However the main remark I can do is that the paper could be much more convincing with

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modelling experiments. At least it would be useful if the authors could suggest some ideas to make some numerical experiments even if modelling is out of the scope of this paper.

I think this paper is suitable for publication in ACP and I recommend it after making the following minor improvements.

Comments:

### Section 2:

I 15 p 1214: typo to be corrected

### Section 4:

I 17 p 1216: I find this sentence ambiguous. Maybe it is just rhetoric and I understand that a lot of fires from lightning can burn a bigger area than just a few anthropogenic fires. What anthropogenic fires represent? is it related to specific human-made things instead of biomass? I suggest the authors to simplify or clarify this point.

I 3 p 1221 : Concerning the NO<sub>x</sub> production and the paper of Logan et al., I would suggest the authors to argue that point using distribution of NO<sub>2</sub> from OMI or SCHIA-MACHY if available for example.

### Section 5: conclusions

Again, I found the last sentence a little ambiguous (Price and Rind, 1994b,c) for the purpose of this paper. What kind of phenomena that are explosives, is it the number of storms, more fires, more CO, all of them. In fact I find this sentence too sensational for just one case with a CO maximum. I would suggest to be more academic or explain better this sentence in the context of that paper.

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