

We are grateful to the reviewer's thoughtful and illuminating comments and have now amended the manuscript according to their points. We have acknowledged the valuable contribution made by the reviewers in this manuscript. A detailed response to each of the reviewer's points is provided below and we have carefully revised the manuscript (all revisions are highlighted in the text).

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Reviewers comments 1:

This is an interesting manuscript dealing with the measurement of particulate PAH concentrations in the Himalayan region across two transects going from Nepal into China Tibetan Plateau. The manuscript has new collected data that permits further insights into the background contamination of Himalayan region and the long distance transport of particulate PAH pollution from the Indian subcontinent.

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In my opinion (from a non-born English speaker), the quality of the English in the paper needs to be improved. In the text there are some sections that also need improvement.

*Answer: The manuscript has been edited by one professional editor (Dr. Dave Chandler; [www.GeoEditing.co.uk](http://www.GeoEditing.co.uk)) who is native English speaker. All changes according to reviewers comments are marked in blue in the text. And some sections also have rewritten to make them logical and clear.*

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Section 3.1 about the spatial distribution and seasonal trend of TSP and PAH concentrations is presented in a confusing way and some of the declarations about spatial and seasonal trends are not evident when compared with concentration data in Tables and Figures. For example in lines 15-21, page 9, there is the statement of a seasonal variation of concentrations which seems to be contradicted by ANOVA tests.

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*Answer: Have improved this section. The seasonal trends are not evident at remote sites from the Figure 2. When we calculated the seasonal averaged concentrations of TSP and PAH, the lowest concentrations were observed during the monsoon season. We have added these data in supporting*

information (Table SI-1). As for the description in lines 15-21, we calculated again, and the result showed that the seasonal variation of each site was not significant (at the 0.05 level). It was consistent with what we expressed before.

5 On lines 7-10, page 10, it is concluded that there is an increase in concentrations during the non-monsoon season which, at least for TSP, is not evident from inspection of Figure 2.

Answer: Although the seasonal variation of TSP concentration was not apparent at Dhunche and other remote sites, the calculated results showed that seasonal averaged TSP concentrations during the non-monsoon season (including the pre-monsoon, post-monsoon and winter seasons) were higher than those  
10 in the monsoon season. As mentioned above, we added the seasonal averaged TSP and PAH concentrations in the supporting information (Table SI-1).

Section 3.4 concerning the estimation of dry deposition fluxes also needs improvement.

15 Answer: After careful consideration, we decided to delete this section according to suggestions of the editor and another reviewer.

Why there was a choice of a dry deposition velocity of 1.4 cm/s for calculating the PAH dry deposition fluxes, when there is a so large variability in measured fluxes? Is it an average of bibliographic data?

Answer: As mentioned above, we have deleted this section.

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Specific comments

Figure 1. The background site in China it is expressed as Nielamu while in the text the local is referred as Nyalam—correct.

Answer: Have changed Nielamu to Nyalam in Figure 1.

Abstract. IGP is only defined lately in the text. Introduce definition here.

Answer: Have defined the IGP (Indo-Gangetic Plain) in the abstract section.

5 Page 6, line 15-20, define the size cutting characteristics of the TSP cyclone.

Answer: All suspended particles can be sampled by the TSP cyclone. Have added this information on page 7 line 6 "--with a TSP cyclone which can collect all the suspended particles".

Page 8, line 7, change "bland" to "blank".

10 Answer: Have changed.

Page 9, line 13, change "pokhara" into "Pokhara".

Answer: Have changed.

15 Page 9, line 16, change "variation" to "variations".

Answer: Have changed.

Page 11, line 6, define POPs, HCBs and PCBs.

20 Answer: Have defined. The POPs, HCBs, and PCBs are persistent organic pollutants (POPs), hexachlorobenzene (HCB) and polychlorinated biphenyls (PCBs), respectively.

Page 12, line 6, change "continents" to "emission sources".

Answer: Have changed.

Page 13, line 14, this is an estimation/calculation and not a measurement.

Answer: Have deleted this section (3.4 Dry deposition fluxes estimation) according to the suggestion of editor and another reviewer.

5 Figure 4, the site Bode with data taken from Chen et al., (2015) is presented in the figure but not discussed in the text. Please discuss.

Answer: Have discussed in the text on page 13 lines 6-8. “However, this is in contrast to Kathmandu where there is a relatively large contribution of 4-ring PAHs, reflecting the dominant influence of fossil fuel emissions, for example, vehicle engine exhausts and coal combustion (Chen et al., 2015).”

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