

Interactive comment on “Drivers of atmospheric deposition of polycyclic aromatic hydrocarbons at European high altitude sites” by Lourdes Arellano et al.

Lourdes Arellano et al.

pilar.fernandez@cid.csic.es

Received and published: 16 August 2018

We are grateful for the positive comments of the reviewer. Changes and additions to be introduced in the revised manuscript are given below:

Author's response: The recent study by Singh et al., 2017 indicated by the reviewer will be included in the introduction. In addition, some other studies of 2016-2017 and 2018 will also be included: Kirchgeorg et al., 2016, Environ Poll, 218; 804-812. Yang et al., 2016, Environ Poll, 214, 1-7 Feng et al., 2017, Environ Poll, 230, 639-647 Inomata et al., 2017, Environ Sci Technol, 51, 7972-7981 Zhang et al., 2018, Atmos Environ, 173, 256-264.

C1

Reviewer's comment: Line 342. These emissions involve the release of large amounts of particulate matter containing PAH...Please provide the reference. Author's response: In fact, this statement is based on the results observed in this study; however, this is confirmed by the results observed by van Drooge et al., 2010 (Environ Sci Pollut Res 17:1207-1216), therefore this reference will be cited here.

Reviewer's comment: Line 345. Some PAHs also showed significant negative correlations with temperature, Please also mention the R2 value here. Author's response: The following information will be added: B[a]P (R2=0.585), B[ghj]Per (R2=0.516 at $p < 0.001$) and Cor (R2=0.561).

Reviewer's comment: Line 397. Air masses from central/east Europe are negatively correlated with PAH deposition fluxes, mainly for HMW-PAH...Please provide the reference. Author's response: In fact, this is a result of the present study. We will refer here to Table 5 to clarify it.

Reviewer's comment: Line 434, 437 and Figure 4... Please keep the R2 values at the two decimals such as ($r_2=0.9958$... It should be (R2=0.99). Author's response: This will be changed in the revised manuscript.

Reviewer's comment: Please recheck the complete manuscript where mentioned PAH and PAHs, it should be mentioned with grammar and suitability of sentences. Author's response: This will be taken into account in the revised manuscript.

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2018-617>, 2018.

C2