

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

Anonymous Referee #1

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The manuscript presents particle and PAHs monthly deposition fluxes in the European mountain areas. This manuscript also addresses the number of sites, sampling frequency and period of study comprise the most comprehensive approach performed so far on PAH deposition in high mountain areas. This is a worthwhile manuscript and can be accepted for publication in the ACP after minor revision as per some comments given below: In introduction section Please add some recent studies of (2016) and (2017) for including the sources, abundances/distributions and long-range transport of PAHs such as . . . (Singh et al. 2017; Distributions of Polycyclic Aromatic Hydrocarbons, Aromatic Ketones, Carboxylic Acids, and Trace Metals in Arctic Aerosols: Long-range Atmospheric Transport, Photochemical Degradation/ Production at Polar Sunrise

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Environ. Sci. Technol. 2017, 51, 8992–9004). Line-342. These emissions involve the release of large amounts of particulate matter containing PAH. . . . Please provide the reference. Line- 345. Some PAHs, e.g. benzo[a]pyrene, benzo[ghi]perylene and coronene, also showed significant negative correlations with temperature ($p < 0.05$); Please also mention the R^2 value here. Line-397. Air masses from central/east Europe are negatively correlated with PAH deposition fluxes, mainly for HMW-PAH. . . . Please provide the reference. Line 434, 437 and Figure 4 Please keep the R^2 value at the two decimals such as ($r^2 = 0.9958$ It should be ($R^2 = 0.99$). Please recheck the complete manuscript where mentioned PAH and PAHs, it should be mentioned with grammar and suitability of sentences.

Please also note the supplement to this comment:

<https://www.atmos-chem-phys-discuss.net/acp-2018-617/acp-2018-617-RC1-supplement.pdf>

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

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