

## ***Interactive comment on “Nation wide increase of polycyclic aromatic hydrocarbons in ultrafine particles during winter over China” by Qingqing Yu et al.***

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The manuscript by Yu et al. reports one-year concurrent measurement of airborne PAHs at 12 sites across China. Size-segregated PAHs together with typical organic markers are measured to evaluate health risks of PAHs in different size particles and attribute emission sources of PAHs over different regions in China. The finding that toxic PAHs are concentrated in ultrafine particles is particularly interesting. The authors also find that PAH pollution is high in the northern China and nation-wide increases in wintertime, due to the unfavorable meteorological conditions and enhanced emissions of coal combustion and biomass burning. I think this is an important work nowadays

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in China as well in the global air pollution community. Overall this manuscript is well-organized and well-written and should be accepted after the authors address the minor issues in supplement below.

Please also note the supplement to this comment:

<https://www.atmos-chem-phys-discuss.net/acp-2020-576/acp-2020-576-RC1-supplement.pdf>

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