

Atmos. Chem. Phys. Discuss., referee comment RC1
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Comment on acp-2021-947

Tiantao Cheng (Referee)

Referee comment on "Measurement report: The importance of biomass burning in light extinction and direct radiative effect of urban aerosol during the COVID-19 lockdown in Xi'an, China" by Jie Tian et al., Atmos. Chem. Phys. Discuss.,
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General comments:

Urbanization even anthropogenic activities is an important way to influence air pollution by emissions (gases and particles), meteorological conditions and atmospheric processes (urban heat island), etc. Anthropogenic pollutants include greenhouse gases, gaseous and particulate pollutants. Aerosol is very important to impact atmospheric cycle and climate system by direct and indirect effects, a hot issue of scientific researches internationally. Also, atmospheric pollutions cause adverse harm to human health. Aerosols are known to originate from direct emission and secondary formation, namely, POA and SOA. The organic aerosol (OA) is a very important part of aerosols, including BC and OC. Inorganic ions are important compositions of aerosols. This paper used the data of aerosol optical properties, chemical composition, meteorological parameters used in Xi'an to analyze their temporal variation and compare their difference between the normal period and the COVID-19 in 2019, and to estimate the radiation forcing of aerosols. The topic of this paper is of common interest within the scientific community. Although the manuscript includes some important data, however, the quality is somewhat sufficient in the current state to be directly published.