

## 1.221 Relationships between ground- and upper-level concentrations of gases and particles in Tokyo.

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Abstract:

Concentrations of gaseous and particulate species in the urban atmosphere have been monitored at about 320 m and 10 m above the ground in central Tokyo since 2016. Diurnal ozone concentrations behaved consistently at both levels in summertime. In wintertime, however, ground-level ozone varied diurnally with low concentrations in nighttime and high in daytime, although upper-level ozone kept mostly constant, corresponding with the daytime concentration of ground-level ozone. By taking oxidant, which is defined as  $O_3 + NO_2$ , the concentrations well agreed with each other between the ground and upper levels.  $SO_2$  is generally higher at the upper level than at the ground level, particularly when winds come from the south, which brings  $SO_2$  emitted from ships and large point sources inside and coasts along the Tokyo bay. Since 2017, monitors for  $PM_{2.5}$  mass and chemical compounds were installed at both levels. Discrepancies in chemical compositions between both levels will be discussed on the poster.