



## **Tropospheric ozone over Beijing: variability and trend for 2002-2018**

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A double-cell ozonesonde has been developed at the Institute of Atmospheric Physics (IAP), Chinese Academy of Sciences, replacing the single-cell GPSO<sub>3</sub> ozonesonde at 2013. Taking MLS and total column ozone datasets observed at Beijing as the reference values, we compare the differences of ozonesonde observation from reference values before and after 2013. Based on probability and cumulative functions of Weibull distribution, we make corrections to ozonesonde observation before 2013 and get the tropospheric ozone variability and trend for 2002-2018. The result shows that tropospheric ozone keeps increasing over Beijing until 2012 when a dramatic drop occurs. Since then, the tropospheric ozone remains stable over Beijing. Further study shows that the most significant tropospheric ozone variability is found in Spring. However, the annual variation of tropospheric ozone over Beijing is hardly observed in autumn.