

This manuscript has improved after the revisions. The authors have solved most of the pro-existing problems. But there are still some unanswered questions. I recommend this paper to publish after the authors deals with the below problems.

1. The language in the revised manuscript needs further improvement. Some low-level grammatical errors are easily found, such as the errors in line 46, 82, 182, 334, 487. I recommend to find a native English speaker to help correct this paper before next submission.
2. The authors stated that the study is the first using the CNY data covering several years. Actually, some previous studies have used more data to study this issue, such as Sun et al. (2020). The authors need to refer more papers in the introduction part.

Sun, Y., Lei, L., Zhou, W., Chen, C., He, Y., Sun, J., ... & Worsnop, D. R. (2020). A chemical cocktail during the COVID-19 outbreak in Beijing, China: Insights from six-year aerosol particle composition measurements during the Chinese New Year holiday. *Science of the Total Environment*, 742, 140739.

3. In section 3.1, the authors attributed high concentrations of SO₂ and BC on CNY in 2018 to fireworks. However, during the 2018 CNY period fireworks were prohibited. The coal combustion can also emit a lot of SO₂ and BC. Previous studies (e.g., Wang et al. 2018) suggested that massive emission of SO₂ from coal-based power plants, steel and iron works, glassworks and cement mills in the southern Hebei province, the south of Beijing. Therefore, the high-level air pollutants on CNY in 2018 may be from long distance transportation.

Wang, Y., Li, Z., Zhang, Y., Du, W., Zhang, F., Tan, H., Xu, H., Fan, T., Jin, X., Fan, X., Dong, Z., Wang, Q., and Sun, Y.: Characterization of aerosol hygroscopicity, mixing state, and CCN activity at a suburban site in the central North China Plain, *Atmos. Chem. Phys.*, 18, 11739-11752, 10.5194/acp-18-11739-2018, 2018.

4. Line 317-319. The authors said that the air masses transport conditions on CNY in 2018 and 2019 were rather similar. However, the trajectories in Fig.4 show that air mass transported from the south to Beijing in CNY 2018 but from the east to Beijing in CNY 2019. The authors need to know the pollution levels were distinct in the south and east regions of Beijing. Weaker diffusion conditions and more industrial emissions make that the pollution in the south of Beijing is much stronger than in the east (e.g., Wang et al. 2019). Therefore, the transportation from industrial pollutants should be stronger in CNY 2018.

Wang, Y., Dörner, S., Donner, S., Böhnke, S., De Smedt, I., Dickerson, R. R., Dong, Z., He, H., Li, Z., Li, Z., Li, D., Liu, D., Ren, X., Theys, N., Wang, Y., Wang, Y., Wang, Z., Xu, H., Xu, J., and Wagner, T.: Vertical profiles of NO₂, SO₂, HONO, HCHO, CHOCHO and aerosols derived from MAX-DOAS measurements at a rural site in the central western North China Plain and their relation to emission sources and effects of regional

transport, Atmos. Chem. Phys., 19, 5417-5449, 10.5194/acp-19-5417-2019, 2019.

5. Figure 2i: Why the BLH was larger than 2 km in so much time, especially in 2018? In general, BLH was lower than 1 km in winter.
6. Figure 10 was too vague. The full names of these measurement sites need to be annotated.