

This study presents a thorough discussion on how the hygroscopic growth influences the sampling, aerosol size and composition under high RH condition. The datasets and analysis are robust and provide valuable insights for high-RH atmosphere. I have some suggestions.

1. During the fog events, atmospheric RH reaches $\sim 100\%$ for nearly half day. At our city, if this happens, usually it's accompanied with precipitation. Is there any precipitation during the observation periods? How frequent is this foggy condition happens at this site and other NCP cities?
2. RH usually has a diurnal variation, which is higher at night and lower at day. When studying the composition and source reliance on RH, the diurnal variation of RH is mixed with the diurnal variations of different composition and PMF factors. How to understand this influence on Figure 5-7?
3. The hygroscopic growth will change the particle diameter thus shifting the cut-off size of the impactors. It is better to quantify how much underestimation it will cause to PM_{2.5} and PM₁ mass under different RH. This will provide reference for other studies.
4. How about moving the nafion dryer in front of the cyclone impactors? Will this solve the hygroscopic influence on cut-off sizes?