Interactive comment on “Variation of particle number size distributions and chemical compositions at the urban and downwind regional sites in the Pearl River Delta during summertime pollution episodes” by D. L. Yue et al.

Anonymous Referee #1

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This study aims to investigate the regional influence of air pollution in the Pearl River Delta (PRD) region. Despite the Back-garden regional site (BG) was located downwind of the Guangzhou urban site (GZ) in summer when southerly and southwesterly wind prevails, the concentration of particulate matters (PM) during which was the lowest among the year due to the influence of clean sea breeze and heavy rainfall. Without identifying important relevancy to air pollution control policies formulation in the PRD region or significance to science, the perpetual question in terms of primary study motivation: why this study has to be conducted in summer instead of in the season
with the highest concentration of PM (i.e. winter), must be addressed. The overall low PM concentration in summer also induce query on the author’s definition of “pollution episode” in Section 3.2, as supporting references are lacking. To enrich the content of this paper, the authors shall, therefore, provide more references and comparisons with previous studies of PM in the PRD region.

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