Reply to editor

I have one comment regarding the new paragraph starting "During the photochemical active period of the day, the secondary formation of condensable organics, which might occur faster than that of inorganics, is probably responsible for the appearance of less hygroscopic Aitken particles (Mochida et al., 2008)." Here the key is probably not the rate at which the vapors are produced but their relative concentrations. The condensable organics oxidize from relatively higher concentration of a mixture of volatile organic vapors in contrast to sulfuric acid, which is the main inorganic vapor contributing to the growth of nanoparticles. The differences in the condensable vapor concentrations have a larger impact on nucleation mode particles as the Aitken mode particles as they have smaller volume to begin with. Please reformulate this sentence better.

We thank the editor for his comment. In order to incorporate his suggestion, the following paragraph was added (line 349-357, see manuscript.docs without trackchanges):

"The fact that Aitken particles appeared to be less hygroscopic than nuclei particles (Holmgren et al., 2014), reflect the differences in availability in the atmosphere between the concentrations of inorganic and organic condensable vapours and their relative contribution to the hygroscopic GF of nuclei and Aitken modes. More specifically, inorganics and especially sulphuric acid is the main component for nuclei particles in polluted urban areas (Stolzenburg et al., 2005), but subsequent growth may be affected by the type and concentrations of condensable species. This process has been already described previously in Athens (Petäjä et al., 2007), where higher GFs for 20 nm and 50 nm indicated higher mass flux of soluble material. The decrease in hygroscopicity in the Aitken mode in this study can be potentially attributed to the dominating influence of higher concentrations of non-hygroscopic volatile organic vapours relative to the available condensable soluble mass."