

All technical corrections were addressed in this revised manuscript. Regarding Perraud et al., it is our understanding that the authors used total particulate organic nitrates (from measurements) and total gas-phase organic nitrates (from modeling) to calculate the organic nitrate gas-phase partitioning, and that, in their assessment, their results were inconsistent with equilibrium partitioning of organic nitrates.

In Table 1 concentrations of PM nitrate and organics should not have been included for experiments above 60% RH - just as partitioning data was not included for these experiments. These have been removed and the paragraph that references this part of the table has been updated as follows (starting line 353, changes underlined):

“Table 1 summarizes the ON partitioning coefficient averaged over approximately 20 minutes from when PM organics and nitrates peak in concentration. PM concentration and partitioning data are not calculated for experiments above 60% RH. As discussed, these experiments had higher and less consistent nitrate decay rates which may affect partitioning. There may also be issues in applying the wall-loss and CE corrections used here and in previous work (Hildebrandt et al., 2009), which assume that the particles measured by the SEMS before lights are turned on consist only of ammonium sulfate. In these high RH experiments the particles may contain a significant fraction of water. The wall loss correction also assumes that particles lost to the walls participate in partitioning as though they were still in suspension. This assumption may be poor if small amounts of water condense onto the walls of the chamber in these high RH experiments.”