Dear Authors,

I am happy to accept your manuscript for publication in ACP. I have only very minor technical corrections as given below, you want to address before submitting the final manuscript version.

With kindest regards,

Daniel Knopf

Minor technical corrections:

1. 21 and 24: I suggest to have the abbreviation for gas phase as normal font and not subscript.

Correction was made as suggested.

I. 27: Instead of "on" do you mean "for"?

Correction was made as suggested; "for" has been substituted for "on".

1. 339-345: There is something missing in this sentence, in particular "..., which independent measurements by an AMS suggest..." seems not to fit in?

This sentence has been broken up into 2 sentences to clarify the main points. These lines now read: "Observations of a rapid decrease in  $\gamma(N_2O_5)$  with small amounts of organics are in agreement with previous laboratory studies using surface-active compounds (McNeill et al., 2006; Thornton and Abbatt, 2005), humic acids (Badger et al., 2006), and secondary organic aerosol (SOA) from  $\alpha$ -pinene ozonolysis (Anttila et al., 2006; Escorcia et al., 2010; Folkers et al., 2003). Chemical measurements using an AMS suggest that SOA from  $\alpha$ -pinene ozonolysis has an O:C ratio similar to that of semi-volatile oxygenated organic aerosol (SV-OOA, O:C = 0.35  $\pm$  0.14) (Ng et al., 2010)."