

Review comments of :Agarwal et al. (ACPD) **Size distributions of dicarboxylic acids, ketoacids,  $\alpha$ -dicarbonyls, sugars, WSOC, OC, EC and inorganic ions in atmospheric particles over Northern Japan: implication for long-range transport of Siberian biomass burning and East Asian polluted aerosols**

**Page 6715:**

**Line 5: I assume size bins are diameter, but should you say  $D_p < 1.1$  etc...**

**Line 8: can say back trajectory?**

**Line 9: grammar mistake “air masses were arrived” should say “air masses arrived”**

**Line 23: grammar: “episodes in Siberian region” needs article or plural**

**Page 6716:**

**Line 10-11: grammar: “can lead to alter” should say “can alter”**

**Line 12: grammar: article needed before “Asian continent”**

**Line 18: grammar “are flown from Asian continent” could change to “transported from Asia to...”**

**Page 6717:**

**Line 9: grammar: article: “on THE molecular level”**

**Line 11: grammar: article: “ especially THE southern area”**

**Page 6718:**

**Line 2: grammar: article: “during THE campaign”**

**Line 16: are aerodynamic cut sizes a diameter?**

**Line 21: capital letter error: “At”**

**Line 22:23 : “8 to 11” August should be “8-11 August”**

**Line 24: say “local time” instead of “LT”**

**Page 6719:**

**Line 23: what is hcl? Is this HCl?**

**Page 6720:**

**Line 2: nahco3 should be  $\text{NaHCO}_3$ ?**

**Line 16: 10-day back trajectories are a long time? Is it valid to use such long simulations considering the uncertainties that compound in time? Also, are these isentropic or isobaric? This needs to be stated.**

**Page 6721:**

**Line 7: Awkward sentence, verb tense disagreement?**

**Line 23: “8 August and 8-9” seems redundant**

**Page 6724:**

**Line 9: Important hypothesis!**

**Page 6731:**

**Line 8-12: Important finding!**

**Line 13:25: comment – what about sea spray sugars? Russell et al 2010?**

**Page 6731:**

**Line 9: grammar: “this sample may be considered”**

**Page 6733:**

**Line 25:27: Important finding!**

**OVERALL COMMENTS:**

**Relevant findings, analysis seems sound, clear, concise**

**Must consider OC from marine organics, or at least refer to recent articles by O’Dowd et al and Russell et al 2010 regarding a sea spray component of sugars in fine aerosol, and maybe coarse?**

**Be careful of grammar, especially using articles.**