Atmos. Chem. Phys. Discuss., 7, S3036–S3037, 2007
www.atmos-chem-phys-discuss.net/7/S3036/2007/


Atmospheric Chemistry and Physics Discussions



# *Interactive comment on* "Kinetic modeling of Secondary Organic Aerosol formation: effects of particle- and gas-phase reactions of semivolatile products" *by* A. W. H. Chan et al.

**Anonymous Referee #1**

Received and published: 11 July 2007

This paper presents a general model to examine the effects of equilibrium/kinetics on the observed SOA yield for a variety of SOA formation mechanisms. The topic is timely, and this study should help interpret some of the seemingly contradicting laboratory results on SOA production irreversibility. The paper is well written. Publication is recommended after the following issues are addressed:

1. Page 7060, lines 2 to 7: the comments that "higher HC(0) leads the higher A2" seems to only apply when beta_g = 1. When beta_g $>$ 1, the reverse is true, which is the case in Figure 13. This needs clarification

2. Page 7063, line 15: instead of "consuming as much parent hydrocarbon as possi-

ble", the author likely meant "consuming the parent hydrocarbon to the fullest extent" or "consuming all of the parent hydrocarbon."

---

Interactive comment on Atmos. Chem. Phys. Discuss., 7, 7051, 2007.