Atmos. Chem. Phys. Discuss., 11, C23–C24, 2011
www.atmos-chem-phys-discuss.net/11/C23/2011/

Atmospheric Chemistry and Physics Discussions

Interactive comment on "Theoretical basis for convective invigoration due to increased aerosol concentration" *by* Z. J. Lebo and J. H. Seinfeld

S. S. Lee

seoungl@umich.edu

Received and published: 26 January 2011

The following studies can help authors to strengthen their arguments.

1.Lee et al. (2008, JGR) did analysis on the effect of wind shear on aerosol-precipitation interactions in a mesoscale cloud ensemble.

2.Lee et al. (2010, ACPD) investigated the effect of humidity on aerosol-precipitation interactions in a mesoscale cloud ensemble by examining the humidity effect on vorticity, entrainment and gustiness.

3.Lee and Feigold (2010, GRL) demonstrated that the buffering mechanims suggested by Stevens and Feingold (2009, Nature) affect the precipitation response to aerosol in deep convection. They also showed that these mechanisms are associated with the

aerosol effect on cloud-top height.

References:

Lee, S. S., L. J. Donner, V T J Phillips, and Y. Ming, 2008: The dependence of aerosol effects on clouds and precipitation on cloud-system organization, shear and stability. J. Geophys. Res., 113, D16202, doi:10.1029/2007JD009224

Lee, S. S., 2010, Dependence of aerosol-precipitation interactions on humidity in a multiple-cloud system, Atmos. Chem. Phys. Discuss., 10, 25287-25327.

Lee, S. S., and G. Feingold, 2010, Precipitating cloud-system response to aerosol perturbations, Geophys. Res. Lett., 37, L23806, doi:10.1029/2010GL045596.

Interactive comment on Atmos. Chem. Phys. Discuss., 11, 2773, 2011.