

Interactive comment on “Small-scale mixing processes enhancing troposphere-to-stratosphere transport by pyro-cumulonimbus storms” by G. Luderer et al.

G. Luderer et al.

Received and published: 16 November 2007

Thanks for the interesting comment!

Since the aerosol is optically very thin (orders of magnitude thinner than the cloud hydrometeors) in the thermal IR wavelength range considered, the smoke has practically no effect on the observed signatures. Similarly, the direct effect of the smoke on the dynamics is very small. Smoke concentrations are of the order of 1 mg m^{-3} , orders of magnitude smaller than the hydrometeor loadings.

However, the aerosol does have a strong on the microphysical structure of the pyroCb. The aerosol-microphysics interactions also affect the dynamics to some extent. This is discussed in the Luderer et. al (2006) ACP paper.

Interactive comment on Atmos. Chem. Phys. Discuss., 7, 10371, 2007.

ACPD

7, S6971–S6972, 2007

Interactive
Comment

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

S6972

EGU