

Interactive comment on “Aerosol particle properties in the tropical free troposphere observed at Pico Espejo (4765 m a.s.l.), Venezuela” by T. Schmeißner et al.

R. Krejci

radek@itm.su.se

Received and published: 25 January 2011

Dear Gourihar, In this paper we presented more statistical overview on seasonal cycles observed in lowermost tropical free troposphere. Analysis of contribution from various source regions and source types is ongoing. We have FLEXPART runs every 3 hours for 2 years of measurements. Based on the air mass transport analysis we can see clear influence of regional biomass sources from South America, but also from equatorial and southern subtropical Africa, depends on position of the ITCZ during a year. How this is seen in aerosol properties and size distribution is not a simple straightforward picture. Often these events are associated with convective transport on the way,

C12750

which results in aerosol processing and washout in convective clouds. Sometimes we do see higher accumulation mode aerosol concentrations, but there are occasions when accumulation aerosol is strongly reduced (by cloud processing very likely) and aerosol size distribution shows pronounced Aitken mode indicating new particle formation associated with convective clouds outflow. We hope to have clearer picture after analysis of light absorbing aerosol measurements will be completed.

If you are interested, we can attempt to have a look on both dataset (Pico Espejo and your Rocky Mountains) together. We might get a good picture of lowermost FT transport on an intercontinental scale

Regards Radovan Krejci radek@itm.su.se

Interactive comment on Atmos. Chem. Phys. Discuss., 10, 29153, 2010.

C12751