

Interactive comment on “Trans-Pacific dust transport: integrated analysis of NASA/CALIPSO and a global aerosol transport model” by K. Eguchi et al.

Anonymous Referee #3

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This paper shows a very interesting analysis of a dust transport event across the Pacific Ocean, from the desert of East Asia to north America. This case study is interesting as it involves two different events, one with a moderate altitude transport from the Gobi desert that gets mixed up with biomass burning aerosol, and another from the Taklimakan desert at much higher altitude. The event analysis uses both model simulations and vertical profiles acquired by the Calipso lidar.

This is a well conducted analysis that deserves to be published. On the other hand, it is not fully original as several other similar works have been done in recent years, as soon as Calipso data got available. The author should perhaps make a better recognition of

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similar works and explain what is the novelty of their own contribution. See for instance [Generoso et al (2008), J. Geophys. Res., 113, D24209, doi:10.1029/2008JD010154, or Huang et al (2008), , J. Geophys. Res., 113, D23212, doi:10.1029/2008JD010620]

One problem of such studies is that they cannot be generalized easily. It is not clear whether the case that is analyzed is an exceptional event or whether it is representative of a frequent phenomenon. As a single case analysis, the author should avoid to make general statements as they do in the last sentence of the abstract or in the conclusions. On the other hand, they may state (if appropriate) that they have looked at other dates and have observed similar events. It is even better if they could provide a frequency of occurrence.

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 4013, 2009.

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