**Atmospheric
Measurement
Techniques
Discussions**

Interactive comment on "Aerosol classification from airborne HSRL and comparisons with the CALIPSO vertical feature mask" by S. P. Burton et al.

Anonymous Referee #2

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The paper continues the previous research of Burton et. al, 2012 on aerosol classification from particle intensive parameters measured by airborne HSRL-1 lidar. In this study the developed scheme is used to validate the classification exploited in CALIOP algorithm. The retrieval of aerosol extinction and backscattering from CALIOP requires assumption about the particle lidar ratio and the aerosol type is a necessary input value. Thus comparison of aerosol types derived from HSRL-1 and CALIOP strategies is extremely important. The results presented in the paper confirm that in many cases the CALIOP classification is valid, still some improvements are needed when the mixture of dust with smoke and marine aerosol is considered. The paper is well and clearly written and the authors carefully analyze different aspects of extracting

information about aerosol type from lidar measurements.

Interactive comment on Atmos. Meas. Tech. Discuss., 6, 1815, 2013.