

Global Distribution of Aerosol and Aerosol Forcing from CALIOP Observations

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A Level 3 monthly gridded aerosol profile product has been developed from CALIOP global aerosol profile data, available since early this year. Detection limits of the CALIOP retrieval algorithm and the representivity of aerosol profiles in the upper troposphere are of particular concern for model evaluation. Initial validation studies have been performed to characterize the accuracy and representivity of the monthly gridded profile data. A number of improvements have been identified and an improved version is planned for release later this year. Additionally, CALIOP aerosol profiles have been used to estimate the global direct aerosol radiative effect. Use of CALIOP aerosol data allows observation-based estimates of cloudy-sky aerosol DRE. Results of these studies will be discussed.