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Comparison of AOD and Lidar ratios retrieved from a synergy of multiwavelength Raman Lidar, backscatter CAML lidar and AERONET sunphotometry

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Backscatter lidar profiles from the Raman multiwavelength Iidar, backscatter profiles from CAML lidar and aerosol optical depths (AODs) from the AERONET network at Ispra (Varese) Italy, were acquired during 2012-2013. We will present several cases events showing the importance in retrieving different parameters such as AODs, extinction coefficients, colour ratios and depolarization ratios when using synergy of several instruments especially ground based lidars and sunphotometers. Multiwavelength Raman lidar and sunphotometry increase the accuracy of lidar ratio (LR) values, we will show some LR daily variations depending on the several and different events acquired. Preliminary results of comparison between LR and AODs show a degree of physical coherency using our two lidars and the sunphotometer. We will be using CALIPSO satellite profiles when it is possible to compare AODs and LR with our ground based measurements. Brief conclusion will be presented during this communication, about the daily variations of the LR, for different atmospheric events.