

Interactive comment on “Comparison of aerosol properties retrieved using GARRLiC, LIRIC, and Raman algorithms applied to multi-wavelength LIDAR and sun/sky-photometer data” by V. Bovchaliuk et al.

Anonymous Referee #1

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Depending on the LIDAR characteristics, different techniques can be used for obtaining optical and microphysical properties of aerosols and is difficult to decide in some particular cases which one of these techniques is the best and provide the best output. This paper is focused on detailed analysis and comparison of some aerosol optical properties and microphysical properties retrieved using The Raman technique and inversion with regularization, LIRIC (Lidar-Radiometer Inversion Code) and GARRLiC (Generalized Aerosol Retrieval from Radiometer and LIDAR Combined data). There are some inconsistencies in the retrieved LIDAR ratios, but aerosol properties derived from lidar measurements were generally in agreement with the AERONET (AERosol RObotic

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NETwork). Three dust events were presented in details: over Lille on 30 March 2014 transported mineral dust, analysis of a heavy dust event in Dakar on 10 April 2015 and on 29 March 2014 with complex aerosol load. More papers like this should be published so we could get a better view of the possibilities and challenges in using these different algorithms.

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