

***Interactive comment on “Variability of aerosol properties over Eastern Europe observed from ground and satellites in the period from 2003 to 2011” by A. Bovchaliuk et al.***

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Dear Prof. Dr. Alexandros D. Papayannis

We appreciate your useful comment and we improved citation. We added references to earlier work on aerosol systematic measurements performed in the Eastern Mediterranean Region and corrected the text (see below).

All the best

On behalf of authors

Andrii Bovchaliuk

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instead lines 3-7, page 2647 new text:

The Sahara is the major source of mineral dust that often spreads across the Mediterranean to Europe. Saharan dust aerosols over the North East Mediterranean that lies on the way for aerosol to Eastern Europe region well studied in (Papayannis et al., 2005, 2008; Kalivitis et al., 2007; Gerasopoulos et al., 2007). According to Israelevich et al. (2012) whose research is based on data from MODIS for the period from 2001 to 2010 Saharan dust is transported to Eastern Europe region mostly in autumn (August–September) and in spring (April).

to Reference:

Papayannis, A., Balis, D., Amiridis, V., Chourdakis, G., Tsaknakis, G., Zerefos, C., Castanho, A. D. A., Nickovic, S., Kazadzis, S., and Grabowski, J.: Measurements of Saharan dust aerosols over the Eastern Mediterranean using elastic backscatter-Raman lidar, spectrophotometric and satellite observations in the frame of the EARLINET project, *Atmos. Chem. Phys.*, 5, 2065–2079, doi:10.5194/acp-5-2065-2005, 2005.

Papayannis, A., Amiridis, V., Mona, L., Tsaknakis, G., Balis, D., Bosenberg, J., Chaikovski, A., De Tomasi, F., Grigorov, I., Mattis, I., Mitev, V., Muller, D., Nickovic, S., Perez, C., Pietruczuk, A., Pisani, G., Ravetta, F., Rizi, V., Sicard, M., Trickl, T., Wiegner, M., Gerding, M., Mamouri, R. E., D’Amico, G., and Pappalardo, G.: Systematic lidar observations of Saharan dust over Europe in the frame of EARLINET (2000–2002), *J. Geophys. Res.*, 113, D10204, doi:10.1029/2007JD009028, 2008.

Kalivitis, N., Gerasopoulos, E., Vrekoussis, M., Kouvarakis, G., Kubilay, N., Hatzianastassiou, N., Vardavas, I., and Mihalopoulos, N.: Dust transport over the eastern Mediterranean derived from Total Ozone Mapping Spectrometer, Aerosol Robotic Network, and surface measurements, *J. Geophys. Res.*, 112, D03202, doi:10.1029/2006JD007510, 2007.

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Gerasopoulos, E., Koulouri, E., Kalivitis, N., Kouvarakis, G., Saarikoski, S., Mäkelä, T., Hillamo, R., and Mihalopoulos, N.: Size-segregated mass distributions of aerosols over Eastern Mediterranean: seasonal variability and comparison with AERONET columnar size-distributions, *Atmos. Chem. Phys.*, 7, 2551-2561, doi:10.5194/acp-7-2551-2007, 2007.

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Interactive comment on *Atmos. Chem. Phys. Discuss.*, 13, 2641, 2013.