

Interactive comment on “AERONET-based microphysical and optical properties of smoke-dominated aerosol near source regions and transported over oceans, and implications for satellite retrievals of aerosol optical depth” by A. M. Sayer et al.

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Dear Dr. Andrew Sayer,

Considerable amounts of dust aerosols are also observed sometimes over the Sevastopol site, both local origination and transported from distant sources. For example, an incidental soil dust event was observed in Europe in 23–25 March 2007 (see Birmili

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et al., 2008; Bessagnet et al., 2008) that was originated in southern Ukraine (near to Sevastopol, also see uploaded Fig. 1). Moreover, according to Israelevich et al. (2012), whose research is based on data from MODIS for the period from 2001 to 2010, the Saharan dust is transported over the northeastern Mediterranean (Kalivitis et al., 2007) to the Eastern Europe region (over Sevastopol site). According to Bovchaliuk et al., 2013, where is presented preliminary analysis about soil and dust aerosol in May 2007, You can make certain of the this, for example, in Fig. 2.

1. Birmili, W., Schepanski, K., Ansmann, A., Spindler, G., Tegen, I., Wehner, B., Nowak, A., Reimer, E., Mattis, I., Müller, K., Brüggemann, E., Gnauk, T., Herrmann, H., Wiedensohler, A., Althausen, D., Schladitz, A., Tuch, T., and Löschau, G.: A case of extreme particulate matter concentrations over Central Europe caused by dust emitted over the southern Ukraine, *Atmos. Chem. Phys.*, 8, 997–1016, doi:10.5194/acp-8-997-2008, 2008.
2. Bessagnet, B., Menut, L., Aymoz, G., Chepfer, H., and Vautard, R.: Modeling dust emissions and transport within Europe: the Ukraine March 2007 event, *J. Geophys. Res.*, 113, D15202, doi:10.1029/2007JD009541, 2008.
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4. 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.
5. Bovchaliuk, A., Milinevsky, G., Danylevsky, V., Goloub, P., Dubovik, O., Holdak, A., Ducos, F., and Sosonkin, M.: Variability of aerosol properties over Eastern Europe observed from ground and satellites in the period from 2003 to 2011, *Atmos. Chem.*

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Sincerely,

Andrii Bovchaliuk

Interactive comment on Atmos. Chem. Phys. Discuss., 13, 25013, 2013.

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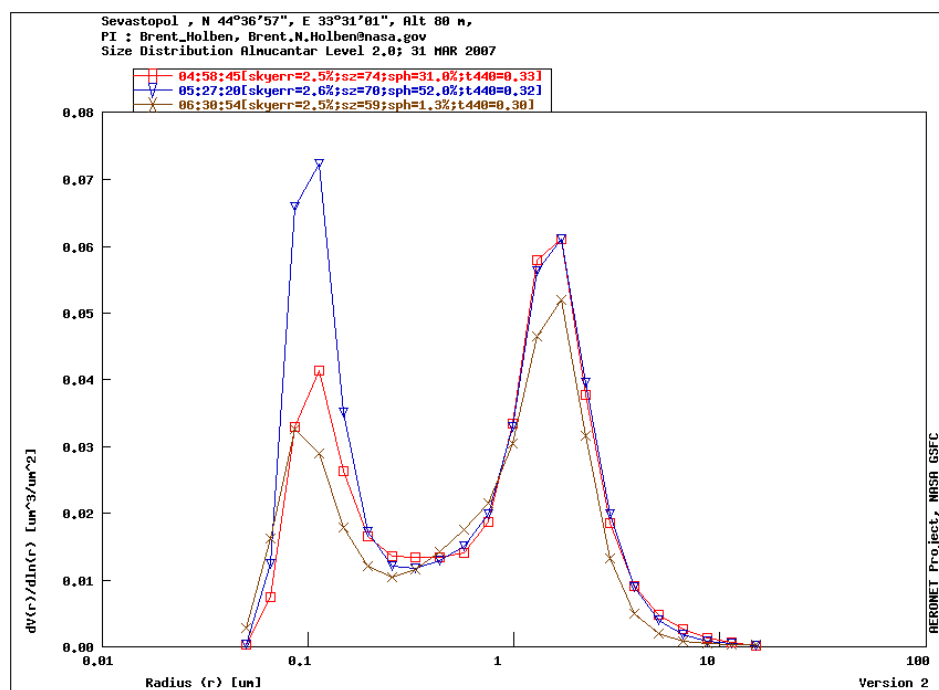


Fig. 1.

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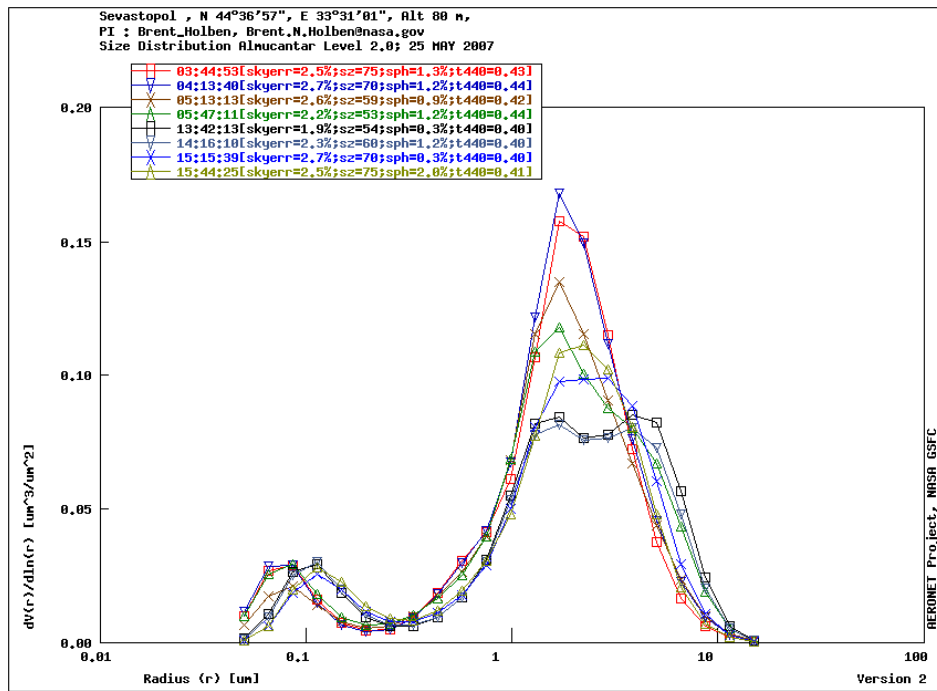


Fig. 2.

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