

***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 authors,

The manuscript was prepared in constructive form. I read this paper with interest. However, the paper seems to lack of citations on work about strong forest and peat wildfires in Russia during July-August 2010 (Pg 25030, Ln 5-9):

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1. Konovalov, I. B., Beekmann, M., Kuznetsova, I. N., Yurova, A., and Zvyagintsev, A. M.: Atmospheric impacts of the 2010 Russian wildfires: integrating modelling and measurements of an extreme air pollution episode in the Moscow region, *Atmos. Chem. Phys.*, 11, 10031–10056, doi:10.5194/acp-11-10031-2011, 2011.
2. Chubarova, N., Nezval', Ye., Sviridenkov, I., Smirnov, A., and Slutsker, I.: Smoke aerosol and its radiative effects during extreme fire event over Central Russia in summer 2010, *Atmos. Meas. Tech.*, 5, 557–568, doi:10.5194/amt-5-557-2012, 2012.
3. Witte, J. C., Douglass, A. R., da Silva, A., Torres, O., Levy, R., and Duncan, B. N.: NASA A-Train and Terra observations of the 2010 Russian wildfires, *Atmos. Chem. Phys.*, 11, 9287–9301, doi:10.5194/acp-11-9287-2011, 2011.
4. 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. Phys.*, 13, 6587–6602, doi:10.5194/acp-13-6587-2013, 2013.

There were chosen period of 20100815–18 for Sevastopol site (Ukraine) in yours work (Table 5). This period was characterized by transportation of aerosols to Sevastopol from this special event occurred in Moscow region. Moreover, it can be used data from 4 April 2007 and 27 April 2009 which characterized with transportation of smoke too.

Specific Comments:

Pg 25032:

Ln 1-2:

"A similar urban contribution could explain the larger fine mode volume radius at Sevastopol (Ukraine) and Singapore than the comparison site of Yakutsk."

According to [4] the biomass burning and urban aerosols are prevailed in April 2007 but dust and salt – in May 2007 (Fig. 2c) in Sevastopol site. In addition, it is a port

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city and presence of urban aerosols can be explained by ship engine emissions in the Black Sea.

It should be emphasized that I try to help with improving the manuscript. Thus, the authors can decide whether to include cited papers.

Sincerely,

Andrii Bovchaliuk

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

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