

***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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Received and published: 1 May 2013

Dear Dr. Aleksander Pietruczuk

We thank for your useful comment and we improved citation. We added references to earlier work on aerosol measurements performed at Belsk and Minsk regarding seasonal transport of aerosols and corrected the text (see below).

All the best

On behalf of authors

Andrii Bovchaliuk

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after end of sentence at line 4 at page 2646 inserted new text:

Independent studies confirm two peaks during the year (April and August) over Belsk, Poland (Jaroslowski and Pietruczuk, 2010) that is caused by biomass burning in Europe and from accumulation of aerosol in the atmosphere. Analyzing the spring peaks over Belsk and Minsk showed the time shift between peaks of PM10 and AOT that probably correspond to transportation of different types of aerosol on different altitudes (Pietruczuk and Chaikovsky, 2012). Biomass burning products, smoke and sulfate aerosols are transported mainly in the boundary layer or just over it, increasing both PM10 concentration and AOT. The dust aerosol transported in the free troposphere slightly affects the AOT values only.

to Reference:

Jaroslowski, J., and Pietruczuk A.: On the origin of seasonal variation of aerosol optical thickness in UV range over Belsk, Poland, *Acta Geophys.*, 58(6), 1134-1146, DOI:10.2478/s11600-010-0019-4, 2010.

Pietruczuk, A., and Chaikovsky, A.: Variability of aerosol properties during the 2007–2010 spring seasons over central Europe. *Acta Geophys.*, 60(5), 1338-1358, DOI:10.2478/s11600-012-0017-9, 2012.

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

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