



Comparison of AERONET and Russian actinometrical network aerosol optical depths over Russia

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The estimates of comparable values of aerosol optical depth (AOD) at different averaging periods are obtained on the basis of the data network AERONET and ground based solar radiation observations on the territory of the Russian Federation. A comparison is carried out for stations that match by location or nearby. Synchronous monthly and daily averaging datasets of AOD for the period 2004–2012 were analyzed. Periods of the data coincidence and violations in synchronous AOD changes were revealed for each set pair. Violations in the synchronicity of AOD relative course may be caused by differences in location of observation points and associated with a possible inhomogeneity of the cloud field as well as with local features of the atmosphere conditions. Additionally a comparison of AOD data obtained by ground and satellite observations was made. Presented results are preliminary and will be the basis for a systematic analysis of AOD data obtained in the Russian Federation. The work has been funded by RFBR (project #15-05-05803).