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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Estimation of the aerosol radiative forcing at ground level, overland, and in cloudless atmosphere, from METEOSAT-7 observation: method andfirst results" *by* T. Elias and J.-L. Roujean

T. Elias and J.-L. Roujean

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Abstract and conclusion were similarly modified to take into account the suggestion of the referee to specify that results are valid for a case study of significant amplitude (factor 6 in aerosol optical thickness variation). Even if the feasibility of the method has been proved here, validation on a regional scale must be the objective of a future paper.

The second paragraph of the abstract is copied here:

The validation of DSSF is performed comparing retrievals with ground-based mea-

surements acquired in two contrasted environments: an urban site near Paris and a continental background site located South East of France. The study is concentrated on aerosol episodes occurring around the 2003 summer heat wave, providing 42 cases of comparison for variable solar zenith angle (from 59° to 69°), variable aerosol type (biomass burning emissions and urban pollution), and variable aerosol optical thickness (a factor 6 in magnitude). The method reproduces measurements of DSSF within an accuracy assessment of 20 Wm-2 (5% in relative) in 70% of the situations, and within 40 Wm-2 in 90% of the situations, for the case study considered here.

Interactive comment on Atmos. Chem. Phys. Discuss., 7, 13503, 2007.