Geophysical Research Abstracts, Vol. 9, 09709, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-09709

Validation and synoptic environment of dust aerosol event detected by OMI index during the AMMA SOP

C.Lavaysse, J. Pelon, C. Flamant

Service d'Aeronomie, 4 place Jussieu 75252 Paris Cédex 05, France

The aims of this study are : To compare and validate the OMI aerosol index with others sensors ; To analyse the interaction between the aerosol outbreak and transport with the atmosphere dynamics at synoptic scale.

During the AMMA SOP (June to September 2006), we compare the aerosol optical thickness at different station on the Sahel area with the OMI aerosol index average on 1° square around the station. The comparison shows good correlation between the two temporal series data. But sometimes, we have detected days with large divergence. Using Meteo France cloud classification, we have shown that during these days, hight level cloud (i.e. cirrus) are present. To assess the sensibility of each sensor to these clouds, we used ground lidar (Arm, based at Niamey) and satellite lidar data (Calipso, launch in April 2006) to obtain the level distribution of dust aerosol.

The second part of this study is to analyse the dynamical environment of the large dust aerosol outbreak and transport throughout the Sahel area and Tropical Atlantic. In particularly, we analyse the atmosphere at synoptic scale to point out the possible interaction with the African Easterly Waves and Heat Low.