

**ASIAN DUST EPISODE IN JUNE 2006: AEROSOL OBSERVATIONS OVER A  
HIGH ALTITUDE SITE IN THE CENTRAL HIMALAYAS**

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**Abstract**

A dust storm blew through the Indus valley and proceeding towards the Himalayan region was observed on 12<sup>th</sup> June 2006. On next day i.e. on 13<sup>th</sup> June, 2006, large changes in aerosols physical and optical properties are observed at a high altitude site Nainital (29.4°N; 79.5°E, 1958 m amsl) in the central Himalayan region. The dust episodes brought pronounced changes in the composite aerosol size distribution and in the columnar aerosol optical depths as compared to dust free conditions. The spectral aerosol optical depth values showed about four times increase as compared to those for non-dusty days and this variation was found to be increased considerably from shorter to longer wavelengths. Angstrom turbidity parameter ( $\beta$ ) estimated for a dusty day was found to be 3 to 4.5 times more than the non-dusty conditions. Angstrom exponent ( $\alpha$ ) values were estimated to be less than zero during peak of the dusty event, indicating the dominance of coarse particles. Remarkably large values of OMI aerosol index (2.5 to 3.5) revealed the presence of high dust clouds passing over this region on 12<sup>th</sup> June 2006.