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Spectral Variations of AOD and Its Validation Using MODIS: First Cut Results from Kannur, India

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ABSTRACT

The properties of aerosols present in the atmosphere are often influenced by the environment in which they are being disbursed. Subsequently, the variation in the environmental conditions may severely affect the aerosol size and distribution. Thus it is quite exciting to investigate the spatial and temporal variations of AOD that are being affected by the significant changes in the environment to a large extent. This paper presents preliminary observations of diurnal variation of Aerosol Optical Depth (AOD) over two distinct locations in Kannur, India. The AOD over a location which has strong marine influence shows the presence of coarse particles while that on a valley of Western Ghats reveals the combined influences of both land and the ocean. The correlation between AOD measured from the ground and that retrieved from MODIS is fairly good. The AODs retrieved from ground based observation is validated with that estimated from MODIS in the context of meteorological parameters observed during the period of this observation.

KEYWORDS

Aerosol; MICROTOP; MODIS; Meteorological Parameters; Kannur

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