Aerosol optical characteristics in SKYNET/GEOSS site from measurements of sky radiometers.

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Abstract

Aerosol and cloud optical properties are studied using data from sky radiometer measurements. We started the long-term monitoring of aerosols and cloud by using a sky radiometer on SKYNET project since 1994. We are seeking in this data information on the aerosol optical characteristics at each site. The observation site of SKYNET/GEOSS is located mainly in Cape Hedo, Fukue-jima, Miyako-jima, Japan, and some Asian site. The Sky radiometer is a portable instrument that takes measurements of aerosols only during daytime under clear sky condition. It observes both direct solar irradiance and diffuse sky radiation at every 10 minutes. We present the temporal and spatial variation of the aerosol optical properties in each site using sky radiometer. The aerosol optical properties have a clearly spatial variability in Japan site and short period of time (e.g. Asian dust event). Alpha is low and AOD(0.5) are high during spring by Asian dust events.