

Aerosol sun photometry throughout five years in Japan

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Japan locates in an interesting region for aerosol study. Most of natural and anthropogenic aerosols can be measured. Some of natural aerosols are the oceanic type aerosols provided from the ocean, e.g., West Pacific Ocean, Sea of Japan and East China Sea, and the other is Asian dust, what one calls Yellow sand, coming from Gobi and Taklamakan desert area in China. It should be enhanced that most of these natural aerosols, especially dust aerosols, are mixed with the anthropogenic (e.g. nitrate and sulfate) aerosols during long distance transportation.

Two automatic sun/sky radiometers have been set for the worldwide aerosol sun photometer network (AERONET). One is facing to Pacific Ocean (Shirahama) for taking continuous measurements of background aerosols of Japan, and the other is set at megalopolis city (Osaka).

This work intends to show the temporary and/or spatially change of aerosol properties, e.g., aerosol optical thickness at 0.44, 0.67, and 0.87 microns, size distribution, and single scattering albedo. For instance, the regional difference between city and remote area is examined, and time variation involves long time change over five years and also seasonal change.