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### Detection and Analysis of Dust Aerosol Particles over the

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#### Abstract

It is well known that the heavy soil dust has been transported from the Japanese archipelago to East Asia on westerly winds, especially in spring. The satellite observations are necessary for global monitoring of the Asian dust. A new algorithm for detecting dust in space is proposed based on the multispectral satellite data. The derived dust optical depth is validated with the ground-based measurements and/or model simulations. The sun/sky photometry has been undertaken at NASA/AERONE'04 and NIES'05. The suspended particulate matter (SPM) sampling and NIES/LIDAR network

been simultaneously working there. However, it is difficult to relate measurements directly to the column space data. Therefore, in order to compare the model results with the surface-level data, an aerosol transportation model simulation and the measurements are examined with the model simulations.

As a result, the distribution of Asian dust aerosols is retrieved in a comparison with the measurements in this study.

Keywords: [Remote sensing](#), [Yellow sand](#), [Aerosol](#), [Model simulation](#)

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