Kitakoga, S., Y. Inoue, M. Kuji, T. Hayasaka, 2014: Characteristics of aerosol properties of haze and yellow sand examined from SKYNET measurements over East China Sea. *J. Meteor. Soc. Japan*, **92A**, 57-69.
http://dx.doi.org/10.2151/jmsj.2014-A04.

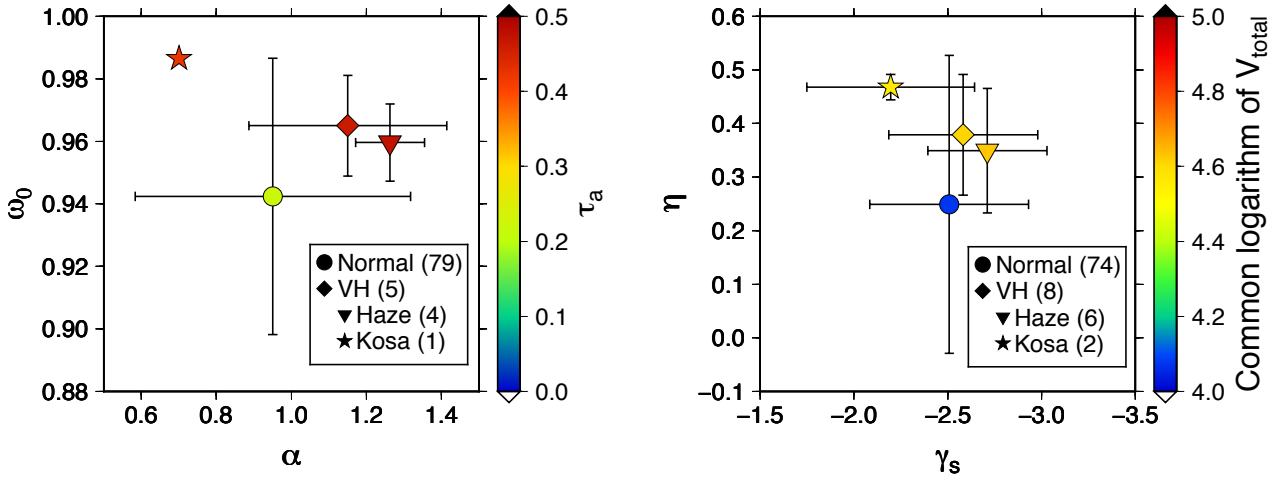

Figure 1. Characteristics of atmospheric phenomena with aerosol properties. Circles represent normal atmospheric conditions such that the visibilities are equal to or more than 10 km, rhombuses represent points of Visual Hindrance (VH), triangles represent haze, stars indicate yellow sand (Kosa), and the values in parentheses indicate the number of datasets. The error bar is the standard deviation. (left) Single scattering albedo ω_0 versus Ångström exponent α with the color bar showing aerosol optical depth τ_a at 500 nm, as obtained from sky radiometer measurements. (right) Ratio of non-spherical particles η versus the ratio of coarse particles γ_s, with the color bar showing the total volume of aerosols V_{total} in a common logarithmic scale, as obtained from Light Detection and Ranging (LIDAR) and Optical Particle Counter (OPC) measurements.

- Characteristics of atmospheric phenomena such as haze and yellow sand (Kosa) events were investigated in terms of aerosols by using sky radiometers, LIDAR, and OPC observations at Fukue-jima and Amami-Oshima Islands from 2003 to 2004.

- Aerosol properties such as loading, light absorptivity, particle size, non-sphericity, and vertical distribution showed specific features both in the atmospheric column (Fig. 1: left) and near the surface (Fig. 1: right), depending on the atmospheric phenomena compared with normal atmospheric conditions.

- It was clearly confirmed that the influence of limited light absorptivity dominated even during a Kosa event (Fig. 1: left).