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MIS029-P03

Room:Convention Hall

Time:May 23 14:00-16:30

## Measurement of variation of total mass, composition, and optical property for aerosol particles at summit of Mt. Fuji

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It is well known that a particle in which diameter is less than 2.5  $\mu\text{m}$ (PM2.5) influence health issue by air pollution and climate change by scattering and absorbing sun light. It is important to observe the chemical composition, optical property and mass concentration of PM2.5 to clear source, transportation of PM2.5. To investigate behavior of PM2.5 at the summit of Mt. Fuji, we measured total mass concentration and optical property of PM2.5 using SHARP monitor and nephelometer, respectively, and collected PM2.5 using high-volume air sampler in this study.

Mass concentrations of PM2.5 in the daytime were higher than that in the night time. It is suggested that top of Mt. Fuji is strongly influenced by valley breeze. Using two high-volume air samplers we collected PM2.5 on the quartz filter which was exchanged every week or 3 days. We controlled sampling time for high-volume air sampler to classify daytime (10:00-19:00) and nighttime (0:00-5:00) PM2.5. We analyzed the chemical composition such as water soluble compounds (sulfate, nitrate, and ammonium etc.), metals and organic and elemental carbon of PM2.5 on the filter we collected. From the observed results and metrological data we investigated the cause of variety of aerosol concentration and mass closure.

Keywords: Mt. Fuji, optical property, chemical composition, mass closure