

Japan Geoscience Union Meeting 2011

(May 22-27 2011 at Makuhari, Chiba, Japan)

©2011. Japan Geoscience Union. All Rights Reserved.



MIS029-P05

Room:Convention Hall

Time:May 23 14:00-16:30

Study on cloud water chemistry and its controlling factors using Mt. Fuji as an observational tower (2)

Daisuke Tahara^{1*}, Hiroshi Okochi¹, Syohei Maruyama¹, Yukiya Minami²

¹Waseda Univ., ²Ishikawa Pref. Univ.

It was clarified that long-range transport of acidic substances and the subsequent deposition caused forest decline in Europe and North America in the 1960s. Various air pollutants, emitted in East Asia by recent economic and industrial development, are inevitably transported to Japan by the westerlies because Japan is located at the east end of Chinese continent. Chemical transport model like CMAQ revealed that the long-range transport of ozone and the precursors from China causes the increase of advisory for photochemical smog in widespread area from the northern part of Kyusyu to Kanto region in Japan.

Mt. Fuji, which is the highest mountain in Japan (3776 m a.s.l.), is an isolated peak and therefore could be regarded as the tower to observe the long-range transportation from East Asia such as China and Korea to Japan, the mixing processes from the boundary layer to the free troposphere, and the nucleation/precipitation scavenging processes of various atmospheric pollutants. Simultaneous sampling of cloud water has been performed at the summit and in the foot (1300 m a.s.l.) of Mt. Fuji during the summer from 2006. We here mainly report the summer observational campaign in 2010.

Keywords: Free Troposphere, Background Concentration, Long-range Transportation, Aerosol-Gas-Cloud Interaction