Japan Geoscience Union Meeting 2014
(28 April - 02 May 2014 at Pacifico YOKOHAMA, Kanagawa, Japan)

U04-P01 会場:3 階ポスター会場 時間:4 月 29 日 14:00-15:15

航空機によって捕集された人為起源およびバイオマス燃焼から発生したエアロゾル粒子の電子顕微鏡分析
Aerosol particles collected using aircrafts from anthropogenic sources and biomass burning and electron microscopy

足立 光司 [1*]
ADACHI, Kouji[1*]

[1] 気象研究所
[1]Meteorological Research Institute

Aerosol particles collected during four sampling campaigns using aircrafts were analyzed using transmission electron microscopes (TEM). The samples were collected from two A-Force campaigns in 2013 (winter and summer) conducted in Japan and Korea, BBOP campaign in 2013 in the USA, and MILAGRO campaign in 2006 in Mexico. These campaigns aim to characterize aerosol particles from regional transportation, biomass burning, and both. The samples collected using aircrafts are useful for characterization of particle agings, especially changes of their mixing states, from emissions as the aircrafts can chase plumes of different aging periods. An example of such aerosol-particle aging is tar ball formation in biomass burning smoke. Tar ball is spherical, organic aerosol particles commonly from combustion smoke of a wide range of biomass burning. At the early stage of the emission, tar balls are liquid but as they age in the smoke, they become solid and spherical. Sets of biomass burning aerosol samples with different aging stages collected using an aircraft revealed such processes in atmosphere. I will also discuss the samples collected over Japan during the A-Force campaigns.

キーワード: 電子顕微鏡, 東アジア, 米北西部, A-Force, BBOP, MILAGRO
Keywords: Electron microscope, East Asia, Northwest US, A-Force, BBOP, MILAGRO