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Long-range transport of mercury in Mt. Fuji during summer observation campaign, 2008

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An intensive field campaign for the measurement of elemental gaseous mercury (Hg(0)) and Particulate mercury Hg(p) concentrations in ambient air was conducted in summit of Mt. Fuji from 11 August to 17 August in 2008 using an developed measurement technology, which was the first time Hg(0) and Hg(p) were monitored at a remote area in Mt. Fuji. The overall average Hg(0) covering the sampling periods was 2.61 1.24ng/m3, which is only a little elevated comparing to global background of approximately 1.5-2.0ng/m3.

Elemental gaseous mercury concentrations range from 1.45ng/m3 to 5.42ng/m3 in ambient air. Although there is not significant difference in concentration between daytime and night time, distinct daily variability of Hg(0) observed during survey periods. The phenomenon is caused by the direction of airmass. The back trajectory analysis were shown in Fig. 2. From this result, when airmass come from East Asian continent, elemental gaseous mercury concentrations were larger when that come from the Pacific Ocean.

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