

## Ship-based observation of black carbon at North Pacific Ocean: Analysis of transportation event at January on 2016

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Ship-based measurement for black carbon (BC) and carbon monoxide (CO) was conducted on board the R/V Mirai from 18 at North Pacific Ocean (12.9 °N, 130.5 °E) to 24 at Yokohama Port (35.4°N, 139.7°W) January 2016. Measurements of atmospheric BC particles and CO were conducted using a single particle soot photometer (SP2) instrument and CO analyzer, respectively. Ambient particles and gases were sampled on the flying bridge, ~18m above sea level. From 18 to 19 January 2016 (around 20°N and 135° E), high concentrations of BC and CO were observed. It was suggested the contribution from the Asian continent air mass by backward trajectory analysis. In spite of almost same source, it was indicated that different BC size distribution and mixing state at air mass in 18 and 19 January plumes, suggesting the air masses would undergo different removal processes. In the presentation, we are going to discuss the comparison with CO and other event cases in the cruise.

Keywords: Black carbon, single particle, Ship-based measurement