

### **3.005 Long term measurements of CO, O<sub>3</sub>, and VOCs at Moshiri, Hokkaido in northern Japan.**

Presenting Author:

**Shungo KATO**, Tokyo Metropolitan University, Faculty of Urban Environmental Sciences, [shungo@tmu.ac.jp](mailto:shungo@tmu.ac.jp)

Co-Authors:

**Sandra Hong Lam Hong**, Tokyo Metropolitan University, Faculty of Urban Environmental Sciences

**Yoshizumi Kajii**, Kyoto University, Graduate School of Global Environmental Studies

**Masayuki Sera**, Nagoya University, Institute for Space-Earth Environmental Research

**Yutaka Matsumi**, Nagoya University, Institute for Space-Earth Environmental Research

Abstract:

Atmospheric CO, O<sub>3</sub> and VOCs were observed at Moshiri, Hokkaido (N44.4, E142.2), a remote site in northern Japan from 2000. CO and O<sub>3</sub> were monitored by IR absorption and UV absorption instruments. VOCs were analyzed by GC-FID for C<sub>2</sub>-C<sub>11</sub> hydrocarbons by weekly canister sampling. Clear seasonal cycles, high during winter-spring and low during summer, were observed for these trace gases. High concentration tended to be observed when Siberian forest fire periods. Average concentration of each VOC was related to the lifetime in the atmosphere. There was no significant long term trend for O<sub>3</sub> concentration. On the contrast, decreasing trend was observed for CO. CO and ethane have similar lifetime in the atmosphere, but no clear trend was observed for ethane and other VOCs. This difference would indicate that the CO decreasing trend would be caused by decreasing emission of CO, but not caused by increasing of removal process (global average OH concentration).