Author(s):

Eric C. Apel, Rebecca S. Hornbrook, Alan Hills, Dan Riemer, Nicola Blake ACD/NCAR, 3450 Mitchell Lane, Boulder, CO 80301 US, 303-497-1452 apel@ucar.edu, http://staff.ucar.edu/browse/people/10885

1.0 Data Set Overview:

NOMADSS Field Project, Project P.I.s: Dan Jaffe, University of Washington, Alex Guenther, National Center for Atmospheric Chemistry, Xianliang Zhou, Wadsworth Center and SUNY Albany Time period covered: 6/03/2013 through 7/14/2013 TOGA measurements from on board the NSF/NCAR C-130 https://www.eol.ucar.edu/field_projects/sas

2.0 Instrument Description:

The Trace Organic Gas Analyzer (TOGA) is a fast online Gas Chromatograph/Mass Spectrometer (GC/MS), with a measurement frequency of approximately one 30s sample every 2 minutes, capable of measuring up to 70 or more different volatile organic compounds (VOCs), including selected C_3 - C_{10} hydrocarbons, C_1 - C_9 oxygenated VOCs, halogenated VOCs, DMS, HCN, OCS, CH₃CN, and halogenated VOCs. See individual data files for specific VOCs measured during NOMADSS, individual VOC measurement accuracies and detection limits.

4.0 Data Format:

Data are in **ICARTT** format, one file per research flight.

5.0 Data Remarks:

Please contact P.I. prior to use.

No data was obtained during RF13, 7/4/2013.

Data for uncalibrated PAN and alkyl nitrates are included with arbitrary "arb" units, and use of these data should be treated with caution. Please contact the PI to discuss the use of these data.

6.0 References:

Recent publications:

- E. C. Apel et al., Impact of the deep convection of isoprene and other reactive trace species on radicals and ozone in the upper troposphere, Atmos. Chem. Phys., 12, 1135, doi:10.5194/acp-12-1135-2012, 2012.
- R. S. Hornbrook et al., Observations of nonmethane organic compounds during ARCTAS
 Part 1: Biomass burning emissions and plume enhancements, Atmos. Chem. Phys. 11, 1103, doi:10.5194/acp-11-11103-2011, 2011.

E. C. Apel et al., Chemical evolution of volatile organic compounds in the outflow of the Mexico City Metropolitan area, Atmos. Chem. Phys., 10, 2353, doi:10.5194/acp-10-2353-2010, 2010.