NARSTO PAC2001 Slocan Park Site Gaseous, Particle, and Meteorological Data

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1. Data Set Description:

The **Slocan Park (SLPK) site**, at 49.23417 N and -123.0475 W and at 85 m a.s.l., was in a typical urban park in a residential neighborhood in Vancouver with an open field of approximately 150 x 300 m2. Residences of one to two stories surround the park. The site had good fetch in all directions with no major point sources within a radius of 3 km. Like in much of Vancouver, both deciduous and coniferous trees line the streets around the site. Traffic in the nearby streets is typical of light volume and light duty transportation. The closest street (29th Avenue), approximately 50 m away, is a secondary traffic route with light volume rush hour traffic. The closest major highway, Highway 1A, is about 600 m away where congested rush hour traffic is typical. Measurements at this site were designed to study the urban mixture of primary particles and secondary particles that are expected from conversion of precursors, such as anthropogenic hydrocarbons. Emphasis was also placed on chemical characterization of PM with an eventual goal of receptor modeling, particularly for organic carbon components. The measurements were from August 11th to 31st, 2001.

Table 1 lists the measurements made at this site, including those for gases, such as O3, NOx, total and speciated NOy (Hayden et al., 2004), SO2, CO, NH3 (Pryor et al., 2004), NMHCs (including mono-terpenes), HCHO and CH3CHO (Wang et al., 2002). Particle chemical measurements included size distributed inorganic composition (Anlauf et al., 2002), organic and elemental carbon, and mass from <0.05 to 18 um aerodynamic diameter (AD) using impactors that were sampled twice daily, and size distributed chemical composition from 0.06 to 0.7 um AD at high time resolution using an Aerodyne Aerosol Mass Spectrometer (AMS, Boudries et al., 2004; Alfarra et al., 2004). Detailed organic carbon speciation for many solvent-extractable polar and non-polar homologues of organic compounds were conducted with twice daily high-volume sampling and detailed lab analyses. Black carbon was determined using filter-based optical absorption methods. Sulfur isotope (Norman et al., 2002) was characterized in PM <2.5 um twice daily on high volume filter samples. Detailed mass measurements were made using several techniques, primarily to assess the performance of the techniques. Particle number size distributions were measured from 0.12 to 0.3 um using an optical probe. Tethered balloon measurements were made at this site. Vertical profiles, from ground level to 300 m for O3, wind direction and speed, T, P, and RH, were measured four times daily.

The **Pacific 2001 Air Quality Study (PAC2001)** was conducted from 1 August to 31 September, 2001 in the Lower Fraser Valley (LFV), British Columbia, Canada. The study consisted of individual research projects organized to address several issues on ambient particulate matter and ozone that are important to policy makers. A special issue of Atmospheric Environment [Vol. 38(34), Nov 2004] describes specific study objectives (Li, 2004) and presents a series of results papers from the field study. The ground sampling sites during the study were (1) Cassiar Tunnel, (2) Slocan Park, (3) Langley Ecole Lochiel, (4) Sumas Eagle Ridge, and (5) Golden Ears Provincial Park and aloft measurements were taken from a Convair 580 and a Cessna 188. Selected measurement data have been compiled for each site and aircraft and are archived as site-specific data sets.

Table 1. Measurements at the Slocan Park site during the Pacific 2001 field study. Time resolutions of the measurements are also listed.

Species	Technique	Time Resolution	Frequency	PI
Gas Phase Measurements				
O_3	UV-photometry	1-min	Continuous	Anlauf - MSC
NO, NO_y	Chemiluminescence	1-min	Continuous	Anlauf - MSC
PAN/PPN	GC	5-min	Continuous	Bottenheim - MSC
HNO_3	annular denuder	4-hr	5/day	Brook - MSC
HNO_2	annular denuder	4-hr	5/day	Brook - MSC
Speciated NMHC	Canister-capillary GC	Integrated 5-30 min	Every 3 hrs Every hour intensive	Wang - EPS
NH_3	coil-fluorescence	1-hr	Continuous	Pryor - Indiana U.
SO_2	Pulse fluorescence	1-min	Continuous	Anlauf/Brook - MSC
CO	IR-absorption - gas	1-min	Continuous	Anlauf - MSC

Species	Technique	Time Resolution	Frequency	PI
	correlation			
HCHO	DNPH cartridge	1-hr	Every 3 hrs	Wang - EPS
CH_3CHO	DNPH cartridge	1-hr	Every 3 hrs	Wang - EPS
Particle Chemical Characterization Measurements				
Size distribution (<0.05 - 15 µm) of inorganic species and mass	Impactor (MOUDI-static) IC and micro-balance	12-hrs	2/day	Brook/Li - MSC
Size distribution (<0.05 - 15 µm) EC/OC	Impactor (MOUDI-rotate) TOT	12-hrs	2/day	Brook - MSC
Black carbon	Optical absorption	1-hr	Continuous	Sharma - MSC
Mass (<2.5 µm)	TEOM	1-min	Continuous	Brook - MSC
Mass (<2.5 µm)	FP - microbalance	24-hrs	One/day	Brook - MSC
Water soluble inorganic and organic species (<2.5 µm)	FP - IC	4 hrs day, 8 hrs night	5/day	Brook/Li - MSC
OC/EC (<2.5 µm)	FP - TOT	4 hrs day, 8 hrs night	5/day	Brook - MSC
Detailed Organic Speciation				
Size distributed speciation	Aerodyne Aerosol Mass Spectrometer	1-min	Continuous	Worsnop - Aerodyne
Trace organics species - polar (<2.5 µm)	Hivol FP - solvent extraction - GCMS/GC FID	12-hrs	2/day	Brook/Li/Blanchard/Cheng - MSC
Trace organics species - polar (<2.5 µm)	Hivol FP - solvent extraction - derivatization -GCMS/GC FID	12-hrs	2/day	McLaren - York U. McCarry - McMaster
S-isotope	Hivol FP - MS	24-hrs	1/day	Norman - U. Calgary
Air toxics	Hivol - solvent extraction - GC/MS	24-hrs	1/day	Shoeib - MSC
Gas-particle partitioning of semivolatile organics	IOGAP sampling - solvent extraction - GC/MS, Alkanes, PAH	24-hrs	1/day	Mihele/Lane - MSC
Gas-particle partitioning of semivolatile organics	HiCap sampling - solvent extraction - GC/MS, Alkanes, PAH	24-hrs	1/day	Mihele/Lane - MSC
PAHs - vapour phase	Hivol - Quartz filter - GC/MS	daylight hours	1/day	Shoeib - MSC
PAHs - particle phase	Hivol - Quartz filter - GC/MS	daylight hours	1/day	Shoeib - MSC
Meteorological Measurements and Vertical Profiling				
T, P, RH WS, WD at surface	Typical met package	1-min	Continuous	Brook - MSC
Tethersonde T, P, RH, WS, WD	Typical met package	1-hr	Continuous	Brook/Arnold - MSC
Tethersonde O_3	UV-photometry	1-hr	Continuous	Brook/Arnold - MSC

The data set should be cited as follows:
Li, Shao-meng. 2004. NARSTO PAC2001 Slocan Park Site Gaseous, Particle, and Meteorological Data. Available on-line via NARSTO Data and Information at the Atmospheric Science Data Center at NASA Langley Research Center, Hampton, Virginia, U.S.A.

2. Sample Data Record/Data Format:

Data files are in the NARSTO Data Exchange Standard (DES) format that is described in detail on the NARSTO Quality Systems Science Center (QSSC) web site. The files follow a tabular layout and are stored as ASCII comma-separated values files (.csv). The DES does not rely on row position to identify specific information, but uses a tag to describe the information contained in the row. The DES is a self-documenting format with three main sections: the header contains information about the contents of the file and the data originator; the middle section contains metadata tables that describe/define sites, flags, and other codified fields; and the final section is the main data table that contains key sampling and analysis information and the data values. Descriptions of the standardized metadata fields are also available on the QSSC web site.

Archived Slocan Park Data Files

Data File Names	Link to Time Series Plots of Reported Variables (PDF)
NARSTO_NARSTO_PAC2001_SLPK_ALN_S+O-ISOT-PM2.5_HIVOL_20010814D16_V1.csv	View HIVOL_20010814D16
NARSTO_NARSTO_PAC2001_SLPK_DKW_CARBONYL_PART1_OF_1_20010813D19_V1.csv	View PART1_OF_1_20010813D19
NARSTO_PAC2001_SLPK_DKW_VOC_PART2_OF_2_20010813D19_V1.csv	View PART2_OF_2_20010813D19
NARSTO_PAC2001_SLPK_DKW_VOC_PART1_OF_2_20010813D19_V1.csv	View PART1_OF_2_20010813D19
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010813-HOUR18_V1.csv	View VERTICAL_PROFILES
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010814-HOUR12_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010814-HOUR19_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010815-HOUR08_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010815-HOUR12_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010815-HOUR20_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010816-HOUR08_V1.csv	
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NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010817-HOUR12_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010817-HOUR19_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010818-HOUR19_V1.csv	
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NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010820-HOUR20_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010824-HOUR20_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010825-HOUR08_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010825-HOUR12_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010825-HOUR19_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010826-HOUR08_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010826-HOUR12_V1.csv	
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NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010827-HOUR19_V1.csv	
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DOWN-20010828-HOUR08_V1.csv
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NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010829-HOUR08_V1.csv
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-DOWN-20010829-HOUR12_V1.csv
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NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-FIXED-20010816-HOUR18_V1.csv
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NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-FIXED-20010827-HOUR18_V1.csv
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-FIXED-20010828-HOUR18_V1.csv
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-FIXED-20010829-HOUR18_V1.csv
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NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010814-HOUR17_V1.csv
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010815-HOUR07_V1.csv
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010815-HOUR17_V1.csv
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010816-HOUR07_V1.csv
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010815-HOUR11_V1.csv
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010816-HOUR11_V1.csv
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010816-HOUR17_V1.csv
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UP-20010817-HOUR07_V1.csv	
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NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010818-HOUR17_V1.csv	
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NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010820-HOUR11_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010820-HOUR17_V1.csv	
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NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010826-HOUR17_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010827-HOUR07_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010827-HOUR11_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010827-HOUR17_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010828-HOUR07_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010828-HOUR17_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010829-HOUR07_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010829-HOUR11_V1.csv	
NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010829-HOUR17_V1.csv	
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NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010830-HOUR11_V1.csv	
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NARSTO_PAC2001_SLPK_J-B_O3-MET-PROF-UP-20010831-HOUR11_V1.csv	
NARSTO_PAC2001_SLPK_JRB_GAS-PART-DENUD+FILTER_20010813D19_V1.csv	View GAS-PART-DENUD+FILTER_20010813D19
NARSTO_PAC2001_SLPK_JRB_PART-OCBC_MOUDI_20010817D15_V1.csv	View PART-OCBC_MOUDI_20010817D15
NARSTO_PAC2001_SLPK_JRB_PM25-OC+EC_FP-CYCLONE_20010814D19_V2.csv	View PM25-OC+EC_FP-CYCLONE_20010814D19
NARSTO_PAC2001_SLPK_JRB_MET-TOWER_20010813D31_V1.csv	View MET-TOWER_20010813D31

NARSTO_PAC2001_SLPK_JRB_PM25_ADS_20010813D20_V1.csv	View PM25_ADS_20010813D20
NARSTO_PAC2001_SLPK_JRB_PM25_TEOM_20010812D20_V1.csv	View PM25_TEOM_20010812D20
NARSTO_PAC2001_SLPK_JWB_PAN_GC-PDD_20010814D18_V1.csv	View PAN_GC-PDD_20010814D18
NARSTO_PAC2001_SLPK_KGA_PART-IONS_MOUDI_20010814D18_V1.csv	View KGA_PART-IONS_MOUDI_20010814D18
NARSTO_PAC2001_SLPK_M-S_GAS-OCS_20010814D17_V1.csv	View M-S_GAS-OCS_20010814D17
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NARSTO_PAC2001_SLPK_M-S_PART-PAH_20010814D17_V1.csv	View M-S_PART-PAH_20010814D17
NARSTO_PAC2001_SLPK_R-M_PART-ORG_HIVOL_20010815D16_V1.csv	View R-M_PART-ORG_HIVOL_20010815D16
NARSTO_PAC2001_SLPK_S-L_PART-FATTY-ACIDS_20010815D16_V1.csv	View S-L_PART-FATTY-ACIDS_20010815D16
NARSTO_PAC2001_SLPK_S-L_PART-NALKANES_20010815D16_V1.csv	View S-L_PART-NALKANES_20010815D16
NARSTO_PAC2001_SLPK_S-L_PART-OHSSTEROLS_20010815D16_V1.csv	View S-L_PART-OHSSTEROLS_20010815D16
NARSTO_PAC2001_SLPK_KGA_GAS_PHASE_20010812D20_V1.csv	View KGA_GAS_PHASE_20010812D20
NARSTO_PAC2001_SLPK_S-S_BC_PSAP+AETHALOMETER_20010813_D19_V1.csv	View S-S_BC_PSAP+AETHALOMETER_20010813
NARSTO_PAC2001_SLPK_SCP_GAS-NH3_20010815D17_V1.csv	View SCP_GAS-NH3_20010815D17
NARSTO_PAC2001_SLPK_WOR_NITRATE-SIZE-DIST_AMS_20010811D13_V1.csv	View WOR_NITRATE-SIZE-DIST_AMS_20010811D13
NARSTO_PAC2001_SLPK_WOR_ORGANIC-SIZE-DIST_AMS_20010811D13_V1.csv	View WOR_ORGANIC-SIZE-DIST_AMS_20010811D13
NARSTO_PAC2001_SLPK_WOR_PM-LOADINGS_AMS_20010811D13_V1.csv	View WOR_PM-LOADINGS_AMS_20010811D13
NARSTO_PAC2001_SLPK_WOR_SULFATE-SIZE-DIST_AMS_20010811D13_V1.csv	View WOR_SULFATE-SIZE-DIST_AMS_20010811D13

Data File Name Syntax

Pacific 2001 data file names are comprised of nine sections, defined as follows:

Model file name: **NARSTO_PAC2001_SLPK_JRB_MET_TOWER_200108D75_V1.csv**

1. Archive project: **NARSTO**
2. Study acronym: **PAC2001**
3. Site ID / Aircraft ID: **4-character abbreviation**

Study site and aircraft abbreviations

Abbreviation	Site Name
BNDB	Boundary Bay
CSRT (CSTN, CSTS)	Cassiar Tunnel
GEPP	Golden Ears Provincial Park
LNEL	Langley Ecole Lochiel
LPHS	Langley Poppy High School
SLPK	Slocan Park
SLPS	Slope Study
SMMT	Sumas Mountain
CSNA	CFS Cessna 188
CNVR	NRC-IAR Convair 580

4. Principal Investigator ID: **Initials (3 characters)**

Principal Investigator's initials and affiliation

Initials	Name	Affiliation
AMM	Anne Marie Macdonald	Environment Canada
ANL	Anna Lise Norman	University of Calgary
C-M	Cris Mihele	Environment Canada
DKW	Danny Wang	Environment Canada
FAF	Frank Froude	Environment Canada
GVRD	Greater Vancouver Regional District	Greater Vancouver Regional District
HAB	H. A. Weibe	Environment Canada
J-R	Jochen Rudolph	York University
JRB	Jeff Brook	Environment Canada
JWB	Jan Bottenheim	Environment Canada
KGA	Kurt Anlauf	Environment Canada
LAG	Lisa Graham	Environment Canada
M-M	Mike Mozurkewich	York University
M-S	Mahiba Shoeib	Environment Canada
PCB	Peter Brickell	Environment Canada
R-M	Robert McLaren	York University
S-L	Shoa-meng Li	Environment Canada
S-P	Sara Pryor	University of Indiana
S-S	Sangeeta Sharma	Environment Canada
WOR	Douglas Worsnop	Aerodyne Research Inc.
WRL	Richard Leaitch	Environment Canada

5. Measurement activity: **General measurement type**
6. Instrument name or analysis method: **General analysis method**
7. Sampling date with sampling days or flight number:
    - **For Ground-based measurements:**
      The first date in the data file (YYYYMMDD), followed by the letter "D" and the total number of sampling days.
        - Examples:
            - 20010801D1 (starting August 1, 2001, total of 1 day)
            - 20010815D61 (starting August 15, 2001, total of 61 days)
    - **For Aircraft measurements:**
      The first date in the data file (YYYYMMDD), followed by the letter "F" and the flight number for the date.
        - Examples:
            - 20010815F1 (first flight on August 15, 2001)
            - 20010815F2 (second flight on August 15, 2001)
8. Archive data file version number: The file version number starts at **"V1"**. The version number is incremented if the archive data file is replaced.
9. Suffix: **.csv** (comma separated values)

3. References:

- Alfarra, et al., 2003. Characterization of organic aerosols in the Lower Fraser Valley during the Pacific 2001 using two Aerodyne aerosol mass spectrometers. Atmospheric Environment, this issue, doi:10.1016/j.atmosenv.01.054

- Anlauf, K.G., Li, S.-M., Leaitch, W.R., Brook, J., Hayden, K., Wiebe, A., 2002. Chemical and size characteristics of particles in the Lower Fraser Valley: Pacific 2001 Field Study, Presentation at the American Geophysical Union Fall Meeting, December 2002, San Francisco, CA, USA.

- Brook, et al., 2003. OC and EC measurement during Pacific 2001. Presentation at the European Aerosol Conference, 2003.

- Boudries, H., et al., 2004. Chemical and physical processes controlling the distribution of aerosols in the Lower Fraser Valley, Canada, during the PACIFIC 2001 field campaign. Atmospheric Environment, this issue, doi:10.1016/j.atmosenv.2004.01.057.

- Hayden, et al., 2004. Gaseous chemical characterization of the Lower Fraser Valley airshed during Pacific 2001. Atmospheric Environment, this issue, doi:10.1016/j.atmosenv.2003.12.048.

- Li, Shao-Meng. 2004. A concerted effort to understand the ambient particulate matter in the Lower Fraser Valley: the Pacific 2001 Air Quality Study. Atmospheric Environment, Volume, 38(34), pp. 5719-5731. (Pacific 2001 Special Issue)
- McCarry, B.E., Rosati, M., Yang, R., 2002. PAH and nitro-PAH analyses of air particulate material collected during Pacific 2001 study. Presentation at the Symposium on Atmospheric Aerosols and Pacific 2001 Field Study, 85th CSC Conference, Vancouver, Canada, June 1-5, 2002.
- Norman, A.L., Belzer, W., Barrie, L., Wang, D., 2002. Sulphate in PM2.5: results from the Pacific 2001 field campaign. Presentation at the American Geophysical Union Fall Meeting, December 2002, San Francisco, CA, USA.
- Pryor, et al., 2004. Spatial and temporal variability of reduced nitrogen concentrations in the Fraser Valley. Atmospheric Environment, this issue, doi:10.1016/j.atmosenv.2003.12.045.
- Wang, D., Fuentes, J.D., Dann, T., Travers, D., Connolly, T., Arktas, Y., 2002. Non-methane hydrocarbon measurements in the Vancouver region during Pacific 2001. Presentation at the American Geophysical Union Fall Meeting, December 2002, San Francisco, CA, USA.

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