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1. Data Set Description:

The U.S. Environmental Protection Agency (EPA) selected Atlanta as one of the first Supersites Programs dedicated to the study of fine particles (or PM_{2.5}). The Southern Oxidants Study (SOS) in conjunction with the Georgia Institute of Technology, Earth and Atmospheric Sciences Department developed and implemented the scientific research plan for this initial Supersites Program effort.

The Atlanta field experiment was a 4-week long campaign aimed at comprehensively addressing issues related to the measurement and characterization of fine particles in the polluted or urban atmosphere. The experiment took place during the August 1999 and deployed a wide array of instrumentation at a measurement site located on Jefferson Street in Midtown Atlanta.

Goals of the Atlanta Supersite Program were twofold: first, to provide a platform for testing and contrasting some of the newer particle measurement techniques, and second, to provide data to advance our scientific understanding of atmospheric processes regarding atmospheric particles.

Specific objectives were: (1) to characterize the performance of emerging and/or state-of-the-science PM Measurements; (2) to compare and contrast similar and dissimilar PM Measurements; (3) to evaluate the precision, accuracy, and completeness of information that can be gained from the planned EPA PM mass and chemical composition networks; (4) to evaluate the scientific information gained by combining various independent and complementary PM Measurements; and (5) to address various scientific issues and their ozone- and PM-related policy implications with this data base.

More information about the Atlanta Supersite can be found in the accompanying documentation and referenced publications.

The data set should be cited as follows:

Solomon, Paul, William L.Chameides, Ellis Cowling, James Meagher. 2002. NARSTO EPA_SS_ATLANTA 1999 Air Chemistry, Particulate Matter, and Met 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:

There are 38 data files included in this data set. These data files are in the NARSTO Data Exchange Standard (DES) format. The DES format uses ASCII tabular data files with structured numerical and character data and metadata fields of varying length separated by commas (i.e., *.csv). The most recent version of the DES format is described in detail in the template and instructions available on the [NARSTO QSSC Web Site](#).

FILE NAMES:

- NARSTO_EPA_SS_ATLANTA_UV_BREWER_MET_DATA_1_MB_V1.csv
- NARSTO_EPA_SS_ATLANTA_ADI_ICVC_PART_DATA_1_SH_V1.csv
- NARSTO_EPA_SS_ATLANTA_ITOPC_PART_DATA_1_BT_V1.csv
- NARSTO_EPA_SS_ATLANTA_MET_MET_DATA_1_KB_V1.csv
- NARSTO_EPA_SS_ATLANTA_NANO_SMPS_LASAIR_OPC_PART_DATA_3_PM_V1.csv
- NARSTO_EPA_SS_ATLANTA_PM_ASAC_PART_DATA_1_MB_V1.csv
- NARSTO_EPA_SS_ATLANTA_PPWD_IC_GAS_DATA_1_SD_V1.csv



- NARSTO_EPA_SS_ATLANTA_TVAPC_BOSS_PART_DATA_1_RT_V1.csv
- NARSTO_EPA_SS_ATLANTA_3-SFDS_PART_DATA_1_EE_V1.csv
- NARSTO_EPA_SS_ATLANTA_TDMA_PART_DATA_4_PM_V1.csv
- NARSTO_EPA_SS_ATLANTA_AWD_SJAC_IC_PART_GAS_DATA_1_PJ_V1.csv
- NARSTO_EPA_SS_ATLANTA_AWD_SJAC_IC_PART_GAS_DATA_2_PJ_V1.csv
- NARSTO_EPA_SS_ATLANTA_BC_EC_PART_DATA_1_GA_V1.csv
- NARSTO_EPA_SS_ATLANTA_CAMM_PART_DATA_2_GA_V1.csv
- NARSTO_EPA_SS_ATLANTA_CFPMM_TEOM_PART_DATA_1_TR_V1.csv
- NARSTO_EPA_SS_ATLANTA_DS_FIU_GAS_DATA_2_SD_V1.csv
- NARSTO_EPA_SS_ATLANTA_DS_FIU_GAS_DATA_3_SD_V1.csv
- NARSTO_EPA_SS_ATLANTA_GAS_GAS_DATA_1_KB_V1.csv
- NARSTO_EPA_SS_ATLANTA_HSPH_NO3_PART_DATA_3_GA_V1.csv
- NARSTO_EPA_SS_ATLANTA_PCM_PART_GAS_DATA_1_KB_V1.csv
- NARSTO_EPA_SS_ATLANTA_PCS_IC_PART_DATA_1_SD_V1.csv
- NARSTO_EPA_SS_ATLANTA_PILS_IC_PART_DATA_1_RW_V1.csv
- NARSTO_EPA_SS_ATLANTA_APM_TDMA_PART_DATA_1_PM_V1.csv
- NARSTO_EPA_SS_ATLANTA_OVOC_PART_DATA_1_RZ_V1.csv
- NARSTO_EPA_SS_ATLANTA_APM_TDMA_PART_DATA_2_PM_V1.csv
- NARSTO_EPA_SS_ATLANTA_MOSS_PART_DATA_2_PS_V1.csv
- NARSTO_EPA_SS_ATLANTA_ASPTS_PART_DATA_1_PS_V1.csv
- NARSTO_EPA_SS_ATLANTA_VAPS_PART_DATA_3_PS_V1.csv
- NARSTO_EPA_SS_ATLANTA_LIGHT_SCAT_PART_DATA_1_HM_V1.csv
- NARSTO_EPA_SS_ATLANTA_ANIONS_MOUDI_PART_DATA_1_DS_V1.csv
- NARSTO_EPA_SS_ATLANTA_MASS_MOUDI_PART_DATA_2_DS_V1.csv
- NARSTO_EPA_SS_ATLANTA_OCEC_MOUDI_PART_DATA_3_DS_V1.csv
- NARSTO_EPA_SS_ATLANTA_FRM-A_PART_DATA_4_PS_V1.csv
- NARSTO_EPA_SS_ATLANTA_FRM-B_PART_DATA_5_PS_V2.csv (see [change notice_20070517](#))
- NARSTO_EPA_SS_ATLANTA_FRM-T_PART_DATA_6_PS_V1.csv
- NARSTO_EPA_SS_ATLANTA_DICHOT_PART_DATA_7_PS_V1.csv
- NARSTO_EPA_SS_ATLANTA_SPEC_PART_DATA_8_PS_V1.csv
- NARSTO_EPA_SS_ATLANTA_URG_PART_DATA_9_PS_V1.csv

FILE NAMING SYNTAX:

All 38 files are identified by the prefix NARSTO_EPA_SS_ATLANTA.

- This is followed by a condensed identifier that briefly describes something about the file (see below for an explanation of the condensed identifiers).
- Next is the descriptor that identifies if the measurements are particles (PART_DATA), gases (GAS_DATA), meteorology (MET_DATA) or a combination (PART_GAS_DATA).
- The number that follows separates files of the same type.
- The syntax ends with the initials of the principal investigator that was responsible for collecting the data.

A list of the principal investigators follows:

BT	Barbara Turpin	1 file
DS	Dennis Savoie	3 files
EE	Eric Edgerton	1 file
GA	George Allen	3 files
KB	Karsten Baumann	3 files
HM	Hal Maring	1 file
MB	Michael Bergin	2 files
PJ	Piet Jongejan	2 files
PM	Peter McMurry	4 files
PS	Paul Solomon	9 files
RT	Roger Tanner	1 file
RW	Rodney Weber	1 file
RZ	Rod Zika	1 file
SD	Sandy	4 files



	Dasgupta	
SH	Susanne Hering	1 file
TR	Ted Russell	1 file

Condensed Identifier List:

ITOPC	In-situ thermal-optical particulate carbon
ANIONS_MOUDI	Anions MOUDI
MASS_MOUDI	Mass particles MOUDI
OCEC_MOUDI	Organic and Elemental Carbon
MOUDI 3-SFDS	Data from a 3-stage filter-denuder sampler
BC_EC HSPH	Aethalometer urban EC and classic Black Carbon Soot
CAMM	Continuous Ambient Mass Monitor
HSPH_NO3	HSPH Continuous Nitrate Monitor
MET	Meteorological data
GAS	Gaseous chemical data
PCM	Particle composition monitor
LIGHT_SCAT	Aerosol light scattering
PM_ASAC PM2.5,	Aerosol Scattering & Absorption Coefficient
UV_BREWER UV	Radiation measurements
AWD_SJAC_IC	Annular Wet Denuder and Steam Jet Aerosol Collector sampling / on-line IC analysis
APM_TDMA	Aerosol Particle Mass Analyzer and Tandem Differential Mobility Analyzer system
TDMA	Tandem Differential Mobility Analyzer system
ASPS	Andersen Speciation Sampler
MOSS	MetOne Speciation Sampler
VAPS	VAPS Sampler
FRM-A FRM	Sampler on platform A
FRM-B FRM	Sampler on platform B
FRM-T FRM	Sampler on roof of trailers
DICHOT	Auto Dichotomous sampler
SPEC R&P	Chemical Speciation Sampler
URG	URG Sampler
TVAPC_BOSS	Particle Concentrator Speciation Sampler BYU Design-Ions and OC/EC data
PSC_IC	Particle-into-liquid/ion chromatograph
OVOC	Gas phase Oxygenated Volatile Organic Compounds
PCS_IC	Filter based Particle Collection System / Ion Chromatograph
PPWD_IC	Parallel Plate Wet Denuder / Ion Chromatograph
DS_FLU	Diffusion Scrubber / Fluorescence
ADI_ICVC	Automated analyze, integrated collection, vaporization cell with NOx, SO2, and CO2 detection C
FPMM_TEOM	Continuous fine particle mass measurement Tapered element oscillating microbalance
NANO_SMPS_SMPS_LASAIR-OPC	Nano Scanning Mobility Particle Spectrometer, Scanning Mobility Particle Spectrometer, Optical Particle Counter

Change Notice for NARSTO_EPA_SS_ATLANTA_FRM-B_PART_DATA_5_PS_V2.csv, 20070517

*FILE CHANGE HISTORY--VERSION NUMBER/DESCRIPTION: 2, Second archived version.

In the *TABLE COLUMN INSTRUMENT NAME AND MODEL NUMBER key phrase the previous entries of 'Anderson RAAS2.5/400' have



been changed by the QAC to 'Anderson RAA2.5/100' per Paul Solomon's e-mail request of 2007/05/14.

No measurement values were changed.

3. References:

- Mikel, Dennis K. and George Momberger. 1999. Quality Assurance Project Plan for the Southern Oxidant Study Atlanta Supersite Field Experiment, 1999. Revision 1.1, November 1999. U.S. Environmental Protection Agency, Atlanta, Georgia.
- Mikel, Dennis K. 2001. Quality Assurance Final Report for the Southern Oxidant Study Atlanta Supersite Field Experiment, August 3 - September 1, 1999. Revision 1.2, August 3, 2001. U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina.
- Solomon, P.A., W. Chameides, R.W. Weber, A. Middlebrook, C.S. Kiang, A.G. Russell, A. Butler, Turpin, B., D. Mikel, R. Scheffe, E. Cowling, E. Edgerton, J. St. John, J. Jansen, P. McMurry, S. Hering, and T. Bahadori. 2003. An Overview of the 1999 Atlanta Supersites Project. JGR - Atmospheres, Special Issue for the Atlanta Supersites Project, 108, in press, doi:10.1029/2001JD001458.

4. Contact Information:

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Data Center:

The User and Data Services Office at the Langley Atmospheric Science Data Center is involved throughout the system to monitor the quality of data on ingest, to ensure prompt replies to user questions, to verify media orders prior to filling them, and to ensure that the needs of the users are being met.

If you have a problem finding what you need, trouble accessing the system, or need an answer to a question concerning the data or how to obtain data, please contact the User and Data Services staff.

Telephone: (757) 864-8656
FAX: (757) 864-8807
E-mail: support-asdc@earthdata.nasa.gov
URL: <http://eosweb.larc.nasa.gov>

5. Acknowledgement:

When data from the Langley Atmospheric Science Data Center are used in a publication, we request the following acknowledgment be included: "These data were obtained from the NASA Langley Research Center Atmospheric Science Data Center".

The Langley Data Center requests a reprint of any published papers or reports or a brief description of other uses (e.g., posters, oral presentations, etc.) of data that we have distributed. This will help us determine the use of data that we distribute, which is helpful in optimizing product development. It also helps us to keep our product-related references current.

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Document Information:

Document Creation Date: January 9, 2003

Review Date: May 2007

Last Date Modified: May 17, 2007

Document ID: TBD

Author: Langley Data Center User and Data Services Office

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