

NITRIC ACID, AMMONIA AND ATMOSPHERIC PARTICULATE
MATTER CONCENTRATIONS IN THE SOUTH COAST AIR BASIN,
30-31 August 1982

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Nitric Acid, Ammonia and Atmospheric Particulate
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This report archives the complete results of the experiment conducted on August 30-31, 1982, in the Los Angeles, California, air basin as described in Acquisition of Regional Air Quality Model Validation Data for Nitrate, Sulfate, Ammonium Ion and Their Precursors, Atmospheric Environment, 18, 1815-1827 (Appendix A of this report). It is suggested that before using this report, one be familiar with that paper to better understand the techniques used to obtain the data that follow, the locations of the monitoring sites, and the uncertainties on experimental measurements. A brief discussion of the experiment is included here to help explain how the results are tabulated.

As noted, the experiment was conducted in the Los Angeles basin during the period 30-31 August 1982. The sampling network operated for 48 consecutive hours from midnight (PDT) preceding 30 August to midnight (PDT) following 31 August and consisted of ten sampling sites, of which seven were co-located with South Coast Air Quality Management District (SCAQMD) monitoring locations, two on university campuses, and one at a California Air Resources Board (CARB) monitoring station. The ten monitoring station names, numbers, and locations were:

STATION NAME	STATION NUMBER	STATION LOCATION
Pasadena	1	Keck Laboratories, California Institute of Technology, Pasadena, CA
Azusa	2	SCAQMD site 803 N. Loren Ave. Azusa, CA
Upland	3	CARB site 1350 San Bernardino Rd. Upland, CA
Rubidoux	4	SCAQMD site 5888 Mission Blvd. Rubidoux, CA
Anaheim	5	SCAQMD site 1010 S. Harbor Blvd. Anaheim, CA
Long Beach	6	SCAQMD site 3648 N. Long Beach Blvd. Long Beach, CA
Downtown Los Angeles	7	SCAQMD site 1630 N. Main Los Angeles, CA
West Los Angeles	8	SCAQMD site 1535 S. Robertson Blvd. Los Angeles, CA
Lennox	9	SCAQMD site 11408 La Cienega Blvd. Los Angeles, CA
UCR	10	University of California at Riverside campus. Riverside, CA

The station numbers above correspond to those used in the following tables. Nominal two-hour and four-hour average measurements were obtained at each site for major ionic aerosol species, nitric acid gas, and ammonia gas. Over each measurement period, six filters were

exposed; their codes, types, and associated measured species are:

FILTER CODE	FILTER TYPE	COMMENTS
T1	47 mm Membrana Zefluor, Teflon filter, 1 μ m pore size	Preceded nylon, BN, filter and was used to strip aerosols.
BN	47 mm, GHIA, Nylasorb, 1 μ m pore size	Followed T1 and was used to measure $\text{HNO}_3(\text{g})$ after aerosol nitrate was collected.
T2	47 mm Membrana Zefluor, Teflon, 1 μ m pore size	Used to collect ionic aerosol constituents. NO_3^- , SO_4^{2-} , Cl^- , Ca^{++} , Na^+ , K^+ , Mg^{++} , NH_4^+ measurements obtained from T2.
Ox	Oxalic acid impregnated 47 mm Gelman AE glass fiber filter	Followed Teflon, T2 filter and was used to collect $\text{NH}_3(\text{g})$ after aerosol ammonium was stripped.
ND	47 mm, GHIA, Nylasorb, 1 μ m pore size nylon:	Followed nitric acid gas denuder. Used to collect nitrate aerosol. See comments in Aquisition of Regional Air Quality Model Validation Data for Nitrate, Sulfate, Ammonium Ion and Their Precursors regarding aerosol losses in denuder. We believe that these denuder data may be biased and should not be used.

Total nitrate can be calculated by adding aerosol nitrate from filter T2 and nitric acid from BN. The sixth filter (a nylon total filter)

from each period was analyzed on occasion to check the total inorganic nitrate values obtained by addition of filters T2 and BN. The filter codes described above are used in the following tables to identify the filter from which the data are taken and to identify the actual pollutant species measured.

Temperatures noted were measured on site by standard methods supplemented by data obtained from U.S. Weather Service observations at nearby airports and from other meteorological measurement stations. Humidity data were obtained from local meteorological stations and then interpolated to give the reported RH values.

The following report is subdivided into a number of small tables reporting the experimental results for each station during each time period, starting with station 1. The data are shown chronologically for each station. In the first line of the table are the station number, corresponding to the list above, the period, and the sampling time. The period number identifies the container in which the filter was stored and does not necessarily correspond to the order in which the filters were used. Period number is used only as an interval identification number and should be ignored by the reader. Instead, the reader should focus on the sampling time which gives the nominal start and stop times (PDT) for each filter and the date. Temperature and relative humidity, averaged over the sampling time, are found on the second line. Lines 3, 4, and 5 are headers for the table and pertain to the columns underneath. Starting with column 1 the station number is given, which repeats the station number found in

row 1. Column 2 gives the time or period, also found in row 1, and is not used. The filter type is given in column 3: the filter code indicates the filter type as discussed above. The fourth column states the species being measured. Finally, the fifth through eighth columns give the species concentrations and measurement uncertainties. Data are given in both ppb units and $\mu\text{g m}^{-3}$ where one ppb is equivalent to $0.0407 \mu\text{ moles m}^{-3}$. Mass units reported are for the species as listed, except that both NH_3 and NH_4^+ are given in $\mu\text{g m}^{-3} \text{ N}$ and HNO_3 is given in $\mu\text{g m}^{-3} \text{ NO}_3^-$.

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STATION 1 PERIOD 7 SAMPLING TIME 0- 4 AUG 30
TEMPERATURE = 290.5 K RELATIVE HUMIDITY= 82.8%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
1	7	T2	NO3-	2.58	6.50	0.55	1.39
1	7	T2	SO4=	1.71	6.68	0.47	1.85
1	7	T2	CL-	0.10	0.14	0.40	0.57
1	7	T2	NH4+	0.61	0.35	0.31	0.18
1	7	T2	NA+	0.00	0.00	0.72	0.67
1	7	T2	CA++	0.51	0.83	0.85	1.38
1	7	T2	MG++	0.17	0.17	0.71	0.71
1	7	T2	K+	0.27	0.43	0.49	0.78
1	7	ND	NO3-	2.55	6.42	0.48	1.22
1	7	BN	HNO3	0.50	1.26	0.31	0.78
1	7	DX	NH3	1.17	0.66	0.55	0.31

STATION 1 PERIOD 8 SAMPLING TIME 4- 8 AUG 30
TEMPERATURE = 290.8 K RELATIVE HUMIDITY= 81.7%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
1	8	T2	NO3-	0.49	1.24	0.41	1.02
1	8	T2	SO4=	0.47	1.82	0.41	1.59
1	8	T2	CL-	0.10	0.14	0.40	0.57
1	8	T2	NH4+	0.59	0.34	0.31	0.17
1	8	T2	NA+	0.00	0.00	0.72	0.67
1	8	T2	CA++	0.30	0.48	0.84	1.38
1	8	T2	MG++	0.00	0.00	0.71	0.71
1	8	T2	K+	0.00	0.00	0.49	0.78
1	8	ND	NO3-	1.94	4.89	0.42	1.05
1	8	BN	HNO3	0.60	1.51	0.31	0.79
1	8	DX	NH3	4.11	2.34	0.96	0.55

STATION 1 PERIOD 9 SAMPLING TIME 8- 12 AUG 30
TEMPERATURE = 297.5 K RELATIVE HUMIDITY= 60.0%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
1	9	T2	NO3-	1.30	3.27	0.44	1.12
1	9	T2	SO4=	1.78	6.94	0.46	1.87
1	9	T2	CL-	0.07	0.10	0.40	0.57
1	9	T2	NH4+	2.14	1.21	0.51	0.29
1	9	T2	NA+	0.00	0.00	0.72	0.67
1	9	T2	CA++	1.25	2.04	0.87	1.42
1	9	T2	MG++	0.26	0.26	0.72	0.71
1	9	T2	K+	0.00	0.00	0.49	0.78
1	9	ND	NO3-	4.02	10.12	0.67	1.68
1	9	BN	HNO3	3.45	8.68	0.59	1.49
1	9	DX	NH3	4.88	2.77	1.10	0.62

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STATION 1 PERIOD 10
 TEMPERATURE = 304.0 K
 FILTER ID

SAMPLING TIME 12- 16 AUG 30
 RELATIVE HUMIDITY= 38.9%

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY	
				(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
1	10	T2	NO3-	1.13	2.85	0.43	1.09
1	10	T2	SO4=	1.16	4.54	0.44	1.70
1	10	T2	CL-	0.00	0.00	0.40	0.57
1	10	T2	NH4+	1.01	0.57	0.35	0.20
1	10	T2	NA+	0.07	0.07	0.72	0.68
1	10	T2	CA++	0.81	1.31	0.86	1.39
1	10	T2	MG++	0.26	0.26	0.72	0.71
1	10	T2	K+	0.00	0.00	0.49	0.78
1	10	ND	NO3-	4.19	10.57	0.69	1.74
1	10	BN	HNO3	6.14	15.45	0.96	2.41
1	10	DX	NH3	9.66	5.49	2.00	1.13

STATION 1 PERIOD 11
 TEMPERATURE = 300.0 K
 FILTER ID

SAMPLING TIME 16- 20 AUG 30
 RELATIVE HUMIDITY= 48.1%

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY	
				(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
1	11	T2	NO3-	0.84	2.12	0.42	1.06
1	11	T2	SO4=	0.80	3.11	0.42	1.63
1	11	T2	CL-	0.00	0.00	0.40	0.57
1	11	T2	NH4+	0.75	0.43	0.32	0.18
1	11	T2	NA+	0.26	0.24	0.72	0.68
1	11	T2	CA++	0.59	0.96	0.85	1.38
1	11	T2	MG++	0.25	0.25	0.72	0.71
1	11	T2	K+	0.26	0.41	0.49	0.78
1	11	ND	NO3-	2.01	5.07	0.42	1.07
1	11	BN	HNO3	2.51	6.33	0.48	1.21
1	11	DX	NH3	2.44	1.39	0.70	0.40

STATION 1 PERIOD 12
 TEMPERATURE = 293.0 K
 FILTER ID

SAMPLING TIME 20- 24 AUG 30
 RELATIVE HUMIDITY= 69.6%

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY	
				(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
1	12	T2	NO3-	1.46	3.68	0.46	1.15
1	12	T2	SO4=	0.79	3.07	0.42	1.63
1	12	T2	CL-	0.46	0.66	0.41	0.59
1	12	T2	NH4+	0.90	0.51	0.34	0.19
1	12	T2	NA+	0.91	0.85	0.73	0.69
1	12	T2	CA++	0.84	1.37	0.86	1.40
1	12	T2	MG++	0.48	0.47	0.72	0.71
1	12	T2	K+	0.05	0.08	0.49	0.78
1	12	ND	NO3-	2.68	6.74	0.50	1.25
1	12	BN	HNO3	0.71	1.78	0.32	0.80
1	12	DX	NH3	3.07	1.75	0.79	0.45

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STATION 1 PERIOD 13 SAMPLING TIME 0- 2 AUG 31
 TEMPERATURE = 290.8 K RELATIVE HUMIDITY= 78.8%
 FILTER ID

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY	
				(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
1	13	T2	NO3-	0.79	1.98	0.42	1.05
1	13	T2	SO4=	0.49	1.92	0.41	1.59
1	13	T2	CL-	0.21	0.30	0.40	0.57
1	13	T2	NH4+	0.83	0.47	0.33	0.19
1	13	T2	NA+	0.48	0.45	0.72	0.68
1	13	T2	CA++	1.18	1.92	0.87	1.42
1	13	T2	MG++	0.26	0.26	0.72	0.71
1	13	T2	K+	1.09	1.73	0.53	0.84
1	13	ND	NO3-	2.81	7.07	0.51	1.29
1	13	BN	HNO3	0.51	1.29	0.31	0.78
1	13	OX	NH3	4.06	2.31	0.95	0.54

STATION 1 PERIOD 14 SAMPLING TIME 2- 4 AUG 31
 TEMPERATURE = 290.4 K RELATIVE HUMIDITY= 80.6%
 FILTER ID

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY	
				(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
1	14	T2	NO3-	0.55	1.38	0.41	1.03
1	14	T2	SO4=	0.31	1.21	0.40	1.57
1	14	T2	CL-	0.00	0.00	0.40	0.57
1	14	T2	NH4+	0.98	0.56	0.34	0.20
1	14	T2	NA+	0.00	0.00	0.72	0.67
1	14	T2	CA++	0.88	1.44	0.86	1.40
1	14	T2	MG++	0.14	0.14	0.71	0.71
1	14	T2	K+	0.02	0.03	0.49	0.78
1	14	ND	NO3-	2.12	5.34	0.43	1.09
1	14	BN	HNO3	0.66	1.67	0.32	0.80
1	14	OX	NH3	0.90	0.51	0.53	0.30

STATION 1 PERIOD 15 SAMPLING TIME 4- 6 AUG 31
 TEMPERATURE = 290.1 K RELATIVE HUMIDITY= 82.2%
 FILTER ID

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY	
				(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
1	15	T2	NO3-	0.57	1.44	0.41	1.03
1	15	T2	SO4=	1.10	4.30	0.43	1.69
1	15	T2	CL-	0.00	0.00	0.40	0.57
1	15	T2	NH4+	1.23	0.70	0.38	0.21
1	15	T2	NA+	0.21	0.19	0.72	0.68
1	15	T2	CA++	0.36	0.58	0.85	1.38
1	15	T2	MG++	0.11	0.11	0.71	0.71
1	15	T2	K+	0.00	0.00	0.49	0.78
1	15	ND	NO3-	1.57	3.96	0.38	0.96
1	15	BN	HNO3	0.73	1.83	0.32	0.80
1	15	OX	NH3	4.43	2.52	1.02	0.58

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STATION 1 PERIOD 16 SAMPLING TIME 6- 8 AUG 31
 TEMPERATURE = 291.1 K RELATIVE HUMIDITY= 76.9%
 FILTER ID

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY	
				(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
1	16	T2	NO3-	1.26	3.16	0.44	1.11
1	16	T2	SO4=	2.10	8.21	0.51	1.98
1	16	T2	CL-	0.11	0.16	0.40	0.57
1	16	T2	NH4+	1.59	0.91	0.43	0.24
1	16	T2	NA+	0.28	0.26	0.72	0.68
1	16	T2	CA++	2.15	3.50	0.93	1.51
1	16	T2	MG++	0.65	0.64	0.72	0.72
1	16	T2	K+	0.28	0.45	0.49	0.78
1	16	ND	NO3-	1.47	3.71	0.37	0.93
1	16	BN	HNO3	0.89	2.24	0.33	0.83
1	16	DX	NH3	3.41	1.94	0.85	0.48

STATION 1 PERIOD 17 SAMPLING TIME 8- 10 AUG 31
 TEMPERATURE = 295.7 K RELATIVE HUMIDITY= 56.0%
 FILTER ID

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY	
				(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
1	17	T2	NO3-	2.76	6.95	0.57	1.44
1	17	T2	SO4=	3.05	11.93	0.60	2.36
1	17	T2	CL-	0.00	0.00	0.40	0.57
1	17	T2	NH4+	2.16	1.23	0.52	0.29
1	17	T2	NA+	0.40	0.37	0.72	0.68
1	17	T2	CA++	2.36	3.85	0.95	1.54
1	17	T2	MG++	0.65	0.65	0.72	0.72
1	17	T2	K+	0.33	0.53	0.49	0.78
1	17	ND	NO3-	2.73	6.87	0.50	1.27
1	17	BN	HNO3	2.04	5.14	0.43	1.07
1	17	DX	NH3	4.93	2.80	1.11	0.63

STATION 1 PERIOD 18 SAMPLING TIME 10- 12 AUG 31
 TEMPERATURE = 301.5 K RELATIVE HUMIDITY= 40.4%
 FILTER ID

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY	
				(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
1	18	T2	NO3-	0.49	1.22	0.41	1.02
1	18	T2	SO4=	0.48	1.86	0.41	1.59
1	18	T2	CL-	0.00	0.00	0.40	0.57
1	18	T2	NH4+	0.82	0.50	0.33	0.19
1	18	T2	NA+	0.00	0.00	0.72	0.67
1	18	T2	CA++	0.11	0.18	0.84	1.37
1	18	T2	MG++	0.09	0.09	0.71	0.71
1	18	T2	K+	0.00	0.00	0.49	0.78
1	18	ND	NO3-	2.09	5.26	0.43	1.09
1	18	BN	HNO3	2.76	6.96	0.51	1.28
1	18	DX	NH3	5.03	2.86	1.12	0.64

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STATION 1 PERIOD 19 SAMPLING TIME 12- 14 AUG 31
TEMPERATURE = 307.3 K RELATIVE HUMIDITY= 26.0%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
1	19	T2	NO3-	0.84	2.12	0.42	1.06
1	19	T2	SO4=	0.19	0.72	0.40	1.57
1	19	T2	CL-	0.00	0.00	0.40	0.57
1	19	T2	NH4+	0.97	0.55	0.34	0.19
1	19	T2	NA+	0.00	0.00	0.72	0.67
1	19	T2	CA++	0.62	1.01	0.85	1.39
1	19	T2	MG++	0.10	0.10	0.71	0.71
1	19	T2	K+	0.20	0.33	0.49	0.78
1	19	ND	NO3-	1.91	4.81	0.41	1.04
1	19	BN	HNO3	4.99	12.57	0.80	2.01
1	19	DX	NH3	5.42	3.08	1.19	0.68

STATION 1 PERIOD 20 SAMPLING TIME 14- 16 AUG 31
TEMPERATURE = 308.5 K RELATIVE HUMIDITY= 20.6%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
1	20	T2	NO3-	0.66	1.66	0.41	1.04
1	20	T2	SO4=	0.35	1.37	0.40	1.58
1	20	T2	CL-	0.00	0.00	0.40	0.57
1	20	T2	NH4+	3.11	1.77	0.68	0.39
1	20	T2	NA+	1.17	1.09	0.74	0.69
1	20	T2	CA++	1.08	1.75	0.86	1.41
1	20	T2	MG++	0.78	0.77	0.73	0.72
1	20	T2	K+	0.00	0.00	0.49	0.78
1	20	ND	NO3-	10.34	26.03	1.56	3.93
1	20	BN	HNO3	7.44	18.74	1.14	2.86
1	20	DX	NH3	2.09	1.19	0.65	0.37

STATION 1 PERIOD 21 SAMPLING TIME 16- 18 AUG 31
TEMPERATURE = 305.5 K RELATIVE HUMIDITY= 21.4%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
1	21	T2	NO3-	2.10	5.29	0.51	1.28
1	21	T2	SO4=	3.10	12.10	0.61	2.38
1	21	T2	CL-	0.46	0.65	0.41	0.59
1	21	T2	NH4+	3.52	2.00	0.76	0.43
1	21	T2	NA+	0.92	0.86	0.73	0.69
1	21	T2	CA++	0.61	0.99	0.85	1.39
1	21	T2	MG++	0.38	0.38	0.72	0.71
1	21	T2	K+	0.31	0.50	0.49	0.78
1	21	ND	NO3-	3.12	7.85	0.55	1.39
1	21	BN	HNO3	4.13	10.41	0.68	1.72
1	21	DX	NH3	13.42	7.63	2.73	1.55

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STATION 1 PERIOD 22 SAMPLING TIME 18- 20 AUG 31
TEMPERATURE = 301.2 K RELATIVE HUMIDITY= 32.9%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY (UG/M**3)
STATION	TIME	TYPE		(PPB)	(UG/M**3)	
1	22	T2	NO3-	1.12	2.81	0.43
1	22	T2	SO4=	2.14	8.34	0.51
1	22	T2	CL-	0.29	0.41	0.41
1	22	T2	NH4+	1.71	0.97	0.44
1	22	T2	NA+	0.21	0.20	0.72
1	22	T2	CA++	1.08	1.77	0.87
1	22	T2	MG++	0.43	0.43	0.72
1	22	T2	K+	0.24	0.39	0.49
1	22	ND	NO3-	1.53	3.86	0.38
1	22	BN	HNO3	2.51	6.33	0.48
1	22	DX	NH3	6.94	3.94	1.48

STATION 1 PERIOD 23 SAMPLING TIME 20- 22 AUG 31
TEMPERATURE = 297.1 K RELATIVE HUMIDITY= 36.2%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY (UG/M**3)
STATION	TIME	TYPE		(PPB)	(UG/M**3)	
1	23	T2	NO3-	0.63	1.57	0.41
1	23	T2	SO4=	0.41	1.58	0.40
1	23	T2	CL-	0.63	0.90	0.42
1	23	T2	NH4+	0.74	0.42	0.32
1	23	T2	NA+	0.02	0.02	0.72
1	23	T2	CA++	0.60	0.98	0.85
1	23	T2	MG++	0.31	0.31	0.72
1	23	T2	K+	0.12	0.19	0.49
1	23	ND	NO3-	2.14	5.40	0.44
1	23	BN	HNO3	1.34	3.37	0.36
1	23	DX	NH3	7.26	4.12	1.54

STATION 1 PERIOD 24 SAMPLING TIME 22- 24 AUG 31
TEMPERATURE = 295.4 K RELATIVE HUMIDITY= 40.2%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY (UG/M**3)
STATION	TIME	TYPE		(PPB)	(UG/M**3)	
1	24	T2	NO3-	0.80	2.00	0.42
1	24	T2	SO4=	0.51	1.99	0.41
1	24	T2	CL-	0.18	0.26	0.40
1	24	T2	NH4+	1.12	0.63	0.36
1	24	T2	NA+	0.30	0.29	0.72
1	24	T2	CA++	0.84	1.37	0.86
1	24	T2	MG++	1.18	1.17	0.75
1	24	T2	K+	0.37	0.59	0.49
1	24	ND	NO3-	2.10	5.28	0.43
1	24	BN	HNO3	1.13	2.85	0.34
1	24	DX	NH3	7.78	4.42	1.63

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STATION 2 PERIOD 7 SAMPLING TIME 0- 4 AUG 30
 TEMPERATURE = 292.6 K RELATIVE HUMIDITY= 72.6%
 FILTER ID

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY
				(PPB)	(UG/M**3)	
2	7	T2	NO3-	2.97	7.48	0.59
2	7	T2	SO4=	5.17	20.21	0.87
2	7	T2	CL-	0.58	0.82	0.42
2	7	T2	NH4+	6.31	3.58	1.29
2	7	T2	NA+	1.70	1.59	0.76
2	7	T2	CA++	0.91	1.49	0.86
2	7	T2	MG++	0.16	0.16	0.71
2	7	T2	K+	0.60	0.95	0.50
2	7	ND	NO3-	0.94	2.36	0.33
2	7	BN	HNO3	0.46	1.16	0.31
2	7	DX	NH3	5.90	3.35	1.28
						0.73

STATION 2 PERIOD 8 SAMPLING TIME 4- 8 AUG 30
 TEMPERATURE = 291.5 K RELATIVE HUMIDITY= 78.1%
 FILTER ID

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY
				(PPB)	(UG/M**3)	
2	8	T2	NO3-	3.03	7.63	0.60
2	8	T2	SO4=	3.94	15.40	0.71
2	8	T2	CL-	0.97	1.38	0.46
2	8	T2	NH4+	6.15	3.49	1.26
2	8	T2	NA+	1.62	1.51	0.76
2	8	T2	CA++	1.19	1.94	0.87
2	8	T2	MG++	0.17	0.17	0.71
2	8	T2	K+	0.51	0.82	0.71
2	8	ND	NO3-	0.87	2.18	0.50
2	8	BN	HNO3	0.48	1.21	0.33
2	8	DX	NH3	2.50	1.42	0.31
						0.71
						0.40

STATION 2 PERIOD 9 SAMPLING TIME 8- 12 AUG 30
 TEMPERATURE = 300.1 K RELATIVE HUMIDITY= 51.3%
 FILTER ID

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY
				(PPB)	(UG/M**3)	
2	9	T2	NO3-	6.07	15.29	0.99
2	9	T2	SO4=	5.76	22.50	0.94
2	9	T2	CL-	0.67	0.95	0.43
2	9	T2	NH4+	9.07	5.15	1.84
2	9	T2	NA+	0.91	0.85	0.73
2	9	T2	CA++	5.13	8.36	1.26
2	9	T2	MG++	0.71	0.70	0.73
2	9	T2	K+	0.91	1.45	0.52
2	9	ND	NO3-	2.33	5.86	0.46
2	9	BN	HNO3	1.12	2.83	0.34
2	9	DX	NH3	4.56	2.59	1.04
						0.59

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STATION 2 PERIOD 10 SAMPLING TIME 12- 16 AUG 30
 TEMPERATURE = 306.1 K RELATIVE HUMIDITY= 34.5%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
2	10	T2	NO3-	4.03	10.16	0.72	1.81
2	10	T2	SO4=	4.30	16.80	0.75	2.94
2	10	T2	CL-	0.04	0.06	0.40	0.57
2	10	T2	NH4+	5.51	3.13	1.14	0.65
2	10	T2	NA+	1.48	1.39	0.75	0.71
2	10	T2	CA++	2.98	4.85	1.00	1.63
2	10	T2	MG++	1.19	1.18	0.75	0.74
2	10	T2	K+	0.27	0.43	0.49	0.78
2	10	ND	NO3-	1.39	3.50	0.36	0.92
2	10	BN	HNO3	2.53	6.38	0.48	1.21
2	10	OX	NH3	10.36	5.89	2.13	1.21

STATION 2 PERIOD 11 SAMPLING TIME 16- 20 AUG 30
 TEMPERATURE = 302.1 K RELATIVE HUMIDITY= 42.5%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
2	11	T2	NO3-	2.38	6.00	0.53	1.34
2	11	T2	SO4=	2.78	10.86	0.57	2.24
2	11	T2	CL-	0.17	0.24	0.40	0.57
2	11	T2	NH4+	3.14	1.78	0.69	0.39
2	11	T2	NA+	1.23	1.16	0.74	0.70
2	11	T2	CA++	1.34	2.18	0.88	1.43
2	11	T2	MG++	0.22	0.22	0.72	0.71
2	11	T2	K+	0.03	0.05	0.49	0.78
2	11	ND	NO3-	0.70	1.75	0.32	0.80
2	11	BN	HNO3	1.45	3.66	0.37	0.93
2	11	OX	NH3	6.67	3.90	1.46	0.63

STATION 2 PERIOD 12 SAMPLING TIME 20- 24 AUG 30
 TEMPERATURE = 296.1 K RELATIVE HUMIDITY= 57.5%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
2	12	T2	NO3-	3.32	8.35	0.63	1.60
2	12	T2	SO4=	3.35	13.08	0.64	2.49
2	12	T2	CL-	0.81	1.15	0.44	0.62
2	12	T2	NH4+	4.68	2.66	0.98	0.56
2	12	T2	NA+	1.94	1.81	0.78	0.73
2	12	T2	CA++	1.45	2.37	0.88	1.44
2	12	T2	MG++	0.36	0.36	0.72	0.71
2	12	T2	K+	0.22	0.35	0.49	0.78
2	12	ND	NO3-	1.18	2.98	0.35	0.88
2	12	BN	HNO3	0.48	1.22	0.31	0.76
2	12	OX	NH3	7.84	4.46	1.65	0.94

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STATION 2 PERIOD 13 SAMPLING TIME 0- 2 AUG 31
TEMPERATURE = 293.1 K RELATIVE HUMIDITY= 67.9%
FILTER ID

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY	
				(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
2	13	T2	NO3-	2.99	7.53	0.60	1.50
2	13	T2	SO4=	2.14	8.37	0.51	2.00
2	13	T2	CL-	0.53	0.76	0.42	0.59
2	13	T2	NH4+	4.11	2.34	0.87	0.49
2	13	T2	NA+	3.37	3.15	0.88	0.82
2	13	T2	CA++	1.22	1.98	0.87	1.42
2	13	T2	MG++	0.01	0.01	0.71	0.71
2	13	T2	K+	0.16	0.26	0.49	0.78
2	13	ND	NO3-	1.23	3.09	0.35	0.88
2	13	BN	HNO3	0.56	1.41	0.31	0.78
2	13	OX	NH3	10.62	6.04	2.18	1.24

STATION 2 PERIOD 14 SAMPLING TIME 2- 4 AUG 31
TEMPERATURE = 292.1 K RELATIVE HUMIDITY= 72.2%
FILTER ID

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY	
				(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
2	14	T2	NO3-	2.34	5.88	0.53	1.33
2	14	T2	SO4=	1.20	4.70	0.44	1.71
2	14	T2	CL-	0.56	0.80	0.42	0.60
2	14	T2	NH4+	3.15	1.79	0.69	0.39
2	14	T2	NA+	3.33	3.12	0.87	0.82
2	14	T2	CA++	0.78	1.27	0.85	1.39
2	14	T2	MG++	0.02	0.02	0.71	0.71
2	14	T2	K+	0.82	1.31	0.51	0.81
2	14	ND	NO3-	1.08	2.72	0.34	0.86
2	14	JN	HNO3	0.31	0.77	0.30	0.76
2	14	OX	NH3	10.63	6.04	2.18	1.24

STATION 2 PERIOD 15 SAMPLING TIME 4- 6 AUG 31
TEMPERATURE = 291.6 K RELATIVE HUMIDITY= 74.5%
FILTER ID

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY	
				(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
2	15	T2	NO3-	2.18	5.48	0.51	1.29
2	15	T2	SO4=	1.09	4.27	0.43	1.69
2	15	T2	CL-	0.39	0.56	0.41	0.58
2	15	T2	NH4+	3.15	1.79	0.69	0.39
2	15	T2	NA+	0.73	0.69	0.73	0.68
2	15	T2	CA++	0.81	1.31	0.86	1.39
2	15	T2	MG++	0.00	0.00	0.71	0.71
2	15	T2	K+	0.00	0.00	0.49	0.78
2	15	ND	NO3-	0.88	2.21	0.33	0.82
2	15	BN	HNO3	0.34	0.87	0.30	0.77
2	15	OX	NH3	9.99	5.67	2.06	1.17

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STATION 2 PERIOD 16
 TEMPERATURE = 291.1 K
 FILTER ID

SAMPLING TIME 6- 8 AUG 31
 RELATIVE HUMIDITY= 76.9%

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY
				(PPB)	(UG/M**3)	
2	16	T2	NO3-	4.21	10.61	0.74
2	16	T2	SO4=	2.75	10.74	0.57
2	16	T2	CL-	0.47	0.67	0.41
2	16	T2	NH4+	4.50	2.55	0.94
2	16	T2	NA+	1.19	1.11	0.74
2	16	T2	CA++	1.45	2.37	0.88
2	16	T2	MG++	1.44	1.43	0.76
2	16	T2	K+	0.24	0.38	0.49
2	16	ND	NO3-	0.88	2.22	0.33
2	16	BN	HN03	0.42	1.07	0.31
2	16	DX	NH3	11.92	6.78	2.44

STATION 2 PERIOD 17
 TEMPERATURE = 299.1 K
 FILTER ID

SAMPLING TIME 8- 10 AUG 31
 RELATIVE HUMIDITY= 45.5%

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY
				(PPB)	(UG/M**3)	
2	17	T2	NO3-	5.40	13.61	0.90
2	17	T2	SO4=	3.28	12.82	0.63
2	17	T2	CL-	1.01	1.44	0.46
2	17	T2	NH4+	5.88	3.34	1.21
2	17	T2	NA+	1.14	1.07	0.74
2	17	T2	CA++	3.91	6.38	1.10
2	17	T2	MG++	0.45	0.44	0.72
2	17	T2	K+	0.22	0.36	0.49
2	17	ND	NO3-	1.48	3.73	0.37
2	17	BN	HN03	0.91	2.29	0.33
2	17	DX	NH3	6.56	3.73	1.40

STATION 2 PERIOD 18
 TEMPERATURE = 304.6 K
 FILTER ID

SAMPLING TIME 10- 12 AUG 31
 RELATIVE HUMIDITY= 33.7%

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY
				(PPB)	(UG/M**3)	
2	18	T2	NO3-	9.13	23.00	1.41
2	18	T2	SO4=	3.54	13.81	0.66
2	18	T2	CL-	3.94	5.61	0.97
2	18	T2	NH4+	7.53	4.28	1.53
2	18	T2	NA+	1.18	1.10	0.74
2	18	T2	CA++	3.63	5.91	1.07
2	18	T2	MG++	0.00	0.00	0.71
2	18	T2	K+	0.37	0.58	0.49
2	18	ND	NO3-	2.35	5.91	0.46
2	18	BN	HN03	1.40	3.52	0.36
2	18	DX	NH3	3.81	2.16	0.91

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STATION 2 PERIOD 19
TEMPERATURE = 306.1 K
FILTER ID

SAMPLING TIME 12- 14 AUG 31
RELATIVE HUMIDITY= 27.8%

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY (UG/M**3)
				(PPB)	(UG/M**3)	
2	19	T2	NO3-	3.02	7.60	1.51
2	19	T2	SO4=	2.79	10.89	2.25
2	19	T2	CL-	0.68	0.97	0.61
2	19	T2	NH4+	4.29	2.44	0.51
2	19	T2	NA+	0.85	0.79	0.69
2	19	T2	CA++	3.39	5.53	1.70
2	19	T2	MG++	0.15	0.15	0.71
2	19	T2	K+	0.11	0.17	0.78
2	19	ND	NO3-	1.26	3.18	0.89
2	19	BN	HNO3	2.94	7.40	1.33
2	19	DX	NH3	9.03	5.13	1.06

STATION 2 PERIOD 20
TEMPERATURE = 309.1 K
FILTER ID

SAMPLING TIME 14- 16 AUG 31
RELATIVE HUMIDITY= 19.9%

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY (UG/M**3)
				(PPB)	(UG/M**3)	
2	20	T2	NO3-	6.66	16.77	2.68
2	20	T2	SO4=	2.89	11.30	2.29
2	20	T2	CL-	0.90	1.29	0.64
2	20	T2	NH4+	8.34	4.74	0.96
2	20	T2	NA+	2.28	2.14	0.75
2	20	T2	CA++	2.86	4.66	1.61
2	20	T2	MG++	0.01	0.01	0.71
2	20	T2	K+	0.68	1.08	0.80
2	20	ND	NO3-	3.27	8.25	1.44
2	20	BN	HNO3	4.15	10.45	1.72
2	20	DX	NH3	15.34	8.71	1.77

STATION 2 PERIOD 21
TEMPERATURE = 307.1 K
FILTER ID

SAMPLING TIME 16- 18 AUG 31
RELATIVE HUMIDITY= 19.5%

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY (UG/M**3)
				(PPB)	(UG/M**3)	
2	21	T2	NO3-	1.02	2.57	1.08
2	21	T2	SO4=	0.45	1.78	1.58
2	21	T2	CL-	0.09	0.13	0.57
2	21	T2	NH4+	1.09	0.62	0.20
2	21	T2	NA+	0.13	0.12	0.68
2	21	T2	CA++	0.55	0.90	1.38
2	21	T2	MG++	0.01	0.01	0.71
2	21	T2	K+	0.00	0.00	0.78
2	21	ND	NO3-	1.14	2.86	0.87
2	21	BN	HNO3	1.89	4.76	1.03
2	21	DX	NH3	14.01	7.96	1.62

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STATION 2 PERIOD 22 SAMPLING TIME 18- 20 AUG 31
 TEMPERATURE = 302.6 K RELATIVE HUMIDITY= 30.3%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
2	22	T2	NO3-	2.18	5.49	0.51	1.30
2	22	T2	SO4=	1.79	7.01	0.48	1.88
2	22	T2	CL-	0.12	0.17	0.40	0.57
2	22	T2	NH4+	2.55	1.45	0.58	0.33
2	22	T2	NA+	3.43	3.21	0.88	0.83
2	22	T2	CA++	0.80	1.31	0.86	1.39
2	22	T2	MG++	0.02	0.02	0.71	0.71
2	22	T2	K+	0.00	0.00	0.49	0.78
2	22	ND	NO3-	0.79	2.00	0.32	0.81
2	22	BN	HNO3	1.13	2.85	0.34	0.87
2	22	OX	NH3	8.97	5.10	1.86	1.06

STATION 2 PERIOD 23 SAMPLING TIME 20- 22 AUG 31
 TEMPERATURE = 299.1 K RELATIVE HUMIDITY= 32.0%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
2	23	T2	NO3-	3.32	8.36	0.63	1.60
2	23	T2	SO4=	2.41	9.41	0.54	2.09
2	23	T2	CL-	1.48	2.10	0.52	0.74
2	23	T2	NH4+	3.32	1.89	0.72	0.41
2	23	T2	NA+	3.04	2.84	0.85	0.80
2	23	T2	CA++	1.80	2.93	0.90	1.47
2	23	T2	MG++	0.07	0.07	0.71	0.71
2	23	T2	K+	1.45	2.30	0.56	0.88
2	23	ND	NO3-	0.80	2.03	0.32	0.81
2	23	BN	HNO3	0.60	1.51	0.31	0.79
2	23	OX	NH3	11.48	6.53	2.35	1.34

STATION 2 PERIOD 24 SAMPLING TIME 22- 24 AUG 31
 TEMPERATURE = 297.1 K RELATIVE HUMIDITY= 36.1%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
2	24	T2	NO3-	2.91	7.32	0.59	1.48
2	24	T2	SO4=	2.05	8.01	0.50	1.96
2	24	T2	CL-	1.31	1.87	0.50	0.71
2	24	T2	NH4+	2.67	1.52	0.60	0.34
2	24	T2	NA+	2.52	2.36	0.81	0.76
2	24	T2	CA++	1.62	2.65	0.89	1.46
2	24	T2	MG++	0.00	0.00	0.71	0.71
2	24	T2	K+	0.00	0.00	0.49	0.78
2	24	ND	NO3-	0.97	2.45	0.33	0.84
2	24	BN	HNO3	0.49	1.25	0.31	0.78
2	24	OX	NH3	12.13	6.89	2.48	1.41

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STATION 3 PERIOD 7 SAMPLING TIME 0- 4 AUG 30
 TEMPERATURE = 290.1 K RELATIVE HUMIDITY= 84.9%
 FILTER ID

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY (PPB)	UNCERTAINTY (UG/M**3)
				(PPB)	(UG/M**3)		
3	7	T2	NO3-	4.37	11.01	0.76	1.92
3	7	T2	SO4=	4.06	15.84	0.72	2.82
3	7	T2	CL-	0.00	0.00	0.40	0.57
3	7	T2	NH4+	7.47	4.25	1.52	0.86
3	7	T2	NA+	0.46	0.43	0.72	0.68
3	7	T2	CA++	1.02	1.67	0.86	1.41
3	7	T2	MG++	0.01	0.01	0.71	0.71
3	7	T2	K+	0.00	0.00	0.49	0.78
3	7	ND	NO3-	1.55	3.92	0.38	0.95
3	7	BN	HNO3	0.42	1.05	0.31	0.77
3	7	DX	NH3	2.66	1.52	0.73	0.42

STATION 3 PERIOD 8 SAMPLING TIME 4- 8 AUG 30
 TEMPERATURE = 296.1 K RELATIVE HUMIDITY= 58.5%
 FILTER ID

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY (PPB)	UNCERTAINTY (UG/M**3)
				(PPB)	(UG/M**3)		
3	8	T2	NO3-	5.63	14.18	0.93	2.33
3	8	T2	SO4=	3.37	13.17	0.64	2.50
3	8	T2	CL-	0.44	0.62	0.41	0.59
3	8	T2	NH4+	7.22	4.10	1.47	0.84
3	8	T2	NA+	0.20	0.19	0.72	0.68
3	8	T2	CA++	2.12	3.46	0.93	1.51
3	8	T2	MG++	0.15	0.15	0.71	0.71
3	8	T2	K+	0.00	0.00	0.49	0.78
3	8	ND	NO3-	1.87	4.70	0.41	1.03
3	8	BN	HNO3	0.36	0.90	0.30	0.77
3	8	DX	NH3	6.72	3.82	1.43	0.81

STATION 3 PERIOD 9 SAMPLING TIME 8- 12 AUG 30
 TEMPERATURE = 303.1 K RELATIVE HUMIDITY= 43.1%
 FILTER ID

STATION	TIME	TYPE	SPECIES	CONCENTRATION		UNCERTAINTY (PPB)	UNCERTAINTY (UG/M**3)
				(PPB)	(UG/M**3)		
3	9	T2	NO3-	10.78	27.16	1.65	4.15
3	9	T2	SO4=	4.21	16.44	0.74	2.90
3	9	T2	CL-	0.14	0.20	0.40	0.57
3	9	T2	NH4+	12.69	7.21	2.55	1.45
3	9	T2	NA+	0.38	0.35	0.72	0.68
3	9	T2	CA++	2.56	4.17	0.96	1.57
3	9	T2	MG++	0.24	0.24	0.72	0.71
3	9	T2	K+	0.00	0.00	0.49	0.78
3	9	ND	NO3-	1.68	4.23	0.39	0.98
3	9	BN	HNO3	1.17	2.96	0.35	0.87
3	9	DX	NH3	10.75	6.11	2.21	1.25

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STATION 3 PERIOD 10 SAMPLING TIME 12- 16 AUG 30
 TEMPERATURE = 302.1 K RELATIVE HUMIDITY= 43.3%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
3	10	T2	NO3-	3.36	8.47	0.64	1.61
3	10	T2	SO4=	2.77	10.81	0.57	2.24
3	10	T2	CL-	0.22	0.31	0.40	0.57
3	10	T2	NH4+	4.01	2.28	0.85	0.48
3	10	T2	NA+	1.14	1.07	0.74	0.69
3	10	T2	CA++	1.64	2.68	0.89	1.46
3	10	T2	MG++	0.30	0.29	0.72	0.71
3	10	T2	K+	0.42	0.67	0.50	0.79
3	10	ND	NO3-	1.35	3.39	0.36	0.91
3	10	BN	HNO3	2.72	6.85	0.50	1.27
3	10	DX	NH3	2.23	1.27	0.67	0.38

STATION 3 PERIOD 11 SAMPLING TIME 16- 20 AUG 30
 TEMPERATURE = 296.1 K RELATIVE HUMIDITY= 60.7%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
3	11	T2	NO3-	3.25	8.19	0.63	1.58
3	11	T2	SO4=	2.03	7.94	0.50	1.96
3	11	T2	CL-	0.24	0.34	0.40	0.57
3	11	T2	NH4+	2.31	1.32	0.54	0.31
3	11	T2	NA+	1.17	1.09	0.74	0.69
3	11	T2	CA++	2.27	3.71	0.94	1.53
3	11	T2	MG++	0.20	0.20	0.72	0.71
3	11	T2	K+	0.22	0.35	0.49	0.78
3	11	ND	NO3-	1.35	3.39	0.36	0.91
3	11	BN	HNO3	1.51	3.82	0.37	0.94
3	11	DX	NH3	7.99	4.54	1.67	0.95

STATION 3 PERIOD 12 SAMPLING TIME 20- 24 AUG 30
 TEMPERATURE = 292.1 K RELATIVE HUMIDITY= 73.5%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
3	12	T2	NO3-	4.05	10.21	0.72	1.82
3	12	T2	SO4=	3.86	15.08	0.70	2.73
3	12	T2	CL-	0.00	0.00	0.40	0.57
3	12	T2	NH4+	4.70	2.67	0.98	0.56
3	12	T2	NA+	0.68	0.64	0.73	0.68
3	12	T2	CA++	1.62	2.64	0.89	1.45
3	12	T2	MG++	0.03	0.03	0.71	0.71
3	12	T2	K+	0.00	0.00	0.49	0.78
3	12	ND	NO3-	0.80	2.03	0.32	0.81
3	12	BN	HNO3	0.56	1.41	0.31	0.78
3	12	DX	NH3	6.62	3.76	1.42	0.80

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STATION 3 PERIOD 13 SAMPLING TIME 0- 2 AUG 31
TEMPERATURE = 291.1 K RELATIVE HUMIDITY= 76.9%

STATION TIME TYPE			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
3	13	T2	NO3-	2.27	5.73	0.52	1.32
3	13	T2	SO4=	0.44	1.70	0.41	1.58
3	13	T2	CL-	0.00	0.00	0.40	0.57
3	13	T2	NH4+	1.43	0.81	0.40	0.23
3	13	T2	NA+	0.22	0.21	0.72	0.68
3	13	T2	CA++	1.73	2.82	0.90	1.47
3	13	T2	MG++	0.01	0.01	0.71	0.71
3	13	T2	K+	0.42	0.67	0.50	0.79
3	13	ND	NO3-	1.12	2.82	0.34	0.86
3	13	BN	HNO3	0.41	1.02	0.31	0.77
3	13	OX	NH3	2.84	1.61	0.76	0.43

STATION 3 PERIOD 14 SAMPLING TIME 2- 4 AUG 31
TEMPERATURE = 291.1 K RELATIVE HUMIDITY= 76.9%

STATION TIME TYPE			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
3	14	T2	NO3-	3.60	9.06	0.67	1.68
3	14	T2	SO4=	1.77	6.90	0.48	1.87
3	14	T2	CL-	0.14	0.20	0.40	0.57
3	14	T2	NH4+	3.15	1.79	0.69	0.39
3	14	T2	NA+	0.67	0.63	0.73	0.68
3	14	T2	CA++	1.76	2.87	0.90	1.47
3	14	T2	MG++	0.02	0.02	0.71	0.71
3	14	T2	K+	0.07	0.12	0.49	0.78
3	14	ND	NO3-	1.16	2.92	0.35	0.87
3	14	BN	HNO3	0.44	1.10	0.31	0.77
3	14	OX	NH3	2.91	1.65	0.77	0.44

STATION 3 PERIOD 15 SAMPLING TIME 4- 6 AUG 31
TEMPERATURE = 289.1 K RELATIVE HUMIDITY= 87.3%

STATION TIME TYPE			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
3	15	T2	NO3-	0.28	0.70	0.40	1.01
3	15	T2	SO4=	0.36	1.39	0.40	1.58
3	15	T2	CL-	0.00	0.00	0.40	0.57
3	15	T2	NH4+	0.24	0.13	0.29	0.16
3	15	T2	NA+	0.00	0.00	0.72	0.67
3	15	T2	CA++	0.29	0.48	0.84	1.36
3	15	T2	MG++	0.00	0.00	0.71	0.71
3	15	T2	K+	0.09	0.14	0.49	0.78
3	15	ND	NO3-	0.40	1.00	0.31	0.77
3	15	BN	HNO3	0.45	1.13	0.31	0.77
3	15	OX	NH3	3.07	1.75	0.79	0.45

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STATION 3 PERIOD 16 SAMPLING TIME 6- 8 AUG 81
TEMPERATURE = 295.1 K RELATIVE HUMIDITY= 60.0%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
3	16	T2	NO3-	5.62	14.16	0.92	2.33
3	16	T2	SO4=	4.35	16.99	0.76	2.96
3	16	T2	CL-	0.92	1.30	0.45	0.64
3	16	T2	NH4+	5.41	3.08	1.12	0.64
3	16	T2	NA+	0.98	0.91	0.74	0.69
3	16	T2	CA++	0.00	0.01	0.84	1.37
3	16	T2	MG++	0.79	0.79	0.73	0.72
3	16	T2	K+	0.65	1.03	0.50	0.80
3	16	ND	NO3-	1.94	4.90	0.42	1.05
3	16	BN	HNO3	0.48	1.22	0.31	0.78
3	16	OX	NH3	1.72	0.98	0.61	0.34

STATION 3 PERIOD 17 SAMPLING TIME 8- 10 AUG 81
TEMPERATURE = 299.1 K RELATIVE HUMIDITY= 45.5%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
3	17	T2	NO3-	5.77	14.54	0.95	2.38
3	17	T2	SO4=	3.25	12.70	0.63	2.45
3	17	T2	CL-	0.48	0.68	0.41	0.59
3	17	T2	NH4+	5.56	3.16	1.15	0.65
3	17	T2	NA+	0.51	0.48	0.73	0.68
3	17	T2	CA++	7.09	11.55	1.54	2.51
3	17	T2	MG++	0.17	0.17	0.71	0.71
3	17	T2	K+	2.01	3.20	0.61	0.97
3	17	ND	NO3-	2.91	7.33	0.53	1.32
3	17	BN	HNO3	0.78	1.96	0.32	0.81
3	17	OX	NH3	5.57	3.16	1.22	0.69

STATION 3 PERIOD 18 SAMPLING TIME 10- 12 AUG 81
TEMPERATURE = 302.1 K RELATIVE HUMIDITY= 38.9%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
3	18	T2	NO3-	8.05	20.28	1.26	3.17
3	18	T2	SO4=	2.58	10.06	0.55	2.16
3	18	T2	CL-	0.00	0.00	0.40	0.57
3	18	T2	NH4+	8.92	5.07	1.81	1.03
3	18	T2	NA+	0.43	0.40	0.72	0.68
3	18	T2	CA++	3.84	6.26	1.09	1.78
3	18	T2	MG++	0.02	0.02	0.71	0.71
3	18	T2	K+	0.00	0.00	0.49	0.78
3	18	ND	NO3-	3.66	9.22	0.62	1.56
3	18	BN	HNO3	1.70	4.27	0.39	0.99
3	18	OX	NH3	16.91	9.61	3.42	1.94

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STATION 3 PERIOD 19 SAMPLING TIME 12- 14 AUG 31
 TEMPERATURE = 305.1 K RELATIVE HUMIDITY= 29.4%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
3	19	T2	NO3-	2.48	6.26	0.54	1.37
3	19	T2	SO4=	0.26	1.02	0.40	1.57
3	19	T2	CL-	0.00	0.00	0.40	0.57
3	19	T2	NH4+	1.91	1.09	0.48	0.27
3	19	T2	NA+	0.17	0.16	0.72	0.68
3	19	T2	CA++	2.73	4.45	0.98	1.59
3	19	T2	MG++	0.02	0.02	0.71	0.71
3	19	T2	K+	0.00	0.00	0.49	0.78
3	19	ND	NO3-	3.37	8.49	0.58	1.47
3	19	BN	HNO3	3.23	8.14	0.57	1.42
3	19	DX	NH3	25.02	14.21	5.03	2.86

STATION 3 PERIOD 20 SAMPLING TIME 14- 16 AUG 31
 TEMPERATURE = 304.1 K RELATIVE HUMIDITY= 26.3%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
3	20	T2	NO3-	1.67	4.20	0.47	1.18
3	20	T2	SO4=	0.56	2.17	0.41	1.60
3	20	T2	CL-	0.00	0.00	0.40	0.57
3	20	T2	NH4+	0.44	0.25	0.30	0.17
3	20	T2	NA+	0.97	0.90	0.74	0.69
3	20	T2	CA++	2.26	3.68	0.94	1.53
3	20	T2	MG++	0.02	0.02	0.71	0.71
3	20	T2	K+	0.04	0.07	0.49	0.78
3	20	ND	NO3-	1.50	3.77	0.37	0.94
3	20	BN	HNO3	3.26	8.22	0.57	1.43
3	20	DX	NH3	6.79	3.86	1.45	0.82

STATION 3 PERIOD 21 SAMPLING TIME 16- 18 AUG 31
 TEMPERATURE = 300.1 K RELATIVE HUMIDITY= 29.1%

FILTER ID			SPECIES	CONCENTRATION		UNCERTAINTY	
STATION	TIME	TYPE		(PPB)	(UG/M**3)	(PPB)	(UG/M**3)
3	21	T2	NO3-	3.89	9.81	0.70	1.77
3	21	T2	SO4=	1.17	4.57	0.44	1.70
3	21	T2	CL-	0.00	0.00	0.40	0.57
3	21	T2	NH4+	4.43	2.52	0.93	0.53
3	21	T2	NA+	0.23	0.22	0.72	0.68
3	21	T2	CA++	2.52	4.11	0.96	1.56
3	21	T2	MG++	0.02	0.02	0.71	0.71
3	21	T2	K+	0.43	0.68	0.50	0.79
3	21	ND	NO3-	3.28	8.26	0.57	1.44
3	21	BN	HNO3	3.27	8.24	0.57	1.44
3	21	DX	NH3	1.77	1.00	0.61	0.35