Methodology

5. Evaluation and validation of predicted O_3 concentrations using wind trajectories

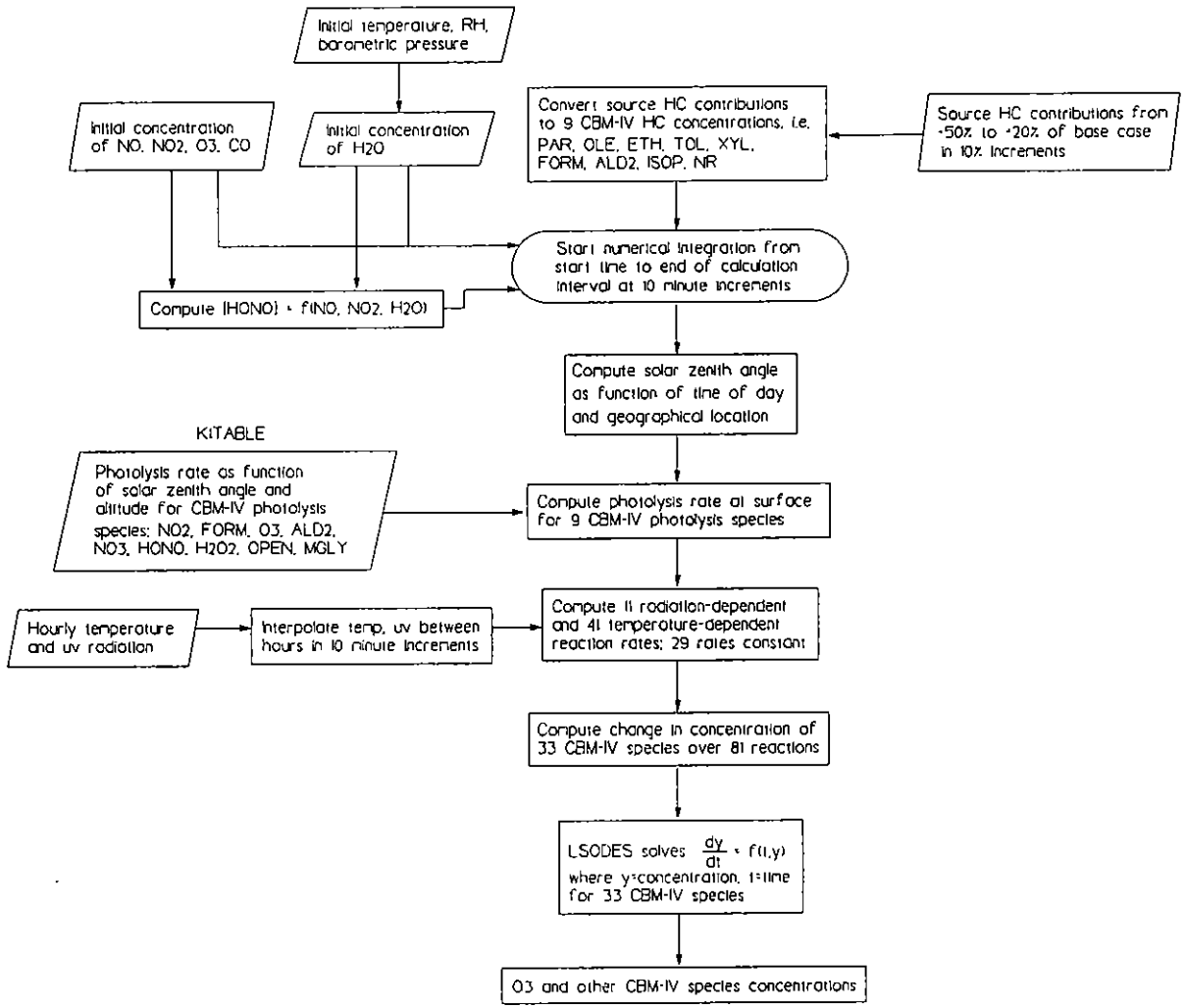
Methodology

6. Estimation of the relative effect of each source category by determining the variation in predicted ozone from changes in the NMOC contributions from each source type -50% to +20% of the based (measured sample) case while holding the other contributions constant

Methodology

See Insert: Flowchart of the Ozone Calculator

Methodology - Flowchart of the Ozone Calculator



Studies Using the CMB/CBM-IV Approach

Wadden et al, Receptor Modeling of VOCs-II. Development of VOC Control Functions from Ambient Ozone, 28, 2507-2521, 1994.

- **Summer 1987 - 18 4-hr morning NMHC samples on 9 days at 2 stations in Chicago; 8 sources; 23 fitting compounds.**

Studies Using the CMB/CBM-IV Approach

Chung et al, Development of Ozone-Precursor Relationships Using VOC Receptor Modeling, 30, 3167-3179, 1996.

- **Summer 1988 - 78 1-hr NMHC morning samples on 39 days at one station in Detroit; 6 sources; 29 fitting compounds.**

Studies Using the CMB/CBM-IV Approach

Kenski et al, Using Ambient Data to Examine Emission Inventories: A Mass Balance Approach, AWMA Paper 96-FA149.01, Nashville, 1996.

- **Summer 1991- 246 2-hr morning samples on 7 days at 17 stations in Illinois, Wisconsin, Indiana, and Michigan surrounding Lake Michigan; 7 sources; 48 fitting compounds.**

Studies Using the CMB/CBM-IV Approach

Chung et al, Receptor Model-Based Evaluation of NO_x Reductions Effectiveness in Ozone Abatement Strategies for Two Nonattainment Regions, AWMA Paper 97-RA94A.03, Toronto, 1997.

- Summer 1993 - Detroit (SEMOS); 67 2-hr morning samples on 8 days at 5 stations; 7 sources; 49 fitting compounds.

Calculations

- **Observed morning concentrations of NO, NO_x, CO, and O3 used as initial conditions**
- **CBM-IV estimates of O3 in this air mass were then calculated starting at the time of the sample collection and were continued, using actual temperature,and uv measurements; maximum O3 predictions were calculated for each sample.**

Calculations

- **Maximum calculated O3 concentrations typically occurred in 6-8 hours**
- CMB applied to each ambient sample using 6-8 source categories. These included vehicles, gasoline vapor, liquid gasoline, petroleum refineries, graphic arts, architectural coatings, waste -water treatment, vapor degreasing, coke oven emissions, and drycleaning

Calculations

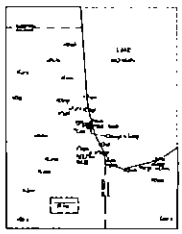
- Contribution of each NMOC component from each source determined by using calculated CMB coefficients and extended fingerprints.
- These contributions allocated to the carbon bond categories required for CBM-IV.

Calculations

- Based on forward trajectories for each sample, calculated ozone maximum concentrations were compared with measured ground-level values at about the same time when theses were available.

Calculations

- Organic contribution of each source was varied from -50% to +20% of the value based on the ambient measurement/CMB evaluation while holding the contributions from the other sources constant at the ambient/CMB values.



Chicago Area Monitoring Stations, 1987

Calculations

See Insert: CBM-IV Calculation Conditions for Chicago, 1987

Validation

See Insert : Chicago, Summer 1987 Table

Calculations

CBM-IV Calculation Conditions for Chicago, 1987									
	Date								
	7/1	7/11	7/24	7/30	8/1	8/7	8/11	8/17	9/3
Initial Organic Concentration, $\mu g/m^3$									
NMOC	134	124	263	184	266	188	249	170	289
Source Contributions, $\mu g/m^3$									
vehicles	46	35	64	50	47	43	28	55	50
gas.vap.	14	7	20	0	40	21	32	0	29
refineries	16	7	8	0	31	18	28	0	38
arch.coat	0.4	4	7	4	1	2	3	1	2
graph.art	0.3	3	6	4	1	1	0.8	1	2
wst.wat.	5	3	10	10	8	9	6	6	18
vap.degr	5	3	8	10	8	6	5	5	17

Calculations

CBM-IV Calculation Conditions for Chicago, 1987									
	Date								
	7/1	7/11	7/24	7/30	8/1	8/7	8/11	8/17	9/3
dry clean	0.2	0.2	0.9	0.4	0.5	1	0.7	0.5	0.5
Other Initial Conditions									
NO_x ppb	27	31	25	38	33	20	34	19	12
NO ppb	6	11	3	10	6	2	7	5	2
O_3 ppb	15	7	21	27	28	45	27	24	15
T,°C	21	32	32	31	33	31	25	28	21

Calculations

CBM-IV Calculation Conditions for Chicago, 1987									
	Date								
	7/1	7/11	7/24	7/30	8/1	8/7	8/11	8/17	9/3
Max. Calc. O_3 ppb	58	57	151	111	127	144	65	133	89

Validation

Chicago, Summer 1987		
Date	Predicted O_3*, ppb	Measured "Downwind" O_3, ppb
7/1/87	58	44 - 59
7/11/87	57	Over Lake Muskegon, MI: 88 - 95
7/24/87	151	Over Lake Muskegon, MI: 137 - 178
7/30/87	111	Over Lake and return over Chicago 85 - 153
8/1/87	127	109 - 120

Validation

Chicago, Summer 1987		
Date	Predicted O_3*, ppb	Measured "Downwind" O_3, ppb
8/7/87	144	Over Lake; no station; return over NW Indiana in evening
8/11/87	65	64 - 66
8/17/87	133	Over Lake; no station; return over SW Michigan around midnight
9/3/87	89	West out of study area; no station

* Calculated maximum values generally fell within the 16:00-18:00 time interval. "Downwind" values are given for this time period which always included the daily max. value.

Validation

See Insert : Map

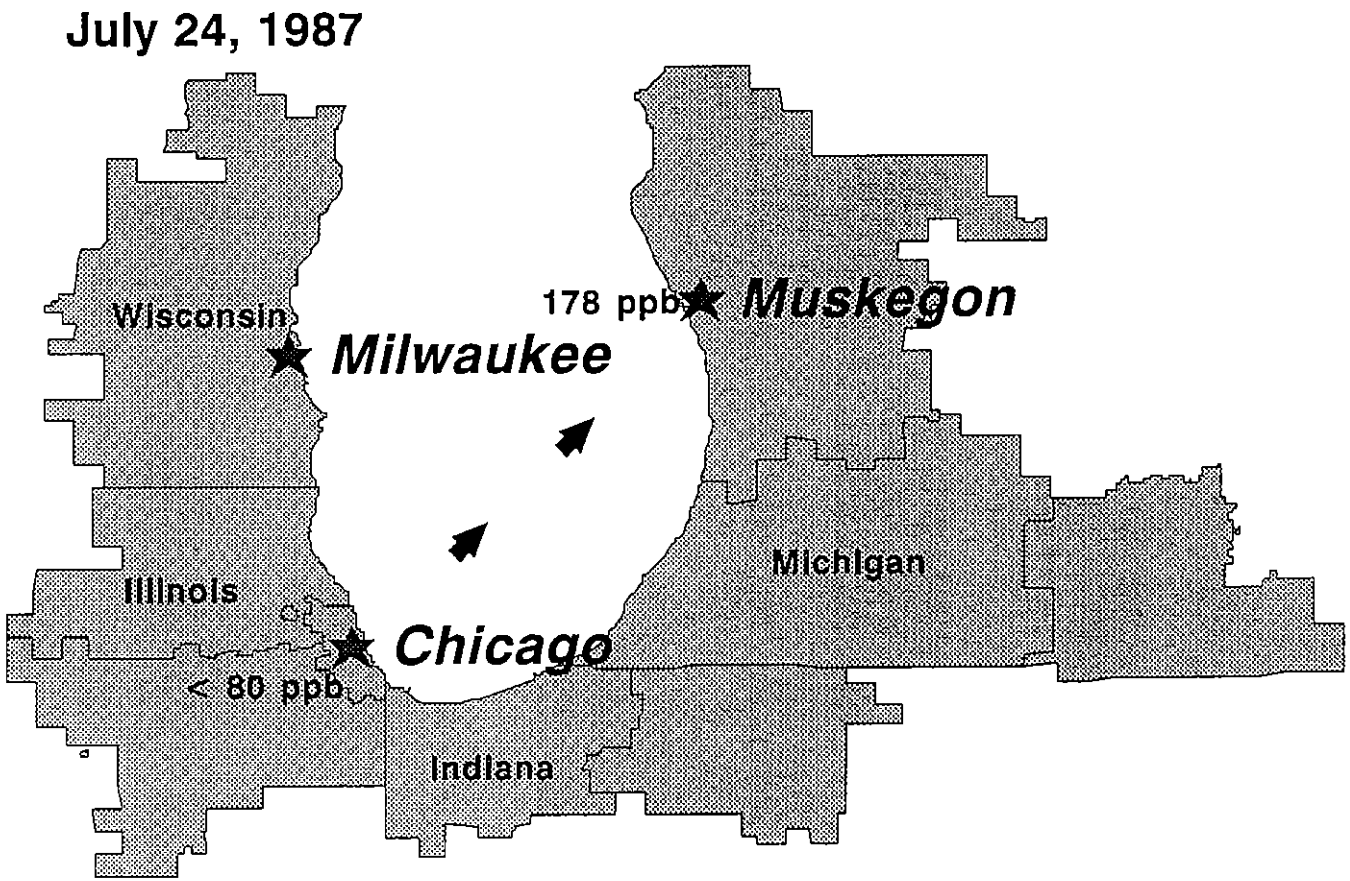
Validation

See Insert : 6 a.m. start time

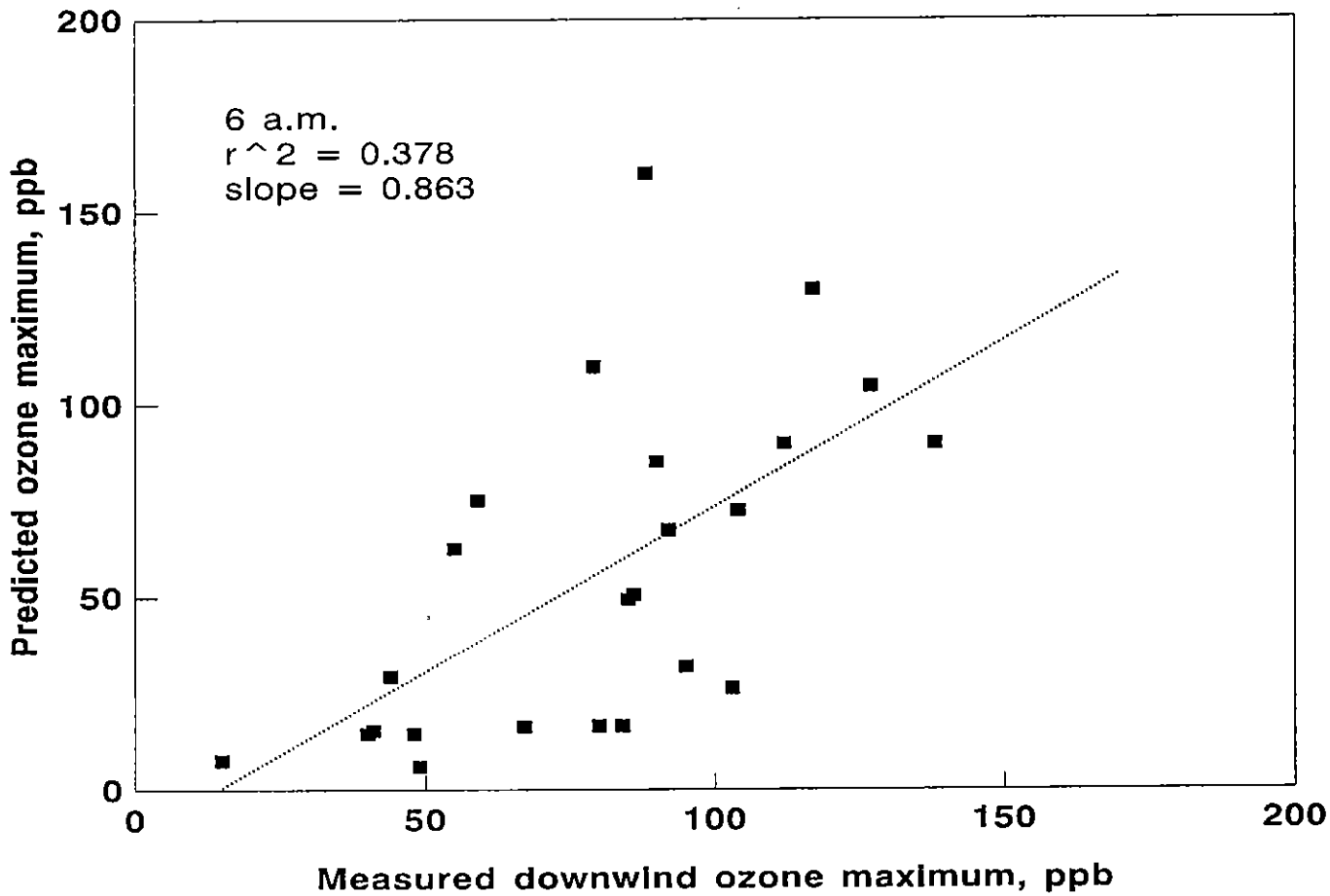
Validation

See Insert : 8 a.m. start time

Validation

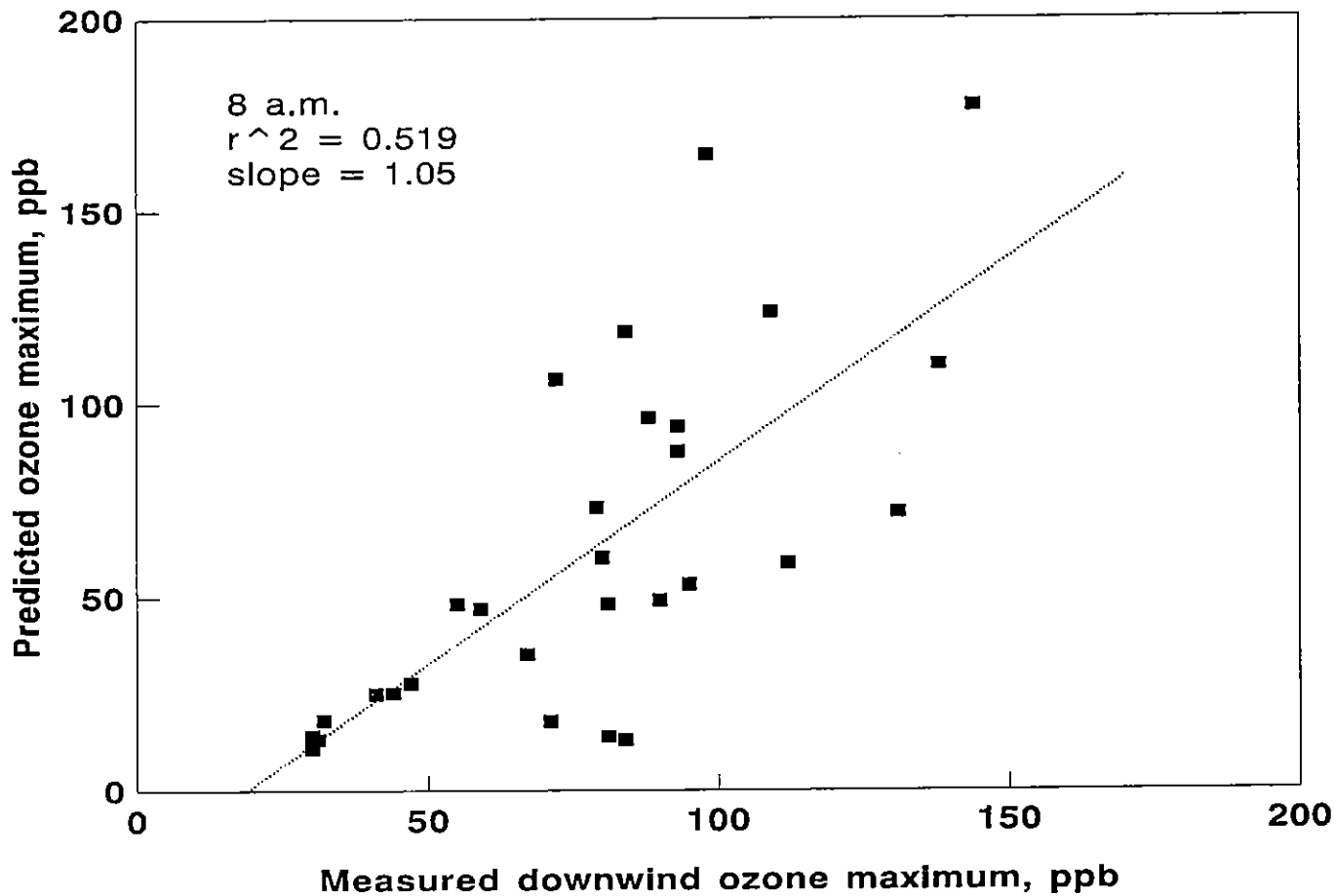

July 24, 1987
Wisconsin
Milwaukee
178 ppb
Muskegon
Illinois
Chicago
< 80 ppb
Indiana
Michigan

Validation



Measured/Predicted Max. O_3; Detroit, 1988; 6a.m. start time.

Validation



Measured/Calculated O_3; Detroit, 1988; 8 a.m. starting time.

Validation

See Insert : SEMOS (1993)

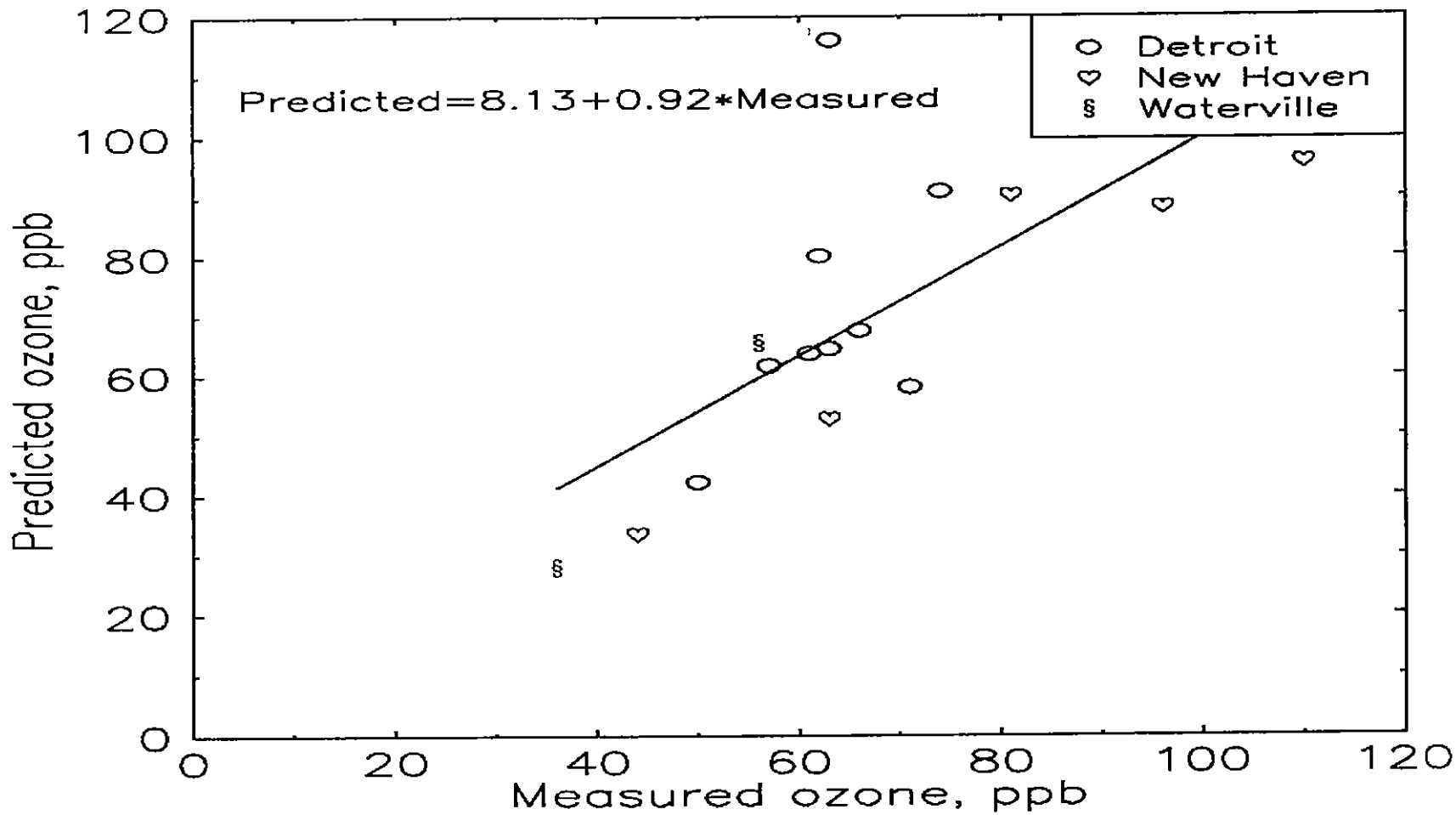
Validation

See Insert : Lake Michigan Study - 7 a.m.

Validation

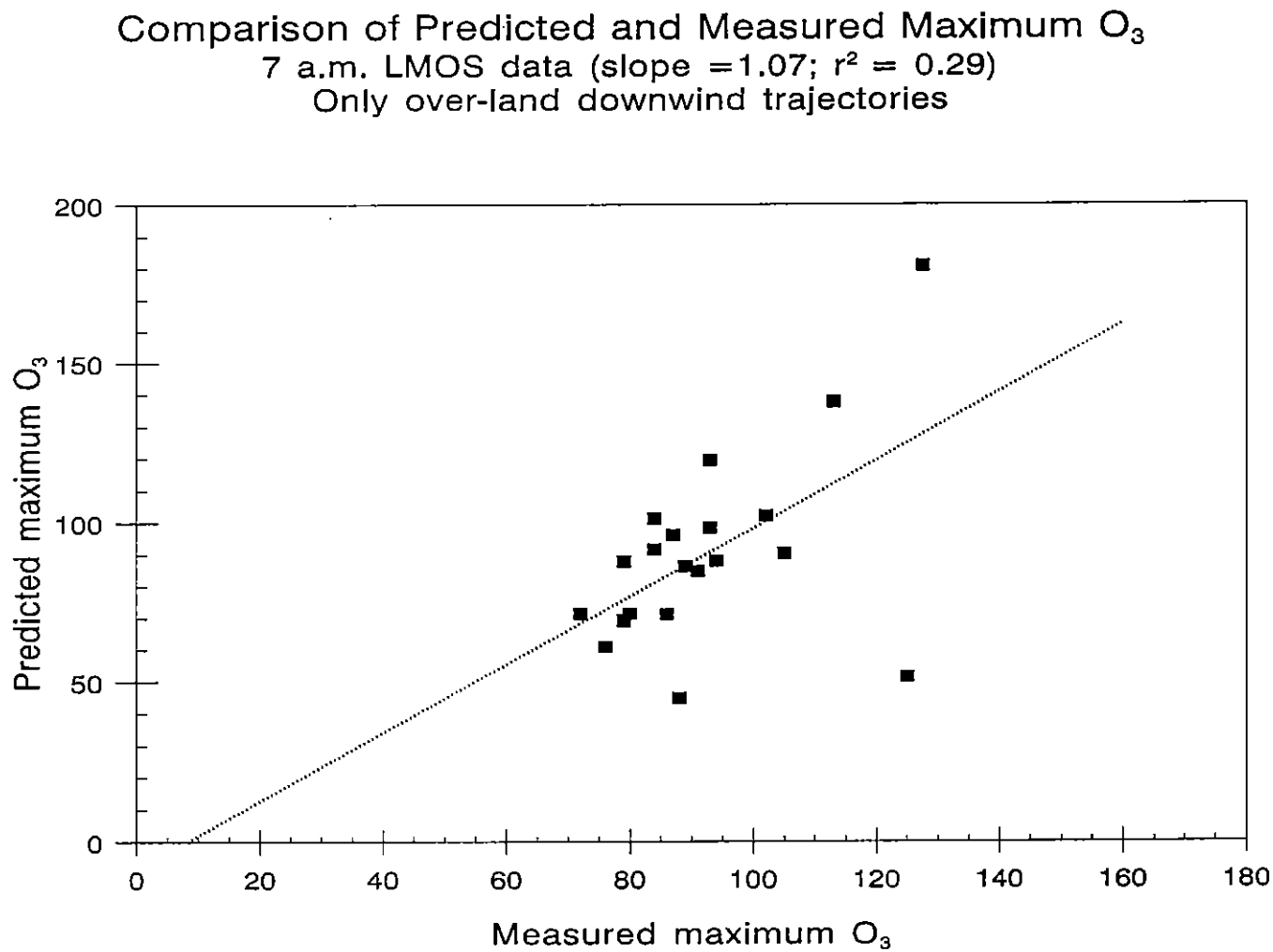
See Insert : Lake Michigan Study - 10 a.m.

Validation



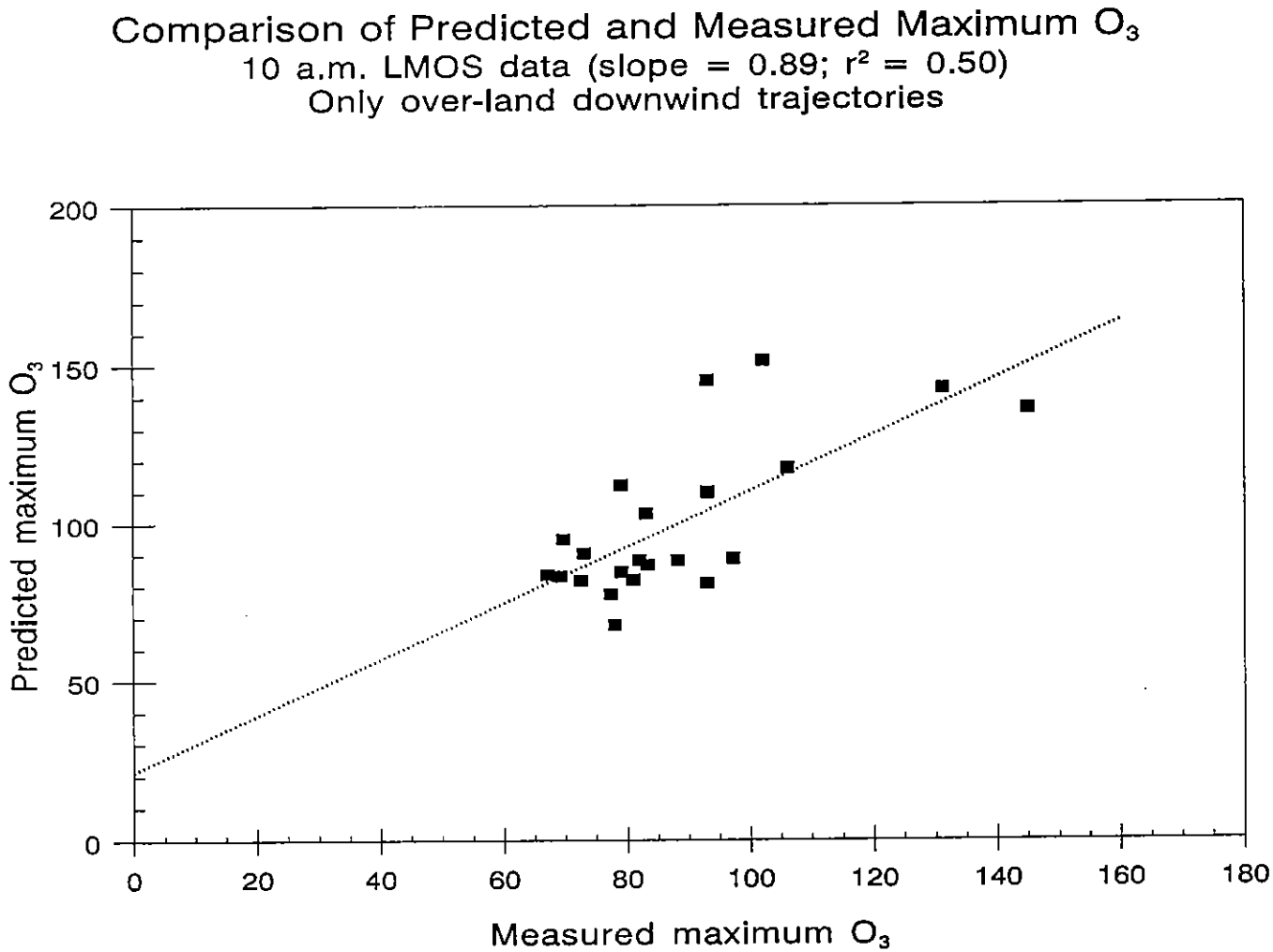
SEMOS (1993) predicted vs. measured ozone maximums for 7:00 and 11:00 calculation start times.

Validation



Lake Michigan O_3 Study; Summer 1991; 7 a.m. start time

Validation

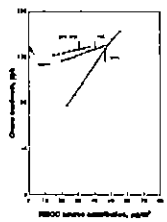


Lake Michigan O_3 Study; Summer 1991; 10 a.m. start time

Validation

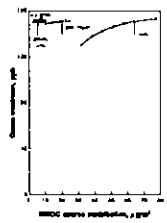
See Insert : Lake Michigan Ozone Study (1991)

Sensitivity Analysis and Development of Control Functions



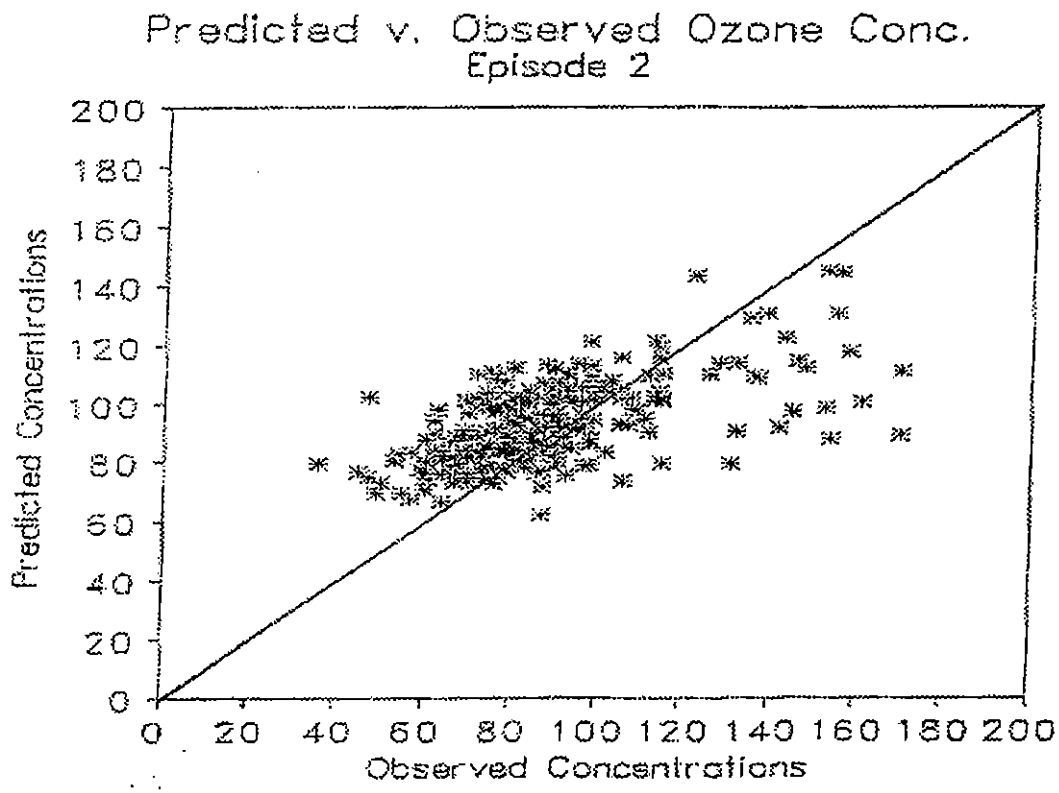
O_3 Maxima vs VOC control Options for Chicago, August 1, 1987 (Arrows show ambient concentration base case)

Sensitivity Analysis and Development of Control Functions



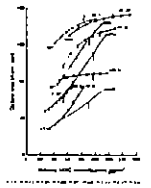
O_3 Maxima vs VOC Control Options for Chicago, July 24, 1987 (Arrows show ambient concentration base case)

Validation



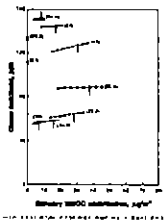
Lake Michigan Ozone Study (1991), Evaluation of the UAM-V Photochemical Grid Model in the Lake Michigan Region, Sept. 1994.

Sensitivity Analysis and Development of Control Functions



O_3 Maxima vs Vehicle VOC Control
Chicago, 1997 (Max. Temp. 1C), Arrows
show ambient concentration base case

Sensitivity Analysis and Development of Control Functions

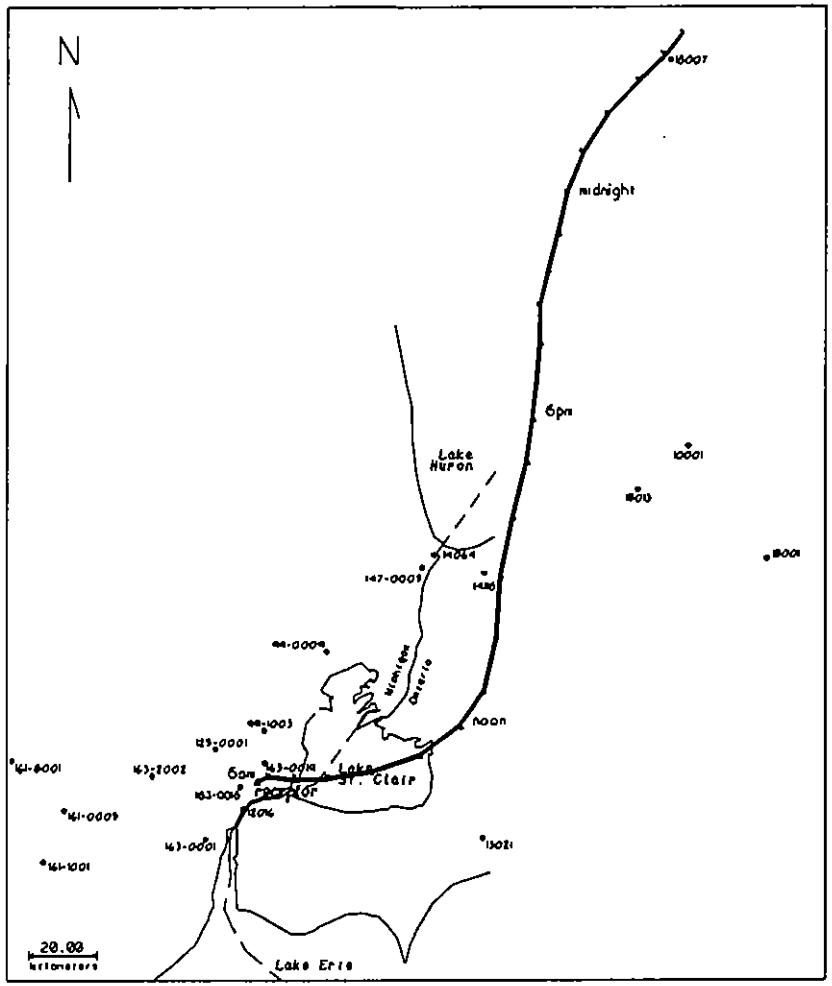


O_3 Maxima vs Refinery VOC Control
Chicago, 1997 (Max. Temp. 1C), Arrows
show ambient concentration base case

Sensitivity Analysis and Development of Control Functions

See Insert: Detroit Ozone Monitoring Stations

Sensitivity Analysis and Development of Control Functions



* indicates ozone monitoring station

Detroit O_3 Monitoring Stations; Forward Trajectory for 8/8/88

Sensitivity Analysis and Development of Control Functions

See Insert: Ozone Maxima vs. VOC Source Control

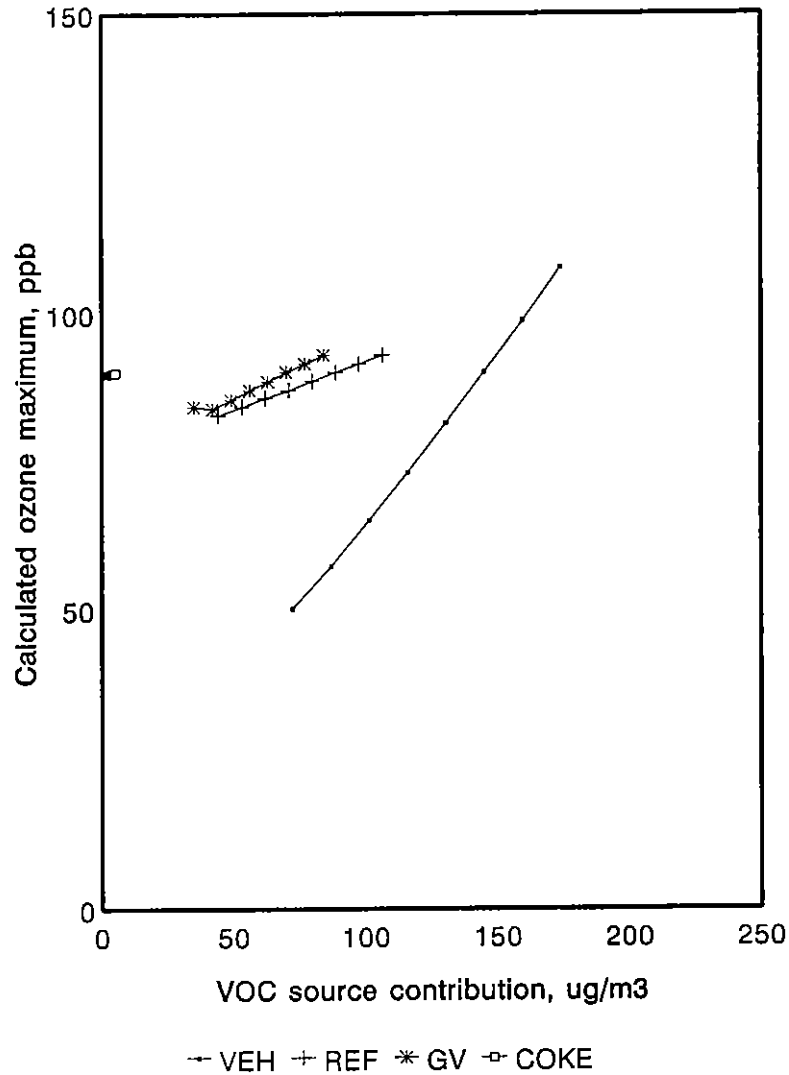
Sensitivity Analysis and Development of Control Functions

See Insert: Maximum O3/Vehicle VOC Relationship

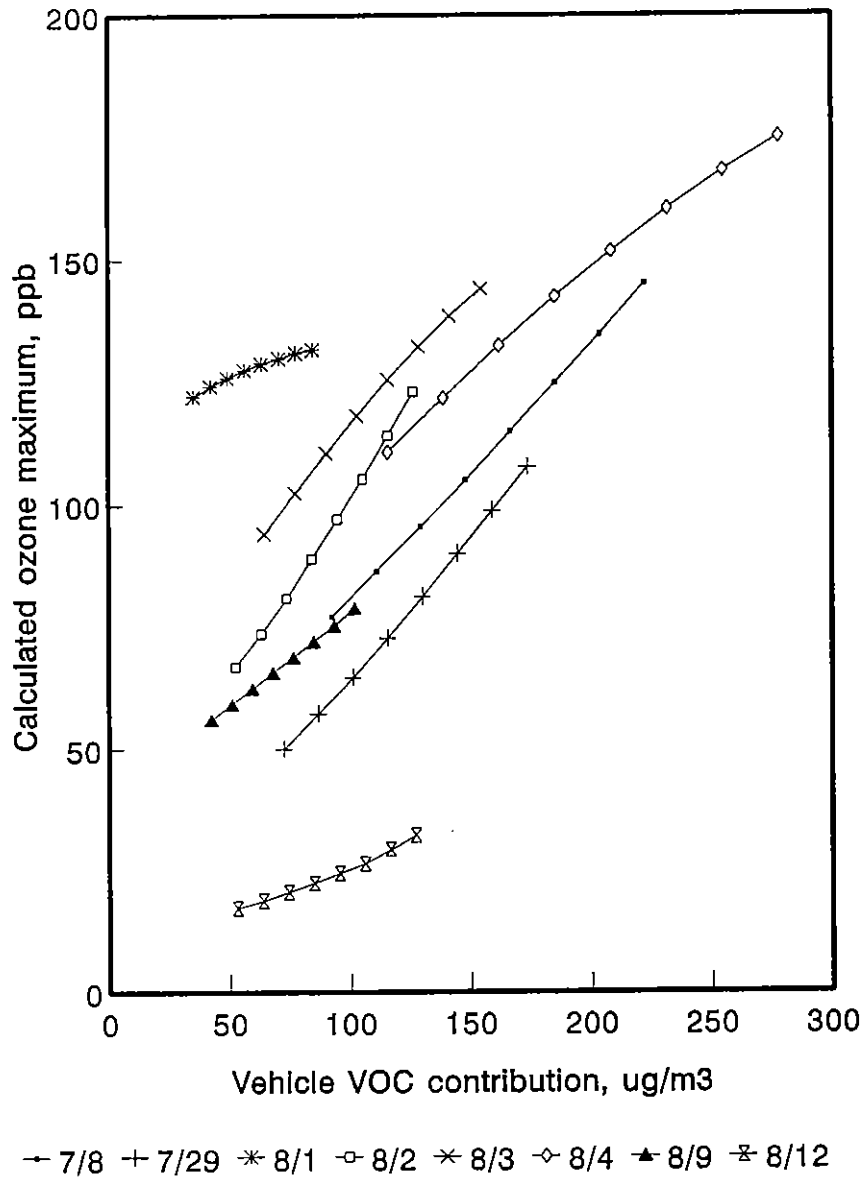
Sensitivity Analysis and Development of Control Functions

See Insert: NMOG Measurement Sites

Sensitivity Analysis and Development of Control Functions

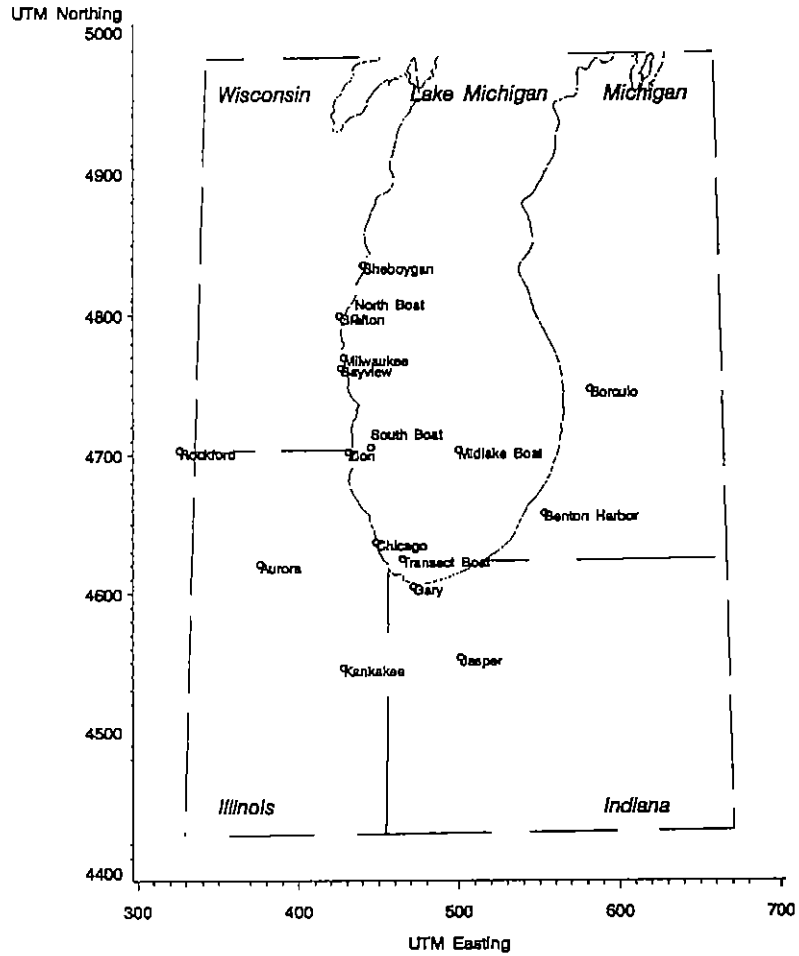


O_3 Maxima vs. VOC Source Control; Detroit, 7/29/1988



Maximum O_3/Vehicle VOC Relationship; Detroit, 1988

Sensitivity Analysis and Development of Control Functions



NMOG Measurement Sites, LMOS, 1991

Sensitivity Analysis and Development of Control Functions

See Insert: Figure 16

Sensitivity Analysis and Development of Control Functions

See Insert: VOC/O3 Relationship

Sensitivity Analysis and Development of Control Functions

See Insert: Nox/O3 Relationship

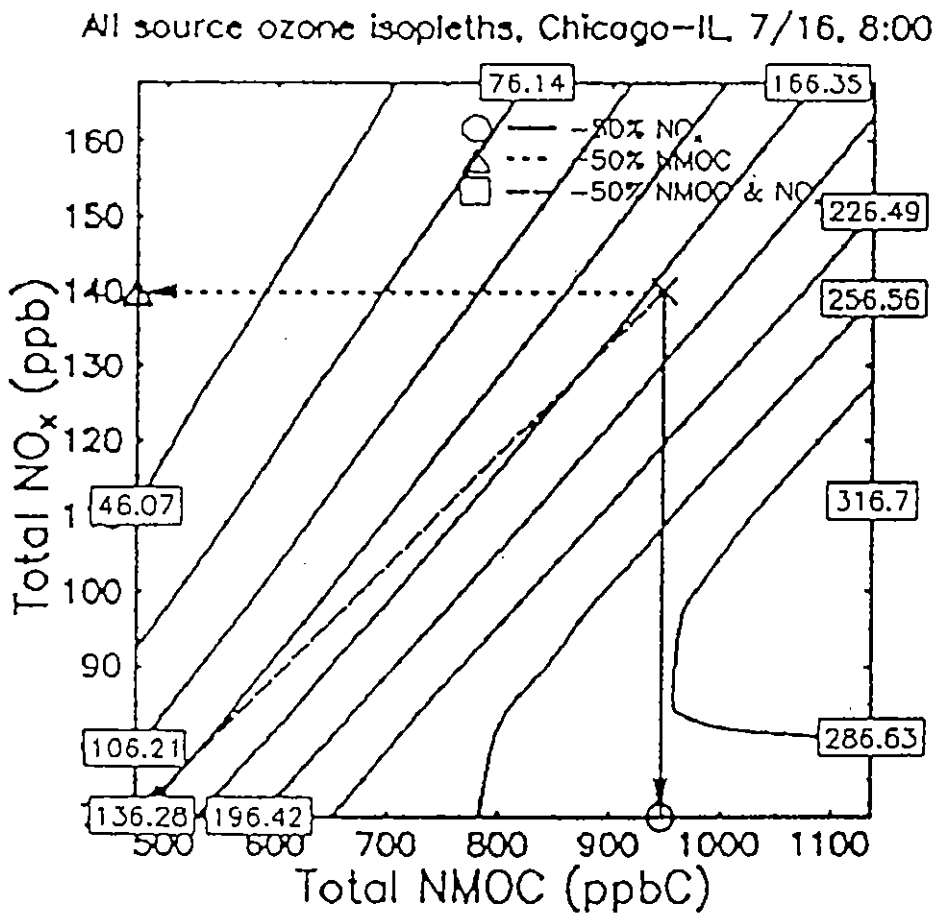
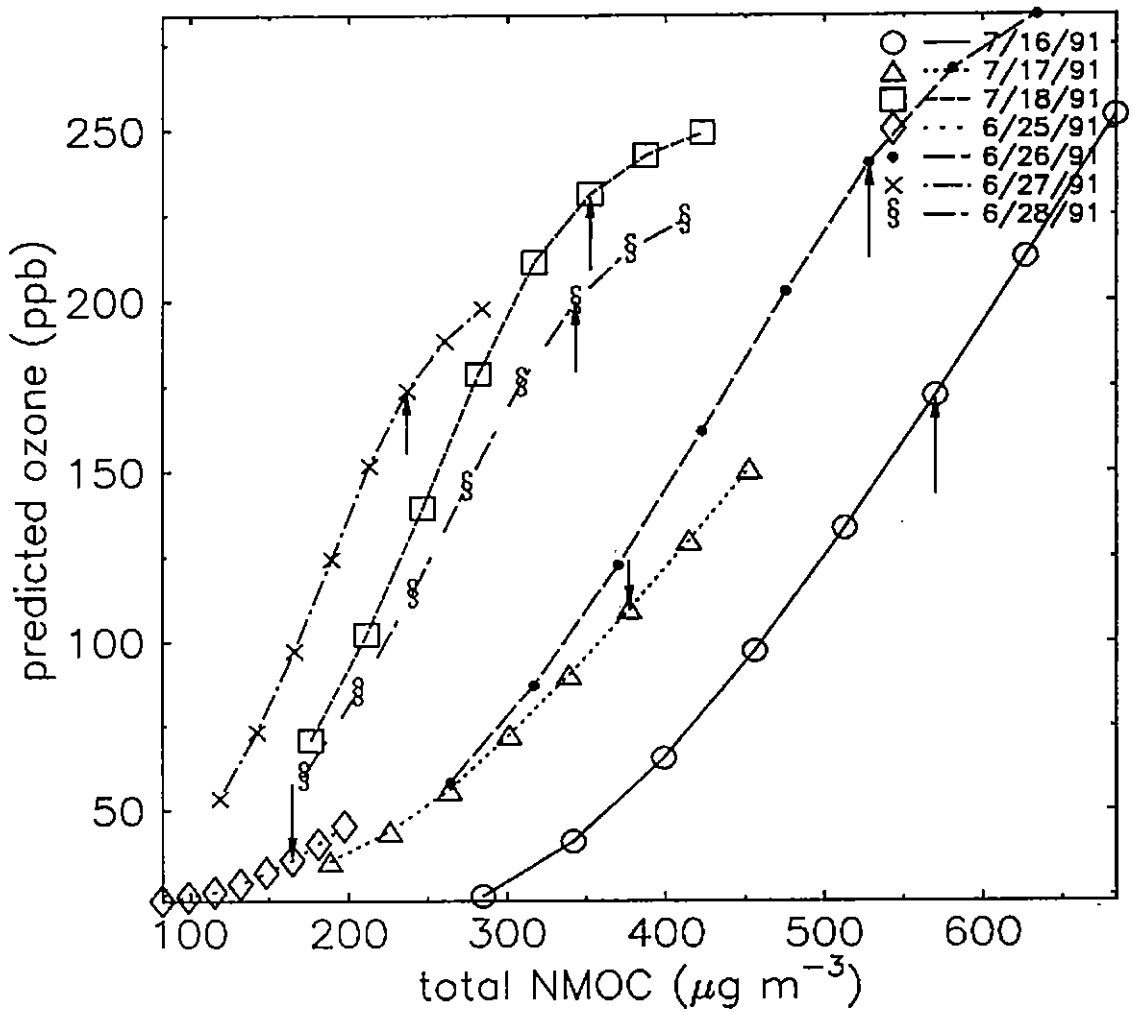


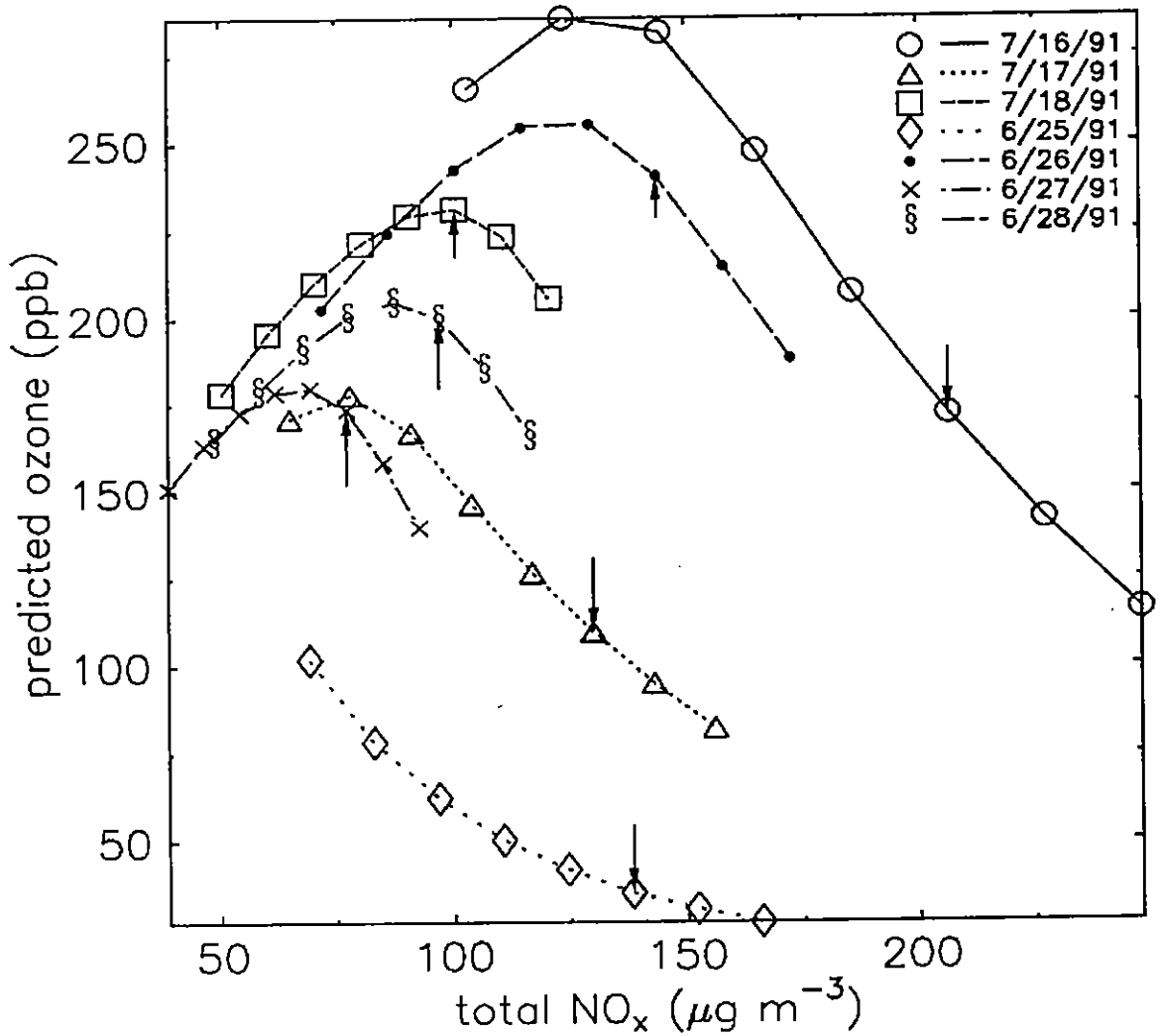
Figure 16. Chicago ozone isopleth, 7/16/91, 8:00am.

Sensitivity Analysis and Development of Control Functions



VOC/O_3 Relationship, Chicago, 1991

Sensitivity Analysis and Development of Control Functions



NO_x/O_3 Relationship, Chicago, 1991

Sensitivity Analysis and Development of Control Functions

See Insert: SEMOS Study Area, 1993

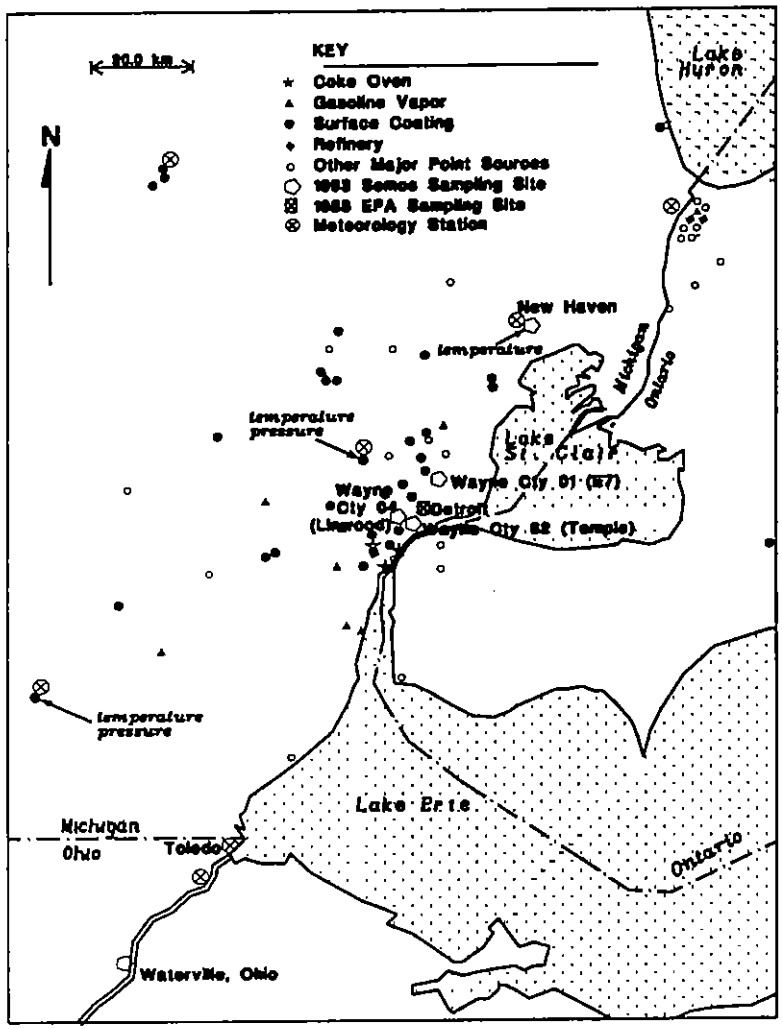
Sensitivity Analysis and Development of Control Functions

See Insert: Ozone Isopleth

Conclusions

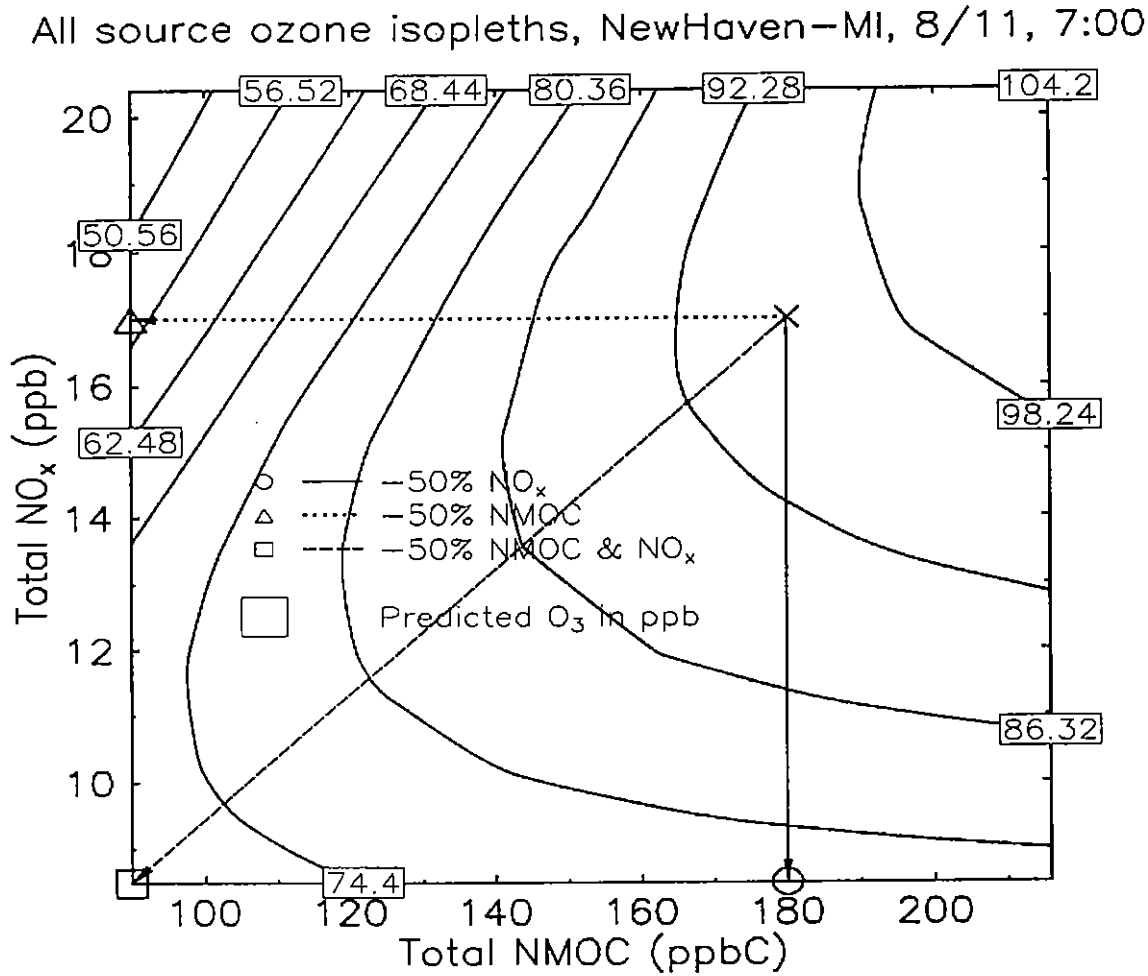
- **Initial ambient concentrations reflect actual upwind emission history of air mass**
- **CMB receptor model coefficients are based on the ambient organic measurements.**

Sensitivity Analysis and Development of Control Functions



SEMOS Study Area, 1993

Sensitivity Analysis and Development of Control Functions



Ozone Isopleth, New Haven, MI, 8/11/93
(**x** indicates measured precursor conc.)

Conclusions

- Incorporation of these coefficients, adjusted to a VOC basis which includes both fitting and non-fitting compounds (some of which are reactive), provides a measure of the actual contributions of each type of source

Conclusions

- Predictions of maximum O_3 calculated from CBM-IV using these inputs are in reasonable agreement with "downwind"maximum ground-level concentrations

Conclusions

- The agreement between predicted and measured maximum O_3 also gives us confidence that our allocation of VOC is reliable.

- Model results provide a method to relate precursor emissions from specific source categories to O_3 production

Conclusions

- The approach compliments grid-based photochemical models by allowing many more control options to be investigated than would be possible due to computational constraints

INTRODUCTION TO RECEPTOR MODELING

Lesson Title: Application of Scanning Electron Microscopy to Receptor Modeling
Lesson: XVIII
Prepared By: G. Casuccio
Date: March 3, 1998

Lesson Goal: The goal of this lesson is to describe how the scanning electron microscope (SEM) can be used in particle identification and source apportionment studies. Special emphasis will be placed on the use of the computer controlled scanning electron microscopy (CCSEM) data in the Chemical Mass Balance (CMB) receptor model.

Lesson Objectives: At the completion of this lesson students will be able to:

Explain the principles of manual SEM characterization for particle identification and source apportionment.

List the types of information that can be obtained using CCSEM techniques.

Describe the similarities and differences between the SEM and CCSEM analyses.

Discuss how SEM and CCSEM data can be used to complement information obtained from bulk analytical techniques such as XRF.

Explain how samples are prepared for CCSEM analysis.

Discuss how CCSEM data are used in the CMB model to determine source impact.

INTRODUCTION TO RECEPTOR MODELING

LESSON XVIII OUTLINE

I. Manual SEM Characterization for Particle Identification and Source Apportionment

A. Particle image
B. Particle size
C. Particle composition
D. Examples

II. Computer-Controlled Scanning Electron Microscopy for Particle Characterization

A. Particle size
B. Particle composition
C. Particle image
D. Particle type
E. Particle distributions
F. Examples

III. CMB Modeling Using CCSEM Data

Application of Scanning Electron Microscopy to Receptor Modeling

Gary S. Casuccio
RJ Lee Group
Monroeville, PA

Outline of Presentation

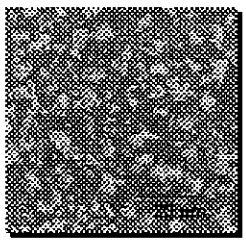
- Introduction
- SEM characterization for particle identification and source apportionment
- Particle characterization using CCSEM techniques
- CMB modeling using CCSEM data

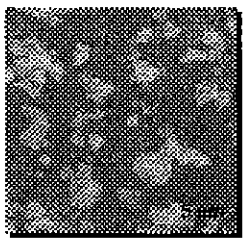
Introduction

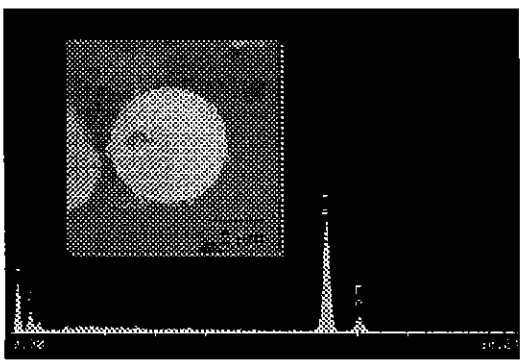
Particle Identification and Source Apportionment

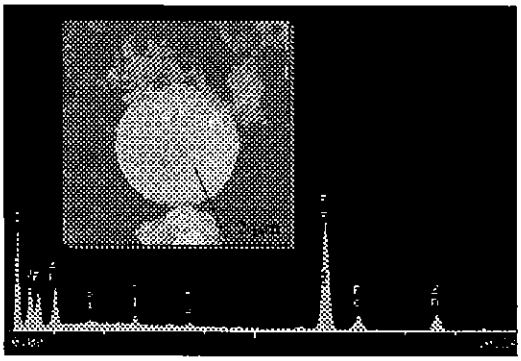
- Particle characterization
  - Size
  - Shape
  - Composition
- Identify unique particle types

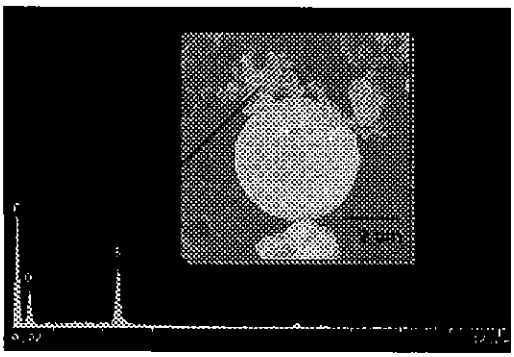
Ambient Sample











Traditional SEM Analysis

- Pan/zoom to find particles or features of interest
- Acquire elemental spectrum of particle; store/plot spectrum
- Obtain photo of particle
- Record information

Advantages of SEM Analysis

- Particle x particle analysis
- can differentiate based on morphology
- can differentiate based on elemental composition

Advantages of Manual Microscopy

- Analysis can be tailored to the sample in real time
- Subtleties may be more easily recognized and evaluated

Historical Limitations of Manual SEM Techniques

- Limited number of particles analyzed
- Slow analysis
- Tedious/subjective
- Expertise required
- Information overload

Limitations Promote Change

- ⇨ **Automation of the SEM**

What is Automation?

- Computer assistance or replacement of the microscopist
  - Assist functions where the eye/brain is best
  - Replace functions where the eye/brain is weak

What is Automation?

- Computer assistance or replacement of the microscopist
  - Assist difficult or interpretive
  - Replace easy or tedious

The SEM is Ideally Suited for Automation.

- Sampling rates
  - secondary signal, µsec
  - backscattered signal, µsec
  - particle sizing, milli-sec
  - X-ray collection, sec
  - digital image, sec

How Do We Automate the SEM?

- ⇨ **the Computer**
  - Computer controlled SEM
  - CCSEM

CCSEM System

- SEM
- X-ray analyzer
- Digital scan generator
- Computer

Particle Characterization using CCSEM Techniques

Objectives of CCSEM

- **Retain and enhance the traditional manual analysis**
- **Acquire the maximum amount of information in a minimal amount of time**
- **Improve the reproducibility of the analysis**

Objectives of CCSEM

- **Application specific**
- **Relate the microscopic world to the macroscopic world**

Particle Type ⇨ Elemental

Microscopic ⇨ Macroscopic

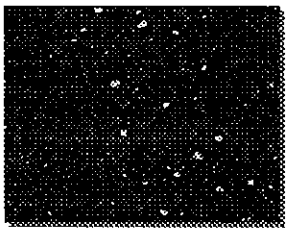
CCSEM Analysis

- **Ideally suited to the analysis of particles assuming sample preparation requirements are met**

CCSEM Sample Preparation Requirements

- **Uniform substrate**
  - **polycarbonate filter**
- **Minimum of particles touching**
  - **sample collection**
  - **sample preparation**

Example of Ideal Particle Loading



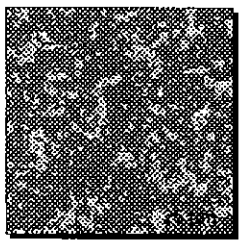
Sample Preparation of Filter Samples for CCSEM Analysis

- **Direct preparation of lightly loaded filter samples**
- **Redeposition of heavily loaded filter samples**

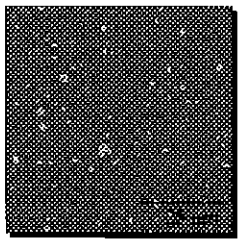
Redeposition

- **Resuspend particles and deposit onto polycarbonate (PC) filter**
- **Mount section of PC filter onto SEM stub**
- **Coat with a thin layer of carbon**

Example of Redeposit Sample

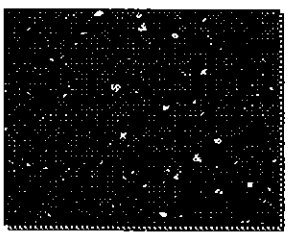


As-collected

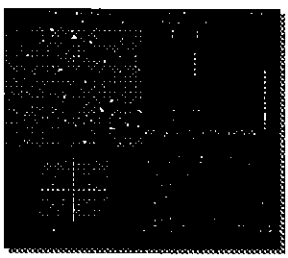


Redeposit

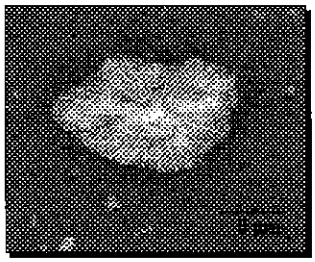
Particle Detection



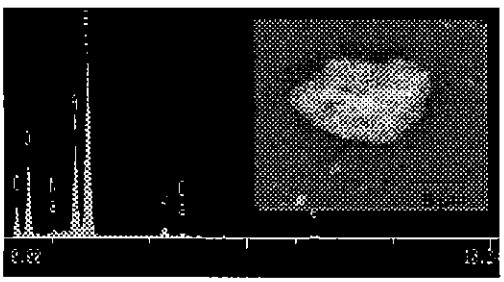
Particle Detection



Example of Particle Sizing



Example of Particle Composition



Information Provided by CCSEM

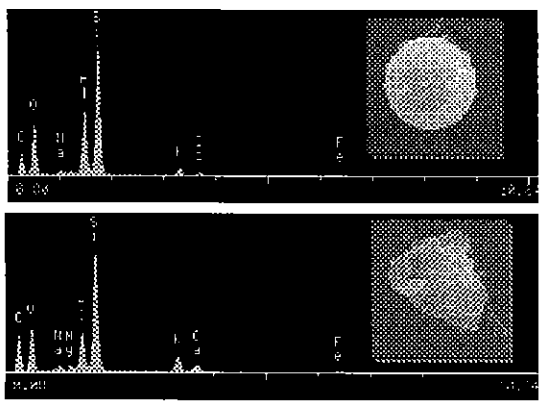
- **Particle size**
- **Particle shape**
- **Elemental composition**
- **Digital image**

Information Provided by CCSEM

- **Particles sorted into classes (particle types) based on EDS data**
- **Frequency/mass distributions determined for each class and for total sample**

Particle Class

- **Elemental composition + (shape)**



Particle Classes

Si - Al - K

↓

Particle Class

Si/Al-rich ⇨ Crustal / Fly ash

CCSEM Particle Mass Measurements

- Measure size of particle
- Obtain chemistry of particle using EDS techniques
- Estimate volume of particle
- Estimate density of particle

Calculation of Particle Mass

- $M_p(i) = Den(i) \times Vol(i)$
  - $M_p(i)$ = mass of particle i
  - Den(i) = density of particle i
  - Vol(i) = volume of particle i

Calculation of Particle Volume

$$Vol = \left(\frac{Dmin(i)}{2}\right)^2 x \left(\frac{Dmax(i)}{2}\right) x \frac{4}{3}\pi \times 10^6$$

Aerodynamic Equivalent Diameter

$D_a = X D_p \sqrt{\rho}$

D_a = aerodynamic diameter

D_p = physical diameter

X = shape factor

ρ = density

Illustration of CCSEM Results for Source Samples

- Particle size distributions
  - Number
  - Mass
- Particle composition

Basic Oxygen Furnace Particle Class Results

Particle Class	Wt.%	Num.%
Fe-rich	33	20
Fe/Zn-rich	29	35
Ca/Mg-rich	21	3

Basic Oxygen Furnace Mass Distribution, wt.%

	Size range (μm)			
Class	.2-2.5	2.5-5	5-10	>10
Fe-rich	33	52	14	1
Fe/Zn	46	44	10	--
Ca/Mg	3	37	53	7

Coal Fired Boiler

Particle Class	Wt.%	Num.%
Fly Ash	82	65
Crustal	6	10
S-rich	3	15

Coal Fired Boiler Mass Distribution, wt.%

- Size range (μm)

Class	.1-2.5	2.5-5	5-10	>10
Fly Ash	26	53	21	--
Crustal	36	21	43	--
S-rich	47	35	18	--

Example of CCSEM Results for Source and Ambient Samples

Class	Stack	Plume	Upwind
Fly Ash	29	28	1
Crustal	15	23	53
S-rich	24	20	3

Example of CMB Modeling using CCSEM Data

- Source apportionment of ambient PM-10 collected during an exceedance day
  - Background
  - Sample collection and analysis
  - CMB modeling
  - Results

Background

- PM-10 non-attainment area
- Local industry (steel plant) largest source of PM-10 in the area
- Receptor modeling techniques used to help identify specific source impact

Source Sample Collection

- Process source samples
  - Dilution sampling techniques
  - Fine and coarse fractions
- Road samples
  - Resuspension techniques
  - Fine and coarse fractions

Ambient Sample Collection

- Dichot samplers
  - Fine and coarse fractions
- ACCU samplers
  - PM-10 fraction

Sample Analysis

- Analysis of source and ambient samples using CCSEM techniques
  - Particle class data, wt. %
  - Precision values

CCSEM Results for Exceedance Day Samples, Wt.%

Part. Type	Fine	Coarse	ACCU
Fe-rich	15	16	24
Fe/Ca	10	15	14
S/Ca	29	--	9
Ca-rich	7	30	28

CMB Results for Dichot and ACCU Samples, Wt.%

Source	Fine	Coarse	ACCU
Sinter	24.2	84.1	73.2
BF	25.8	----	13.6
S/Ca	30.0	4.8	8.7
Unknown	20.0	11.1	4.5
R^2	0.91	0.95	0.93
CHI^2	0.74	0.37	0.30

Summary

CCSEM Limitations

- Sample preparation
- Complex features
- Substrate interference
- Inferred particle volume and density
- Costs (perceived)

CCSEM Strengths

- Individual size-chemistry-image measurements
- Physical and aerodynamic size
- Speed of analysis
- Precision (accuracy)
- Operator bias or subjectivity is minimized

CCSEM

- Do More Less Better
- Less is more

Lesson XIX

Where To Turn For Help
Peter Scheff

INTRODUCTION TO RECEPTOR MODELING

Lesson Title: Where to turn for help
Lesson: XIX
Prepared By: P.A. Scheff
Date: March 3, 1998

Lesson Goal: The goal of this lesson is to describe where students can find additional resources and how they can contact the instructors of the course.

Lesson Objectives: At the completion of this lesson students will be able to:

List several sources of reference.

Use the Internet to contact instructors.

Lesson XIX. Where To Turn For Help.

Peter A. Scheff
University of Illinois at Chicago

1. U.S. Environmental Protection Agency

- **Charles Lewis: Source Apportionment and Characterization Branch, RTP, NC lewis.charles@epamail.epa.gov**
- **Thomas Coulter: Air Quality Modeling Group, OAQPS, RTP, NC coulter.tom@epamail.epa.gov**

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- **Judith Chow**
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4. Soport.sel

```
 1  MARIN     *
 2  CDUST
 3  UDUST     *
 4  AUTPB     *
 5  RDOIL     *
 6  VBRN1
 7  VBRN2
 8  KRAFT     *
 9  SULFT
10  HOGFU
11  ALPRO     *
12  STEEL     *
13  FERMN     *
14  CARBO
15  GLASS
16  CARBF
17  SO4
18  NO3
19  OC
20  EC
```

5. Adport.txt

```
 ID     DATE     DUR STHOUR SIZE       C1     TOT      C9       F     C11      NA     C12      MG     C13
AL     C14      SI     C16       S     C17      CL     C19       K     C20      CA     C22      TI     C23
   V     C24      CR     C25      MN     C26      FE     C28      NI     C29      CU     C30      ZN     C35
    BR     C82      PB    C201      OC    C202      EC    C203     SO4    C204     NO3
 PACS1  08/13/77 24  0      FINE     80.0     8.0  0.8830  0.0880  6.9300  0.6930  0.4300  0.0430  4.6600
0.4660  3.0200  0.3020  2.9500  0.2950  5.9500  0.5950  1.6400  0.1640  1.7800  0.1780  0.0830  0.0080
0.3720  0.0370  0.3150  0.0320  2.9900  0.2990  4.5300  0.4530  0.7650  0.0770  0.0440  0.0040  0.2250
0.0230  0.4190  0.0420  2.5300  0.2530  7.5400  0.7540  1.4200  0.1420 10.3000  1.0340  0.6380  0.0640
 PACS1  08/13/77 24  0      COARS    80.0     8.0  0.7340  0.0730  6.3300  0.6330  1.4800  0.1480  4.8400
0.4840  3.2700  0.3270  2.5000  0.2500  4.6700  0.4670  1.1200  0.1120  1.5200  0.1520  0.1400  0.0140
0.2770  0.0280  0.0080  0.0010  2.4700  0.2470  5.4100  0.5410  0.7790  0.0780  0.0500  0.0050  0.2140
0.0210  0.5200  0.0520  1.7800  0.1780 10.1000  1.0100  1.6800  0.1680  8.1000  0.8130  1.1300  0.1130
 PACS2  01/24/78 24  0      FINE     42.6     0.6  0.0900  0.0100  0.1900  0.0100  0.0000  0.0800  0.1900
0.0100  0.3900  0.0200  2.6000  0.0100  0.7900  0.0300  0.1900  0.0100  0.1100  0.0100  0.0110  0.0010
0.0280  0.0010  0.0040  0.0010  0.0270  0.0010  0.2270  0.0080  0.0430  0.0020  0.0330  0.0020  0.1060
0.0040  0.4190  0.0120  0.9400  0.0200 15.3000  1.6000  1.8000  0.4000  6.9000  0.3000  2.9000  0.2000
 PACS2  01/24/78 24  0      COARS    73.3     1.1  0.0360  0.0170  0.9700  0.1400  0.8500  0.1200  4.8000
0.1600 14.5000  0.5000  0.5600  0.1400  0.3300  0.0500  0.5400  0.0300  2.0000  0.0700  0.4000  0.0200
0.0260  0.0020  0.0260  0.0020  0.0830  0.0040  3.5000  0.1320  0.0220  0.0030  0.0520  0.0040  0.1100
0.0100  0.2200  0.0200  0.6200  0.0700 13.1000  4.3000  1.7000  0.9000  1.7000  0.5000  1.6000  0.3000
 PACS3  08/07/77 24  0      FINE    135.0    13.5  0.0060  0.0010  9.9400  0.9940  1.3600  0.1360  8.0900
0.8090 20.5000  2.0500  2.3500  0.2350  8.8300  0.8830  1.0600  0.1060  2.2400  0.2240  0.4830  0.0480
0.5030  0.0530  0.0330  0.0030  0.1170  0.0120  5.6600  0.5660  0.7670  0.0770  0.0480  0.0050  0.2500
0.0250  1.5400  0.1540  4.7400  0.4740 23.6000  2.3600  2.4000  0.2400  7.7640  0.7760  0.3240  0.0320
 PACS3  08/07/77 24  0      COARS   135.0    13.5  0.0100  0.0010  7.5900  0.7590  1.4600  0.1460  6.2900
0.6290 17.1000  1.7100  2.1200  0.2120  9.9700  0.9970  1.3700  0.1370  2.1400  0.2140  0.4820  0.0480
0.5190  0.5200  0.0270  0.0030  0.1190  0.0120  5.8500  0.5850  0.7880  0.0790  0.0490  0.0050  0.1970
0.0200  1.3800  0.1380  7.8500  0.7850 24.6000  2.4600  2.3100  0.2310  8.4700  0.8470  0.4400  0.0440
```

6. Prport.txt

```
 CODE    NAME      SIZE          C9          F         C11         NA        C12         MG        C13         AL
C14        SI       C16           S        C17          CL        C19          K        C20         CA        C22
 TI       C23         V         C24         CR         C25         MN        C26         FE        C28         NI
C29        CU       C30          ZN        C35          BR        C82         PB       C201         OC       C202
 EC      C203       SO4        C204        NO3
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.03300  .01300  .40000  .10000  .01400  .00200  .01400  .00200  .00000  .00000  .00000  .00000  .00000
.00000  .00000  .00000  .00000  .00000  .00000  .00000  .00000  .00000  .00000  .00000  .00200  .00050
.00000  .00000  .00000  .00000  .00000  .00000  .10000  .04000  .00000  .00000
2       CDUST     FINE   .00000  .00000  .00690  .00380  .01760  .00620  .11700  .02200  .25400  .03400
.00070  .00030  .00000  .00000  .01000  .00280  .00930  .00370  .00760  .00240  .00025  .00006  .00030
.00008  .00200  .00090  .06800  .02300  .00000  .00004  .00020  .00004  .00041  .00026  .00000  .00010
.00006  .00002  .04320  .01700  .00590  .00380  .00000  .00000  .00000  .00000
3       UDUST     FINE   .00000  .00010  .01250  .00340  .01300  .00270  .08840  .02710  .22300  .01100
.00370  .00140  .00000  .00010  .01030  .00060  .02440  .00400  .00640  .00120  .00023  .00005  .00045
.00017  .00123  .00017  .06000  .00600  .00009  .00003  .00030  .00012  .00110  .00037  .00020  .00006
.00370  .00150  .11800  .04300  .01850  .00910  .00420  .00310  .00000  .00010
4       AUTPB     FINE   .00000  .00010  .00000  .00050  .00000  .00500  .01100  .00500  .00820  .00300
.00400  .00130  .03000  .01000  .00072  .00029  .01250  .00500  .00000  .00100  .00000  .00005  .00000
.00010  .00000  .00016  .02100  .00800  .00018  .00008  .00073  .00030  .00350  .00130  .05000  .01700
.20000  .03000  .50000  .10000  .03800  .01400  .01300  .00400  .00910  .00300
5       RDOIL     FINE   .00053  .00019  .03500  .01700  .00000  .03000  .00530  .00240  .00960  .00480
.13300  .02400  .00000  .00100  .00280  .00100  .01580  .00640  .00110  .00038  .03440  .00750  .00047
.00015  .00046  .00013  .02970  .00610  .05360  .01210  .00075  .00025  .00400  .00180  .00013  .00021
.00110  .00064  .07000  .06200  .03100  .02500  .48100  .11900  .00650  .00440
6       VBRN1     FINE   .00000  .01000  .00650  .00140  .00000  .00000  .01440  .00830  .00890  .01100
.00480  .00300  .05550  .01470  .00600  .00013  .01070  .00380  .00000  .00000  .00000  .00000  .00000
.00000  .00120  .00120  .00190  .00110  .00000  .00000  .00090  .00040  .00000  .00000  .00053  .00044
.00000  .00000  .59000  .10000  .03500  .03200  .01600  .00880  .05100  .02500
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.01600  .01500  .09900  .05100  .06500  .04500  .00920  .00980  .00070  .00070  .00000  .00000  .00012
.00007  .00047  .00042  .00054  .00060  .00000  .00000  .00054  .00060  .00000  .00000  .00045  .00045
.00000  .00000  .47000  .37000  .04400  .08200  .05000  .05400  .02000  .02500
8       KRAFT     FINE   .00000  .00100  .12700  .00710  .00630  .00530  .00250  .00014  .00150  .00014
.11700  .01000  .01800  .00420  .01500  .00140  .00000  .00500  .00006  .00002  .00001  .00001  .00280
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9       SULFT     FINE   .00000  .00000  .02500  .00800  .00730  .00520  .00000  .00000  .00400  .00150
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.00000  .00030  .00000  .00000  .00000  .00000  .56000  .05600  .00300  .00030
10      HOGFU     FINE   .00150  .00050  .03400  .02900  .00000  .01000  .00240  .00180  .00760  .00370
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12      STEEL     FINE   .00000  .00500  .01260  .00480  .06500  .00710  .00650  .00160  .05000  .00210
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.01400  .08700  .00900  .32000  .03000  .00700  .00070  .00280  .00030  .01200  .00120  .00000  .00100
.00760  .00070  .00000  .00000  .00000  .00000  .02500  .01300  .00000  .01400
13      FERMN     FINE   .00290  .00080  .03100  .00300  .00000  .04000  .00640  .00130  .00990  .00300
.01700  .00350  .00420  .00160  .10500  .03900  .01300  .00140  .00046  .00007  .00024  .00019  .00042
.00003  .17300  .00990  .02100  .01400  .00000  .00005  .00036  .00004  .00580  .00250  .00160  .00220
.00045  .00016  .09000  .00900  .01500  .00150  .04200  .00400  .05700  .02800
14      CARBO     FINE   .00050  .00030  .00120  .00100  .00780  .01200  .00350  .00400  .03500  .04300
.04800  .06600  .01700  .01500  .00790  .01100  .00140  .00130  .00014  .00019  .00007  .00008  .00009
.00011  .00035  .00041  .00330  .00610  .00004  .00007  .00019  .00023  .00004  .00004  .00017  .00010
.00000  .00010  .13600  .07400  .56000  .55000  .16000  .25000  .01600  .02100
15      GLASS     FINE   .00054  .00023  .09200  .01000  .00000  .01000  .00190  .00014  .00250  .00070
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```

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.01600	.00420	.01050	.00070	.01250	.00350	.30000	.04000	.00000	.00020	.00006	.00000	.00000
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.00008	.00004	.07300	.01300	.01200	.00280	.03200	.00420	.00570	.00240			
17	SO4	FINE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
.33000	.03300	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
.00000	.00000	.00000	.00000	.00000	.00000	1.00000	.10000	.00000	.00000			
18	NO3	FINE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
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.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	1.00000	.10000			
19	OC	FINE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
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.00000	.00000	1.00000	.10000	.00000	.00000	.00000	.00000	.00000	.00000			
20	EC	FINE	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
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.00000	.00000	.00000	.00000	1.00000	.10000	.00000	.00000	.00000	.00000			
1	MARIN	COARS	.00000	.00000	.40000	.04000	.04800	.00900	.00000	.00000	.00000	.00000
.03300	.01300	.40000	.10000	.01400	.00200	.01400	.00200	.00000	.00000	.00000	.00000	.00000
.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00200	.00050
.00000	.00000	.00000	.00000	.00000	.00000	.10000	.04000	.00000	.00000			
2	CDUST	COARS	.00002	.00000	.01300	.00500	.01200	.00310	.07200	.01700	.29700	.01500
.00000	.00000	.00000	.00100	.02200	.00240	.01400	.00670	.00820	.00150	.00017	.00006	.00010
.00006	.00085	.00028	.04760	.00850	.00009	.00004	.00020	.00004	.00041	.00026	.00000	.00010
.00042	.00011	.04320	.01700	.00590	.00380	.00004	.00001	.00009	.00005			
3	UDUST	COARS	.00008	.00007	.01750	.00091	.01540	.00140	.06600	.00700	.28000	.01500
.00000	.00020	.00000	.00020	.01030	.00058	.03000	.00220	.01010	.00180	.00027	.00005	.00045
.00017	.00100	.00011	.05730	.00290	.00004	.00003	.00030	.00012	.00110	.00037	.00008	.00009
.00370	.00150	.03340	.00980	.01550	.00780	.00074	.00045	.00020	.00010			
4	AUTPB	COARS	.00000	.00010	.00000	.00050	.00000	.00500	.01100	.00500	.00820	.00300
.00400	.00130	.03000	.01000	.00072	.00029	.01250	.00500	.00000	.00100	.00000	.00005	.00000
.00010	.00000	.00016	.02100	.00800	.00018	.00008	.00073	.00030	.00350	.00130	.05000	.01700
.20000	.03000	.50000	.10000	.03800	.01400	.01300	.00400	.00910	.00300			
5	RDOIL	COARS	.00053	.00019	.03500	.01700	.00000	.03000	.00530	.00240	.00960	.00480
.13300	.02400	.00000	.00100	.00280	.00100	.01580	.00640	.00110	.00038	.03440	.00750	.00047
.00015	.00046	.00013	.02970	.00610	.05360	.01210	.00075	.00025	.00400	.00180	.00013	.00021
.00110	.00064	.07000	.06200	.03100	.02500	.48100	.11900	.00650	.00440			
6	VBRN1	COARS	.00000	.01000	.00650	.00140	.00000	.00000	.01440	.00830	.00890	.01100
.00480	.00300	.05550	.01470	.00600	.00013	.01070	.00380	.00000	.00000	.00000	.00000	.00000
.00000	.00120	.00120	.00190	.00110	.00000	.00000	.00090	.00040	.00000	.00000	.00053	.00044
.00000	.00000	.59000	.10000	.03500	.03200	.01600	.00880	.05100	.02500			
7	VBRN2	COARS	.00320	.00150	.00330	.00340	.00000	.01000	.00450	.00510	.00490	.00780
.01600	.01500	.09900	.05100	.06500	.04500	.00920	.00980	.00070	.00070	.00000	.00000	.00012
.00007	.00047	.00042	.00054	.00060	.00000	.00000	.00054	.00060	.00000	.00000	.00045	.00045
.00000	.00000	.47000	.37000	.04400	.08200	.05000	.05400	.02000	.02500			
8	KRAFT	COARS	.00000	.00500	.05300	.00710	.00000	.01000	.00280	.00090	.00130	.00013
.03300	.00500	.02900	.01200	.00400	.00110	.00360	.00070	.00000	.00200	.00000	.00001	.00480
.00180	.00052	.00011	.01840	.00550	.00220	.00050	.00060	.00020	.00000	.00010	.00056	.00003
.00000	.00020	.15800	.05300	.01800	.01800	.11800	.01500	.00000	.01400			
9	SULFT	COARS	.00000	.00000	.02500	.00800	.00730	.00520	.00000	.00000	.00400	.00150
.12000	.02000	.00580	.00100	.30000	.10000	.02000	.00200	.00010	.00001	.00000	.00001	.00000
.00001	.00054	.00070	.00066	.00036	.00000	.00001	.00016	.00017	.00017	.00002	.00000	.00005
.00000	.00030	.00000	.00000	.00000	.00000	.56000	.05600	.00300	.00100			
10	HOGFU	COARS	.00110	.00041	.00690	.00960	.00460	.00170	.00280	.00090	.00960	.00140
.00590	.00090	.00830	.00760	.01300	.00210	.05200	.00520	.00097	.00080	.00006	.00004	.00007
.00001	.00290	.00040	.00920	.00220	.00000	.00005	.00023	.00004	.00039	.00005	.00001	.00001
.00020	.00003	.11100	.05400	.04300	.01400	.01500	.00370	.00200	.00130			
11	ALPRO	COARS	.04200	.01900	.02400	.00600	.02700	.00550	.31300	.04900	.00097	.00080
.00000	.00300	.01200	.00150	.00000	.00100	.00810	.00340	.00076	.00041	.00040	.00011	.00016
.00018	.00000	.00020	.00380	.00150	.00210	.00060	.00140	.00040	.00009	.00004	.00120	.00200
.00000	.00100	.00000	.02000	.01600	.01500	.01700	.01100	.00000	.02000			
12	STEEL	COARS	.00000	.00500	.01260	.00480	.06500	.00710	.00650	.00160	.05000	.00210
.01960	.00070	.01850	.00780	.00920	.00070	.06200	.00570	.00200	.00020	.00060	.00010	.02100
.01400	.08700	.00900	.32000	.03000	.00700	.00070	.00280	.00030	.01200	.00120	.00000	.00100
.00760	.00070	.00000	.00000	.00000	.00000	.02500	.01300	.00000	.01400			

13	FERMN	COARS	.00290	.00080	.03100	.00300	.00000	.04000	.00640	.00130	.00990	.00300
.01700	.00350	.00420	.00160	.10500	.03900	.01300	.00140	.00046	.00007	.00024	.00019	.00042
.00003	.17300	.00990	.02100	.01400	.00000	.00005	.00036	.00004	.00580	.00250	.00160	.00220
.00045	.00016	.09000	.00900	.01500	.00150	.04200	.00400	.05700	.02800			
14	CARBO	COARS	.00000	.00400	.00260	.00170	.00000	.00400	.02800	.04300	.12000	.15000
.00410	.00310	.00990	.00430	.00720	.01100	.00570	.00490	.00033	.00019	.00012	.00010	.00004
.00007	.00029	.00025	.00270	.00210	.00017	.00023	.00055	.00018	.00000	.00010	.00011	.00009
.00000	.00010	.04600	.02300	.24000	.15000	.01600	.01830	.00830	.00480			
15	GLASS	COARS	.00054	.00023	.09200	.01000	.00000	.01000	.00190	.00014	.00250	.00070
.11300	.02300	.00060	.00006	.01370	.00280	.00300	.00030	.00000	.00005	.00005	.00000	.00190
.00035	.00002	.00001	.00020	.00002	.00000	.00010	.00005	.00002	.00011	.00002	.00006	.00005
.00380	.00060	.00000	.00000	.00000	.00000	.65000	.09900	.00620	.00350			
16	CARBF	COARS	.00000	.00200	.00430	.00050	.01250	.00350	.00860	.00130	.02900	.01300
.00540	.00570	.00960	.00630	.00480	.00300	.25800	.08700	.00000	.00020	.00009	.00001	.00000
.00010	.00036	.00010	.00330	.00130	.00021	.00006	.00040	.00004	.00000	.00010	.00000	.00010
.00000	.00020	.04500	.00780	.03600	.01800	.00930	.01100	.00000	.00500			
17	SO4	COARS	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
.33000	.03300	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
.00000	.00000	.00000	.00000	.00000	.00000	1.00000	.10000	.00000	.00000			
18	NO3	COARS	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	1.00000	.10000			
19	OC	COARS	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
.00000	.00000	1.00000	.10000	.00000	.00000	.00000	.00000	.00000	.00000			
20	EC	COARS	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000
.00000	.00000	.00000	.00000	1.00000	.10000	.00000	.00000	.00000	.00000			

2. Mexico City Volatile Organic Compound Data Set

1. Inmexvoc.in8

somexvoc.sel
pomexvoc.sel
admexvoc.sel
admexvoc.car
prmexvoc.car

2. Admexvoc.sel

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MERCED      3/25/93 03 06 TVOC
MERCED      3/26/93 03 06 TVOC
MERCED      3/27/93 03 06 TVOC
PEDREGAL    3/25/93 03 06 TVOC
PEDREGAL    3/26/93 03 06 TVOC
PEDREGAL    3/27/93 03 06 TVOC
XALOSTOC    3/25/93 03 06 TVOC
XALOSTOC    3/26/93 03 06 TVOC
XALOSTOC    3/27/93 03 06 TVOC
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3. Pomexvoc.sel

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VOC999  TVOC        TOTAL MASS BY FID
  VOC1  ETHYLENE    ETHYLENE
  VOC2  ACETYLEN    ACETYLENE
  VOC3  ETHANE    * ETHANE
  VOC4  PROPYLEN    PROPYLENE
  VOC5  PROPANE   * PROPANE
  VOC6  MCHLOR    * METHYL CHLORIDE
  VOC7  IBUTANE   * ISOBUTANE
  VOC8  VCHLOR      VINYLCHLORIDE
  VOC9  1BUTENE     1-BUTENE
 V0C10  13BUTADI    1,3-BUTADIENE
 VOC11  NBUTANE   * N-BUTANE
 VOC12  T2BUTENE    T-2-BUTENE
 VOC13  C3BUTENE    C-2-BUTENE
 VOC14  12BUTYNE    1,2-BUTYNE
 VOC16  3M1BUTEN    3-METHYL-1-BUTENE
 VOC17  IPENTANE  * ISOPENTANE
 VOC18  1PENTENE    1-PENTENE
 VOC19  2M1BUTEN    2-METHYL-1-BUTENE
 VOC20  NPENTANE  * N-PENTANE
 VOC21  ISOPRENE    ISOPRENE
 VOC22  T2PENTEN    T-2-PENTENE
 VOC23  C2PENTEN    C-2-PENTENE
 VOC24  VDCHLOR     VINYLDICHLORIDE
 VOC25  2M2BUTEN    2-METHYL-2-BUTENE
 VOC26  DCETHANE  * DICHLOROETHANE
 VOC27  FREON113    FREON-113
 VOC28  22DMBUTA  * 2,2-DIMETHYLBUTANE
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VOC29	CPENTANE	*	CYCLOPENTANE
VOC30	4M1PENTE		4-METHYL-1-PENTENE
VOC31	CPENTANE	*	CYCLOPENTANE
VOC32	23DMBUTA	*	2,3-DIMETHYLBUTANE
VOC33	MTBE	*	MTBE
VOC34	2MPENTAN	*	2-METHYLPENTANE
VOC35	3MPENTAN	*	3-METHYLPENTANE
VOC36	2M1PENTE		2-METHYL-1-PENTENE
VOC37	1HEXENE		1-HEXENE
VOC38	C12DCETY		CIS-1,2-DICHLOROETHYLENE
VOC39	NHEXANE	*	N-HEXANE
VOC40	T3HEXENE		T-3-HEXENE
VOC41	T2HEXENE		T-2-HEXENE
VOC42	C2HEXENE		C-2-HEXENE
VOC43	ETBE	*	ETBE
VOC44	22DMPENT	*	2,2-DIMETHYLPENTANE
VOC45	MCPENTAN	*	METHYLCYCLOPENTANE
VOC46	24DMPENT	*	2,4-DIMETHYLPENTANE
VOC47	233TM1BE		2,2,3-TRIMETHYL-1-BUTENE
VOC48	223TMBUT	*	2,2,3-TRIMETHYLBUTANE
VOC49	C44DM2PE		C-4,4-DIMETHYL-2-PENTENE
VOC50	24DM1PTE		2,4-DIMETHYL1-PENTENE
VOC51	BENZENE	*	BENZENE
VOC52	33DMPENT	*	3,3-DIMETHYLPENTANE+CARBON-TETRACHLORIDE
VOC53	33DM1HXE		3,3-DIMETHYL-1-HEXENE
VOC54	CHEXANE	*	CYCLOHEXANE
VOC55	4M1HEXEN		4-METHYL-1-HEXENE
VOC56	2MHEXANE	*	2-METHYLHEXANE
VOC57	23DMPENT	*	2,3-DIMETHYLPENTANE
VOC58	3MHEXANE	*	3-METHYLHEXANE
VOC59	12DCPROP		1,2-DICHLOROPROPANE
VOC60	1C3DMCPT	*	1-C-3-DIMETHYLCYCLOPENTANE
VOC61	3EPENTAN	*	3-ETHYLPENTANE
VOC62	224TM1PE		2,2,4-TRIMETHYL-1-PENTENE
VOC63	NHEXANE	*	N-HEXANE
VOC64	244TM1PE		2,4,4-TRIMETHYL-1-PENTENE
VOC65	MCHEXANE	*	METHYLCYCLOHEXANE
VOC66	25DMHEXA	*	2,5-DIMETHYLHEXANE
VOC67	24DMHEXA	*	2,4-DIMETHYLHEXANE
VOC68	34MCHEXA	*	3&4-METHYLCYCLOHEXANE
VOC69	112TCE		1,1,2-TRICHLOROETHANE
VOC71	234TMPEN	*	2,3,4-TRIMETHYLPENTANE
VOC72	TOLUENE	*	TOLUENE
VOC73	23DMHEXA	*	2,3-DIMETHYLHEXANE
VOC74	2M3EPENT	*	2-METHYL-3-ETHYLPENTANE
VOC75	2MHEPTAN	*	2-METHYLHEPTANE
VOC76	4MHEPTAN	*	4-METHYLHEPTANE
VOC77	3MHEPTAN	*	3-METHYLHEPTANE
VOC78	225TMPEN	*	2,2,5-TRIMETHYLPENTANE
VOC79	1OCTENE		1-OCTENE
VOC80	11DMCHEX	*	1,1-DIMETHYLCYCLOHEXANE
VOC81	T4OCTENE		T-4-OCTENE
VOC82	T3OCTENE		T-3-OCTENE
VOC83	CHEPTANE	*	CYCLOHEPTANE
VOC84	NOCTANE	*	N-OCTANE
VOC85	1T2DMCHX	*	1-T-2-DIMETHYLCYCLOHEXANE
VOC86	PERC		PERCHLOROETHYLENE

VOC87	235TMHEX	*	2,3,5-TRIMETHYLHEXANE
VOC88	22DMHEPT	*	2,2-DIMETHYLHEPTANE
VOC89	24DMHEPT	*	2,4-DIMETHYLHEPTANE
VOC90	44DMHEPT	*	4,4-DIMETHYLHEPTANE
VOC91	26DMHEPT	*	2,6-DIMETHYLHEPTANE
VOC92	CLBENZ		CHLOROBENZENE
VOC93	25DMHEPT	*	2,5-DIMETHYLHEPTANE
VOC94	33DMHEPT	*	3,3-DIMETHYLHEPTANE
VOC95	EBENZ	*	ETHYLBENZENE
VOC96	MPXYLENE	*	M&P-XYLENE
VOC97	4MOCTANE	*	4-METHYLOCTANE
VOC98	3MOCTANE	*	3-METHYLOCTANE
VOC99	STYRENE	*	STYRENE
VOC100	OXYLENE	*	O-XYLENE&1,1,2,2-TETRACHLOROETHANE
VOC101	1NONENE		1-NONENE
VOC102	NNONANE	*	N-NONANE
VOC103	IPBENZ	*	I-PROPYLBENZENE
VOC104	44DMOCTA	*	4,4-DIMETHYLOCTANE
VOC105	COCTENE		CYCLOOCTENE
VOC106	ISPBENZ	*	ISOPROPYLBENZENE
VOC107	44DMOCTA	*	4,4-DIMETHYLOCTANE
VOC108	COCTANE	*	CYCLOOCTANE
VOC109	26DMOCTA	*	2,6-DIMETHYLOCTANE
VOC110	APINENE		A-PINENE
VOC111	NPBENZ	*	N-PROPYLBENZENE
VOC112	METOLUEN	*	M-ETHYLTOLUENE
VOC113	23DMOCTA	*	2,3-DIMETHYLOCTANE
VOC114	5MNONANE	*	5-METHYLNONANE
VOC115	135TMBEN	*	1,3,5-TRIMETHYLBENZENE
VOC116	2MNONANE	*	2-METHYLNONANE
VOC117	3MNONANE	*	3-METHYLNONANE
VOC118	OETOLUEN	*	O-ETHYLTOLUENE
VOC119	1DECENE		1-DECENE
VOC120	124TMBEN	*	1,2,4-TRIMETHYLBENZENE
VOC121	TBCHEXAN	*	T-BUTYLCYCLOHEXANE
VOC122	NDECANE	*	N-DECANE&M-DICHLOROBENZENE
VOC123	PDCLBENZ	*	P-DICHLOROBENZENE
VOC124	SBBENZ	*	SEC-BUTYLBENZENE
VOC125	123TMBEN	*	1,2,3-TRIMETHYLBENZENE
VOC126	ODCLBENZ	*	0-DICHLOROBENZENE
VOC127	NBCHEXA	*	N-BUTYLCYCLOHEXANE
VOC128	13DEBENZ	*	1,3-DIETHYLBENZENE
VOC129	NBBENZ	*	N-BUTYLBENZENE
VOC130	13DM4EBZ	*	1,3-DIMETHYL-4-ETHYLBENZENE
VOC131	4TBTOLUE	*	4-T-BUTYLTOLUENE
VOC132	NUNDECAN	*	N-UNDECANE
VOC133	1245TMBZ	*	1,2,4,5-TETRAMETHYLBENZENE
VOC134	1235TMBZ	*	1,2,3,5-TETRAMETHYLBENZENE
VOC135	MDIPBENZ	*	M-DIISOPROPYLBENZENE
VOC136	1234TMBZ	*	1,2,3,4-TETRAMETHYLBENZENE
VOC137	246TMSTY	*	2,4,6-TRIMETHYLSTYRENE
VOC138	NAPTHALE	*	NAPTHALENE&N-1-DODECENE
VOC139	NDODECAN	*	N-DODECANE
VOC140	HCLBUTAD		HEXACHLOROBUTADIENE
VOC141	N1TDECEN		N-1-TETRADECENE
VOC142	NTRDECAN		N-TRIDECANE
VOC143	NTEDECAN		N-TETRADECANE

4. Somexvoc.sel

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1  VEHICLES   * VEHICLE EMISSIONS
2  GASVAPOR   * GASOLINE VOPORS
3  LIQGAS     * LIQUID GASOLINE
4  LPG        * LIQUIFIED PETROLEUM GAS
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5. Admexvoc.car

ID	MERCED	MERCED	MERCED	PEDREGAL	PEDREGAL	PEDREGAL	XALOSTOC	XALOSTOC	XALOSTOC
DATE	3/25/93	3/26/93	3/27/93	3/25/93	3/26/93	3/27/93	3/25/93	3/26/93	3/27/93
DRU	3	3	3	3	3	3	3	3	3
STHOUR	6	6	6	6	6	6	6	6	6
SIZE	TVOC	TVOC	TVOC	TVOC	TVOC	TVOC	TVOC	TVOC	TVOC
VOC999	2500	2156	3690	732	1784	690	3698	4185	3079
TVOC	250	215	369	73	178	69	370	418	308
VOC1	75.70472	71.5571	90.05767	28.29061	26.44451	15.78958	86.03859	70.17805	72.36848
ETHYLENE	7.570472	7.15571	9.005767	2.829061	2.644451	1.578958	8.603859	7.017805	7.236848
VOC2	99.95853	100.5505	102.4217	40.72922	35.99738	22.10849	179.6898	132.5516	150.1429
ACETYLEN	9.995853	10.05505	10.24217	4.072922	3.599738	2.210849	17.96898	13.25516	15.01429
VOC3	21.7931	19.25012	34.24008	9.412329	11.15158	9.485896	43.14786	57.29364	72.99536
ETHANE	2.17931	1.925012	3.424008	0.941233	1.115158	0.94859	4.314786	5.729364	7.299536
VOC4	26.22171	26.47832	33.83809	11.11211	6.461061	6.62717	34.83302	27.90113	25.92329
PROPYLEN	2.622171	2.647832	3.383809	1.111211	0.646106	0.662717	3.483302	2.790113	2.592329
VOC5	390.8178	289.9878	699.4986	116.1084	75.3294	153.3438	671.823	1019.77	761.0676
PROPANE	39.08178	28.99878	69.94986	11.61084	7.53294	15.33438	67.1823	101.977	76.10676
VOC6	2.223533	2.27093	2.153468	1.784596	1.580584	1.899997	5.456825	2.812903	4.06583
MCHLOR	0.222353	0.227093	0.215347	0.17846	0.158058	0.19	0.545683	0.28129	0.406583
VOC7	106.3697	82.42958	192.4074	32.66937	25.641	41.36009	171.2245	214.5547	179.5024
IBUTANE	10.63697	8.242958	19.24074	3.266937	2.5641	4.136009	17.12245	21.45547	17.95024
VOC8	0	0	21.85587	0	0	0	0	0	0
VCHLOR	0.1	0.1	2.185587	0.1	0.1	0.1	0.1	0.1	0.1
VOC9	23.98314	21.69356	34.947	8.599478	5.928842	6.368438	34.07919	18.3947	12.01433
1BUTENE	2.398314	2.169356	3.4947	0.859948	0.592884	0.636844	3.407919	1.83947	1.201433
VOC10	6.331842	6.195513	7.892173	2.286682	1.064138	1.213713	8.186356	6.629889	4.70583
13BUTADI	0.633184	0.619551	0.789217	0.228668	0.106414	0.121371	0.818636	0.662989	0.470583
VOC11	240.0279	184.5802	439.5503	70.12119	66.88544	87.82584	367.0397	451.8664	374.7797
NBUTANE	24.00279	18.45802	43.95503	7.012119	6.688544	8.782584	36.70397	45.18664	37.47797
VOC12	19.77944	6.044926	18.08152	3.127258	2.961189	2.731555	14.99263	12.42371	6.787657
T2BUTENE	1.977944	0.604493	1.808152	0.312726	0.296119	0.273156	1.499263	1.242371	0.678766
VOC13	6.831751	5.433905	12.7484	1.827336	2.653674	1.689899	11.58477	10.34555	9.871393
C3BUTENE	0.683175	0.543391	1.27484	0.182734	0.265367	0.16899	1.158477	1.034555	0.987139
VOC14	0	0	0	0	0	0	0	1.090306	2.958163
12BUTYNE	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.109031	0.295816
VOC16	2.484033	2.116495	4.001704	0.56333	1.711744	0.432802	3.375972	3.131519	2.331751
3M1BUTEN	0.248403	0.21165	0.40017	0.056333	0.171174	0.04328	0.337597	0.313152	0.233175
VOC17	135.8281	112.117	220.8314	31.13287	138.69	27.02179	154.8745	151.3295	124.3371
IPENTANE	13.58281	11.2117	22.08314	3.113287	13.869	2.702179	15.48745	15.13295	12.43371
VOC18	6.155983	5.383122	9.529665	1.419775	4.773992	1.0946	8.048062	7.345617	5.412891
1PENTENE	0.615598	0.538312	0.952967	0.141978	0.477399	0.10946	0.804806	0.734562	0.541289
VOC19	9.529714	8.146857	14.81257	1.937143	7.013714	1.394857	12.256	11.58571	7.873714
2M1BUTEN	0.952971	0.814686	1.481257	0.193714	0.701371	0.139486	1.2256	1.158571	0.787371
VOC20	106.1577	91.90379	162.341	23.25704	118.8419	19.21369	138.2859	137.2246	116.7405
NPENTANE	10.61577	9.190379	16.2341	2.325704	11.88419	1.921369	13.82859	13.72246	11.67405
VOC21	2.468552	4.390364	5.722155	1.048012	0.877634	2.062605	5.821313	5.838844	3.941137
ISOPRENE	0.246855	0.439036	0.572216	0.104801	0.087763	0.206261	0.582131	0.583884	0.394114
VOC22	10.33058	9.894341	17.2474	2.10848	7.712583	1.964785	13.87429	13.53595	9.080261
T2PENTEN	1.033058	0.989434	1.72474	0.210848	0.771258	0.196479	1.387429	1.353595	0.908026
VOC23	5.711158	5.0402	9.160982	1.126087	4.536409	0.795761	7.659913	7.13952	4.650335
C2PENTEN	0.571116	0.50402	0.916098	0.112609	0.453641	0.079576	0.765991	0.713952	0.465034
VOC24	0	0	0	0	0	0	0	0	0
VDCHLOR	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
VOC25	12.73332	11.09142	20.26099	2.127372	10.02258	1.223983	16.19516	15.7532	9.392268
2M2BUTEN	1.273332	1.109142	2.026099	0.212737	1.002258	0.122398	1.619516	1.57532	0.939227
VOC26	3.396953	3.56256	5.477133	0.799758	6.583869	0.49682	6.361714	10.26357	8.926596

DCETHANE	0.339695	0.356256	0.547713	0.079976	0.658387	0.049682	0.636171	1.026357	0.89266
VOC27	0	0	0	0	0	0	0	0	0
FREON113	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
VOC28	6.620031	6.135195	9.514389	1.514306	5.971629	1.195967	9.211294	8.7716	5.166696
22DMBUTA	0.662003	0.61352	0.951439	0.151431	0.597163	0.119597	0.921129	0.87716	0.51667
VOC29	2.33165	2.193186	3.441589	0.522161	1.858981	0.3292	2.985602	2.724244	1.739979
CPENTANE	0.233165	0.219319	0.344159	0.052216	0.185898	0.03292	0.29856	0.272424	0.173998
VOC30	1.740435	1.793443	2.402546	0.470202	1.451344	0.385291	2.084497	1.836635	1.368887
4M1PENTE	0.174044	0.179344	0.240255	0.04702	0.145134	0.038529	0.20845	0.183664	0.136889
VOC31	6.956324	6.226972	9.802743	1.755826	7.98795	1.573774	8.776269	8.989807	6.742785
CPENTANE	0.695632	0.622697	0.980274	0.175583	0.798795	0.157377	0.877627	0.898981	0.674279
VOC32	9.881973	8.877713	14.39675	2.894944	10.47585	2.346207	14.07783	15.01349	10.52686
23DMBUTA	0.988197	0.887771	1.439675	0.289494	1.047585	0.234621	1.407783	1.501349	1.052686
VOC33	55.0935	49.23309	77.94814	11.74421	70.86996	9.669018	67.40671	61.28488	53.73182
MTBE	5.50935	4.923309	7.794814	1.174421	7.086996	0.966902	6.740671	6.128488	5.373182
VOC34	54.57805	45.73781	74.37053	13.84174	60.37535	12.51637	75.36328	81.58482	58.29425
2MPENTAN	5.457805	4.573781	7.437053	1.384174	6.037535	1.251637	7.536328	8.158482	5.829425
VOC35	33.76732	29.86635	46.18486	9.699061	37.42674	7.972529	55.42781	60.65079	42.40818
3MPENTAN	3.376732	2.986635	4.618486	0.969906	3.742674	0.797253	5.542781	6.065079	4.240818
VOC36	3.493631	3.497066	4.613183	0.590943	2.04425	0.506522	3.615353	3.395467	2.328923
2M1PENTE	0.349363	0.349707	0.461318	0.059094	0.204425	0.050652	0.361535	0.339547	0.232892
VOC37	2.749227	2.650181	3.484339	0.798089	2.097702	0.629769	3.451133	3.037775	2.173847
1HEXENE	0.274923	0.265018	0.348434	0.079809	0.20977	0.062977	0.345113	0.303778	0.217385
VOC38	0	0	0	0	0	0	0	0	0
C12DCETY	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
VOC39	48.24556	43.38196	64.69538	13.02842	53.6749	10.76781	86.79733	88.00326	64.72411
NHEXANE	4.824556	4.338196	6.469538	1.302842	5.36749	1.076781	8.679733	8.800326	6.472411
VOC40	8.006078	5.954749	10.64538	0.803241	0	0.445418	16.66311	31.25428	14.37876
T3HEXENE	0.800608	0.595475	1.064538	0.080324	0.1	0.044542	1.666311	3.125428	1.437876
VOC41	4.21029	4.012199	5.478988	1.150187	3.293118	1.030531	5.089676	4.779944	3.155714
T2HEXENE	0.421029	0.40122	0.547899	0.115019	0.329312	0.103053	0.508968	0.477994	0.315571
VOC42	2.089687	1.998084	2.879761	0.470609	1.691215	0.372709	2.676517	2.418312	1.583582
C2HEXENE	0.208969	0.199808	0.287976	0.047061	0.169122	0.037271	0.267652	0.241831	0.158358
VOC43	4.476416	4.129098	5.739988	0.974636	3.981949	0.847743	6.35837	6.629433	4.497267
ETBE	0.447642	0.41291	0.573999	0.097464	0.398195	0.084774	0.635837	0.662943	0.449727
VOC44	1.28069	1.2024	1.566392	0.370419	1.277185	0.321925	1.595605	1.37534	1.297634
22DMPENT	0.128069	0.12024	0.156639	0.037042	0.127719	0.032193	0.159561	0.137534	0.129763
VOC45	15.77055	14.6822	21.56214	4.211435	18.27532	3.283958	21.03027	19.05337	16.21883
MCPENTAN	1.577055	1.46822	2.156214	0.421144	1.827532	0.328396	2.103027	1.905337	1.621883
VOC46	6.177929	5.741489	8.114155	1.887149	5.753759	1.75277	6.252129	5.612953	4.427496
24DMPENT	0.617793	0.574149	0.811416	0.188715	0.575376	0.175277	0.625213	0.561295	0.44275
VOC47	0.694487	0.696204	1.37237	0.382454	0.622347	0.457457	0.788383	0.774642	4.889461
233TM1BE	0.069449	0.06962	0.137237	0.038245	0.062235	0.045746	0.078838	0.077464	0.488946
VOC48	0.841329	0.722725	0.868205	0	1.342037	0	1.408058	1.197142	0
223TMBUT	0.084133	0.072273	0.086821	0.1	0.134204	0.1	0.140806	0.119714	0.1
VOC49	0	0	0	0.049238	0	0	0	0	0
C44DM2PE	0.1	0.1	0.1	0.004924	0.1	0.1	0.1	0.1	0.1
VOC50	0.745001	0.714033	0.908025	0.237816	0.006775	0.301506	1.106108	0.961782	0.881147
24DM1PTE	0.0745	0.071403	0.090803	0.023782	0.000678	0.030151	0.110611	0.096178	0.088115
VOC51	34.47786	31.54794	42.06038	11.17451	7.36082	7.338089	38.73087	35.20529	25.07437
BENZENE	3.447786	3.154794	4.206038	1.117451	0.736082	0.733809	3.873087	3.520529	2.507437
VOC52	3.517809	2.831307	4.425159	1.613717	0.920114	2.147727	0	0	0
33DMPENT	0.351781	0.283131	0.442516	0.161372	0.092011	0.214773	0.1	0.1	0.1
VOC53	0	0	0	0	0	0	0	0	5.157817
33DM1HXE	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.515782
VOC54	6.782036	6.510663	9.092715	1.826902	0.272684	1.487399	8.297489	7.797109	6.1391
CHEXANE	0.678204	0.651066	0.909272	0.18269	0.027268	0.14874	0.829749	0.779711	0.61391
VOC55	0.658417	0.689334	0.818155	0.141989	0.521008	0.164318	0.826743	0.656127	0.482076
4M1HEXEN	0.065842	0.068933	0.081816	0.014199	0.052101	0.016432	0.082674	0.065613	0.048208
VOC56	18.79637	17.51446	26.73573	5.179737	3.08581	3.854888	21.42374	17.96734	15.41554
2MHEXANE	1.879637	1.751446	2.673573	0.517974	0.308581	0.385489	2.142374	1.796734	1.541554
VOC57	10.52819	9.857976	14.35837	3.392532	0.97986	2.590268	10.08586	9.017731	7.122798
23DMPENT	1.052819	0.985798	1.435837	0.339253	0.097986	0.259027	1.008586	0.901773	0.71228
VOC58	22.16202	20.62017	36.42664	6.550685	1.54051	5.435923	25.73942	22.8456	19.79637
3MHEXANE	2.216202	2.062017	3.642664	0.655069	0.154051	0.543592	2.573942	2.28456	1.979637
VOC59	0	0	0	0	0	0	0	0	0
12DCPROP	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
VOC60	3.518809	3.391706	4.781252	0.959571	3.72664	0.739145	3.93447	3.490755	2.749893
1C3DMCPT	0.351881	0.339171	0.478125	0.095957	0.372664	0.073915	0.393447	0.349076	0.274989
VOC61	6.095549	5.75259	9.560774	1.668052	6.875531	1.273679	7.134357	6.536078	5.045055
3EPENTAN	0.609555	0.575259	0.956077	0.166805	0.687553	0.127368	0.713436	0.653608	0.504506

VOC62	23.25455	21.75091	30.51864	6.69586	17.52964	4.717233	20.83532	18.36247	14.17792
224TM1PE	2.325455	2.175091	3.051864	0.669586	1.752964	0.471723	2.083532	1.836247	1.417792
VOC63	29.11816	27.94077	45.2435	8.050106	35.27392	6.266777	33.95804	31.82705	24.35775
NHEXANE	2.911816	2.794077	4.52435	0.805011	3.527392	0.626678	3.395804	3.182705	2.435775
VOC64	1.391553	1.406379	1.404334	0.386997	1.646654	0.287308	1.449833	1.662502	1.918114
244TM1PE	0.139155	0.140638	0.140433	0.0387	0.164665	0.028731	0.144983	0.16625	0.191811
VOC65	14.74167	14.01111	19.5149	4.204708	15.24149	3.468426	14.6535	12.61527	14.25845
MCHEXANE	1.474167	1.401111	1.95149	0.420471	1.524149	0.346843	1.46535	1.261527	1.425845
VOC66	3.144822	2.965318	3.862256	0.994267	2.867406	0.672558	2.929184	2.437295	2.106844
25DMHEXA	0.314482	0.296532	0.386226	0.099427	0.286741	0.067256	0.292918	0.24373	0.210684
VOC67	8.235633	7.673225	10.57618	2.533458	8.540441	1.730934	8.264191	7.033304	6.437094
24DMHEXA	0.823563	0.767323	1.057618	0.253346	0.854044	0.173093	0.826419	0.70333	0.643709
VOC68	0.465214	0.481573	0	0	0	0	0	0.631362	0
34MCHEXA	0.046521	0.048157	0.1	0.1	0.1	0.1	0.1	0.063136	0.1
VOC69	0	0	0	0	0	0	0	0	0
112TCE	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
VOC71	7.903434	7.394061	9.723537	1.951235	5.65963	1.181931	8.044473	6.444087	4.791249
234TMPEN	0.790343	0.739406	0.972354	0.195124	0.565963	0.118193	0.804447	0.644409	0.479125
VOC72	95.11051	85.01648	167.9484	24.71555	72.54131	28.76756	219.2615	286.7316	212.2927
TOLUENE	9.511051	8.501648	16.79484	2.471555	7.254131	2.876756	21.92615	28.67316	21.22927
VOC73	4.520827	4.25565	5.438164	1.074112	3.870998	0.688877	4.767937	3.713058	3.193195
23DMHEXA	0.452083	0.425565	0.543816	0.107411	0.3871	0.068888	0.476794	0.371306	0.31932
VOC74	1.461678	1.386496	1.733265	0.231957	1.573577	0.181253	1.736179	1.450022	1.257113
2M3EPENT	0.146168	0.13865	0.173327	0.023196	0.157358	0.018125	0.173618	0.145002	0.125711
VOC75	12.69876	12.25233	15.28409	3.580178	14.02756	2.432633	14.19366	11.99124	10.34364
2MHEPTAN	1.269876	1.225233	1.528409	0.358018	1.402756	0.243263	1.419366	1.199124	1.034364
VOC76	4.966091	4.730637	5.918979	1.223893	5.60135	0.773967	6.109557	4.718981	4.157156
4MHEPTAN	0.496609	0.473064	0.591898	0.122389	0.560135	0.077397	0.610956	0.471898	0.415716
VOC77	12.09498	11.52441	14.28749	3.451378	12.65563	2.187271	12.65797	10.76851	8.941412
3MHEPTAN	1.209498	1.152441	1.428749	0.345138	1.265563	0.218727	1.265797	1.076851	0.894141
VOC78	2.020272	1.94699	2.369286	0.349541	1.657551	0.205085	2.811616	1.536293	2.120969
225TMPEN	0.202027	0.194699	0.236929	0.034954	0.165755	0.020509	0.281162	0.153629	0.212097
VOC79	2.21214	2.25336	2.29229	0.210108	1.129543	0.147705	2.210995	1.82971	1.498233
1OCTENE	0.221214	0.225336	0.229229	0.021011	0.112954	0.014771	0.2211	0.182971	0.149823
VOC80	1.89154	1.83429	2.334655	0	1.926463	0.13282	2.210995	1.878945	1.411213
11DMCHEX	0.189154	0.183429	0.233466	0.1	0.192646	0.013282	0.2211	0.187895	0.141121
VOC81	2.38618	2.352975	2.794945	0.449985	2.33122	0.29999	2.51213	0	1.65109
T4OCTENE	0.238618	0.235298	0.279495	0.044999	0.233122	0.029999	0.251213	0.1	0.165109
VOC82	2.724528	0	3.619345	0	0	0	6.62955	17.23168	5.938543
T3OCTENE	0.272453	0.1	0.361935	0.1	0.1	0.1	0.662955	1.723168	0.593854
VOC83	0	0	0	0.460319	1.743946	0	0	0	0
CHEPTANE	0.1	0.1	0.1	0.046032	0.174395	0.1	0.1	0.1	0.1
VOC84	23.13216	22.65426	28.11165	6.279736	24.75294	4.271969	27.07309	23.48068	20.12896
NOCTANE	2.313216	2.265426	2.811165	0.627974	2.475294	0.427197	2.707309	2.348068	2.012896
VOC85	0.789478	0.811233	0.857033	0.108775	0.56105	0	0.93432	0	0
1T2DMCHX	0.078948	0.081123	0.085703	0.010878	0.056105	0.1	0.093432	0.1	0.1
VOC86	0	0	0	0	0	0	0	0	0
PERC	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
VOC87	1.07551	0.738622	0	0	0.710153	0.57835	1.767738	0.721752	0.90733
235TMHEX	0.107551	0.073862	0.1	0.1	0.071015	0.057835	0.176774	0.072175	0.090733
VOC88	0.545571	0.532194	5.83552	1.733847	0	0	0	0.802653	1.886816
22DMHEPT	0.054557	0.053219	0.583552	0.173385	0.1	0.1	0.1	0.080265	0.188682
VOC89	2.435296	2.309663	2.852908	0.68749	2.507418	0.483337	2.627816	2.288143	2.699357
24DMHEPT	0.24353	0.230966	0.285291	0.068749	0.250742	0.048334	0.262782	0.228814	0.269936
VOC90	0.335602	0.246612	0.276857	0.073867	0	0.042459	0.372245	0.29198	0
44DMHEPT	0.03356	0.024661	0.027686	0.007387	0.1	0.004246	0.037225	0.029198	0.1
VOC91	3.604959	3.254816	3.960918	1.063806	4.013265	0.781714	4.124939	3.41302	5.510388
26DMHEPT	0.360496	0.325482	0.396092	0.106381	0.401327	0.078171	0.412494	0.341302	0.551039
VOC92	0	0	0	0	0	0	0	0	1.475531
CLBENZ	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.147553
VOC93	7.776429	6.520102	7.536214	2.045602	6.239173	1.415112	8.216143	6.597459	9.075796
25DMHEPT	0.777643	0.65201	0.753621	0.20456	0.623917	0.141511	0.821614	0.659746	0.90758
VOC94	3.144888	2.597571	3.321704	0.816031	2.67551	0.589194	4.617582	3.121041	2.904092
33DMHEPT	0.314489	0.259757	0.33217	0.081603	0.267551	0.058919	0.461758	0.312104	0.290409
VOC95	15.97588	14.51333	19.27906	4.857819	14.89359	3.490068	27.44603	23.15752	23.91967
EBENZ	1.597588	1.451333	1.927906	0.485782	1.489359	0.349007	2.744603	2.315752	2.391967
VOC96	50.04074	46.1807	62.55526	15.48782	43.62883	10.83151	78.81335	71.26878	74.44034
MPXYLENE	5.004074	4.61807	6.255526	1.548782	4.362883	1.083151	7.881335	7.126878	7.444034
VOC97	10.33678	9.756306	12.06481	2.882571	10.76951	1.953122	11.16502	10.14426	9.974418
4MOCTANE	1.033678	0.975631	1.206481	0.288257	1.076951	0.195312	1.116502	1.014426	0.997442
VOC98	9.029847	8.373765	10.60665	2.940735	8.641898	2.21951	9.263663	8.541857	8.09051

3MOCTANE	0.902985	0.837377	1.060665	0.294074	0.86419	0.221951	0.926366	0.854186	0.809051
VOC99	5.700634	5.115531	6.42816	1.654869	3.532937	1.377994	8.517737	8.759537	6.585463
STYRENE	0.570063	0.511553	0.642816	0.165487	0.353294	0.137799	0.851774	0.875954	0.658546
VOC100	20.53492	19.06926	25.38632	5.986666	18.61266	4.236109	33.22591	29.76434	29.97558
OXYLENE	2.053492	1.906926	2.538632	0.598667	1.861266	0.423611	3.322591	2.976434	2.997558
VOC101	4.117267	3.951653	4.90956	0.73401	3.738721	0.497996	4.552364	4.402331	4.209018
1NONENE	0.411727	0.395165	0.490956	0.073401	0.373872	0.0498	0.455236	0.440233	0.420902
VOC102	22.04152	20.71181	27.00324	5.714986	21.11142	4.54116	27.35573	26.57978	25.91725
NNONANE	2.204152	2.071181	2.700324	0.571499	2.111142	0.454116	2.735573	2.657978	2.591725
VOC103	0	0	0	0	3.065345	0.76143	0	0	0
IPBENZ	0.1	0.1	0.1	0.1	0.306535	0.076143	0.1	0.1	0.1
VOC104	0	0	0	0.054008	0.32405	0.08711	0	0	0
44DMOCTA	0.1	0.1	0.1	0.005401	0.032405	0.008711	0.1	0.1	0.1
VOC105	0.176545	0.164176	0.167549	0.016867	0	0	0.24795	0.21534	0
COCTENE	0.017655	0.016418	0.016755	0.001687	0.1	0.1	0.024795	0.021534	0.1
VOC106	3.551192	3.459619	4.278328	0.935356	0	0	4.635355	4.493634	4.563404
ISPBENZ	0.355119	0.345962	0.427833	0.093536	0.1	0.1	0.463536	0.449363	0.45634
VOC107	0.317662	0.353087	0.374574	0	0	0	0.31592	0.400126	0.469814
44DMOCTA	0.031766	0.035309	0.037457	0.1	0.1	0.1	0.031592	0.040013	0.046981
VOC108	3.93436	3.818139	4.842378	0.987598	3.653253	0.902865	4.775965	4.903065	4.951729
COCTANE	0.393436	0.381814	0.484238	0.09876	0.365325	0.090287	0.477597	0.490307	0.495173
VOC109	8.78187	8.428783	10.24881	2.419921	8.025753	2.270092	12.56129	11.13791	10.81676
26DMOCTA	0.878187	0.842878	1.024881	0.241992	0.802575	0.227009	1.256129	1.113791	1.081676
VOC110	4.307648	3.560885	7.352528	1.335054	1.409563	1.488521	16.7207	21.21963	18.67352
APINENE	0.430765	0.356089	0.735253	0.133505	0.140956	0.148852	1.67207	2.121963	1.867352
VOC111	5.1429	4.833246	6.288274	1.377002	4.867107	1.160097	7.779617	7.405187	6.526281
NPBENZ	0.51429	0.483325	0.628827	0.1377	0.486711	0.11601	0.777962	0.740519	0.652628
VOC112	19.86308	18.39986	24.83707	6.065927	16.62135	4.278286	31.59017	32.16353	24.69342
METOLUEN	1.986308	1.839986	2.483707	0.606593	1.662135	0.427829	3.159017	3.216353	2.469342
VOC113	9.773765	9.215679	12.24769	2.900189	8.390455	2.224214	15.60434	16.16301	12.88592
23DMOCTA	0.977377	0.921568	1.224769	0.290019	0.839046	0.222421	1.560434	1.616301	1.288592
VOC114	1.322914	1.2329	1.553465	0.202676	1.110945	0.188739	1.472743	1.50991	1.502941
5MNONANE	0.132291	0.12329	0.155347	0.020268	0.111095	0.018874	0.147274	0.150991	0.150294
VOC115	8.251078	7.636784	10.12339	2.205819	6.150298	1.554741	12.39746	13.4691	10.41235
135TMBEN	0.825108	0.763678	1.012339	0.220582	0.61503	0.155474	1.239746	1.34691	1.041235
VOC116	4.250356	3.94603	5.278812	1.000384	3.712522	0.92191	4.742892	4.607636	4.964278
2MNONANE	0.425036	0.394603	0.527881	0.100038	0.371252	0.092191	0.474289	0.460764	0.496428
VOC117	4.328192	3.99069	5.15504	1.053976	3.760372	0.870232	5.315816	5.16142	5.079756
3MNONANE	0.432819	0.399069	0.515504	0.105398	0.376037	0.087023	0.531582	0.516142	0.507976
VOC118	7.206985	6.732805	8.947278	2.133263	6.212298	1.542446	10.70719	11.37377	9.072636
OETOLUEN	0.720699	0.673281	0.894728	0.213326	0.62123	0.154245	1.070719	1.137377	0.907264
VOC119	0	0	0	1.001575	0	0.795725	0.986584	0.936995	0.670023
1DECENE	0.1	0.1	0.1	0.100158	0.1	0.079573	0.098658	0.0937	0.067002
VOC120	21.1676	19.30388	30.01704	10.45894	15.52901	7.963345	31.38867	34.58276	25.88578
124TMBEN	2.11676	1.930388	3.001704	1.045894	1.552901	0.796335	3.138867	3.458276	2.588578
VOC121	0.528408	0.532988	0.677255	0.14255	0.455129	0.129955	0.58165	0.716757	0.646341
TBCHEXAN	0.052841	0.053299	0.067726	0.014255	0.045513	0.012996	0.058165	0.071676	0.064634
VOC122	15.34301	14.10663	18.92614	4.270723	12.67337	3.890342	18.32857	19.64277	19.39189
NDECANE	1.534301	1.410663	1.892614	0.427072	1.267337	0.389034	1.832857	1.964277	1.939189
VOC123	8.725	6.696	15.381	1.685	4.095	2.127	7.464	11.863	14.815
PDCLBENZ	0.8725	0.6696	1.5381	0.1685	0.4095	0.2127	0.7464	1.1863	1.4815
VOC124	0.947139	0.924132	1.195838	0.290332	0.902768	0.253082	1.177213	1.212272	1.162971
SBBENZ	0.094714	0.092413	0.119584	0.029033	0.090277	0.025308	0.117721	0.121227	0.116297
VOC125	6.13068	5.763248	7.41608	1.918903	4.504006	1.452563	7.918795	9.187029	7.76512
123TMBEN	0.613068	0.576325	0.741608	0.19189	0.450401	0.145256	0.79188	0.918703	0.776512
VOC126	1.35	0	2.362	0	2.567	0	0	2.535	1.723
ODCLBENZ	0.135	0.1	0.2362	0.1	0.2567	0.1	0.1	0.2535	0.1723
VOC127	4.110477	3.804195	5.05623	1.320734	2.12451	0.910831	4.598811	4.572476	4.396722
NBCHEXA	0.411048	0.38042	0.505623	0.132073	0.212451	0.091083	0.459881	0.457248	0.439672
VOC128	2.558945	2.376516	3.007076	0.895713	2.191895	0.645352	3.367552	2.757262	2.847108
13DEBENZ	0.255895	0.237652	0.300708	0.089571	0.21919	0.064535	0.336755	0.275726	0.284711
VOC129	8.412033	7.796812	9.819426	2.772602	6.201512	1.916881	10.05993	9.51702	9.947619
NBBENZ	0.841203	0.779681	0.981943	0.27726	0.620151	0.191688	1.005993	0.951702	0.994762
VOC130	2.352411	2.285575	2.877786	0.838738	1.747599	0.592212	2.980232	3.01365	3.081582
13DM4EBZ	0.235241	0.228558	0.287779	0.083874	0.17476	0.059221	0.298023	0.301365	0.308158
VOC131	0.370162	0.262359	0.484566	0	0	0	0.102853	0.572569	0.843178
4TBTOLUE	0.037016	0.026236	0.048457	0.1	0.1	0.1	0.010285	0.057257	0.084318
VOC132	8.830515	7.924033	10.12905	2.686388	6.114549	2.577355	8.943028	11.78891	11.47631
NUNDECAN	0.883052	0.792403	1.012905	0.268639	0.611455	0.257736	0.894303	1.178891	1.147631
VOC133	2.61592	2.449926	3.079938	0.842025	1.689528	0.651378	3.443702	3.430006	3.3807
1245TMBZ	0.261592	0.244993	0.307994	0.084203	0.168953	0.065138	0.34437	0.343001	0.33807

VOC134	3.653523	3.136913	4.055635	1.070473	1.756365	0.651378	5.019828	4.476374	4.096723
1235TMBZ	0.365352	0.313691	0.405564	0.107047	0.175637	0.065138	0.501983	0.447637	0.409672
VOC135	2.134768	1.837291	2.41955	0.322864	0.977423	0.267122	1.407357	2.059709	1.861575
MDIPBENZ	0.213477	0.183729	0.241955	0.032286	0.097742	0.026712	0.140736	0.205971	0.186158
VOC136	3.04652	2.723296	3.392205	0.823946	1.627075	0.563176	2.821907	3.709403	3.176357
1234TMBZ	0.304652	0.27233	0.339221	0.082395	0.162708	0.056318	0.282191	0.37094	0.317636
VOC137	0.529539	0.411261	0.566433	0	0.135098	0	0.488304	0	0.581625
246TMSTY	0.052954	0.041126	0.056643	0.1	0.01351	0.1	0.04883	0.1	0.058163
VOC138	7.894656	6.985505	8.519763	2.596155	3.515769	1.646202	7.428049	7.807298	8.183408
NAPTHALE	0.789466	0.698551	0.851976	0.259616	0.351577	0.16462	0.742805	0.78073	0.818341
VOC139	6.568713	5.850314	7.039148	1.997612	3.709023	1.674332	5.100051	10.09698	8.090675
NDODECAN	0.656871	0.585031	0.703915	0.199761	0.370902	0.167433	0.510005	1.009698	0.809068
VOC140	0.466569	0.405432	0.45477	0.148015	0.222022	0.054701	0.367892	0.674647	0.515907
HCLBUTAD	0.046657	0.040543	0.045477	0.014802	0.022202	0.00547	0.036789	0.067465	0.051591
VOC141	0	0	0	0	0	0	0	0	0
N1TDECEN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
VOC142	0	0	0	0	0	0	0	0	0
NTRDECAN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
VOC143	0	0	0	0	0	0	0	0	0
NTEDECAN	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

6. Pomexvoc.car

CODE	1	2	3	4
NAME	VEHICLES	GASVAPOR	LIQGAS	LPG
SIZE	TVOC	TVOC	TVOC	TVOC
VOC1	0.0142660	0.0001760	0.0000100	0
ETHYLENE	0.0014266	0.0000176	0.000001	0.0001
VOC2	0.02274	0.0000000	0.0000400	0
ACETYLEN	0.002274	0.0001	0.000004	0.0001
VOC3	0.002113	0.0000000	0.0000000	0.0071
ETHANE	0.0002113	0.0001	0.0001	0.00071
VOC4	0.023546	0.0021360	0.0000590	0
PROPYLEN	0.0023546	0.0002136	0.0000059	0.0001
VOC5	0.0131720	0.0223310	0.0006430	0.454
PROPANE	0.0013172	0.0022331	0.0000643	0.0454
VOC6	0.0000380	0.0000080	0.0000010	0
MCHLOR	0.0000038	0.0000008	0.0000001	0.0001
VOC7	0.0127580	0.0544340	0.0040500	0.149
IBUTANE	0.0012758	0.0054434	0.000405	0.0149
VOC8	0.0000000	0.0000000	0.0000000	0
VCHLOR	0.0001	0.0001	0.0001	0.0001
VOC9	0.0177910	0.0277670	0.0024270	0.0251
1BUTENE	0.0017791	0.0027767	0.0002427	0.00251
V0C10	0.0064460	0.0018810	0.0002400	0.0005
13BUTADI	0.0006446	0.0001881	0.000024	0.00005
VOC11	0.0328720	0.0548880	0.0166710	0.2918
NBUTANE	0.0032872	0.0054888	0.0016671	0.02918
VOC12	0.0054590	0.0344500	0.0042660	0.0276
T2BUTENE	0.0005459	0.003445	0.0004266	0.00276
VOC13	0.0045300	0.0318110	0.0042800	0.0168
C3BUTENE	0.000453	0.0031811	0.000428	0.00168
VOC14	0.0003270	0.0000000	0.0000000	0
12BUTYNE	0.0000327	0.0001	0.0001	0.0001
VOC16	0.0014600	0.0086250	0.0020130	0
3M1BUTEN	0.000146	0.0008625	0.0002013	0.0001
VOC17	0.0295970	0.0875030	0.0259200	0.0183
IPENTANE	0.0029597	0.0087503	0.002592	0.00183
VOC18	0.0035340	0.0155810	0.0054270	0
1PENTENE	0.0003534	0.0015581	0.0005427	0.0001
VOC19	0.0059390	0.0282190	0.0103390	0
2M1BUTEN	0.0005939	0.0028219	0.0010339	0.0001
VOC20	0.0462760	0.0768360	0.0171810	0.0048
NPENTANE	0.0046276	0.0076836	0.0017181	0.00048
VOC21	0.0025060	0.0011790	0.0004980	0
ISOPRENE	0.0002506	0.0001179	0.0000498	0.0001
VOC22	0.0066320	0.0297490	0.0130110	0
T2PENTEN	0.0006632	0.0029749	0.0013011	0.0001
VOC23	0.0036290	0.0162300	0.0072530	0

C2PENTEN	0.0003629	0.001623	0.0007253	0.0001
VOC24	0.0000000	0.0000000	0.0000000	0
VDCHLOR	0.0001	0.0001	0.0001	0.0001
VOC25	0.0080540	0.0408320	0.0168510	0
2M2BUTEN	0.0008054	0.0040832	0.0016851	0.0001
VOC26	0.0000000	0.0000000	0.0000000	0
DCETHANE	0.0001	0.0001	0.0001	0.0001
VOC27	0.0028670	0.0008880	0.0021050	0
FREON113	0.0002867	0.0000888	0.0002105	0.0001
VOC28	0.0017560	0.0097020	0.0042600	0
22DMBUTA	0.0001756	0.0009702	0.000426	0.0001
VOC29	0.0017560	0.0050030	0.0030330	0
CPENTANE	0.0001756	0.0005003	0.0003033	0.0001
VOC30	0.0010610	0.0029160	0.0023700	0
4M1PENTE	0.0001061	0.0002916	0.000237	0.0001
VOC31	0.0039530	0.0109620	0.0070030	0
CPENTANE	0.0003953	0.0010962	0.0007003	0.0001
VOC32	0.0063570	0.0130700	0.0112330	0
23DMBUTA	0.0006357	0.001307	0.0011233	0.0001
VOC33	0.0304400	0.0871060	0.0147260	0
MTBE	0.003044	0.0087106	0.0014726	0.0001
VOC34	0.0336830	0.0741320	0.0138970	0
2MPENTAN	0.0033683	0.0074132	0.0013897	0.0001
VOC35	0.0216730	0.0397600	0.0389110	0
3MPENTAN	0.0021673	0.003976	0.0038911	0.0001
VOC36	0.0017560	0.0052970	0.0064300	0
2M1PENTE	0.0001756	0.0005297	0.000643	0.0001
VOC37	0.0015790	0.0000000	0.0000000	0
1HEXENE	0.0001579	0.0001	0.0001	0.0001
VOC38	0.0000000	0.0000000	0.0000000	0
C12DCETY	0.0001	0.0001	0.0001	0.0001
VOC39	0.0288620	0.0418410	0.0105530	0.0032
NHEXANE	0.0028862	0.0041841	0.0010553	0.00032
VOC40	0.0022800	0.0027430	0.0038350	0
T3HEXENE	0.000228	0.0002743	0.0003835	0.0001
VOC41	0.0024920	0.0038890	0.0056840	0
T2HEXENE	0.0002492	0.0003889	0.0005684	0.0001
VOC42	0.0012750	0.0021160	0.0032320	0
C2HEXENE	0.0001275	0.0002116	0.0003232	0.0001
VOC43	0.0023450	0.0039840	0.0063140	0
ETBE	0.0002345	0.0003984	0.0006314	0.0001
VOC44	0.0007830	0.0010050	0.0016780	0
22DMPENT	0.0000783	0.0001005	0.0001678	0.0001
VOC45	0.0098510	0.0135900	0.0202330	0
MCPENTAN	0.0009851	0.001359	0.0020233	0.0001
VOC46	0.0030810	0.0034040	0.0071260	0
24DMPENT	0.0003081	0.0003404	0.0007126	0.0001
VOC47	0.0001330	0.0000010	0.0002470	0
233TM1BE	0.0000133	0.0000001	0.0000247	0.0001
VOC48	0.0003450	0.0003440	0.0005510	0
223TMBUT	0.0000345	0.0000344	0.0000551	0.0001
VOC49	0.0000880	0.0000310	0.0001400	0
C44DM2PE	0.0000088	0.0000031	0.000014	0.0001
VOC50	0.0000800	0.0002230	0.0004280	0
24DM1PTE	0.000008	0.0000223	0.0000428	0.0001
VOC51	0.0279010	0.0139490	0.0222430	0
BENZENE	0.0027901	0.0013949	0.0022243	0.0001
VOC52	0.0011710	0.0009960	0.0022840	0
33DMPENT	0.0001171	0.0000996	0.0002284	0.0001
VOC53	0.0000000	0.0000000	0.0000000	0
33DM1HXE	0.0001	0.0001	0.0001	0.0001
VOC54	0.0038840	0.0046800	0.0084210	0
CHEXANE	0.0003884	0.000468	0.0008421	0.0001
VOC55	0.0002630	0.0001920	0.0007700	0
4M1HEXEN	0.0000263	0.0000192	0.000077	0.0001
VOC56	0.0131810	0.0034270	0.0266370	0
2MHEXANE	0.0013181	0.0003427	0.0026637	0.0001
VOC57	0.0045110	0.0004970	0.0092480	0
23DMPENT	0.0004511	0.0000497	0.0009248	0.0001
VOC58	0.0146040	0.0016600	0.0000000	0
3MHEXANE	0.0014604	0.000166	0.0001	0.0001

VOC59	0.0000000	0.0000000	0.0000000	0
12DCPROP	0.0001	0.0001	0.0001	0.0001
VOC60	0.0023700	0.0024810	0.0051690	0
1C3DMCPT	0.000237	0.0002481	0.0005169	0.0001
VOC61	0.0040110	0.0007420	0.0082620	0
3EPENTAN	0.0004011	0.0000742	0.0008262	0.0001
VOC62	0.0086200	0.0019050	0.0118180	0
224TM1PE	0.000862	0.0001905	0.0011818	0.0001
VOC63	0.0179340	0.0012460	0.0347950	0
NHEXANE	0.0017934	0.0001246	0.0034795	0.0001
VOC64	0.0006320	0.0005560	0.0022240	0
244TM1PE	0.0000632	0.0000556	0.0002224	0.0001
VOC65	0.0082620	0.0005990	0.0144870	0
MCHEXANE	0.0008262	0.0000599	0.0014487	0.0001
VOC66	0.0018500	0.0016980	0.0040550	0
25DMHEXA	0.000185	0.0001698	0.0004055	0.0001
VOC67	0.0047990	0.0001140	0.0101640	0
24DMHEXA	0.0004799	0.0000114	0.0010164	0.0001
VOC68	0.0004180	0.0000770	0.0011270	0
34MCHEXA	0.0000418	0.0000077	0.0001127	0.0001
VOC69	0.0001950	0.0010410	0.0001670	0
112TCE	0.0000195	0.0001041	0.0000167	0.0001
VOC71	0.0028550	0.0093000	0.0086190	0
234TMPEN	0.0002855	0.00093	0.0008619	0.0001
VOC72	0.0414270	0.0006250	0.0401260	0
TOLUENE	0.0041427	0.0000625	0.0040126	0.0001
VOC73	0.0021240	0.0001370	0.0050100	0
23DMHEXA	0.0002124	0.0000137	0.000501	0.0001
VOC74	0.0007110	0.0024460	0.0007810	0
2M3EPENT	0.0000711	0.0002446	0.0000781	0.0001
VOC75	0.0083570	0.0004740	0.0180980	0
2MHEPTAN	0.0008357	0.0000474	0.0018098	0.0001
VOC76	0.0030750	0.0021040	0.0021260	0
4MHEPTAN	0.0003075	0.0002104	0.0002126	0.0001
VOC77	0.0085670	0.0001180	0.0156940	0
3MHEPTAN	0.0008567	0.0000118	0.0015694	0.0001
VOC78	0.0008100	0.0002620	0.0018470	0
225TMPEN	0.000081	0.0000262	0.0001847	0.0001
VOC79	0.0005710	0.0000000	0.0000000	0
1OCTENE	0.0000571	0.0001	0.0001	0.0001
VOC80	0.0012540	0.0000870	0.0030050	0
11DMCHEX	0.0001254	0.0000087	0.0003005	0.0001
VOC81	0.0016160	0.0023360	0.0031300	0
T4OCTENE	0.0001616	0.0002336	0.000313	0.0001
VOC82	0.0001210	0.0000000	0.0000000	0
T3OCTENE	0.0000121	0.0001	0.0001	0.0001
VOC83	0.0008440	0.0001940	0.0000000	0
CHEPTANE	0.0000844	0.0000194	0.0001	0.0001
VOC84	0.0143510	0.0000080	0.0215650	0
NOCTANE	0.0014351	0.0000008	0.0021565	0.0001
VOC85	0.0005060	0.0001350	0.0011840	0
1T2DMCHX	0.0000506	0.0000135	0.0001184	0.0001
VOC86	0.0003210	0.0001030	0.0000820	0
PERC	0.0000321	0.0000103	0.0000082	0.0001
VOC87	0.0004350	0.0002240	0.0009090	0
235TMHEX	0.0000435	0.0000224	0.0000909	0.0001
VOC88	0.0000000	0.0000920	0.0003590	0
22DMHEPT	0.0001	0.0000092	0.0000359	0.0001
VOC89	0.0015630	0.0001830	0.0025280	0
24DMHEPT	0.0001563	0.0000183	0.0002528	0.0001
VOC90	0.0001790	0.0005860	0.0003090	0
44DMHEPT	0.0000179	0.0000586	0.0000309	0.0001
VOC91	0.0021620	0.0001760	0.0031260	0
26DMHEPT	0.0002162	0.0000176	0.0003126	0.0001
VOC92	0.0000000	0.0000000	0.0010700	0
CLBENZ	0.0001	0.0001	0.000107	0.0001
VOC93	0.0043950	0.0013130	0.0060550	0
25DMHEPT	0.0004395	0.0001313	0.0006055	0.0001
VOC94	0.0014660	0.0033630	0.0022860	0
33DMHEPT	0.0001466	0.0003363	0.0002286	0.0001
VOC95	0.0118210	0.0004150	0.0133090	0

EBENZ	0.0011821	0.0000415	0.0013309	0.0001
VOC96	0.0370710	0.0005100	0.0390470	0
MPXYLENE	0.0037071	0.000051	0.0039047	0.0001
VOC97	0.0067550	0.0001590	0.0097110	0
4MOCTANE	0.0006755	0.0000159	0.0009711	0.0001
VOC98	0.0055830	0.0012000	0.0077880	0
3MOCTANE	0.0005583	0.00012	0.0007788	0.0001
VOC99	0.0030950	0.0001020	0.0002220	0
STYRENE	0.0003095	0.0000102	0.0000222	0.0001
VOC100	0.0146220	0.0005300	0.0167170	0
OXYLENE	0.0014622	0.000053	0.0016717	0.0001
VOC101	0.0021610	0.0001120	0.0026930	0
1NONENE	0.0002161	0.0000112	0.0002693	0.0001
VOC102	0.0123970	0.0000100	0.0138680	0
NNONANE	0.0012397	0.000001	0.0013868	0.0001
VOC103	0.0020740	0.0001120	0.0027620	0
IPBENZ	0.0002074	0.0000112	0.0002762	0.0001
VOC104	0.0001480	0.0000000	0.0000000	0
44DMOCTA	0.0000148	0.0001	0.0001	0.0001
VOC105	0.0000000	0.0000000	0.0001410	0
COCTENE	0.0001	0.0001	0.0000141	0.0001
VOC106	0.0000000	0.0000000	0.0000000	0
ISPBENZ	0.0001	0.0001	0.0001	0.0001
VOC107	0.0000000	0.0000000	0	0
44DMOCTA	0.0001	0.0001	0.0001	0.0001
VOC108	0.0023200	0.0003980	0.0031220	0
COCTANE	0.000232	0.0000398	0.0003122	0.0001
VOC109	0.0053420	0.0006110	0.0051790	0
26DMOCTA	0.0005342	0.0000611	0.0005179	0.0001
VOC110	0.0007350	0.0000000	0.0008280	0
APINENE	0.0000735	0.0001	0.0000828	0.0001
VOC111	0.0041430	0.0003450	0.0050780	0
NPBENZ	0.0004143	0.0000345	0.0005078	0.0001
VOC112	0.0145240	0.0005420	0.0157210	0
METOLUEN	0.0014524	0.0000542	0.0015721	0.0001
VOC113	0.0069380	0.0000820	0.0073790	0
23DMOCTA	0.0006938	0.0000082	0.0007379	0.0001
VOC114	0.0007860	0.0000000	0.0008420	0
5MNONANE	0.0000786	0.0001	0.0000842	0.0001
VOC115	0.0087500	0.0002170	0.0000000	0
135TMBEN	0.000875	0.0000217	0.0001	0.0001
VOC116	0.0023980	0.0000000	0.0000000	0
2MNONANE	0.0002398	0.0001	0.0001	0.0001
VOC117	0.0025170	0.0007940	0.0026640	0
3MNONANE	0.0002517	0.0000794	0.0002664	0.0001
VOC118	0.0057110	0.0001260	0.0058140	0
OETOLUEN	0.0005711	0.0000126	0.0005814	0.0001
VOC119	0.0000000	0.0000000	0.0000000	0
1DECENE	0.0001	0.0001	0.0001	0.0001
VOC120	0.0230630	0.0000030	0.0230580	0
124TMBEN	0.0023063	0.0000003	0.0023058	0.0001
VOC121	0.0003530	0.0000000	0.0003250	0
TBCHEXAN	0.0000353	0.0001	0.0000325	0.0001
VOC122	0.0088840	0.0000260	0.0075060	0
NDECANE	0.0008884	0.0000026	0.0007506	0.0001
VOC123	0.0003660	0.0000000	0.0000000	0
PDCLBENZ	0.0000366	0.0001	0.0001	0.0001
VOC124	0.0006890	0.0000240	0.0007810	0
SBBENZ	0.0000689	0.0000024	0.0000781	0.0001
VOC125	0.0063460	0.0000180	0.0062580	0
123TMBEN	0.0006346	0.0000018	0.0006258	0.0001
VOC126	0.0000000	0.0000670	0.0008380	0
ODCLBENZ	0.0001	0.0000067	0.0000838	0.0001
VOC127	0.0000000	0.0000000	0.0000000	0
NBCHEXA	0.0001	0.0001	0.0001	0.0001
VOC128	0.0000000	0.0000000	0.0000000	0
13DEBENZ	0.0001	0.0001	0.0001	0.0001
VOC129	0.0072140	0.0000440	0.0071680	0
NBBENZ	0.0007214	0.0000044	0.0007168	0.0001
VOC130	0.0024000	0.0001470	0.0023540	0
13DM4EBZ	0.00024	0.0000147	0.0002354	0.0001

VOC131	0.0000000	0.0000000	0.0003910	0
4TBTOLUE	0.0001	0.0001	0.0000391	0.0001
VOC132	0.0052960	0.0000600	0.0038620	0
NUNDECAN	0.0005296	0.000006	0.0003862	0.0001
VOC133	0.0022980	0.0000450	0.0023870	0
1245TMBZ	0.0002298	0.0000045	0.0002387	0.0001
VOC134	0.0030970	0.0001380	0.0030640	0
1235TMBZ	0.0003097	0.0000138	0.0003064	0.0001
VOC135	0.0014190	0.0000040	0.0012420	0
MDIPBENZ	0.0001419	0.0000004	0.0001242	0.0001
VOC136	0.0024370	0.0009220	0.0008790	0
1234TMBZ	0.0002437	0.0000922	0.0000879	0.0001
VOC137	0.0000000	0.0000000	0.0001020	0
246TMSTY	0.0001	0.0001	0.0000102	0.0001
VOC138	0.0064110	0.0000300	0.0046660	0
NAPTHALE	0.0006411	0.000003	0.0004666	0.0001
VOC139	0.0039500	0.0000400	0.0031220	0
NDODECAN	0.000395	0.000004	0.0003122	0.0001
VOC140	0.0000000	0.0000000	0.0000830	0
HCLBUTAD	0.0001	0.0001	0.0000083	0.0001
VOC141	0.0000020	0.0000000	0.0000000	0
N1TDECEN	0.0000002	0.0001	0.0001	0.0001
VOC142	0.0010240	0.0000000	0.0007560	0
NTRDECAN	0.0001024	0.0001	0.0000756	0.0001
VOC143	0.0001970	0.0000000	0.0000000	0
NTEDECAN	0.0000197	0.0001	0.0001	0.0001

3. Chicago Volatile Organic Compound PAMS Data Set

1. Inchivoc.in8

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SOCHIVOC.SEL
POCHIVOC.SEL
ADCHIVOC.SEL
ADCHIVOC.CAR
PRCHIVOC.CAR
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2. Adchivoc.sel

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NW       6/7/94  3  0      TVOC
NW       6/7/94  3  6      TVOC
NW       6/7/94  3 12      TVOC
NW       6/7/94  3 15      TVOC
NW      7/13/94  3  0      TVOC
NW      7/13/94  3  6      TVOC
NW      7/13/94  3 12      TVOC
NW      7/13/94  3 15      TVOC
NW       8/8/94  3  0      TVOC
NW       8/8/94  3  6      TVOC
NW       8/8/94  3 12      TVOC
NW       8/8/94  3 15      TVOC
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3. Pochivoc.sel

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VOC999  TVOC          TOTAL MASS BY FID
  VOC1  ETHYLENE    * ETHYLENE
  VOC2  ACETYLEN    * ACETYLENE
  VOC3  ETHANE      * ETHANE
  VOC4  PROPYLEN    * PROPYLENE
  VOC5  PROPANE     * PROPANE
  VOC7  IBUTANE     * ISOBUTANE
  VOC9  1BUTENE     * 1-BUTENE
 VOC11  NBUTANE     * N-BUTANE
 VOC12  T2BUTENE    * T-2-BUTENE
 VOC13  C3BUTENE    * C-2-BUTENE
 VOC16  3M1BUTEN    * 3-METHYL-1-BUTENE
 VOC17  IPENTANE    * ISOPENTANE
 VOC18  1PENTENE    * 1-PENTENE
 VOC20  NPENTANE    * N-PENTANE
 VOC21  ISOPRENE    * ISOPRENE
 VOC22  T2PENTEN    * T-2-PENTENE
 VOC23  C2PENTEN    * C-2-PENTENE
 VOC25  2M2BUTEN    * 2-METHYL-2-BUTENE
 VOC28  22DMBUTA    * 2,2-DIMETHYLBUTANE
 VOC29  CPENTANE    * CYCLOPENTANE
 VOC30  4M1PENTE    * 4-METHYL-1-PENTENE
 VOC32  23DMBUTA    * 2,3-DIMETHYLBUTANE
 VOC35  3MPENTAN    * 3-METHYLPENTANE
 VOC36  2M1PENTE    * 2-METHYL-1-PENTENE
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VOC39	NHEXANE	*	N-HEXANE
VOC41	T2HEXENE	*	T-2-HEXENE
VOC42	C2HEXENE	*	C-2-HEXENE
VOC45	MCPENTAN	*	METHYLCYCLOPENTANE
VOC46	24DMPENT	*	2,4-DIMETHYLPENTANE
VOC51	BENZENE	*	BENZENE
VOC54	CHEXANE	*	CYCLOHEXANE
VOC56	2MHEXANE	*	2-METHYLHEXANE
VOC57	23DMPENT	*	2,3-DIMETHYLPENTANE
VOC58	3MHEXANE	*	3-METHYLHEXANE
VOC65	MCHEXANE	*	METHYLCYCLOHEXANE
VOC71	234TMPEN	*	2,3,4-TRIMETHYLPENTANE
VOC72	TOLUENE	*	TOLUENE
VOC75	2MHEPTAN	*	2-METHYLHEPTANE
VOC77	3MHEPTAN	*	3-METHYLHEPTANE
VOC84	NOCTANE	*	N-OCTANE
VOC95	EBENZ	*	ETHYLBENZENE
VOC96	MPXYLENE	*	M&P-XYLENE
VOC99	STYRENE	*	STYRENE
VOC100	XYLENE	*	O-XYLENE & 1,1,2,2-TETRACHLOROETHANE
VOC102	NNONANE	*	N-NONANE
VOC106	ISPBENZ	*	ISOPROPYLBENZENE
VOC111	NPBENZ	*	N-PROPYLBENZENE
VOC115	TMBE	*	1,3,5 & 1,2,4-TRIMETHYLBENZENE
VOC121	CPENTENE	*	CYCLOPENTENE
VOC125	2MPENTAN	*	2-METHYLPENTANE
VOC127	224TMPEN	*	2,2,4-TRIMETHYLPENTANE
VOC130	NHEPTANE	*	N-HEPTANE
VOC135	NOX	*	NOX

4. Sochivoc.sel

1	VEHICLE	*	VEHICLE EMISSIONS
2	GASVAP	*	GASOLINE VAPOR
3	WHOLE	*	WHOLE GASOLINE
4	REFINE	*	PETROLEUM REFINERY EMISSION
5	GRAPHART	*	GRAPHIC ARTS
6	ARCHCOAT	*	ARCHITECTURAL COATING
7	COKE	*	COKE OVENS
8	CNG	*	COMMERCIAL NATURAL GAS
9	LPG	*	LIQUID PETROLEUM GAS

5. Adchivoc.car

ID	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW
DATE	6/7/94	6/7/94	6/7/94	6/7/94	7/13/94	7/13/94	7/13/94	7/13/94	8/8/94	8/8/94	8/8/94	8/8/94
DUR	3	3	3	3	3	3	3	3	3	3	3	3
STHOUR	0	6	12	15	0	6	12	15	0	6	12	15
SIZE	TVOC	TVOC	TVOC	TVOC	TVOC	TVOC	TVOC	TVOC	TVOC	TVOC	TVOC	TVOC
VOC999	199.67	527.20	160.02	160.76	172.10	144.63	152.07	172.48	164.83	168.65	259.17	186.00
TVOC	19.967	52.720	16.020	16.076	17.210	14.463	15.207	17.248	16.483	16.865	25.917	18.600
VOC1	7.916	20.191	8.948	8.26	8.375	7.572	9.465	10.153	4.646	4.99	9.121	9.006
ETHYLENE	0.7916	2.0191	0.8948	0.826	0.8375	0.7572	0.9465	1.0153	0.4646	0.499	0.9121	0.9006
VOC2	4.899	10.331	4.58	5.006	4.047	4.313	3.568	4.207	2.929	4.1	6.017	4.42
ACETYLEN	0.4899	1.0331	0.458	0.5006	0.4047	0.4313	0.3568	0.4207	0.2929	0.41	0.6017	0.442
VOC3	12.962	17.139	4.239	3.44	9.092	5.037	3.87	3.379	5.897	6.45	6.327	4.607
ETHANE	1.2962	1.7139	0.4239	0.344	0.9092	0.5037	0.387	0.3379	0.5897	0.645	0.6327	0.4607

VOC4	4.188	0	3.327	3.672	2.409	2.295	2.582	3.041	1.377	1.836	3.729	2.811
PROPYLEN	0.4188	0.1	0.3327	0.3672	0.2409	0.2295	0.2582	0.3041	0.1377	0.1836	0.3729	0.2811
VOC5	9.199	13.467	3.667	3.066	9.499	9.199	6.674	5.471	16.053	18.518	19.72	14.971
PROPANE	0.9199	1.3467	0.3667	0.3066	0.9499	0.9199	0.6674	0.5471	1.6053	1.8518	1.972	1.4971
VOC7	7.012	7.607	1.307	1.486	2.853	1.545	1.07	0.951	1.961	2.674	3.506	1.842
IBUTANE	0.7012	0.7607	0.1307	0.1486	0.2853	0.1545	0.107	0.0951	0.1961	0.2674	0.3506	0.1842
VOC9	0	0	0	0	3.155	2.811	3.328	3.614	1.951	1.951	3.155	3.098
1BUTENE	0.1	0.1	0.1	0.1	0.3155	0.2811	0.3328	0.3614	0.1951	0.1951	0.3155	0.3098
VOC11	8.617	22.345	6.537	2.555	6.715	4.932	4.873	5.051	5.051	6.656	12.361	7.488
NBUTANE	0.8617	2.2345	0.6537	0.2555	0.6715	0.4932	0.4873	0.5051	0.5051	0.6656	1.2361	0.7488
VOC12	0.746	1.262	0.631	0.746	0.631	0.574	0.574	0.574	0	0.574	0.574	0.516
T2BUTENE	0.0746	0.1262	0.0631	0.0746	0.0631	0.0574	0.0574	0.0574	0.1	0.0574	0.0574	0.0516
VOC13	0	0.918	0	0	0	0	0	0	0	0	0.574	0
C3BUTENE	0.1	0.0918	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0574	0.1
VOC16	0	0.631	0	0	0	0	0	0	0	0	0	0
3M1BUTEN	0.1	0.0631	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
VOC17	11.568	44.972	10.918	11.45	11.922	9.856	10.466	12.748	7.613	10.151	24.729	16.584
IPENTANE	1.1568	4.4972	1.0918	1.145	1.1922	0.9856	1.0466	1.2748	0.7613	1.0151	2.4729	1.6584
VOC18	0.688	1.95	0.574	0.574	0	0	0	0.574	0	0.574	0.975	0.688
1PENTENE	0.0688	0.195	0.0574	0.0574	0.1	0.1	0.1	0.0574	0.1	0.0574	0.0975	0.0688
VOC20	4.84	15.935	4.131	4.072	4.662	3.895	3.895	4.544	2.715	3.541	7.141	4.662
NPENTANE	0.484	1.5935	0.4131	0.4072	0.4662	0.3895	0.3895	0.4544	0.2715	0.3541	0.7141	0.4662
VOC21	0	1.043	0	0	0	0	0	0	0	0	0.549	0
ISOPRENE	0.1	0.1043	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0549	0.1
VOC22	0.746	2.868	0.803	0.86	0.688	0.688	0.803	0.975	0	0.574	1.377	0.918
T2PENTEN	0.0746	0.2868	0.0803	0.086	0.0688	0.0688	0.0803	0.0975	0.1	0.0574	0.1377	0.0918
VOC23	0	1.606	0	0	0	0	0	0	0	0	0.688	0
C2PENTEN	0.1	0.1606	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0688	0.1
VOC25	1.09	2.811	1.147	1.147	0.86	1.033	1.205	1.492	0	0.803	1.893	1.319
2M2BUTEN	0.109	0.2811	0.1147	0.1147	0.086	0.1033	0.1205	0.1492	0.1	0.0803	0.1893	0.1319
VOC28	0.705	2.644	0.746	0.881	0.764	0.705	0.705	0.881	0	0.646	1.175	0.881
22DMBUTA	0.0705	0.2644	0.0746	0.0881	0.0764	0.0705	0.0705	0.0881	0.1	0.0646	0.1175	0.0881
VOC29	0	4.36	1.434	1.377	1.262	1.262	1.262	1.606	0.803	1.033	2.008	1.434
CPENTANE	0.1	0.436	0.1434	0.1377	0.1262	0.1262	0.1262	0.1606	0.0803	0.1033	0.2008	0.1434
VOC30	0	0.861	0	0	0	0	0	0	0	0	0	0
4M1PENTE	0.1	0.0861	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
VOC32	0	1.586	0	0	0	0	0	0	0	0	0.646	0
23DMBUTA	0.1	0.1586	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0646	0.1
VOC35	2.056	11.925	2.232	2.409	2.291	2.056	2.174	2.644	1.292	1.704	3.231	2.35
3MPENTAN	0.2056	1.1925	0.2232	0.2409	0.2291	0.2056	0.2174	0.2644	0.1292	0.1704	0.3231	0.235
VOC36	0	1.205	0	0	0	0	0	0	0	0	0	0
2M1PENTE	0.1	0.1205	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
VOC39	2.526	10.222	2.291	2.291	2.644	1.939	2.937	3.29	1.116	1.645	2.996	2.115
NHEXANE	0.2526	1.0222	0.2291	0.2291	0.2644	0.1939	0.2937	0.329	0.1116	0.1645	0.2996	0.2115
VOC41	0	0.975	0	0	0	0	0	0	0	0	0	0
T2HEXENE	0.1	0.0975	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
VOC42	0	0	0	0	0	0	0	0	0	0	0	0
C2HEXENE	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
VOC45	1.778	5.0565	1.606	1.664	1.606	1.319	1.434	1.721	0.861	1.09	1.778	1.377
MCPENTAN	0.1778	0.50565	0.1606	0.1664	0.1606	0.1319	0.1434	0.1721	0.0861	0.109	0.1778	0.1377
VOC46	1.054	3.396	1.288	1.347	1.054	0.995	1.112	1.405	0.703	0.878	1.405	1.171
24DMPENT	0.1054	0.3396	0.1288	0.1347	0.1054	0.0995	0.1112	0.1405	0.0703	0.0878	0.1405	0.1171
VOC51	4.366	14.483	5.324	5.697	4.686	4.526	5.005	5.591	2.343	3.408	5.697	5.058
BENZENE	0.4366	1.4483	0.5324	0.5697	0.4686	0.4526	0.5005	0.5591	0.2343	0.3408	0.5697	0.5058
VOC54	0.975	1.721	0.918	0.688	0.861	0.861	0.688	0.688	0	0	0.631	0
CHEXANE	0.0975	0.1721	0.0918	0.0688	0.0861	0.0861	0.0688	0.0688	0.1	0.1	0.0631	0.1
VOC56	1.698	5.0620	1.581	1.464	1.347	1.171	1.229	1.464	0.761	0.995	1.639	1.229
2MHEXANE	0.1698	0.5062	0.1581	0.1464	0.1347	0.1171	0.1229	0.1464	0.0761	0.0995	0.1639	0.1229
VOC57	1.639	5.445	1.991	1.991	1.405	1.405	1.581	1.932	0.937	1.288	1.932	1.581
23DMPENT	0.1639	0.5445	0.1991	0.1991	0.1405	0.1405	0.1581	0.1932	0.0937	0.1288	0.1932	0.1581
VOC58	1.991	6.792	1.581	1.639	1.522	1.347	1.405	1.698	0.878	1.112	1.847	1.522
3MHEXANE	0.1991	0.6792	0.1581	0.1639	0.1522	0.1347	0.1405	0.1698	0.0878	0.1112	0.1847	0.1522
VOC65	0.975	2.237	0	0	0.631	0	0	0	0	0	0.688	0.574
MCHEXANE	0.0975	0.2237	0.1	0.1	0.0631	0.1	0.1	0.1	0.1	0.1	0.0688	0.0574
VOC71	1.11	3.621	1.402	1.518	0.993	1.051	1.226	1.577	0.701	0.876	1.402	1.168
234TMPEN	0.111	0.3621	0.1402	0.1518	0.0993	0.1051	0.1226	0.1577	0.0701	0.0876	0.1402	0.1168
VOC72	11.952	37.201	11.198	13.082	10.013	9.152	10.229	12.005	6.406	8.075	14.051	11.198
TOLUENE	1.1952	3.7201	1.1198	1.3082	1.0013	0.9152	1.0229	1.2005	0.6406	0.8075	1.4051	1.1198
VOC75	0.584	2.394	0	0.584	0	0	0	0.526	0	0	0.584	0
2MHEPTAN	0.0584	0.2394	0.1	0.0584	0.1	0.1	0.1	0.0526	0.1	0.1	0.0584	0.1
VOC77	0.876	2.278	0.818	0.934	0.642	0.584	0.701	0.759	0	0	0.759	0.584

3MHEPTAN	0.0876	0.2278	0.0818	0.0934	0.0642	0.0584	0.0701	0.0759	0.1	0.1	0.0759	0.0584
VOC84	0.934	1.986	0	0.584	0.759	0	0	0.584	0.642	0	0.993	0
NOCTANE	0.0934	0.1986	0.1	0.0584	0.0759	0.1	0.1	0.0584	0.0642	0.1	0.0993	0.1
VOC95	2.225	5.048	1.683	1.845	1.628	1.357	1.574	1.845	4.939	3.148	2.714	1.954
EBENZ	0.2225	0.5048	0.1683	0.1845	0.1628	0.1357	0.1574	0.1845	0.4939	0.3148	0.2714	0.1954
VOC96	8.421	18.201	6.031	6.302	5.487	4.89	5.65	6.52	20.537	12.768	9.942	6.737
MPXYLENE	0.8421	1.8201	0.6031	0.6302	0.5487	0.489	0.565	0.652	2.0537	1.2768	0.9942	0.6737
VOC99	0	2.769	1.757	1.598	1.118	0.959	1.012	0.959	0.959	0.905	1.118	1.012
STYRENE	0.1	0.2769	0.1757	0.1598	0.1118	0.0959	0.1012	0.0959	0.0959	0.0905	0.1118	0.1012
VOC100	3.42	7.762	2.877	2.931	2.063	1.737	2.171	2.443	6.459	4.179	3.528	2.497
XYLENE	0.342	0.7762	0.2877	0.2931	0.2063	0.1737	0.2171	0.2443	0.6459	0.4179	0.3528	0.2497
VOC102	0.816	1.865	0.641	0	0	0	0	0	0	0	0.699	0
NNONANE	0.0816	0.1865	0.0641	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0699	0.1
VOC106	0.765	1.748	1.038	0.983	0.71	0	0	0	0.655	0	0.492	0
ISPBENZ	0.0765	0.1748	0.1038	0.0983	0.071	0.1	0.1	0.1	0.0655	0.1	0.0492	0.1
VOC111	0.655	1.693	0.492	0.601	0.546	0	0	0.546	0.983	0.765	0.765	0
NPBENZ	0.0655	0.1693	0.0492	0.0601	0.0546	0.1	0.1	0.0546	0.0983	0.0765	0.0765	0.1
VOC115	5.845	13.328	4.916	5.408	5.462	4.534	5.189	5.517	9.942	5.681	6.009	4.588
TMBE	0.5845	1.3328	0.4916	0.5408	0.5462	0.4534	0.5189	0.5517	0.9942	0.5681	0.6009	0.4588
VOC121	1.319	0.613	0	1.377	0	0	0	0	0	0	2.008	1.434
CPENTENE	0.1319	0.0613	0.1	0.1377	0.1	0.1	0.1	0.1	0.1	0.1	0.2008	0.1434
VOC125	3.818	14.334	3.936	3.76	3.76	3.349	3.466	4.465	2.115	2.879	5.287	3.877
2MPENTAN	0.3818	1.4334	0.3936	0.376	0.376	0.3349	0.3466	0.4465	0.2115	0.2879	0.5287	0.3877
VOC127	3.212	10.687	4.146	3.913	3.037	2.92	3.504	4.088	2.219	2.57	4.438	3.562
224TMPEN	0.3212	1.0687	0.4146	0.3913	0.3037	0.292	0.3504	0.4088	0.2219	0.257	0.4438	0.3562
VOC130	1.581	5.738	0.878	0.937	0.995	0.82	1.347	0.937	0.586	0.703	1.112	1.23
NHEPTANE	0.1581	0.5738	0.0878	0.0937	0.0995	0.082	0.1347	0.0937	0.0586	0.0703	0.1112	0.123
VOC135	178.089	430.74	165.148	144.813	121.396	154.056	139.883	139.883	52.379	234.165	165.148	102.293
NOX	17.8089	43.074	16.5148	14.4813	12.1396	15.4056	13.9883	13.9883	5.2379	23.4165	16.5148	10.2293

6. Pochivoc.car

CODE	1	2	3	4	5	6	7	8	9
NAME	VEHICLE	GASVAP	WHOLE	REFINE	GRAPHART	ARCHCOAT	COKE	CNG	LPG
SIZE	TVOC	TVOC	TVOC	TVOC	TVOC	TVOC	TVOC	TVOC	TVOC
VOC1	0.0705	0	0	0.0106	0	0	0.0072	0	0
ETHYLENE	0.00705	0.0001	0.0001	0.00106	0.0001	0.0001	0.00072	0.0001	0.0001
VOC2	0.0411	0	0	0.0032	0	0	0	0	0
ACETYLEN	0.00411	0.0001	0.0001	0.00032	0.0001	0.0001	0.0001	0.0001	0.0001
VOC3	0.0168	0.0008	0.0002	0.048	0	0	0	0.694	0.041
ETHANE	0.00168	0.00008	0.00002	0.0048	0.0001	0.0001	0.0001	0.0694	0.0041
VOC4	0.0239	0.0007	0.0004	0.0108	0	0	0	0	0.051
PROPYLEN	0.00239	0.00007	0.00004	0.00108	0.0001	0.0001	0.0001	0.0001	0.0051
VOC5	0.0102	0.0149	0.0008	0.0885	0	0	0.0128	0.213	0.904
PROPANE	0.00102	0.00149	0.00008	0.00885	0.0001	0.0001	0.00128	0.0213	0.0904
VOC7	0.0108	0.061	0.06	0.0541	0	0	0.003	0.021	0.002
IBUTANE	0.00108	0.0061	0.006	0.00541	0.0001	0.0001	0.0003	0.0021	0.0002
VOC9	0.0161	0.0087	0	0.0026	0	0	0	0	0
1BUTENE	0.00161	0.00087	0.0001	0.00026	0.0001	0.0001	0.0001	0.0001	0.0001
VOC11	0.0528	0.2637	0.0323	0.1569	0	0	0.0232	0.031	0
NBUTANE	0.00528	0.02637	0.00323	0.01569	0.0001	0.0001	0.00232	0.0031	0.0001
VOC12	0.0041	0.0152	0.0025	0.0195	0	0	0	0	0
T2BUTENE	0.00041	0.00152	0.00025	0.00195	0.0001	0.0001	0.0001	0.0001	0.0001
VOC13	0.0033	0.0136	0.0023	0.0069	0	0	0	0	0
C3BUTENE	0.00033	0.00136	0.00023	0.00069	0.0001	0.0001	0.0001	0.0001	0.0001
VOC16	0.0016	0.0051	0.0011	0.0003	0	0	0	0	0
3M1BUTEN	0.00016	0.00051	0.00011	0.00003	0.0001	0.0001	0.0001	0.0001	0.0001
VOC17	0.067	0.2795	0.0737	0.1434	0	0	0.0076	0.007	0
IPENTANE	0.0067	0.02795	0.00737	0.01434	0.0001	0.0001	0.00076	0.0007	0.0001
VOC18	0.0058	0.0118	0.0039	0.0007	0	0	0.0001	0	0
1PENTENE	0.00058	0.00118	0.00039	0.00007	0.0001	0.0001	0.00001	0.0001	0.0001

MPXYLENE	0.00364	0.00033	0.0063	0.00188	0.00097	0.00267	0.00081	0.0001	0.0001
VOC99	0.0044	0.0001	0.0019	0	0	0	0	0	0
STYRENE	0.00044	0.00001	0.00019	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
VOC100	0.0169	0.0011	0.026	0.0069	0.0054	0.0286	0.0124	0	0
XYLENE	0.00169	0.00011	0.0026	0.00069	0.00054	0.00286	0.00124	0.0001	0.0001
VOC102	0.0024	0.0001	0.0022	0.0086	0	0	0.0145	0	0
NNONANE	0.00024	0.00001	0.00022	0.00086	0.0001	0.0001	0.00145	0.0001	0.0001
VOC106	0.0015	0.0005	0.0024	0.0055	0.0036	0	0	0	0
ISPBENZ	0.00015	0.00005	0.00024	0.00055	0.00036	0.0001	0.0001	0.0001	0.0001
VOC111	0.0042	0.0002	0.0071	0.0025	0.009	0	0.0069	0	0
NPBENZ	0.00042	0.00002	0.00071	0.00025	0.0009	0.0001	0.00069	0.0001	0.0001
VOC115	0.0202	0.001	0.056	0.0305	0.0338	0	0.0046	0	0
TMBE	0.00202	0.0001	0.0056	0.00305	0.00338	0.0001	0.00046	0.0001	0.0001
VOC121	0.0017	0.0037	0.0021	0	0	0	0	0	0
CPENTENE	0.00017	0.00037	0.00021	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
VOC125	0.0253	0.0271	0.0288	0.0335	0	0	0.0046	0	0
2MPENTAN	0.00235	0.00271	0.00288	0.00335	0.0001	0.0001	0.00046	0.0001	0.0001
VOC127	0.0247	0.0071	0.0282	0.0307	0	0	0.0144	0	0
224TMPEN	0.00247	0.00071	0.00282	0.00307	0.0001	0.0001	0.00144	0.0001	0.0001
VOC130	0.0069	0.0022	0.0085	0.013	0	0.0222	0.0108	0.002	0
NHEPTANE	0.00069	0.00022	0.00085	0.0013	0.0001	0.00222	0.00108	0.0002	0.0001
VOC135	0.5453	0	0	0.0192	0	0	0.1106	0	0
NOX	0.05453	0.0001	0.0001	0.00192	0.0001	0.0001	0.01106	0.0001	0.0001

4. Florida Atmospheric Mercury Data Set.

PRSOFAM7.txt

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CODE  NAME  SIZE  C2  NAI  C3 IX C4 KX C5 PX C6 SX C8 VI C9 WI C11 YBI C12 AGI C13 ALI C14 ASI C15 AUI C16 BAI C17 BRX
C18 CAX C19 CDI C20 CEI C21 CLX C22 COI C23 CRI C24 CSI C25 CUX C26 EUI C27 FEI C29 GAI C30 GDI C32 HFI C34 LAI C35 LUI
C36 MGX C37 MNI C40 NDI C41 NIX C42 PBX C43 PDX C44 RBX C46 SBI C47 SCI C48 SEI C49 SIX C50 SMI C51 SNX C52 SRX C56 THI
C57 TIX C58 ZNI C61 HGCV C62 OC C63 EC
1 DCI FINE 2.5E-02 3.7E-04 0.0E+00 1.9E-04 4.1E-02 2.6E-03 9.2E-04 1.1E-04 2.2E-02 1.6E-03 3.4E-06 1.8E-06 2.0E-06
2.0E-06 3.8E-06 1.7E-06 3.0E-05 1.2E-05 9.8E-04 9.7E-05 1.6E-04 4.6E-06 1.0E-07 5.0E-08 1.3E-04 1.3E-04 6.2E-03 4.8E-04
3.1E-03 2.3E-04 2.1E-04 8.3E-05 1.3E-06 1.3E-06 1.5E-01 9.4E-03 1.0E-05 2.7E-07 3.7E-05 2.5E-06 3.0E-06 4.8E-07 1.1E-03
6.8E-05 2.2E-07 2.2E-07 1.1E-03 1.1E-04 1.1E-05 5.4E-06 4.9E-04 3.7E-04 3.1E-07 2.6E-07 1.1E-06 4.3E-07 2.7E-07 2.7E-07
2.5E-04 7.2E-05 3.9E-05 1.8E-05 3.0E-04 3.0E-04 9.6E-05 1.1E-05 9.5E-03 5.6E-04 0.0E+00 1.0E-04 6.9E-05 1.5E-05 9.8E-04
1.4E-05 9.2E-08 1.2E-08 4.1E-06 2.0E-06 2.3E-03 5.2E-04 2.0E-07 1.6E-07 9.6E-04 2.3E-04 4.1E-06 8.8E-06 2.8E-07 2.8E-07
3.4E-04 9.7E-05 6.5E-02 4.4E-03 5.2E-05 6.7E-08 5.5E-02 5.5E-03 2.1E-02 2.1E-03
2 MEDX FINE 3.1E-02 3.7E-04 1.7E-03 2.0E-03 1.8E-02 1.2E-03 1.2E-03 2.3E-04 1.3E-02 9.6E-04 1.5E-05 1.8E-06 5.3E-06
2.3E-06 2.1E-06 2.1E-06 9.8E-05 6.0E-06 2.4E-03 1.3E-04 1.3E-05 2.8E-06 1.1E-06 9.0E-08 1.1E-03 2.8E-04 2.4E-03 2.1E-04
1.0E-02 1.1E-03 2.2E-04 2.2E-04 1.6E-04 1.6E-04 1.3E-01 8.3E-03 7.8E-06 6.6E-07 6.8E-05 6.9E-06 2.0E-05 1.5E-06 1.6E-03
1.2E-04 5.8E-07 5.8E-07 4.0E-03 5.0E-04 1.2E-05 8.1E-06 4.1E-04 2.2E-04 8.6E-07 8.6E-07 1.7E-06 8.5E-07 3.7E-07 3.7E-07
0.0E+00 2.3E-04 1.8E-04 1.7E-05 4.7E-04 4.7E-04 1.7E-04 3.8E-05 5.2E-03 3.6E-04 1.3E-03 1.1E-03 8.7E-05 4.2E-05 7.1E-04
8.6E-06 2.0E-07 3.1E-08 1.8E-05 7.6E-06 3.3E-02 4.4E-03 1.3E-07 1.0E-07 1.0E-02 2.2E-03 0.0E+00 5.0E-05 9.2E-07 7.4E-07
3.8E-04 8.5E-04 3.4E-02 2.3E-03 1.4E-03 1.1E-06 3.1E-01 3.1E-02 3.8E-01 3.8E-02
3 TARM FINE 9.0E-03 1.1E-04 2.5E-03 3.5E-03 1.7E-01 1.1E-02 5.4E-03 6.6E-04 1.0E-01 6.4E-03 2.5E-04 5.4E-06 4.6E-06
2.1E-06 4.2E-06 4.2E-06 1.6E-05 1.1E-05 7.8E-03 3.6E-04 2.3E-05 2.0E-06 9.0E-07 1.8E-07 4.0E-04 4.0E-04 1.3E-03 1.5E-04
1.5E-01 9.5E-03 2.8E-04 2.8E-04 3.2E-05 4.0E-06 8.6E-02 5.4E-03 2.0E-05 1.0E-06 1.2E-04 9.8E-06 4.4E-04 9.4E-06 2.1E-04
7.2E-05 8.8E-07 2.5E-07 9.8E-03 4.8E-04 1.0E-05 7.9E-06 1.4E-03 3.9E-04 1.9E-06 7.0E-07 5.1E-06 9.1E-07 7.0E-07 7.0E-07
2.0E-03 5.9E-04 7.5E-05 1.4E-05 6.4E-04 4.3E-04 1.9E-04 6.5E-05 1.4E-03 2.2E-04 2.9E-03 2.2E-03 2.8E-03 2.2E-04 9.6E-06
2.0E-06 1.6E-06 6.2E-08 1.7E-03 9.7E-05 4.1E-02 5.7E-03 5.8E-07 1.7E-07 3.4E-03 3.2E-03 5.7E-04 1.5E-04 1.5E-06 1.1E-06
1.3E-04 1.9E-03 7.0E-04 6.8E-05 4.8E-04 1.5E-06 7.1E-01 7.1E-02 1.2E-02 1.2E-03
4 Oil FINE 5.4E-02 2.0E-02 0.0E+00 0.0E+00 3.0E-03 1.4E-03 -9.9E+01 -9.9E+01 1.6E-01 8.8E-02 4.2E-02 3.7E-03 7.7E-02
4.1E-02 3.7E-04 2.0E-04 -9.9E+01 -9.9E+01 1.4E-02 8.1E-03 8.4E-05 2.5E-05 -9.9E+01 -9.9E+01 4.9E-03 8.4E-04 1.4E-04
4.3E-05 5.5E-02 2.6E-02 -9.9E+01 -9.9E+01 1.6E-04 1.0E-04 4.4E-04 3.3E-04 1.4E-03 6.8E-04 3.3E-04 1.8E-04 5.0E-07
3.0E-07 -9.9E+01 -9.9E+01 1.7E-03 6.0E-04 2.6E-02 1.2E-02 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 1.4E-03 1.2E-04 2.0E-04
1.3E-04 9.2E-05 5.1E-05 3.5E-03 1.9E-03 5.1E-04 2.1E-04 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01
-9.9E+01 -9.9E+01 -9.9E+01 9.2E-04 6.4E-04 8.0E-04 3.1E-04 6.6E-05 5.7E-06 -9.9E+01 -9.9E+01 2.7E-02 1.8E-02 -9.9E+01
-9.9E+01 -9.9E+01 -9.9E+01 5.5E-03 1.9E-03 1.6E-03 1.1E-03 1.6E-02 8.2E-03 1.3E-03 1.1E-04 -9.9E+01 -9.9E+01 -9.9E+01
-9.9E+01
5 Refin FINE 3.8E-03 5.0E-04 0.0E+00 0.0E+00 3.2E-04 5.1E-05 -9.9E+01 -9.9E+01 1.3E-01 1.6E-02 2.5E-04 7.2E-05 0.0E+00
0.0E+00 3.7E-03 4.2E-04 -9.9E+01 -9.9E+01 6.8E-02 1.2E-02 6.0E-07 2.0E-07 -9.9E+01 -9.9E+01 2.8E-04 8.6E-05 6.1E-06
1.9E-06 3.1E-04 4.4E-05 -9.9E+01 -9.9E+01 2.7E-03 3.9E-04 6.4E-05 2.6E-05 1.5E-05 2.0E-06 5.9E-05 8.0E-06 0.0E+00
0.0E+00 -9.9E+01 -9.9E+01 4.9E-03 6.9E-04 2.0E-03 3.0E-04 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 1.0E-03 8.7E-05 3.3E-03
4.9E-04 5.9E-04 2.0E-04 0.0E+00 0.0E+00 1.4E-05 3.0E-06 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01
-9.9E+01 -9.9E+01 -9.9E+01 8.1E-06 2.5E-06 2.7E-03 3.9E-04 1.5E-05 1.0E-06 -9.9E+01 -9.9E+01 1.7E-01 2.0E-02 -9.9E+01
-9.9E+01 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 3.8E-03 1.1E-03 2.9E-05 1.6E-05 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01
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-9.9E+01
6 Incin FINE 7.7E-02 1.7E-02 0.0E+00 0.0E+00 8.6E-02 2.4E-02 -9.9E+01 -9.9E+01 3.5E-02 8.5E-03 2.5E-05 9.9E-06 1.7E-02
1.3E-02 0.0E+00 0.0E+00 -9.9E+01 -9.9E+01 1.4E-02 4.5E-03 1.8E-04 7.5E-05 -9.9E+01 -9.9E+01 6.3E-04 3.3E-04 1.7E-03
9.9E-04 1.5E-02 6.5E-03 -9.9E+01 -9.9E+01 9.1E-06 3.9E-06 2.3E-01 9.1E-02 6.4E-06 4.0E-06 4.7E-04 2.3E-04 5.6E-06
2.4E-06 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 5.6E-03 2.3E-03 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 6.0E-04 3.2E-04 3.4E-06
3.0E-07 0.0E+00 0.0E+00 1.3E-02 8.5E-03 5.9E-04 5.6E-04 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01
-9.9E+01 -9.9E+01 -9.9E+01 1.8E-03 3.9E-04 8.1E-04 3.8E-04 3.9E-05 1.4E-05 -9.9E+01 -9.9E+01 3.2E-04 1.1E-04 -9.9E+01
-9.9E+01 -9.9E+01 -9.9E+01 8.9E-04 7.4E-04 2.7E-03 6.7E-04 1.1E-01 3.4E-02 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01
-9.9E+01
7 Steel FINE 4.2E-02 3.5E-02 3.2E-04 2.5E-04 1.3E-01 4.5E-02 -9.9E+01 -9.9E+01 1.1E-01 9.7E-03 5.2E-03 4.2E-03 0.0E+00
0.0E+00 0.0E+00 0.0E+00 -9.9E+01 -9.9E+01 6.8E-02 3.1E-02 3.5E-04 1.8E-05 -9.9E+01 -9.9E+01 1.0E-03 7.7E-04 1.1E-03
6.1E-04 1.1E-01 3.2E-02 -9.9E+01 -9.9E+01 1.1E-04 5.2E-05 3.9E-02 2.6E-02 7.7E-05 2.6E-05 1.6E-03 3.9E-04 3.5E-04
3.5E-04 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 3.2E-01 1.6E-02 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 1.1E-02 4.8E-03 8.7E-05
6.8E-05 0.0E+00 0.0E+00 6.1E-02 2.9E-02 1.3E-02 4.8E-03 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01
-9.9E+01 -9.9E+01 -9.9E+01 2.3E-04 1.9E-04 8.7E-03 6.5E-03 5.8E-04 5.8E-04 -9.9E+01 -9.9E+01 1.4E-02 1.2E-02 -9.9E+01
-9.9E+01 -9.9E+01 -9.9E+01 9.7E-03 3.9E-03 7.7E-03 3.2E-03 2.0E-02 5.2E-03 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01
-9.9E+01
8 UrbanD FINE 1.3E-02 3.4E-03 0.0E+00 0.0E+00 3.9E-03 6.0E-04 -9.9E+01 -9.9E+01 1.2E-02 1.6E-03 1.7E-04 3.0E-05 0.0E+00
0.0E+00 0.0E+00 0.0E+00 -9.9E+01 -9.9E+01 2.2E-02 3.4E-03 5.0E-05 5.0E-05 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 5.0E-05
5.0E-05 1.2E-01 1.3E-02 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 8.9E-03 1.0E-05 0.0E+00 0.0E+00 4.5E-04 3.0E-05 0.0E+00
0.0E+00 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 5.3E-02 3.3E-03 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 0.0E+00
0.0E+00 0.0E+00 0.0E+00 1.3E-02 2.7E-03 1.4E-02 3.2E-04 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01
-9.9E+01 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 0.0E+00 0.0E+00 2.0E-05 1.0E-06 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 -9.9E+01
-9.9E+01 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 1.8E-03 1.5E-04 2.3E-03 1.5E-04 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01
-9.9E+01
9 Mveh FINE 2.6E-03 2.2E-03 2.1E-05 1.8E-05 1.5E-03 3.0E-04 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 0.0E+00 0.0E+00 9.5E-02
4.7E-02 0.0E+00 0.0E+00 -9.9E+01 -9.9E+01 3.6E-03 1.0E-03 0.0E+00 0.0E+00 -9.9E+01 -9.9E+01 5.5E-04 1.6E-04 1.0E-02
3.1E-03 5.5E-03 2.3E-03 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 6.0E-03 3.1E-03 5.5E-06 2.0E-06 0.0E+00 0.0E+00 5.0E-07
0.0E+00 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 4.0E-03 2.0E-03 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 0.0E+00
0.0E+00 0.0E+00 0.0E+00 3.8E-03 1.5E-03 1.5E-04 5.0E-05 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01
-9.9E+01 -9.9E+01 -9.9E+01 3.6E-05 2.1E-05 0.0E+00 0.0E+00 4.0E-06 1.5E-05 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 -9.9E+01
-9.9E+01 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 0.0E+00 0.0E+00 7.5E-04 1.6E-04 8.6E-07 1.8E-07 -9.9E+01 -9.9E+01 -9.9E+01
-9.9E+01
10 Lime FINE 7.3E-03 3.1E-03 1.1E-05 1.4E-05 5.1E-02 2.1E-02 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 3.4E-05 2.0E-05 0.0E+00
0.0E+00 0.0E+00 0.0E+00 -9.9E+01 -9.9E+01 2.2E-02 7.0E-03 4.2E-05 1.9E-05 -9.9E+01 -9.9E+01 3.6E-04 3.6E-04 1.2E-04
7.0E-05 1.0E-01 5.0E-03 -9.9E+01 -9.9E+01 2.3E-05 1.1E-05 2.7E-03 1.8E-03 5.7E-06 2.0E-06 1.1E-04 1.1E-04 3.5E-04
5.0E-06 -9.9E+01 -9.9E+01 5.0E-04 5.0E-04 6.1E-03 2.0E-03 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 5.1E-04 0.0E+00 1.3E-05
4.0E-06 2.0E-04 3.0E-05 7.0E-03 8.9E-03 1.2E-04 5.0E-05 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01
-9.9E+01 -9.9E+01 -9.9E+01 2.1E-05 0.0E+00 6.4E-03 2.0E-03 3.4E-05 3.7E-05 -9.9E+01 -9.9E+01 1.6E-03 7.0E-04 -9.9E+01
-9.9E+01 -9.9E+01 -9.9E+01 2.9E-03 0.0E+00 1.1E-03 3.0E-04 1.5E-04 1.0E-05 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01
-9.9E+01
11 Rsul FINE 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 -9.9E+01 -9.9E+01 2.2E-01 1.6E-02 9.0E-06 1.1E-05 0.0E+00

0.0E+00 0.0E+00 0.0E+00 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 9.9E-06 4.0E-06 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 0.0E+00
0.0E+00 0.0E+00 0.0E+00 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00
0.0E+00 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 0.0E+00 0.0E+00 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 0.0E+00
0.0E+00 0.0E+00 0.0E+00 0.0E+00 0.0E+00 5.2E-05 2.0E-05 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01
-9.9E+01 -9.9E+01 -9.9E+01 4.5E-06 1.6E-06 0.0E+00 0.0E+00 4.0E-05 9.0E-06 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 -9.9E+01
-9.9E+01 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 0.0E+00 0.0E+00 1.3E-04 9.0E-05 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01
-9.9E+01
12 Coal FINE 1.8E-03 1.2E-03 3.8E-04 1.2E-04 5.5E-03 1.2E-03 -9.9E+01 -9.9E+01 1.9E-01 9.5E-02 3.8E-04 3.1E-04 1.1E-02
4.5E-03 2.6E-03 7.5E-04 -9.9E+01 -9.9E+01 5.0E-02 1.5E-02 6.0E-04 4.6E-04 -9.9E+01 -9.9E+01 1.3E-03 7.5E-04 6.0E-04
9.5E-04 1.4E-02 1.4E-02 -9.9E+01 -9.9E+01 7.0E-05 1.7E-05 1.9E-03 2.3E-03 2.5E-05 1.2E-05 3.0E-04 2.0E-04 7.5E-06
6.5E-06 -9.9E+01 -9.9E+01 1.5E-03 2.7E-04 2.6E-02 1.2E-02 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 2.7E-03 1.4E-03 2.9E-05
1.1E-05 7.5E-04 5.5E-04 6.0E-03 3.0E-03 1.8E-04 8.5E-05 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01
-9.9E+01 -9.9E+01 -9.9E+01 1.2E-04 1.4E-04 1.4E-02 3.4E-03 2.7E-03 5.5E-04 -9.9E+01 -9.9E+01 8.5E-03 4.5E-03 -9.9E+01
-9.9E+01 -9.9E+01 -9.9E+01 0.0E+00 0.0E+00 3.2E-03 4.6E-04 9.5E-04 4.4E-04 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01 -9.9E+01
-9.9E+01

ADSOFAM7.txt

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ID   DATE    DUR  STHR  SIZE  C1  TOT  C2 NAI C3 IX C4 KX C5 PX C6 SX C8 VI C9 WI C11 YBI C12 AGI C13 ALI C14 ASI C15 AUI C16 BAI C17 BRX C18 CAX C19
CDI C20 CEI C21 CLX C22 COI C23 CRI C24 CSI C25 CUX C26 EUI C27 FEI C29 GAI C30 GDI C32 HFI C34 LAI C35 LUI C36 MGX C37 MNI C40 NDI C41 NIX C42 PBX
C43 PDX C44 RBX C46 SBI C47 SCI C48 SEI C49 SIX C50 SMI C51 SNX C52 SRX C56 THI C57 TIX C58 ZNI C61 HGCV C62 OC C63 EC
ADK  8/12/95 11 20 FINE 4869 474 140 6 2 23.7 50.6 4.7 7 2.1 533.8 33.9 2.16 0.06 0.0156 0.0107 0.0029 0.0008 0.0145 0.0023 171.7 13.6 0.18 0.012 0
0.0022 2.3 0.27 1.6 0.5 59.1 7.2 0.71 0.18 0.228 0.008 29.1 3.8 0.051 0.002 0.23 0.16 0.011 0.0017 1.4 0.5 0.005 0.0008 98 3.8 0.079 0.014 0.0187
0.0041 0.017 0.0012 0.108 0.006 0.0006 0.0005 41.4 6.7 1.54 0.13 0.225 0.025 2.3 0.5 0 1 24.1 15.5 0 0.4 0.07 0.005 0.0304 0.0013 0.175 0.013 387.1
50.3 0.0171 0.0009 35.1 22 0 0.7 0.0276 0.0013 11.8 12.3 0.61 0.91 -99 -99 -99 -99 -99 -99
ADK  8/13/95 14 17 FINE 9829 464 161 5 0 17.3 38.9 3.9 5.5 1.8 744.8 46.8 5.45 0.06 0.0631 0.0148 0.0051 0.0018 0.0088 0.0018 10.5 10.7 0.26 0.01
0.01473 0.0018 1.6 0.22 1.2 0.4 49.5 5.6 0.92 0.143 0.364 0.009 8.1 2.7 0.112 0.0021 0.21 0.13 0.021 0.0015 1.1 0.4 0.0021 0.0002 69 2.9 0.065 0.011
0.0109 0.0032 0.003 0.0008 0.084 0.006 0.0007 0.0004 31.5 5.2 1.88 0.14 0.147 0.02 1.5 0.4 1.1 0.8 20.6 11.7 0.1 0.3 0.44 0.010 0.0169 0.001 0.618
0.037 308 40.2 0.016 0.0009 31.8 17.2 0.2 0.5 0.0182 0.0009 1.2 9.3 7.05 0.92 -99 -99 -99 -99 -99 -99
ADK  8/14/95 14 17 FINE 17978 650 203 6 7.6 18.2 24.1 3.5 3.1 2.1 2343.8 146.2 5.11 0.11 0.0094 0.0063 0.0018 0.0007 0.0089 0.0018 51.7 10.8 0.32
0.016 0 0.0017 1.1 0.45 0.8 0.4 22 4.6 0.68 0.145 0.03 0.004 2.7 2.6 0.037 0.0014 0.14 0.13 0.0053 0.001 2.1 0.4 0.0007 0.0002 17 2.3 0.082 0.011
0.0104 0.0033 0.0056 0.0009 0.017 0.005 0.0001 0.0003 22.2 4.2 0.6 0.08 0.119 0.02 2.7 0.4 0 0.8 6.9 11.1 0 0.3 0.15 0.004 0.0047 0.001 0.467 0.028
65.5 10.5 0.0023 0.0007 4.9 15.9 0 0.5 0.0045 0.0008 0 8.7 1.88 0.75 -99 -99 -99 -99 -99 -99
ADK  8/17/95 10 7 FINE 29106 1005 287 8 35.8 27.3 62.5 6.2 33.9 4.7 4162.7 259.5 4.17 0.07 0.0087 0.0086 0.0087 0.003 0.0051 0.0025 100.7 14.8 0.4
0.016 0 0.0024 1.1 0.3 4.4 0.7 602.5 38.2 0.6 0.199 0.162 0.007 4.4 3.8 0.067 0.0022 0.19 0.18 0.0151 0.0024 5 0.7 0.0026 0.0005 77 3.9 0.181 0.015
0.0283 0.0045 0.0039 0.0013 0.102 0.007 0.002 0.0004 47.8 7.8 2.3 0.2 0.12 0.028 2.6 0.5 0.3 1.1 15.9 15.2 0.6 0.5 0.27 0.010 0.0199 0.0014 0.851
0.051 236.4 32.5 0.0132 0.001 30.2 22.7 6.4 1.3 0.0199 0.0017 6.7 12.7 7.26 1.17 -99 -99 -99 -99 -99 -99
ADK  8/17/95 14 17 FINE 21179 733 184 5 17.4 18.7 49.3 4.6 8.4 2.3 2441.7 152.4 4.04 0.07 0.0118 0.0063 0.0049 0.0007 0.0115 0.0018 46.8 10.9 0.6
0.023 0 0.0018 1 0.22 3.5 0.6 62.8 6.3 0.72 0.146 0.149 0.006 1.8 2.2 0.061 0.0017 0.28 0.13 0.008 0.0012 1.7 0.4 0.0028 0.0005 73 3 0.118 0.011
0.0185 0.0033 0.0036 0.001 0.116 0.006 0.0007 0.0003 33 5.5 2.3 0.08 0.22 0.02 3.3 0.4 4.2 1 0.9 11.1 0 0.3 0.22 0.010 0.021 0.001 0.465 0.028 211.2
28.4 0.0125 0.001 26.4 17.2 0.3 0.6 0.019 0.0012 5.7 9.8 3.25 0.79 -99 -99 -99 -99 -99 -99
ADK  8/18/95 10 7 FINE 15967 692 302 8 19.9 25.1 76.6 6.2 8.9 2.9 1961.1 122.6 6.27 0.11 0.0015 0.0087 0.0122 0.0033 0.0159 0.0025 247.3 15.2 0.39
0.014 0 0.0024 2.3 0.86 2.3 0.6 133.4 10.5 0.58 0.2 0.305 0.009 89.1 7 0.118 0.003 0.3 0.18 0.0174 0.0019 2.2 0.6 0.0053 0.0004 144 4.8 0.173 0.054
0.0506 0.0045 0.0152 0.0012 0.153 0.007 0.001 0.0005 66.3 9.9 3.73 0.21 0.315 0.098 2.6 0.5 0.3 1.1 0 14.3 0.5 0.5 0.15 0.010 0.0444 0.0015 0.284
0.019 502.8 65.5 0.025 0.0011 13.8 22.9 0 0.8 0.04 0.0014 14 10.9 5.07 1.1 0.028 0.002 -99 -99 -99 -99
ADK  8/18/95 14 17 FINE 22553 768 171 5 4.8 18.6 47.5 4.5 2.7 2.2 2682.2 167.3 2.1 0.05 0.0124 0.0063 0.0026 0.0007 0.0093 0.0018 102.9 10.9 1.02
0.031 0 0.0017 1.5 0.22 2.5 0.5 69 6.4 0.52 0.145 0.15 0.005 0 2.6 0.042 0.0015 0.1 0.13 0.0203 0.0013 1 0.4 0.0028 0.0005 68 2.8 0.088 0.011 0.0089
0.0033 0.0051 0.0009 0.071 0.004 0.0007 0.0003 30.7 5.2 0.18 0.08 0.101 0.02 1.4 0.4 3.1 0.9 0 8.8 0.7 0.4 0.42 0.010 0.0178 0.001 0.59 0.035 225.1
30.2 0.0106 0.0007 25.1 17 0.9 0.7 0.0184 0.0011 6.4 7.9 4.29 0.82 0.029 0.001 -99 -99 -99 -99
ADK  8/19/95 24 7 FINE 21852 689 225 5 0 10.1 49.7 3.6 13.4 2.1 3314.4 206.6 5.84 0.06 0.0282 0.0107 0.0037 0.0004 0.0178 0.0048 81.4 6.3 0.57 0.019 0
0.0011 1.7 0.46 2.4 0.4 73.8 5.4 0.69 0.084 0.12 0.004 2.9 1.5 0.081 0.0014 0.4 0.08 0.0161 0.001 1.4 0.3 0.0017 0.0002 51 1.9 0.038 0.006 0.0277
0.0019 0.0032 0.0006 0.066 0.004 0.0005 0.0002 31.1 4.8 0.64 0.06 0.033 0.012 2.7 0.3 1.3 0.5 0 5.6 0.8 0.2 0.47 0.010 0.0144 0.0006 0.646 0.038 183.8
24.6 0.0075 0.0005 5.9 9.5 0 0.3 0.0139 0.0007 6.2 6 5.44 0.6 0.008 0.001 -99 -99 -99 -99
ADK  8/21/95 14 18 FINE 7981 432 495 9 34.5 20.6 61.7 5 2.6 1.8 403.8 25.7 3.61 0.09 0.0186 0.0062 0.0014 0.0006 0.0072 0.0031 244.6 11.4 0.16 0.021
0.00127 0.0018 0.7 0.22 0.9 0.5 67.3 6.2 1.26 0.144 0 0.004 536.6 33.8 0.002 0.0012 0 0.13 0 0.0009 1.4 0.4 0.0002 0.0002 2 2.2 0.127 0.011 0.005
0.0032 0.003 0.0008 0.133 0.008 0.0011 0.0003 73.2 10.3 1.83 0.22 0.066 0.02 1.9 0.4 1.8 0.9 0 9.5 0.1 0.4 0.02 0.001 0.0003 0.001 0.024 0.004 374.3
48.6 0.0276 0.0013 0 15.5 0 0.5 0 0.0008 11.7 9.4 0.18 0.72 0.015 0.001 -99 -99 -99 -99
ADK  8/22/95 24 8 FINE 6281 284 328 6 9.2 10.8 52.6 3.8 3 1.2 413.4 26 3.26 0.04 0.0171 0.0037 0.0032 0.0004 0.0105 0.0011 63.6 6.3 0.29 0.011 0 0.001
1.7 0.13 2.2 0.3 46.2 4.1 1.29 0.085 0.094 0.004 179.7 11.5 0.072 0.0015 0.19 0.08 0.0079 0.0008 2.1 0.3 0.0016 0.0004 47 1.8 0.044 0.006 0.008 0.0019
0.0054 0.0006 0.051 0.005 0.0003 0.0002 39.6 5.6 0.35 0.02 0.065 0.012 1.5 0.3 1.1 0.6 0 5.8 0.6 0.2 0.39 0.010 0.0104 0.0006 0.136 0.009 119.9 16.1
0.0066 0.0006 17 10.1 0.3 0.4 0.0104 0.0009 0 6 4.95 0.58 0.023 0.001 -99 -99 -99 -99
ADK  8/31/95 9 8 FINE 16863 756 266 8 0 25.6 93.4 7.7 32.6 4.7 1966.2 123 6.13 0.09 0.0204 0.0098 0.0131 0.0036 0.023 0.0028 333.6 16.8 0.36 0.017
0.00056 0.0027 5.4 0.34 2.3 0.7 167.1 12.7 1.15 0.225 0.422 0.013 36.9 4.9 0.315 0.005 0.44 0.2 0.0197 0.0025 0.3 0.6 0.0072 0.001 191 6.1 0.149 0.017
0.0387 0.0051 0.0135 0.0026 0.24 0.011 0.0048 0.0004 113.7 16.1 5.12 0.3 0.302 0.032 1.4 0.6 1.1 1.3 0 15.1 2 0.6 0.14 0.010 0.0538 0.0017 0.364 0.024
550.4 72 0.0397 0.0015 19.2 24.3 1.2 1 0.0512 0.0026 0 16.8 8.43 1.34 -99 -99 -99 -99 -99 -99
ADK  8/31/95 23 18 FINE 18070 587 254 5 0 9.9 104.6 6.9 40.1 4 1960.2 122.3 7.85 0.16 0.018 0.0039 0.02 0.0022 0.0156 0.0011 552.6 10.8 0.48 0.016 0
0.0011 6.2 1.38 2.9 0.4 149.6 9.8 0.55 0.09 0.624 0.014 18 2.1 0.288 0.0039 0.6 0.08 0.0273 0.0014 0 0.3 0.0103 0.0007 262 6.4 0.137 0.007 0.0143
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763.2 98.7 0.0541 0.0016 2.4 10.2 0.6 0.4 0.0783 0.0014 20.5 6.5 4.19 0.58 0.017 0.001 -99 -99 -99 -99
ADK 9/1/95 15 17 FINE 16861 616 361 6 35.3 20.3 178.3 11.7 32.9 4 1496.3 93.6 6.35 0.07 0.0082 0.0061 0.026 0.005 0.0236 0.0018 672.9 11.1 0.35 0.036
0 0.0017 5.6 1.93 2.7 0.5 251.2 16.5 1.76 0.141 0.919 0.02 130.9 8.9 0.357 0.0059 1.02 0.13 0.0395 0.0035 0 0.4 0.0142 0.0008 409 9.1 0.27 0.011
0.0116 0.0032 0.0242 0.0016 0.497 0.032 0.0034 0.001 185.7 24.8 10.69 0.37 0.371 0.02 0.7 0.4 3 1 5.7 11 1.4 0.4 0.13 0.010 0.1195 0.0013 0.331 0.024
1413.1 181.2 0.0539 0.0034 28.2 17.4 0.9 0.7 0.105 0.0036 40 9.5 9.03 1.04 0.015 0.001 -99 -99 -99 -99
ADK 9/4/95 9 8 FINE 5950 610 243 8 25.3 31.4 13.6 4.5 14.4 3.2 904.6 57.1 3.59 0.08 0.014 0.0101 0.0016 0.0011 0.0072 0.0029 2.7 17.3 0.08 0.014 0
0.0028 1 0.35 1.4 0.6 20.8 8.5 0.93 0.233 0.034 0.006 58 5.7 0.012 0.002 0 0.21 0.0001 0.0013 1 0.6 0 0.0001 6 3.6 0.133 0.018 0.0003 0.0053 0 0.0012
0.019 0.006 0 0.0005 58 9.3 0.27 0.12 0.014 0.033 2.8 0.6 0 1.2 0 16.9 0 0.5 0.05 0.001 0.0008 0.0016 0.166 0.011 0 7.9 0.0007 0.001 77.7 30.8 0 0.8
0.0009 0.0011 0.6 13.7 0 1.16 0.031 0.001 -99 -99 -99 -99
ADK 9/4/95 15 17 FINE 10210 472 195 5 7.8 18.7 18.4 3.2 11.9 2.3 836.4 52.5 1.89 0.04 0.0079 0.0062 0.0027 0.0006 0.0081 0.0018 8.8 10.7 0.11 0.013 0
0.0017 1.6 0.22 2.2 0.5 30.3 4.8 1.1 0.144 0.015 0.004 73.2 5.4 0.149 0.0024 0.41 0.13 0.0009 0.0007 0.2 0.4 0.0007 0.0002 9 2.3 0.033 0.011 0.0075
0.0032 0 0.0009 0.013 0.005 0.0058 0.0003 50.9 7.6 0.17 0.11 0.25 0.02 1.3 0.4 0 0.8 0 9.7 1.1 0.4 0.07 0.001 0.0012 0.001 0.172 0.011 0 5.5 0 0.0005
6.1 15 1.9 0.7 0.0032 0.0014 0.2 9 1.76 0.74 0.036 0.001 -99 -99 -99 -99
FLG 8/10/95 15 16 FINE 12747 513 121 5 0 17.9 80.7 6.2 17.9 2.7 1242.7 77.7 3.41 0.05 0.0352 0.0126 0.0145 0.0042 0.0195 0.0017 332 10.4 2.78 0.074
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78.5 0.0326 0.0011 31.4 19.4 0.4 0.6 0.0557 0.0015 21.8 8.8 6.7 0.88 0.020 0.002 1900 190 780 78
FLG 8/11/95 11 7 FINE 13337 598 304 7 0 22.4 89.1 7.6 13.9 2.7 1111.7 69.7 5.07 0.08 0.0306 0.014 0.0116 0.0036 0.0236 0.0022 400.5 13.5 0.45 0.016
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0.022 747.4 96.2 0.0365 0.0014 0 22.3 1.5 0.8 0.0661 0.0028 23 11.8 7.54 1.1 0.020 0.002 2330 233 600 60
FLG 8/11/95 13 18 FINE 9534 490 160 6 0 22 93 7 6.4 2.1 709.5 44.8 0 0.04 0.0139 0.009 0.0096 0.0007 0.0338 0.002 0 11.8 2.54 0.068 0.00194 0.0019
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0.024 0.001 0 18.7 0.2 0.7 0.0368 0.0032 14.2 11.5 43.37 3.15 0.006 0.002 1940 194 1030 103
FLG 8/12/95 11 7 FINE 10232 544 176 6 62.1 29.9 81.1 6.8 7.7 2.4 857.3 54.1 2.05 0.06 0.0109 0.0078 0.0132 0.0037 0.025 0.0022 294.8 13.4 0.54 0.022
0.00009 0.0022 6.7 0.27 1.3 0.5 148 11.4 1.08 0.18 0.432 0.02 0 5 0.088 0.0028 0.69 0.17 0.0195 0.0026 0.2 0.5 0.0076 0.0009 175 5.6 0.14 0.013 0.0322
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539.8 69.8 0.037 0.0015 25.4 23.8 1.3 0.8 0.0689 0.0045 16.2 12.7 4.62 1.02 0.275 0.010 1670 167 400 40
FLG 8/12/95 12 19 FINE 5602 463 72 5 0 23.7 64.4 6.3 7.5 2.3 539.4 34.2 1.01 0.05 0.0629 0.0115 0.0076 0.0008 0.0361 0.0126 161.5 12.9 2.78 0.075
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253.4 33.7 0.0163 0.001 0 20.1 0 0.7 0.0209 0.0038 9.9 11.7 8.49 1.12 0.011 0.002 1750 175 550 55
FLG 8/13/95 11 7 FINE 24516 858 185 6 0 22.1 53 5.7 19.4 3.4 3110.3 194 12 0.13 0.0677 0.023 0.0157 0.0055 0.0396 0.0022 229.7 13.2 0.59 0.027
0.01014 0.0021 8.2 0.26 2.7 0.6 80.3 9 1.01 0.176 0.344 0.015 13.3 4 0.231 0.0055 1.2 0.17 0.0156 0.0037 4.6 0.6 0.005 0.0011 115 4.8 0.152 0.013 0
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FLG 8/13/95 12 19 FINE 24005 828 120 5 0 22.7 52.4 5 14.8 3 2888.4 180.1 11.8 0.12 0.0487 0.0171 0.0052 0.0007 0.0154 0.002 149.8 12.2 3.19 0.087
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FLG 8/14/95 11 7 FINE 27208 929 204 6 13.1 26.9 36.5 5 20.3 3.5 3175.8 198.2 10.43 0.12 0.0286 0.0133 0.0081 0.0008 0.04 0.0084 62 13.2 0.61 0.023
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103.5 15.9 0.007 0.0008 0 21.6 1.7 0.8 0.0125 0.0023 3.6 13 8.95 1.15 0.038 0.002 2320 232 480 48
FLG 8/14/95 13 18 FINE 15166 607 137 5 0 23 23.6 4.8 8.5 2.4 2119.6 132.3 3.31 0.06 0.0085 0.007 0.0052 0.0007 0.0184 0.002 28.4 11.9 2.12 0.059 0
0.0019 5.6 0.24 2 0.5 41.3 6.6 0.72 0.16 0.095 0.01 1.8 2.8 0.047 0.0023 0.17 0.15 0.0028 0.0005 1.8 0.4 0.001 0.0004 46 3.4 0.059 0.012 0.0223 0.0036
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0.003 0.0009 0 21.1 0 0.6 0.0052 0.0022 3 10.1 4.08 0.89 0.012 0.002 1570 157 460 46
FLG 8/15/95 11 7 FINE 38216 1231 167 6 4.2 25 60.1 5.7 25.3 3.8 4166.5 259.8 8.21 0.05 0.0428 0.0155 0 0.0008 0.0245 0.0073 89.3 13.3 1.01 0.029
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0.004 0 0.0009 0.1 0.006 0.0142 0.0004 48.2 7.8 1.32 0.16 0 0.025 3.2 0.5 2.8 1.1 1.3 16.3 0 0.4 0.17 0.010 0.0032 0.0012 0.523 0.031 181.8 25.3
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FLG 8/15/95 13 18 FINE 28501 943 183 6 0 22 52.1 5 7.6 2.8 3498.1 218.1 3.57 0.06 0.0041 0.0069 0.0048 0.0007 0.0198 0.0075 105.5 11.8 2.59 0.069
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0.0178 0.0036 0.0071 0.0012 0.081 0.005 0.004 0.0003 39 6.4 2.61 0.19 0.328 0.022 1.2 0.4 3.7 1.1 22.2 14.8 0.3 0.4 0.84 0.020 0.0191 0.0011 1.173
0.068 160 22.5 0.0107 0.0009 15.8 20.5 0.2 0.6 0.0173 0.0016 5.8 10 10.48 1.14 0.008 0.002 2640 264 360 36
FLG 8/16/95 11 7 FINE 19289 735 350 8 0 22.4 36.2 4.7 16 3.1 2043.6 127.7 8.19 0.1 0.0181 0.0079 0.0054 0.0008 0.0155 0.0023 37.6 13.5 0.53 0.02
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FLG 8/17/95 11 7 FINE 39586 1266 158 7 0 24 62 6.5 27.8 4.2 5090.5 317.4 3.2 0.06 0.0406 0.0076 0.0054 0.0008 0.0236 0.0088 127.9 13.1 0.74 0.026 0
0.0021 3.9 0.26 3.4 0.6 170.5 12.6 0.99 0.176 0.19 0.008 0 3.7 0.086 0.0022 0.32 0.16 0.0214 0.0018 1.6 0.5 0.0035 0.0008 94 3.9 0.035 0.013 0.0238
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FLG 8/18/95 11 7 FINE 29762 996 95 6 0 23 44.3 5.1 199.8 17.5 4137.4 258.3 5.44 0.07 0.0219 0.0095 0.005 0.0008 0.0146 0.0022 79.5 13.1 0.82 0.023
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FLG 8/18/95 12 18 FINE 17275 658 56 5 7.8 23.5 24.9 5.2 87.4 8.3 2152.3 134.6 1.04 0.05 0.0099 0.0083 0.0043 0.0007 0.0164 0.0064 34.1 12 7.62 0.2 0
0.0019 5.1 0.24 0 0.5 67.1 7.1 0.33 0.162 0.111 0.006 0 3.1 0.027 0.0016 0.06 0.15 0.0059 0.001 4.4 0.7 0.0012 0.0003 50 3.1 0.042 0.012 0.0106 0.0036
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FLG 8/20/95 11 7 FINE 31106 1037 117 6 43.6 28.4 37.6 6 164.8 14.6 3630.8 226.7 8.74 0.09 0.0039 0.0079 0.0027 0.0008 0.0104 0.0023 85.7 13.5 0.88
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0.0136 0.0041 0.0116 0.0016 0.082 0.006 0.0014 0.0004 169.9 23.3 1.81 0.22 0.206 0.025 2.4 0.5 3.4 1.2 25.1 17.4 2.8 0.6 0.54 0.010 0.0142 0.0012
0.587 0.036 240.8 33.1 0.0112 0.0008 6.1 23.1 1.1 0.8 0.0176 0.0017 1.5 11.6 4.9 1.01 0.007 0.002 1950 195 410 41
FLG 8/20/95 13 18 FINE 19149 701 181 6 56.4 26.3 45.7 5.3 90.5 8.6 2185.5 136.6 6.16 0.07 0.0184 0.0088 0.0111 0.0007 0.01 0.002 108.1 12 2.5 0.067 0
0.0019 3.7 0.24 1.5 0.5 71 7.6 0.46 0.161 0.243 0.009 0 3.1 0.098 0.0022 0.34 0.15 0.0133 0.0019 0.3 0.5 0.0032 0.0006 105 4 0.142 0.012 0.0141 0.0036
0.0152 0.0012 0.11 0.006 0.0065 0.0003 148.7 20.1 1.84 0.19 0.488 0.023 0.1 0.4 1.9 1.1 9.1 13.4 1.4 0.5 0.67 0.020 0.0245 0.0011 0.483 0.031 222.5
30.3 0.0175 0.0009 60.7 22.9 0.3 0.7 0.0229 0.0013 3.6 10.5 5.5 0.94 0.035 0.002 3010 301 2780 278
FLG 8/23/95 24 7 FINE 5284 262 162 4 16.3 12.9 29.4 2.7 39.7 3.8 1044.7 65.3 1.64 0.03 0.0144 0.0057 0.0012 0.0004 0.0019 0.001 13 6.2 0.28 0.01
0.0014 0.001 2.3 0.12 1.1 0.3 40 3.9 0.29 0.083 0.003 0.003 0 1.7 0.004 0.0007 0 0.07 0.0005 0.0006 0.8 0.3 0 0.0001 2 1.4 0.025 0.006 0.003 0.0019 0
0.0005 0.019 0.003 0.0054 0.0002 72.4 9.7 0.22 0.08 0.238 0.012 0.8 0.2 1.5 0.6 9.4 7.9 1.5 0.3 0.19 0.001 0.004 0.0006 0.043 0.004 18.9 4.7 0.0017
0.0004 9.6 10.5 0 0.3 0 0.0003 0 5 0.62 0.42 0.012 0.001 880 88 370 37
FLG 8/24/95 10 8 FINE 8472 554 164 7 8.2 28.5 18 4.7 42.2 5 1276.9 80.1 1.9 0.06 0.0722 0.0137 0.0035 0.0009 0.0151 0.0025 17.1 14.6 0.47 0.017 0
0.0024 7.2 2.3 0.7 0.5 76.6 8.4 0.31 0.197 0.073 0.006 0 4.2 0.098 0.0026 0.42 0.18 0.0025 0.0014 1.8 0.6 0.0006 0.0003 38 3.4 0.02 0.015 0.0125
0.0044 0.011 0.0018 0.039 0.006 0.005 0.0004 157.4 21.1 0.6 0.04 0.313 0.028 1.4 0.5 0 1.1 33.7 17.6 1.7 0.5 0.41 0.010 0.003 0.0013 0.259 0.017 14.2
8.1 0.0024 0.0009 46.4 25.3 0 0.7 0.0024 0.0012 0.8 12.3 6.12 1.12 0.028 0.001 700 70 510 51
FLG 8/25/95 11 7 FINE 5399 485 251 7 18.3 25.5 27 4.8 22.2 3.4 499.9 31.9 3.92 0.07 0.0293 0.0112 0.0029 0.0008 0.0177 0.0064 19 13.6 0.58 0.02 0
0.0022 2.9 0.27 1.3 0.5 72.1 7.6 0.76 0.183 0.078 0.006 54.8 5.2 0.073 0.002 0.24 0.17 0.0035 0.0018 2.4 0.5 0.0011 0.0004 46 3.2 0.05 0.014 0.0103
0.0041 0.0024 0.0017 0.026 0.006 0.0054 0.0004 168 22.3 0.56 0.04 0.15 0.026 1.8 0.4 1.7 1.1 0 14.2 0.7 0.4 0.64 0.020 0.0032 0.0012 0.142 0.011 21.7
7.5 0.0021 0.0008 0 21.4 1.3 0.8 0.0034 0.0016 0 10.8 10.86 1.25 0.060 0.002 1100 110 780 78
FLG 8/25/95 13 18 FINE 8712 481 493 10 15.1 22.8 10.2 5.1 16.5 2.8 456.6 29.1 6.32 0.08 0.0108 0.007 0.0033 0.0007 0.0256 0.007 32.1 12 2.17 0.06 0
0.0019 6.2 1.86 1.2 0.5 50 6.9 0.97 0.161 0.125 0.006 19.6 3.3 0.12 0.0025 0.25 0.15 0.0035 0.0022 3 0.5 0.0007 0.0003 57 3.3 0.094 0.012 0.012 0.0036

0.0073 0.0011 0.054 0.007 0.0012 0.0003 148.8 19.9 0.58 0.03 0.24 0.023 3.2 0.5 0.8 0.9 10 13.5 1.8 0.5 1.24 0.020 0.0045 0.0011 0.156 0.011 35.2 8.2
0.0038 0.0009 37.6 21.4 1.5 0.8 0.0052 0.001 0.9 10.4 7.95 1.03 0.002 0.002 1010 101 1010 101
FLG 8/26/95 11 7 FINE 7929 505 357 8 0 22.3 79.4 6.4 6.2 2.2 438.3 28 2.9 0.07 0.0718 0.0205 0.0083 0.003 0.0089 0.0022 291.6 13.4 0.41 0.016 0
0.0021 3.2 0.27 0 0.4 162.1 11.7 1.23 0.178 0.463 0.013 204 13.5 0.151 0.0027 2.42 0.17 0.0181 0.002 0.6 0.5 0.0059 0.0004 186 5.4 0.052 0.013 0.0288
0.004 0.0263 0.0017 0.164 0.009 0.0099 0.0004 136.5 18.4 2.56 0.27 0.478 0.025 0.8 0.4 1.5 1 11 14.3 0.8 0.4 0.46 0.010 0.0482 0.0014 0.232 0.016
562.3 72.6 0.0229 0.0012 37.4 22 0.8 0.7 0.0534 0.0018 0 13.3 4.99 1 0.031 0.001 1280 128 570 57
FLG 8/26/95 12 18 FINE 5626 441 275 7 11.2 20.7 67.4 5.8 6.7 2.1 412.1 26.3 6.38 0.09 0.0076 0.0071 0.0064 0.0007 0.0092 0.002 202.5 12.2 1.51 0.041
0 0.002 7.7 1.83 1.5 0.5 85.6 7.7 0.98 0.163 0.302 0.011 215.9 14 0.151 0.0027 0.95 0.15 0.011 0.0027 1.7 0.5 0.0044 0.0006 125 4.2 0.058 0.012 0.0581
0.0037 0.0148 0.0015 0.103 0.007 0.0098 0.0003 98.7 13.5 2.43 0.26 0.832 0.023 2 0.4 0 1 7.9 12.5 0.2 0.4 0.33 0.010 0.0321 0.0012 0.275 0.019 365.7
47.6 0.0164 0.001 45.3 20 0.4 0.7 0.0297 0.0019 12 11 9.51 1.11 0.031 0.001 590 59 300 30
FLG 8/27/95 12 7 FINE 9003 500 346 8 0 21.6 93.4 6.9 9.5 2.4 522.5 33.1 2.49 0.07 0.014 0.0073 0.007 0.0008 0.0241 0.0021 346.2 12.7 1.03 0.031 0
0.002 15.8 0.25 0.7 0.4 138.8 10.3 0.73 0.168 0.548 0.018 53.9 4.7 0.118 0.0028 0.57 0.15 0.0196 0.0022 0.1 0.5 0.0078 0.0008 205 5.8 0.349 0.013
0.0878 0.0038 0.0123 0.0018 0.188 0.009 0.0127 0.0003 124.4 16.8 3.65 0.33 0.563 0.024 0 0.4 0 0.9 0 10.5 1 0.4 0.52 0.020 0.0574 0.0014 0.249 0.019
643.2 82.8 0.0326 0.0014 26.3 19.7 1 0.8 0.0633 0.0034 20.6 10.1 16.51 1.5 0.009 0.001 1840 184 440 44
FLG 8/28/95 11 7 FINE 14962 642 572 11 0 21.5 171.3 11.5 15.3 3 686.1 43.4 0 0.05 0.0394 0.008 0.0182 0.0008 0.0439 0.0023 0 13.6 0.85 0.036 0.00057
0.0024 8.8 0.28 0.3 0.5 251.4 17 3.26 0.184 0.095 0.027 345.2 22.2 2.869 0.0377 0.42 0.18 0.0047 0.0006 0 0.5 0.0024 0.0001 67 6.7 0.22 0.073 0.069
0.0041 0.0077 0.0032 0.385 0.016 0.023 0.0004 195.5 26.1 0 0.04 2.639 0.026 0 0.4 0.7 1.1 0 13.8 1.7 0.5 1.01 0.020 0.0086 0.0013 0.445 0.032 1163.9
149.3 0.0708 0.0027 48.3 23.4 2.2 0.9 0.0128 0.0007 31.5 12.3 44.72 3.3 0.034 0.001 1040 104 500 50
FLG 8/28/95 13 18 FINE 15107 600 714 13 48.2 22 78.4 5.9 18 2.8 629 39.7 4.1 0.06 0.0336 0.0068 0.0173 0.0041 0.0193 0.002 259.9 11.8 1.76 0.049
0.00107 0.0019 7.6 0.24 0.7 0.4 132.2 9.8 1.27 0.157 0.517 0.014 56.3 4.8 0.132 0.0024 0.53 0.14 0.0237 0.0026 2.2 0.5 0.007 0.0012 205 5.9 0.188
0.012 0.019 0.0035 0.0193 0.0017 0.185 0.008 0.0092 0.0003 95.1 13.2 2.43 0.23 1.194 0.401 1.1 0.4 1.1 0.9 16.7 13 1 0.4 1.51 0.030 0.0497 0.0013
0.212 0.015 512.3 66.4 0.0258 0.0013 30.9 18.6 2.2 0.8 0.0499 0.0019 5.2 10.8 9.25 1.08 0.041 0.002 1190 119 1260 126
FLG 8/29/95 11 7 FINE 22226 803 132 6 0 21.4 34.2 4.1 38.1 4.6 2977 185.7 0.86 0.05 0.0189 0.0109 0.0032 0.0008 0.0114 0.0022 26.9 13.3 1.18 0.034 0
0.0022 6.2 0.27 0.6 0.5 57.5 6.6 0.57 0.179 0.056 0.006 0 3.2 0.289 0.0045 0.18 0.16 0.0058 0.0018 2.5 0.5 0.0007 0.0004 43 3.2 0.088 0.013 0.0205
0.004 0.0288 0.0015 0.046 0.006 0.0027 0.0004 53.2 8.3 0.83 0.15 0.126 0.025 0.8 0.4 3.3 1.1 3.5 14 1.2 0.5 0.51 0.010 0.006 0.0012 0.783 0.046 58.1
10.8 0.0035 0.0008 21 20.2 0.7 0.8 0.0046 0.0015 0 13.8 12.47 1.31 0.004 0.001 1710 171 340 34
FLG 8/29/95 13 18 FINE 14869 596 94 5 29.4 22.8 29.7 3.7 15.2 2.9 2092.4 130.6 1.09 0.05 0.0127 0.0069 0.0047 0.0007 0.0177 0.002 6.2 11.7 1.92 0.053
0.0124 0.002 9.6 0.24 2.2 0.5 30.3 5.7 1.22 0.158 0.029 0.009 0 2.7 0.084 0.0022 0.28 0.15 0.0037 0.001 0.8 0.4 0.0013 0.0005 22 2.8 0.03 0.012 0.0203
0.0036 0.0038 0.0015 0.023 0.006 0.0281 0.0003 41.8 6.7 0.61 0.09 1.163 0.022 1.1 0.4 1.2 1 0 12.2 1.1 0.4 0.58 0.020 0.0019 0.0011 0.723 0.045 0 6.6
0.002 0.001 24.2 19.5 0 0.6 0.0052 0.0006 0 10.4 9.44 1.09 0.014 0.001 1480 148 410 41
FLG 8/30/95 11 7 FINE 10233 547 133 6 11.7 22.7 22.5 4.1 23.1 3.4 1427.6 89.4 1.67 0.06 0.075 0.0131 0.0051 0.0008 0.0191 0.0072 1.4 13.4 0.64 0.018
0.00155 0.0022 5.1 0.27 1.6 0.5 90.2 8.6 0.35 0.181 0.052 0.006 0 3 0.322 0.0047 0.14 0.16 0.0093 0.0013 2.5 0.5 0.0004 0.0003 42 3.2 0.044 0.014
0.0046 0.0041 0.0006 0.0017 0.019 0.005 0.0032 0.0004 46.4 7.4 0.16 0.12 0.318 0.025 1.9 0.5 0.4 1 18.5 15.3 0.8 0.4 0.96 0.020 0.0003 0.0012 0.342
0.022 0 6.5 0.0004 0.0007 62.4 23.6 1.2 0.8 0.0016 0.0016 2.3 12.4 10.94 1.25 -99 -99 2340 234 500 50
FLG 8/30/95 13 18 FINE 7474 456 61 5 33.2 21.6 23.1 3.8 17.4 2.7 942.3 59.1 1.3 0.05 0.0355 0.0091 0.0035 0.0007 0.0217 0.0069 3.3 11.8 1.19 0.032
0.00176 0.0019 5.5 1.52 1.4 0.4 93.5 7.7 0.79 0.159 0.08 0.007 0.4 2.6 0.126 0.0027 0.12 0.14 0.0115 0.0013 5.6 0.6 0 0.0001 37 2.7 0.01 0.012 0.023
0.0036 0.0004 0.0012 0.021 0.005 0.0038 0.0003 45.3 7 0.35 0.03 0.343 0.022 0.7 0.4 0.4 0.9 0 10.9 1 0.4 1.58 0.030 0.0007 0.0011 0.305 0.02 0 5.6
0.0005 0.0007 1.2 16.8 0.3 0.6 0.0029 0.002 0 12 6.15 0.95 -99 -99 1760 176 640 64
FLG 8/31/95 11 7 FINE 17889 708 85 6 6.1 23.6 45.7 4.7 29.3 4.2 2420.3 151.1 2.99 0.06 0.1981 0.0126 0.0069 0.0008 0.0433 0.0095 43.1 13.7 0.64 0.019
0 0.0022 9.7 0.28 2.7 0.6 85.4 8.8 0.55 0.184 0.142 0.007 0 3.3 1.565 0.0199 0.51 0.17 0.0085 0.0017 2.1 0.6 0.0022 0.0007 89 4.3 0.044 0.014 0.0208
0.0041 0.0064 0.0012 0.058 0.005 0.0074 0.0004 59.5 9.1 0.76 0.13 0.47 0.026 2.1 0.5 2.1 1.2 24.5 15.5 1.9 0.5 1.52 0.030 0.0092 0.0012 0.533 0.032
47.8 10.6 0.0058 0.0008 24.8 21.5 0 0.7 0.0095 0.0015 0 13.2 23.92 1.97 -99 -99 2670 267 700 70
FLG 8/31/95 13 18 FINE 14357 584 80 5 0 18.7 75.3 5.8 31.5 3.9 1651.4 103.2 5.55 0.07 0.3675 0.0143 0.0066 0.0007 0.0167 0.002 199.2 11.8 4.46 0.118
0.00439 0.0019 9.7 0.24 2.1 0.5 102.2 8.2 0.47 0.158 0.395 0.012 0 2.6 0.545 0.0075 0.67 0.15 0.022 0.0026 2.1 0.5 0.0045 0.0005 191 5.5 0.125 0.041
0.0231 0.0035 0.0057 0.0012 0.154 0.005 0.0155 0.0003 81.6 11.6 6.69 0.23 0.625 0.022 2.5 0.5 2.3 1.1 1.1 11.8 2.1 0.5 0.98 0.020 0.0381 0.0012 0.353
0.023 415.7 54.4 0.024 0.001 18.4 18.7 2.1 0.8 0.033 0.0024 14.5 11.1 7.61 1.01 -99 -99 2030 203 790 79
FLG 9/1/95 11 7 FINE 13974 620 127 6 44.6 25.4 77.2 6.5 23.2 3.4 1513.4 94.8 3.43 0.06 0.1398 0.0167 0.0067 0.0008 0.0334 0.0023 162.9 13.6 3.13
0.083 0 0.0022 7.3 0.27 2.1 0.6 143.2 10.6 0.92 0.183 0.297 0.012 1.9 3 0.97 0.0125 0.57 0.17 0.0269 0.0033 0.6 0.5 0.0042 0.0011 135 4.9 0.09 0.027
0.0369 0.0041 0.0084 0.0016 0.126 0.008 0.0104 0.0004 84.2 12 0 0.16 0.802 0.026 1 0.4 6.7 1.3 0 12.6 0.6 0.4 0.9 0.020 0.0303 0.0013 0.367 0.025
345.4 45.5 0.0181 0.0012 6.1 20 0.3 0.7 0.0354 0.0037 10.2 10 23.88 1.97 0.028 0.001 2130 213 890 89
FLG 9/1/95 13 18 FINE 13394 560 237 6 48.1 22.5 84.8 6.4 18.6 3.1 1257.4 78.8 7.2 0.07 0.0368 0.0149 0.0097 0.0007 0.0385 0.0121 220.2 11.6 1.55
0.042 0 0.0019 5.5 0.23 6 0.8 103.9 8 1.45 0.156 0.458 0.014 8.6 2.9 0.256 0.0041 0.64 0.14 0.015 0.0021 2.2 0.5 0.0064 0.0016 189 5.7 0.047 0.012

0.0341 0.0035 0.0124 0.0025 0.205 0.007 0.0074 0.0003 83.8 11.8 2.21 0.15 0.558 0.022 2.6 0.5 3.5 1.1 6.7 12.9 0.8 0.4 5.91 0.100 0.0402 0.0012 0.353
0.027 393.3 51.3 0.0256 0.0011 0 16 0.9 0.8 0.0417 0.0035 11.2 10.6 26.91 2.08 0.059 0.001 2070 207 960 96
FLG 9/2/95 11 7 FINE 7036 503 289 7 11.2 23.1 28.2 4.3 11.4 2.4 809.3 50.9 1.13 0.05 0.0073 0.0079 0.01 0.0008 0.0197 0.0023 10.2 13.6 2.02 0.055 0
0.0022 3.6 0.27 1.2 0.5 53.8 6.7 1.05 0.183 0.02 0.01 84.5 6.5 1.062 0.0136 0 0.17 0.0001 0.0006 0.8 0.4 0.0006 0.0001 16 3.5 0.079 0.014 0.0441
0.0041 0 0.0016 0.016 0.008 0.0218 0.0004 78.2 11.1 0.36 0.12 0.947 0.026 1 0.4 1.8 1 7.8 14.4 1 0.4 0.35 0.010 0.0011 0.0012 0.245 0.018 18.7 6.8 0
0.0007 17.5 20.6 0.4 0.7 0.001 0.0007 0 11.5 14.16 1.41 0.044 0.001 680 68 240 24
FLG 9/3/95 11 7 FINE 10205 552 235 7 0 22.6 19 4.5 4.9 2.3 1047 65.7 3.49 0.06 0.0273 0.008 0.0037 0.0008 0.0071 0.0023 0.8 13.6 0.17 0.012 0 0.0022
1.7 0.28 1.3 0.5 23.9 5.7 1.33 0.184 0.028 0.007 37.2 4.6 0.02 0.0017 0 0.17 0.0015 0.0013 0.8 0.5 0.0003 0.0002 11 2.9 0.036 0.014 0.031 0.0041
0.0003 0.0013 0.021 0.008 0.0048 0.0004 55.2 8.4 0.39 0.12 0.238 0.026 1.8 0.4 0.8 1 0 14.2 0.2 0.4 0.27 0.010 0 0.0012 0.214 0.016 3.1 6.5 0.0011
0.001 0 18.8 1.1 0.8 0.0015 0.0015 0.9 12 1.61 0.94 0.015 0.001 990 99 180 18
FLG 9/5/95 11 7 FINE 11237 577 169 6 12 23.5 19.1 4.1 16.2 2.8 951.8 59.9 15.44 0.13 0.0814 0.0144 0.0049 0.0008 0.1823 0.0078 0 13.9 0.69 0.021 0
0.0023 6.6 1.82 1.1 0.5 121.5 9.6 0.61 0.187 0.081 0.006 2 3.7 0.293 0.0047 0.41 0.17 0.001 0.0011 1 0.5 0.001 0.0004 63 3.5 0.051 0.014 0.0064 0.0042
0 0.0012 0.047 0.006 0.0036 0.0004 37 6.4 1.79 0.14 0.209 0.026 9.1 0.8 0 1 0 13.8 0.5 0.4 0.94 0.020 0.0003 0.0012 0.224 0.015 41.1 8.7 0.0031 0.0008
1.1 20 0.8 0.8 0.0019 0.0011 0 13.7 9.62 1.21 0.089 0.001 1840 184 1020 102
IND 8/9/95 14 19 FINE 20401 710 103 5 0 18.7 110.2 7.8 47.4 5 1776.2 110.9 2.19 0.05 0.0208 0.009 0.0236 0.0072 0.0922 0.0136 242.1 10.9 2 0.066
0.22918 0.0053 16.1 0.22 5 0.7 892.9 55.8 0.69 0.144 0.583 0.018 3 2.9 0.137 0.0037 1.34 0.15 0.0618 0.0076 1.9 0.4 0.0126 0.001 310 8.5 0.103 0.029
0.1288 0.0032 0.0451 0.0022 0.189 0.007 0.0068 0.0022 80.2 11.3 2.67 0.13 1.095 0.484 0.8 0.4 2.4 1 0 10.3 0.5 0.4 5.31 0.100 0.0742 0.0014 0.823 0.05
558.2 72.5 0.0297 0.0015 46.7 18.3 2.5 0.8 0.0707 0.0035 15.8 9.2 21.69 1.74 0.255 0.005 -99 -99 -99 -99
IND 8/10/95 10 8 FINE 23697 877 243 8 0 22.8 157.2 10.8 60.1 6.4 1796.6 112.5 3.29 0.07 0.0271 0.0088 0.0166 0.0033 0.058 0.0162 440.2 11.9 0.42
0.018 0.00532 0.0017 14.4 3.7 1.8 0.6 1252.4 78.3 0.95 0.142 0.655 0.017 28.9 4.4 0.164 0.0028 1.6 0.14 0.0465 0.0044 0.6 0.6 0.0096 0.0009 253 6.7
0.132 0.039 0.0492 0.0032 0.033 0.0018 0.288 0.012 0.0068 0.0003 129.7 18 1.06 0.17 0.494 0.02 2.3 0.6 2.5 1.3 0 13.9 2.2 0.6 0.69 0.020 0.0688 0.0013
0.746 0.045 998.2 128.9 0.0428 0.0018 52.5 25.1 1.4 1 0.0783 0.0038 31.4 12.9 22.04 1.75 0.035 0.001 3860 386 1900 190
IND 8/10/95 14 18 FINE 24156 812 166 6 0 17.5 136.5 9.2 61.2 6.1 1694.9 106 3.22 0.06 0.0147 0.0085 0.0168 0.0026 0.0235 0.0081 475.9 11.2 2.13 0.07
0 0.0018 14.4 2.88 2.2 0.5 1443.2 89.9 0.75 0.147 0.739 0.018 53.4 4.5 0.149 0.0028 0.85 0.13 0.036 0.0027 0 0.4 0.0116 0.001 332 8.5 0.275 0.051
0.0399 0.0128 0.0223 0.0019 0.371 0.013 0.0051 0.0015 108.4 15 2.23 0.2 0.627 0.311 1.1 0.4 1.7 0.9 0 9.9 0.4 0.4 0.83 0.020 0.0902 0.0016 0.491 0.033
977 126.2 0.0777 0.0027 0 16.3 4.3 1 0.0868 0.0022 26.8 10.4 10.87 1.12 0.035 0.002 2340 234 4520 452
IND 8/11/95 12 7 FINE 18817 711 300 9 0 21.6 170.5 11.5 67.3 6.6 997 62.7 0 0.05 0.0286 0.0075 0.0182 0.0044 0.0326 0.0022 0 12.8 0.47 0.027 0.00689
0.0021 13.5 2.49 4.5 0.7 1827.9 113.8 0.84 0.173 0.595 0.015 232.1 15.2 0.126 0.0027 0.98 0.16 0.061 0.0032 0.7 0.5 0.0082 0.0007 259 7.2 0.102 0.013
0.0238 0.0039 0.019 0.0014 0.295 0.012 0.0058 0.0003 123.4 17 0 0.04 0.532 0.024 0.5 0.4 7.1 1.3 0 13 1.9 0.5 1.15 0.030 0.0656 0.0015 0.356 0.024
871.2 112.5 0.046 0.0019 14.3 20.5 3.4 1 0.0665 0.0035 21.4 11.3 30.38 2.34 -99 -99 2560 256 2020 202
IND 8/12/95 12 7 FINE 15185 616 260 9 21.8 23.8 196 12.9 24.5 3.5 765.5 48.5 1.78 0.06 0.0417 0.0072 0.0121 0.0007 0.0615 0.0132 263.3 12.6 0.86
0.031 0 0.002 13.5 0.25 6.5 0.8 614.4 38.7 1.56 0.548 0.488 0.014 352.6 22.6 0.1 0.003 0.64 0.15 0.1286 0.004 1.4 0.5 0.007 0.0011 205 5.8 0.122 0.012
0.0291 0.0037 0.0159 0.002 0.217 0.01 0.0069 0.0003 80.6 11.5 3.99 0.18 0.776 0.023 1.1 0.4 18 1.8 0 12.8 2 0.5 4.89 0.090 0.0534 0.0013 0.421 0.027
571 74.1 0.0365 0.0015 26.8 20.4 2 0.8 0.0549 0.0028 16.1 9.9 40.35 2.97 -99 -99 2730 273 1240 124
IND 8/12/95 13 19 FINE 13482 550 137 6 25.1 20.4 68.7 5.7 8.6 2.2 597.7 37.8 1.21 0.05 0.1839 0.0127 0.0188 0.0007 0.0295 0.0019 98.3 11.1 4.6 0.151
0 0.0018 12.3 4.12 2.6 0.6 159.4 11.1 1.23 0.149 0.419 0.015 104.5 7.5 0.06 0.0036 0.28 0.14 0.0213 0.0026 2.2 0.5 0.0049 0.0001 100 5.1 0.06 0.016
0.0614 0.0034 0.0153 0.0025 0.226 0.008 0.0114 0.0003 37.3 6.1 0.93 0.13 0.819 0.021 0.1 0.4 7.8 1.2 8.6 11.4 1.1 0.4 32.5 0.550 0.0223 0.0011 0.201
0.023 254.7 33.8 0.0123 0.0008 3.8 16.4 0 0.6 0.0309 0.0057 2.1 9.9 10.58 1.11 -99 -99 6240 624 800 80
IND 8/13/95 10 9 FINE 14073 654 181 8 28.5 26.8 64.7 5.9 7.4 2.7 1706.5 106.9 5.42 0.09 0.0029 0.0087 0.0052 0.0009 0.0111 0.0025 199 14.9 0.32 0.017
0 0.0024 3.4 0.3 2.5 0.6 118.8 9.8 0.57 0.2 0.301 0.01 14.5 4.1 0.089 0.0025 0.28 0.18 0.0168 0.0021 0 0.5 0.0057 0.0008 128 4.6 0.046 0.015 0.0231
0.0045 0.014 0.0015 0.148 0.009 0.0039 0.0004 67.3 10.1 2.14 0.24 0.452 0.028 1.8 0.5 1.6 1.2 0 14 0.5 0.5 0.45 0.010 0.0368 0.0015 0.427 0.03 361.4
47.7 0.0284 0.0014 0 21.6 0 0.8 0.0349 0.0023 11.5 12.5 4.75 1.09 -99 -99 2200 220 80 8
IND 8/13/95 14 19 FINE 19482 690 122 6 0.3 20 85.7 6.3 41 4.5 1438.8 90 6.41 0.1 0.0055 0.0064 0.007 0.0007 0.0246 0.0018 110.2 11 2.74 0.094 0.0285
0.0019 7.4 2.46 3.1 0.6 735.2 46.1 0.47 0.146 0.381 0.011 18.2 3 0.16 0.0031 0.42 0.13 0.0457 0.0022 1.1 0.5 0.0033 0.0012 114 4.2 0.048 0.011 0.0393
0.0033 0.0083 0.0014 0.194 0.008 0.0037 0.0003 52.4 7.9 1.15 0.1 0.341 0.021 2.9 0.5 3.1 1 0 10.7 0.8 0.4 5.76 0.100 0.0208 0.001 0.594 0.037 309.2
40.9 0.0159 0.0009 17.5 18.1 1.5 0.7 0.0242 0.0025 7.1 9.6 17.25 1.47 -99 -99 3650 365 2980 298
IND 8/14/95 10 9 FINE 29595 1009 216 6 59.7 28 53.6 5.3 65.9 6.8 3658.4 228.3 19.9 0.15 0.0253 0.0083 0.0049 0.0009 0.0132 0.0024 65.7 14.2 1.08
0.042 0 0.0023 3.8 0.29 3.3 0.7 1088.4 68 1.81 0.192 0.16 0.012 5.3 3.6 0.558 0.0062 0.99 0.18 0.009 0.0034 1.7 0.5 0.0025 0.0001 65 3.8 0.064 0.014
0.0577 0.0043 0 0.0017 0.091 0.019 0.0005 0.0004 55.6 8.8 0.56 0.17 0.261 0.027 10.6 0.9 0.2 1.1 0 12.9 1 0.5 0.96 0.020 0.0129 0.0013 0.516 0.038
125.5 18.8 0.0076 0.003 0 17.7 0.5 0.8 0.0144 0.0028 0 13.8 19.08 1.72 -99 -99 4730 473 1460 146
IND 8/14/95 13 19 FINE 24513 831 134 5 0 19.4 46.3 4.5 45.6 4.9 2036.8 127.3 10.57 0.09 0.021 0.0116 0.004 0.0007 0.0159 0.0019 41.5 11.5 3.03 0.081
0 0.0019 12.2 1.92 3.1 0.6 782.8 49 0.55 0.155 0.4 0.011 50 4.5 0.399 0.0056 0.24 0.14 0.0001 0.0005 1.1 0.5 0.0002 0.0001 77 3.4 0.045 0.012 0.0159

0.0035 0.0019 0.0011 0.252 0.007 0.0012 0.0003 45.7 7.2 0.28 0.03 0.198 0.022 6.2 0.6 3.6 1.1 0 10.9 0.8 0.4 1.15 0.020 0.0057 0.001 0.546 0.035 69.3
11.9 0.0079 0.0007 0 16.7 1.2 0.7 0.0064 0.001 4.6 9.7 15.22 1.37 -99 -99 4480 448 3680 368
IND 8/17/95 11 7 FINE 36348 1183 184 6 9 24.9 117 8.6 69.9 7.2 4598.3 286.7 3.15 0.07 0.0243 0.008 0.0105 0.0052 0.0337 0.0023 172.2 13.7 0.66 0.02 0
0.0022 15.7 3.11 3.5 0.7 1173.4 74.2 1.07 0.184 0.259 0.013 12.2 3.5 0.097 0.0033 0.64 0.17 0.0525 0.0034 2.3 0.6 0.007 0.0012 156 5.4 0.066 0.014
0.0477 0.0041 0.009 0.002 0.107 0.009 0.0024 0.0004 51.8 8.3 2.69 0.17 0.379 0.026 0.7 0.5 3.9 1.3 19.6 15.8 1.7 0.5 0.94 0.030 0.0267 0.0014 0.072
0.063 309.6 42 0.0195 0.0011 75.3 25.1 6.2 1.3 0.0299 0.0042 10.4 10.1 29.88 2.35 -99 -99 3800 380 1860 186
IND 8/17/95 13 18 FINE 32101 1041 93 5 0 19.8 82 6.7 89.3 8.5 3792.5 236.5 3.94 0.06 0.0296 0.0133 0.0048 0.0007 0.0155 0.002 72 11.8 2.7 0.073 0
0.0019 10.6 2.75 3.3 0.6 1551.7 96.7 0.56 0.159 0.157 0.007 15.5 3.2 0.063 0.002 0.43 0.14 0.027 0.0032 1.3 0.5 0.0026 0.0001 170 5 0.18 0.012 0.017
0.0036 0.0147 0.0018 0.095 0.006 0.0036 0.0003 50.6 7.9 0 0.11 0.319 0.022 1.8 0.4 2.9 1.1 17.1 13.8 0.7 0.4 0.6 0.010 0.0169 0.0011 0.796 0.049 242.1
33 0.0129 0.0008 0 17.5 3.8 0.9 0.0161 0.0017 5.7 10.4 12.88 1.26 -99 -99 3780 378 3360 336
IND 8/18/95 11 7 FINE 30211 1014 116 6 42.4 27.4 37 6.6 67.1 6.9 4198.3 261.7 4.76 0.11 0.0457 0.0167 0.0053 0.0008 0.0099 0.0023 124.1 13.7 1.13
0.04 0 0.0022 15 2.25 1.9 0.5 726.8 46.9 0.96 0.181 0.156 0.009 0 3.5 0.062 0.0021 0.42 0.17 0.0137 0.0016 8.1 0.8 0.0025 0.0007 108 4.1 0.17 0.057
0.0351 0.0041 0.0053 0.0013 0.086 0.006 0.0038 0.0004 48.2 7.8 2.12 0.19 0.313 0.025 1.3 0.5 3 1.2 0 12.8 2.2 0.5 0.51 0.020 0.0122 0.0197 0.73 0.044
158.3 22.8 0.0119 0.001 95 27 2.8 1 0.0139 0.0016 8.6 11.5 8.65 1.15 0.011 0.001 1200 120 150 15
IND 8/18/95 14 18 FINE 20783 720 53 4 6.3 20.1 45.6 4.3 36.9 4.2 1903.5 118.9 0.99 0.04 0.0109 0.0077 0.0095 0.0006 0.0141 0.0018 41.6 10.7 4.26
0.112 0 0.0017 9.5 2.54 2.4 0.5 549.4 34.5 0.27 0.144 0.093 0.006 2.4 2.7 0.024 0.0013 0.66 0.13 0.0066 0.0009 1.8 0.4 0.0002 0.0001 82 3.2 0.025
0.011 0.0148 0.0032 0.0011 0.001 0.046 0.004 0.0026 0.0003 22.3 4.4 0.86 0.16 0.273 0.02 0.7 0.4 2.6 1 0 10.3 0.3 0.4 0.51 0.010 0.0075 0.001 0.537
0.035 73.8 12 0.0058 0.0006 0 15.8 2.1 0.7 0.0082 0.0016 3.4 9 7.41 0.94 0.018 0.001 3650 365 2060 206
IND 8/19/95 10 8 FINE 34127 1134 160 7 29.1 27.1 55.1 5.5 40.2 5.2 4514.1 281.4 5.34 0.07 0.0343 0.0159 0.0142 0.0009 0.0533 0.0185 72.7 14.5 1.88
0.062 0 0.0024 10.4 0.29 3.7 0.7 452.9 29 2.73 0.613 0.178 0.02 1.3 4.1 0.132 0.0045 0.78 0.19 0.0206 0.0034 1.5 0.6 0.0029 0.0001 113 5.9 0.119 0.015
0.0866 0.0044 0.031 0.006 0.081 0.007 0.0126 0.0004 38.5 6.8 2.08 0.2 1.092 0.027 1.8 0.5 4.1 1.3 0 13.1 0 0.5 11.1 0.200 0.021 0.0015 1.27 0.076
332.5 44.6 0.0117 0.001 0 21.5 0 0.8 0.0263 0.0048 4.5 11.7 19.62 1.77 0.011 0.001 3950 395 750 75
IND 8/20/95 10 8 FINE 26879 946 129 7 0 25.8 61.5 6.1 15.3 3.6 3486.9 217.6 10.02 0.1 0.0157 0.0086 0.0054 0.0009 0.0114 0.0025 90.4 14.7 1.46 0.05 0
0.0024 2.6 0.3 4 0.7 214.6 16.4 0.47 0.198 0.162 0.008 0 4.2 0.118 0.0029 0.14 0.18 0.0243 0.0022 1.9 0.6 0.0029 0.0005 97 4.4 0.275 0.094 0.0294
0.0044 0.0051 0.0015 0.086 0.007 0.0037 0.0004 44.4 7.5 1.59 0.15 0.268 0.028 2.8 0.6 10.4 1.7 3.9 16.2 1.2 0.6 1.22 0.030 0.016 0.0013 0.553 0.037
157.3 23 0.0124 0.001 88.6 29.1 0 0.7 0.0182 0.0021 12.3 12.3 32.02 2.51 0.011 0.001 4470 447 400 40
IND 8/20/95 14 18 FINE 17609 638 74 5 0 16.8 62.4 5 47.1 4.9 1926.5 120.4 5.17 0.07 0.0132 0.0092 0.0081 0.0006 0.0204 0.0069 90.7 10.7 2.45 0.08 0
0.0017 8.2 2.33 3.1 0.6 843.3 52.7 0.56 0.143 0.181 0.008 1.1 2.5 0.064 0.002 0.46 0.13 0.0112 0.0025 2.9 0.5 0.0038 0.0007 98 3.4 0.044 0.011 0.0329
0.0032 0.0064 0.0013 0.089 0.005 0.0036 0.0003 43.4 6.7 4.37 0.16 0.357 0.02 2.4 0.4 13.3 1.5 7 10.9 0.4 0.4 0.84 0.020 0.0164 0.001 0.406 0.026 190.6
25.9 0.0131 0.0009 18.1 17.8 0.1 0.6 0.019 0.0018 8.1 10 20.59 1.66 0.040 0.002 3300 330 3150 315
IND 8/21/95 10 8 FINE 14183 648 247 9 11.5 25.7 66.3 6.1 22.3 3.6 993.4 62.5 1.18 0.06 0.0306 0.0137 0.0062 0.0009 0.0178 0.0024 36.6 14.6 0.93 0.035
0.00209 0.0023 7.4 2.38 1.3 0.6 431 27.7 0.89 0.196 0.233 0.009 22.8 3.6 0.075 0.0023 0.38 0.18 0.015 0.0032 1.4 0.5 0.0051 0.001 137 4.8 0.055 0.015
0.0306 0.0044 0.0061 0.0015 0.126 0.007 0.0041 0.0004 62 9.4 0.18 0.09 0.372 0.027 1.9 0.5 4.2 1.3 1.9 14.7 1.1 0.5 0.84 0.020 0.0299 0.0014 0.208
0.016 309 41.2 0.0188 0.0012 25.9 22.8 0.4 0.7 0.0248 0.0021 12.6 12.9 15.84 1.55 0.029 0.001 2170 217 690 69
IND 8/22/95 10 8 FINE 9395 593 221 9 50.4 30.6 45.2 5.6 24 3.6 479.9 30.7 2.36 0.07 0.0069 0.0091 0.0054 0.0009 0.0097 0.0026 68.6 15.5 0.72 0.029 0
0.0025 3.2 0.31 0.6 0.6 643.6 40.7 1.27 0.209 0.132 0.01 92.9 7.4 0.033 0.0022 0.3 0.19 0.0088 0.002 0.9 0.5 0.0019 0.0006 63 3.9 0.068 0.016 0.0259
0.0047 0.0036 0.0017 0.067 0.008 0.006 0.0004 83.9 12.1 1.31 0.14 0.407 0.029 2.4 0.5 1.7 1.2 0 13.9 0.9 0.5 0.33 0.010 0.0109 0.0014 0.1 0.011 129.5
19.4 0.0098 0.0012 0 23.7 1.2 0.9 0.0136 0.0025 5.7 13.4 4.4 1.13 0.056 0.001 3520 352 2170 217
IND 8/22/95 14 18 FINE 8588 448 118 6 2.9 20.2 53.6 5 21 2.9 360.2 23 4.93 0.09 0.0184 0.0064 0.0013 0.0007 0.009 0.0018 24.5 10.9 1.09 0.039 0
0.0018 9 1.65 0.4 0.3 638.7 40.1 0.5 0.147 0.295 0.009 35.2 3.6 0.033 0.0015 0.22 0.13 0.0047 0.0015 0.9 0.4 0.0011 0.0005 52 2.7 0.065 0.011 0.013
0.0033 0.0075 0.001 0.209 0.008 0.0016 0.0003 40.9 6.3 1.13 0.1 0.064 0.021 2.1 0.4 0 0.8 22.9 13.3 0.9 0.4 0.4 0.010 0.0047 0.001 0.109 0.009 46 9
0.0059 0.0007 19.5 18 0.2 0.6 0.0035 0.0011 3.1 9.9 4.73 0.84 0.012 0.001 2450 245 2860 286
IND 8/23/95 9 8 FINE 17076 742 147 8 0 25.3 51.5 5.8 79.8 7.9 840.3 53.1 1.93 0.08 0.0076 0.0093 0.0046 0.001 0.0145 0.0027 65.3 16 0.34 0.014 0
0.0026 20 3.19 1.7 0.6 2219.8 138.2 0.55 0.215 0.116 0.009 95.9 7.5 0.055 0.0025 0.38 0.19 0.0056 0.0017 0.9 0.6 0.0025 0.0006 79 4.1 0.032 0.016
0.0414 0.0048 0.0054 0.0017 0.053 0.007 0.0019 0.0004 54.9 8.8 1.44 0.22 0.308 0.03 1.5 0.5 1.1 1.2 12.8 17.6 1 0.5 0.26 0.010 0.0085 0.0014 0.201
0.017 99.8 16.7 0.0113 0.0013 29.9 26.2 0.7 0.9 0.0123 0.0023 4.9 13.4 7.85 1.27 0.012 0.001 2590 259 4610 461
IND 8/24/95 10 8 FINE 12751 634 99 6 0 23.6 28.7 5.3 16.8 3.2 1470.5 92.1 1.56 0.06 0.7111 0.0201 0.0062 0.0009 0.0126 0.0025 32.5 15 0.44 0.015 0
0.0024 13.2 3.57 1 0.5 390 25.3 0.47 0.202 0.085 0.01 70 6 0.713 0.0102 0.63 0.18 0.0102 0.0031 2.5 0.6 0.0002 0.0001 86 4.5 0.026 0.015 0.044 0.0046
0.0025 0.0023 0.038 0.006 0.0107 0.0004 24 5.2 2.91 0.24 0.762 0.028 2.1 0.5 0.4 1.2 0 12.9 0.7 0.5 0.46 0.020 0.0044 0.0013 0.361 0.026 76.5 13.2
0.004 0.0009 0 22.6 1.6 0.9 0.0064 0.0022 1.8 11.4 13.88 1.48 0.038 0.001 1790 179 2470 247
IND 8/24/95 14 18 FINE 11689 505 242 6 0 18.1 47 4.8 22.5 3 1023.5 64.2 2.29 0.05 0.0063 0.0063 0.0044 0.0007 0.0083 0.0018 39.6 10.8 0.59 0.019 0
0.0018 5.2 0.22 4.7 0.7 428.6 28.1 0.94 0.145 0.085 0.008 288.4 18.5 0.037 0.0018 0.42 0.13 0.0146 0.0015 1.3 0.4 0.0024 0.0007 58 2.9 0.146 0.011

0.0628 0.0033 0.0054 0.0016 0.046 0.007 0.0062 0.0003 37.4 6 1.1 0.13 0.387 0.02 0.7 0.3 4.1 1 26 13.5 0.6 0.4 0.85 0.020 0.0075 0.001 0.361 0.024
69.3 11.4 0.0057 0.0009 73.1 21.1 1 0.7 0.0097 0.0016 3 10.1 15.92 1.38 0.159 0.001 1200 120 1480 148
IND 8/25/95 10 8 FINE 11555 593 287 8 0 25.5 48.9 5 35.6 4.4 542.9 34.5 1.65 0.06 0.0036 0.0084 0.0059 0.0009 0.0101 0.0024 39.5 14.3 0.24 0.015 0
0.0023 14.2 3.32 0.9 0.5 1015.8 63.6 1.18 0.193 0.101 0.009 265.6 17.4 0.243 0.0041 0.4 0.17 0.0174 0.002 0.5 0.5 0.0022 0.001 92 4.1 0.209 0.014
0.0342 0.0043 0.0043 0.0021 0.042 0.007 0.0025 0.0004 58.6 8.9 1.32 0.16 0.8 0.232 0.2 0.5 0.9 1.1 4.5 16.2 0.5 0.5 0.52 0.020 0.0071 0.0013 0.243
0.017 155.9 22.4 0.0064 0.0011 0 22.7 0.8 0.8 0.009 0.0021 6.3 11.3 9.42 1.23 0.213 0.003 1920 192 2250 225
IND 8/25/95 13 18 FINE 8548 460 202 6 0 18 45.8 4.5 29.1 3.5 465.9 29.6 3.65 0.06 0.0099 0.0066 0.0039 0.0007 0.0218 0.0071 39 11.4 0.94 0.026 0
0.0018 9.3 2.54 1.3 0.4 689 43.2 0.7 0.153 0.099 0.006 225.3 14.6 0.092 0.0019 0.22 0.14 0.0092 0.0016 7.7 0.7 0.0025 0.0008 65 3.1 0.054 0.011 0.0172
0.0034 0.0027 0.0011 0.046 0.006 0.0027 0.0003 38.5 6.1 0.58 0.09 0.282 0.021 2.6 0.4 5 1.1 1.1 11.9 0.5 0.4 0.69 0.020 0.0087 0.001 0.175 0.013 128.7
18.1 0.0052 0.0008 0 16.8 1.6 0.8 0.0079 0.0016 4.5 10.5 12.31 1.21 0.024 0.001 1940 194 1720 172
IND 8/26/95 11 7 FINE 17358 694 562 16 15.3 24.9 122.5 8.7 24.8 3.5 526.6 33.7 2.81 0.09 0.4206 0.0374 0.0163 0.0008 0.037 0.0023 483.2 15.6 4.12
0.136 0 0.0023 15.2 0.28 5.7 0.8 571.5 36.3 2.17 0.184 0.797 0.023 482.4 30.6 0.878 0.0119 1.47 0.18 0.0547 0.0066 2 0.5 0.0149 0.0031 467 12 0.103
0.014 0.1496 0.0041 0.0321 0.0027 0.213 0.013 0.0071 0.0004 128.1 17.7 5.94 0.37 1.028 0.026 0.6 0.4 14.4 1.7 0 11.9 0.8 0.5 4.41 0.090 0.0936 0.0018
1.028 0.064 716.5 92.5 0.054 0.0024 53.3 23.7 1.2 0.9 0.0909 0.0044 0 15.2 41.16 3.07 0.100 0.006 3750 375 2040 204
IND 8/26/95 13 18 FINE 11965 515 419 8 30.7 20.9 69.5 5.7 11.5 2.1 406.7 25.9 3.6 0.06 0.0123 0.0064 0.006 0.0023 0.0336 0.0083 173.8 11.1 3.39 0.09
0 0.0018 6.8 2.03 1.4 0.4 153.3 10.9 1.36 0.43 0.263 0.008 93.3 6.7 0.064 0.0019 0.44 0.13 0.0141 0.0016 1.6 0.4 0.0046 0.0007 133 4.1 0.093 0.011
0.0521 0.0033 0.0055 0.001 0.122 0.007 0.0012 0.0003 43.3 6.8 0.64 0.03 0.171 0.021 1.7 0.4 2.9 1 0 9.6 0 0.3 1.74 0.030 0.0283 0.0012 0.263 0.017
297.9 39.1 0.0157 0.0009 18.7 17.7 1.7 0.7 0.0253 0.0016 8.8 9.5 12.16 1.18 0.052 0.005 4150 415 610 61
IND 8/27/95 11 7 FINE 8799 542 416 9 47 26.6 137.6 9.9 14.1 2.7 474 30.3 1.83 0.06 0.0089 0.0082 0.0058 0.0009 0.0393 0.0116 271.5 14.1 1.3 0.036 0
0.0023 4.7 0.28 2.7 0.6 252.7 16.9 0.85 0.189 0.375 0.011 306.5 19.8 0.087 0.0024 0.51 0.17 0.1004 0.0029 0.4 0.5 0.0069 0.0009 193 5.7 0.148 0.014
0.0298 0.0043 0.0137 0.0013 0.174 0.007 0.0025 0.0004 78.1 11.2 1.99 0.2 0.306 0.027 1 0.4 6.7 1.4 0 11.8 0.2 0.4 1.46 0.030 0.0524 0.0016 0.738 0.044
513.1 66.5 0.0268 0.0011 0 20.5 1 0.8 0.0476 0.002 13.9 11.4 25.8 2.1 0.317 0.010 1700 170 450 45
IND 8/27/95 13 18 FINE 21882 753 240 6 0 17.2 154.9 10.4 53 5.3 606 38.4 2.11 0.06 0.0423 0.0064 0.0082 0.0007 0.035 0.0018 481.7 11.4 2.06 0.056 0
0.0018 15.6 3.57 1.9 0.5 1152.2 71.9 1.49 0.147 0.807 0.022 314.1 20.2 0.371 0.006 0.97 0.14 0.0546 0.0037 3.8 0.5 0.012 0.0015 366 9.4 0.068 0.011
0.0475 0.0033 0.0262 0.0016 0.314 0.013 0.0063 0.0003 101.2 14.2 4.28 0.41 0.396 0.021 0.5 0.4 7.3 1.2 23.6 12.9 0.1 0.3 1.04 0.030 0.0879 0.0018
0.284 0.021 976.2 125.9 0.0585 0.0021 38.3 18.6 3 0.9 0.0842 0.0045 32.5 10.1 12.29 1.23 0.054 0.004 6070 607 4510 451
IND 8/28/95 10 7 FINE 22600 827 620 12 7.3 25.4 190.9 12.8 53.4 5.8 721.2 45.7 2.52 0.08 0.0383 0.0082 0.0275 0.0057 0.0459 0.0024 651.6 14.6 0.84
0.029 0.01674 0.0024 27.1 3.56 1.8 0.5 1495.1 93.2 2.35 0.189 1.054 0.029 656.4 41.4 0.608 0.0096 1.5 0.18 0.0417 0.0038 0.4 0.5 0.0163 0.0019 481
12.4 0.265 0.014 0.0771 0.0043 0.0364 0.003 0.434 0.021 0.0053 0.0004 174.1 23.6 10.11 0.47 1.647 0.027 0.3 0.5 2.2 1.2 8.5 15.3 0.8 0.5 0.73 0.020
0.1299 0.0023 0.308 0.024 1485.1 190.6 0.0744 0.0029 31.5 24 2.5 0.9 0.1242 0.0067 43.1 12.3 18.23 1.71 -99 -99 3080 308 3000 300
IND 8/28/95 14 18 FINE 15317 585 151 5 12.6 18.9 72.4 5.8 46.3 4.8 789 49.6 4.07 0.06 0.0928 0.0131 0.0095 0.0007 0.0387 0.011 176.6 10.8 3.53 0.094
0 0.0017 21.3 4.39 2 0.5 1235.8 77 1.08 0.144 0.315 0.01 129.1 8.8 0.222 0.0038 0.89 0.13 0.0225 0.0022 1.7 0.4 0.0038 0.0007 188 5.3 0.109 0.011
0.0271 0.0033 0.0126 0.0016 0.132 0.006 0.0055 0.0003 60.4 8.8 9.69 0.37 0.503 0.02 1 0.4 2.6 1 3.6 11.3 0.6 0.4 0.81 0.020 0.0299 0.0012 0.195 0.014
338.1 44.4 0.0203 0.0009 0.1 16.2 6.1 1 0.0327 0.0016 12.8 9.2 31.39 2.34 -99 -99 2680 268 4630 463
IND 8/29/95 10 8 FINE 25335 905 119 7 0 23.3 67.4 6.3 68.8 7 3040.6 189.7 0.84 0.06 0.0304 0.0085 0.0097 0.0009 0.028 0.0025 24.1 14.6 0.37 0.016 0
0.0024 19 3.45 3.1 0.6 1733.9 108.1 0.8 0.196 0.124 0.011 3.3 3.9 0.043 0.0022 0.67 0.18 0.0006 0.0006 1.7 0.5 0.0023 0.0006 118 4.7 0.045 0.015
0.0276 0.0044 0.009 0.0025 0.059 0.006 0.007 0.0004 28.4 5.6 2.27 0.15 0.54 0.028 0.8 0.4 0 1 23.1 16.8 0.3 0.4 0.64 0.010 0.0106 0.0013 1.093 0.065
72.4 12.8 0.0069 0.0009 72.8 27.1 10.2 1.6 0.0087 0.0024 4.4 13.6 15.1 1.52 -99 -99 3200 320 3180 318
IND 8/29/95 13 18 FINE 27493 908 83 5 0 17.1 76.3 5.7 90 8.3 2627.9 164 0.93 0.05 0 0.0066 0.0101 0.0007 0.0195 0.0019 84.9 11.3 1.83 0.061 0 0.0018
10.9 2.33 3.5 0.6 2277.3 141.7 0.63 0.151 0.183 0.007 91.4 6.5 1.288 0.0166 0.79 0.14 0.0116 0.0025 1.1 0.4 0.0037 0.0007 122 4.1 0.06 0.011 0.0215
0.0034 0.0071 0.0013 0.084 0.006 0.0043 0.0003 43.1 6.9 1.38 0.18 0.362 0.021 0.2 0.3 0 0.8 16.7 12.8 0.1 0.4 0.71 0.020 0.0203 0.0011 1.22 0.073
338.4 44.7 0.0147 0.0009 18.1 18.3 3.8 0.9 0.0187 0.0017 7.4 10.2 12.73 1.23 -99 -99 3670 367 2510 251
IND 8/30/95 11 7 FINE 19345 748 146 6 0 21.2 38 5.3 51.5 5.5 1667.3 104.3 2.07 0.06 0.0062 0.0095 0.0039 0.0008 0.0099 0.0024 20.1 14 0.37 0.015 0
0.0023 14.5 1.58 1.1 0.5 1387 86.5 0.53 0.189 0.068 0.006 28.5 4 1.517 0.0199 0.39 0.17 0.0265 0.002 1.5 0.5 0.0021 0.0009 111 5.1 0.027 0.014 0.0156
0.0042 0.0014 0.0013 0.033 0.005 0.0015 0.0004 35.5 6.3 1.45 0.18 0.464 0.026 1.4 0.4 0.9 1 0 14.4 0 0.4 0.78 0.020 0.0041 0.0013 0.362 0.027 117.5
17.4 0.0045 0.0008 0 20.4 3.2 1 0.0041 0.0012 3.7 10.7 7.86 1.15 -99 -99 3040 304 2710 271
IND 8/30/95 13 18 FINE 18173 661 82 5 0 18 74 5.7 65.7 6.3 1038.4 65.2 0.8 0.04 0.0414 0.0065 0.0094 0.0007 0.0235 0.0019 32.9 11.1 1.95 0.053 0
0.0018 10.3 2.5 2 0.5 1688 105.1 0.71 0.15 0.1 0.01 161.3 10.7 0.049 0.0031 1.16 0.14 0.0358 0.0027 2.5 0.5 0.0009 0.0001 92 4.1 0.085 0.011 0.0387
0.0034 0.0051 0.0018 0.037 0.005 0.0025 0.0003 29 5.1 2.05 0.15 0.355 0.021 1.1 0.4 7.8 1.2 0 11 0 0.3 2.61 0.050 0.0071 0.001 0.286 0.021 159.6 22.1
0.0074 0.0009 27.3 18.9 3.6 0.9 0.0067 0.002 3.6 8.8 15.67 1.39 -99 -99 4860 486 3490 349
IND 8/31/95 11 7 FINE 24820 881 93 6 26.6 26.5 61.4 6 51 5.6 2730 170.4 1.55 0.06 0.0193 0.0109 0.0076 0.0008 0.0362 0.0106 50.6 14 0.68 0.022 0
0.0022 19.1 3.88 2.5 0.5 1305.7 81.5 0.38 0.188 0.147 0.008 38.5 4.4 0.05 0.0024 0.53 0.17 0.0217 0.002 1.7 0.5 0.0021 0.0009 155 5.1 0.072 0.014

0.0174 0.0042 0.008 0.0013 0.08 0.006 0.0081 0.0004 39.5 6.6 0.62 0.12 0.676 0.026 0.2 0.4 2.8 1.1 3.5 14 0 0.4 1.07 0.030 0.0107 0.0012 0.747 0.047
175.2 24.4 0.0108 0.0008 20 21.9 1.5 0.8 0.0153 0.002 7.3 12.1 23.95 1.99 -99 -99 3590 359 3190 319
IND 8/31/95 13 18 FINE 28359 928 78 5 42.8 21.5 109.8 7.6 81.7 7.7 2632.6 164.4 7.52 0.07 0.0189 0.0087 0.0082 0.0023 0.0389 0.0076 236.8 11.1 1.85
0.049 0.00229 0.0018 12.3 1.54 5.1 0.7 1710.1 106.5 0.24 0.148 0.337 0.009 140.5 9.6 0.115 0.0025 0.66 0.13 0.0186 0.003 2.9 0.5 0.0046 0.0007 195 5.5
0.104 0.036 0.0211 0.0033 0.0122 0.001 0.17 0.006 0.0019 0.0003 60.6 9 2.6 0.2 0.152 0.021 3.2 0.4 9.5 1.3 0 10 0.4 0.4 0.99 0.020 0.0358 0.0012 0.52
0.033 483.4 63.3 0.0248 0.001 35.8 18.1 2.6 0.8 0.035 0.0016 15.5 9.6 19.46 1.6 -99 -99 4140 414 3190 319
IND 9/1/95 9 8 FINE 22717 870 134 7 82 32.2 89.3 7.7 68.5 7 1631.4 102.3 4.24 0.08 0.0382 0.0094 0.0131 0.001 0.033 0.0027 257.1 16.2 0.73 0.026 0
0.0026 31.5 6.98 2.6 0.6 2066.5 128.7 0.81 0.216 0.472 0.015 493.7 31.4 0.381 0.0067 0.77 0.2 0.039 0.0033 1.3 0.5 0.0057 0.0011 265 7.7 0.167 0.016
0.0297 0.0049 0.0146 0.0024 0.223 0.009 0.0093 0.0004 90.8 13.1 5.01 0.29 0.981 0.03 1.2 0.5 2.6 1.3 0 14.4 0.4 0.5 2.43 0.050 0.048 0.0018 0.429
0.028 524.6 68.5 0.0342 0.0014 38.8 27 2.5 1.1 0.049 0.0044 17.1 13.5 11.59 1.43 0.028 0.002 4280 428 3610 361
IND 9/1/95 13 18 FINE 29887 970 176 5 8.5 19.7 130.3 9 27.4 3.5 1241.7 78.2 0.25 0.04 0.0097 0.0064 0.0208 0.0007 0.0511 0.0018 62.2 11 2.46 0.069
0.00801 0.0023 12.3 0.22 7 0.8 307.1 19.9 2.12 0.148 0.36 0.039 882.1 55.4 0.098 0.0099 0.82 0.2 0.0594 0.0107 10.2 0.9 0.0019 0.0001 161 9.2 0.106
0.011 0.0973 0.0033 0.0098 0.0007 0.167 0.018 0.003 0.0003 56.4 8.5 2.66 0.21 0.485 0.021 1.1 0.4 23.1 2 0 9.9 0.2 0.4 24.28 0.370 0.0319 0.0013 0.449
0.075 357.3 47.2 0.0174 0.0031 45.7 19.3 1.3 0.7 0.0329 0.0006 13.4 9.7 65.84 4.64 0.070 0.006 -99 -99 -99 -99
IND 9/2/95 10 7 FINE 5892 522 214 7 0 22.3 19.9 4.8 19.9 3.3 707.4 44.7 0.87 0.06 0.0008 0.0085 0.0021 0.0009 0.0083 0.0025 0 14.6 0.11 0.01 0 0.0023
2.9 0.29 0.5 0.5 185.5 13.4 0.43 0.196 0.012 0.005 118.4 8.5 0.027 0.0018 0 0.18 0.0011 0.0012 0 0.5 0.0002 0.0001 18 3.1 0.053 0.015 0.0093 0.0044
0.0015 0.0014 0.005 0.005 0.0016 0.0004 92.6 13.1 0.19 0.04 0.206 0.028 1.8 0.5 2.3 1.2 0 10.7 1.2 0.5 0.14 0.001 0 0.0013 0.153 0.011 0 7.6 0.0003
0.0008 27.6 22.7 0.1 0.8 0 0.0013 0 11.3 1.5 1 0.019 0.001 -99 -99 -99 -99
IND 9/3/95 10 8 FINE 8697 564 251 7 0 25.6 20.8 5.1 30.2 4.1 1024.7 64.5 6.77 0.08 0.0231 0.0087 0.0071 0.0009 0.0195 0.0025 6.6 14.8 0.43 0.019 0
0.0024 1.6 0.3 6.2 0.9 32.9 7.1 0.59 0.2 0.041 0.006 20.9 4.2 0.455 0.0072 0.08 0.18 0.0021 0.0021 0.7 0.5 0.0002 0.0001 20 3.3 0.126 0.015 0.0195
0.0045 0 0.0014 0.032 0.005 0.0006 0.0004 95.8 13.5 0.22 0.1 0.162 0.028 5.7 0.7 2.1 1.2 0 14.9 1.2 0.5 1.22 0.030 0.0014 0.0013 0.222 0.016 0 8.6
0.0021 0.0008 26.6 25 1.2 0.9 0.0023 0.0022 0.2 13.9 7.52 1.18 -99 -99 1590 159 110 11
IND 9/3/95 14 18 FINE 7433 421 149 5 0 16.8 32.4 4.1 22.8 3 511.8 32.4 2.23 0.05 0.0029 0.0062 0.0029 0.0006 0.0061 0.0018 0 10.6 2.22 0.059 0 0.0017
5.1 1.32 1 0.5 178.6 12.3 0.31 0.143 0.036 0.006 32.6 3.3 0.129 0.0024 0.08 0.13 0.0008 0.0005 1.2 0.4 0.0009 0.0001 25 2.5 0.067 0.011 0.0382 0.0032
0.0011 0.001 0.01 0.004 0.0033 0.0003 58.6 8.5 0.8 0.09 0.244 0.02 1.6 0.4 1.9 0.9 13.2 11.9 0.5 0.4 0.45 0.010 0 0.0009 0.223 0.016 0 6 0.0003 0.0006
35.5 18.3 0 0.5 0.0002 0.0006 0 9.5 3.37 0.78 -99 -99 2060 206 320 32
IND 9/4/95 10 8 FINE 9108 575 185 7 38.2 28.4 35 5.3 31.6 4.2 935 59 3.73 0.07 0.0022 0.0088 0.0031 0.0009 0.0086 0.0025 2.7 15 0.93 0.029 0 0.0024
1.4 0.3 3.2 0.7 185.2 13.6 0.67 0.202 0.028 0.006 23.1 4.6 0.291 0.0043 0.02 0.18 0.0082 0.0031 0 0.5 0.0002 0.0001 23 3.3 0.145 0.015 0.0147 0.0046
0.0076 0.0014 0.012 0.006 0.0006 0.0004 97.8 13.8 0.47 0.13 0.07 0.028 2.8 0.6 4.9 1.4 0 15.1 0.7 0.5 1.28 0.030 0.0004 0.0013 0.263 0.017 0 8.2
0.0032 0.0009 33.8 25.4 0.7 0.9 0.0003 0.0013 9.3 12.7 29.24 2.34 0.088 0.001 -99 -99 -99 -99
IND 9/4/95 14 18 FINE 11717 506 55 4 15 19.9 44.7 4.4 39.8 4.3 688.5 43.7 2.19 0.05 0.0116 0.0063 0.0103 0.0007 0.0266 0.0018 5.2 10.8 2.15 0.058 0
0.0017 5.9 0.22 16.9 1.6 271.7 17.8 1.44 0.146 0.024 0.003 28.9 3.4 0.37 0.0074 0.14 0.14 0.011 0.003 33.5 2.2 0.0024 0.0001 59 3.7 0.084 0.011 0.0418
0.0033 0.0033 0.0023 0.009 0.005 0.0063 0.0003 63.9 9.2 0.35 0.03 1.084 0.02 2.7 0.4 17.4 1.7 0 9.2 1.4 0.5 14.24 0.250 0.001 0.001 0.192 0.02 0 6
0.0017 0.0012 37.3 19 0 0.5 0.0053 0.0006 0 8.8 15.51 1.37 0.036 0.001 4090 409 1710 171
IND 9/5/95 11 8 FINE 14156 630 163 6 0 22.2 91.5 7.1 83 8 824.9 52.1 2.25 0.06 0.3113 0.0178 0.005 0.0008 0.0265 0.009 29.8 13.8 0.6 0.022 0 0.0022
12 1.41 4.3 0.7 1481.5 92.3 1.17 0.186 0.103 0.006 74.8 6.1 0.437 0.0067 0.68 0.17 0.0111 0.0017 1.1 0.5 0.0026 0.0011 107 4.1 0.037 0.014 0.0185
0.0042 0.0027 0.0011 0.043 0.007 0.0009 0.0004 104 14.5 1.23 0.21 0.244 0.026 0.9 0.5 4.2 1.3 0 14.1 0 0.4 1.45 0.030 0.0053 0.0012 0.217 0.015 47.8
10.8 0.006 0.0011 5.2 20.3 3.2 1.1 0.0071 0.0018 2.1 12.6 22.56 1.9 0.079 0.001 3530 353 2080 208
MNS 8/9/95 14 18 FINE 17948 646 153 4 0 17.9 122.1 8.7 22.9 3.3 1778.2 111.2 3.07 0.05 0.0021 0.0059 0.0111 0.0006 0.0663 0.0017 292.7 10.2 2.1 0.057
0 0.0016 8.2 0.2 5.4 0.7 231.4 15.3 1.15 0.135 0.411 0.019 5.5 2.9 0.108 0.0045 0.69 0.14 0.0334 0.0087 5.2 0.6 0.0064 0.0001 202 8.6 0.107 0.036
0.0299 0.003 0.0241 0.005 0.176 0.021 0.0034 0.0003 106.3 14.6 1.9 0.17 0.326 0.019 0.6 0.4 7.5 1.2 18.1 13.7 1.3 0.4 2.76 0.060 0.0514 0.0012 0.495
0.039 530 68.9 0.0245 0.0018 0 16.6 2.3 0.8 0.0509 0.006 18.1 8.6 26.45 2.03 0.106 0.001 2400 240 2040 204
MNS 8/10/95 10 8 FINE 14671 681 554 9 2.2 32 102.2 9.1 14.9 3.2 1099 69.1 4.54 0.09 0.0421 0.009 0.0267 0.0009 0.0582 0.0026 444.3 15.8 0.83 0.084
0.00323 0.0027 17.5 0.31 2.4 0.6 198.8 14.9 3.43 0.208 0.639 0.032 0 4.4 0.603 0.0143 1.61 0.22 0.0333 0.0069 0.8 0.6 0.0105 0.0032 309 13 0.284 0.016
0.0357 0.0047 0.024 0.0043 0.699 0.044 0.0108 0.0004 118.4 16.4 4.47 0.36 0.847 0.029 4.4 0.6 1.2 1.2 74.3 23.5 2.5 0.6 0.6 0.030 0.085 0.0019 0.376
0.038 817.7 105.5 0.1098 0.0041 54.2 29.8 2.1 1 0.088 0.0113 26 14.1 8.43 1.39 0.021 0.001 2840 284 1000 100
MNS 8/11/95 11 8 FINE 13655 602 351 7 0 22.8 94.3 8.1 15.3 2.9 879.6 55.4 7.36 0.16 1.1729 0.0754 0.0115 0.0008 0.0505 0.0022 402.2 14.6 0.43 0.038
0.00146 0.0026 19.8 0.26 2.3 0.6 236.2 16.1 2.29 0.176 0.511 0.028 2.2 3.9 1.686 0.0209 2.41 0.21 0.0374 0.0006 3.2 0.6 0.0067 0.0019 221 8.2 0.325
0.013 0.0266 0.004 0.0242 0.0053 0.245 0.029 0.0078 0.0004 110 15.2 3.87 0.26 0.71 0.025 3.6 0.6 4.5 1.2 20.9 17.3 1.1 0.5 1.43 0.050 0.0565 0.0015
0.336 0.043 664.4 85.7 0 0.0006 0 22.7 2.3 0.9 0.0526 0.0087 17.3 11.8 50.96 3.69 -99 -99 3210 321 1610 161
MNS 8/11/95 12 20 FINE 11026 538 202 6 0 20.4 85 6.9 15.3 2.7 677.2 42.9 3.15 0.06 0.0627 0.0074 0.016 0.0008 0.0228 0.0021 257.5 12.8 1.81 0.072
0.00252 0.0024 8.6 0.25 1.4 0.5 278.3 18.5 1.16 0.17 0.434 0.028 41 5 0.111 0.0052 1 0.19 0.0225 0.0006 2.1 0.5 0.0069 0.0001 212 7.6 0.073 0.013

0.074 0.0038 0.0224 0.004 0.156 0.02 0.0047 0.0003 111.9 15.3 3.41 0.16 0.471 0.024 0.2 0.4 3.2 1.1 0 14.4 0.8 0.4 1.12 0.050 0.0442 0.0013 0.225
0.037 441.5 57.4 0.0276 0.0025 0 21.6 1.3 0.8 0.0403 0.0073 16.7 10.8 19.68 1.77 -99 -99 2430 243 1860 186
MNS 8/12/95 10 8 FINE 10952 589 197 6 59 32.6 93.9 7.8 8.9 2.7 679.7 43.3 2.25 0.07 0.0009 0.0085 0.0066 0.0009 0.043 0.0024 281.7 14.7 0.63 0.035 0
0.0024 8.1 0.29 1.9 0.6 123.5 10.8 0.85 0.196 0.443 0.023 0.5 4.3 0.107 0.0043 0.7 0.19 0.0251 0.0082 4.1 0.7 0.0069 0.0022 195 7.5 0.105 0.015 0.0281
0.0044 0.0142 0.0031 0.188 0.011 0.005 0.0004 96.7 13.6 0 0.3 0.487 0.027 5.3 0.7 6.6 1.4 0 14.7 1.5 0.5 0.9 0.040 0.0503 0.0016 0.174 0.026 555.6 72
0.0266 0.0021 17.7 25.6 2.2 0.9 0.0493 0.007 12.7 13.2 15.33 1.59 -99 -99 3000 300 1410 141
MNS 8/12/95 13 18 FINE 12080 530 126 5 0 21.1 124.3 8.8 10.5 2.3 501.9 32.1 1.5 0.05 0.013 0.0067 0.0048 0.0007 0.0304 0.0019 121.5 11.5 2.88 0.073 0
0.0018 13.3 0.23 3.2 0.6 152.6 11.5 0.99 0.155 0.347 0.023 13.9 3.4 0.073 0.006 0.62 0.16 0.0193 0.0063 4.9 0.6 0.0027 0.0001 155 6.1 0.022 0.012
0.0539 0.0035 0.0065 0.0036 0.111 0.01 0.0007 0.0003 63.1 9.2 2.92 0.18 0.155 0.022 0.2 0.4 8.8 1.3 32.2 16.1 1.2 0.4 2 0.060 0.0213 0.0012 0.21 0.036
230.6 30.8 0.0121 0.0023 9.4 20.8 2.3 0.8 0.0221 0.0059 10.7 10.4 15.89 1.49 -99 -99 3650 365 2430 243
MNS 8/13/95 10 7 FINE 14734 656 208 6 0 25.9 81 7 23.4 3.6 1625.5 101.7 10.31 0.21 0.0065 0.0084 0.0181 0.0009 0.0181 0.0024 275.5 15.1 0.63 0.046 0
0.0023 6.5 0.29 2.1 0.6 156.4 12.2 0.71 0.194 0.329 0.028 3.1 4.4 0.107 0.0058 0.39 0.19 0.0654 0.0107 0.3 0.5 0.0042 0.0016 136 7 0.16 0.015 0.0896
0.0044 0.0104 0.005 0.137 0.017 0.0029 0.0004 92.3 13.1 1.78 0.18 0.442 0.027 2.6 0.5 0 1.1 23.3 18.2 2 0.5 0.59 0.050 0.0369 0.0015 0.625 0.056 394.4
51.9 0.022 0.002 1.3 24.9 1.7 0.9 0.0396 0.0065 10.1 12.5 10.09 1.39 -99 -99 2410 241 320 32
MNS 8/13/95 14 18 FINE 12452 528 118 5 10.7 22.6 64.7 6 18.8 3 1193.6 74.8 6.13 0.08 0.0072 0.0065 0.0101 0.0007 0.0832 0.0201 138.8 11.1 1.03 0.036
0 0.0018 3.1 0.22 2.1 0.5 172.3 12.2 0.43 0.149 0.248 0.017 0 3.5 0.153 0.0049 0.4 0.14 0.0239 0.0064 2.8 0.5 0.0029 0.001 128 5.3 0.17 0.011 0.016
0.0034 0.0042 0.0031 0.107 0.016 0.005 0.0003 68.4 9.8 9.55 0.32 0.342 0.021 2.2 0.4 3.3 1 0 11.9 1.5 0.4 1.34 0.050 0.0233 0.0011 0.368 0.047 276.2
36.6 0.0135 0.0011 5.5 20 0 0.5 0.0231 0.0048 12.1 10.9 29.43 2.23 -99 -99 2420 242 1310 131
MNS 8/14/95 10 7 FINE 0 491 215 6 0 26.7 35 6.5 39.8 5 3565.9 222 11.25 0.1 0.0575 0.0085 0.0051 0.0009 0.0147 0.0024 43.9 14.5 0.44 0.031 0 0.0025
6.6 0.29 1.9 0.6 169.7 12.6 1.2 0.196 0.104 0.02 3.3 4.6 0.162 0.0053 0.31 0.19 0.0086 0.0006 0.6 0.5 0.0016 0.0001 58 4.5 0.069 0.015 0.0131 0.0044
0.0042 0.0031 0.063 0.021 0.0021 0.0004 65.2 9.6 0.29 0.04 0.175 0.027 4.9 0.6 2.4 1.2 7.3 19 1.5 0.5 0.69 0.030 0.0087 0.0014 0.446 0.037 102.3 15.8
0.0086 0.0026 0 23 0.5 0.8 0.0072 0.0008 3.9 13.5 7.41 1.19 -99 -99 3340 334 670 67
MNS 8/14/95 13 18 FINE 16999 638 205 5 0 22.9 26.5 5 27.2 3.6 1996.6 124.7 4.93 0.07 0.0153 0.0067 0.0077 0.0007 0.0372 0.0019 33.1 11.4 0.86 0.038 0
0.0019 4.9 0.23 0.7 0.5 212 14.5 1.4 0.153 0.094 0.015 1.2 3.3 0.104 0.0049 0.2 0.15 0.0046 0.0005 1.6 0.4 0.002 0.0001 63 4.5 0.093 0.011 0.0142
0.0034 0.0034 0.0029 0.049 0.013 0.0031 0.0003 58.5 8.6 3.61 0.16 0.309 0.021 2.8 0.4 5.9 1.2 20.8 14.7 1.7 0.4 1.36 0.050 0.006 0.0011 0.46 0.039
94.1 14.4 0 0.0006 15.7 20.8 0 0.6 0.0078 0.0006 3.2 9.5 23.27 1.85 -99 -99 2940 294 1460 146
MNS 8/15/95 11 7 FINE 35922 1179 173 6 0 26 59.4 5.9 49 5.7 3786 236.2 13.28 0.26 0.042 0.0083 0.0049 0.0009 0.0333 0.0024 136.3 14.4 0.68 0.057 0
0.0023 7.4 0.29 4.4 0.7 298.3 20.1 4.15 0.191 0.148 0.022 0 3.9 0.148 0.0053 0.43 0.19 0.0144 0.0059 3 0.6 0.0022 0.0001 80 5.4 0.138 0.014 0.0375
0.0043 0.0075 0.0037 0.087 0.02 0.005 0.0004 69.7 10.5 0.96 0.21 0.321 0.027 3.1 0.6 3.1 1.3 55.2 20.7 2 0.6 0.91 0.040 0.0119 0.0014 0.81 0.059 273.2
37.2 0.0107 0.0027 33.8 25.8 0.9 0.8 0.0138 0.0008 5.8 12.6 16.35 1.6 0.030 0.001 5120 512 770 77
MNS 8/15/95 14 18 FINE 37279 1179 129 5 0 20.7 83.2 6.8 54.8 5.8 3982.8 248.5 5.02 0.07 0.006 0.0065 0.0081 0.0007 0.044 0.0019 115.6 11.2 1.24 0.047
0 0.0018 6.5 0.22 3.2 0.6 241.7 16.2 0.33 0.15 0.225 0.021 6 3.4 0.138 0.006 0.57 0.15 0.0272 0.0005 2.1 0.5 0.0036 0.0001 106 5 0.082 0.011 0.0367
0.0034 0.0269 0.0045 0.086 0.016 0.0014 0.0003 62.4 9.4 3.17 0.24 0.231 0.021 2.1 0.4 9.2 1.3 25.6 15 1.2 0.4 2.4 0.070 0.0188 0.0011 1.268 0.082
171.2 23.9 0.0098 0.0022 0 19 1.4 0.7 0.025 0.0058 9.4 9.9 18.08 1.58 0.172 0.020 4980 498 980 98
MNS 8/16/95 14 18 FINE 27613 909 121 5 0 20.8 62 5.7 47.9 5.2 3170.9 197.8 3.02 0.06 0.0143 0.0089 0.0045 0.0007 0.03 0.0019 102.4 11.2 1.48 0.053 0
0.0018 2.6 0.22 2.6 0.6 176.8 12.4 0.71 0.149 0.213 0.016 0.3 3.2 0.084 0.004 0.43 0.14 0.058 0.0052 2.9 0.5 0.0025 0.0001 105 5.9 0.087 0.011 0.0184
0.0034 0.0138 0.0026 0.101 0.011 0.0034 0.0003 58.1 8.6 2.79 0.15 0.357 0.021 0.5 0.4 4.3 1 33.8 15.7 2.4 0.5 2.19 0.070 0.0167 0.0011 1.016 0.074
122.1 17.8 0.0106 0.0014 5.2 19.6 1.2 0.7 0.0212 0.0035 6.2 9.5 15.5 1.4 0.027 0.001 2930 293 1550 155
MNS 8/17/95 11 8 FINE 34241 1137 174 6 0 27.4 73.8 7 40 5.2 3932.4 245.2 3.33 0.07 0.0768 0.0145 0.0066 0.0009 0.0684 0.0024 113.3 14.5 0.7 0.054 0
0.0023 7 0.29 3.6 0.7 106.5 9.5 1.28 0.195 0.231 0.023 0 3.8 0.263 0.0088 0.56 0.2 0.0142 0.0006 3.8 0.7 0.0055 0.0001 110 7.3 0.036 0.015 0.0211
0.0044 0.0164 0.008 0.117 0.016 0.0107 0.0004 75.8 11.3 0.78 0.14 0.911 0.027 0.6 0.5 2.8 1.2 44.9 20.1 1.2 0.5 2.41 0.090 0.0208 0.0014 1.036 0.1
172.3 24.7 0.0137 0.0021 0 20.9 0.1 0.7 0.025 0.0008 5.7 12.2 18.63 1.76 -99 -99 3720 372 1260 126
MNS 8/17/95 13 19 FINE 28640 951 113 5 24.8 25 68.5 6 124.4 11.3 3404.6 212.6 4.54 0.07 0.0185 0.0107 0.0072 0.0007 0.0261 0.002 66.9 12.1 3.2 0.087
0.00043 0.002 11.7 0.24 4.3 0.7 172.8 12.5 1.04 0.163 0.211 0.018 0 3.4 0.096 0.0042 0.64 0.17 0.0099 0.0005 5.3 0.7 0.003 0.0001 134 5.4 0.126 0.012
0.0199 0.0037 0.0098 0.0032 0.103 0.011 0.004 0.0003 143.5 19.7 2.3 0.13 0.322 0.023 1.4 0.5 9.9 1.4 0 13.8 1.9 0.5 1.75 0.060 0.0136 0.0012 0.722
0.048 141.2 20.4 0.0079 0.0012 27.4 21.6 0 0.6 0.0134 0.0039 4.8 11.6 10.61 1.2 -99 -99 4090 409 2470 247
MNS 8/18/95 11 7 FINE 23603 850 129 6 0 25.7 51.2 5.4 89.2 8.7 3017.6 188.6 6.37 0.09 0.0088 0.0082 0.0068 0.0008 0.0422 0.0024 103.7 14 0.94 0.048 0
0.0022 8.9 0.28 2.2 0.6 164.6 12.4 1.2 0.188 0.207 0.02 0 3.7 0.163 0.0061 0.3 0.18 0.0146 0.0048 1.6 0.6 0.0026 0.0001 108 6.4 0.097 0.014 0.0239
0.0042 0.012 0.0036 0.096 0.019 0.0065 0.0004 166.3 22.6 2.17 0.15 0.603 0.026 3.2 0.6 4.4 1.3 39.8 18.9 3 0.6 1.17 0.050 0.0194 0.0014 0.53 0.043
181.7 25.8 0.013 0.0015 0 23.5 0.4 0.8 0.0199 0.0039 3.4 12.1 12.8 1.42 0.016 0.002 3220 322 1220 122
MNS 8/18/95 14 18 FINE 16319 618 61 5 47.2 24.2 38 4 57.1 5.8 1549.1 97.1 0.86 0.04 0.0099 0.0066 0.0026 0.0007 0.0187 0.0019 41.7 11.2 3.12 0.077
0.00191 0.0021 6.4 0.23 1.2 0.4 176.5 12.5 0.69 0.151 0.141 0.01 0 3.2 0.04 0.004 0.33 0.14 0.0091 0.004 1.5 0.5 0.0014 0.0001 93 4.9 0.04 0.011

0.0144 0.0034 0 0.0018 0.059 0.01 0.0003 0.0003 124.5 16.9 2.22 0.14 0.09 0.021 0.2 0.4 3.7 1.1 22.3 14.2 1.5 0.4 1.17 0.050 0.0073 0.0011 0.452 0.057
69.6 11.7 0.0037 0.0017 48.6 21.1 2 0.8 0.0053 0.0021 3.7 10 9.69 1.11 0.051 0.001 3290 329 1290 129
MNS 8/19/95 10 8 FINE 37022 1221 149 6 0 25.7 43.6 5.9 114.1 11 4082.4 255.1 11.28 0.13 0.0098 0.0088 0.009 0.0009 0.0415 0.0025 80.8 15.1 0.77 0.035
0.01597 0.0026 6.2 0.3 3 0.7 176 13.3 0.68 0.203 0.147 0.016 0 5 0.132 0.0058 0.44 0.19 0.0118 0.0048 2.2 0.7 0.0019 0.0001 81 5.2 0.054 0.015 0.0227
0.0046 0.0168 0.0031 0.071 0.015 0.0034 0.0004 166.9 23.1 1.42 0.12 0.21 0.028 5.3 0.7 6.3 1.5 82.9 23.9 1.6 0.6 0.94 0.040 0.0146 0.0016 0.906 0.062
149.3 22.3 0.0058 0.0015 14.2 25.4 0.4 0.9 0.0128 0.0044 2.3 13.5 14.67 1.54 0.037 0.001 4150 415 830 83
MNS 8/19/95 14 18 FINE 57278 1759 254 6 0 18.3 45.9 5 96.5 9.1 3237.3 202.8 5.94 0.07 0.0953 0.0065 0.0041 0.0007 0.0396 0.0113 47.1 11.1 2.93 0.078
0 0.0018 11.6 2.16 2.6 0.6 132.3 10.3 3.69 0.15 0.258 0.011 0 3.1 0.095 0.0029 0.4 0.14 0.0242 0.0023 2.8 0.6 0.0029 0.0008 117 4.2 0.17 0.011 0.0335
0.0034 0.0103 0.0016 0.08 0.009 0.0019 0.0003 147.4 21.1 3.03 0.15 0.198 0.021 1.7 0.4 16.6 1.7 0 11.5 2.8 0.5 1.72 0.040 0.0089 0.0011 0.612 0.041
119.5 18.1 0.0073 0.0011 65.5 22.6 1.5 0.7 0.0105 0.003 1.4 10.1 34.79 2.58 0.037 0.001 3960 396 1040 104
MNS 8/20/95 10 8 FINE 22110 838 153 6 52.3 32.2 40 6 68.3 7.2 2757.4 172.5 6.43 0.08 0.0047 0.0089 0.0049 0.0009 0.0201 0.0026 116.6 15.2 0.43 0.049
0 0.0024 5.9 0.31 4.3 0.8 68 9 0.7 0.205 0.213 0.025 0 4 0.112 0.0057 0.25 0.2 0.0111 0.0007 2.5 0.7 0.0045 0.0001 92 6.3 0.066 0.015 0.044 0.0046
0.0213 0.0036 0.09 0.014 0.003 0.0004 174.4 23.6 0.39 0.04 0.287 0.029 1.7 0.6 6.8 1.5 12.7 17.8 2.6 0.6 0.57 0.040 0.0233 0.0015 0.456 0.046 206.6
29.1 0.0125 0.002 50.6 28 2.4 1 0.0265 0.0075 3.7 13 6.41 1.27 0.029 0.001 2170 217 480 48
MNS 8/20/95 14 18 FINE 21111 729 130 5 0 21 65.3 5.4 50.4 5.4 1774.3 110.9 9.61 0.19 0.0013 0.0063 0.0052 0.0007 0.0295 0.0018 199 11.2 4.08 0.103 0
0.0017 9.6 0.22 1.9 0.5 236.4 15.8 0.79 0.145 0.302 0.019 0 2.8 0.136 0.0079 0.77 0.15 0.0236 0.0061 1.5 0.5 0.0051 0.0001 266 8.1 0.119 0.011 0.0197
0.0033 0.0159 0.0026 0.141 0.012 0.0061 0.0003 137.9 18.7 3.04 0.19 0.345 0.02 0.3 0.4 3.5 1 0 11.1 1.1 0.4 0.85 0.040 0.0292 0.0011 0.388 0.033 309.5
40.9 0.0213 0.0014 24.4 19.9 0.8 0.7 0.0297 0.007 6 9.9 8.97 1.08 0.029 0.001 1860 186 1180 118
MNS 8/21/95 10 9 FINE 9858 607 326 7 34.5 30.2 57.3 6.9 6.4 3.1 578.7 37.2 5.04 0.08 0.0279 0.0092 0.012 0.001 0.016 0.0027 244.7 15.8 0.95 0.05 0
0.0025 9.7 0.32 1.3 0.6 170.4 13.1 1.07 0.212 0.346 0.017 61.7 6.1 0.132 0.0047 0.42 0.2 0.0152 0.0058 1 0.7 0.0057 0.0001 196 6.6 0.074 0.016 0.022
0.0048 0.0339 0.0039 0.136 0.016 0.0022 0.0004 198.2 26.4 3.34 0.28 0.145 0.03 0 0.5 3.4 1.3 54 21.4 2.5 0.6 0.7 0.030 0.0446 0.0016 0.16 0.026 376.1
49.8 0.0203 0.0025 0 26.3 0.7 0.9 0.0393 0.0042 11.2 13.9 5.22 1.22 0.017 0.001 3250 325 450 45
MNS 8/21/95 14 18 FINE 11972 507 127 5 1.3 20.2 157.8 10.7 8.3 2.9 383.6 24.7 4.3 0.1 0.0021 0.0062 0.0049 0.0006 0.0184 0.0018 346.1 12 3.97 0.103 0
0.0017 9.6 0.22 2.1 0.5 291.3 18.9 0.44 0.143 0.46 0.019 219.1 14.3 0.094 0.004 0.45 0.14 0.0236 0.0054 0.9 0.5 0.0072 0.0026 204 7.4 0.066 0.011
0.0297 0.0032 0.0155 0.0026 0.131 0.012 0.0069 0.0003 184.7 24.5 2.66 0.23 0.468 0.02 0.2 0.4 2.8 0.9 16.1 13.2 2.2 0.5 0.55 0.040 0.0485 0.0012 0.181
0.02 428 55.9 0.0207 0.0012 0 17 3.6 0.9 0.0483 0.0056 10.5 9.1 5.36 0.94 0.020 0.001 1930 193 1000 100
MNS 8/22/95 10 9 FINE 7327 589 227 7 60 34.3 26.7 6.6 8.4 3.1 406.9 26.5 5.5 0.08 0.0132 0.0095 0.005 0.001 0.0381 0.0027 61.9 16.2 0.46 0.044 0
0.0027 9.5 0.33 2.4 0.6 124.4 11.4 1.73 0.219 0.167 0.018 43.1 5.7 0.178 0.0058 0.74 0.21 0.0027 0.0007 3.2 0.7 0.0022 0.0001 108 7.7 0.325 0.016
0.015 0.0049 0.0102 0.0032 0.063 0.017 0.0055 0.0004 165.4 22.3 1.6 0.17 0.266 0.031 3.3 0.6 0.5 1.2 0 16.8 2.1 0.6 0.94 0.050 0.0109 0.0016 0.111
0.023 101.1 16.6 0.0058 0.0015 48.7 29.2 0 0.8 0.0135 0.0059 8.3 15.2 14.81 1.61 0.041 0.001 2850 285 1720 172
MNS 8/22/95 14 18 FINE 5987 415 212 5 25.4 22.5 63.5 5.5 6.5 2.3 312 20.3 9 0.08 0.5036 0.0202 0.0045 0.0007 0.0432 0.0019 29.3 11.1 1.72 0.079 0
0.0018 1.7 0.22 3.1 0.6 137.7 10.3 0.86 0.15 0.119 0.02 74.2 6 0.883 0.0116 0.56 0.16 0.0148 0.0005 2.8 0.5 0.0004 0.0001 68 4.2 0.105 0.011 0.0406
0.0034 0.0082 0.0037 0.057 0.011 0.0008 0.0003 121.2 16.3 1.09 0.16 0.291 0.021 4.4 0.5 5 1.1 11.6 13.1 2.6 0.5 2.18 0.070 0.006 0.001 0.6 0.056 39.5
8.6 0.0045 0.0014 0 18.9 1 0.7 0.008 0.0006 0.8 9.7 30.5 2.32 0.348 0.022 1950 195 1580 158
MNS 8/23/95 24 8 FINE 10737 388 261 5 0 12.5 59.5 4.3 40.1 3.9 1304.7 81.5 2.16 0.03 0.0495 0.0122 0.002 0.0004 0.0558 0.0065 26.9 6.4 0.28 0.011
0.00046 0.0011 2.5 0.13 1.4 0.3 64.1 5.1 0.99 0.086 0.065 0.005 0 1.8 0.055 0.0019 0.64 0.08 0.0078 0.0012 3.2 0.4 0.0004 0.0001 35 1.8 0.086 0.006
0.0243 0.0019 0.005 0.001 0.024 0.004 0.0012 0.0002 77.4 10.5 0.16 0.06 0.184 0.012 1.4 0.3 3.7 0.7 5.5 7.7 0.8 0.3 1.24 0.030 0.0048 0.0006 0.251
0.019 35.1 6.3 0.0033 0.0007 9.1 11.6 0 0.3 0.0054 0.0015 3.1 5.5 14.69 1.14 0.037 0.001 1240 124 1040 104
MNS 8/24/95 10 9 FINE 12628 667 154 7 0 26.6 46 6.1 33 4.7 1322.6 83.2 3.75 0.07 0.0022 0.0095 0.003 0.001 0.0686 0.0216 23.5 16.3 0.52 0.053 0
0.0026 4.1 0.33 2.5 0.7 86.4 9.3 0.87 0.22 0.082 0.017 0 4.4 0.1 0.0052 0.35 0.2 0.0074 0.0007 5.7 0.8 0.0015 0.0001 49 4.4 0.047 0.016 0.0273 0.0049
0.0031 0.0027 0.031 0.013 0.0009 0.0004 151.8 20.6 0.06 0.11 0.34 0.031 2.1 0.6 5.3 1.5 0 16.3 1.9 0.6 1.24 0.040 0.003 0.0015 0.311 0.031 12.2 9.8
0.0021 0.0008 0 25.2 1.6 1 0.0041 0.003 0 14.4 16.42 1.68 0.026 0.001 1660 166 1350 135
MNS 8/24/95 14 18 FINE 9496 470 402 6 26.6 23.1 67.4 5.7 24.1 3.2 888.6 56.1 2.39 0.05 0.2166 0.0217 0.004 0.0007 0.0526 0.0019 115.5 11.1 0.55 0.073
0 0.0018 4 0.22 2.5 0.5 33.1 6.2 1.17 0.15 0.1 0.016 87.8 6.7 0.518 0.0089 1.76 0.16 0.0141 0.0005 5.1 0.6 0.0011 0.0001 56 4.9 0.081 0.011 0.0627
0.0034 0.0099 0.0041 0.03 0.003 0.0007 0.0003 133.4 17.9 0.33 0.08 0.182 0.021 7.3 0.7 3.7 1 5.5 12.5 1.4 0.4 3.87 0.090 0.0088 0.0011 0.286 0.039
18.5 6.5 0.0034 0.0005 49.4 20.9 0 0.5 0.0168 0.0056 1.5 9.9 68.08 4.74 0.028 0.001 1550 155 1170 117
MNS 8/25/95 10 8 FINE 7557 578 397 9 28.8 31.4 49.8 5.8 6.4 2.7 436.8 28.3 1.41 0.06 0.0603 0.0092 0.006 0.001 0.0465 0.0119 26.4 15.8 0.24 0.026 0
0.0025 3.6 0.89 1.9 0.6 69.1 8.2 4.87 0.213 0.082 0.008 167.2 11.8 0.135 0.0036 0.25 0.19 0 0.0007 6.8 0.8 0.0009 0.0001 49 3.9 0.359 0.016 0.033
0.0048 0.0046 0.0016 0.035 0.009 0.0003 0.0004 170.7 22.9 0.93 0.14 0.126 0.03 1.8 0.5 3.2 1.3 0 15.9 0.9 0.5 1.55 0.030 0.005 0.0014 0.121 0.012 0
8.2 0.0031 0.0013 0 22.9 0 0.8 0.004 0.0018 1.9 13.5 9.99 1.35 0.035 0.002 1300 130 640 64
MNS 8/25/95 13 18 FINE 8299 474 344 6 0 20.7 80.8 6.6 6.1 2.2 311.8 20.7 3.23 0.06 0 0.007 0.0023 0.0007 0.0375 0.002 53.8 12 0.99 0.058 0 0.0019 1.3
0.24 0.2 0.5 62.1 6.7 1.46 0.161 0.11 0.014 156.3 10.8 0.082 0.003 0.44 0.15 0.0099 0.0005 5.1 0.7 0.0015 0.0001 56 3.8 0.059 0.012 0.0297 0.0036

0.0066 0.0022 0.049 0.004 0.0008 0.0003 93.2 12.8 0.55 0.03 0.168 0.023 0.6 0.4 2.8 1 0 12.3 1.5 0.4 1.02 0.040 0.009 0.0011 0.19 0.026 0 9.3 0.0065
0.0028 0 19.7 0.4 0.7 0.009 0.0036 4.1 10.3 27.68 2.14 0.033 0.002 1740 174 1500 150
MNS 8/26/95 11 7 FINE 10029 568 627 12 27.2 28.6 105.4 8.1 8.9 2.9 237.2 17.4 2.05 0.07 0.991 0.0356 0.0158 0.003 0.0125 0.0024 414.5 14.6 0.24 0.015
0 0.0023 6.9 1.11 0 0.5 167.1 12.3 1.25 0.193 0.527 0.013 604.9 38.2 1.7 0.0212 2.64 0.18 0.0254 0.0029 0.2 0.5 0.009 0.0004 255 6.9 0.126 0.014 0.02
0.0043 0.0189 0.0013 0.276 0.012 0.002 0.0006 201.7 26.7 0.42 0.23 0.292 0.097 0 0.5 0 1 8.1 15.7 1.3 0.5 0.27 0.010 0.075 0.0017 0.265 0.017 626.4
81.2 0.049 0.0018 0 21.4 1.1 0.8 0.0737 0.0018 20.2 12.6 12.49 1.37 0.026 0.001 860 86 580 58
MNS 8/26/95 13 18 FINE 8909 473 484 9 0 21.8 70.3 6.2 6.2 2.2 320.4 21.3 1.72 0.07 0.0319 0.0068 0.0097 0.0023 0.0158 0.002 1.7 11.6 0.6 0.022 0
0.0019 4.2 1.11 1 0.5 105.4 8.6 1.37 0.156 0.334 0.01 225.9 14.8 0.081 0.0021 0.48 0.14 0.0146 0.0031 2.9 0.5 0.0049 0.0007 143 4.4 0.162 0.012 0.0247
0.0035 0.0071 0.0011 0.153 0.009 0.0019 0.0003 147.5 19.6 0.21 0.03 0.122 0.022 0.7 0.4 1.5 0.9 0 12.1 0.9 0.4 0.52 0.010 0.0365 0.0012 0.228 0.018
274.2 36.7 0.0242 0.0014 0 17.8 0.4 0.6 0.0342 0.0012 11 10.3 5.56 0.92 0.026 0.001 980 98 710 71
MNS 8/27/95 10 8 FINE 8386 570 490 10 0 25.9 147.2 11.2 6.7 3.1 276.1 20.1 2.96 0.08 0.0412 0.0089 0.0055 0.0009 0.0305 0.0026 417.5 15.5 0.44 0.022
0 0.0025 6 0.31 0.3 0.6 180.9 13.5 1.91 0.205 0.673 0.019 0 4.9 0.167 0.0049 0.71 0.19 0.031 0.006 2.9 0.7 0.0118 0.0011 259 7.5 0.429 0.015 0.0549
0.0046 0.0183 0.0018 0.252 0.01 0.0043 0.0004 202.9 26.8 3.99 0.46 0.908 0.029 0 0.5 2.9 1.3 0 17.5 1.8 0.6 0.75 0.020 0.0723 0.0018 0.209 0.017 662.3
86 0.0517 0.0021 0 24.7 1 0.8 0.0675 0.0043 21.6 13.8 7.67 1.25 0.022 0.001 1190 119 980 98
MNS 8/27/95 14 18 FINE 17038 642 486 7 11.9 22.7 189 12.6 16.9 3.2 384.2 26.2 3.4 0.07 0.0277 0.0068 0.031 0.0007 0.0418 0.0019 712.7 12.3 2.03 0.065
0 0.0019 20.3 0.23 1.5 0.5 233.6 15.8 5.45 0.156 1.151 0.06 89.5 7.1 0.394 0.0126 1.75 0.26 0.0454 0.0005 6 0.7 0.0189 0.0038 496 16.4 0.281 0.012
0.0787 0.0035 0.0352 0.0096 0.518 0.058 0.017 0.0003 215.9 28.6 8.18 0.41 1.552 0.022 0 0.4 3.7 1 31.1 14.7 1.7 0.5 1.16 0.080 0.1308 0.0028 0.284
0.054 1225.6 157.5 0.092 0.0083 0 19.4 4.3 1 0.1216 0.0151 36.1 10.9 9.6 1.67 0.022 0.001 2360 236 2940 294
MNS 8/28/95 10 8 FINE 14350 667 554 9 10.5 29.2 166.8 11.9 13.1 3.4 362.2 25 3.59 0.09 0.0262 0.0088 0.0244 0.0009 0.0347 0.0025 726.8 15.8 0.51 0.06
0 0.0024 13.2 0.31 0 0.6 291 19.6 1.49 0.204 0.987 0.035 0 4.9 1.845 0.0261 2.82 0.22 0.0567 0.0161 1 0.6 0.0151 0.0022 431 12.7 0.274 0.015 0.0999
0.0046 0.0433 0.0049 0.398 0.031 0.0038 0.0004 260.5 34.3 6.74 0.65 0.496 0.029 1.6 0.6 0 1.1 15.3 17.4 2.4 0.6 0.64 0.060 0.1308 0.0024 0.322 0.046
1198.4 153.9 0.0613 0.004 0 22 3 1 0.1236 0.0078 38.3 14 14.58 1.73 -99 -99 1420 142 1130 113
MNS 8/28/95 14 19 FINE 9724 481 272 6 30.4 24.1 80.8 6.8 16.4 2.8 607.2 38.8 1.59 0.07 0.048 0.0066 0.0057 0.0007 0.0314 0.0019 88.4 11.4 1.55 0.071
0 0.0018 3.9 0.23 0.1 0.5 131.9 9.9 2.14 0.153 0.341 0.026 28.6 3.9 0.088 0.0044 0.79 0.17 0.0236 0.0054 2.9 0.5 0.0055 0.0001 145 6.7 0.1 0.011
0.0767 0.0034 0.0125 0.004 0.132 0.022 0.0047 0.0003 123.3 16.5 1.14 0.19 0.379 0.021 0.3 0.4 2.8 1 13.1 13.1 2.2 0.5 0.94 0.050 0.0323 0.0011 0.232
0.035 236.7 32.2 0.0222 0.0031 0 19.4 0 0.5 0.0333 0.0071 11.3 9.8 12.58 1.32 -99 -99 1860 186 2120 212
MNS 8/29/95 10 8 FINE 19343 783 166 7 20.2 30.7 49 6.8 55.6 6.2 3068.3 191.5 0.81 0.06 0.022 0.0091 0.0048 0.0009 0.0319 0.0094 21.4 15.6 0.38 0.017
0 0.0025 3.2 1.14 0.4 0.6 125.4 10.7 0.82 0.21 0.071 0.007 0 4.8 0.043 0.0023 0.63 0.19 0.0185 0.003 0.7 0.6 0.0002 0.0001 43 3.6 0.189 0.016 0.0258
0.0047 0.0171 0.0016 0.044 0.008 0.0003 0.0004 98.6 13.9 1.17 0.16 0.087 0.029 0 0.5 1.8 1.2 15.2 17.8 2 0.6 0.96 0.020 0.0046 0.0014 0.592 0.036 0
12.6 0.0038 0.0012 0 26.3 3.9 1.1 0.0058 0.0013 2.4 13.2 18.56 1.75 -99 -99 1920 192 450 45
MNS 8/29/95 14 19 FINE 21816 762 67 5 0 19.4 53.1 4.8 58.9 5.9 2749.2 171.6 0.75 0.04 0.0506 0.0068 0.0046 0.0007 0.0727 0.0019 26.6 11.6 0.43 0.029
0 0.0019 3 0.23 3.7 0.7 91.2 8 2.08 0.156 0.069 0.022 0 3.5 0.792 0.0117 0.36 0.16 0.0152 0.0005 1.6 0.5 0.0002 0.0001 44 5.7 0.042 0.012 0.0352
0.0035 0.0042 0.0037 0.015 0.004 0.0041 0.0003 86.3 12.1 1.71 0.12 0.418 0.022 0 0.4 4.3 1.1 9.3 13.2 2 0.5 1.05 0.050 0.0045 0.0011 1.27 0.086 0 10.2
0 0.0006 0 19.4 0.2 0.6 0.0066 0.0006 4.4 10.3 11.39 1.22 -99 -99 2410 241 1080 108
MNS 8/30/95 10 8 FINE 7101 579 137 7 0 29.6 31.8 5.7 16.6 3.1 689.2 43.9 0.56 0.06 0.2265 0.0614 0.006 0.001 0.02 0.0027 0 16 0.28 0.067 0 0.0026 6.8
0.32 0 0.6 106.7 9.7 2.54 0.215 0.05 0.025 0 4.7 0.542 0.0102 0.58 0.21 0.0065 0.0007 4.5 0.7 0.0006 0.0001 33 5.5 0.229 0.016 0.0355 0.0048 0.0044
0.0047 0.013 0.005 0.0058 0.0004 93.7 13.1 0.93 0.11 0.345 0.03 0.2 0.5 2.6 1.3 0.8 17.2 1.6 0.6 0.97 0.060 0.0002 0.0015 0.162 0.033 0 20.7 0.0001
0.0008 0 25.5 1.8 0.9 0.0011 0.0009 1.8 14.3 9.42 1.37 -99 -99 1640 164 1020 102
MNS 8/30/95 14 18 FINE 11749 516 138 5 2.2 21.9 35.8 4.2 32 3.7 1318.5 82.6 3.56 0.05 0 0.0065 0.0176 0.0007 0.048 0.0019 13.4 11.2 1.14 0.059 0
0.0018 10.4 0.23 0.3 0.4 87.3 8 0.28 0.151 0.101 0.019 0 3.1 0.106 0.0045 0.34 0.16 0.0042 0.0005 6.6 0.7 0.0006 0.0001 57 4.3 0.042 0.011 0.0195
0.0034 0.0053 0.0044 0.03 0.008 0.0207 0.0003 70.2 9.8 0.39 0.09 0.605 0.021 0.9 0.4 3.3 0.9 46.7 15.5 0.9 0.4 2.95 0.090 0.0026 0.001 0.351 0.032 0
8.3 0.0006 0.0009 53 22.2 0.1 0.6 0.0071 0.0006 3.2 10.1 12.68 1.25 -99 -99 1940 194 1600 160
MNS 8/31/95 10 9 FINE 22500 868 137 7 10.4 32.5 55.9 7.7 60.8 6.8 2217.4 138.9 5.42 0.1 0.0107 0.0095 0.0137 0.001 0.0242 0.0027 134.6 16.4 0.6 0.041
0 0.0026 2.2 0.33 0.5 0.6 612.1 39 0.63 0.218 0.226 0.023 0 5.2 0.337 0.0094 0.7 0.21 0.0083 0.0007 0.9 0.7 0.0027 0.0001 219 8.3 0.093 0.016 0.0626
0.0049 0.0028 0.0034 0.097 0.011 0.0016 0.0004 139.8 19.2 0.41 0.15 0.234 0.031 0.8 0.6 1.5 1.4 18.6 18.4 2.6 0.6 0.81 0.050 0.0245 0.0016 0.478 0.043
139.9 23.3 0.0133 0.0016 0 26.2 0 0.9 0.0238 0.0057 5.7 13 24.78 2.17 -99 -99 2770 277 1030 103
MNS 8/31/95 14 18 FINE 18697 678 169 5 0 18.9 92.6 6.9 35.9 4.4 2019.1 126.3 7.62 0.09 0.0656 0.0066 0.0125 0.0023 0.0302 0.0099 274.1 11.5 0.85
0.032 0 0.0019 6.2 1.14 1.9 0.6 157.4 11.4 1.02 0.152 0.452 0.012 0 3.7 0.126 0.0028 0.66 0.14 0.0232 0.003 3.6 0.6 0.0073 0.001 193 5.4 0.156 0.011
0.0304 0.0034 0.0122 0.0011 0.201 0.013 0.0013 0.0003 126.4 17.1 2.76 0.26 0.22 0.021 0.4 0.4 2.4 1 14.8 13.6 2.2 0.5 0.92 0.020 0.0494 0.0013 0.36
0.025 407.6 53.7 0.03 0.0013 17.4 20.5 0 0.5 0.0496 0.0024 14.7 9.5 14.05 1.31 -99 -99 2020 202 1790 179
MNS 9/1/95 9 9 FINE 15795 740 193 7 83.7 36.7 110 8.9 12 4 1349.9 85.4 4.73 0.08 0.0149 0.0099 0.0061 0.001 0.0567 0.0028 311.4 17 0.6 0.046 0.00422
0.0028 6.6 0.34 2.4 0.7 248.4 17.6 0.44 0.227 0.445 0.03 0 6 0.252 0.0074 0.81 0.22 0.0417 0.0079 1.5 0.7 0.0078 0.0001 224 8.8 0.174 0.017 0.0247

0.0051 0.0211 0.004 0.192 0.015 0.001 0.0005 147.6 20.1 2.93 0.22 0.192 0.032 0 0.6 6.5 1.6 9 18.9 3.1 0.7 1.35 0.060 0.0611 0.0018 0.375 0.049 446.8
59.7 0.0259 0.0017 0 28.3 2.4 1.1 0.0544 0.0061 16.3 15.5 13.17 1.65 0.020 0.001 2480 248 1090 109
MNS 9/1/95 14 18 FINE 16164 616 202 5 0 18.3 84.3 6.2 10.5 2.5 1005.7 63.4 4.48 0.07 0.0282 0.0066 0.0121 0.0007 0.0258 0.0019 256.2 11.4 0.87 0.037
0 0.0018 6.1 0.23 3.2 0.6 136.6 10 3.38 0.152 0.387 0.021 0 2.9 0.128 0.0055 0.72 0.16 0.0176 0.0005 3.5 0.5 0.0049 0.0017 194 6.8 0.171 0.011 0.0354
0.0034 0.0085 0.0026 0.221 0.021 0.0009 0.0003 100.1 13.7 3.48 0.28 0.256 0.021 0.4 0.4 5.7 1.1 39.4 13.9 0.6 0.4 2.59 0.060 0.0421 0.0013 0.297 0.044
379.7 49.9 0.026 0.0031 20.4 18.9 0 0.6 0.0361 0.0053 16.8 9.8 14.36 1.39 0.029 0.001 2420 242 1760 176
MNS 9/2/95 10 8 FINE 6844 581 369 9 0 28.4 42.2 5.5 6.7 2.5 654.5 41.8 1.06 0.06 0.0374 0.0094 0.004 0.001 0.0219 0.0027 30.3 16.1 0.25 0.027 0
0.0026 3.4 1.08 0 0.5 83.8 9.1 2.79 0.217 0.052 0.008 107.4 8.5 0.038 0.0025 0.1 0.2 0.0425 0.0028 0 0.5 0.0001 0.0001 34 3.7 0.102 0.016 0.0293
0.0049 0.0041 0.0017 0.019 0.007 0.0003 0.0004 83.9 11.9 0.47 0.1 0.133 0.03 0 0.5 0.6 1.2 26 19.2 1 0.5 0.3 0.010 0.0049 0.0015 0.347 0.027 0 13.9
0.0026 0.0013 24.4 27 0 0.8 0.005 0.0019 1.7 13.1 5.54 1.2 0.017 0.001 950 95 320 32
MNS 9/2/95 14 18 FINE 7664 450 246 6 0 20.8 33.7 4.1 19 2.7 654.5 41.4 1.76 0.05 0.1034 0.0067 0.0054 0.0007 0.0094 0.0019 8.9 11.5 1.56 0.069 0
0.0018 6.7 0.23 0.7 0.5 300.8 19.7 3.08 0.155 0.082 0.02 35.7 3.9 0.562 0.0094 0.28 0.15 0.014 0.0005 0 0.4 0 0.0001 42 5.5 0.237 0.012 0.0343 0.0035
0.0183 0.0034 0.024 0.004 0.0054 0.0003 64.3 9.2 0.25 0.08 0.424 0.022 0 0.4 0.6 0.9 14.5 12.9 0.7 0.4 0.81 0.050 0.0021 0.0011 0.342 0.037 0 10.8
0.0016 0.0006 48.8 21.1 2.8 0.8 0.0059 0.0006 2.5 10.3 6.54 0.98 0.017 0.001 1450 145 510 51
MNS 9/3/95 10 8 FINE 7629 591 346 11 0 25.6 23.3 4.7 12.2 3.1 925.7 58.7 2.84 0.07 0.0071 0.0095 0.0089 0.001 0.0259 0.0027 0 16.2 0.26 0.016 0
0.0026 7.7 0.33 0.2 0.6 88.8 9.3 0.7 0.218 0.073 0.014 0 5.2 1.48 0.0199 0.59 0.2 0.0045 0.0029 0 0.6 0.0002 0.0001 39 4.6 0.046 0.016 0.0161 0.0049
0.022 0.0033 0.016 0.006 0.0122 0.0004 79.3 11.3 0.42 0.04 0.418 0.031 0.8 0.6 1.3 1.3 3.5 15.7 1.6 0.6 0.42 0.010 0.0019 0.0015 0.306 0.022 0 19.9 0
0.0009 27.2 26.5 1.5 0.9 0.0037 0.0026 0 16.2 5.07 1.19 -99 -99 1280 128 70 7
MNS 9/3/95 14 18 FINE 7818 449 202 7 8.3 20.8 20.2 3.5 10 2.2 396.6 25.6 0 0.04 0.0213 0.0067 0.0069 0.0007 0.0254 0.0019 0 11.4 0.82 0.029 0 0.0018
14.1 3.71 0 0.4 121.5 9.3 0.57 0.153 0.137 0.009 26 4 0.477 0.007 0.21 0.14 0.0074 0.0005 0.8 0.4 0.002 0.0008 86 3.9 0.046 0.011 0.0193 0.0034 0.0218
0.0028 0.034 0.005 0.0032 0.0003 56.1 8.1 0 0.03 0.238 0.022 0 0.4 0.8 0.9 0 10.4 1.4 0.4 1.28 0.030 0.0019 0.001 0.269 0.02 0 13.6 0.0027 0.0007 20.2
20 0.5 0.6 0.0004 0.0006 1.7 11.8 7.03 0.96 -99 -99 1690 169 910 91
MNS 9/4/95 10 8 FINE 7780 610 209 8 0 28.2 21.4 5.1 13.5 3.1 790.6 50.2 4.94 0.08 0.0041 0.0098 0.0051 0.001 0.0121 0.0028 2 16.7 0.32 0.019 0 0.0027
3.6 0.34 0 0.6 54.1 7.8 0.97 0.226 0.057 0.006 0 4.2 0.679 0.0094 0.08 0.2 0.0025 0.0021 0.6 0.6 0.0008 0.0001 30 3.9 0.055 0.017 0.0046 0.0051 0.0089
0.0019 0.019 0.007 0.0018 0.0005 73.1 10.7 0.1 0.08 0.159 0.032 1 0.5 3.3 1.4 32.7 19.9 1.9 0.6 0.31 0.010 0.0011 0.0015 0.184 0.014 0 17.8 0.001
0.0011 0 24.5 0.1 0.8 0.0007 0.0015 2.9 13.2 2.98 1.17 0.022 0.001 1820 182 240 24
MNS 9/4/95 15 18 FINE 11706 496 103 5 0 19.7 21.2 3.1 19.2 2.7 701.5 44.3 3.04 0.05 0.0492 0.0184 0.0019 0.0006 0.0166 0.0053 3.7 10.4 2.35 0.063
0.00036 0.0017 9.4 1.09 0.7 0.5 138.7 10.1 0.45 0.14 0.12 0.005 0 2.9 0.457 0.0062 0.27 0.13 0.0033 0.0011 0.6 0.4 0 0.0001 82 3.2 0.057 0.011 0.0079
0.0032 0.002 0.0009 0.031 0.004 0.0002 0.0003 46.6 6.9 0.41 0.09 0.075 0.02 1.1 0.4 1.7 0.9 0 8.4 1 0.4 0.71 0.010 0.0012 0.0009 0.175 0.011 0 12.3
0.0013 0.0006 38.9 19.2 0.4 0.6 0.0019 0.0009 4.5 8.7 17.75 1.47 0.043 0.001 2650 265 1900 190
MNS 9/5/95 11 9 FINE 16699 714 291 8 17.9 27.2 56.6 5.2 21.8 3.7 1212.4 76.8 3.53 0.08 0.8733 0.0289 0.0043 0.0009 0.0603 0.01 220.5 15.2 2.88 0.078
0.00533 0.0024 14.5 2.18 0 0.6 340.5 22.2 1.08 0.204 0.197 0.008 0 4.4 1.238 0.0159 1.21 0.19 0.0254 0.0019 13.4 1.2 0.0014 0.0005 138 5.1 0.142 0.015
0.0231 0.0046 0.0062 0.0012 0.069 0.008 0.0007 0.0004 83.3 11.9 1.49 0.28 0.23 0.029 2.5 0.6 32.2 2.8 8.5 16.2 1.1 0.5 2.31 0.040 0.0028 0.0014 0.349
0.023 0 16.8 0.0044 0.0013 0 21.5 2.9 1.1 0.0055 0.0017 4.9 15 36.33 2.79 0.041 0.001 2630 263 1720 172
THP 8/10/95 8 7 FINE 22915 955 318 10 31 37.5 140.9 12.1 21.9 4.6 2224.3 139.2 3.26 0.1 0.0427 0.0115 0.0145 0.0012 0.0527 0.0033 534.7 20.1 0.39
0.029 0.04474 0.0035 47.3 0.4 1 0.7 217.8 16.4 2.57 0.265 0.721 0.041 4.5 5.5 0.175 0.0049 0.85 0.26 0.0365 0.0042 0 0.7 0.016 0.0017 329 10.3 0.257
0.062 0.0714 0.006 0.0341 0.0038 0.308 0.015 0.0452 0.0005 175.9 24.2 3.65 0.52 3.169 0.037 0.9 0.6 0 1.4 16.5 22.5 1.5 0.7 0.39 0.020 0.1038 0.0025
0.466 0.034 1131.3 145.8 0.0587 0.0029 28.9 33.8 1.7 1.2 0.0939 0.0074 29.4 16.8 6.12 1.52 0.047 0.004 1190 119 180 18
THP 8/10/95 16 15 FINE 18240 639 609 11 0 18 106.4 7.6 22.5 3.1 1426 89.2 2.88 0.06 0.019 0.0057 0.0187 0.0006 0.0269 0.0017 429 10.1 1.33 0.042
0.00095 0.0016 8.9 0.2 0.5 0.4 164 11.4 1.31 0.132 0.553 0.016 0 2.7 0.126 0.0026 0.96 0.13 0.0289 0.0021 0.7 0.4 0.0091 0.0005 254 6.7 0.251 0.085
0.0304 0.003 0.022 0.0015 0.251 0.009 0.0333 0.0003 112.3 15.3 3.26 0.24 1.366 0.019 0.8 0.3 2.9 0.9 14.3 12.1 0.7 0.3 1.23 0.030 0.0815 0.0014 0.364
0.025 896.5 115.4 0.0476 0.0019 29.1 17.8 0.6 0.6 0.0701 0.0032 24.2 8.5 18.78 1.52 0.017 0.001 800 80 390 39
THP 8/12/95 11 7 FINE 9190 540 184 6 0 24 83.5 7 11.4 2.7 691.7 43.7 1.96 0.07 0.0234 0.0118 0.0166 0.0033 0.0228 0.0023 325.7 14 0.69 0.023 0.00886
0.0023 3.3 0.28 1.2 0.5 154.2 11.9 0.96 0.186 0.485 0.013 13.9 4 0.095 0.0024 1 0.17 0.0347 0.002 0 0.5 0.0086 0.001 216 6.2 0.133 0.05 0.032 0.0042
0.0352 0.0017 0.212 0.007 0.0041 0.0004 124.1 16.9 4.72 0.41 0.408 0.026 0 0.4 2.2 1.1 0 15.3 0.3 0.4 0.29 0.010 0.0619 0.0015 0.288 0.019 542.4 70.2
0.037 0.0014 0 22.5 1.2 0.8 0.0571 0.0023 14.1 11.9 4.16 1.02 -99 -99 1030 103 370 37
THP 8/13/95 10 8 FINE 13869 667 194 7 0 28.5 57.7 6.6 12.9 3.3 1590.4 99.6 4.78 0.07 0.0311 0.0091 0.0141 0.0009 0.0156 0.0026 199 15.5 0.28 0.028 0
0.0025 7.2 0.31 0.7 0.5 81.9 9.5 0.94 0.209 0.274 0.011 0 3.7 0.084 0.0024 0.23 0.19 0.0222 0.0023 0.8 0.6 0.0046 0.0005 122 4.7 0.251 0.016 0.0196
0.0047 0.0073 0.0015 0.115 0.01 0.0347 0.0004 98.1 13.9 2.1 0.2 0.768 0.029 1.9 0.5 0 1.2 38.8 19.8 2 0.6 0.33 0.010 0.0366 0.0015 0.412 0.027 355.4
47.2 0.0224 0.0013 48.9 28.1 1.1 0.9 0.0335 0.0021 9.4 13.1 6.11 1.18 -99 -99 1160 116 120 12
THP 8/14/95 10 8 FINE 28722 996 201 7 0 24.7 32.5 4.7 39 5.1 3675.7 229.2 17.87 0.17 0.0297 0.0087 0.0111 0.0009 0.0252 0.0025 44.4 14.8 0.41 0.028 0
0.0024 5.7 0.3 2.4 0.6 74 8.5 2.19 0.199 0.126 0.014 0 3.7 0.394 0.0064 0.2 0.18 0.0026 0.0021 1.2 0.5 0.0006 0.0001 45 4.1 0.07 0.015 0.0332 0.0045

0.0005 0.0021 0.093 0.012 0.0084 0.0004 77.5 11.5 0.67 0.13 0.87 0.028 9.4 0.9 3.3 1.2 34.6 18.8 0.2 0.5 1.48 0.040 0.0072 0.0013 0.365 0.025 78.5
13.6 0.0056 0.0012 46.6 25.6 0 0.7 0.0092 0.0036 2.5 11.4 8.04 1.21 -99 -99 2140 214 260 26
THP 8/17/95 11 7 FINE 38594 1251 194 7 21 28.1 44 7 55.7 6.4 4907.9 306 2.95 0.06 0.0833 0.0082 0.0095 0.0009 0.0247 0.0024 133.2 14.1 0.67 0.021 0
0.0023 5.9 0.28 3.1 0.7 94.8 9.6 0 0.19 0.183 0.012 0 4.2 0.07 0.0028 0.33 0.18 0.0259 0.0043 0.9 0.5 0.0038 0.0008 85 4 0.109 0.014 0.0475 0.0043
0.014 0.0023 0.089 0.009 0.0133 0.0004 99.3 14.3 0.95 0.14 0.864 0.027 2.2 0.5 3.9 1.3 40.3 19 2.4 0.6 0.4 0.020 0.0228 0.0013 0.886 0.057 304.2 41.3
0.0162 0.0014 66.6 27.3 0 0.7 0.0301 0.0046 7.2 12.2 9.03 1.21 -99 -99 1110 111 310 31
THP 8/19/95 10 7 FINE 37647 1238 127 7 0 28 46.6 6.3 46 5.7 4681.6 292 4.64 0.08 0.0153 0.0088 0.0054 0.0009 0.024 0.0025 71.2 15 0.5 0.021 0 0.0024
3 0.3 0.8 0.6 112.8 10.2 1.12 0.202 0.13 0.011 0 4.2 0.088 0.0031 0.37 0.18 0.01 0.002 0.4 0.5 0.0003 0.0001 58 4 0.091 0.015 0.0366 0.0046 0.0035
0.0018 0.071 0.008 0.0052 0.0004 47.8 7.9 0.53 0.04 0.327 0.028 3.4 0.6 4.2 1.3 65.9 22.1 1.4 0.5 0.65 0.020 0.0119 0.0014 0.786 0.05 157.6 23.1
0.0092 0.0011 0 25 2.2 1 0.0125 0.003 6.5 13.5 7.59 1.21 0.005 0.001 1980 198 280 28
THP 8/21/95 15 17 FINE 213320 6408 35069 573 0 19.3 264.2 17.2 0 2.2 504.5 32.5 2.77 0.06 0.4327 0.0058 0.0077 0.0006 0.0108 0.0017 209.8 10.2 0.92
0.28 0.00598 0.0016 3.4 1.19 4.9 0.7 80.6 7.2 28.54 0.134 0.781 0.019 49.5 4.6 0.078 0.002 2.3 0.13 0.0385 0.0034 22.1 1.5 0.0061 0.0006 123 3.8 3.606
0.01 0.0662 0.003 0.0093 0.0011 0.583 0.095 0.003 0.0003 88.8 17.2 1.77 0.36 0.552 0.159 12.8 1 0 0.9 0 10.9 1.4 0.4 0.25 0.010 0.0375 0.0011 0.161
0.013 745.3 110.6 0.0348 0.0005 1.9 17.9 0 0.6 0.0445 0.0023 12.2 9 14.19 1.25 0.007 0.001 1990 199 1100 110
THP 8/22/95 9 9 FINE 5920 630 223 8 27 37 40.1 6.3 0 2.7 448.9 28.9 1.84 0.07 0.0055 0.0105 0.0131 0.0011 0.0061 0.003 80.8 18 1.03 0.033 0 0.0029
2.9 0.36 0.8 0.6 107.8 11.3 1.17 0.242 0.211 0.011 96.2 8 0.039 0.0024 0.08 0.22 0.0052 0.0008 0 0.6 0.0027 0.001 53 4.2 0.055 0.018 0.0411 0.0054
0.0005 0.0018 0.106 0.007 0.0035 0.0005 69.4 10.6 0.32 0.05 0.58 0.034 1.6 0.6 3.3 1.5 16.3 22.5 0 0.6 0.54 0.020 0.0139 0.0016 0.104 0.013 191.7 27.2
0.0103 0.0014 0 28.9 0.5 1 0.0126 0.0022 5.5 15.6 10.23 1.48 0.014 0.001 1440 144 870 87
THP 8/24/95 10 7 FINE 8953 586 69 6 0 29.3 15.7 5.6 11.6 2.9 1285.1 80.6 1.48 0.06 0.0083 0.0098 0.002 0.0009 0.0127 0.0026 11.6 15.5 0.28 0.011 0
0.0025 1.4 0.31 1.9 0.6 53.7 8.4 0.56 0.208 0.022 0.006 1 4.2 0.022 0.002 0.04 0.19 0.0038 0.002 0.7 0.5 0.0002 0.0003 26 3.3 0.004 0.016 0.0473
0.0047 0 0.0012 0.013 0.005 0.0005 0.0004 32.5 6.1 0.96 0.12 0.06 0.029 1.8 0.5 1.9 1.2 40.5 21.8 0.4 0.5 0.21 0.010 0.0012 0.0014 0.263 0.019 26.2
8.6 0.0009 0.0008 17.2 27.6 0 0.8 0.0019 0.0014 2 13.8 5.22 1.15 0.026 0.001 800 80 500 50
THP 8/24/95 13 17 FINE 7688 448 158 5 0 20.5 24.6 3.8 4.9 2.1 1084.6 67.9 2.42 0.06 0.0037 0.0067 0.0027 0.0007 0.0108 0.0019 24.1 11.4 0.35 0.015 0
0.0018 0.8 0.23 1.5 0.5 26.3 5.5 1.24 0.154 0.032 0.007 6.9 3 0.019 0.0015 0.1 0.14 0.0076 0.0014 0 0.4 0.0003 0.0002 21 2.5 0.04 0.012 0.0283 0.0035
0.0055 0.0012 0.035 0.008 0.0005 0.0003 42 6.6 0.18 0.08 0.131 0.022 1.5 0.4 2.2 0.9 0 12.2 0.5 0.4 0.23 0.010 0.0036 0.001 0.27 0.018 26.5 7.1 0.002
0.0009 0 17.9 1 0.7 0.0041 0.0013 1.7 9.8 6.69 0.95 0.022 0.001 440 44 420 42
THP 8/31/95 9 8 FINE 24758 921 99 7 10 28.3 27.5 4.8 79.1 7.9 2600.3 162.5 1.86 0.07 0.0132 0.0117 0.0022 0.001 0.0118 0.0027 36.2 16.2 0.38 0.014 0
0.0026 1.3 0.56 0 0.5 70 8.5 0.59 0.218 0.031 0.007 0 4.2 0.031 0.0021 0.11 0.2 0.006 0.0016 1 0.6 0.0005 0.0003 25 3.5 0.033 0.016 0.0218 0.0049 0
0.0013 0.034 0.007 0.0004 0.0004 146.6 20.1 0 0.04 0.031 0.031 0 0.5 0 1.1 52.3 20.6 1.1 0.5 0.19 0.010 0.0031 0.0015 0.551 0.034 0 12.2 0.0021 0.0009
4.5 24.3 1.3 0.9 0.0038 0.0013 0 14.5 5.66 1.2 -99 -99 1050 105 480 48
THP 9/1/95 9 8 FINE 11306 659 125 7 0 28 50.2 5.6 14.8 3.7 995.7 63.4 3.02 0.07 0.0136 0.0098 0.0101 0.0029 0.0129 0.0028 203.9 16.8 0.43 0.019
0.00309 0.0027 1.7 0.34 1 0.7 91.6 9.2 1.1 0.226 0.284 0.009 0 5.3 0.088 0.0025 0.3 0.2 0.0129 0.0025 0.4 0.6 0.004 0.0003 117 4.6 0.045 0.017 0.0556
0.0051 0.0037 0.0013 0.147 0.009 0.0015 0.0007 179.7 24.1 2.07 0.19 0.083 0.032 0 0.6 2.4 1.3 36.5 19.5 2.7 0.6 0.09 0.010 0.0346 0.0016 0.195 0.015
183.8 28 0.0241 0.0013 0 24.9 1.7 1 0.0361 0.0018 6.4 16 2.04 1.16 0.010 0.001 960 96 230 23
THP 9/1/95 14 17 FINE 16694 614 134 5 52.4 20.8 87.1 6.1 24.5 3.3 1144.5 72 2.96 0.06 0.0205 0.0062 0.0049 0.0006 0.0307 0.0018 168 10.6 3.12 0.083
0.00955 0.0017 6.7 2.26 0.6 0.4 232.7 15.1 1.19 0.398 0.501 0.013 0 2.9 0.077 0.0026 0.44 0.13 0.0227 0.0019 2.7 0.5 0.0043 0.0012 138 4.3 0.075 0.025
0.0322 0.0032 0.0599 0.0019 0.274 0.008 0.003 0.0003 82.8 11.6 1.83 0.23 0.482 0.161 0 0.4 7 1.1 0 9.2 1.1 0.4 3.26 0.060 0.032 0.0011 0.331 0.022 268
36 0.0209 0.001 0 14.3 2.5 0.8 0.0344 0.0019 10.2 9.7 16.1 1.39 0.025 0.002 2150 215 1760 176
THP 9/4/95 10 7 FINE 7975 570 208 7 18.1 26.1 22.4 4.7 6.3 2.6 819 51.9 3.85 0.08 0.0091 0.009 0.0015 0.0009 0.0119 0.0026 12.7 15.4 0.97 0.03 0
0.0025 1.2 0.31 0 0.5 39.8 7 1.04 0.207 0.023 0.006 0 3.7 1.004 0.0127 0 0.19 0.0028 0.0022 0.5 0.5 0 0.0001 8 3.3 0.015 0.016 0.0151 0.0047 0.0026
0.0012 0.014 0.007 0.0015 0.0004 95.2 13.3 0.46 0.08 0.322 0.029 0.8 0.5 2.5 1.3 0 14.3 2.7 0.6 0.62 0.010 0 0.0014 0.183 0.014 0 21.5 0 0.0007 0 22.6
1 0.9 0.001 0.0016 1.1 12.5 11.28 1.37 0.010 0.001 2010 201 480 48

Lesson XIV

Review of Practice Exercises
Peter Scheff

INTRODUCTION TO RECEPTOR MODELING

Lesson Title: Review of Practice Exercises
Lesson: XIV
Prepared By: P.A. Scheff
Date: March 3, 1998

Lesson Goal: The goal of this lesson is to describe the solutions to the homework assignments.

Lesson Objectives: At the completion of this lesson students will be able to:

Explain the methods for solving the homework questions.

Explain where to get answers to their specific questions about problem solutions.

Lesson XV

CMB Application for VOCs
Donna Kenski

INTRODUCTION TO RECEPTOR MODELING

Lesson Title: CMB Application for VOCs
Lesson: XV
Prepared By: D. Kenski
Date: March 3, 1998

Lesson Objectives: At the completion of this lesson students will be able to:

List at least 3 model assumptions that are especially relevant to VOC receptor model applications.

List at least 3 limitations and advantages of receptor models for VOC source apportionment.

List at least 3 VOC source groups that are typically modeled.

List at least 3 characteristics that are important in developing VOC source profiles (versus PM source profiles).

Review typical VOC receptor modeling results for 5 U.S. cities. (Need to restate this one)

List at least 3 advanced applications of VOC receptor models to ozone prediction, and be able to explain the usefulness of VOC source apportionment for ozone control curve development.

INTRODUCTION TO RECEPTOR MODELING

LESSON XV OUTLINE

I. Introduction - Objectives

II. Why VOCs?

III. Receptor model assumptions and implications for VOC modeling

IV. Limitations and advantages of receptor models for VOCs

V. Important VOC sources

VI. VOC source fingerprint considerations

VII. Model results and validation

- A. Diurnal patterns
- B. Distributions with wind direction
- C. Trajectory analysis
- D. Comparisons with emission inventory data
- E. Emission rate calculations

VIII. Review of VOC studies in U.S. cities

- A. Chicago
- B. Washington D.C
- C. Beaumont, Texas
- D. Atlanta
- E. Detroit

IX. Advanced applications --source control curve development

Lesson XV. CMB Applications for VOCs

Donna M. Kenski, Ph.D.
Environmental Scientist
U.S. EPA Region 5

What are VOCs and why are they important?

- VOC = gaseous organic compounds with vapor pressures greater than 0.15 mmHg, generally C_1-C_{12}.
- Some are toxic, hazardous, or both
- On warm sunny days, VOCs react with nitrogen oxides to form ozone.

Reactions? What about conservation of mass?

- VOC reactions violate conservation of mass assumption basic to receptor models.
- We compensate for reactivity by:
  - Choosing species with similar reaction rates
  - Including reactivity term in model

CMB Applications for VOCs

Advantages and limitations of receptor models applied to VOCs

- CMB tolerates deviations in model assumptions well (so reactivity is not such a problem)
- Useful for fugitive emission sources
- Shorter averaging times, individual samples

Advantages and limitations of receptor models applied to VOCs

- Can identify previously uninventoried sources
- Uncertainties in emission inventories greater for VOCs than for criteria pollutants

Why emission inventories?

- Basis for photochemical grid modeling and VOC/ozone control programs
- Most inventory data is not measured but estimated from emission factors
- Some data are self-reported

CMB Applications for VOCs

Why emission inventories?

- Some types of emissions are especially difficult to quantify
- Few estimates of inventory variability

Refinery capacity and VOC emissions

	Capacity bbl/day	Reported emissions, tons/year	Emissions as % of throughput
Yorktown, VA	53,000	7,905	0.33
Refinery A	323,000	2,405	0.017
Refinery B	60,000	272	0.0089
Refinery C	200,000	924	0.0089

Choosing VOC fingerprints and fitting species

- Same principles apply to VOCs as particulates
  - Look for species that occur in both source emission and ambient air
  - Minimize collinearity

CMB Applications for VOCs

Weighting schemes

- Gas chromatograph errors vary inversely with concentration, so each observation is weighted by its measurement error (a function of concentration). Observations with greater error have less influence on the solution.

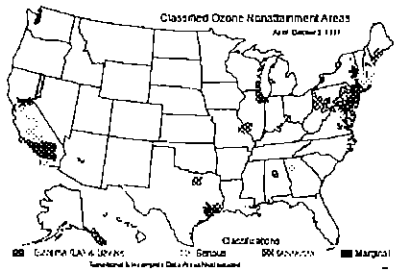
Show me the data!

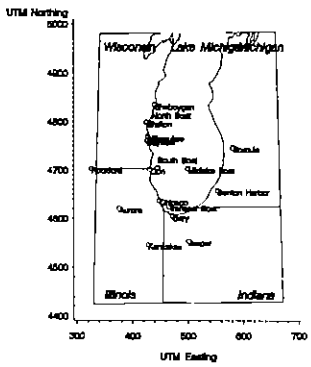
- PAMS -- nationwide network of VOC monitors, including much continuous GC data
- Special ozone studies to support photochemical grid models

Show me the data!

- Toxic studies and special purpose monitoring

CMB Applications for VOCs





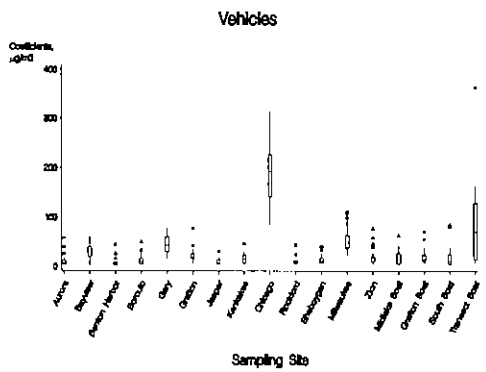
Uses of VOC receptor models

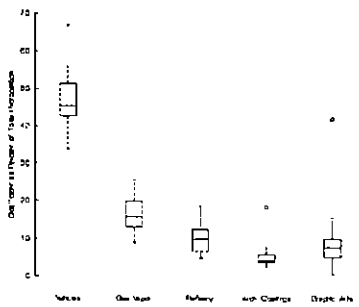
- Estimate and validate emission inventories
- Examine diurnal variation in emissions

CMB Applications for VOCs

Uses of VOC receptor models

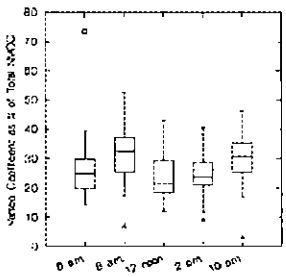
- Track changes in inventories over longer time periods
- Estimate mass emission rates



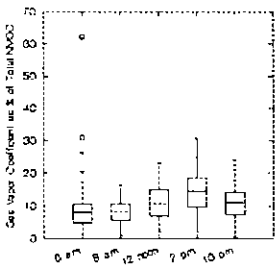


Typical distribution of source coefficients in Chicago

CMB Applications for VOCs



Diurnal variation in vehicle contributions in Detroit



Typical distribution of gasoline vapor contributions in Detroit

See Insert of Figure 38

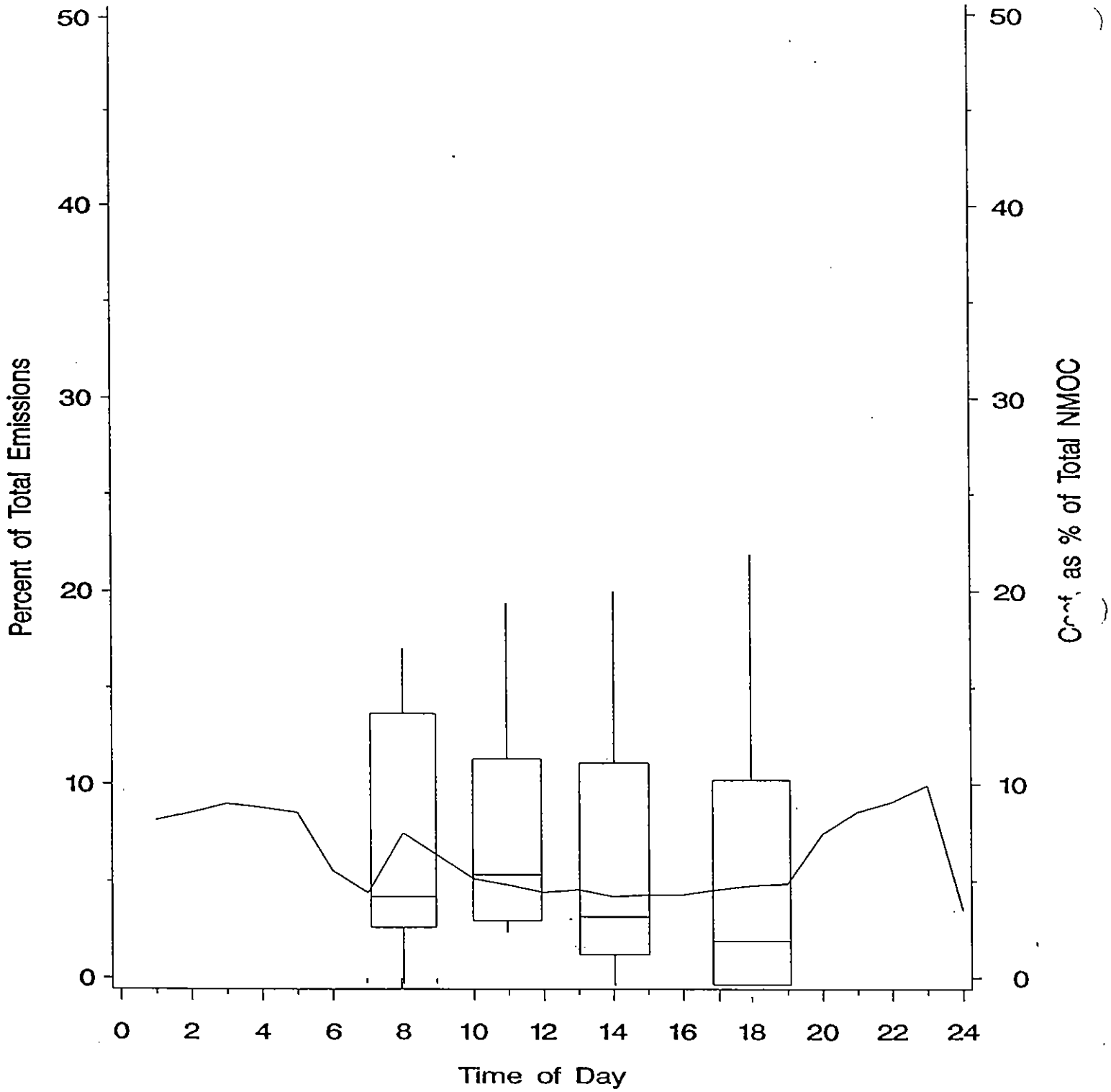
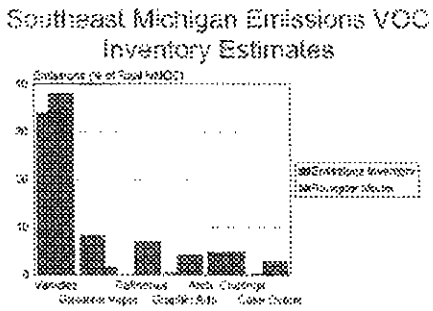


Figure 38. Comparison of LMOS Emission Inventory and Receptor Model Emission Inventory for Borculo Gasoline Storage and Transport

CMB Applications for VOCs

See Insert of Figure 39



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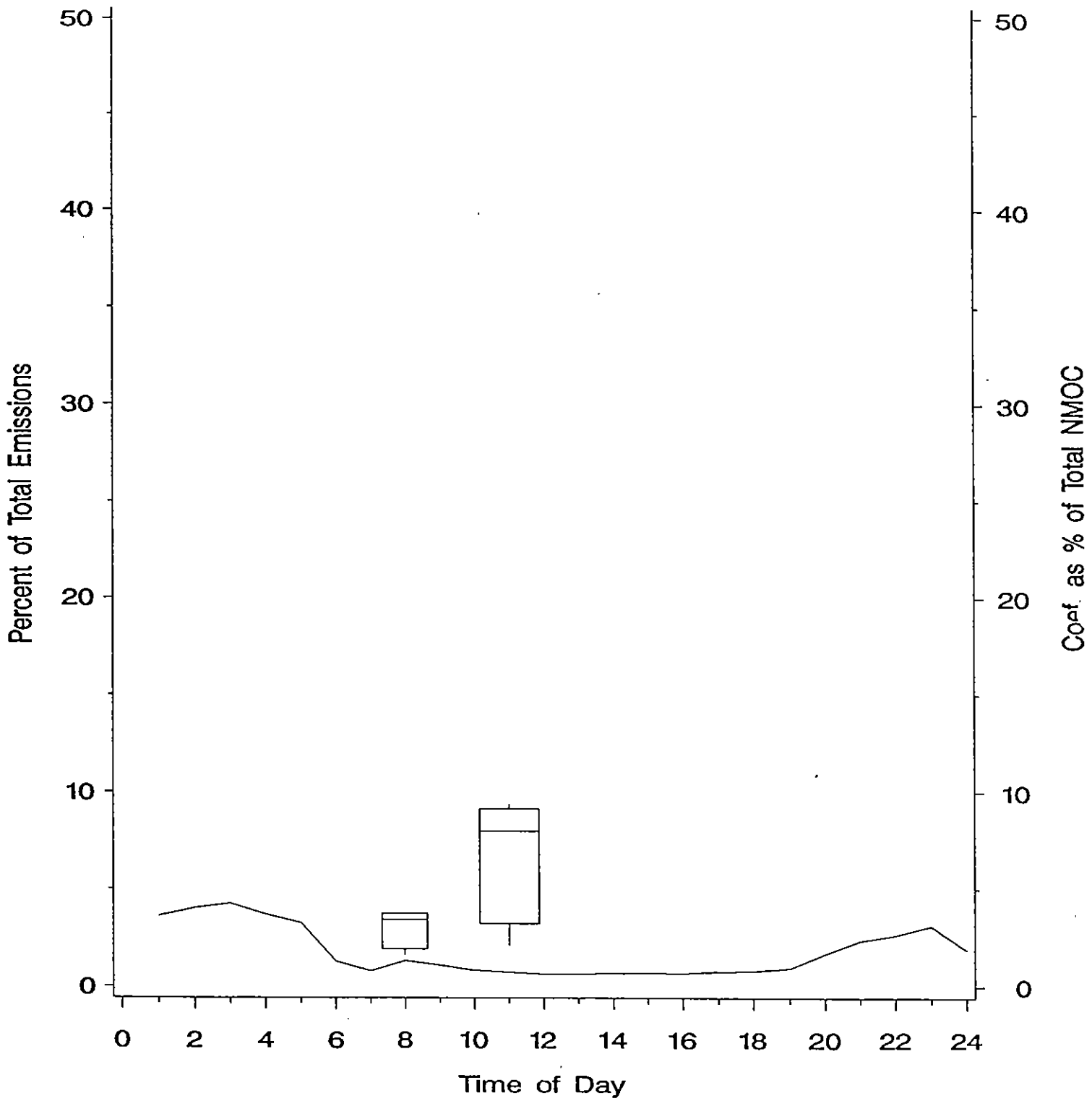
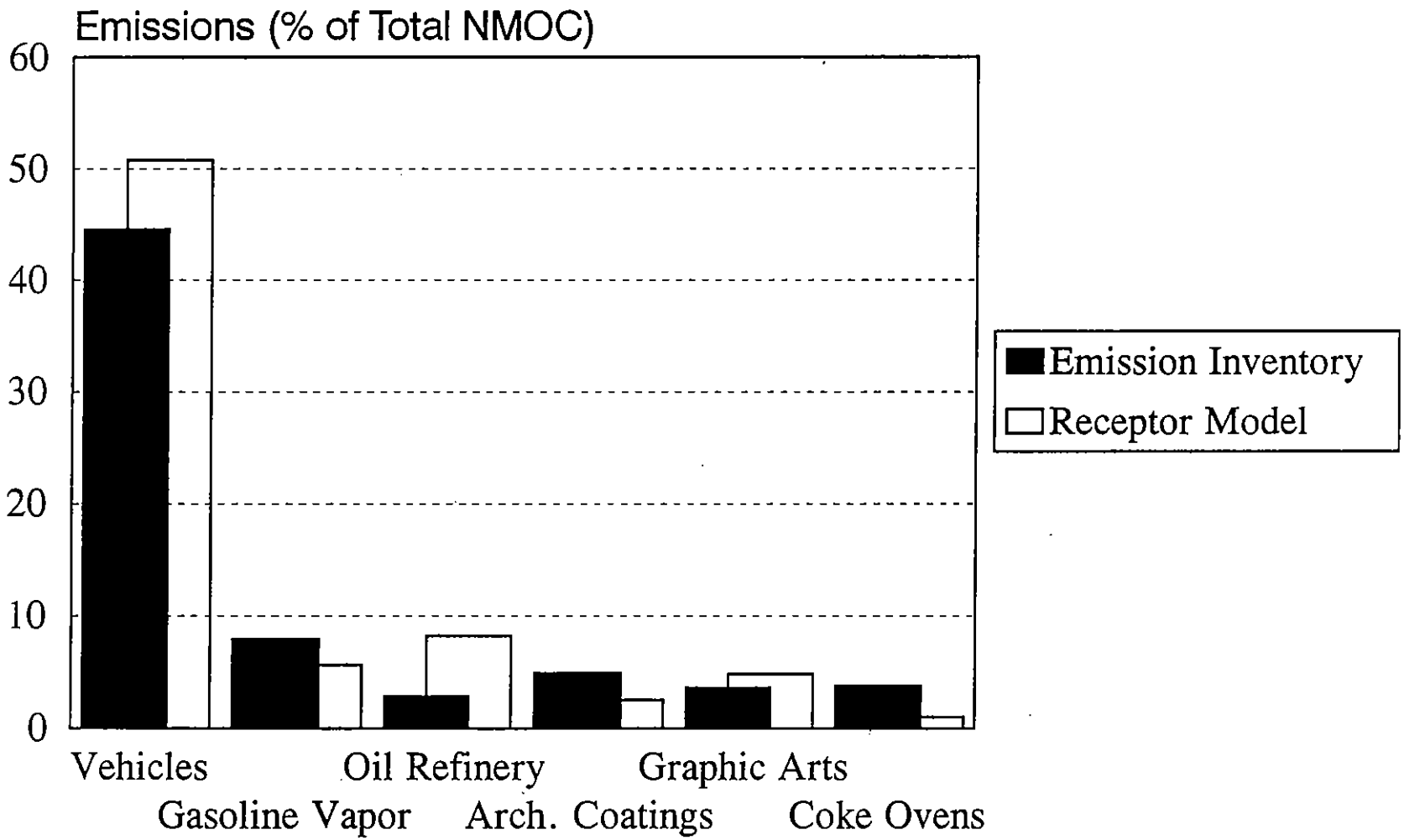


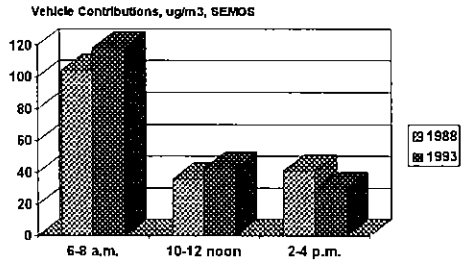
Figure 39. Comparison of LMOS Emission Inventory and Receptor Model Emission Inventory for Chicago Gasoline Storage and Transport

Using PAMS VOC Data to Check Emission Inventory Estimates in the Lake Michigan Region

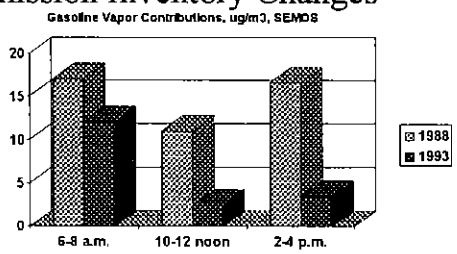


Inventory data for metro Chicago region; receptor model data from NWU and Gary sites

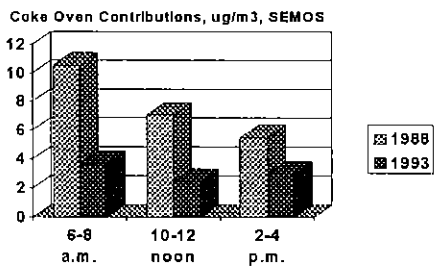
Using Receptor Models to Track Emission Inventory Changes



Using Receptor Models to Track Emission Inventory Changes



Using Receptor Models to Track Emission Inventory Changes



Mass Emission Rates

- Box model across urban area
- Upwind and downwind concentrations determined from receptor model
- Top of box determined from lapse rate

Mass Emission Rates

- Length of box determined from wind speed

Box model estimates of mass emission rates

Date (1991)	Wind Speed km/hr	Mixing Ht m amsl	NMOC flux kg/hr	Vehicle flux kg/hr
June 25	6	193	4,561	427
June 26	10	223	20,604	11,749
June 27	15	373	21,201	17,749
June 28	15	423	38,435	26,867
July 16	8	573	49,475	30,924
July 17	11	543	49,242	33,486
July 18	10	323	20,286	14,820
LMOS 7 am			29,286	15,114
LMOS 8 am			45,982	23,211

Lesson XVI

Multiple Linear Regression and Carbon-14

Charles Lewis

INTRODUCTION TO RECEPTOR MODELING

Lesson Title: Multiple Regression Modeling and Carbon-14
Lesson: XVI
Prepared By: Charles W. Lewis
Date: March 3, 1998

Lesson Goal: Since the CMB receptor model requires a library of accurate and representative source profiles, this session provides some alternative receptor modeling approaches, especially Multiple Linear Regression techniques and their validation by radiocarbon (C-14).

Lesson Objectives: At the completion of this lesson students will be able to:

List at least 3 alternative receptor modeling approaches.

Explain the tracer species concept and be able to list at least 2 particulate and 2 gaseous tracer examples.

Explain how to produce pure tracers from chemical species that have more than one source.

List at least 3 uses of Multiple Linear Regression (MLR) for quantitative estimates of abundance and source impacts when pure tracers are available.

Explain MLR validation using radiocarbon techniques.

Explain how to use MLR to apportion exotic air pollutant properties such as mutagenicity.

List at least one current research issue that involves MLR.

References:

1. C.W. Lewis and W. Einfeld. "Origins of Carbonaceous Aerosol in Denver and Albuquerque during Winter." Environ. Internat. 11, 243-247 (1985).

2. R.B. Zweidinger, R.K. Stevens, C.W. Lewis et al. "Identification of Volatile Hydrocarbons as Mobile Source Tracers for Fine-Particulate Organics." Environ. Sci. Technol. 24, 538-542 (1990)

3. C.W. Lewis, R.E. Baumgardner, R.K. Stevens et al. "Contribution of Woodsmoke and Motor Vehicle Emissions to Ambient Aerosol Mutagenicity." Environ. Sci. Technol. 22, 968-971 (1988).

4. G.A. Klouda, C.W. Lewis, R.A. Rasmussen et al. "Radiocarbon Measurements of Atmospheric Volatile Organic Compounds: Quantifying the Biogenic Contribution," Environ. Sci. Technol., 30, 1098-1105 (1996).

5. R.C. Henry, C.W. Lewis and J.F. Collins. "Vehicle-Related Hydrocarbon Source Compositions from Ambient Data: the GRACE/SAFER Method." Environ. Sci. Technol. 28, 823-832 (1994).

INTRODUCTION TO RECEPTOR MODELING

LESSON XVI OUTLINE

I. Introduction - Objectives

II. The Tracer Species Concept.

A. Certain chemical species are strongly associated with particular sources. Their presence in an ambient air sample is a qualitative indicator that the associated sources may be pollutant contributors to the sample.

1. Aerosol Examples: Si, Cl, Zn, Se, Pb

2. VOC Examples: Carbon monoxide, acetylene, benzene, propane, iso-pentane, isoprene

B. A semi-quantitative receptor model can be devised by multiplying the ambient concentration of a tracer species by ones best estimate of the abundance of the tracer in the emissions from the assumed source. This gives an upper limit of the impact of that source.

C. Pure tracers can be produced from chemical species that have more than one source.

1. Examples: water-soluble fine particle potassium, and soil-corrected fine particle potassium

III. Multiple Linear Regression (MLR): Provides quantitative estimates of abundances and source impacts when pure tracers are available.

A. Example: Mobile source and woodsmoke contributions to fine particle organics.

B. Example: Mobile source tracer using fine particle Pb.

1. Confirmation of the technique

2. Alternatives: Correlation of several VOCs vs. Pb

C. Results using the 2-source MLR approach.

IV. MLR Validation by Radiocarbon (Carbon-14): A deterministic (non-statistical) approach.

A. Introduction to the radiocarbon method.

B. Equivalence of radiocarbon and soil-corrected potassium tracers of woodsmoke.

V. Using MLR to Apportion Exotic Air Pollutant Properties.

A. Example: Mutagenicity.

VI. Research in Progress.

A. Using the radiocarbon method to determine the biogenic traction of VOC: Solving the ground-level ozone problem.

B. Extracting source profiles from ambient data: The SAFER method.

1. Example: Sources of VOCs in Atlanta

VII. Questions on This Lesson.

VIII. Summary

Multiple Linear Regression (MLR) and Radiocarbon (^{14}C)

Charles W. Lewis
US EPA, RTP, NC

"Tracer" Receptor Model

- Qualitative
- Semi-quantitative
- Quantitative (MLR)

Candidate Tracers for Receptor Modeling

Aerosol Chart

Candidate Tracers for Receptor Modeling

Aerosol

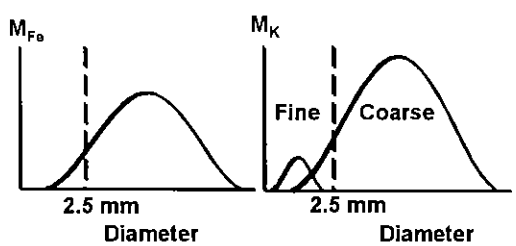
Species	Dominant Source	Multiplier (approx.)
Na, Cl	marine	Na: 2.54, Cl: 1.64
K', Cl, ^{14}C	wood combustion	K': 100, ^{14}C: 10^{12}
Al, Si, K, Ca, Ti, Fe	soil	Al: 12, Si: 4
Zn, Pb	incinerators	Zn: 10, Pb: 10
Mn, Fe	steel production	
As, Se	coal combustion	
Br, Pb	leaded gasoline combustion (non-USA)	
V	electric utility oil combustion	

Candidate Tracers for Receptor Modeling

Non-methane Organic Compounds (VOC)

Chart

Wood Smoke Tracer



Multiple Linear Regression Receptor Model

$$C_I = A_0 + \sum_J A_J X_{IJ} + \in_I$$

Candidate Tracers for Receptor Modeling

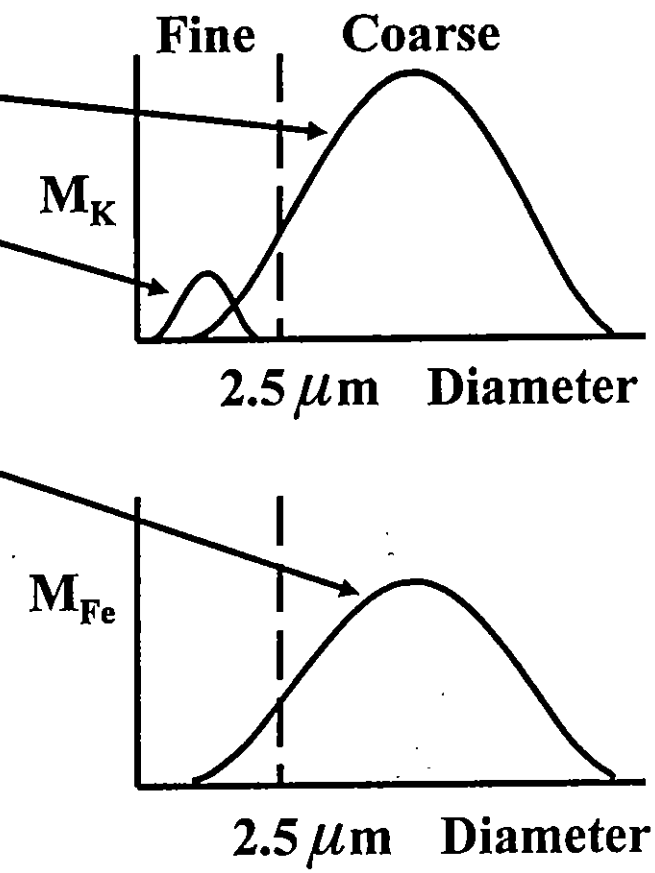
Non-methane Organic Compounds (VOC)

Species	Dominant Source	Multiplier (approx.)
carbon monoxide, acetylene	automobile exhaust	0.1 25
iso-pentane	gasoline headspace evaporation	4
toluene	graphic arts	
xylenes	industrial solvents	
ethane, propane	natural gas	1.5 8
propane	liquified petroleum gas (LPG)	1
isoprene, a-pinene, b-pinene, ^{14}C	biogenic emissions	

Wood Smoke Tracer

- **Assumptions:**
  1. $K_f + K_C = K_{soil} + K_{wood}$
  2. $Fe_f + Fe_C = Fe_{soil}$
  3. K_{soil} and Fe_{soil} have identical size distributions

  then



$K_{wood} = K_f - Fe_f \times (K_C / Fe_C)$

Note: Average ($[K_C] / [Fe_C]$) = 0.682 $\pm$ 0.098

Multiple Linear Regression Receptor Model

$$C_I = \sum_J A_J X_{IJ} + \in_I$$

where

C_I = amount of pollutant measured in sample I

X_{IJ} = amount of tracer species for source J measured in sample I

$A_J X_{IJ}$ = amount of C_I from source J

A_O = amount of C_I from unidentified sources

$\in_I$ = difference between measured and calculated amounts of pollutant in sample I

Each A_J determined by minimizing $\sum (\in_I)^2$

Fundamental Assumption:

Tracer species X_{IJ} is emitted only by source J

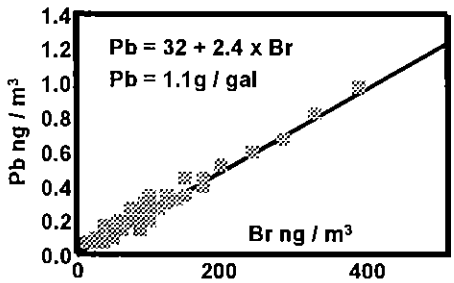
Multiple Linear Regression Receptor Model (2-source application)

$C_I = A_O + A_1 \times (\text{wood tracer})_I + A_2 \times (\text{mobile tracer})_I$

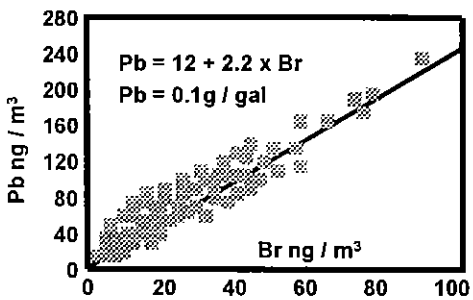
N samples: I = 1, N

3 unknowns: A_O, A_1, A_2

Albuquerque 1985



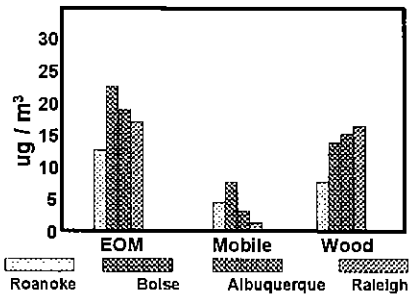
Boise 1986 - 1987



Zweidinger, Stevens, Lewis, et al. (1990).

- Recommend several VOCs as possible replacements for particulate Pb as a tracer of mobile source particulate emissions:
- o - Xylene
- 2 - Methylhexane
- 3 - Methylhexane
- Methylcyclohexane
- 2, 3, 4 - Trimethylpentane
- 2, 3, 4 - Trimethylpentane
- 2 - Methylpentane

EOM Distribution



MLR Validation with ^{14}C

Cosmic Rays

See Insert

The Carbon - 14 Method

- $^{14}C / ^{12}C = f_O = 1.2 \times 10^{-12}$ in living material.
- $^{14}C / ^{12}C = 0$ in material dead for > 10^6 years.
- If $^{14}C / ^{12}C$ in ambient sample = f_S,
  → fractional contribution from living material = f_S / f_0.

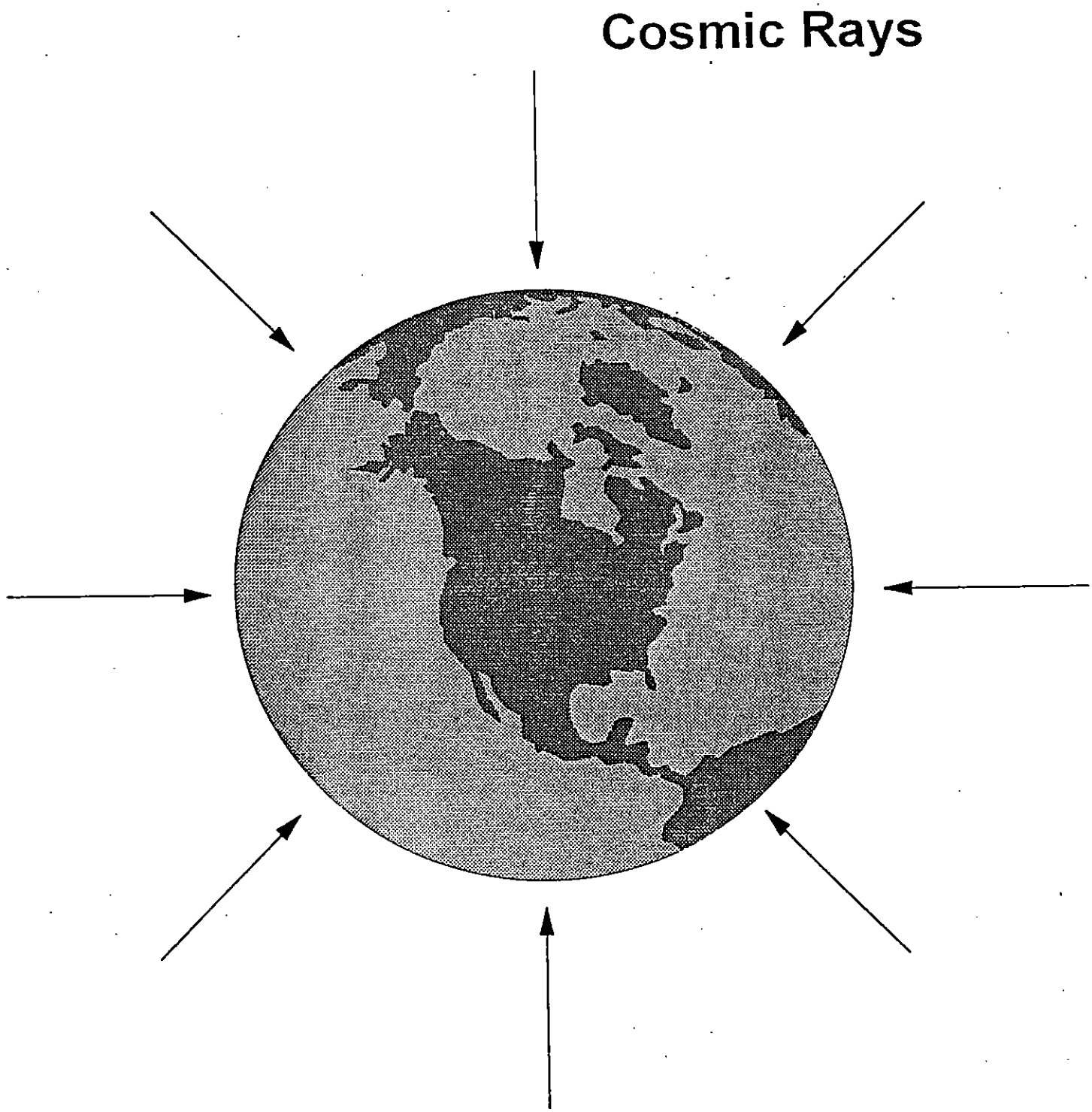
Aerosol Sample Preparation & ^{14}C Measurement

- Sample $\xrightarrow{O_2}$ CO_2 $\xrightarrow{\text{Fe Wool}}$

  Fe-C "bead" →

  Tandem Accelerator Ion Source →

  ^{14}C ion beam, magnetically analyzed and counted

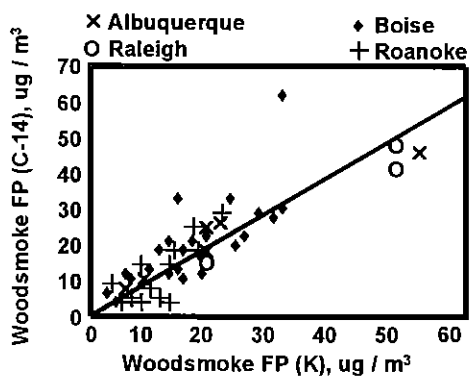


$$\text{Cosmic Rays} \longrightarrow n \xrightarrow{^{14}N} {}^{14}C \xrightarrow{O_2} {}^{14}CO_2 \longrightarrow \text{Biosphere}$$

$$^{14}C \xrightarrow{5730\ \text{yr.}} {}^{14}N$$

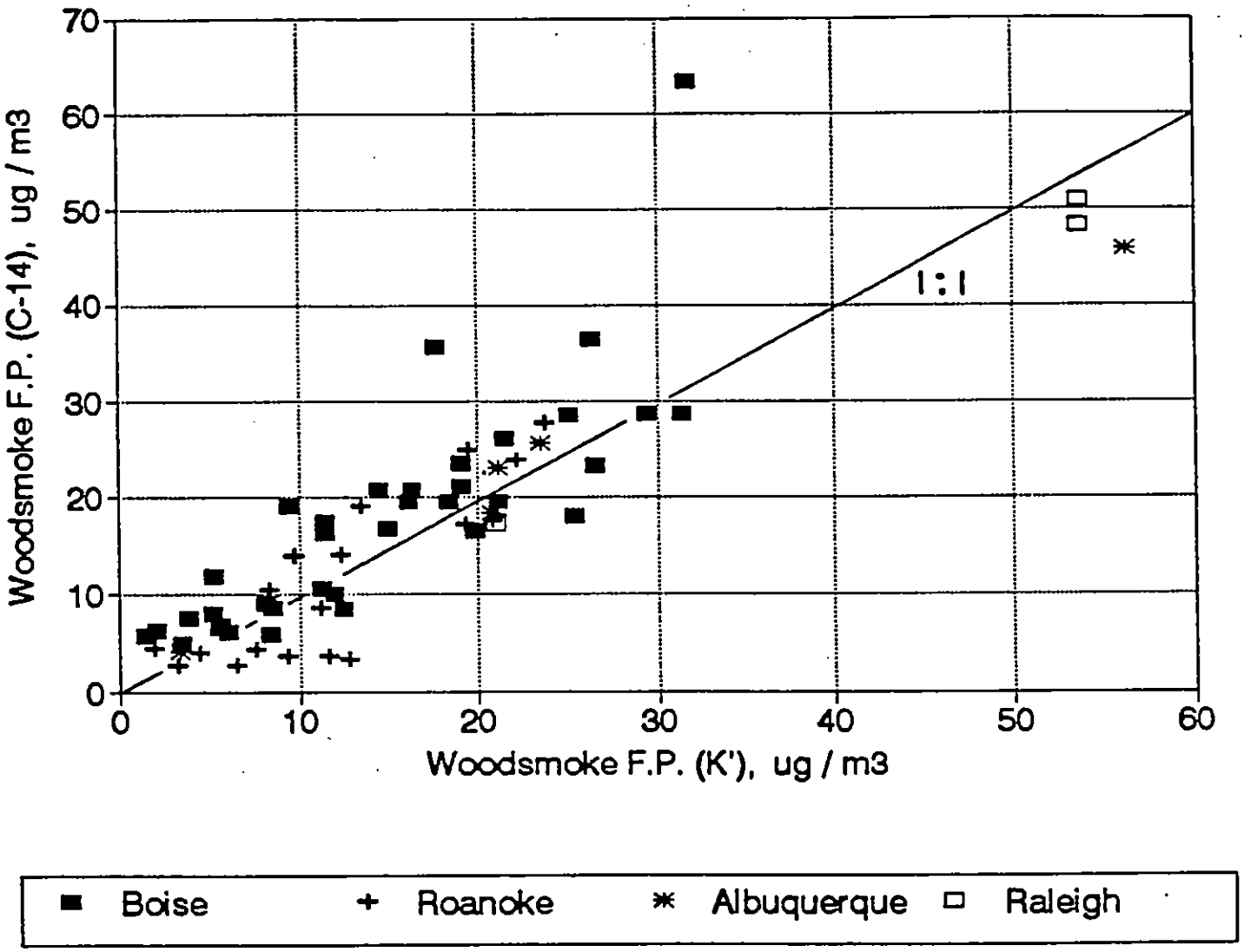
Calculating Woodsmoke (WS) Contribution to Fine Particle Organics Concentration

1. WS ($\mu g / m^3$) = f_S / f_O * Total FP organics concentration ($\mu g / m^3$)
2. WS ($\mu g / m^3$) = c * Total FP potassium concentration ($\mu g / m^3$)
   - c = 40 -- 120

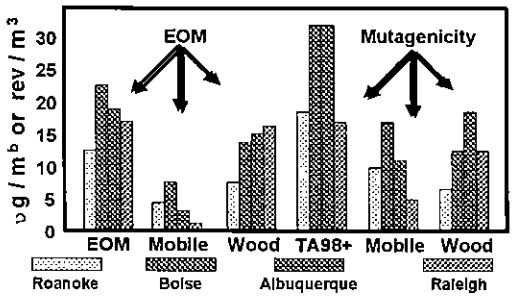


"Exotic" MLR Applications

- Individual chemical concentrations
- Visibility (extinction)
- Mutagenicity
- Carcinogenicity


70
60
50
40
30
20
10
0
0
10
20
30
40
50
60
Woodsmoke F.P. (C-14), ug / m3
Woodsmoke F.P. (K'), ug / m3
1:1
Boise
Roanoke
Albuquerque
Raleigh

EOM and Mutagenicity Averages



Research in Progress

- VOC and ^{14}C
- SAFER

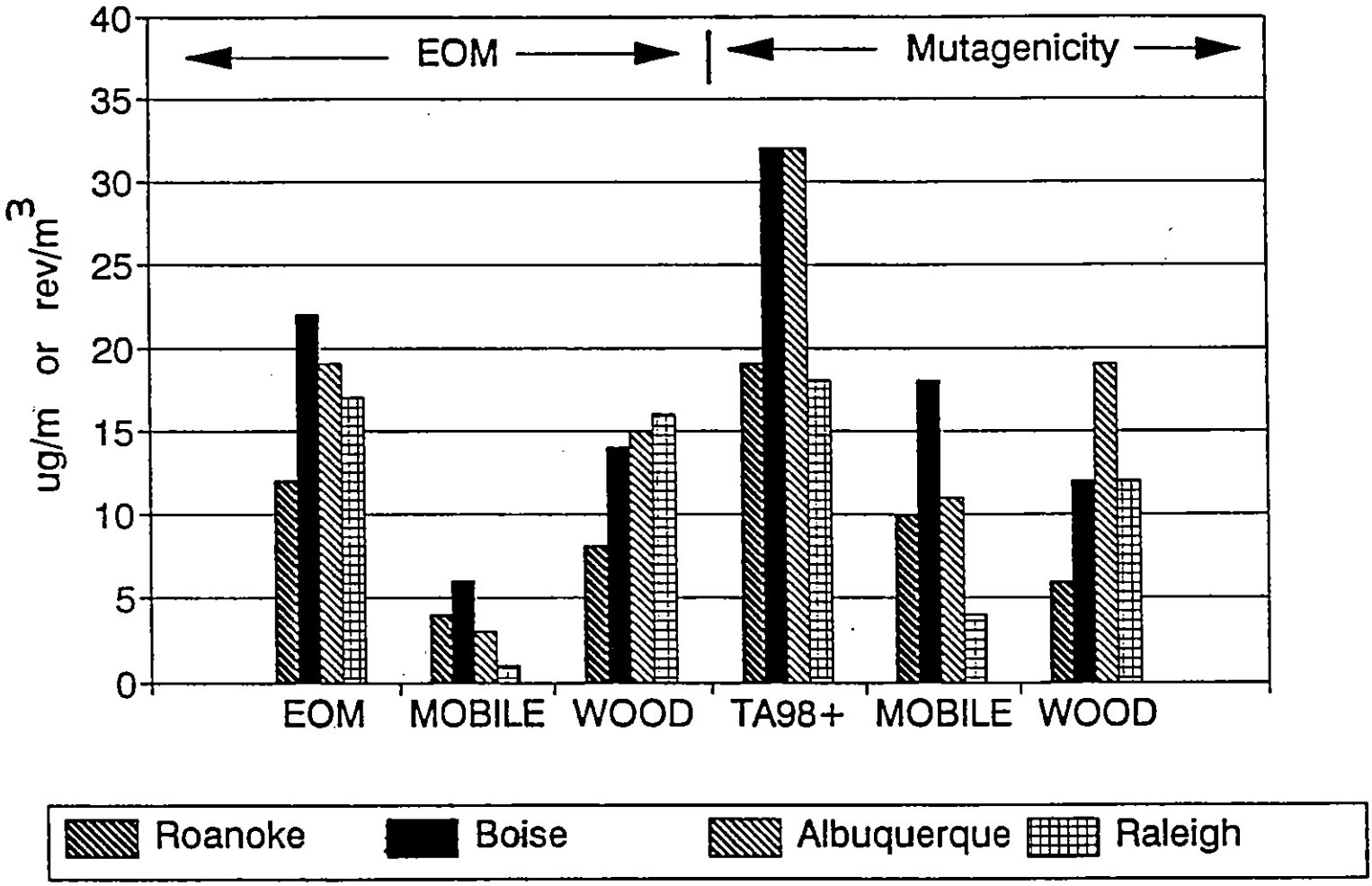
Tropospheric Ozone

- $(NO + NO_2) + VOC \rightarrow O_3$

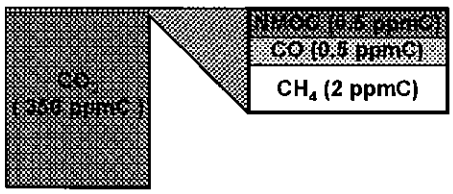
  NO_X

- What is the biogenic contribution to VOC?

EOM and Mutagenicity Averages



Ambient Air Components Containing Gas Phase Carbon

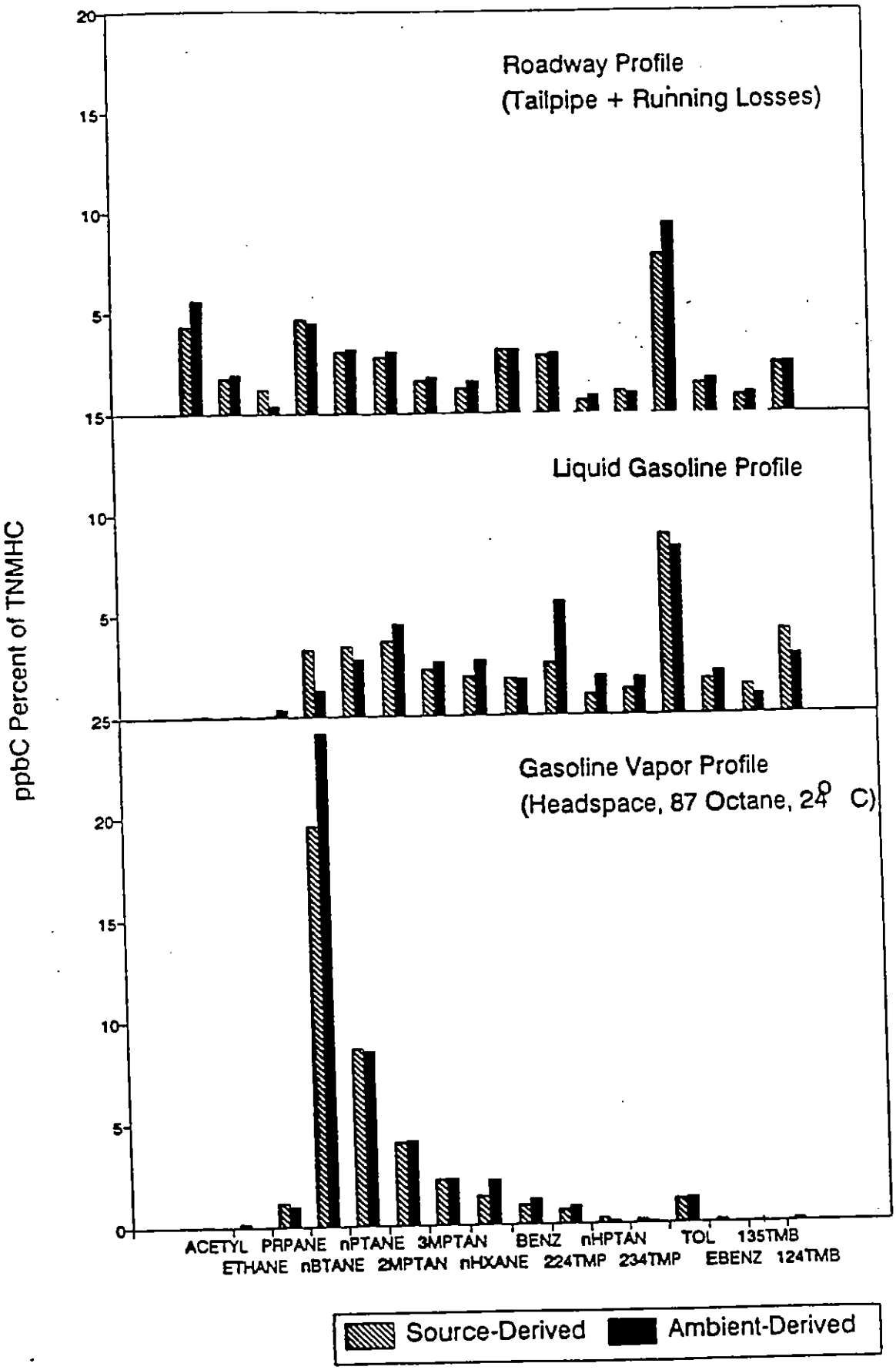


SAFER

- Source Apportionment by Factors with Explicit Restrictions
- A multivariate method for deriving source profiles from ambient data
- Constrained Factor Analysis
  - Non-negative source contributions
  - Non-negative source profiles
  - User-supplied constraints for profiles (eg, gasoline does not contain acetylene)

Graph

See Insert


Roadway Profile
(Tailpipe + Running Losses)
Liquid Gasoline Profile
Gasoline Vapor Profile
(Headspace, 87 Octane, 24° C)
ppbC Percent of TNMHC
20
15
10
5
15
10
5
25
20
15
10
5
0
ACETYL
ETHANE
PRPANE
nBTANE
nPTANE
2MPTAN
3MPTAN
nHXANE
BENZ
224TMP
nHPTAN
234TMP
TOL
EBENZ
135TMB
124TMB
Source-Derived
Ambient-Derived

Multiple Linear Regression Receptor Model

$$C_I = \sum_J A_J X_{IJ} + \epsilon_I$$

where

C_I = amount of pollutant measured in sample I

X_{IJ} = amount of tracer species for source J measured in sample I

$A_J X_{IJ}$ = amount of C_I from source J

A_O = amount of C_I from unidentified sources

ϵ_I = difference between measured and calculated amounts of pollutant in sample I

Each A_J determined by minimizing $\Sigma (\epsilon_I)^2$

<u>FUNDAMENTAL ASSUMPTION</u>:
Tracer species X_{IJ} is emitted only by source J.

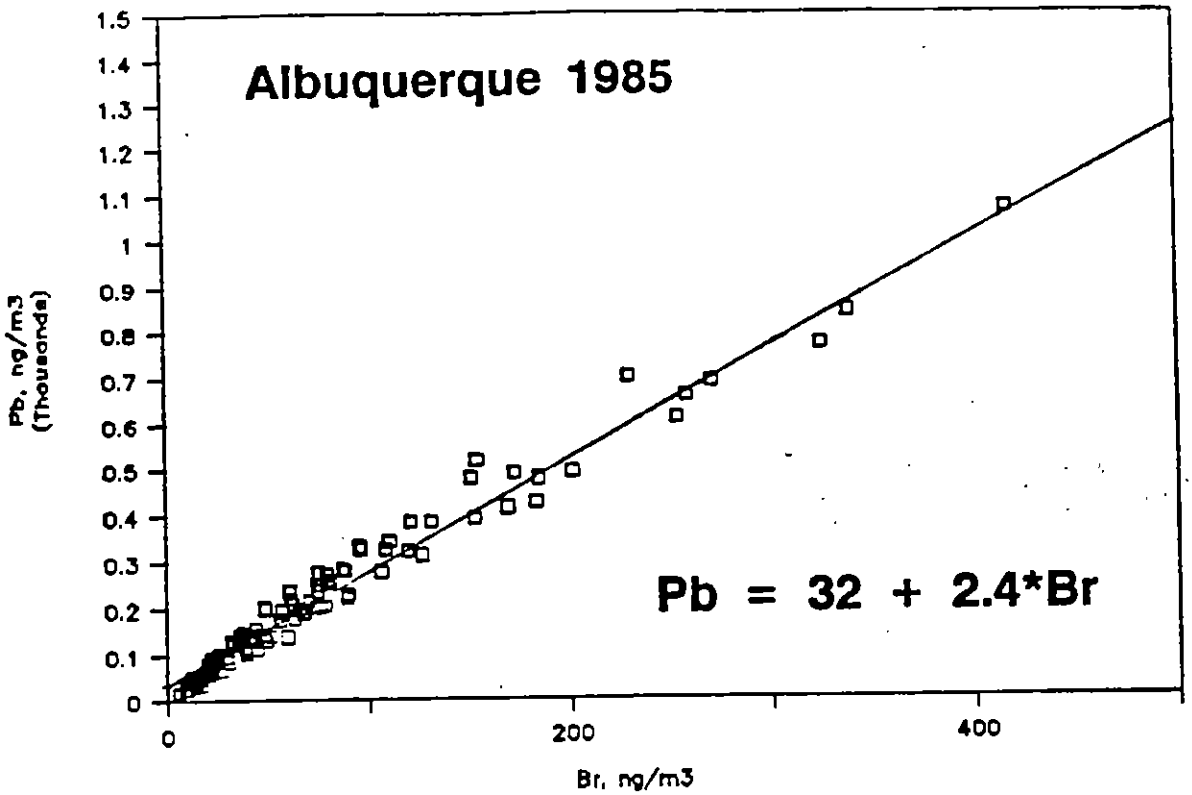
Multiple Linear Regression Receptor Model

(2-source application)

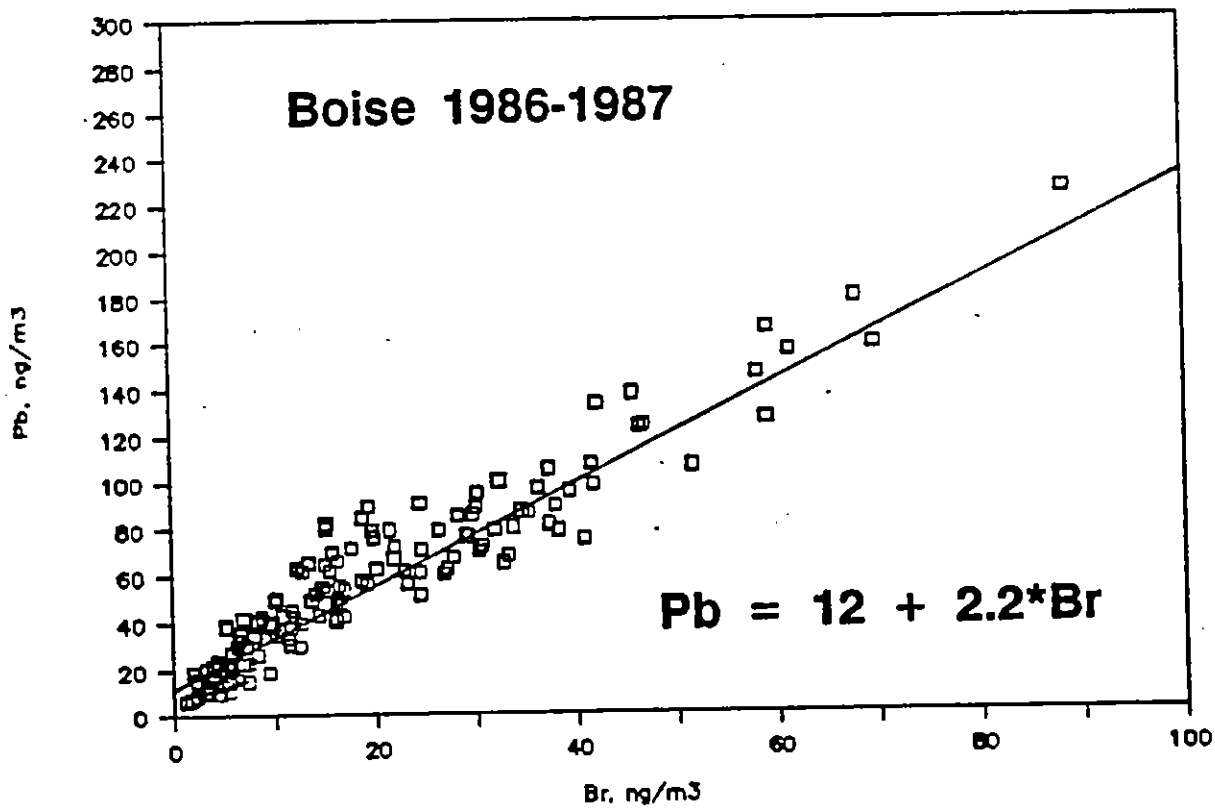
$$C_I = A_O + A_1 \cdot (\text{wood tracer})_I + A_2 \cdot (\text{mobile tracer})_I$$

N samples: $I = 1, N$

3 unknowns: A_O, A_1, A_2



Pb
1.1
g/gal



Pb
0.1
g/gal

Calculating Woodsmoke (WS) Contribution to Fine Particle Organics Concentration

1. WS ($\mu g/m^3$) = f_s/f_o * Total F.P. organics concentration ($\mu g/m^3$)

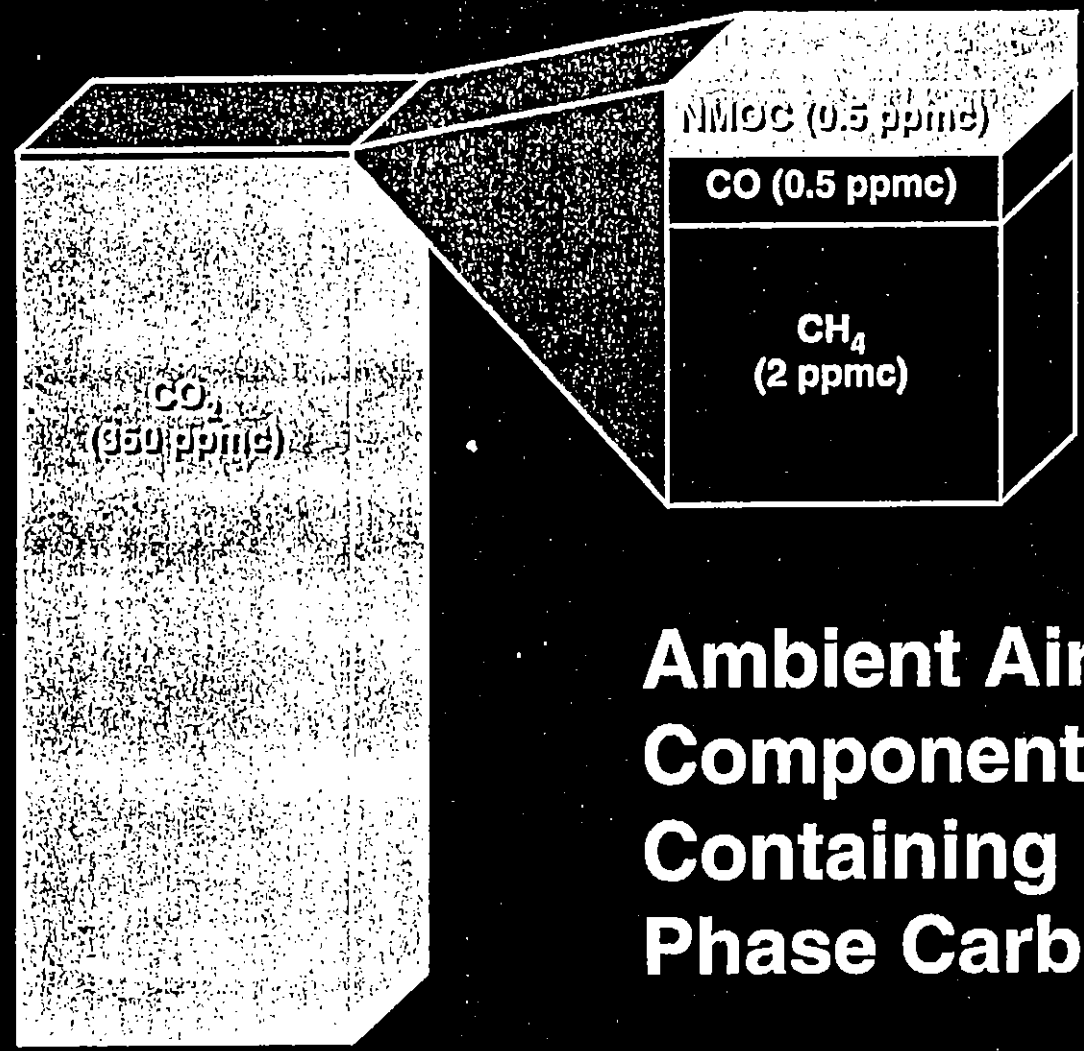
2. WS ($\mu g/m^3$) = c * Total F.P. potassium concentration ($\mu g/m^3$)

40--120

Tropospheric Ozone

$$\underbrace{(NO + NO_2)}_{NO_x} + VOC \longrightarrow O_3$$

What is the <u>biogenic</u> contribution to VOC ?



Ambient Air Components Containing Gas Phase Carbon

SAFER

- Source Apportionment by Factors with Explicit Restrictions
- A multivariate method for deriving source profiles from ambient data
- Constrained Factor Analysis

  * Non-negative source contributions

  * Non-negative source profiles

  * User-supplied constraints for profiles (e.g., gasoline does not contain acetylene)

Lesson XVII

Source Allocation of Ambient Ozone
Richard Wadden

INTRODUCTION TO RECEPTOR MODELING

Lesson Title: Source Allocation of Ambient Ozone
Lesson: XVII
Prepared By: R. Waddden
Date: March 3, 1998

Lesson Goal: Application of the CMB to ambient hydrocarbon samples provides a sample-specific estimate of emission inventory at the receptor point. This lecture explores how the results of the CMB allocation can be used as input for an ozone prediction model which quantitatively relates ambient ozone generation to each VOC source category.

Lesson Objectives: At the completion of this lesson students will be able to:

Explain the function of receptor modeling results in prediction of ambient ozone concentrations.

Allocate ambient ozone to specific precursor source categories.

Describe at least 3 advantages and disadvantages of trajectory analyses in evaluating the CMB/ozone model.

Compare ozone modeling results from CMB receptor modeling with dispersion modeling within a given airshed.

Lesson XVII. Source Allocation of Ambient Ozone

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Purpose

- **Using ambient organic concentrations and the chemical mass balance receptor model (CMB), calculate the contribution of each of a number of different source categories to the ambient organic concentrations.**

Purpose

- **Determine the implications that these NMOC contributions from each source category have for ambient O_3 generation.**

Source Allocation of Ambient Ozone

Do this:

- By structuring the VOC mixture of source compositions which contributed to each hydrocarbon sample (through the CMB source allocation model)

Source Allocation of Ambient Ozone

- Subjecting this VOC mixture to a smog chamber calculation using a reaction-rate mechanism ozone calculator (e.g., carbon bond model) along with actual measured atmospheric and pollution conditions.

Methodology

The following steps are applied to each ambient sample:

1. Ambient measurements of the less reactive organic species in NMOC (23-48 fitting compounds)

Lesson XVIII

Application of Scanning Electron Microscopy to Receptor Modeling

Gary Casuccio

Methodology

2. Application of the CMB model to the ambient sample to determine the distribution of fitting compound emissions among source categories.

Methodology

3. Determination of the emissions of non-fitting compounds by application of extended source fingerprints, including reactive organics.

Methodology

4. Prediction of the ozone concentration attributable to each source category by using the source contributions of both fitting and non-fitting components as input to a photochemical smog carbon bond model (e.g., CMB-IV), along with uv, temperature, pressure, humidity, and ambient O_3, No_x/NO, and CO concentrations at the monitoring location for each sampling day

IV. Functions of CMB8

SAM
SPE
SRC
FIT
SHO
ADV
SCN
AVG
PRO
RCN
MPN
OPT