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Volume II

by

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TABLE OF CONTENTS

Appendix A: Representativeness of Wind Measurements on a Mesoscale Grid with Station Separations of 312 m to 10000 m

Appendix B1: Uncertainty Associated with Emission Rate Estimation

Appendix B2: Analysis of Fog-Oil Smoke Emissions

Appendix C: Uncertainties in Source Emission Rate Estimates using Dispersion Models

Appendix D: Display of Relations among Data using Box Plots

Appendix E: User's Guide for the Sigplot Plotting Package

Appendix F1: Listings of the Dugway Data Archives - Historical Datasets

Appendix F2: Listings of the Dugway Data Archives - Smoke/Obscurant Datasets

APPENDIX A

REPRESENTATIVENESS OF WIND MEASUREMENTS ON A MESOSCALE GRID WITH STATION SEPARATIONS OF 312m TO 10000m

To Appear in Boundary Layer Meteorology

Appendix A

Table of Contents

Abstract		A-1
1.	Objective	A-2
2.	Previous Studies of Mesoscale Wind Variability	A-2
	Empirical Studies of St. Louis Data	A-3
	Theoretical Analysis of Spatial Structure	A-4
3.	Proposed Formula	A-6
4.	Field Experiment at Hereford, Colorado	A-8
5.	Analysis of Hereford Data	A-11
	5.1 Single Station Variances as a Function of Averaging Time	A-11
	5.2 Statistics of Pairs of Observing Stations	A-14
6.	Recommended Empirical Formula for Variances	A-19
7.	Test of General Equation with Independent Data	A-20
Acknowledgement		A-23
References		A-23

Appendix A

List of Tables

Table		Page
A-1	Steady-State Periods from the Herford Dataset Selected for Analysis.	A-12
A-2	Ratios ov Variances $\sigma^2(T_a)/\sigma^2(1\ min)$ for Averaging Times, T_a, of 10 and 60 min., for Wind Speed and Wind Dirction at the Herford Site. Results are Given for Each Runs. The Median of the Ratios for the Thirteen Stations is Given. The Scatter of the Ratios for the Thirteen Stations about any Median has a Standard Deviation of about 0.05 to 0.10. Medians over all Dates are Given at the Bottom.	A-15
A-3	Observations and Model Predictions for Dugway Proving Ground Wind Data, with Tower Separation of 500m, for All Levels Combined, and Wind Speed and Direction Combined. Medians are Listed for the Observed Values. Model Parameters are given in the Footnotes.	A-22

Appendix A

Table of Figures

Figure Page

A-1 Schematic diagram of wind station locations at the Hereford site. Terrain sloped slightly downward from west to east with an average slope of 1%. North is towards the tip of the figure and there is 10 km spacing between stations 1 and 7 or stations 7 and 13. A-10

A-2 Time series of five-minute averaged wind speed (u) and wind direction (θ) for Station 3 for 31 March 1990 at the Hereford site. Thick lines indicate steady-state periods selected for analysis. A-13

A-3 Spatial correlation coefficient, R, as a function of station separation for E-W and N-S legs of Hereford monitoring network. Wind speed (u) correlations are on the left, and wind direction (θ) correlations are on the right. Medians over all eleven runs are shown for averaging times of 1 min. (Long Dashes), 10 min. (Short Dashes), and 60 min. (Solid Line). The standard deviation of the scatter of the 11 points about each line is about 0.2. A-17

A-4 Spatial correlation coefficients, R, for various spatial separations, Δx, and averaging times, T_a(1 min; * 10 min; + 60 min) from Hereford site. Plotted are the medians over eleven runs, E-W and N-S legs, and wind speed and wind direction observations. Typical scatter of all the data about each line is about 0.2 at a correlation of 0.5. Empirical curves from Equation (A-17) are drawn (dotted, Ta = 1 min.; dashed, Ta = 10 min.; solid, Ta = 60 min.). A-18

Appendix A

Representativeness of Wind Measurements on a Mesoscale Grid with Station Separations of 312m to 10000m

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Abstract

A field experiment was carried out in which wind speed and direction were measured over flat terrain at a height of 10 m using 13 identical instruments spaced logarithmically along two perpendicular 10 km lines. Station separations ranged from 312 m to 1000 m. One-minute data from 11 sampling periods of duration 6 to 10 hours were studied.

The statistics showed little dependence on whether the line of instruments was oriented along the wind or across the wind, or whether wind speeds or wind directions were being analyzed. The integral time scale derived from the variation of the single station variances with averaging time was found to equal several minutes. The correlation coefficients between two stations separated by distance Δx were found to vary exponentially with Δx, with an integral distance scale on the order of 1 km. At a station separation of 10 km, the correlation coefficient equals 0.24, 0.37, and 0.47 for averaging times of 1, 10, and 60 minutes respectively. These correlation coefficients correspond to root-mean-square differences in wind speed at the two stations of about 1.2, 1.1, and 1.0 m/s respectively.

Empirical equations based on dimensional analysis are suggested for fitting these observations. It is found that the observations are best fit if two independent integral time scales are used - a boundary-layer time scale about 300s that best applies to small averaging times or small separations and a mesoscale time scale of about 1800s that applies to larger averaging times or large separations.

1. Objectives

In order to solve most atmospheric transport and dispersion problems, it is necessary to assume that the wind measurements at one site represent the wind flow at a nearby site. The separation between these two sites can range from 10 m to 100 km. This assumption is sometimes quite good, but situations often occur where wind direction observations differ by 180° between two towers in the same mesoscale network. There are a few limited studies of wind variability over mesoscale distances (e.g. Perry et al. (1978), Lockhart and Irwin (1980), Hanna (1982), and Panofsky and Dutton (1984)), but there is much more theoretical and observational work needed.

This study is part of a comprehensive research program in which the contributions of meteorological uncertainties to errors in air quality modeling and source emission estimation are being investigated. A cooperative two week field experiment was conducted in which 13 wind instruments were set up along an "L-shaped" pattern with maximum station separation of 10 km. Variances and spatial correlations of wind speeds and directions are calculated, with the objective being the development of simplified empirical/theoretical formulas. The accuracy of these simplified formulas is calculated and suggestions made for using these formulas in more generalized mesoscale settings. Finally, the formulas were tested with independent data from a wind study at Dugway Proving Ground.

2. Previous Studies of Mesoscale Wind Variability

The literature contains two types of studies of mesoscale wind variability. Both employ near-surface wind observations made by two or more wind monitors with separations of 10 m to 100 km. In the first type of study, the variances for a variety of wind monitor separations are calculated and presented, and a very simple empirical formula is suggested (e.g., Lockhart and Irwin (1980) and Hanna (1982)). In the second type of study, theoretical formulas based on spectral analyses are applied to the problem (e.g., Pielke and Panofsky (1970), Perry et al. (1978) and Panofsky and Dutton (1984)). Reviews of these two types of studies are given below.

Empirical Studies of St. Louis Data. During the St. Louis Regional Air Pollution Study (RAPS), hourly-averaged wind observations were recorded for one year from a network of twenty-five wind monitors. The separation of the wind monitors ranged from 3 km to 80 km. Lockhart and Irwin (1980) and Hanna (1982) report calculations of the standard deviation, σ, of the difference in wind speed, u, and wind direction, θ, for concurrent measurements between each pair of stations. For example, the following procedure is used to calculate $\sigma_{(u_a-u_b)}$ for any pair of stations, a and b, over the entire sampling period:

$$\sigma^2_{(u_a - u_b)} = \frac{\sum_{i=1}^{N} (u'_a - u'_b)^2}{N} \tag{A-1}$$

where the primes indicate deviations from the average speed at each station and N is the total number of time periods being analyzed. As the separation distance between the stations decreases, this standard deviation should asymptotically approach the standard deviation due to instrument errors for two co-located wind monitors. Lockhart and Irwin (1980) suggested the regression formulas:

$$\sigma_{(\theta_a-\theta_b)} = 15 + 5.71\ln x \tag{A-2}$$

$$\sigma_{(u_a-u_b)} = 0.47 + 0.24\ln x \tag{A-3}$$

where x is in km, θ is in degrees, and u is in m/s. The median value of $\sigma_{(\theta_a-\theta_b)}$ is about 33° and $\sigma_{(u_a-u_b)}$ is about 1.2 m/s, at a median separation distance of about 20 km. The standard deviations of the points scattered about equations (A-2) and (A-3) are 0.16 m/s and 4°, respectively.

Hanna (1982) reported an analysis by Nappo of the same set of RAPS wind data, emphasizing the dependence of the standard deviations of the wind differences upon wind speed. Nappo defined the spatial standard deviations, $\sigma_{\Delta u}$ and $\sigma_{\Delta\theta}$ using the set of concurrent measurements at the 25 monitoring stations. For example, the following procedure is used to calculate $\sigma^2_{\Delta u}$ for any given hour:

$$\sigma^2_{\Delta u} = \frac{\sum_{i=1}^{24} \sum_{n=i+1}^{25} (u'_i - u'_n)^2}{24!} \qquad \text{(A-4)}$$

where the prime indicates a deviation from the overall average speed for the 25 stations. The magnitude of the spatial standard deviation, $\sigma_{\Delta u}$ is expected to be somewhat larger than that calculated from equation (A-2), since the differences in the means among the stations are included in equation (A-4). It was found that the differences in wind speed and direction among the stations increase by a factor of three or four as wind speed decreases from 5.0 m/s to about 1.5 m/s. At higher wind speeds (~10 m/s), asymptotic limits of about 5° for σ_θ and about 0.15 for σ_u/u are evident. The following empirical formulas fit these data:

$$\sigma_{\Delta\theta} = (5^\circ)^2 + (60^\circ/u)^2 \qquad \text{(A-5)}$$

$$(\sigma_{\Delta u}/u)^2 = (0.15)^2 + (0.6/u)^2 \qquad \text{(A-6)}$$

where u is in m/s and σ_θ is in degrees.

Theoretical Analyses of Spatial Structure

Panofsky and Dutton (1984, Chapter 9) discuss the technical issues related to the differences in wind velocities measured at two points. They look at the problem from the point of view of the spectrum of sizes of turbulent eddies. They make a distinction between vertical separations, Δz, lateral (cross-wind) separations, Δy, and longitudinal (along-wind) separations, Δx, between the locations of the measurements. Because turbulent eddies tend to maintain their identities as they travel with the wind, at a given separation the along-wind correlations in wind velocities between the measurement stations should be larger than the vertical or cross-wind correlations.

These authors also point out that most of the correlation between wind velocities at two points is due to larger turbulent eddies, with dimensions approximately equal to or larger than the separation between the points. By the same argument, the wind fluctuations in small eddies at one point are uncorrelated with the wind fluctuations in the same size of eddies at a distant point.

Because of the fact that the larger eddies move with the wind flow and slowly change with time, the maximum correlation between two time series of wind velocities at two points separated by an along-wind distance, Δx, may occur at a time lag of about $\Delta x/\bar{u}$, where $\bar{u}$ is the mean wind speed. This is the approximate time required for an air parcel to travel from the first point to the second point.

The issues raised in the previous three paragraphs have led Panofsky and Dutton (1984) and others to the hypothesis that the spatial correlations are functions of the eddy size, the wind speed, and the separation between the wind observation points. They use a mathematical expression known as the coherence, which "is a measure of the square of the correlation between the Fourier component of two time series with their phases adjusted to obtain maximum correlation." The coherence is a function of eddy frequency, n, and is given by

$$\mathrm{coh}(n) = \frac{[Co^2(n) + Q^2(n)]}{S_1(n)\ S_2(n)} \tag{A-7}$$

where $S_1(n)$ and $S_2(n)$ are estimates of the spectral density of the two time series at points 1 and 2, Co(n) is the cospectrum, and Q(n) the quadrature spectrum. The frequency, n, can have units of cycles per second or radians per second. The cospectrum refers to the correlation due to in-phase fluctuations and the quadrature spectrum refers to the correlation due to fluctuations that are 90° out of phase. The coherence ranges from zero, for no correlation, to one for perfect correlation. In order to calculate coh(n) for two long time series, specialized computer software for carrying out time series analysis is needed.

Pielke and Panofsky (1970) generalized an empirical expression for the coherence, coh(n), based on a suggestion by Davenport (1961):

$$\mathrm{coh}(n) = \exp(-a_i n \Delta x_i / u) \tag{A-8}$$

where the subscript i refers to the direction component and the dimensionless "constant", a_i, is called the "decay parameter." Observations show that "a_i" is typically in the range from 1 to 10. The dimensionless variable, $n\Delta x_i/u$, is often referred to as the reduced frequency. It is found that the "constant," a_i, is in fact a function of station separation, Δx. Other investigators have found a_i to be a function of the ambient stability, the turbulence intensity, and the integral time or distance scale of the turbulence. For example, Perry et al (1978) propose the following formula for horizontal station separations, Δx:

$$a = (65\sigma_w/u) + (6.3\sigma_v \Delta x/uL_y) \tag{A-9}$$

where σ_w and σ_v are the standard deviations of turbulent velocity fluctuations in the vertical and cross-wind directions, and L_y is the lateral integral distance scale of the lateral turbulence.

3. Proposed Formula

The relation between wind speed, u, or wind direction, θ, observed at two stations at positions 1 and 2 can be expressed in terms of a variance or a correlation. The relationship between the two quantities can be derived by beginning with the identity:

$$\sigma_{\Delta u}^2 = \overline{(u_2' - u_1')^2} = \overline{u_2'^2} + \overline{u_1'^2} - 2\,\overline{u_1'u_2'} \tag{A-10}$$

where the primes refer to fluctuations (i.e., the means have been already subtracted) and the overbar refers to a time average. If the two variances $\overline{u_2'^2}$ and $\overline{u_1'^2}$ are equal, then equation (A-10) can be written in the form:

$$\sigma_{\Delta u}^{2}/2\sigma_{u}^{2} = 1 - R_{12} \qquad \text{(A-11)}$$

where $\sigma_u^2 = \overline{u'^2}$ and the correlation coefficient $R_{12} = \overline{u_1'u_2'}/\sigma_u^2$. Thus if the correlation equals 1, 0, or -1, the ratio $\sigma_{\Delta u}^{2}/2\sigma_{u}^{2}$ will equal 0, 1, or 2, respectively. For two stations that are separated by such a large distance that the correlation equals zero, then Equation (A-11) states that $\sigma_{\Delta u}^{2} = 2\sigma_{u}^{2}$.

After investigating the semi-theoretical formulas (A-8) and (A-9), it was decided that there was so much adjustment of "constants" taking place that it was best to begin with a simpler formula based on dimensional analysis. This simpler formula does not explicitly include the frequency, n, but does account for frequency effects through the implicit assumption that wind speed autocorrelograms are exponential (i.e., $R = \exp(-\Delta t/T_I)$, implying that a so-called Markov-energy spectrum is valid) and are completely determined once an integral time scale, T_I, or space scale, Λ_I, is specified. The following dimensionless relationship can then be postulated:

$$\sigma_{\Delta u}^{2}/2\overline{\sigma_{u}^{2}} = f(\Delta x,\ T_I,\ \Lambda_I,\ T_a) \qquad \text{(A-12)}$$

where f is a universal dimensionless function, and variables and parameters are defined in the following way:

$\sigma_{\Delta u}^{2} = \overline{(u_2' - u_1')^2}$, where u_1' and u_2' are wind speed fluctuations at positions 1 and 2.

$\overline{\sigma_u^2} = (\sigma_{u_1}^{2} + \sigma_{u_2}^{2})/2$ is the average turbulent energy at positions 1 and 2.

Δx is the horizontal separation between positions 1 and 2.

T_I is the integral time scale of the time series of wind speed fluctuations measured at position 1 or position 2.

Λ_I is the integral space scale of the correlogram of wind fluctuation differences $(u_i' - u_1')$ measured between positions 1 and i for several positions.

T_a is the averaging time.

The averaging time, T_a, is very important because it is typically of the same order of magnitude as the integral time scale (i.e., within the range from 1 min to 1 hr). As T_a approaches zero, the ratio $\sigma_{\Delta u}{}^2/2\sigma_u{}^2$ reaches a maximum at any given station separation, since there are poor correlations between wind fluctuations in smaller eddies at two positions.

Exponential shapes are proposed for all correlation functions:

$$R(\Delta x/\Lambda_I) = \exp(-\Delta x/\Lambda_I) \qquad \text{(A-13a)}$$

$$R(\Delta t/T_I) = \exp(-\Delta t/T_I) \qquad \text{(A-13b)}$$

The following approximation to Taylor's equation is used to account for the effects of averaging time on variances:

$$\sigma^2(T_a)/\sigma^2(0) = (1 + T_a/2T_I)^{-1} \qquad \text{(A-14)}$$

For a given separation, Δx, the spatial correlation $R(\Delta x/\Lambda_I)$ is also going to depend on averaging time, T_a, since the effects of the fluctuations due to small eddies will drop to zero at large averaging times. Consequently, $R(\Delta x/\Lambda_I)$ should approach unity as T_a increases, and the second term in the following empirical formula is proposed to account for this effect:

$$R(T_a, \Delta x) = [\overline{u_2' u_1'}/\sigma_{u_1}\sigma_{u_2}](T_a, \Delta x)$$

$$= \exp(-\Delta x/\Lambda_I) + (1-\exp(-\Delta x/\Lambda_I))g(T_a u/\Lambda_1) \qquad \text{(A-15)}$$

where the dimensionless function $g(T_a u/\Lambda_1)$ approaches zero as T_a approaches zero and approaches unity as T_a becomes very large.

4. Field Experiment at Hereford, Colorado

The research programs summarized in Section 2 all took advantage of wind observations made at two or more locations. However, none of these wind observations satisfied all of the following desired characteristics of a study in which differences in wind observations are being calculated.

- Flat terrain with few obstructions.
- All wind instruments alike, with relatively fast response and adequate calibration procedures.
- Five or more wind stations along a line with spacings ranging from a few hundred meters to 10000 meters.
- Two perpendicular lines of wind stations.
- Several days or more of one-minute averaged wind observations.

A field experiment was designed to satisfy these characteristics, using instruments and technicians from the National Center for Atmospheric Research (NCAR). Thirteen identical wind stations from NCAR's Portable Automated Mesonetwork (PAM) were set up in flat, open farmland (mostly covered by short, winter-weathered grass) near Hereford, Colorado, and operated for the two week period between 30 March 1990 and 14 April 1990. The instruments were installed, maintained and calibrated by experienced NCAR technicians. The anemometers were located at an elevation of 10 m above the ground. A schematic diagrams of the relative instrument locations is given in Figure A-1. The slope of the terrain is less than about 1% over the entire network. It is seen that logarithmic spacings (312.5m, 625m, 1250m, 2500m, 5000m, 10000m) are used for the instruments along each leg of the "L"-shaped network. The perpendicular axes were used in order to determine if there was a significant difference between the along-wind and cross-wind statistics.

The resulting "Hereford" dataset contained values of N-S and E-W components of the wind velocity at one minute resolution. First, these wind components were converted to wind speed, u, and wind direction, θ, for each minute. Because the threshold of these instruments was about 0.5m/s, periods with reported wind speeds less than 0.5m/s were flagged and not used in the analysis. 5-minute averages of u and θ were made and the resulting time series for each station plotted for the entire 16 day duration of the study (see Figure A-2 for an example of the time series plots for 31 March 1990 Station 6). Visual inspection of the 15 days of time series in the figure revealed that, most of the time, the wind speed and direction are quite variable and unsteady in time. For example, during the afternoon on 1 April and 10 April, the wind speed went through a cycle in which it increased from

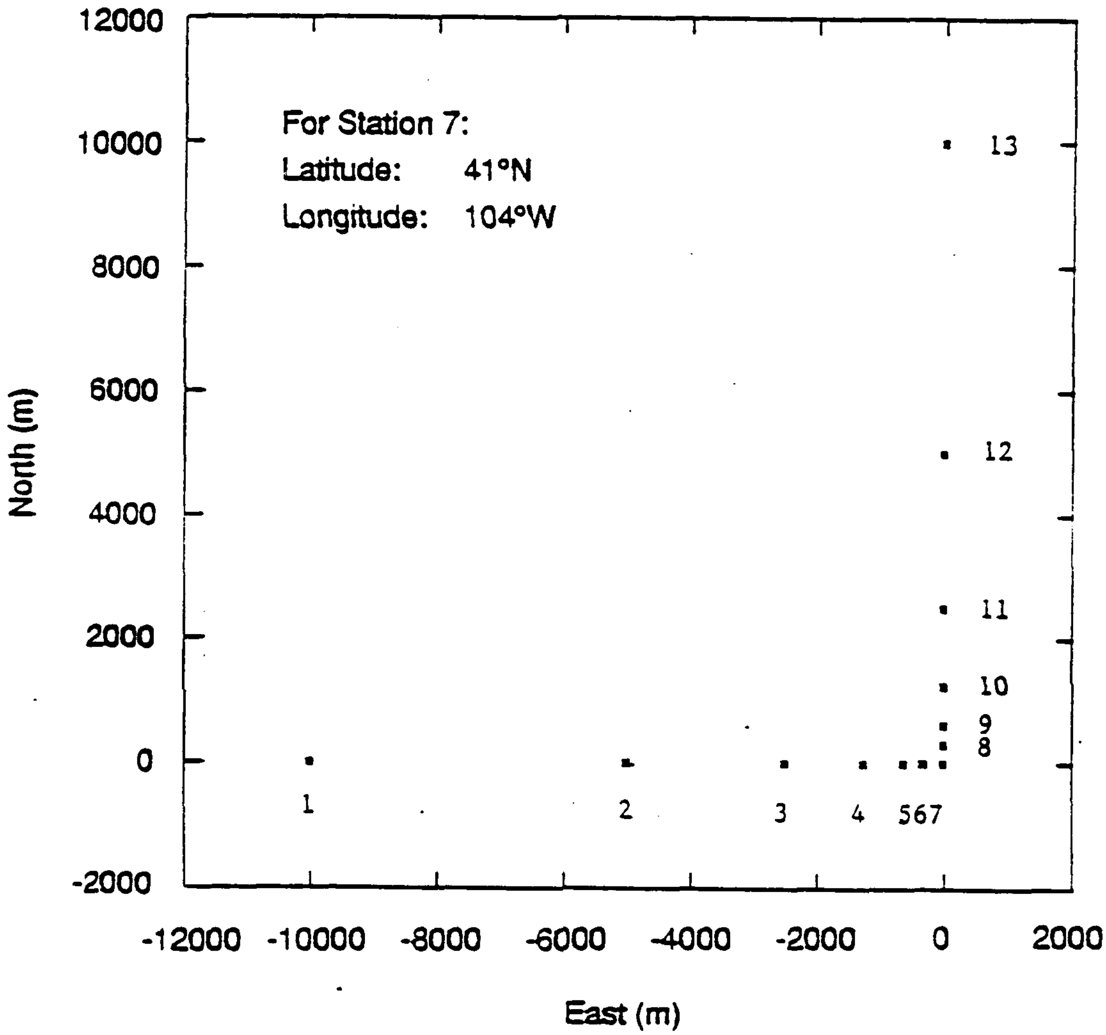

Figure A-1. Schematic diagram of wind station locations at the Hereford site. Terrain sloped slightly downward from west to east with an average slope of 1%. North is towards the top of the figure and there is 10 km spacing between stations 1 and 7 or stations 7 and 13.

nearly zero to about 10 m/s and decreases back down to zero again. This large half-sine-wave would totally dominate any statistical analysis of these wind data.

Because it became clear that any time series analysis of the 16 days would be overly influenced by diurnal changes and synoptic effects, it was decided to confine the analysis to time periods on the order of 6 to 10 hours, when the wind speed and direction appeared to be relatively steady. The eleven steady-state periods that were chosen are listed in Table A-1. Two of these periods are indicated by thick lines in Figure A-2. Median values of wind speed, u, wind direction, θ, standard deviation of wind speed, σ_u, and standard deviation of wind direction, σ_θ, are also listed on the table. These eleven periods are seen to cover a wide range of wind speeds (2.5 to 10.5 m/s), wind directions(170° to 330°) and times of the day.

5. Analysis of Hereford Data

This section presents the results of the analysis of the Hereford data and the next section presents some empirical formulas that fit this dataset. As a first step, variances and time and space correlations were calculated for averaging times of 1, 10, and 60 minutes. A linear trend (estimated from the data from all 13 stations) was removed from the data from each run. Because steady-state periods have been selected and linear trends have been removed, much of the influence of larger mesoscale and regional eddies has been removed there statistics. As will be shown, mesoscale eddies with time scales less than the sampling time are still strongly reflected in the statistics.

5.1 Single Station Variances as a Function of Averaging Time

The variances in the wind speed and wind direction time series were calculated for each of the eleven "steady-state" runs, for each of the thirteen stations, for averaging times of 1, 10, and 60 min. The data are presented in a Table A-2, in the form of ratios of the variance for 10 or 60 minute time periods to the variance for the one minute time period. The medians over the thirteen stations are listed. The overall medians at the

Table A-1

Steady-State Periods from the Hereford Dataset Selected for Analysis. Meteorological Parameters Represent Medians over 13 Stations

Date/Run	Time	Wind Speed u(m/s)	Wind Direction $\theta(^\circ)$	σ_u(m/s)	$\sigma_\theta(^\circ)$
0330	00-10	2.5	130	0.7	17
0330	14-24	3.0	215	0.8	17
0331	00-08	3.5	200	0.45	10
0331	16-24	7.5	325	1.2	13
0404	06-12	5.5	90	1.2	13
0404	12-20	7.5	135	1.2	10
0406	18-24	4.0	215	0.9	14
0409	14-24	10.5	10	1.3	8
0411	06-16	3.0	170	0.9	13
0412	00-08	5.5	140	1.1	11
0413	14-20	7.5	330	1.1	10

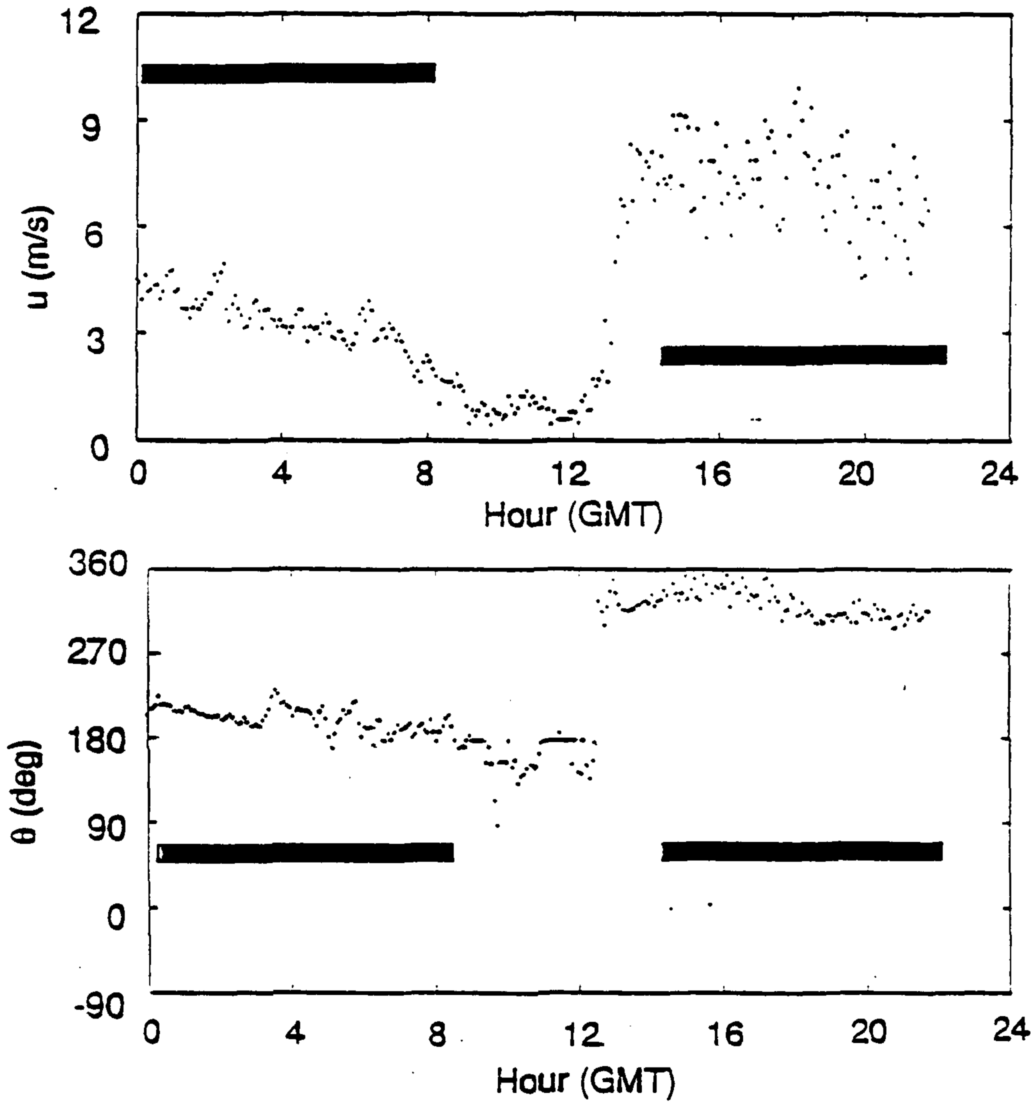

Figure A-2. Time series of five-minute averaged wind speed (u) and wind direction (θ) for Station 3 for 31 March 1990 at the Hereford site. Thick lines indicate steady-state periods selected for analysis.

bottom of the table suggest that there is little difference between the statistics for wind speed and wind direction, with medians of the variance ratios of about 0.68 for σ^2(10 min)/σ^2(1 min) and about 0.39 for σ^2(60 min)/σ^2(1 min). The run-to-run variability in the median variance ratios is about ± 0.20, with no dependence on wind speed, wind direction, σ_u, σ_θ, or time of day. For a given day, the station-to-station variability in the variance ratios is typically about ± 0.05 to 0.10.

Table A-2 suggests that observed median values of σ^2(10 min)/σ^2(1 min) and σ^2(60 min)/σ^2(1 min) are 0.68 and 0.37, respectively. Solving Equation (14) for the integral time scale T_I, we obtain $T_I \approx 9$ min for $T_a = 10$ min and $T_I \approx 15$ min. for $T_a = 60$ min. This trend is duplicated in all types of calculations in this analysis, i.e., the derived time and distance integral scales increase as the averaging time, T_a, or station separation, Δx, increase. Persistent mesoscale eddies are associated with turbulence at time scales of several hours and distance scales of several tens of kilometers. Superimposed on these "baseline mesoscale eddies" are the smaller turbulent eddies normally thought to be associated with the atmospheric boundary layer. Consequently it is assumed that the turbulent velocity field is described by two times scales, one (T_{I1}) associated with boundary layer turbulence, and another (T_{I2}) associated with mesoscale eddies. These two time scales are assumed to contribute equally to $\sigma^2(T_a)$, leading to the following modification to Equation (A-14):

$$\frac{\sigma^2(T_a)}{\sigma^2(0)} = \frac{0.5}{1 + T_a/2T_{I1}} + \frac{0.5}{1 + T_a/2T_{I2}} \qquad \text{(A-16)}$$

The Hereford dataset is best-fit by $T_{I1} \cong 300$s and $T_{I2} \cong 1800$s, which yield $\sigma^2(10)/\sigma^2(1) = 0.71$ (slightly above the median observation of 0.68) and $\sigma^2(60)/\sigma^2(1) = 0.35$ (slightly below the median observation of 0.37).

5.2 Statistics for Pairs of Observing Stations

The spatial statistics to be presented are all keyed to wind station (7) at the corner of the "L" of the network shown in Figure A-1. The results in this section are given for the spatial correlation coefficient,

Table A-2

Ratios of Variances $\sigma^2(T_a)/\sigma^2(1\ min)$ for Averaging Times, T_a, of 10 and 60 min., for Wind Speed and Wind Direction at the Hereford Site. Results are Given for Each of Eleven Runs. The Median of the Ratios for the Thirteen Stations is Given. The Scatter of the Ratios for the Thirteen Stations about any Median has a Standard Deviation of about 0.05 to 0.10. Medians over all Dates are Given at the Bottom.

	$\sigma_u^2(T_a)/\sigma_u^2(1\ min)$ Wind Speed		$\sigma_\theta^2(T_a)/\sigma_\theta^2(1\ min)$ Wind Direction	
Run Date/Time	10 Minute	60 Minute	10 Minute	60 Minute
0330/00-10	.88	.61	.93	.58
0330/14-24	.71	.58	.69	.50
0331/00-08	.74	.39	.77	.36
0331/16-24	.41	.21	.64	.25
0404/06-12	.55	.19	.81	.50
0404/12-20	.51	.37	.42	.17
0406/18-24	.31	.13	.40	.10
0409/14-24	.68	.58	.63	.34
0411/06-16	.81	.51	.76	.38
0412/00-08	.80	.56	.92	.52
0413/14-20	.38	.15	.50	.20
Overall Median	0.68	0.39	0.69	0.36

$R(\Delta x, T_a) = \overline{u_i'u_7'}/\sigma_{u_i'}\sigma_{u_7'}$, which are functions of the separation, Δx, of stations i and 7, the averaging time, T_a and the integral scale of the turbulence. Averaging times of 1, 10 and 60 min are used. Results are presented separately for the E-W and N-S legs of the "L". Rather than showing the correlation for all eleven time periods or runs, we present the median of the 11 periods. These correlations, are plotted in Figure A-3. There does not appear to be a strong dependence on E-W or N-S leg, or on whether wind speed or wind direction is being plotted.

As expected, the calculated correlations are lowest for the shorter averaging times and the largest station separations, due to the fact that the dominant turbulent eddies are characterized by space scales of a few hundred meters and time scales on the order of a few minutes.

At the 10 km separation distance, the correlations average about 0.5. Because of the relation between spatial correlation, R_{12}, spatial variance, $\sigma_{\Delta u}^2$, and variance, σ_u^2, indicated by Equation (A-11), it follows that, at 10 km separation, $\sigma_{\Delta u}^2 = \sigma_u^2$. Knowing that $\sigma_u^2(T_a = 1 \text{ min}) \approx 1.2 m^2/s^2$, and using the median values of $\sigma_u^2(T_a)/\sigma_u^2(1 \text{ min})$ in Table A-2, it can be concluded that $\sigma_{\Delta u}^2 \sim 1.1 m^2/s^2$ for $T_a = 1$ min, $\sigma_{\Delta u}^2 \sim 0.8 m^2/s^2$ for $T_a = 10$ min., and $\sigma_{\Delta u}^2 \sim 0.4 m^2/s^2$ for $T_a = 60$ min at the 10 km separation distance. This value of $\sigma_{\Delta u} \sim 0.7$m/s for one-hour averages is close to that found with the St. Louis RAPS data, as discussed in Section 2.

At small averaging times, T_a, Equation (A-15) suggests that the correlation coefficient for wind speed fluctuations at two points separated by a distance, Δx, should be an exponential function of Δx. Therefore, if ln R is plotted against Δx, a straight line should be seen. Observations of R from this wind network are plotted in Figure A-4, for the six Δx values (312.5, 625, 1250, 2500, 5000, and 10000 m) and three averaging times (1, 10, and 60 min) of interest. Because the correlations in Figure A-3 did not indicate much dependence on E-W or N-S direction, and were similar for wind speed and wind direction, all runs, legs, and variables are combined in this table and figure.

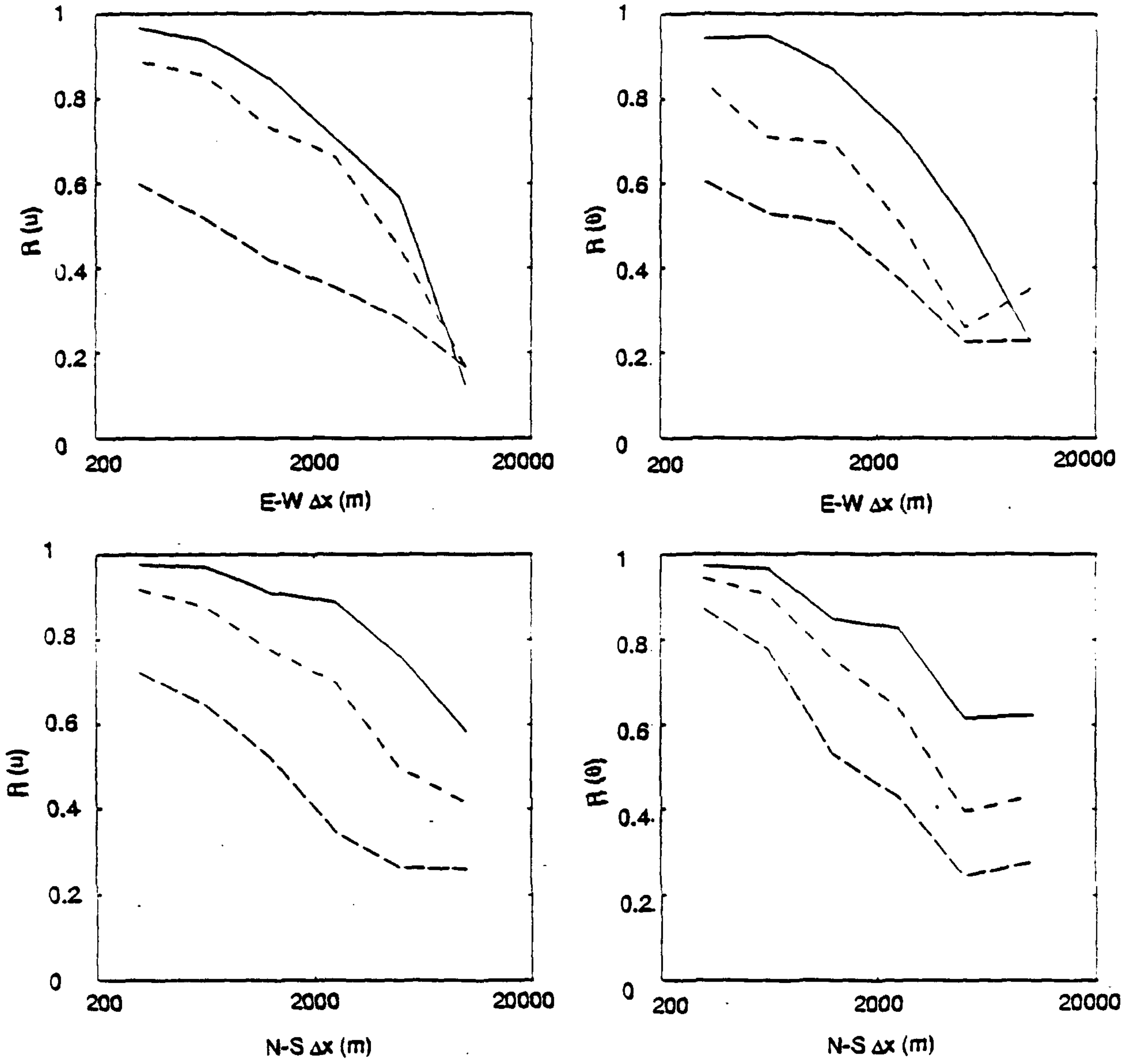

Figure A-3. Spatial correlation coefficient, R, as a function of station separation for E-W and N-S legs of Hereford monitoring network. Wind speed (u) correlations are on the left, and wind direction (θ) correlations are on the right. Medians over all eleven runs are shown for averaging times of 1 min. (Long Dashes), 10 min. (Short Dashes), and 60 Min. (Solid Line). The standard deviation of the scatter of the 11 points about each line is about 0.2.

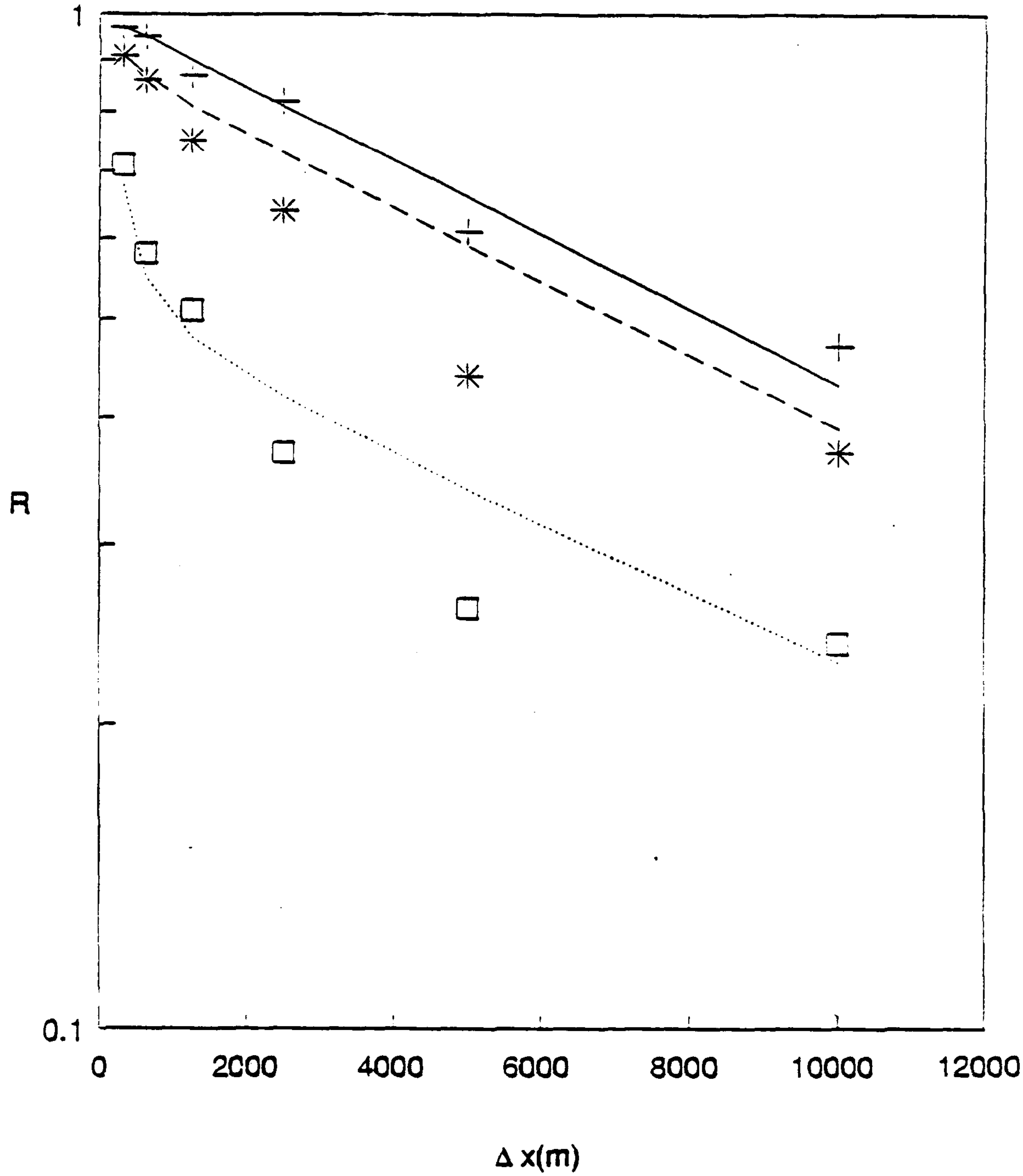

Figure A-4. Spatial correlation coefficients, R, for various spatial separations, Δx, and averaging times, T_a (□ 1 min; * 10 min; + 60 min), from Hereford site. Plotted are the medians over eleven runs, E-W and N-S legs, and wind speed and wind direction observations. Typical scatter of all the data about each line is about 0.2 at a correlation of 0.5. Empirical curves from Equation (A-17) are drawn (dotted, Ta = 1 min.; dashed, Ta = 10 min.; solid, Ta = 60 min.).

The points in the figure follow a straight line only for the largest averaging time (60 min). For the smallest averaging time (1 min), there is a much more rapid drop-off in correlation at small separation distances. This behavior can be explained by the same two-scale phenomenon discussed under Section 5.1 in the analysis of the effects of averaging time; i.e., the results are influenced by a smaller eddy scale, Λ_1, representative of boundary layer processes, and a larger eddy scale, Λ_2, representative of mesoscale fluctuations. However, the effects of the smaller scales tend to disappear at large averaging times, T_a, when the condition $T_a > \Lambda_1/u$ is satisfied. Thus, equation (A-15) appears to be satisfied, with the limits:

$$R(\Delta x,\ T_a \rightarrow 60\ \text{min}) = e^{-\Delta x/\Lambda_2}$$

$$R(\Delta x,\ T_a \rightarrow 1\ \text{min}) = 0.5e^{-\Delta x/\Lambda_1} + 0.5e^{-\Delta x/\Lambda_2}$$

The following empirical equation fits these data and has the proper asymptotic behavior:

$$R(\Delta x,\ T_a) = e^{-\Delta x/\Lambda_2} - 0.5\left(e^{-\Delta x/\Lambda_2} - e^{-\Delta x/\Lambda_1}\right)\Big/\left(1 + (T_a u/a\Lambda_1)^2\right) \qquad \text{(A-17)}$$

where Λ_1 = 300 m, Λ_2 = 12000 m, and a = 5 when u ≈ 5 m/s. The predicted curves are drawn on Figure A-4. The value of a = 5 is consistent with "Pasquill's Beta" = 4, which is the known proportionality factor between Lagrangian and Eulerian scales. Because the actual eddy diameters are equal to about five times the integral scales Λ, the smaller eddy diameters would be about 1500 m and the larger eddy diameters would be about 60 km. Of course the confidence limits on the data (± about 0.2) are so broad that a much wider range of scales, Λ_1 and Λ_2, is possible. Furthermore, these results are limited to this particular site and time of year, and to the ranges of Δx, T_a, and meteorological conditions that we have considered. The sampling time (a maximum of 10 hours) also imposes a maximum limit on integral scales.

6. Recommended Empirical Formula for Variances

Our analysis of the Hereford data has suggested that the variances and correlations for wind speed and wind direction are similar. In addition, we have found that, despite the theoretical prediction that along-wind correlations will be larger than cross-wind correlations, there is no clear dependency of the correlations on wind direction (or any other meteorological variable). This apparent lack of dependency may be due to the fact that this effect is overwhelmed by the natural variability in the observations.

The similarity relations in Equation (A-8) have been shown to be valid, resulting in Equation (A-16) for the effects of averaging time and Equation (A-17) for the effects of station separation. These equations can be combined into the following general equation:

$$\frac{\sigma^2_{\Delta u}(\Delta x,\ T_a)}{2\sigma^2_u(T_a = 0)} = \left[\frac{0.5}{1 + T_a/2T_{I1}} + \frac{0.5}{1 + T_a/2T_{I2}}\right] \cdot \left[1 - e^{-\Delta x/\Lambda_2} + 0.5\,\frac{(e^{-\Delta x/\Lambda_2} - e^{-\Delta x/\Lambda_1})}{(1 + (T_a u/a\Lambda_1)^2)}\right] \qquad \text{(A-18)}$$

where $T_{I1} \sim 300$ s $\qquad T_{I2} \sim 1800$ s

$\Lambda_1 \sim 300$ m $\qquad \Lambda_2 \sim 1200$ m

a (Lagrangian-Eulerian scale) ~ 5

This equation should be tested with independent data from a different site. Slightly different values of the time and distance scales may be appropriate at a different site. For any given time and place, the confidence limits on the results would be expected to be in the same range (about 20% to 30%) has been found here.

7. Test of General Equation with Independent Data

A set of independent wind data from the so-called XM21 field study at Dugway Proving Ground, Utah, were provided by C. Biltoft. Data were available from two towers, separated by 500m, on a relatively flat test range. Instruments were located at heights of 2, 4, 8, 16, and 32m, and measurements were made at a frequency of one per second. Because the towers were constructed of scaffolding, it was necessary to disregard periods when the wind blew through one of the towers. Two periods of valid data were analyzed--from 1110 to 1651 on 11 April 1989, and from 0937 to 2059 on 2 May 1989. Both periods were marked by wind speeds of about 3.5 m/s and relatively strong turbulence intensities ($\sigma_u/\bar{u} \sim 0.3$ and $\sigma_\theta \sim 30^\circ$).

Because the integral scales of the horizontal components of turbulence are not strongly dependent on height, the results from all five levels are combined in our analysis. This assumption will cause a slight error, since the various ratios $\sigma^2(T_a)/\sigma^2(1sec)$ and correlations are observed to increase by about 10% to 20% between heights of 2m and 32m. In addition, the wind speed and direction results appear similar and are combined in our analysis. The combined data results (two variables, two days, five levels) are presented in Table A-3.

The predictions of $\sigma^2(T_a)/\sigma^2(1sec)$ in the table have been made using Equation (A-16), with the same time scales derived from the NCAR wind network (T_1 = 300s and T_2 = 1800s). There is a ± 10% agreement between the predictions and the observed medians, and the predictions are within the ± standard deviation error bounds of the observations. It can be concluded that the variances $\sigma^2(T_a)$ show similar behavior at the two sites, and that Equation (A-16) can adequately simulate this behavior.

Equation (A-17) (for spatial correlations) does not transfer as well to the new site. Its predictions are shown under column (2), assuming the parameters (Λ_1 = 300m, Λ_2 = 12000m, and a = 5) derived from the NCAR wind network. Clearly the predictions of $R_{\Delta u}(T_a)$ are too low by about 10 to 30%. If the Λ_1, Λ_2, and "a" parameters are "tuned" with these new data, the predictions under column (3) are all within ± 4% of the observations. However, the smaller of the length scales, Λ_1, has to be increased from 300m to 1000m, and the Lagrangian-Eulerian parameter "a" has to be reduced from 5 to 0.2. It appears that the weakest part of Equation (A-17) is the correction term, $(1 + (uT_a/a\Lambda_1)^2)^{-1}$, for averaging time, T_a. This term is intended to cause an increase in the spatial correlation as averaging time increases. However, the functional form for this correction term is not obvious and more thought is clearly needed.

Table A-3

Observations and Model Predictions for Dugway Proving Ground Wind Data, with Tower Separation of 500m, for All Levels Combined, and Wind Speed and Direction Combined. Medians are Listed for the Observed Values. Model Parameters are given in the Footnotes.

Averaging Time T_a	$\frac{\sigma^2(T_a)}{\sigma^2(1sec)}$ Observed	$\frac{\sigma^2(T_a)}{\sigma^2(1sec)}$ Predicted (1)	$R_{\Delta u}(T_a)$ Observed	$R_{\Delta u}(T_a)$ Predicted (2)	$R_{\Delta u}(T_a)$ Predicted (3)
1 sec			0.78	0.57	0.77
60 sec	0.87	0.95	0.83	0.58	0.86
600 sec	0.68	0.65	0.94	0.83	0.95

Footnotes: (1) Equation (A-16) is used, with the same values for the parameters as derived from the NCAR data (T_1 = 300s and T_2 = 1800s)

(2) Equation (A-17) is used, with the same values for the parameters as derived from the NCAR data (Λ_1 = 300m, Λ_2 = 12000m, and a = 5)

(3) Equation (A-17) is used, with Λ_1 = 1000m, Λ_2 = 12000m, and a = 0.2.

Acknowledgements:

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APPENDIX B-1

UNCERTAINTY ASSOCIATED WITH EMISSION RATE ESTIMATION

Appendix B-1

Table of Contents

Uncertainty Associated with Emission Rate Estimation

		Page
1.	Introduction	B-1
2.	Measurement of Smoke Munition Emissions	B-2
	2.1 Wind Tunnel Experiments	B-2
	2.2 Field Experiments	B-4
3.	The Emission Rate Expression	B-6
	3.1 Input Parameters	B-6
	3.2 Approach to Estimating Uncertainty in the Emission Rate	B-10
	3.3 Uncertainty Analysis Results	B-16
4.	Conclusions and Recommendations	B-19
	References	B-21

Definition of Terms

A, B, C, D coefficients which are determined by fitting the observed wind tunnel experiments to a curve

COV_{xy} covariance of xy

CV_x^2 squared coefficient of variation of x, $\frac{\sigma_x^2}{\bar{x}^2}$

CV_y^2 squared coefficient of variation of y, $\frac{\sigma_y^2}{\bar{y}^2}$

h relative humidity

M_o initial mass

M_x mass of zinc or phosphorus aerosolized, as measured in the wind tunnel experiments

MYF munition yield factor, the ratio $\frac{M_x}{M_o}$

Q_t mass emission rate

q $\frac{Q_t}{M_o}$

$\bar{x}$ mean of x

$\bar{y}$ mean of y

YF yield factor, theoretical adjustment to mass of aerosol based on the ability of the active ingredient to absorb water vapor

ΔM mass lost during burn, initial mass less final mass, as measured by the load cell

σ_{xy}^2 variance of the product xy

σ_x^2 variance of x

σ_y^2 variance of y

Appendix B-1

UNCERTAINTY ASSOCIATED WITH EMISSION RATE ESTIMATION

1. Introduction

To estimate the uncertainty of an entire model it is necessary to evaluate the uncertainty of its components. The input data for atmospheric dispersion models consists of emission rate data and meteorological data. In this discussion we address the issue of uncertainty associated with the estimation of emission rates of aerosols from smoke munitions. Emission rates are generally expressed in terms of weight per unit time; in this case they are expressed as grams of active ingredient, (e.g., phosphorus) per second.

The issue of estimating the emission rate of obscurant munitions is complex, aside from the issue of estimating the associated uncertainty. There are several reasons for this. First, the critical property which provides the obscurant effect is not directly emitted by the munition; it results from an interaction of the active ingredient, e.g., red phosphorus, and moisture in the ambient atmosphere to form a dense smoke cloud. Second, munitions contain other materials which burn simultaneously but do not contribute directly to the obscurant effect; thus measuring total weight loss over burn time only indirectly measures the amount of active ingredient which has been released. Third, to experimentally determine the amount of active ingredient released, the mass of the active ingredient in the entire smoke cloud must be determined and this measurement can only be carried out in a wind tunnel. Thus, data from the wind tunnel experiments are extrapolated to the field setting. These issues affect emission rate estimation as well as contribute to the associated uncertainty.

This discussion covers the following topics: how emissions are measured in both wind tunnel and field experiments, the model used for estimating emission rates, a technique for estimating uncertainty (using existing data as an example), and conclusions and recommendations for the collection of additional data which would enhance the uncertainty analysis. Several reports were reviewed for this analysis, but the information on the method of measuring and modeling emission rates is based on two reports: *Basic*

Smoke Characterization Test (DPG-FR-77-311) (DPG, 1978) and *Methodology Investigation Final Report Validation of a Transport and Dispersion Model for Smoke* (DPG-FR-702) (Carter et al., 1979). These reports contain data on three different types of smoke obscurant munitions: white phosphorus, red phosphorus, and zinc oxide-hexachloroethane-aluminum. Because only limited amounts of appropriate data are available for the uncertainty analysis, the conclusions drawn from this analysis must be considered tentative.

2. Measurement of Smoke Munition Emissions

2.1 Wind Tunnel Experiments

The most detailed measurement of emission rates of submunitions were conducted in wind tunnel experiments. Although field measurements have been collected, these data are not adequate for developing a model. Thus, the model used to predict emission rates is based on the wind tunnel experiments. The experiments and the data described in this section are summarized from DPG (1978).

The wind tunnel experiments were conducted at the Dugway wind tunnel. In the experiments, single submunitions (e.g., an individual component which contains the smoke producing compound) of zinc and white phosphorus were burned. In actual field use of smoke munitions, multiple submunitions are loaded into a canister and burn simultaneously. For red phosphorus, three submunitions (wedges) were burned simultaneously. The wind tunnel tests were conducted at a wind speed of 2 m/s and the ambient temperature, relative humidity, (%RH), and barometric pressures were recorded. Pre-weighed submunitions were placed on a load cell in the center line of the tunnel and fired remotely. The load cell recorded the elapsed time and weight loss of the submunition as it burned. The end of the tunnel had a barrier that contained a grid of holes through which the air in the tunnel passed. The air passed into sampling lines and through collection devices, impingers. (See Figure B-1.) The impingers were then analyzed for zinc or phosphorus, the appropriate active ingredient. The concentrations in all impingers were summed to determine the total amount of active ingredient which had been aerosolized during the burn. Data collected on each test included: weight loss with burn time, total zinc or phosphorus, tunnel wind speed, temperature, and relative humidity.

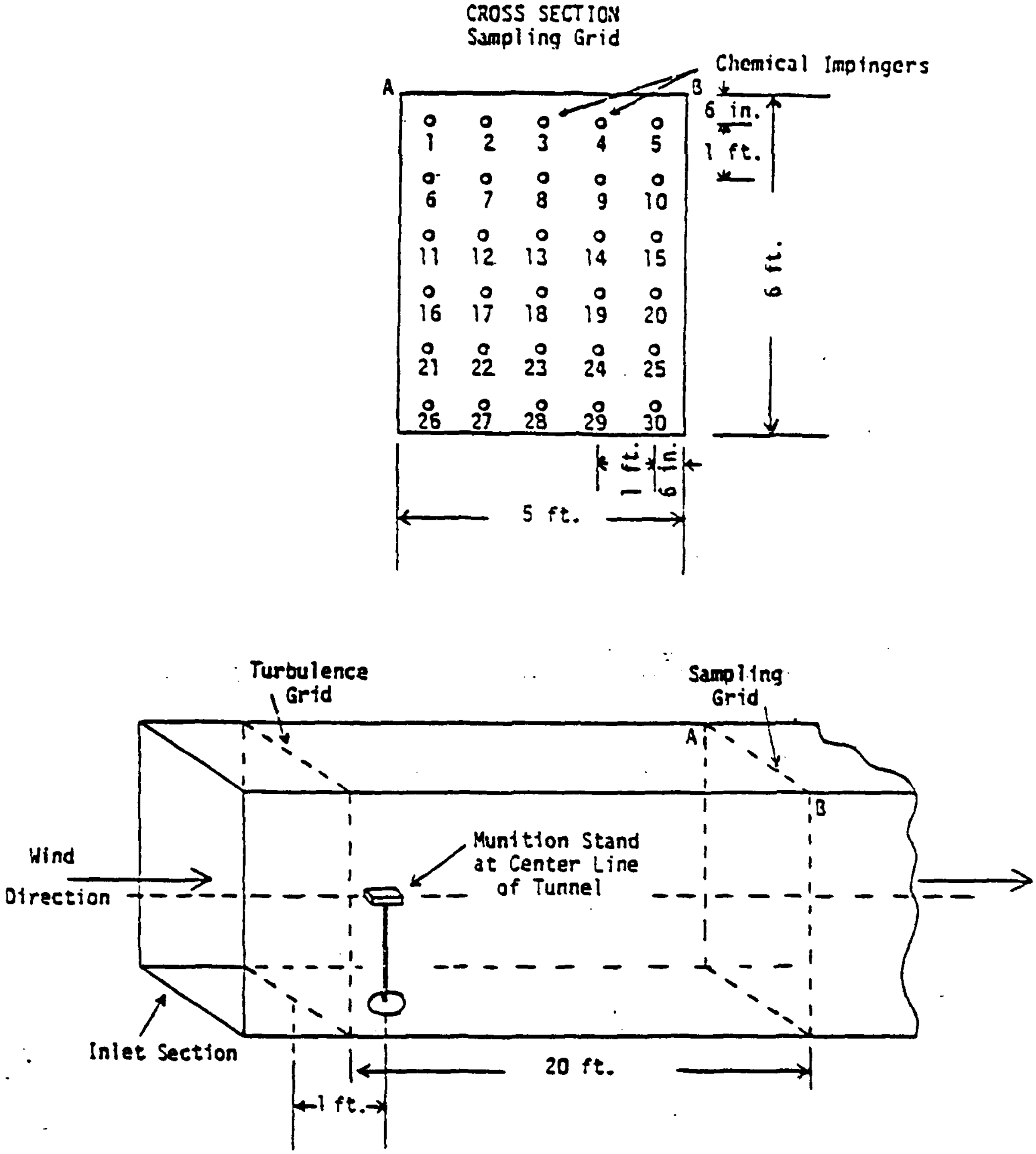


Figure B-1. Diagram of Wind Tunnel. Source: DPG, 1978

Transmittance, which is routinely measured in the field, cannot be measured in the wind tunnel because the concentrations are too high. The types of submunitions tested (as reported in DPG (1978)) were:

155mm HC M1 Canister (zinc)
155mm HC M2 Canister (zinc)
105mm HC M1 Canister (zinc)
6 inch WP Wick (white phosphorus)
2.75 inch Rocket WP Wick (white phosphorus)
81mm Navy RP Wedge (red phosphorus)
155mm Navy RP Wedge (red phosphorus)
81mm German RP Wedge (red phosphorus).

For each type of submunition, two burns were conducted.

2.2 Field Experiments

The field experiments were conducted at the Horizontal Grid, Dugway Proving Ground, Utah. The experiments described in this section are summarized from DPG (1978). The data were collected by means of photography, aerosol sampling with aerosol photometers, particle size analyzers, and impingers. Samplers were located 1.22 meters above the ground. Motion pictures recorded the size and shape of the smoke cloud; aerosol photometers recorded total particle concentration; particle size analyzers recorded size distributions; and impingers measured zinc or phosphorus concentrations. The mass of zinc or phosphorus from these impingers cannot be summed to calculate total zinc or phosphorus aerosolized as was done in the wind tunnel experiments because the total smoke cloud is not collected by the impingers.

Figure B-2 (DPG, 1978) shows the layout of the instruments for these experiments. The sampling line was always oriented perpendicular ($\pm 45^\circ$) to the prevailing wind direction. The impingers were located halfway between the aerosol photometers. As in the wind tunnel experiments, the munitions were placed in a load cell so that data on weight loss with burn time were recorded. The types of submunitions tested were the same as those used in the wind tunnel experiments. For each type of submunition, two burns were conducted.

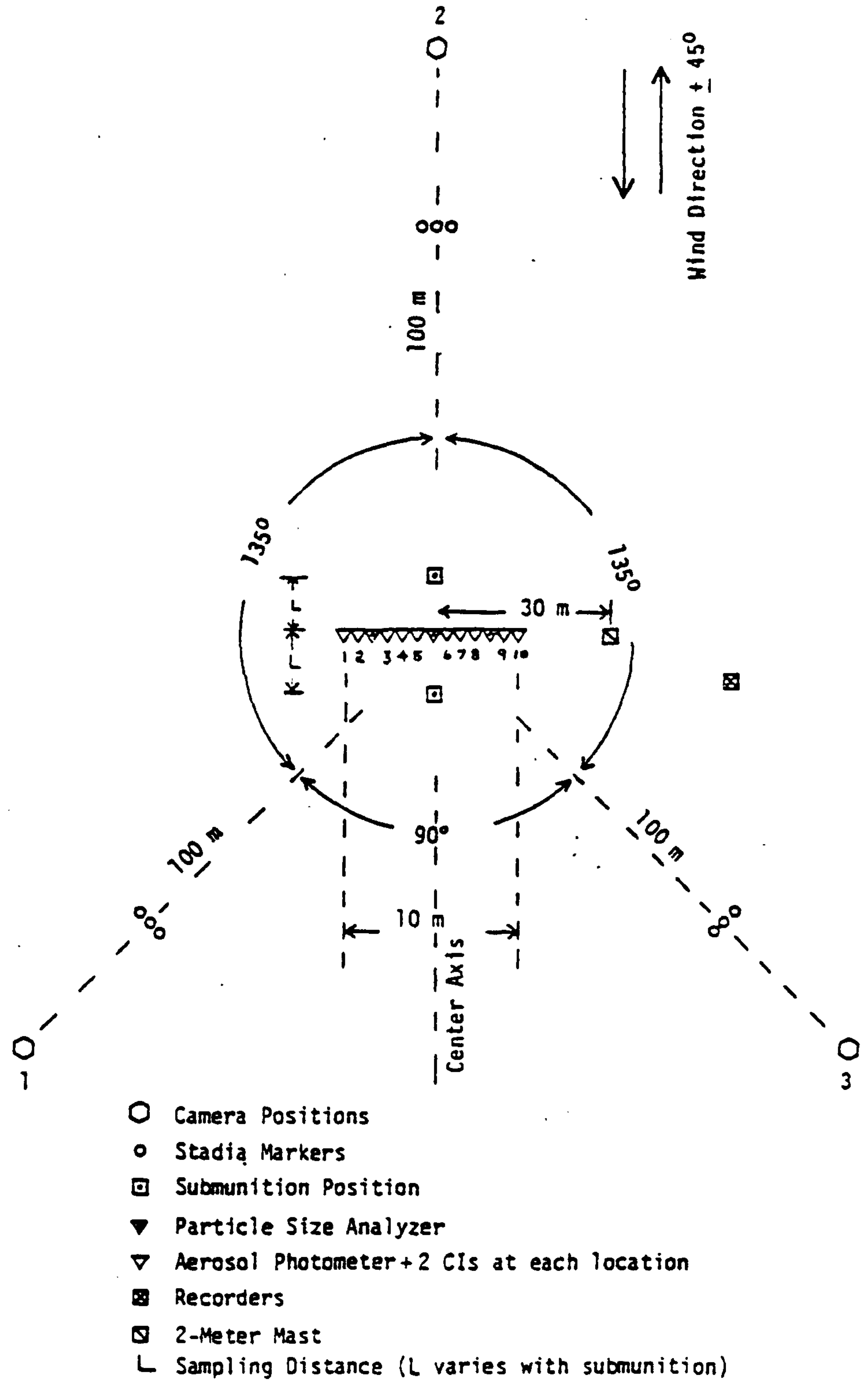


Figure B-2. Grid for munition cloud characterization. Source: DPG, 1978

The meteorological data recorded in these experiments included: wind speed and direction, temperature, and relative humidity.

3. The Emission Rate Expression

The critical parameter to be derived from these experiments is the amount of smoke generated per second of burn time. In its simplest form, this would be calculated by dividing the mass lost by the burn time to derive a value in units of grams per second. However, the amount of smoke generated is more than a function of the mass burned; it is also a function of the interaction of the zinc or phosphorus with water vapor to create the smoke. Zinc and phosphorus are hydroscopic, absorbing upwards of four times their mass in water vapor. Thus, the actual emission rate of interest is total amount of hydrated smoke generated per second. To add one further complexity to the equation, the burn rate of the munitions is not constant with time. There is an initial growth period, followed by a plateau of relatively constant rate of emissions, followed by a rapid decline. In field tests, there are data which indicate munitions can burn unevenly; this is characterized as "flashing" toward the end of the burn time by the observers.

The following discussion covers two topics. The first topic presents the parameters in the emission rate expression and the second discusses the uncertainty associated with those parameters and presents a technique for computing the uncertainty in the overall emission rate value.

3.1 Input Parameters

The emission rate of hydrated smoke is a function of the initial mass of the munition, the fraction of this mass which is the aerosolized zinc or phosphorus, the increase in mass of the aerosol due to hydration, and burn time. The expression which was developed from the wind tunnel experiments to estimate the emission rate is as follows (DPG, 1978):

$$Q_t = M_o \; MYF \; YF(A/t_b + 2Bt/t_b^2 + 3Ct^2/t_b^3 + 4Dt^3/t_b^4) \qquad \text{(B-1)}$$

where: Q_t = mass emission rate

M_o = initial mass

MYF = munition yield factor

YF = yield factor

A, B, C, D = coefficients which are determined by fitting the observed data in the wind tunnel experiments to a curve. They are constrained to sum to unity.

The munition yield factor, MYF, is the ratio of the mass of zinc or phosphorus burned, M_x, to the initial mass of the munition, M_o. M_x is determined from the wind tunnel experiments and is calculated by summing the mass of zinc or phosphorus collected by all the impingers. These wind tunnel values of M_x are used to predict the emission rate, Q_t, for field experiments, as M_x cannot be measured in the field setting.

The yield factor takes into account the hydroscopic growth of the aerosolized zinc or phosphorus and is a function of ambient relative humidity. For the three different types of smoke munitions, yield factors are based on theoretical calculations or experimental data. The conceptual definition of the yield factor is:

$$YF = \frac{\text{mass of smoke (including aerosol)}}{\text{mass of starting material}}$$

In the case of phosphorus, the final material is primarily hydrated orthophosphoric acid, ($H_3PO_4 + nH_2O$). According to DPG (1977), it is assumed that the hydration of the droplets of H_3PO_4 proceeds until their aqueous vapor pressure equals the partial pressure of H_2O in the atmosphere. The mass of hydrated H_3PO_4 is then constant (assuming no other environmental changes occur) and the yield factor can be expressed as:

$$YF = \frac{\text{mass } H_3PO_4 + nH_2O}{\text{mass P}}$$

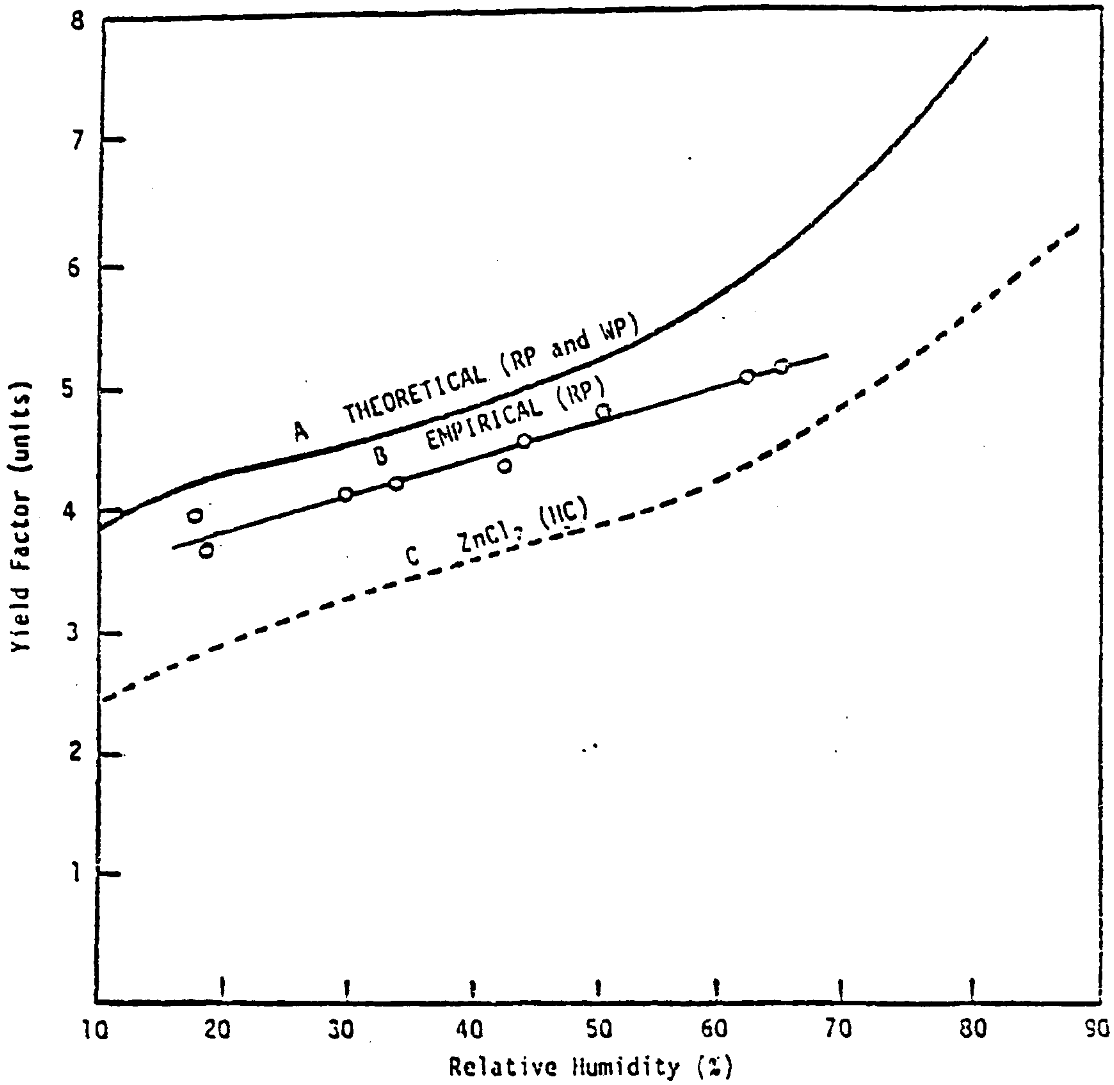
DPG (1977) contains the following example of how a yield factor is calculated. Yield factors for phosphorus can be readily computed from tables correlating aqueous vapor pressures with the composition of various mixtures of H_3PO_4, when the concentration of H_3PO_4 in the solution is expressed as weight %, (i.e., mass (H_3PO_4) x 100/mass (H_3PO_4 + nH_2O)). For a specified aqueous vapor pressure, the ratio of the molecular weight of H_3PO_4 to the atomic weight of P is 3.16:

$$YF = \frac{100 \times 3.16}{H_3PO_4(\text{wt }\%)} = \frac{316}{H_3PO_4(\text{wt }\%)}$$

Taking, as an example, the burning of 1 gram of P in the air at 25°C and containing moisture at a partial pressure of 22.39 mmHg, the oxidation to phosphoric oxide and hydrolysis of phosphoric oxide will result in 1 x 98/31 gram or 3.16 gram H_3PO_4. H_3PO_4 will then hydrate until the aqueous vapor pressure of the diluted H_3PO_4 (H_3PO_4 + nH_2O) equals the ambient vapor pressure. At 22.39 mmHg and 25°C, the equilibrium composition of the mixture is found to be 20.07 weight % H_3PO_4. The YF is then 316/20.07 = 15.7, (i.e., under these conditions, the mass of smoke is 15.7 gram for every gram of P burned). An additional correction will be necessary if the munition efficiency is not 100%.

DPG (1978) notes that the theoretical curve for phosphorus assumes that orthophosphoric acid is produced immediately during combustion. If this assumption does not hold, the yield factor may overestimate the effective dosage. DPG (1977) also presents a derivation which proves that YF's are insensitive to temperature up to 100°C.

Figure B-3 (DPG, 1978) presents yield factor curves based on theoretical calculations for P as well as empirical data for red phosphorus and theoretical calculations for zinc oxide-hexachloroethane-aluminum (HC). It can be seen from these figures that the slope of the lines for all three materials, white phosphorus, red phosphorus, and the zinc based munition, is relatively shallow over the range of relative humidity from approximately 20% to 65%. For example, over the range of 20% to 65% RH, the yield factor for red phosphorus increases by a factor of 1.4. However, the theoretical curves rise sharply at humidities greater than 65%. Between humidity levels of 65% to 80% red and white phosphorus increase by a factor of approximately 1.3 and hydrated zinc chloride by a factor of 1.7. For field tests conducted on one day, the relative humidity would not be expected to vary over this wide a range, so that



Curve A: Yield factors for the conversion of P to hydrated H_3PO_4 (ref. 8).
Curve B: Yield factors empirically determined for RP.
Curve C: Yield factors for the conversion of Zn to hydrated $ZnCl_2$ (ref. 5).

Figure B-3. Yield factors as a function of relative humidity for various smoke producing agents. Source: DPG, 1978.

the yield factor between burns should not vary substantially. For example, an increase from 40% to 50% RH only produces a difference in the yield factor of 1.04 for red phosphorus. During the field experiments, which took place on several different days, the relative humidity varied from 40% to 80%, but within a given day the RH only varied by 2%-4%.

3.2 Approach to Estimating Uncertainty in the Emission Rate

A direct method for determining uncertainty values would be to compare modeled emission rates with actual emission rates; however, emission rate measurements from the field experiments are not available. In the absence of actual data, uncertainty values can be modeled based on estimated uncertainty values for the input parameters and on the uncertainty inherent in the emissions rate model. To estimate uncertainty values for the variables, there should be sufficient data available to calculate the probability density functions (i.e., measures of variability) of the input variables. To model the uncertainty in the emission rate model, an assumption must be made regarding the independence or dependence of the variables in the model, as there are different approaches for each case.

The following discussion presents both a qualitative and quantitative assessment of the emission rate uncertainty of the various smoke munitions. The qualitative assessment highlights the sources of uncertainty of the input parameters to the emission rate model and the limitations imposed by the amount of data (for each type of munition) available for the analysis. The quantitative assessment presents a model for estimating the emission rate uncertainty and an example application for several munitions.

Two factors limit the uncertainty analysis of the smoke munitions data. First, to few experiments were conducted for each type of munition to determine robust probability density functions for the various parameters. For both wind tunnel and field experiments only two burns were conducted for each type of submunition, thus means or variances will not be stable or robust. Confidence intervals are large when $n = 2$. Therefore the quantitative uncertainty analysis presented subsequently is neither a precise nor an accurate measure of uncertainty, but the method is valid with sufficient data.

Second, the data from the wind tunnel experiment are suspect. For five of the nine munitions tested in the wind tunnel, the mass of aerosolized active ingredient, M_x, as measured by the bubblers exceeded the mass burned, ΔM, as measured by the load cell on which the munition was placed. This clearly violates the law of conservation of mass. There are two plausible hypotheses for these results. First, the design of the wind tunnel is suspect. It has been observed that there may have been insufficient downwind distance from the load cell to establish laminar flow at the sampling point (Carter, (1991), personal communication). Second, the wind speed was measured at only one location and the assumption of constant velocity may not be correct (Bowers, (1991), personal communication). Either or both of these situations could have led to an overestimation of air velocity at the point of sampling. Although this condition most likely existed for all tests, it was not evident in the data from the three types of zinc oxide-hexachloroethane-aluminum (HC) smoke munitions (155mm M1 and M2 and the 105mm canisters) and one red phosphorus (RP) munition (81mm Navy wedge). (This observation is based on data reported in DPG, 1978.) The reason for the differences between munitions is not readily evident, and it is not possible to ascertain given the age of the data. The error associated with the inaccuracy of the bubbler data will affect all field experiment data because of the fundamental assumption in the emission rate model. Namely, the MYF relationship (the ratio of the mass of active ingredient aerosolized, M_x, to the initial mass of the munition, M_o), as measured in the wind tunnel experiments, is assumed to apply to the field experiments. As the wind tunnel tests overestimated the MYF, the emission rate, Q_t, would also be overestimated.

A simple analysis was performed to (1) determine if there was a consistent bias in the data which could be used to adjust the mass aerosolized, M_x, and the MYF for those munitions where M_x was greater than the mass burned, ΔM, and (2) evaluate the within munition variability for M_x and ΔM. The computation performed was:

$$\text{bias} = 1 - M_x/\Delta M$$

where a negative value indicates the mass of Zn or P aerosolized is greater than the mass burned and a positive value indicates this relationship is reversed.

The data were taken from DPG (1978) and the results are shown in Table B-1. The first five entries in the table are for the munitions where M_x, the mass of Zn or P aerosolized, exceeds ΔM mass burned; the next four entries are for munitions where M_x is less than ΔM. For one munition, the 155mm RP Navy Wedge, in one test result M_x was less than ΔM and for the second test M_x was greater than ΔM. The reason for this anomaly within a munition type is not clearly evident. It can be observed from this table that for munitions where the mass of Zn or P is less than the mass burned, the within munition variability is relatively small, less than 20%. However, for the munitions where the mass of Zn or P is greater than the mass burned, the within variability was much larger, ranging from approximately 45%-88%. Because the within munition variability is so large for those cases when M_x is greater than ΔM, it is not appropriate to adjust M_x or MYF for these munitions.

Three conclusions can be made based on this analysis. First, those munitions for which the mass of Zn or P aerosolized exceeds the mass burned will be dropped from further analysis because the data violate the law of conservation of mass and the large within munition variability precludes adjusting the original data. Second, the results indicate that there may be another source of error affecting the data in addition to the wind tunnel design. One would anticipate that the design error would affect all munitions equally, however, this is clearly not the case. There could appear to be other sources of variation related to the type of munition (e.g., mass aerosolized is less than mass burned is for all of the zinc canister munitions). Or there may have been some other source of experimental error associated with the operation of the wind tunnel or in the analyses of the bubblers. These additional sources of error cannot be evaluated further due to the age of the data. Third, if one assumes that the affect of the wind tunnel design on the munitions is constant across all experiments, then it must be concluded that M_x, the mass of Zn or P aerosolized, is overestimated for all munitions even if M_x is less than ΔM, the mass burned. It follows then that the MYF, which is the ratio of mass aerosolized to mass burned, is overestimated for all munitions.

To estimate the uncertainty in the emission rate model the issue of independence or dependence of the variables must be considered. The

Table B-1

Evaluating Wind Tunnel Bias

		Initial Mass (M_o)	Mass burned (ΔM)	Mass[1] Aerosolized (M_x)	Bias[2]
2.75" WP Wedge	A9	217	125	150	-.20
	A10	203	116	129	-.11
6" WP Wick	A5	102	59	64	-.09
	A6	101	51	77	-.51
3" WP Wick	A7	63	40	45	-.13
	A8	52	36	Void	
155mm RP Navy Wedge	A15	114	78	72	+.08
	A16	117	69	79	-.15
81mm RP German Wedge	A11	30	15	24	-.60
	A14	35	14	15	-.07
155mm HC M1 Canister	A1	3450	2330	425	+.82
	A2	3572	2412	382	+.84
155mm HC M2 Canister	A12	2055	1162	369	+.68
	A13	1987	1182	391	+.67
105mm HC Canister	A3	1178	646	154	+.76
	A4	1177	633	234	+.63
81mm Navy RP Wedge	A17	117	73	64	+.12
	A18	116	68	61	+.10

1 Zn or P

2 Bias = $1 - \frac{M_x}{\Delta M}$

assumption of independence allows one to use a relatively simple expression to calculate overall model uncertainty as the covariance terms can be neglected. However, if this assumption is incorrect and the variables are dependent, the estimated uncertainty will be unrealistically low.

In the case where the variables can be assumed to be independent, Goodman (1960) presents the expression:

$$\sigma_{xy}^2 = \bar{x}^2\sigma_y^2 + \bar{y}^2\sigma_x^2 = (\overline{xy})^2\left[CV_x^2 + CV_y^2\right] \qquad \text{(B-2)}$$

where σ_{xy}^2 = variance of the product xy

$\bar{x}$ = mean of x

σ_x^2 = variance of X = $\frac{\sum(x - \bar{x})^2}{n - 1}$

$\bar{y}$ = mean of Y

σ_y^2 = variance of Y

CV_x^2 = squared coefficient of variation of x, $\frac{\sigma_x^2}{\bar{x}^2}$

CV_y^2 = squared coefficient of variation of y, $\frac{\sigma_y^2}{\bar{y}^2}$

The variables in the emission rate model (see equation B-1) are not independent, both the munition yield fraction, MYF, and the yield fraction, YF, depend on the type of active ingredient. The variance of the product of two or more variables, which are not independent, is given as (Goodman, 1960):

$$\sigma_{xy}^2 = \bar{x}^2\sigma_y^2 + \bar{y}^2\sigma_x^2 + 2\bar{x}\,\bar{y}(COV_{xy})$$

where the variables are defined as above and COV_{xy}, the covariance of xy, is expressed as:

$$COV_{xy} = \sigma_x\sigma_y = \frac{1}{N}\sum_{i=1}^{N}(x_i - \bar{x})(y_i - \bar{y}) = \frac{1}{N}\sum_{i=1}^{N}(x_i - y_i) - \bar{x}\,\bar{y} \qquad \text{(B-3)}$$

To apply Equation (B-2) to the model for Q_t, the emission rate, integrating over the total burn time, it is written as:

$$Q = \int_0^{t_b} dtQ_t = M_o \cdot MYF \cdot YF \qquad \text{(B-4)}$$

Let E = MYF and Y = YF. Assuming the uncertainty associated with the initial mass, M_o, is small (i.e., the load cell is accurate), Q_t can be divided by M_o and expressed as q

$$q = \frac{Q_t}{M_o} = E \cdot Y \qquad \text{(B-5)}$$

The variance of $q(\sigma_q^2)$ is

$$\sigma_q^2 = \bar{Y}^2 \sigma_E^2 + \bar{E}^2 \sigma_Y^2 + 2\bar{E}\,\bar{Y}\,COV_{EY} \qquad \text{(B-6)}$$

where COV_{EY} is the covariance of the munition yield fraction, now expressed as E, with the yield factor, now expressed as Y. Since the yield factor is a function of the relative humidity (Y = Y(h) where h is fractional relative humidity), this value can be incorporated into the expression for σ_q^2 as follows:

$$\sigma_q^2 = \bar{Y}^2 \sigma_E^2 + \bar{E}^2 Y'^2 \sigma_h^2 + 2\bar{E}\,\bar{Y}\,Y'\,COV_{Eh} \qquad \text{(B-7)}$$

The fractional relative humidity, h, is = 0 at zero humidity and 1 at 100% humidity and Y' is defined as:

$$Y' = \frac{\Delta y}{\Delta h}\bigg|_{h = \bar{h}} \qquad \text{(B-8)}$$

As there are only two values for each munition, Y' is simply the slope of the straight line between the two points. The term COV_{Eh} is the covariance of the munition yield fraction (E) with relative humidity (h).

3.3 Results of Uncertainty Analysis

Table B-2 presents a sample set of data taken from DPG (1978) and used to calculate the variance of the quantity Q_t/M_o, expressed as σ_q^2. The munitions included in this analysis were only those where the mass of Zn or P aerosolized, M_x, was less than mass burned, ΔM, as discussed previously. An example of how the variance of Q_t/M_o (or σ_q^2) is calculated is given below for the zinc munition 155mm HC M1 canister.

Step 1. Calculate the covariance of the munition yield fraction (E) and relative humidity (h) for trials B1R1 and B2R1. The values for E and h are given in Table B-2. Equation B-3 is the definitional formula for covariance; the computation formula is:

$$COV_{E,h} = \frac{N(\Sigma\, E \cdot h) - (\Sigma E)(\Sigma h)}{N^2}$$

$$COV_{E,h} = \frac{2([0.12 \times 0.76] + [0.11 \times 0.72]) - ([0.12 + 0.11][0.76 + 0.72])}{2^2}$$

$$= \frac{0.3408 - 0.3404}{4}$$

$$= 1 \times 10^{-4}$$

Step 2. Calculate Y′ according to Equation B-8 where y, the yield factors (YF), are 5.2 and 5.0, and h, the fractional relative humidity, is 0.76 and 0.72.

$$Y' = \frac{\Delta y}{\Delta h}$$

$$= \frac{5.2 - 5.0}{0.76 - 0.72}$$

$$= 5$$

Table B-2[a]

Variance of the Ratio of the Emission Rate to the Initial Mass, (Q_t/M_o) for Selected Munitions

Munition	Trial	Munition[b] Yield Fraction	Relative Humidity	Yield[c] Factor	Variance of $\frac{Qt}{M_o}$
155mm HC M1 Canister	B1R1	.12	76	5.2	
	B2R1	.11	72	5.0	2.15×10^{-3}
155mm HC M2 Canister	B3R1	.18	75	5.2	
	B4R1	.20	75	5.2	5.41×10^{-3}
105mm HC Canister	B15	.13	73	5.1	
	B16	.19	73	5.1	4.68×10^{-2}
81mm Navy RP Wedge	B11	.55	70	6.6	
	B12	.52	80	7.8	0.160

a. Data taken from Tables III and IV in DPG (1978) for the field experiments conducted at the horizontal grid.

b. MYF values are from the wind tunnel data for the particular munitions.

c. Estimated values from Figure B-3 for $ZnCl_2$ (Curve C) and for the theoretical curve for white phosphorus and red phosphorus (Curve A).

Step 3. Calculate σ_q^2 according to Equation B-7. The variance of E, the munition yield fraction, is

$\sigma_E^2 = 2 \times 10^{-4}$. Equation B-7 is as follows:

$$\sigma_q^2 = \bar{Y}^2 \sigma_E^2 + \bar{E}^2 Y'^2 \sigma_h^2 + 2\bar{E}\,\bar{Y}\,Y' COV_{Eh}$$

and by making the following substitutions:

$$\sigma_q^2 = (5.1)^2(5 \times 10^{-5}) + (0.115)^2(5)^2(8 \times 10^{-4}) + 2(0.115)(5.1)(5)(1 \times 10^{-4})$$

$$= 2.15 \times 10^{-3}$$

Interpretation of the variance estimates is limited by the potential error in the munition yield fraction (MYF) values and the limited amount of data (n = 2) for each type of munition. However, some summary comments can be made about these data and this approach to calculating variance. The variance of the 81mm Navy red phosphorus wedge is larger than the three zinc based munitions (zinc oxide-hexachloroethane-aluminum). The cause of this difference could be due to the type of munition. For example, the red phosphorus MYF is larger than the MYF for zinc munitions. Further, for phosphorus munitions the relative humidity on the two days of red phosphorus tests differed by 10% where as for two of the zinc munition tests it was constant. If there is no variation in relative humidity the variance of q is the product of the mean of the yield factor and the variance of the MYF (see Equation B-7).

Bevington (1969) defines the standard deviation, σ, as the estimated error or uncertainty of a parameter. When a parameter, e.g., x, is a function of two or more other variables (x = ab) the standard deviations of a and b, when combined, give the uncertainty of x. To put the standard deviation values for each munition in perspective, Table B-3 presents the mean emission rates integrated over time, the standard deviation, σ, (as calculated according to Equation B-7), and the standard deviation expressed as a percentage of the mean. This table shows that the emission rates of the two 155mm HC (zinc) canisters (M1 and M2) have the least uncertainty and the 105mm HC (zinc) wedge has the greatest uncertainty. The uncertainty of the 81mm Navy RP wedge is only slightly greater than the 155mm HC canisters.

Table B-3

Comparison of the Mean and Standard Deviation

of the Ratio of the Emission Rate to the Initial Mass $\left(\frac{Q_t}{M_o}\right)^*$

Munition	Mean $\frac{Q_t}{M_o}$	Standard Deviation of $\frac{Q_t}{M_o}$	Standard Deviation as a % of the mean
155mm HC M1 Canister	0.587	0.046	7.8
155mm HC M2 Canister	0.962	0.074	7.7
105mm HC Canister	0.817	0.216	26.6
81mm Navy RP Wedge	3.844	0.40	10.4

* Q_t is integrated over the burn time, thus the quantity $\frac{Q_t}{M_o}$ is actually $\frac{Q_t}{M_b} \cdot t_b$.

An approach to evaluating emission test results from future experiments would be to compute the 95% confidence interval (95% CI = $\bar{x} \pm 1.96\sigma$) of the quantity $\frac{Q_t}{M_o}$ for each munition. If a subsequent experiment produced a $\frac{Q_t}{M_o}$ value outside of the confidence interval, than it could be concluded that the munition was significantly different from the original sample of munitions. Ideally, a larger dataset than that currently available would be necessary to assure that the standard deviations were stable.

An interesting comparison can be made between these results and the findings presented in *Methodology Investigation Final Report, Validation of Transport and Dispersion Model for Smoke* (DPG, 1979). In DPG, (1979), modeled concentrations along the line of sight (CL) were compared to field measurements as well as comparisons between measured and modeled concentration line integrated dosage (CLID). DPG (1979) reports that the CLID were consistently underpredicted for the zinc based munitions (HC) by a factor of 1.4-1.5 and overpredicted by a factor of 2 for the red and white phosphorus munitions. A comparison of these air dispersion modeling results to standard deviations of the source term (presented in Table B-3) shows a similar relationship among munitions. The zinc based munitions exhibited less variability than the red phosphorus munition. One hypothesis which could partially explain the discrepancies in the modeled versus measured comparisons in DPG (1979) is uncertainty in source terms. The red phosphorus has the largest uncertainty (as measured by the standard deviation) and it also shows the greatest difference between measured and modeled values. The large uncertainty in the red phosphorus source term may account for a portion of the uncertainty in the modeled red phosphorus concentrations.

4. Conclusions and Recommendations

The smoke munitions data from DPG (1978) have been reviewed and a method for estimating uncertainty, as expressed as the standard deviation, in the emission rates has been presented. Available data for the present analysis is limited, but the approach to variance estimation is applicable to larger data sets. The quality of the smoke munitions data is suspect due to design problems with the wind tunnel. The number of tests conducted on each munition, n = 2, means the variance computations are not stable. The uncertainty analysis of the source terms indicated that the 105mm HC munition has the largest uncertainty, being slightly more than 3 times the uncertainty of the 155mm HC munitions and 2.6 times the 81mm Navy RP wedge. For the two 155mm HC canisters, the relative humidity was constant for the M2 test runs and varied for the M1 test runs. However, when uncertainty is expressed by the standard deviation as a percent of the mean, the two munitions have almost the same uncertainty.

Two recommendations can be made based on the preceding analysis. First, the munition yield factor should be determined in an accurate and precise manner. This variable is critical, as it is applied to all the field test data. Second, to assess meaningfully the uncertainty in the emission rate values, more than two sets of data must be available for the results to be more stable, and thus reliable.

To use this technique of computing variance to evaluate munition variability, the following plan is suggested. Assuming the wind tunnel design issue has been resolved and accurate MYF's determined, field data from numerous test burns should be collected. This should be done at the horizontal grid, but without simultaneous aerosol and meteorological monitoring. This is because to compute uncertainty for the emission rate value, the only parameters needed are initial weight, M_o, munition yield fraction, and yield factor (as computed based on relative humidity); thus only M_o and %·RH would need to be recorded. Numerous burns for each type of munition should be conducted, e.g., N = 30. Tests should be conducted under as wide a range of humidities as possible. Such a database could then be used to compute robust variance and 95% confidence intervals. Subsequent test results would be compared to this confidence interval to determine if the emission rate is statistically different. Further, with sufficient data to compute stable variances, these values could be incorporated into an expression with meteorological variances to compute overall model uncertainty.

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APPENDIX B-2

ANALYSIS OF FOG-OIL SMOKE EMISSIONS

Appendix B-2

Table of Contents

Analysis of Fog-Oil Smoke Emissions

		Page
1.	Introduction	B-25
2.	Method	B-25
3.	Results	B-35
4.	Conclusions	B-36

Appendix B-2

Analysis of Fog-Oil Smoke Emissions

1. Introduction

This analysis focuses on the fog-oil smoke generator emission rates as tested at the Dugway Proving Ground in March and April, 1985 (Liljegren et al., 1988). Liljegren et al. (1988) reported the details of how the experiment was conducted. Only the method of computing the emission rate will be addressed here. The objectives of this analysis are threefold: (1) to assess the variability in the emission rate from the fog-oil smoke generator, (2) to compare two methods of computing the emission rate, and (3) to evaluate the influence of averaging time on emission rate variability.

2. Method

The fog-oil smoke emission data were taken from Liljegren et al. (1988). The configuration of the smoke test provided for the "instantaneous" measurement of the emission rate based on the weight loss of the oil drum and the exit velocity of the generator. Due to mechanical difficulties, the weight loss values are actually 1-minute averages, as opposed to "instantaneous" values. Plots of these data (and exit temperature) versus time for seven experiments were reported in Figures 3.2 through 3.8 in Liljegren et al. (1988). (For reference, copies of those figures are included, with the original figure numbers.) These data were digitized and the means, $\bar{x}$, and standard deviations, σ, were computed for each experiment. These values and the coefficient of variation ($\sigma/\bar{x}$) for each test are presented in Table B-1. Some experiments were screened to remove values which were approximately zero at the end of the test. Otherwise, the data reflect the actual emissions for the duration of the experiment.

Liljegren et al. (1988) computed a time integrated emission rate based on the total mass of oil burned divided by the duration of operation of the smoke generator. These values, taken from Table 3.1, are shown in Table B-2.

To evaluate the influence of averaging time on the variability in the emission rate, the emission rates were re-calculated based on averaging times up to 510 seconds. To do this the data were processed through a program which

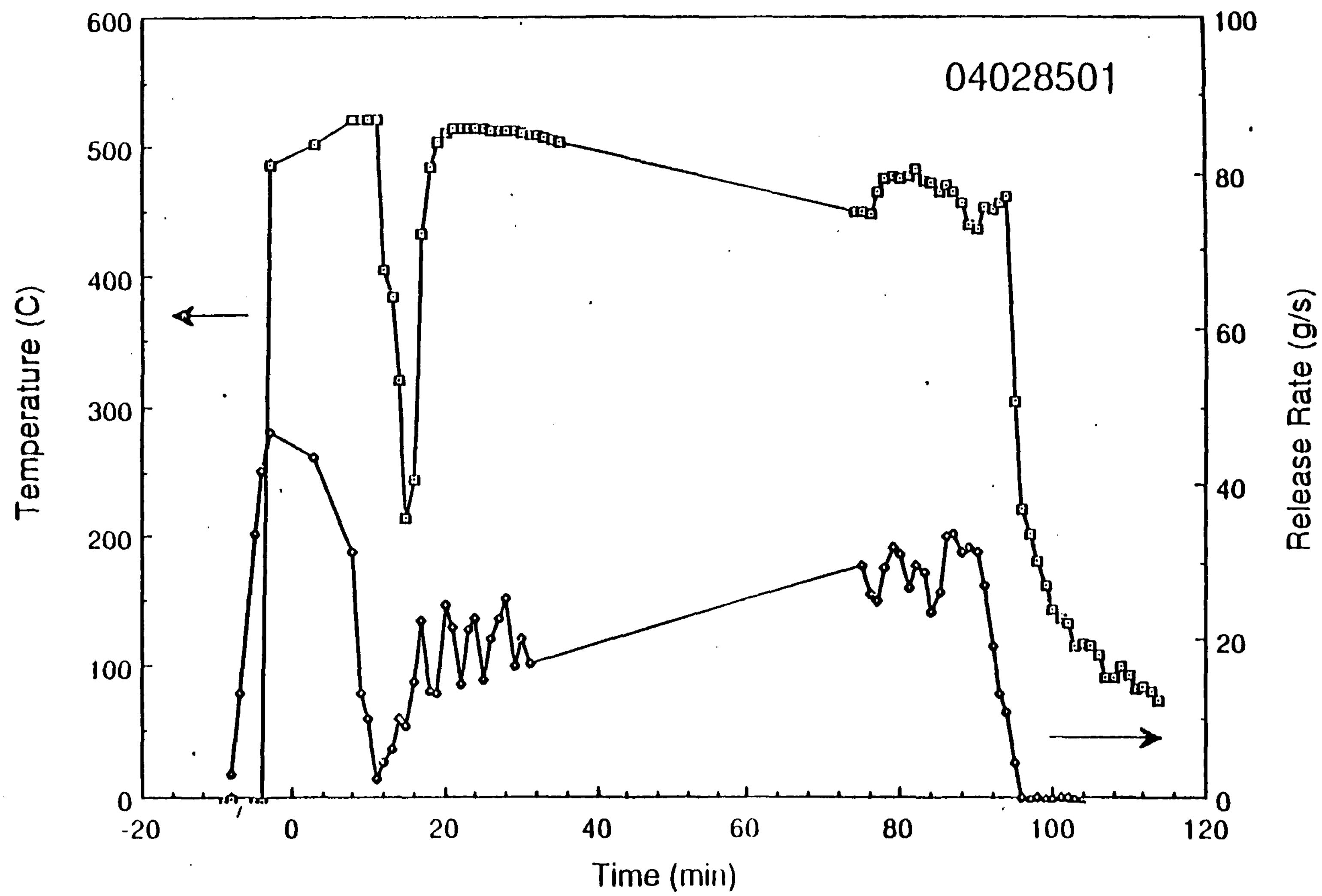

Figure 3.2. Exit Temperature (°C) and Release Rate (g/s) as a function of time for test 10003 (2 April 85). Missing data due to equipment failure (tape jam) "Taken from Liljegren et al., (1988)".

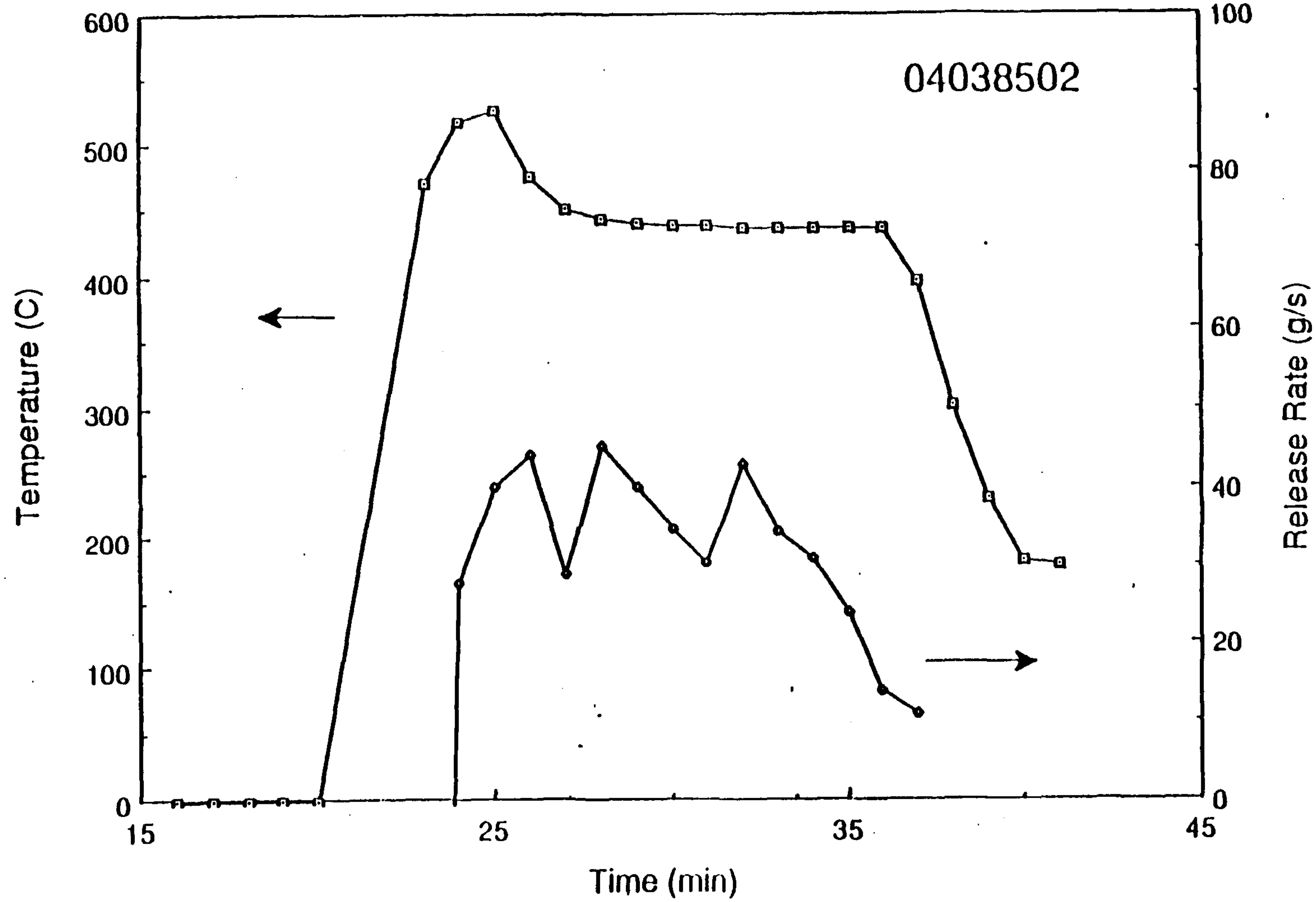

Figure 3.3. Exit Temperature (°C) and Release Rate (g/s) as a function of time for test T0004 (3 April 1985). "Taken from Liljegren et al., (1988)".

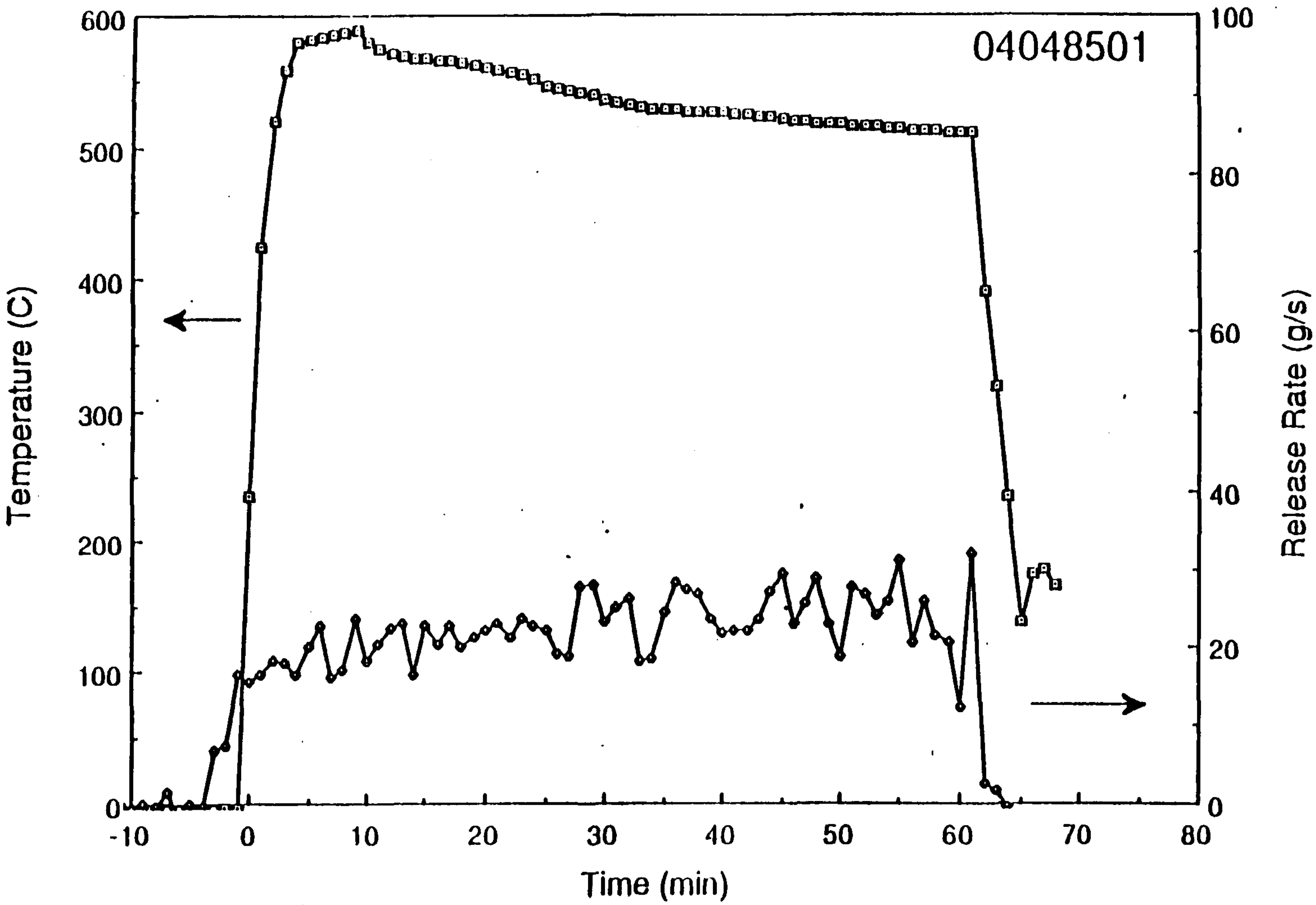

Figure 3.4. Exit Temperature (°C) and Release Rate (g/s) as a function of time for test T0005 (4 April 1985). "Taken from Liljegren et al., (1988)".

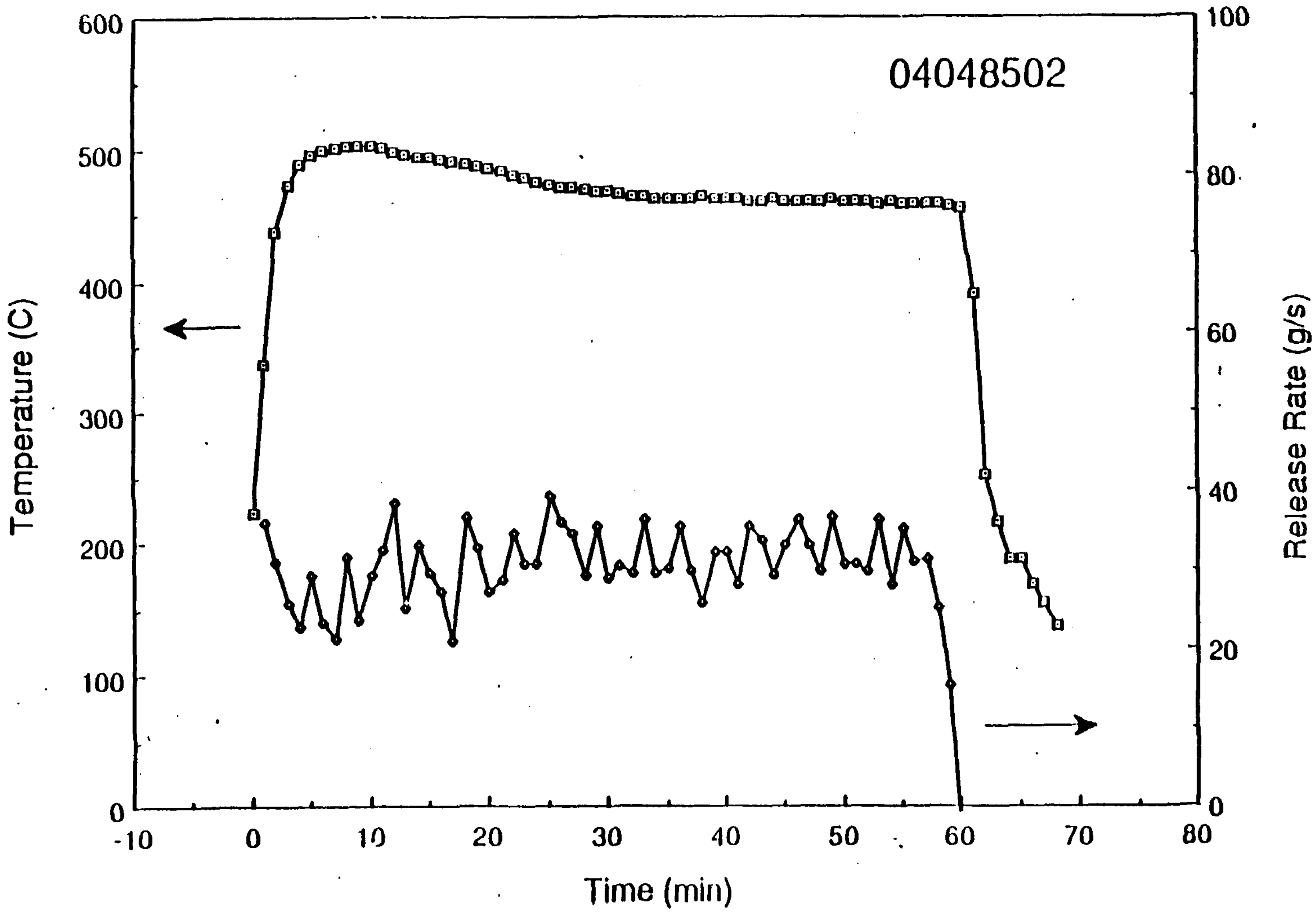

Figure 3.5. Exit Temperature (°C) and Release Rate (g/s) as a function of time for test T0006 (4 April 1985). "Taken from Lilljegren et al., (1988)".

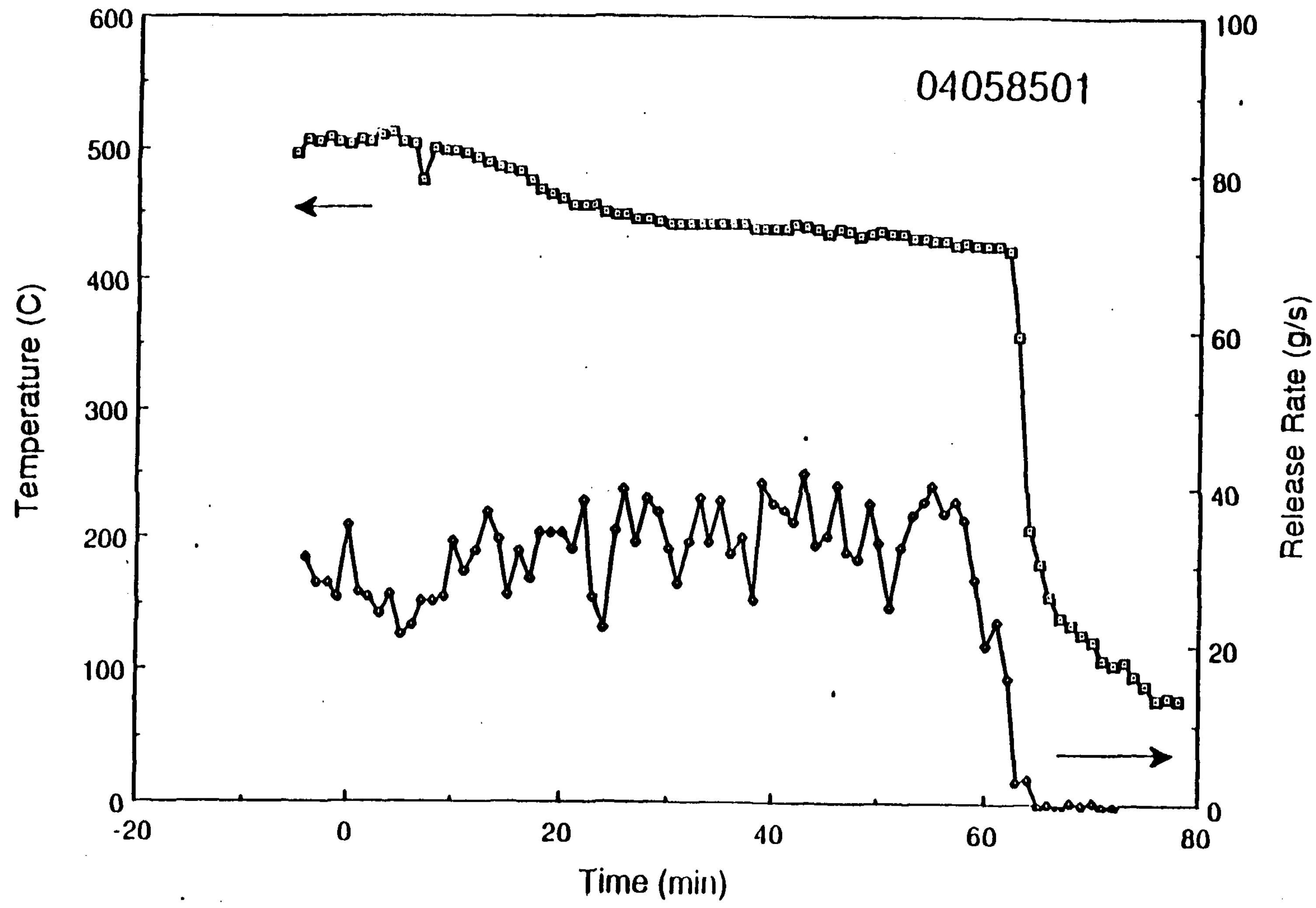

Figure 3.6. Exit Temperature (°C) and Release Rate (g/s) as a function of time for test T0007 (5 April 1985). "Taken from Liljegren et al., (1988)".

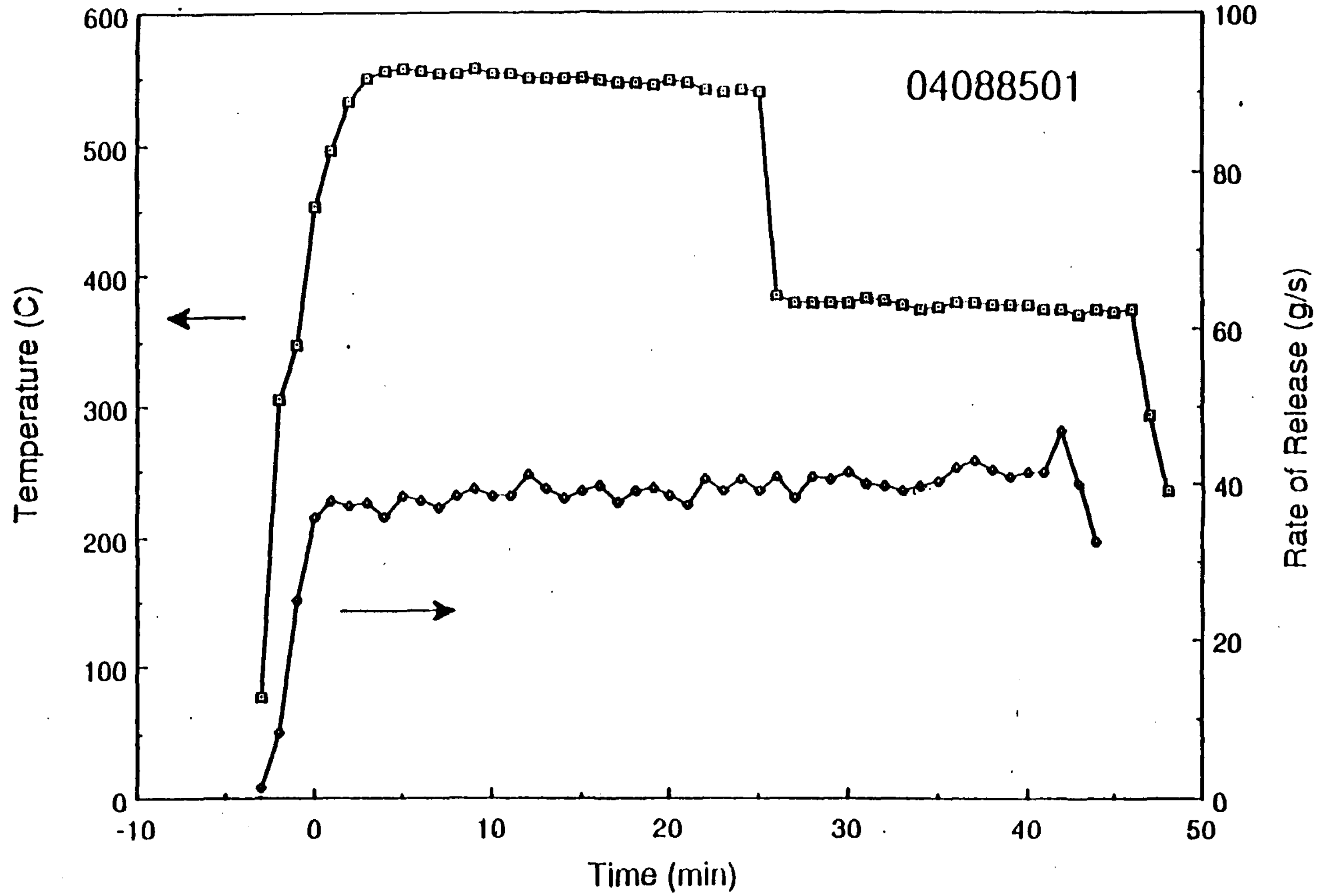

Figure 3.7. Exit Temperature (°C) and Release Rate (g/s) as a function of time for test T0008 (8 April 1985).
"Taken from Liljegren et al., (1988)".

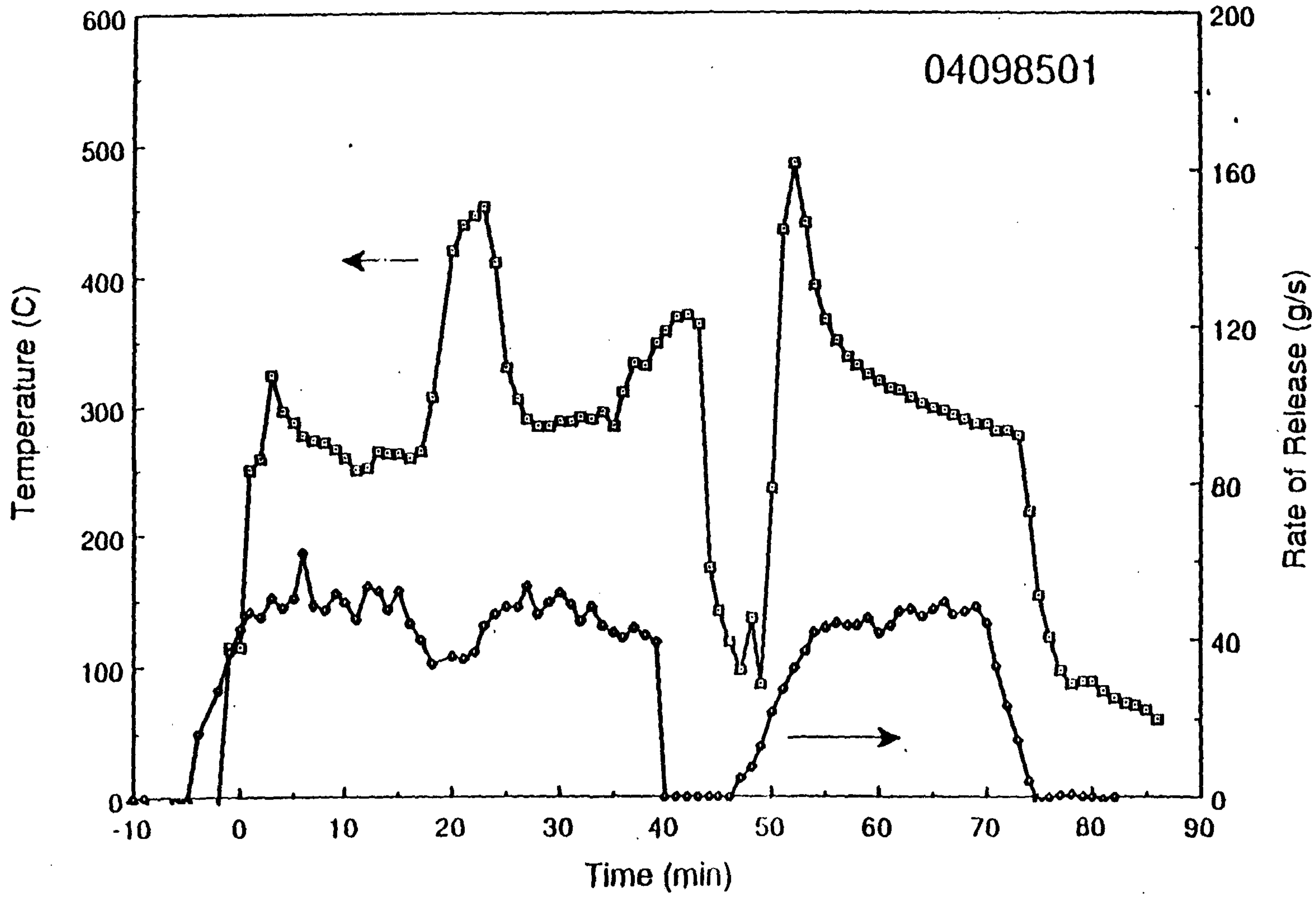

Figure 3.8. Exit Temperature (°C) and Release Rate (g/s) as a function of time for test T0009 (9 April 1985). "Taken from Liljegren et al., (1988)".

Table B-1

Variation in Instantaneous (i.e., one-minute averaged) Fog-Oil Smoke Emission Rates

Figure No.	Test No.	Average Instantaneous Emission Rate (g/s)	Standard Deviation	Coefficient of Variation
3.2	T0003	21.7	10.9	0.5
3.3	T0004	33.8	8.9	0.3
3.4	T0005	21.5	5.9	0.3
3.5	T0006	31.1	4.2	0.1
3.6	T0007	30.9	7.5	0.2
3.7	T0008	37.9	7.5	0.2
3.8	T0009	37.9	16.8	0.4

Table B-2

Comparison of Integrated and Averaged Instantaneous Methods of Calculating Emission Rates

Figure No.	Test No.	Integrated Emission Rate (g/s)*	Average Instantaneous Emission Rate (g/s)	Percent Difference
3.2	T0003	24.3	21.7	-12
3.3	T0004	22.5	33.8	+33
3.4	T0005	22.4	21.5	-4
3.5	T0006	28.7	31.1	+8
3.6	T0007	30.7	30.9	-0.1
3.7	T0008	36.3	37.9	+6
3.8	T0009	43.2	37.9	-12

*Taken from Liljegren et al., (1988), Table 3.1

interpolated the emission rate at 30 second intervals from the existing data which are at approximately one minute intervals. From this processed data, means and standard deviations were computed by grouping the data at 30 sec, 60 sec, 90 sec, etc. increments up to 510 seconds (8.5 minutes). To evaluate how the variability changed with averaging time, the following equation was used

$$R' = \left(\frac{\sigma_{i\ sec}}{\sigma_{30\ sec}} \right) \quad \text{(B-1)}$$

where $\sigma_{i sec}$ is the standard deviation for the i-th averaging time (i = 60 sec, 90 sec, 120 sec, 510 sec) and σ_{30sec} is the standard deviation from the 30 second averaging time.

3. Results

The first objective of this analysis is to evaluate the variance in the fog-oil generator emissions. Table B-1 shows that the variation in the emission rate, expressed as the standard deviation, can be large. The coefficient of variation (CV) normalizes the standard deviation by the mean. Test T0006 has the smallest CV - 0.1. Tests T0003 and T0009 have the largest CV's, 0.5 and 0.4 respectively. During these tests the smoke generator malfunctioned and the emissions were particularly erratic (see Figures 3.2 and 3.8).

The second objective of this analysis is to compare the methods for calculating the average emission rate. Table B-2 shows a comparison of the two methods of computing the mean emission rate. Liljegren et al. (1988) calculated the time integrated average by dividing the mass of oil burned by the duration of operation of the smoke generator. Our approach averaged the "instantaneous" 1 minute emission rates, as digitized from plots. The percent difference between the two methods ranges from -12% to +33%. The largest difference in the computed emission rates is for experiment T0004. A review of Figure 3.3 and the digitizing indicates that there were no errors in that step and that the mean rate of 33.8 g/sec accurately reflects the data in the plot. It is hypothesized that there may be an error in the field data relating to oil burned or duration of operation of the smoke generator, which may have caused Liljergren et al. to compute a lower emission rate. (In addition, Liljergren et al. note that the data for this experiment were divided into two groups based on a shift in wind direction. It is not clear how this was done of if this would affect the emission rate calculation. The smallest difference was for T0007, an experiment when the smoke generator functioned in a very consistent mode (see Figure 3.6). There does not appear to be a bias in the Liljegren et al. method, with their approach producing a higher mean rate four times and a lower rate three times. The r^2 for the two methods of computing the emission rate is 0.56. This means the time integrated method of computing emissions can only account for 56% of the variance in the method based on averaging the "instantaneous" values.

The third objective of this analysis is to evaluate how the variablity in the emission rate changes with averaging time. The data from five experiments, T0005 (Figure 3.4) through T0009 (Figure 3.8), were analyzed using equation (B-1). Two experiments, T0003 and T0004 (Figures 3.2 and 3.3, respectively), were excluded from this analysis due to insufficient data. Table B-3 presents the squared standard deviation ratios by averaging time for the five experiments as well as the median ratio for each averaging interval. These data are plotted in Figure B-1, with the solid line representing the median value and the minimum and maximums represented by the boxes.

A theoretical curve is also plotted in Figure B-1, representing the equation:

$$\frac{\sigma^2(T_a)}{\sigma^2(30s)} = \frac{1 + 30_s/2T_I}{1 + T_a/2T_I} \qquad \text{(B-2)}$$

where T_I is the integral time scale of the physical process. This equation is based on work by G. I. Taylor in the 1920's and is further discussed in Section VIII of the main text. This theory assumes that the time scales of the fluctuations cover a wide range of values, and the time series data in the figures verify that this is the case. An integral scale, T_I, of 150 seconds provides the best fit to the data in Table B-1.

4. Conclusions

This analysis shows that the variation in the one-minute averaged emission rate from the fog-oil smoke generator can vary from 10% to 50% of the mean rate, based on the coefficient of variation. From the comparison of the two methods of computing the emission rate, it appears that when the smoke

Table B-3

Variations in Emission Rate with Averaging Time

Averaging Times (s)	Squared Standard Deviation Ratios* T0005	T0006	T0007	T0008	T0009	Median Ratio
30.	1.000	1.000	1.000	1.000	1.000	1.000
60.	0.879	0.848	0.934	0.922	0.950	0.9220
90.	0.858	0.746	0.837	0.806	0.932	0.8370
120.	0.738	0.605	0.745	0.774	0.872	0.7450
150.	0.639	0.465	0.695	0.823	0.823	0.6950
180.	0.649	0.473	0.696	0.697	0.818	0.6960
210.	0.609	0.415	0.574	0.716	0.804	0.6090
240.	0.652	0.388	0.537	0.551	0.752	0.5510
270.	0.627	0.460	0.574	0.560	0.747	0.5740
300.	0.554	0.356	0.534	0.524	0.636	0.5340
330.	0.544	0.319	0.506	0.483	0.666	0.5060
360.	0.523	0.267	0.518	0.670	0.742	0.5230
390.	0.529	0.300	0.484	0.426	0.498	0.4840
420.	0.557	0.334	0.537	0.680	0.391	0.5370
450.	0.481	0.303	0.484	0.411	0.384	0.4110
480.	0.510	0.278	0.436	0.469	0.573	0.4690
510.	0.492	0.318	0.444	0.700	0.650	0.4920

* $R' = \left(\frac{\sigma_{i\ sec}}{\sigma_{30\ sec}} \right)^2$

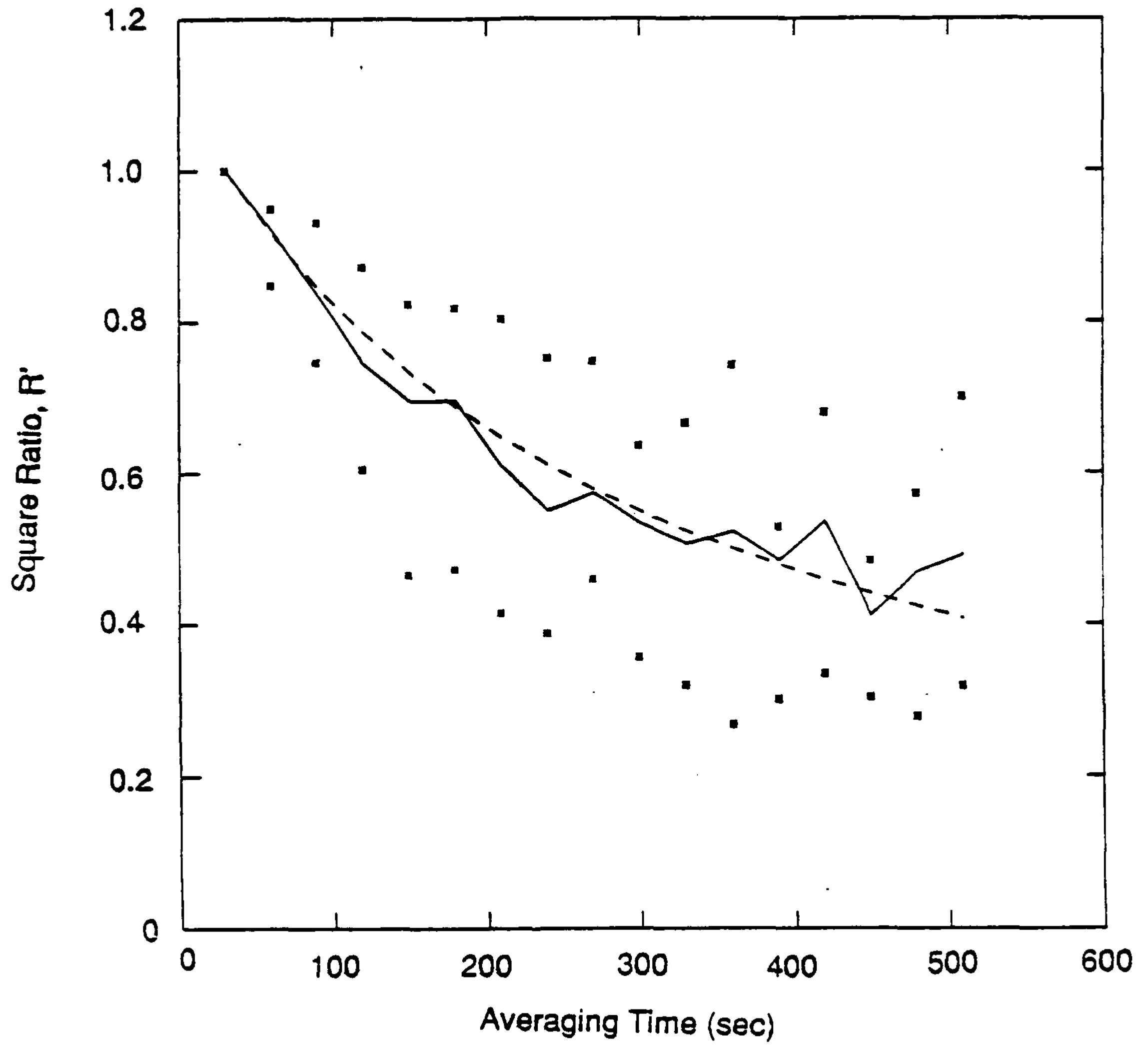

Figure B-1. Variation of emission rate fluctuation variance with averaging time. The solid line represents the median of the five experiments and the stars represent the range at that averaging time. The dashed line represents the theoretical curve given by Equation (B-2).

generator is operating in a consistent manner, both computational methods produce the same result (e.g., T0007, Figure 3.6). However, when the smoke generator malfunctions (e.g., T0003 and T0009, Figures 3.2 and 3.8, respectively), emissions can be highly variable, and the method of Liljegren et al. will over-estimate emissions relative to our method of averaging "instantaneous" emissions. An analysis of the emission rate variability with different averaging time showed that a time interval of 150 seconds best represented the experimental data.

5. References

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APPENDIX C

UNCERTAINTIES IN SOURCE EMISSION RATE ESTIMATES USING DISPERSION MODELS

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UNCERTAINTIES IN SOURCE EMISSION RATE ESTIMATES USING DISPERSION MODELS

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Abstract—The source emission rates during the Prairie Grass dispersion experiments were carefully observed and were adjusted by the experimentalists so that they were about twice as high during unstable conditions as during stable conditions. The question was asked whether observed concentrations and meteorological conditions could be used in dispersion models in order to predict source emission rates and verify this factor of two difference. Three types of simple dispersion models were applied to this problem, with the result that for the model based on Monin–Obukhov similarity theory, the uncertainties in predictions of source emission rates for individual runs were at best about ±10–20% when observed cross-wind integrated concentrations from the 50 m arc were used. Consequently this model could discern the factor of two difference in average source emission rates for the two sets of field trials which consisted of about 20 runs each. However, some models, such as the Gaussian plume model, exhibit uncertainties of about ±70% to a factor of two in predictions for individual runs, and hence could not discern the difference in average source emission rates when concentration observations at downwind distances of 100–800 m are used. It is found that the use of observed cross-wind integrated concentrations produces more accurate conclusions than the use of observed point concentrations, for the uncertainties in predictions of source emission rates are about a factor of two larger when the observed point concentrations are used.

Key word index: Dispersion models, uncertainties in models, source emission estimates.

OBJECTIVE AND METHODS

As source emission rates for air pollutants are seldom well-known, air pollution control decisions must often be made based on observations of air pollution concentrations on monitoring networks. Observed concentrations can be combined with meteorological observations (e.g. wind speed and direction, stability, and mixing depth) and used in so-called hybrid source–receptor models in order to estimate source emission rates (Watson, 1989). These models are based on the concept that atmospheric transport and dispersion models are a mathematical link between observed concentrations and predicted source emission rates.

The specific objective of this research, funded by the U.S. Army, is to develop methods for estimating whether there is a significant difference in the source emission rate of similar types of sources from one experiment to another. For example, a typical source might be a fog oil generator (used for smoke obscuration purposes), and the question may be whether the source characteristics of the fog oil generator have significantly changed between 1980 and 1990. It is assumed that the source emission rate is not directly measured, but that several field trials are carried out at the same site in 1980 and in 1990. In each field trial, cross-wind integrated concentrations are observed at a distance 100 m downwind of the source, and wind velocities, turbulence, and vertical temperature gradients are observed on a tower near the source. The source position and orientation is not varied. Some data of this type exist, and the procedures will eventually be tested with these data; however, first we have chosen to apply the source emission rate estimation methods to a simpler data set.

The Prairie Grass dispersion experiments produced a high-quality database (Barad, 1958) that has been used extensively in the development and testing of dispersion models. The experiments were simple, with near-ground-level continuous point sources, and extensive concentration and meteorological observations were made over the flat, homogeneous terrain. Source emission rates were also reported, and were deliberately varied so that they were twice as high during the day as during the night. Because of the care with which the Prairie Grass experiments were conducted, this database serves as an excellent test bed for study of the uncertainty in source emission rate estimation procedures. If the procedures cannot discern the known factor of two difference in average source emission rates in this highly controlled set of experiments, it would be of little use at more complicated sites, where the terrain may be more complex and the observations are likely to contain more errors.

Three representative dispersion models are used to relate observed concentrations and meteorological conditions to source emission rates. The three models include a statistical regression model, a Monin–Obukhov similarity model, and a Gaussian plume model. The Student-t test is used to determine whether the models can discern a factor of two difference, at the 95% confidence level, between average night and day source emission rates. Another output of this procedure is an estimate of the typical error or uncertainty the source emission rate estimate.

DESCRIPTION OF PRAIRIE GRASS DATABASE

Barad (1958) discusses the Prairie Grass database in great detail. SO_2 tracer gas was released over periods of about 10 min from a point source located at an elevation of 0.45 m. Ten minute averaged tracer concentrations were obtained from measurements observed at an elevation of 1.5 m along arcs at distances of 50, 100, 200, 400 and 800 m from the source. Supporting meteorological observations were made from a nearby tower, located in a flat area, representative of the site, where the average surface roughness, z_0, was determined to be 0.6 cm. Data from 44 experiments were used in our analysis, covering a wide range of meteorological conditions. The data are approximately equally divided into unstable and stable periods.

The Prairie Grass data are listed in Table 1, based on information in the report by Barad (1958) and in papers by van Ulden (1978), Nieuwstadt (1980), and Briggs (1982). The 2 m wind speed, u, the 2 m standard deviation of wind direction fluctuations σ_θ, and the 16 m to 2 m temperature difference, DT, were given in Barad's (1958) report, and the friction velocity, u_*, and the Monin–Obukhov length, L, were estimated by van Ulden (1978). The mixing depth and convective scaling velocity, w_*, were calculated for most unstable experiments by Nieuwstadt (1980). The stability class, SC, is estimated using observations of surface roughness, z_0, Monin–Obukhov length, L, and Golder's (1972) nomogram. Briggs (1982) carefully reviewed all of the data and suggested that certain arcs for some experiments be removed from the data set because of problems with those particular data. At each downwind distance, the table lists observations of C/Q, C^y/Q, and σ_y, where C is the maximum concentration on that arc, C^y is the cross-wind integrated concentration and σ_y is the standard deviation of the lateral concentration distribution. The C^y and σ_y data were given by Nieuwstadt (1980) for most of the unstable periods. The standard deviation of vertical wind direction fluctuations, σ_ϕ, has been estimated using boundary layer similarity theory.

DISPERSION MODELS

Data from the Prairie Grass experiments (Barad, 1958) were used extensively by Pasquill (1961) and others in the development and testing of a Gaussian diffusion model now known as the Pasquill–Gifford–Turner model (Gifford, 1962, 1968, 1976; Turner, 1967), which is the basis for most decisions regarding air pollution control in the U.S. The data were also part of the database used by Nou (1963) in the development of the empirical OB/DG model, which is the basis of the U.S. Air Force procedures for calculating toxic gas impacts. Because the early data analyses did not make use of Monin–Obukhov similarity modeling or convective scaling concepts, there was a flurry of activity with reanalyses of the Prairie Grass data from this new point of view in the late 1970s (e.g. van Ulden, 1978; Horst, 1979; Nieuwstadt, 1980; Venkatram, 1981; Briggs, 1982). In several of these papers, the new scaling parameters (e.g. the mixing depth, h, the friction velocity, u_*, and the Monin–Obukhov length, L) were derived by reanalyzing the original field data.

The variety of dispersion models in the references listed above can be grouped into three classes.

Class 1. Empirical or statistical regression models (e.g. Nou, 1963).
Class 2. Similarity models (e.g. Briggs, 1982).
Class 3. Gaussian plume models (e.g. Gifford, 1976).

Because Nou's (1963) empirical or statistical regression formula was based on several other databases besides the Prairie Grass database, and he did not suggest a formula for the cross-wind integrated concentration, we decided not to use his formula directly, but instead we applied a multivariate linear regression procedure to the data in Table 1 in order to derive the following best-fit power-law formulas:

$$C/Q = 0.000137x^{-1.81}(DT+10°F)^{4.72} \quad (1)$$

$$C^y/Q = 0.00666x^{-1.03}(DT+10°F)^{2.34} \quad (2)$$

where C/Q and C^y/Q are in units of s m^{-3} and s m^{-2}, respectively, x is in units of m and DT is in units of °F. This is the same statistical procedure applied by Nou (1963), and the units for all variables are consistent with those that he used. Nou (1963) also used the 10°F additive factor, which is necessary to prevent negative values of the temperature term. These formulas explain 91 and 84%, respectively, of the variance in the C/Q and C^y/Q observations, where most of the variance is explained by the x term. Note that these formulas are not based at all on physical insights, but are based on least-square fits of linear relationships to the data.

The group of similarity models proposed by van Ulden (1978), Horst (1979), Nieuwstadt (1980), Venkatram (1981) and Briggs (1982) is based on applications of Monin–Obukhov similarity theory and convective scaling similarity theory. According to Monin–Obukhov similarity theory, the following functional relations can be postulated for dispersion from continuous ground-level point sources in the surface boundary layer (Briggs, 1982):

$$Cu_*x^2/Q = f_1(x/L) \quad (3)$$

$$C^yu_*x/Q = f_2(x/L) \quad (4)$$

where f_1 and f_2 are non-dimensional universal functions. The friction velocity, u_*, and the Monin–

Table 1. Prairie Grass database for 44 experiments, including observations of wind speed, u, and standard deviation, σ_θ, at 2 m, temperature difference $DT = T(16\,m) - T(2\,m)$, and mixing depth, h. Derived values of friction velocity, u_*, convective scaling velocity, w_*, Monin–Obukhov length, L, and stability class, SC, are listed. Observations on five monitoring arcs (x = 50, 100, 200, 400 and 800 m) of peak normalized concentration, C/Q, cross wind integrated concentration, C^y/Q, and lateral standard deviation, σ_y, are also given. If a blank appears, then that piece of data is unavailable

EXP	u (m/s)	σθ (deg)	DT (C)	h (m)	Q (g/s)	u* (m/s)	w* (m/s)	L (m)	σφ (deg)	SC	x = 50. m C/Q (s/m^3)	x = 50. m CY/Q (s/m^2)	x = 50. m σy (m)
7	4.2	23.6	-1.6	1530.	80.9	0.31	2.27	-9.0	6.6	B	1.03E-03	4.45E-02	6.2
8	4.9	10.2	-1.2	1560.	91.1	0.31	1.07	-10.0	5.3	C	4.35E-03	5.60E-02	6.6
9	6.9	10.2	-1.6	626.	92.0	0.46	1.70	-31.0	5.3	C	2.02E-03	4.02E-02	9.0
10	4.6	16.0	-2.0	1090.	92.1	0.32	2.01	-11.0	6.1	B	1.05E-03	4.09E-02	12.3
13	1.3	3.2	1.9		61.1	0.09		3.4	4.0	F			
15	3.4	12.0	-1.1	86.	95.5	0.23	0.70	-7.6	6.3	A	4.07E-03	7.43E-02	8.6
16	3.2	18.5	-1.0	1250.	93.0	0.24	2.03	-5.2	7.4	A	1.00E-03	5.30E-02	13.7
17	3.3	5.6	0.5		56.5	0.21		40.0	4.4	D	1.00E-02	1.05E-01	
18	3.5	5.3	1.6		57.6	0.20		25.0	3.9	E	1.05E-02	1.00E-01	
19	5.0	11.6	-1.3	765.	101.0	0.39	1.50	-28.0	5.4	C	1.99E-03	4.42E-02	8.7
20	8.6	8.3	-2.3	813.	101.2	0.60	1.92	-62.0	5.3	D	1.55E-03	3.36E-02	7.9
21	6.1	6.6	0.3		50.9	0.38		172.0	4.3	D	5.29E-03	5.00E-02	
22	6.4	5.0	0.3		40.4	0.46		204.0	4.9	D	4.50E-03	4.70E-02	
23	5.9	7.3	0.2		40.9	0.39		193.0	4.5	D	4.09E-03	4.70E-02	
24	6.2	7.1	0.2		41.2	0.36		248.0	4.2	D	3.60E-03	4.70E-02	
25	2.0	24.0	-0.7	763.	101.6	0.20	1.35	-6.2	6.9	A	2.03E-03	7.79E-02	16.2
26	2.6	6.4	1.0		41.7	0.16		24.0	4.2	E	1.16E-02	1.36E-01	
29	3.5	8.0	0.9		41.5	0.23		36.0	4.5	D	5.07E-03	9.90E-02	
32	2.2	3.6	4.3		41.4	0.13		8.3	4.1	F			
33	8.5	10.5	-1.0		94.7	0.50		-51.0	4.5	D	2.05E-03	3.30E-02	
34	9.0	7.3	-1.1		97.4	0.60		-76.0	5.0	D	1.92E-03	3.00E-02	
36	1.9	3.0	1.0		40.0	0.10		7.0	3.6	F	1.99E-02	1.93E-01	
37	4.6	7.0	0.4		40.3	0.29		95.0	4.3	D	5.50E-03	6.10E-02	
38	4.1	5.0	0.2		45.4	0.28		99.0	4.7	D	7.77E-03	7.00E-02	
41	4.0	5.0	1.4		39.9	0.23		35.0	4.0	E	1.09E-02	7.90E-02	
42	5.0	6.6	0.4		56.4	0.37		120.0	4.4	D	6.70E-03	5.20E-02	
43	5.0	12.2	-1.4	683.	98.6	0.35	1.66	-16.0	5.9	C	2.30E-03	5.07E-02	10.5
44	5.7	12.7	-1.5	1666.	100.7	0.40	2.20	-25.0	5.7	C	1.73E-03	4.47E-02	11.0
45	6.1	6.9	-0.4		100.0	0.39		-87.0	4.7	D	3.30E-03	5.20E-02	
46	5.2	7.7	0.4		99.7	0.34		114.0	4.5	D	5.20E-03	6.30E-02	
48	8.0	8.1	-1.2		104.1	0.51		-63.0	4.8	D	2.07E-03	4.00E-02	
49	6.3	11.9	-1.0	636.	102.0	0.45	1.73	-28.0	5.7	C	1.99E-03	4.22E-02	8.9
50	6.6	10.9	-1.5	851.	102.0	0.44	1.91	-26.0	5.4	C	2.17E-03	4.09E-02	8.2
51	6.1	10.8	-1.4	2136.	102.4	0.45	2.30	-40.0	5.7	D	2.50E-03	4.59E-02	9.6
53	2.5	3.9	3.9		45.2	0.17		10.0	4.7	F	2.02E-02	1.54E-01	
54	4.0	5.9	0.9		43.4	0.24		40.0	4.1	D	9.53E-03	8.10E-02	
55	5.4	5.0	0.4		45.3	0.37		124.0	4.7	D	4.59E-03	5.30E-02	
56	4.3	6.1	0.6		45.9	0.29		76.0	4.6	D	6.64E-03	7.10E-02	
57	6.7	8.0	-0.6		101.5	0.46		-194.0	4.9	D	2.53E-03	4.20E-02	
58	1.9	4.1	5.9		40.5	0.11		6.4	4.0	F			
59	2.6	5.2	3.0		40.2	0.14		11.0	3.7	F	1.74E-02	1.40E-01	
60	4.9	5.9	0.7		38.5	0.20		50.0	3.9	D	7.45E-03	6.20E-02	
61	8.0	11.0	-1.8	515.	102.1	0.51	1.65	-36.0	5.0	D	1.75E-03	3.43E-02	10.4
62	5.2	8.0	-1.0		102.1	0.34		-30.0	5.2	C			

EXP	x = 100. m C/Q (s/m^3)	x = 100. m CY/Q (s/m^2)	x = 100. m σy (m)	x = 200. m C/Q (s/m^3)	x = 200. m CY/Q (s/m^2)	x = 200. m σy (m)	x = 400. m C/Q (s/m^3)	x = 400. m CY/Q (s/m^2)	x = 400. m σy (m)	x = 800. m C/Q (s/m^3)	x = 800. m CY/Q (s/m^2)	x = 800. m σy (m)
7	2.41E-04	2.45E-02	12.0	4.70E-05	1.11E-02	22.0	7.61E-06	4.45E-03	39.0	8.18E-07	2.00E-03	71.0
8	1.17E-03	2.85E-02	12.0	2.61E-04	1.21E-02	21.0	4.15E-05	4.20E-03	41.0	7.37E-06	1.54E-03	86.0
9	5.73E-04	2.39E-02	18.0	1.42E-04	1.09E-02	33.0	2.93E-05	4.46E-03	63.0	5.26E-06	1.41E-03	116.0
10	4.40E-04	1.95E-02	20.0	1.14E-04	7.71E-03	35.0	2.70E-05	2.17E-03	61.0	1.72E-06	3.50E-04	97.0
13							2.04E-03			1.62E-03	1.33E-01	
15	1.08E-03	3.56E-02	16.0	2.16E-04	1.41E-02	26.0	4.75E-05	3.07E-03	45.0	5.43E-06	1.15E-03	92.0
16	3.55E-04	1.93E-02	26.0	6.46E-05	5.16E-03	49.0	6.37E-06	1.08E-03	72.0	5.11E-07	1.40E-04	116.0
17	4.52E-03			1.42E-03	3.40E-02		4.30E-04			1.60E-04	1.10E-02	
18	4.33E-03			1.60E-03	4.60E-02		5.33E-04			2.36E-04	2.00E-02	
19	5.01E-04	2.16E-02	16.0	1.20E-04	8.45E-03	32.0	1.08E-05	2.65E-03	55.0	3.31E-06	5.70E-04	85.0
20	4.80E-04	1.70E-02	14.0	1.40E-04	8.40E-03	27.0	2.97E-05	3.36E-03	49.0	7.04E-06	1.28E-03	90.0
21	1.04E-03			5.47E-04	1.00E-02		1.69E-04			5.96E-05	6.00E-03	
22	1.66E-03			5.44E-04	1.40E-02		1.71E-04			6.07E-05	4.00E-03	
23	1.42E-03			4.43E-04	1.70E-02		1.45E-04			4.80E-05	4.00E-03	
24	1.17E-03			3.08E-04	1.50E-02		1.26E-04			6.30E-05	4.00E-03	
25	3.00E-04	2.66E-02	36.0	5.95E-05	7.40E-03	72.0	1.35E-05	2.96E-03	134.0	2.13E-06	6.20E-04	214.0
26	4.60E-03			1.30E-03	5.10E-02		4.96E-04			2.01E-04	1.50E-02	
29	2.07E-03			6.45E-04	3.80E-02		2.15E-04			6.08E-05	1.20E-02	
32				6.40E-03	1.15E-01		2.69E-03			1.32E-03	5.60E-02	
33	6.31E-04			1.08E-04	9.00E-03		3.08E-05			7.27E-06	1.30E-03	
34	6.56E-04			1.03E-04	9.00E-03		4.76E-05			1.21E-05	1.80E-03	
36	1.30E-02			4.02E-03	1.00E-01		1.52E-03			9.26E-04	4.10E-02	
37	1.92E-03			5.51E-04	2.10E-02		1.00E-04			5.06E-05	7.00E-03	
38	3.34E-03			1.11E-03	2.60E-02		4.04E-04			1.39E-04	8.00E-03	
41	4.59E-03			1.63E-03	3.20E-02		5.95E-04			2.39E-04	1.20E-02	
42	1.72E-03			5.36E-04	1.70E-02		1.34E-04			3.66E-05	5.00E-03	
43	5.31E-04	2.43E-02	21.0	1.49E-04	1.10E-02	40.0	2.32E-05	3.75E-03	89.0	4.76E-06	1.22E-03	200.0
44	4.55E-04	2.20E-02	22.0	1.30E-04	1.08E-02	43.0	2.63E-05	4.27E-03	73.0	5.31E-06	1.35E-03	126.0
45	1.04E-03			3.61E-04	1.70E-02		7.71E-05			2.57E-05	3.50E-03	
46	1.85E-03			5.61E-04	2.30E-02		1.93E-04			5.84E-05	7.00E-03	
48	6.05E-04			1.56E-04	6.00E-03		4.32E-05			1.21E-05		
49	6.22E-04	2.35E-02	17.0	1.72E-04	1.14E-02	35.0	3.03E-05	4.41E-03	72.0	5.25E-06	1.47E-03	110.0
50	6.97E-04	2.24E-02	15.0	1.66E-04	8.85E-03	28.0	3.43E-05	3.79E-03	55.0	5.37E-06	1.07E-03	115.0
51	6.59E-04	2.34E-02	18.0	1.67E-04	9.77E-03	32.0	2.64E-05	3.71E-03	60.0	3.96E-06	8.20E-04	77.0
53	1.15E-02			4.95E-03	8.30E-02		1.81E-03			7.26E-04	6.20E-02	
54	3.78E-03			1.37E-03	3.00E-02		4.98E-04			2.13E-04	1.10E-02	
55	1.80E-03			5.76E-04	1.80E-02		1.64E-04			6.00E-05	5.00E-03	
56	2.35E-03			7.75E-04	2.40E-02		2.69E-04			1.00E-04	7.00E-03	
57	7.28E-04			2.60E-04	1.30E-02		7.65E-05			1.97E-05	2.70E-03	
58				7.14E-03	1.05E-01		3.21E-03			1.33E-03	5.10E-02	
59	1.26E-02			5.53E-03	8.10E-02		2.34E-03			9.02E-04	3.10E-02	
60	2.88E-03			1.05E-03	2.30E-02		3.61E-04			1.47E-04	8.00E-03	
61	5.02E-04	2.06E-02	19.0	1.49E-04	1.12E-02	35.0	3.73E-05	5.19E-03	65.0	8.56E-06	1.96E-03	109.0
62	1.02E-03			2.08E-04	1.30E-02		6.94E-05			1.01E-05	2.30E-03	

Obukhov length. L are the fundamental scaling velocity and scaling length in the surface boundary layer, according to Monin–Obukhov similarity theory. The Prairie Grass data are plotted in Fig. 1 in the dimensionless forms suggested by Equations (2) and (3), illustrating that the data are ordered quite well by these similarity relations.

Because the data in the four parts of Fig. 1 appear to approach a constant as x/L approaches zero, the following functional relation is proposed:

$$f(x/L) = a(1 + bx/L)^c. \qquad (5)$$

A least-squares algorithm was applied to each figure, with the following results:

$$f_1(x/L) = 3.37(1 - 0.019x/L)^{-1.36} \qquad x/L < 0 \qquad (6)$$

$$f_1(x/L) = 3.01(1 + 2.20x/L)^{0.57} \qquad x/L > 0 \qquad (7)$$

$$f_2(x/L) = 1.06(1 - 0.021x/L)^{-1.74} \qquad x/L < 0 \qquad (8)$$

$$f_2(x/L) = 1.07(1 + 0.10x/L)^{0.68} \qquad x/L > 0. \qquad (9)$$

These curves are drawn on the figures and appear to provide a good fit at all values of x/L. However, they have been derived with no requirements that certain physically-based asymptotic functional relationships be satisfied. For example, Briggs (1982) points out that $f_2(x/L)$ should be proportional to $(-x/L)^{1/2}$ in the limit of free convection ($-x/L \to \infty$). Consequently, Briggs' (1982) suggests a third term in Equation (5), which he claims to better account for "convective sweep-out" of the plume at large $|x/L|$. The similarity model is represented by Equations (6)–(9) in our analysis rather than the equations proposed in any of the above references because the other equations are based on a slightly different subset of the Prairie Grass database.

The Gaussian plume models comprise the third class of models in our analysis. The Gaussian model is based on the formulas (Gifford, 1976)

$$C/Q = (\pi u \sigma_y \sigma_z)^{-1} \exp(-(z_s - z_r)^2/2\sigma_z^2) \qquad (10)$$

$$C^y/Q = (2/\pi)^{1/2}(u\sigma_z)^{-1} \exp(-(z_s - z_r)^2/2\sigma_z^2). \qquad (11)$$

The source height, z_s, and receptor height, z_r, equal

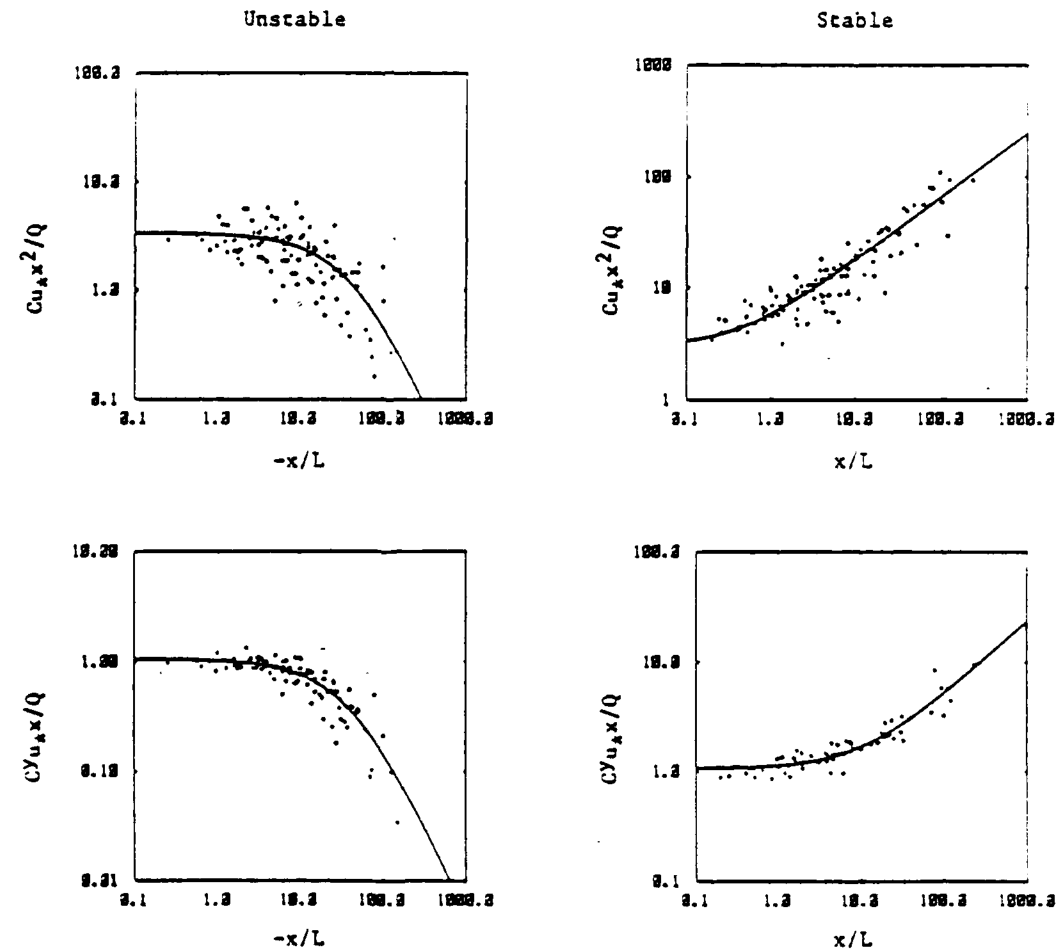

Fig. 1. Prairie Grass data plotted in the dimensionless form suggested by Equations (3) and (4). Best-fit lines of the form $a(1 + bx/L)^c$ are drawn on each figure (see Equations (6)–(9)).

0.45 m and 1.5 m, respectively, in the Prairie Grass experiments. The wind speed, u, is assumed to be that measured at a height of 2 m (see Table 1). The values for lateral and vertical dispersion coefficients, σ_y and σ_z, that are substituted into Equations (10) and (11) are based on suggestions by Briggs (1973), who used the Prairie Grass experiments, along with many other field experiments, in their derivation. These σ_y and σ_z formulas are given in Table 2. The required stability class is found in Table 1 for each Prairie Grass test.

Note that the empirical and similarity classes of dispersion models have been best-fit to the exact same data (Table 1) that will be used for further testing. The Gaussian plume model has not been subjected to these same best-fit procedures, but has been based on data from many experiments. Because of these differences in databases used to derive the models, it is expected that the Gaussian plume model will have the least success in any comparisons with field data from the Prairie Grass database.

The dispersion models in Equations (3) and (4) and (6)–(10) are inverted in order to predict source emission rates:

$$Q_p = C_o/(C/Q)_p \quad (12)$$

$$Q_p = C_o^y/(C^y/Q)_p, \quad (13)$$

where subscripts o and p represent observed and predicted variables, respectively. Because of the characteristics of the multiple linear regression or least-squares statistical procedures, an equation that produces a best-fit for C/Q or C^y/Q may not necessarily product a best-fit for Q. These statistical procedures attempt to minimize the mean-square error and to force the mean of the observed variable to equal the mean of the predicted variable. We should therefore not be surprised if an equation which produces zero mean bias in C/Q is discovered to produce a mean bias of 20–30% or more in Q.

STATISTICAL PROCEDURES

A primary objective of this research is the development of methods for estimating whether there is a significant difference in the source emission rate of similar types of sources from one experiment to another, as determined by observations of meteorological conditions and of point concentrations or cross-wind integrated concentrations. Dispersion models, such as the three presented above, can be used to remove the effects on the concentration observations of variations in meteorological parameters and downwind position of the concentration monitor.

A listing of the observed source emissions, Q, during the Prairie Grass experiment is given in Table 1, and the data are plotted in Fig. 2 as a function of the stability parameter $1/L$ (the point for run 46 has been excluded, since it was an evening transition period when Q was still high although $1/L$ had just become positive). During the Prairie Grass experiment the night-time emissions, Q, of tracer gas were controlled so that Q averaged 45.2 g s^{-1} with a range from about 38 to 58 g s^{-1} and a standard deviation of 5.91 g s^{-1}, and the daytime emissions were controlled so that Q averaged 98.25 g s^{-1} with a range from about 90 to 105 g s^{-1} and a standard deviation of 4.48 g s^{-1}. The experimentalists deliberately maintained this factor of 2 difference in day–night Qs so that the magnitude of concentrations at the monitors would not vary much from day to night. With 19 stable (night) runs and 20 unstable (day) runs, the Student-t parameter (Panofsky and Brier, 1968, p. 63) can be calculated in order to determine if the daytime $\bar{Q}$ is significantly different from the night-time $\bar{Q}$:

$$t = (\bar{Q}_d - \bar{Q}_n) / \left(\frac{N_d\sigma_d^2 + N_n\sigma_n^2}{N_d + N_n - 2} \left(\frac{1}{N_d} + \frac{1}{N_n} \right) \right)^{1/2} \quad (14)$$

where subscripts d and n indicate day and night. If $|t|$ is less than 2.04, then the difference $(\bar{Q}_d - \bar{Q}_n)$ is not significantly different from zero, at the 95% confidence level. In fact, using the observed $\bar{Q}$ and σ_Q

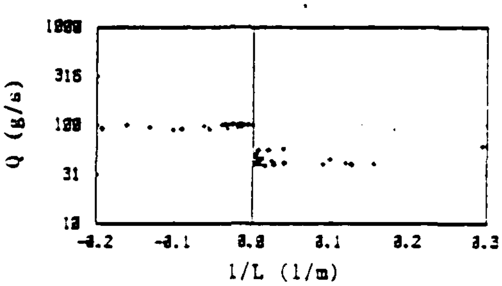

Fig. 2. Observed tracer gas source emission rates, Q, as a function of inverse Monin–Obukhov length, $1/L$, for the Prairie Grass data (run 46 excluded).

Table 2. Formulas recommended by Briggs (1973) for σ_y and σ_z, for rural conditions

Stability class	σ_y(m)	σ_z(m)
A	$0.22x(1+0.0001x)^{-1/2}$	$0.20x$
B	$0.16x(1+0.0001x)^{-1/2}$	$0.12x$
C	$0.11x(1+0.0001x)^{-1/2}$	$0.08x(1+0.0002x)^{-1/2}$
D	$0.08x(1+0.0001x)^{-1/2}$	$0.06x(1+0.0015x)^{-1/2}$
E	$0.06x(1+0.0001x)^{-1/2}$	$0.03x(1+0.0003x)^{-1}$
F	$0.04x(1+0.0001x)^{-1/2}$	$0.016x(1+0.0003x)^{-1}$

figures quoted above, the calculated Student-t parameter is 30.86 for the difference between the mean night-time and daytime emission rates, which implies that the difference is significant at far greater than the 95% confidence level.

Because there is such a clear difference in the observed day and night tracer gas source emission rates, Q, at the Prairie Grass site, it is interesting to ask whether the dispersion models would be able to predict this significant difference in the mean emission rates, based on observed concentrations and meteorological variables. The three types of models described earlier were used to prepare predictions of source emission rate, Q_p (one set of predictions using C_o and another set using C_o^y). This calculation of Q_p was made individually using data from each of five monitoring arcs (50, 100, 200, 400 and 800 m) for C_o, and each of three monitoring arcs (50, 200 and 800 m) for C_o^y. For each set of predictions, values of night-time and daytime $\bar{Q}_p$ and σ_{Qp} were calculated. Then Equation (14) was used to calculate the Student-t parameter. If the resulting t value exceeds 2.04, it is concluded that the model successfully simulated the difference in source emission rates. If t is less than 2.04, then it is concluded that the model has failed to simulate the difference.

Besides investigating the day–night difference in mean source emission rate predictions, it is also of interest to investigate the ability of the models to predict emission rates for all Prairie Grass runs taken as a group. For this purpose, the following performance measures are calculated (where an overbar represents an average over all the database).

Relative bias: $(\bar{Q}_p - \bar{Q}_o)/\bar{Q}_o$.

Correlation: $r = \overline{(Q_p - \bar{Q}_p)(Q_o - \bar{Q}_o)}/\sigma_{Q_p}\sigma_{Q_o}$.

Fractions of predictions, Q_p, within a factor of two of observations, Q_o.

Normalized mean square error: $\overline{(Q_p - Q_o)^2}/\bar{Q}_p\bar{Q}_o$.

These performance measures are tabulated for each model and for C_o and C_o^y on each monitoring arc. In addition, the individual residuals $(Q_p - Q_o)$ are plotted as a function of downwind distance for each model.

RESULTS AND CONCLUSIONS

Predictions of average daytime and night-time source emission rates

The procedures for estimating the daytime and night-time average source emission rates reviewed above were applied to the Prairie Grass database, with the results given in Tables 3 and 4, for C_o and C_o^y, respectively. By comparing the numbers in the two tables, it is evident that use of the observed cross-wind integrated concentration, C_o^y, produced better results than use of the observed point concentration, C_o. The standard deviations, σ_{Qp}, of the predicted source emission rates are about 50% larger during the night, and a factor of 2 or 3 larger during the day, for C_o than for C_o^y. Consequently the calculated Student-t parameters are about twice as large for C_o^y than for C_o, implying that there is more confidence in the conclusions for C_o^y. We expected that there would be a difference, because

Table 3. Predictions of source emission rate, Q_p (g s^{-1}), for night-time and daytime Prairie Grass runs, using observed maximum concentrations, C_o, on monitoring arcs at distances of 50, 100, 200, 400 and 800 m. Three different models are used to calculate $Q_p = C_o/(C/Q)_p$. The average, $\bar{Q}_p$, and standard deviation, σ_{Qp}, for night-time and daytime conditions is listed. Student-t is calculated using Equation (14)

Model	Monitoring distance (m)	Student t	Night ($N = 19$) $\bar{Q}_p$ (g s^{-1})	Night σ_{Qp} (g s^{-1})	Day ($N = 20$) $\bar{Q}_p$ (g s^{-1})	Day σ_{Qp} (g s^{-1})
Observed Q		30.86	45.2	5.9	98.2	4.5
Regression	50	7.40	30.1	12.0	144.6	64.7
	100	5.47	43.8	19.4	139.1	71.6
	200	4.27	52.0	23.0	128.3	72.5
	400	2.20	61.2	27.3	93.4	56.2
	800	−1.19	84.2	51.6	64.5	48.9
Similarity	50	5.68	39.9	14.1	70.8	18.5
	100	4.62	49.2	16.2	84.0	37.1
	200	5.51	48.7	16.2	101.1	37.1
	400	5.52	45.8	15.6	105.4	43.2
	800	4.80	46.3	14.6	116.2	60.1
Gaussian	50	2.40	55.2	45.5	115.5	96.9
	100	1.07	76.3	94.9	109.2	92.2
	200	0.05	98.1	150.9	100.2	70.1
	400	−0.88	118.8	196.3	76.8	62.7
	800	−1.67	150.1	264.1	48.0	30.1

Table 4. Predictions of source emission rate, Q_p (g s^{-1}), for night-time and daytime Prairie Grass runs, using observed cross-wind integrated concentrations, C_o^y, on monitoring arcs at distances of 50, 200 and 800 m. Three different models are used to calculate $Q_p = C_o^y(C^y/Q)_p$. The average, $\bar{Q}_p$, and standard deviation, σ_{Q_p}, for night-time and daytime conditions listed. Student-t is calculated using Equation (14)

Model	Monitoring distance (m)	Student t	Night (N = 19) $\bar{Q}_p$ (g s^{-1})	Night (N = 19) σ_{Q_p} (g s^{-1})	Day (N = 20) $\bar{Q}_p$ (g s^{-1})	Day (N = 20) σ_{Q_p} (g s^{-1})
Observed Q		27.27	45.2	5.9	97.8	4.7
Regression	50	17.19	29.7	9.8	140.1	24.8
	200	7.43	46.9	16.9	124.8	40.1
	800	−0.58	69.4	34.3	62.1	36.4
Similarity	50	16.24	39.7	8.3	89.6	9.0
	200	9.54	49.0	9.0	100.1	20.3
	800	4.38	45.2	13.8	99.6	50.2
Gaussian	50	6.18	61.7	20.9	161.0	58.4
	200	2.83	65.5	60.3	116.6	34.9
	800	−0.99	85.5	145.1	46.9	20.3

σ_y is another complicating factor included in C_o that would act to increase the uncertainty, but did not expect that the difference would be this large.

The ability of the models to arrive at the proper answer (i.e. that the daytime $\bar{Q}$ is significantly larger than the night-time $\bar{Q}$, with at least 95% confidence) can be seen by identifying cases where $t \geq 2.04$ in Tables 3 and 4. It is seen that most models are able to reproduce this conclusion at most arc distances. However, false conclusions ($t < 2.04$) are reached for the following arcs and models.

C_o:	100 m arc:	Gaussian
	200 m arc:	Gaussian
	400 m arc:	Gaussian
	800 m arc:	Regression and Gaussian.
C_o^y:	800 m arc:	Regression and Gaussian.

It is seen that the use of C_o and C_o^y from the closest arc (50 m) leads to the correct conclusion for all three models, with a value for Student-t ranging from 2.4 to 7.4 for C_o and 6.2 to 17.2 for C_o^y. The regression and similarity models are seen to be better able to simulate the difference in observed Q (i.e. they yield a higher t) than the Gaussian model. However, the number of false conclusions increases as downwind distance increases. At the 800 m arc in both tables, only the similarity model yields the proper conclusion. Figs 3 and 4 contain extreme examples of plots of predicted source emission rates, Q_p, as a function of $1/L$, in the same format as the observations in Fig. 2. The similarity model predictions in Fig. 3, using observations of C_o^y on the 50 m arc, produce patterns similar to the observed data, but with slightly more scatter. However, the Gaussian plume model predictions in Fig. 4, using observations of C_o on the 800 m arc, obviously miss the overall trend of the observations of Q, as well as containing much more scatter.

The failure of the regression model and the Gaussian model to estimate $\bar{Q}$ using C_o and C_o^y observations at the longest distances may been seen by investigating the variation of the ratio C_{oy}/C_o with distance for the three models for stable and unstable conditions (Figs 5 and 6). The C_{oy}/C_o values for the similarity model have very little trend with distance and are always centered

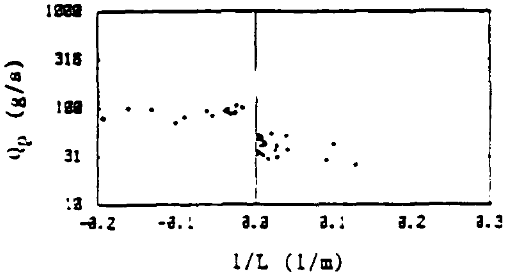

Fig. 3. Tracer gas source emission rates, Q_p, predicted by the similarity model as a function of inverse Monin–Obukhov length, $1/L$, for the Prairie Grass data (run 46 excluded). Observed cross-wind integrated concentrations on the 50 m arc are used.

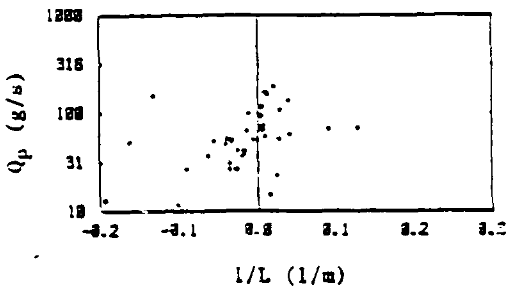

Fig. 4. Gas source emissions rate predicted by the Gaussian plume model, Q_p, as a function of inverse Monin–Obukhov length, $1/L$, for the Prairie Grass data (run 46 excluded). Observed concentrations on the 800 m arc are used.

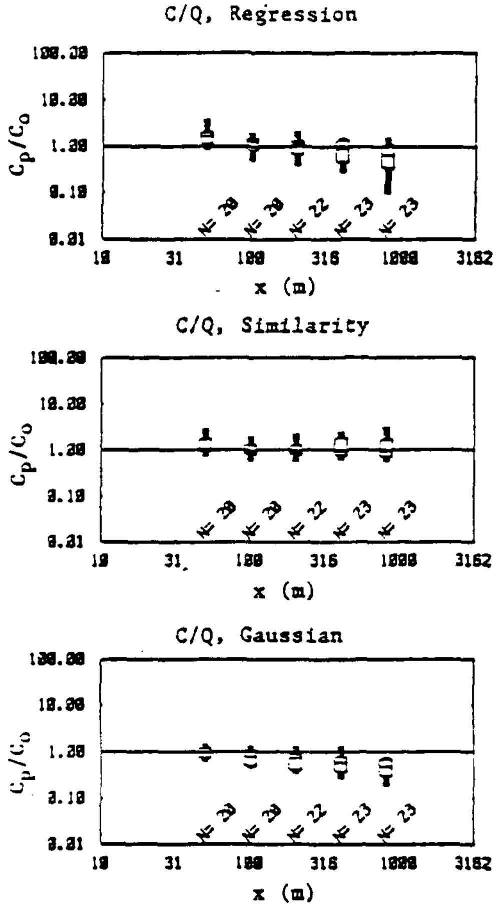

Fig. 5. Ratios of predicted to observed concentrations (C/Q) for the Prairie Grass dataset, as a function of downwind distance, for three models (regression, similarity, and Gaussian) for stable conditions. N is the number of data points at each distance. The midline of each box plot is the median, and the other lines represent ± one and two standard deviations.

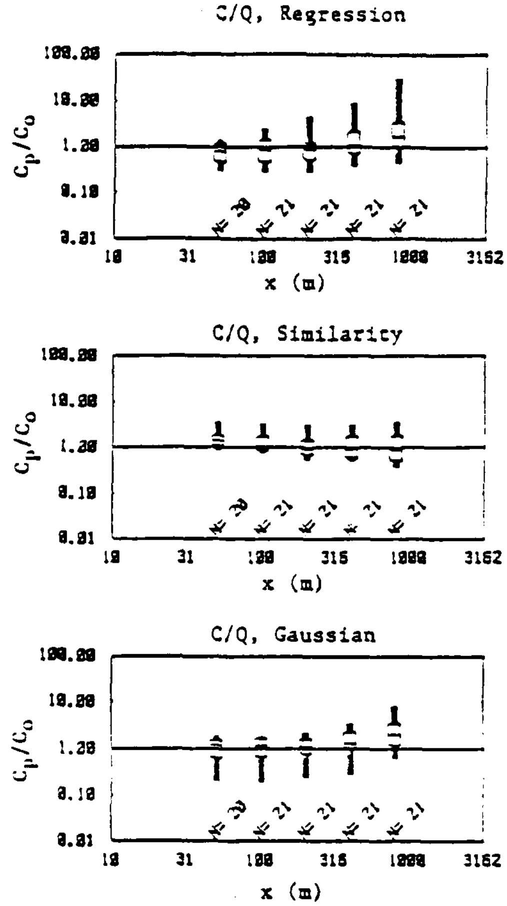

Fig. 6. Ratios of predicted to observed concentrations (C/Q) for the Prairie Grass dataset, as a function of downwind distance, for three models (regression, similarity, and Gaussian) for unstable conditions. N is the number of data points at each distance. The midline of each box plot is the median, and the other lines represent ± one and two standard deviations.

on 1.0. In contrast, at large distances, the regression and Gaussian models tend to underpredict ($C_p/C_o < 1$) during stable conditions (Fig. 3) and overpredict ($C_p/C_o > 1$) during unstable conditions. It is important to note that a model which overpredicts the concentration, C, will underpredict the source emission rate, Q. Consequently, at large distances, the regression and Gaussian models can be expected to overpredict the source emission rate, Q, during stable conditions, and underpredict it during unstable conditions. But since the observed stable $\bar{Q}$ is about 45 g s^{-1} and the unstable $\bar{Q}$ is about 98 g s^{-1}, the $\bar{Q}$s predicted by these two models will tend to be either nearly the same, or their relative magnitudes may even be switched. This problem is seen to occur for the Gaussian model on the 800 m arc, using the C_o data, where the following discrepancy is found in Table 3 and can be seen in Figs 2 and 4.

Thus the Gaussian model leads to the opposite conclusion regarding daytime and night-time $\bar{Q}$ differences if the 800 m C_o data are used. Note that if the experimentalists had controlled the emissions in the opposite way, such that the night-time Q exceeded the daytime Q, then these trends in the errors in the regression and Gaussian models would have led to a correct conclusion regarding the differences in Q.

	Night	Day
Observed $\bar{Q}_o$	45.2	98.2
Gaussian predicted $\bar{Q}_o$	150.1	48.0

Consider the best-performing model in Table 6, where C_o^* data from the 50 m arc are used in the similarity model to predict the average source emission rate, $\bar{Q}$ (see Fig. 3). The calculated Student-t value

Table 5. Evaluations of predictions of source emission rate, Q_p(g s^{-1}), for all Prairie Grass runs, using observed maximum point concentrations, C_o, on monitoring arcs at distances of 50, 200 and 800 m. Three different models are used to calculate $Q_p = C_o/(C/Q)_p$

Distance to C_o observation	Model	$\bar{Q}_p$(g s^{-1})	$\frac{\bar{Q}_o-\bar{Q}_p}{\bar{Q}_o}$	Correlation r	Fraction within factor of 2	$\frac{\overline{(Q_o-Q_p)^2}}{\bar{Q}_o\bar{Q}_p}$
	Observed	72.4				
50 m	Regression	88.8	0.23	0.77	0.82	0.53
	Similarity	55.7	−0.23	0.74	0.90	0.15
	Gaussian	86.1	0.19	0.36	0.80	0.97
200 m	Regression	91.2	0.26	0.59	0.85	0.51
	Similarity	75.6	0.04	0.71	0.92	0.14
	Gaussian	99.2	0.37	0.02	0.74	2.08
800 m	Regression	74.1	0.02	−0.15	0.54	0.70
	Similarity	82.1	0.13	0.65	0.90	0.34
	Gaussian	97.6	0.35	−0.25	0.49	5.75

Table 6. Evaluation of predictions of source emission rate, Q_p(g s^{-1}), for all Prairie Grass runs, using observed cross-wind integrated concentrations, C_o^y, on monitoring arcs at distances of 50, 200 and 800 m. Three different models are used to calculate $Q_p = C_o^y/(C^y/Q)_p$

Distance to C_o observation	Model	$\bar{Q}_p$(g s^{-1})	$\frac{\bar{Q}_o-\bar{Q}_p}{\bar{Q}_o}$	Correlation r	Fraction within factor of 2	$\frac{\overline{(Q_o-Q_p)^2}}{\bar{Q}_o\bar{Q}_p}$
	Observed	68.4				
50 m	Regression	78.4	0.14	0.94	0.91	0.23
	Similarity	61.7	−0.10	0.98	1.00	0.02
	Gaussian	106.0	0.55	0.74	0.88	0.55
200 m	Regression	81.2	0.19	0.80	0.94	0.21
	Similarity	71.6	0.05	0.89	1.00	0.04
	Gaussian	88.1	0.29	0.46	0.88	0.48
800 m	Regression	66.1	−0.03	−0.07	0.74	0.46
	Similarity	69.2	0.01	0.60	0.88	0.26
	Gaussian	68.4	0.00	−0.15	0.65	2.98

in this case is 16.2. Since $\bar{Q}_o$(day)–$\bar{Q}_o$(night)$\cong$53 g s^{-1}, it is concluded that a significant difference in $\bar{Q}$ values could be discerned by this model if $\Delta\bar{Q}_o = \bar{Q}_o$(day)–$\bar{Q}_o$(night) drops as low as $53 \times (2.04/16.2) = 6.7$ g s^{-1}; that is, if $\Delta\bar{Q}_o$ is about 15% of $\bar{Q}_o$. Therefore, in these best of research-grade experiments, where there are about 20 daytime and 20 night-time tests, and where a dispersion model is fit to these same data, a day–night difference in $\bar{Q}$ of less than 15% of the mean would not be estimated to be significant by this procedure.

Predictions of source emission rates for all cases

Putting aside the question of differences in daytime and night-time averages in $\bar{Q}$, it is possible to use the complete database to estimate the overall ability of the models to estimate the 39 individual source emission rates. The relative bias, the correlation, the fraction of predictions within a factor of two of observations, and the normalized mean square error for the three models are listed in Table 5 and 6, for maximum point concentrations and cross-wind integrated concentrations, respectively. These performance measures are calculated using data from the 50 m, 200 m and 800 m arcs.

In most cases, the similarity model shows the most accuracy and the Gaussian model shows the least accuracy. Also, the use of observed cross-wind integrated concentrations, C_o^y, leads to better results than the use of observed point maximum concentrations. The deterioration of model performance as distance increases can also be seen. Focusing on Table 6, for cross-wind integrated concentrations, it is seen that the most accurate model, the similarity model, produces a mean relative bias with a magnitude of 0.10 or less on all three distance arcs. The correlation drops from 0.98 to 0.60 as distance increases from 50 to 800 m, and the fraction within a factor of two drops from 1.00 to 0.88 over the same distance. The normalized mean-square-error increases from 0.02 to 0.26 over those distances, implying that the root-mean-square-error (rmse) increases from about 15% to 50% of the mean. In contrast, the Gaussian model yields a much larger rmse that increases from about 70% to 300% of the mean.

The factor of 5 or 6 difference in rmse between the similarity and Gaussian models implies that the similarity model can discern differences in source emission rates that are a factor of 5 or 6 less than the minimum differences in source emission rates discerned by the Gaussian model. By comparing these numbers between Tables 5 and 6, it is seen that the relative rmses using C_o observations are about 50% to 100% larger than the relative rmses using C_o^* observations. Consequently the use of C_o^* data permits one to discern differences in source emission rate that are 50% to 100% smaller than the minimum differences in source emission rates discerned by C_o data.

IMPLICATIONS FOR FUTURE RESEARCH

The uncertainties in estimating source emission rates were first investigated using the Prairie Grass database, since the source conditions were simplified (a single continuous non-buoyant point source near the ground), the source emission rate was closely monitored, the site was flat and uniform, comprehensive meteorological data were taken, and observations of ground-level concentrations were taken at many points along monitoring arcs at five downwind distances. This experiment represents the optimum database of its type, and has been used in numerous research programs on atmospheric turbulence and dispersion. For this reason, the uncertainties in any analysis procedure should be *minimized* at this site. Conversely, if these procedures were to be applied to other experiments at other sites, where conditions are not so steady, smooth, or carefully-observed, the uncertainties would be expected to be larger.

In the future, we will test these procedures using less ideal observations from other field experiments. These will include U.S. Army field tests of fog oil generators, which are used for smoke obscuration purposes. The plumes from fog oil generators are more complicated than those in the Prairie Grass experiments, since the fog oil plumes are characterized by significant momentum and buoyancy fluxes. Furthermore, the supporting meteorological data are not as complete as at Prairie Grass. Future tests will also include experimental data obtained for plumes from tall power plant stacks, where plume rise and mixing depth are complicating factors. From each set of experiments, the relative uncertainty of the procedures for estimating source emission rate will be assessed. It is expected that the uncertainty will increase as source conditions become more complex or as input data are less complete.

This study has demonstrated that models that do well (in a least squares sense) in estimating point concentrations do not necessarily do well when they are 'turned around' to estimate source emission rate. The reason for this difference is the strong variation with distance of the plume centerline concentration. Consequently it is possible that a model which has zero mean bias in its concentration estimates, will have a 50% mean bias in its source emission rate estimates. For the same reason, if a variable is first made non-dimensional and the model is 'tuned' with the data (e.g. the similarity model described above), the predictions of the non-dimensional variable (e.g. Cu_*x^2/Q) may have zero bias, while the predictions of the concentration, C, may have significant bias. For optimum results, any tuning or regression analysis should be done with the variable that is of ultimate interest.

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APPENDIX D

DISPLAY OF RELATIONS AMONG DATA USING BOX PLOTS

APPENDIX D

DISPLAY OF RELATIONS AMONG DATA USING BOX PLOTS

One way of displaying large numbers of data is through the use of box plots, where the cumulative distribution function (cdf) of the dependent variables within a group of data is represented by a set of significant percentile values. For example, the 2th, 16th, 50th, 84th, and 98th percentiles are used in our analyses. These five significant points in the cdf are plotted by the SIGPLOT program using a "box" pattern as seen in the examples below. Variations of one type of data with another can be seen by breaking up the first type of data into groups defined by ranges of the second type of data.

The SIGPLOT plotting package (see Appendix E) is used to generate the box plots. The ANADISTR program, described below, is used to generate the special input file required by SIGPLOT from a file containing multiple columns of data, representing concurrent values of variables such as observations of concentrations, wind speed, or stability. In the ANADISTR program, the user defines certain ranges of the primary variables in the input file to be used for grouping the dependent variables and plotting them by means of box plots. The ANADISTR program requires one input file and generates one output file. The output file then serves as the input file to the SIGPLOT plotting package. There are no default names associated with these files, and the user is prompted for the file names during the execution of the program. The ANADISTR program is written in FORTRAN 77.

The input data file of the ANADISTR program could contain multiple columns of dependent variables (such as concurrent values of concentration observation) and other primary variables such as wind speed and stability. The ranges of the primary variables are also defined in the input file, to be used for grouping the data prior to generating the box plots. Table D-1 describes the format of the input file. Figure D-1 shows an example of an input file. Note that the ANADISTR program makes no corrections or substitutions for missing data; it is the responsibility of the user to provide valid data at each position.

The output file of the ANADISTR program contains distributions (the 2th, 16th, 50th, 84th, and 98th percentiles of the cdf) of the first variable as a function of the second variable. The information stored in this output file can then be plotted using the SIGPLOT plotting package (see Figure D-2 for an example).

During the execution of the ANADISTR program, the following questions will be asked:

- Name of the input file:

  The user must specify the name of the input data file here. There is no default answer.

- Name of the output file:

  The user must specify the name of the output file. There is no default answer.

- An input file typically contains several columns of dependent and independent data. The ANADISTR program handles one such column or the ratio of any two columns of dependent data, specified by the user, at a time. This is accomplished by asking the user to select any *two* columns between 0 and MM, (see Table D-2). The distribution of the ratio of the numbers in these columns will be analyzed. Note that column "0" is simply all 1's, and is not part of the input data file. Therefore, if the user wants to investigate the distribution of the dependent data in column 2, then two integers, 2 and 0 should be entered. If the user wants to investigate the distribution of the ratio of the dependent data in column 2 to the data in column 1, then 2 and 1 should be entered.

- Implement a lower threshold for the dependent variable? (y/n):

  The user has the option of specifying a lower threshold for the one dependent variable or the ratio of the two dependent variables chosen above. This is sometimes necessary if the logarithmic scale is to be used and there are zero or minute values in the data whose distribution is to be analyzed. The default (i.e., hitting the RETURN key) answer is "y".

TABLE D-1. FORMAT OF THE MANDATORY INPUT DATA FILE OF THE ANADISTR PROGRAM. THE FOLLOWING KEY LETTERS ARE USED IN THE FORMAT COLUMN - FF: FREE FORMAT, C: CHARACTER, I: INTEGER, AND R: REAL.

LINE NO.	FORMAT	DESCRIPTION
1	FF/I	There are four integer constants in this line, representing the total number of observations (NN, < 501), the total number of dependent variable (MM, < 16), the total number of blocks (KK), and the total number of primary variables (NVAR, < 11). **Note that KK is not used by ANADISTR** since the blocking of data is performed internally according to the defined ranges of the primary variables. The limits on NN, MM, and NVAR are assigned in the program using the PARAMETER statements, and can be easily changed.
2	FF/I	There are KK integer constants in this line, representing the number of pieces in each block. The sum of all these integers should equal NN. **Note that the information in this line is currently not used by the ANADISTR program.**
3	FF/I	There are MM character constants in this line; each one can be at most eight characters long, containing the name of each of the dependent variables. All character constants must be enclosed in apostrophes.
4	FF/I	There should be KK character constants in this line. Each one can be at most 20 characters long, containing the name of each of the blocks. All character constants must be enclosed in apostrophes. **Note that the information in this line is not used by the ANADISTR program.**

LINE NO.	FORMAT	DESCRIPTION
Next NN lines:		
	FF/R	There are MM+NVAR real numbers in each line, with the first MM numbers representing the dependent variables, and the following NVAR numbers representing of the primary variables.
Next NVAR lines:		
	FF/ I,C,R	Each line describes the way each of the NVAR primary variables is to be blocked. The first parameter is an integer (IXR, < 21), representing the number of ranges for the primary variable. The second parameter is a character constant, at most 40 characters long, enclosed in apostrophes, representing the name of the primary variable. The next IXR+1 real numbers, in numerical ascending order, define the boundaries of the ranges. For example, the following line: 4 'u (m/s)' 0. 2. 5. 10. 20. means that wind speeds should be divided into four groups where the distribution of the dependent variables within each group is to be calculated. The first group is for those data when wind speeds are between 0. and 2. m/s, the second group is for wind speeds between 2. and 5. m/s, etc. The limits on IXR are assigned in the program using the PARAMETER statement, and can be easily changed. Note that the sequence of the NVAR lines must be consistent with that of the last NVAR columns described in the previous section. As an example, if the MM+1th column in the previous section contains information for wind speeds, then the first line in this section should also contain grouping information for wind speeds.

```
  79    4  2  4
  39 40
'DEPVAR-A' 'DEPVAR-B' 'DEPVAR-C' 'DEPVAR-D'
'SUBSET1' 'SUBSET2'
  616.0  708.7  594.7  516.5    11    3.0   900.  2
  604.1  689.2  585.9  496.7    12    3.4  1000.  2
  868.0  674.8  580.3  516.8    13    3.5  1100.  2
  498.6  668.8  652.1  548.3    14    3.8  1200.  2
  393.1  560.2  704.7  581.9    15    4.7  1300.  2
  409.0  740.9  570.1  621.4    16    5.2  1000.  3
  640.2  249.6  510.1  553.5    17    5.4  1100.  3
  265.3  259.6  463.4  446.0    18    4.9  1100.  4
  192.7   91.6  131.0  485.0    19    4.2  1100.  5
 1149.1 1217.5 1116.1  520.6    10    2.6  1600.  2
  972.8 1275.8 1175.1  536.9    11    3.2  1900.  2
 1137.5 1225.7 1081.7  617.4    12    3.8  1600.  2
  669.5 1052.8  905.1  637.3    13    4.5  1600.  2
  595.5  862.0  862.0  664.1    14    5.0  1500.  2
  741.2  589.5  767.0  665.3    15    5.1  1500.  2
  612.6  602.4  728.2  672.4    16    5.0  1500.  3
  312.0  398.9  657.5  659.5    17    5.2  1500.  3
  400.2  340.2  412.3  586.0    18    5.1  1500.  4
  264.7  612.1  774.2  705.9    16    5.7  1400.  3
  290.0  428.4  757.3  708.8    17    5.1  1800.  3
  459.5  355.0  512.3  602.4    18    5.1  2000.  4
  444.0  216.0  441.4  681.1    19    4.4  2000.  5
  175.1  216.6  456.1  925.4    20    4.6  2000.  6
  102.3  126.1  255.6  522.9    21    4.9  2000.  6
  128.8   16.5    0.5  834.9    22    4.6     0.  6
  200.2  301.9  208.9  728.0    23    5.4     0.  6
  358.3  481.8  354.0  742.4    24    5.4     0.  6
  611.1 1010.2  987.1  679.0    14    4.4  1500.  2
  499.3  752.5  921.6  725.7    15    5.0  1500.  2
  537.8  724.0  826.8  675.9    16    4.7  1500.  3
  220.0  523.3  908.2  640.8    17    3.9  1800.  3
  479.2  357.5  788.6  544.7    18    4.2  2000.  4
  133.2  195.3  383.1  738.5    19    3.1  1800.  5
   98.2  167.3  213.5 1064.9    20    3.2  1500.  6
   92.5  104.6  142.2  741.2    21    3.1  1200.  6
   21.0  127.4  176.3  805.2    22    3.3  1200.  6
  353.0  307.8  167.1  576.9    20    3.8  2000.  5
  358.0  280.9  188.4  225.3    21    2.3  2000.  4
  233.3  355.3  234.9  719.1    22    2.4  2000.  5
  198.3   12.7  184.0  745.2    23    3.6  2000.  6
  507.2    0.0  126.3  664.9    24    3.5  2000.  6
  313.7    0.0    0.0  667.1     1    4.2     0.  6
  165.1    0.0    0.0  703.9     2    3.6     0.  6
  295.6  329.9  454.6  695.3     4    5.2     0.  6
  527.7  308.0  295.9  775.0     5    4.7     0.  6
  454.1  301.0    1.0  995.6     6    2.9     0.  6
  240.3  417.5  361.1  933.8     7    3.4     0.  6
  590.8  579.3  144.2  666.5     8    3.1  1500.  5
  638.3  756.6  608.9  400.1     9    3.4  1500.  4
  949.8 1004.2  805.4  528.9    10    3.4  1500.  3
  886.8  855.6  706.2  517.4    11    3.0  1300.  2
  635.5  761.0  670.9  596.6    12    4.5  1200.  2
  359.3  412.6  232.5  937.6     1    2.3  1200.  6
  484.7  360.7  226.8  979.0     2    2.5  1200.  6
  529.7  332.0  202.5  980.0     3    2.4  1200.  6
  585.8  291.4  186.1 1100.1     4    2.1  1200.  6
  367.7  368.0  260.2 1005.6     5    2.1  1200.  6
  324.7  270.9   72.7 1058.6     6    2.0  1200.  6
  489.0  274.6  208.5  942.2     7    2.6  1200.  6
  570.8  337.1  218.0  646.5     8    2.8  1200.  5
  419.7  254.4  206.1  344.0     9    4.3  1200.  4
  532.8  414.2  197.9  477.0     9    4.8  1800.  3
  425.2  365.7  198.7  469.5    10    7.1  1700.  4
  467.5  411.5  228.5  455.3    11    7.5  2000.  4
  362.2  306.4  147.6  405.2    12    5.1  2000.  4
  429.2  287.4  139.2  450.6    13    5.4  2000.  4
  446.0  338.1  169.5  461.2    14    5.7  2000.  4
  192.9  253.8  145.6  460.7    15    5.8  2400.  4
  630.3  322.5  257.2  460.5    16    7.3  2700.  4
  364.9  326.7  251.1  510.6    17    7.8  3000.  4
  111.4  196.4  248.5    0.0    23    1.9   250.  4
   89.8  146.5  254.9    0.0    24    1.9   250.  4
   82.5  248.0  160.9    0.0     1    2.9   250.  4
  296.5  253.2  193.2    0.0     2    2.8   250.  4
  215.4  299.7  165.0    0.0     3    2.9   250.  4
  454.5  274.2  154.0    0.0     4    3.5   250.  4
  384.7  324.6  163.2    0.0     5    3.5   250.  4
  253.2  488.3  175.6    0.0     6    3.5   250.  4
  289.5  304.1  193.1    0.0     7    3.1   250.  4
6 'hour of day' -0.01, 4., 8., 12., 16., 20., 24.01
10 'u (m/s)' 0.5, 1.5, 2.5, 3.5, 4.5, 5.5, 6.5, 7.5, 8.5, 9.5, 10.5
6 'h (m)' -0.01, 200., 600., 1000., 1500., 2000., 3000.1
3 'pg class' 0.5 3.5 4.5 6.5
```

Figure D-1. An example of the input data file for the ANADISTR program.

DEMONSTRATION OF THE RESULTS GENERATED BY THE ANADISTR PROGRAM.

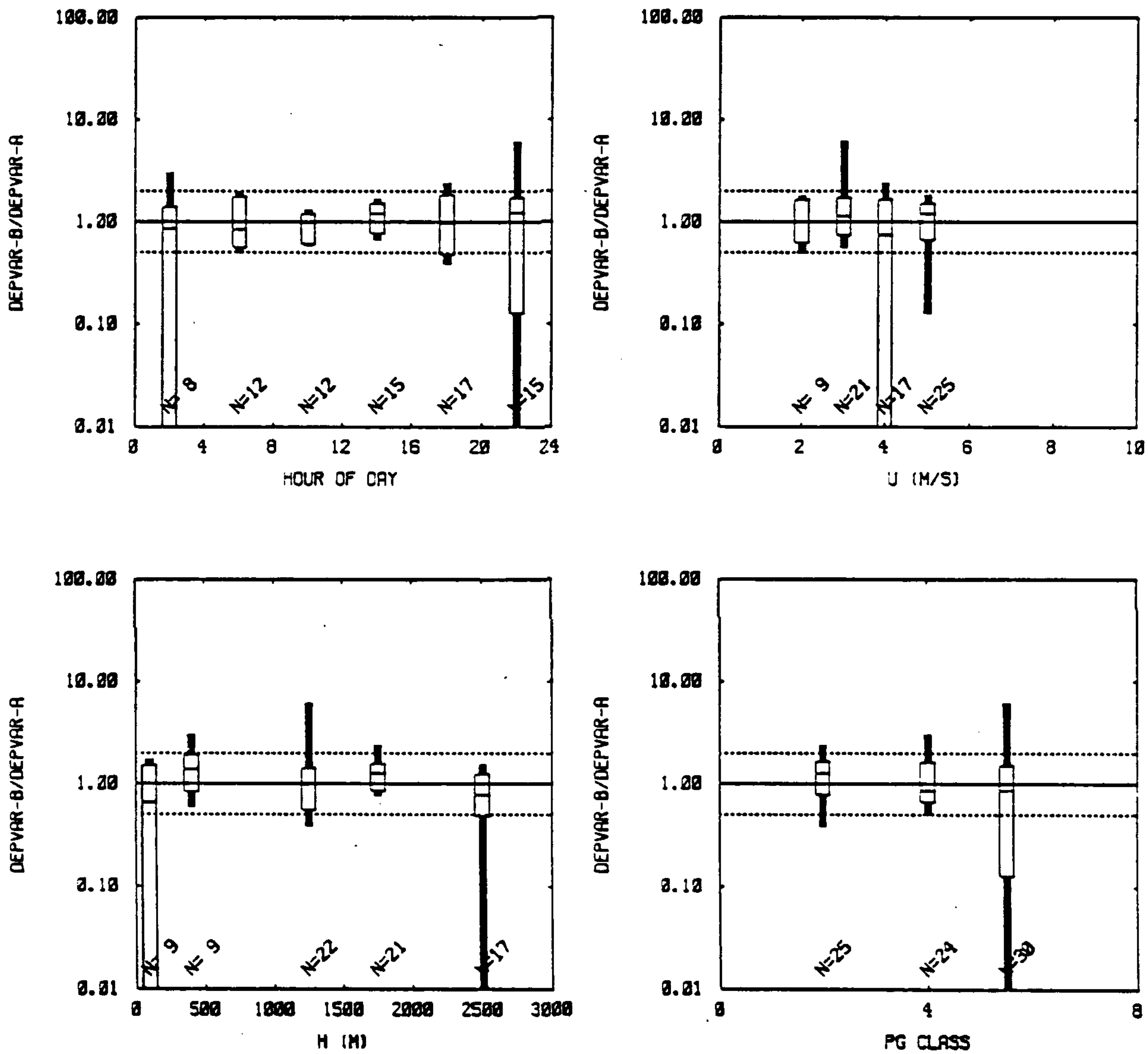

Figure D-2. An example of the results generated by the ANADISTR program and plotted using SIGPLOT. Significant points on each box represent the 2nd, 16th, 50th, 84th, and 98th percentiles. The dashed lines represent the factor of two lines.

The next question will be asked only if the user answers "y" to the above question.

- Enter the lower threshold (e.g. 0.01):

  There is no default answer, but 0.01 has proven to be a good choice for the ratio of two dependent variables in our tests.

- Implement an upper threshold for the dependent variable? (y/n):

  This is sometimes necessary if the logarithmic scale is to be used and there are very large values in the data whose distribution is to be analyzed. The default (i.e., hitting the RETURN key) answer is "y".

The following question will be asked only if the user answers "y" to the above question.

- Enter the upper threshold of the ratio (e.g. 100.):

  There is no default answer, but 100 has proven to be a good choice for the ratio of two dependent variables in our tests.

Intentionally Blank

APPENDIX E

USER'S GUIDE FOR THE SIGPLOT PLOTTING PACKAGE

APPENDIX E

A. USER'S GUIDE FOR THE SIGPLOT PLOTTING PACKAGE

The SIGPLOT plotting package developed at Sigma Research Corporation is a versatile tool for producing different kinds of two-dimensional plots, such as scatter plots, graphs, box plots (sometimes called residual or whisker plots), or error bar plots. The user can specify many parameters including the number of frames per page, the aspect ratio of the frame, and the mapping of the coordinates. The graphics library routines used by SIGPLOT, together with the screen and printer drivers (described later) were originally developed by Dr. Arlindo daSilva of the University of Wisconsin at Milwaukee.

SIGPLOT requires two input files: 1) the template file that contains the control parameters which influence the appearance of the plots, and 2) the input data file that contains the data to be plotted. Tables E-1 and E-2 describe the formats of the template file and the input data file, respectively. Examples of the template file are shown in Figures E-1 and E-2 Examples of the input data file are shown in Figures E-3 and E-4.

SIGPLOT creates a Tektronix picture file that can be viewed directly on any kind of the PC graphics environments (e.g., Hercules, CGA, EGA, and VGA) using the screen driver, TEKPC. Hard copy output can also be generated from the Tektronix picture file with a printer driver. There are three printer drives, TEKEPS, TEKELQ, and PS, that are currently available. The first two drivers are used to drive an EPSON-compatible dot matrix printer, with TEKEPS for low resolution and TEKELQ for high resolution. The PS program is used to drive a PostScript printer, such as Apple LaserWriter, NEC LC-890, or TI MicroLaser PS35. It is recommended that the user have access to a PostScript printer to obtain the best results in the shortest time.

SIGPLOT requires about 200KB of memory. The other screen and printer drivers require less than 100KB of memory, except for TEKELQ, where 450KB of memory is required due to the high resolution and the use of the bitmap approach in the driver program. The SIGPLOT plotting package and the graphics library routines were written in FORTRAN. The screen and printer drivers were written in C.

TABLE E-1. THE FORMAT OF THE TEMPLATE FILE OF SIGPLOT. THE FOLLOWING KEY LETTERS ARE USED IN THE FORMAT COLUMN - FF: FREE FORMAT, C: CHARACTER, I: INTEGER, AND R: REAL.

The global control parameters are specified in the first section of the template file, lines 1 through 16.

LINE NO.	FORMAT	DESCRIPTION
1-3		Reserved for comments
4	FF/C	Name of the input data file, currently not used
5	FF/C	Name of the output Tektronix picture file, currently not used
6	FF/I	Flag for the frame aspect ratio, 1-5, 1: x:y = 1:1 2: x:y = 1:2 3: x:y = 2:1 4: x:y = 1:3 5: x:y = 3:1
7	FF/I	Number of frames per page, 1-4
8-9	A80	Title for the page (no title will be drawn if "0" appears as the first character of the line)
10	FF/C	Flag (PAXIS) for the axis along which the first column, representing the independent variable, of the data in the input data file (see Table E-2) will be plotted (x or y). PAXIS must = x if IPATTN (described below) = 4, and PAXIS must = y if IPATTN = 6
11	FF/I	Flag for mapping, 1-4, 1: linear in x, linear in y 2: linear in x, logarithmic in y 3: logarithmic in x, linear in y 4: logarithmic in x, logarithmic in y

TABLE E-1. THE FORMAT OF THE TEMPLATE FILE OF SIGPLOT. THE FOLLOWING KEY LETTERS ARE USED IN THE FORMAT COLUMN - FF: FREE FORMAT, C: CHARACTER, I: INTEGER, AND R: REAL. Continued.

LINE NO.	FORMAT	DESCRIPTION
12	FF/I	Flag (IPATTN) for plot pattern, 1-6, 1: scatter plot 2: line graph 3: scatter plot except line graph for the last variable 4: box plot 5: error bar plot 6: same as 5 but with extra labelling
13	FF/I	Flag for background, 0 or 2, 0: no background 2: gridded background
14	FF/C	Flag for system time, y or n, if y: system time will be printed out on the upper right corner of each page
15	5A1	Five point patterns for the scatter plot
16	FF/I	Flag (IEXTRA) for the plotting of extra lines, 1: x=0 will be plotted 2: y=0 will be plotted 3: x=0 and y=0 will be plotted 4: x=1 will be plotted 5: y=1 will be plotted 6: x=1 and y=1 will be plotted 7: diagonal line will be plotted 8: y=0.5 and y=2 (factor of two) will be plotted 9: x=-0.667, 0, and 0.667, and $y=4x^2/(4-x^2)$. (see text) will be plotted. else: no extra lines will be plotted. Note that IEXTRA = 9 is effective only if IPATTN = 6

TABLE E-1. THE FORMAT OF THE TEMPLATE FILE OF SIGPLOT. THE FOLLOWING KEY LETTERS ARE USED IN THE FORMAT COLUMN - FF: FREE FORMAT, C: CHARACTER, I: INTEGER, AND R: REAL. Continued.

The next section of the template file (lines 17 through 29) contains the parameters that are applicable to a frame. This section can be repeated if there are multiple frames to be plotted in a print job. However, the user can prepare just one such section if the same information is to be used repeatedly by all frames.

LINE NO.	FORMAT	DESCRIPTION
17-19		Reserved for comments
20	FF/R	Constants, a and b, for the linear transformation of the independent variable, where $x_{new} = a*x_{old} + b$, a=1 and b=0 means no transformation is needed
21	FF/R	Constants, a and b, for the linear transformation of the first dependent variable, where $y_{1,new} = a*y_{1,old} + b$, a=1 and b=0 means no transformation is needed
22	FF/R	Same as above, but for the second dependent variable
23	FF/R	Same as above, but for the third dependent variable
24	FF/R	Same as above, but for the fourth dependent variable

TABLE E-1. THE FORMAT OF THE TEMPLATE FILE OF SIGPLOT. THE FOLLOWING KEY LETTERS ARE USED IN THE FORMAT COLUMN - FF: FREE FORMAT, C: CHARACTER, I: INTEGER, AND R: REAL. Concluded.

LINE NO.	FORMAT	DESCRIPTION
25	FF/R	Same as above, but for the fifth dependent variable. Note that lines 22 through 25 cannot be omitted even if only one group of data were to be plotted
26	FF/R	xmin, xmax, and dx of the x-axis
27	FF/R	ymin, ymax, and dy of the y-axis
28	FF/C	Format specifier for the numerical labels of the x-axis. If "!" appears as the first character of the line, the appropriate format will be determined internally by the program; otherwise, the user should supply a simple FORTRAN I-, F-, or E-format specifier, enclosed in parentheses, e.g., (I5), (F6.3), and (E8.1) are accepted, but (3I5), (I5,f6.3), (1P,E8.1), and (G9.1) are not accepted
29	FF/C	Format specifier for the numerical labels of the y-axis

TABLE E-2. THE FORMAT OF THE INPUT DATA FILE OF SIGPLOT. THE FOLLOWING KEY LETTERS ARE USED IN THE FORMAT COLUMN - FF: FREE FORMAT, C: CHARACTER, I: INTEGER, AND R: REAL.

LINE NO.	FORMAT	DESCRIPTION
1	A40	Title for the frame (no title will be drawn if "0" appears as the first character of the line)
2	A40	Label for the x-axis (no label will be drawn if "0" appears as the first character of the line)
3	A40	Label for the y-axis (no label will be drawn if "0" appears as the first character of the line)
4	FF/I	Two integers specifying the number of points (NPTS) and the number of groups of data (MANY) to be plotted. MANY cannot be > 5 for IPATTN = 1, 2, 3, and 5, and MANY must be = 1 for IPATTN = 4 and 6. NPTS cannot be > 700 for IPATTN = 1, 2, and 3. NPTS cannot be > 50 for IPATTN = 4, 5, and 6 (see text).
Next NPTS lines: For IPATTN = 1, 2, and 3,		
	FF/R	There are 1+MANY real numbers in each line. The first number represents the independent variable, which can be plotted either along the x- or the y-axis depending the value of PAXIS (see Table E-1). The next MANY numbers represent the dependent variables. For example, if three curves (MANY=3), $f_1(x)$, $f_2(x)$, and $f_3(x)$ were to be plotted, then each line here should contain four real numbers, x_i, $f_{1,i}$ $f_{2,i}$, and $f_{3,i}$, where i=1, NPTS. If PAXIS = "x", the x will be plotted along the abscissa, and f_1, f_2, and f_3 will be plotted along the ordinate; vice versa PAXIS = "y".

TABLE E-2. THE FORMAT OF THE INPUT DATA FILE OF SIGPLOT. THE FOLLOWING KEY LETTERS ARE USED IN THE FORMAT COLUMN - FF: FREE FORMAT, C: CHARACTER, I: INTEGER, AND R: REAL. Continued.

LINE NO.	FORMAT	DESCRIPTION
For IPATTN = 4,		
	FF/R, I	There are six real numbers and one integer in each line. The first real number represents the independent variable. The next five real numbers represent the values of the dependent variable at the 2th, 16th, 50th, 84th, and 98th percentiles, respectively. Note that the value of the independent variable listed here frequently represents a range of the independent variable; for example, a wind speed of 7 m/s actually represents wind speeds in the range of 6 to 8 m/s. The integer represents the number of data points based on which the distribution of the dependent variable is derived. No box will be plotted if the number of data points is less than five since not enough information is available to define a distribution.
For IPATTN = 5,		
	FF/R	There are 1+3*MANY real numbers in each line. The first number represents the independent variable. The remaining numbers for the dependent variables are in MANY groups of three numbers. The three numbers, which must be in order, represent the distribution of a dependent variable. This distribution can be 1) $\mu-\sigma$, μ, and $\mu+\sigma$, where μ is the mean, and σ is the standard deviation, or 2) lower c.l., nominal value, and upper c.l., where c.l. is the confidence limit.

TABLE E-2. THE FORMAT OF THE INPUT DATA FILE OF SIGPLOT. THE FOLLOWING KEY LETTERS ARE USED IN THE FORMAT COLUMN - FF: FREE FORMAT, C: CHARACTER, I: INTEGER, AND R: REAL. Concluded

LINE NO.	FORMAT	DESCRIPTION
For IPATTN = 6,		
	FF/R,C	There are four real numbers and one character constant (no more than 17 characters long) in each line. The definition of the first four real numbers is identical to that when IPATTN = 5, except now MANY must = 1. The character constant, enclosed in apostrophes, is used to label each data point.

The above 4+NPTS lines provide enough information to plot a frame. Additional data, similar in structure, can be appended here if the plotting of more than one frames in a print job is desired.

```
!------------------------------------------------------------------
!      Main switches for plotting.
!--------0---------0---------0--------0------------------------------
urrs.1     Name of input data file.
tek1.pic   Name of output tektronix file.
1          Aspect ratio (integer, 1 - 5).
1          Number of plots per page (integer, 1 - 4).
demo of ipattn=2
0
x          Which axis serves as independent variable (x or y).
1          Flag indicating log or linear mapping (1 - 4).
2          Pattern.
0          Background specification.
y          Print out system time on the upper right hand corner (y or n).
.+o#$      Patterns of scatter plots (5a1)
0   Extra line,1:x=0,2:y=0,3:x,y=0,4:x=1,5:y=1,6:x,y=1,7:diag,8:y=fac. 2.,9:fb-nmse, else:nothing.
!------------------------------------------------------------------
!      Parameters for plot 1.
!------------------------------------------------------------------
1. 0.      ascale, bscale for the independent variable axis.
1. 0.      ascale, bscale for curve 1.
1. 0.      ascale, bscale for curve 2.
1. 0.      ascale, bscale for curve 3.
1. 0.      ascale, bscale for curve 4.
1. 0.      ascale, bscale for curve 5.
-6.28319 6.28319 3.141595  xmin, xmax, and dx for the x axis.
-1.2 1.2 0.3 ymin, ymax, and dy for the y axis.
(f5.2)           format for x label
(f4.1)         format for y label
```

Figure E-1. An example of the template file of SIGPLOT. Refer to Figure E-6 for the results.

```
!------------------------------------------------------------------
!      Main switches for plotting.
!--------0---------0---------0---------0---------------------------
urrs.1    Name of input data file.
tek1.pic  Name of output tektronix file.
1         Aspect ratio (integer, 1 - 5).
1         Number of plots per page (integer, 1 - 4).
demo of ipattn=5
0
x         Which axis serves as independent variable (x or y).
3         Flag indicating log or linear mapping (1 - 4).
5         Pattern.
0         Background specification. (0 or 2)
n         Print out system time on the upper right hand corner (y or n).
+o.#$     Patterns of scatter plots (5a1)
0   Extra line,1:x=0,2:y=0,3:x,y=0,4:x=1,5:y=1,6:x,y=1,7:diag,8:y=fac. 2.,9:fb-nmse, else:nothing.
!------------------------------------------------------------------
!      Parameters for plot 1.
!------------------------------------------------------------------
1. 0.     ascale, bscale for the independent variable axis.
1. 0.     ascale, bscale for curve 1.
1. 0.     ascale, bscale for curve 2.
1. 0.     ascale, bscale for curve 3.
1. 0.     ascale, bscale for curve 4.
1. 0.     ascale, bscale for curve 5.
200. 20000. 10. xmin, xmax, and dx for the x axis.
-1.5 1.5 0.5  ymin, ymax, and dy for the y axis.
(i5)
(f4.1)
```

Figure E-2. An example of the template file of SIGPLOT. Refer to Figure E-9 for the results.

```
0
x
y
        50 5
   -6.03186       0.248690     -0.368124     -0.844328     -0.998027     -0.770514
   -5.78053       0.481754     -0.125333     -0.684547     -0.982287     -0.904827
   -5.52920       0.684547      0.125333     -0.481753     -0.904827     -0.982287
   -5.27788       0.844328      0.368125     -0.248690     -0.770513     -0.998027
   -5.02655       0.951057      0.587786      0.397359E-06 -0.587785     -0.951056
   -4.77522       0.998027      0.770513      0.248690     -0.368125     -0.844328
   -4.52389       0.982287      0.904827      0.481754     -0.125333     -0.684547
   -4.27257       0.904827      0.982287      0.684547      0.125333     -0.481753
   -4.02124       0.770513      0.998027      0.844328      0.368125     -0.248690
   -3.76991       0.587785      0.951056      0.951057      0.587785      0.254308E-06
   -3.51858       0.368125      0.844328      0.998027      0.770513      0.248690
   -3.26726       0.125333      0.684547      0.982287      0.904827      0.481754
   -3.01593      -0.125333      0.481753      0.904827      0.982287      0.684547
   -2.76460      -0.368125      0.248690      0.770513      0.998027      0.844328
   -2.51327      -0.587785      0.397391E-07  0.587785      0.951056      0.951057
   -2.26195      -0.770513     -0.248690      0.368124      0.844328      0.998027
   -2.01062      -0.904827     -0.481754      0.125333      0.684547      0.982287
   -1.75929      -0.982287     -0.684547     -0.125334      0.481753      0.904827
   -1.50796      -0.998027     -0.844328     -0.368124      0.248690      0.770513
   -1.25664      -0.951057     -0.951057     -0.587785     -0.556284E-07  0.587785
   -1.00531      -0.844328     -0.998027     -0.770513     -0.248690      0.368124
  -0.753983      -0.684547     -0.982287     -0.904827     -0.481753      0.125333
  -0.502655      -0.481754     -0.904827     -0.982287     -0.684547     -0.125333
  -0.251328      -0.248690     -0.770513     -0.998027     -0.844328     -0.368125
   0.000000       0.000000     -0.587785     -0.951056     -0.951057     -0.587785
   0.251328       0.248690     -0.368124     -0.844328     -0.998027     -0.770513
   0.502655       0.481753     -0.125333     -0.684547     -0.982287     -0.904827
   0.753982       0.684547      0.125333     -0.481754     -0.904827     -0.982287
    1.00531       0.844328      0.368125     -0.248690     -0.770513     -0.998027
    1.25664       0.951056      0.587785     -0.381470E-06 -0.587786     -0.951057
    1.50796       0.998027      0.770513      0.248690     -0.368125     -0.844328
    1.75929       0.982287      0.904827      0.481754     -0.125333     -0.684547
    2.01062       0.904827      0.982287      0.684547      0.125333     -0.481754
    2.26195       0.770513      0.998027      0.844328      0.368125     -0.248690
    2.51327       0.587785      0.951056      0.951057      0.587785      0.190735E-06
    2.76460       0.368124      0.844328      0.998027      0.770513      0.248690
    3.01593       0.125334      0.684548      0.982287      0.904827      0.481753
    3.26726      -0.125333      0.481754      0.904827      0.982287      0.684547
    3.51858      -0.368124      0.248690      0.770514      0.998027      0.844328
    3.76991      -0.587785      0.341731E-06  0.587785      0.951057      0.951056
    4.02124      -0.770513     -0.248690      0.368125      0.844328      0.998027
    4.27257      -0.904827     -0.481754      0.125333      0.684547      0.982287
    4.52389      -0.982287     -0.684547     -0.125333      0.481754      0.904827
    4.77522      -0.998027     -0.844327     -0.368124      0.248691      0.770514
    5.02655      -0.951057     -0.951056     -0.587785      0.723200E-06  0.587786
    5.27787      -0.844328     -0.998027     -0.770513     -0.248689      0.368125
    5.52920      -0.684548     -0.982287     -0.904827     -0.481753      0.125334
    5.78053      -0.481754     -0.904827     -0.982287     -0.684547     -0.125333
    6.03186      -0.248690     -0.770513     -0.998027     -0.844328     -0.368124
    6.28319      -0.301992E-06 -0.587785     -0.951057     -0.951056     -0.587785
```

Figure E-3. An example of the input data file of SIGPLOT. Refer to Figure E-6 for the results.

```
all periods
n-s distance (m)
var(dws) / median 1-min var(ws) /2
6  3
     312.5 -0.029  0.002  0.034 -0.027  0.043  0.112  0.166  0.275  0.383
     625.0 -0.009  0.005  0.019  0.011  0.048  0.085  0.209  0.361  0.513
    1250.0 -0.035  0.012  0.059 -0.007  0.070  0.148  0.330  0.480  0.630
    2500.0 -0.155  0.015  0.185 -0.126  0.100  0.325  0.359  0.565  0.771
    5000.0 -0.033  0.170  0.373  0.013  0.323  0.633  0.440  0.751  1.062
   10000.0 -0.417  0.061  0.539 -0.137  0.369  0.876  0.406  0.873  1.339
```

Figure E-4. An example of the input data file of SIGPLOT. Refer to Figure E-9 for the results.

As one can see from Table E-1, SIGPLOT is capable of creating the following kinds of plots:

IPATTN = 1:	scatter plot (e.g., Fig. E-5)
IPATTN = 2:	line graph (e.g., Fig. E-6)
IPATTN = 3:	scatter plot except line graph for the last variable (e.g., Fig. E-7)
IPATTN = 4:	box plot (e.g., Fig. E-8)
IPATTN = 5:	error bar plot (e.g., Fig. E-9)
IPATTN = 6:	same as IPATTN = 5 but with extra labelling (e.g., Fig. E-10)

The usage of each option is described below.

For IPATTN = 1, groups of data are represented by different dot patterns that are defined in the template file (see Table E-1). At most, five groups of data (MANY = 5) can be plotted, with a maximum of 700 points for each group.

IPATTN = 2 is similar to IPATTN = 1 except that points are now connected. The following line patterns are used to represent different curves: solid, short-dashed, long-dashed, dot-dashed, and dotted. At most, five curves (MANY = 5) can be plotted, with a maximum of 700 points for each group. No user customization of the line patterns is allowed. It is important that the data points in the input file are sorted according to the independent variable.

IPATTN = 3, a combination of IPATTN = 1 and 2, is useful when the user wants to see how well a theoretical curve fits the observed data. Although the order of the data points does not matter for a scatter plot, in this case it is important that the data points in the input file are sorted according to the independent variable. At most, five groups of data (MANY = 5) can be plotted, with a maximum of 700 points for each group.

The IPATTN = 4 option is an alternative to the scatter plot when the number of data points is large. In preparing the input data file for SIGPLOT, the user first defines certain ranges of the independent variable to be used for grouping the dependent variable. The distribution of the dependent variables within each group is then determined and represented by five significant points in the cumulative distribution function (cdf). These five values could be the 2th, 16th, 50th, 84th, and 98th percentiles of the cdf, or the mean and mean ± one and two standard deviations. SIGPLOT then uses a box pattern to represent the distribution of the dependent variable within each grouping or range of the independent variable. Only one set of data (i.e., MANY = 1, even though five points are needed to define a box) is accepted for this option, with a maximum of 50 boxes.

IPATTN = 5 is similar to IPATTN = 4 except that three values (vs. five) are needed to define an error bar (vs. a box). These three values can be the mean and mean ± one standard deviation of a dependent variable, or the nominal value of a dependent variable and its 95% confidence limits. At most, five groups (MANY = 5) of data can be plotted, with a maximum of 50 error bars for each group. The following error bar patterns are used: filled square, empty square, filled triangle, empty triangle, and cross.

IPATTN = 6 is similar to IPATTN = 5 except that the user can label each data point. Because of the additional information to be plotted, only one group of data (MANY = 1) is accepted, with a maximum of 50 error bars. This option is designed primarily to plot the FB (fractional bias), together with its confidence limits, against the NMSE (normalized mean square error), where

$$FB = \frac{(\bar{C}_o - \bar{C}_p)}{(0.5(\bar{C}_o + \bar{C}_p))} \qquad \text{(E-1)}$$

$$NMSE = \frac{\overline{(C_o - C_p)^2}}{\overline{C_o C_p}} . \qquad \text{(E-2)}$$

If IEXTRA = 9 (see Table E-1), SIGPLOT will plot the additional $x = -0.667$, 0, and 0.667 lines, representing the factor of two and zero FB lines, together with the $y = 4x^2/(4-x^2)$ line, representing the "minimum" NMSE (due only to the mean bias) as a function of FB.

The information concerning the usage of the driver programs, TEKPC, TEKELQ, TEKEPS, and PS, can be obtained by simply executing the programs without providing any arguments, and will not be repeated here.

Finally, an example is given below of the procedures followed to use the graphics package.

Step 1: The user prepares the template file (DEMO.INQ) and the input data file (DEMO.DAT) according to the formats described in Tables E-1 and E-2. The user can create his own template file by editing the sample template file. The input data file is usually generated by some other programs.

Step 2: After the execution of SIGPLOT, a Tektronix picture file (DEMO.PIC) is generated.

Step 3: The user can view the results on screen by typing:
TEKPC DEMO.PIC
if a Hercules graphics card is installed, or
TEKPC DEMO.PIC 16
if an EGA (with a resolution of 640x350 pixels) graphics card is installed.

Step 4: A high resolution hard copy output can be generated on an EPSON-compatible dot matrix printer by typing:
TEKELQ DEMO.PIC.

Step 5: Or if the user has access to a PostScript printer, a PostScript file (DEMO.PS) will be created by typing:
PS DEMO.PIC,
and this file can be printed out by typing:
PRINT DEMO.PS

DEMO OF IPATTN=1

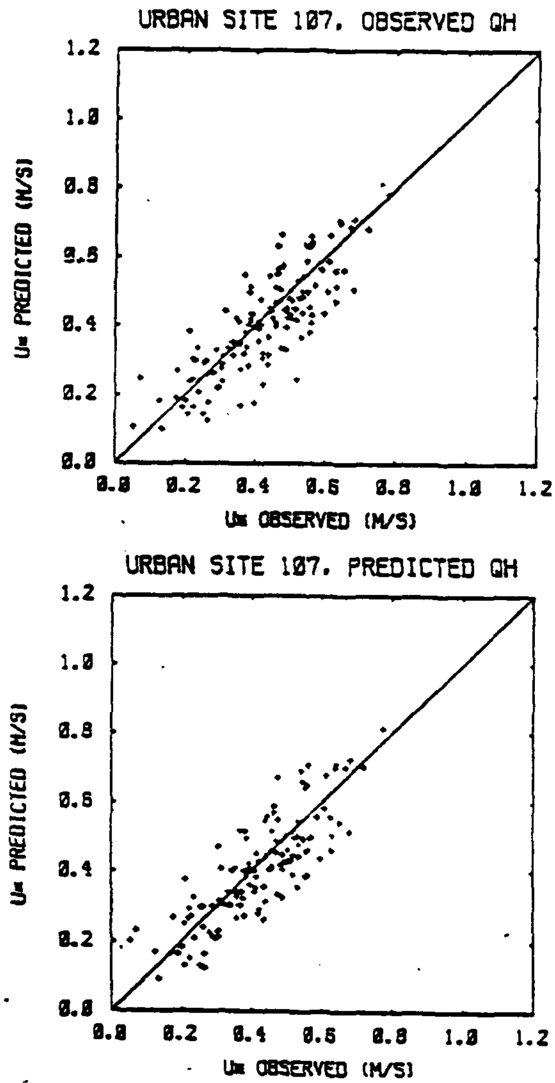

Figure E-5. A sample scatter plot (IPATTN = 1) generated by SIGPLOT.

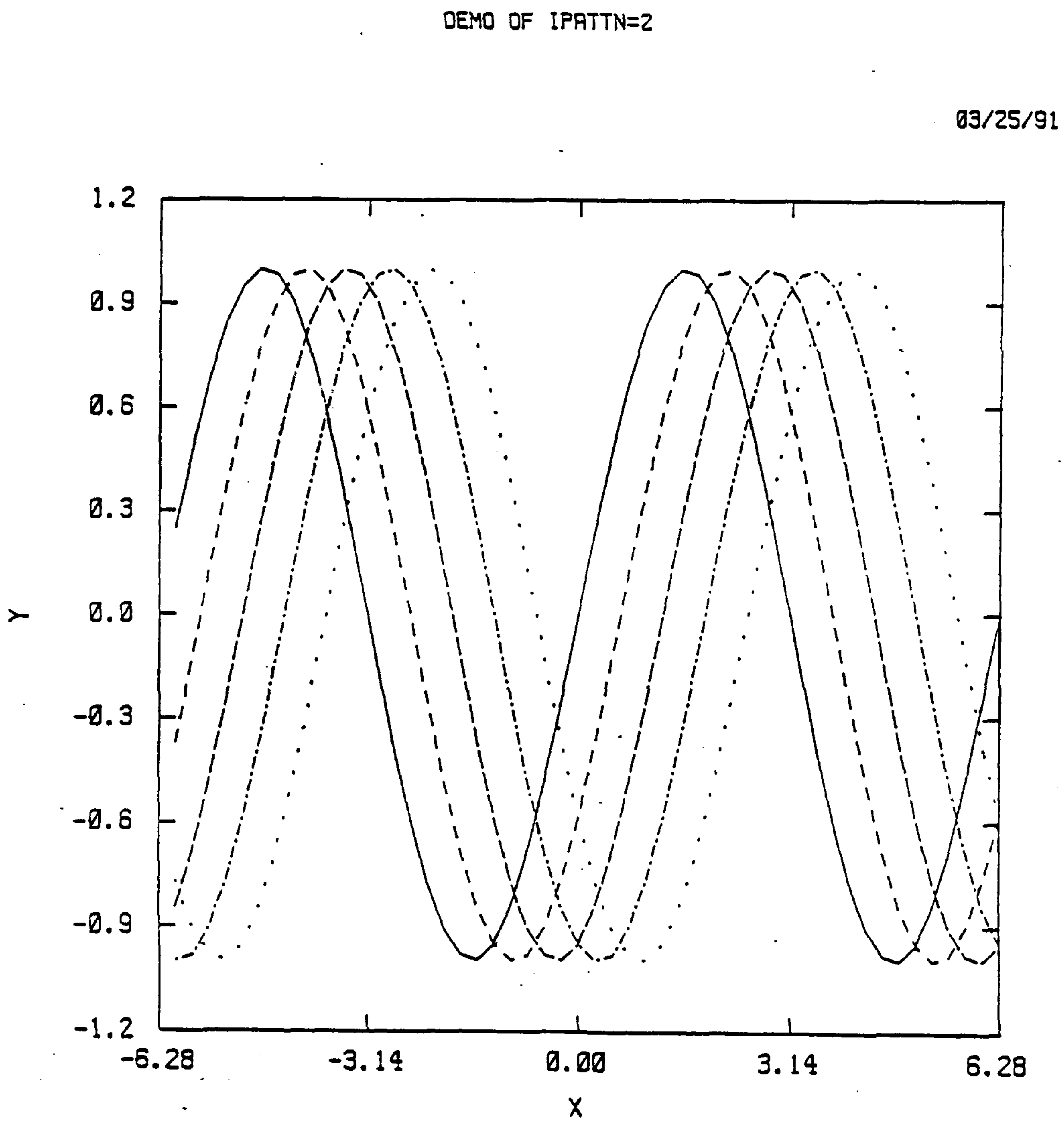

Figure E-6. A sample line graph (IPATTN = 2) generated by SIGPLOT. Refer to Figures E-1 and E-3 for the template and data files used for this figure.

DEMO OF IPATTN=3

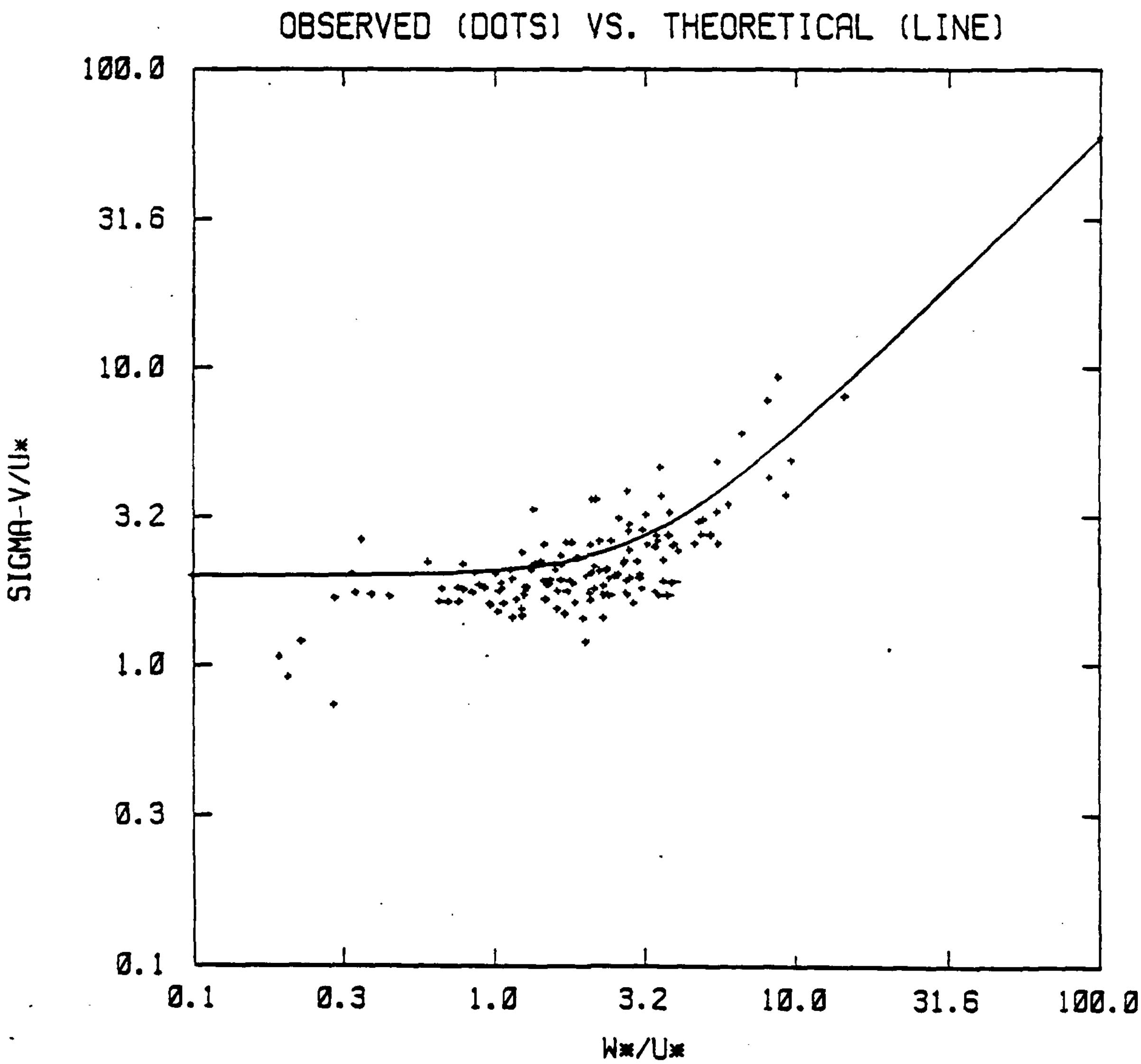

Figure E-7. A sample scatter plot and line graph (IPATTN = 3) generated by SIGPLOT.

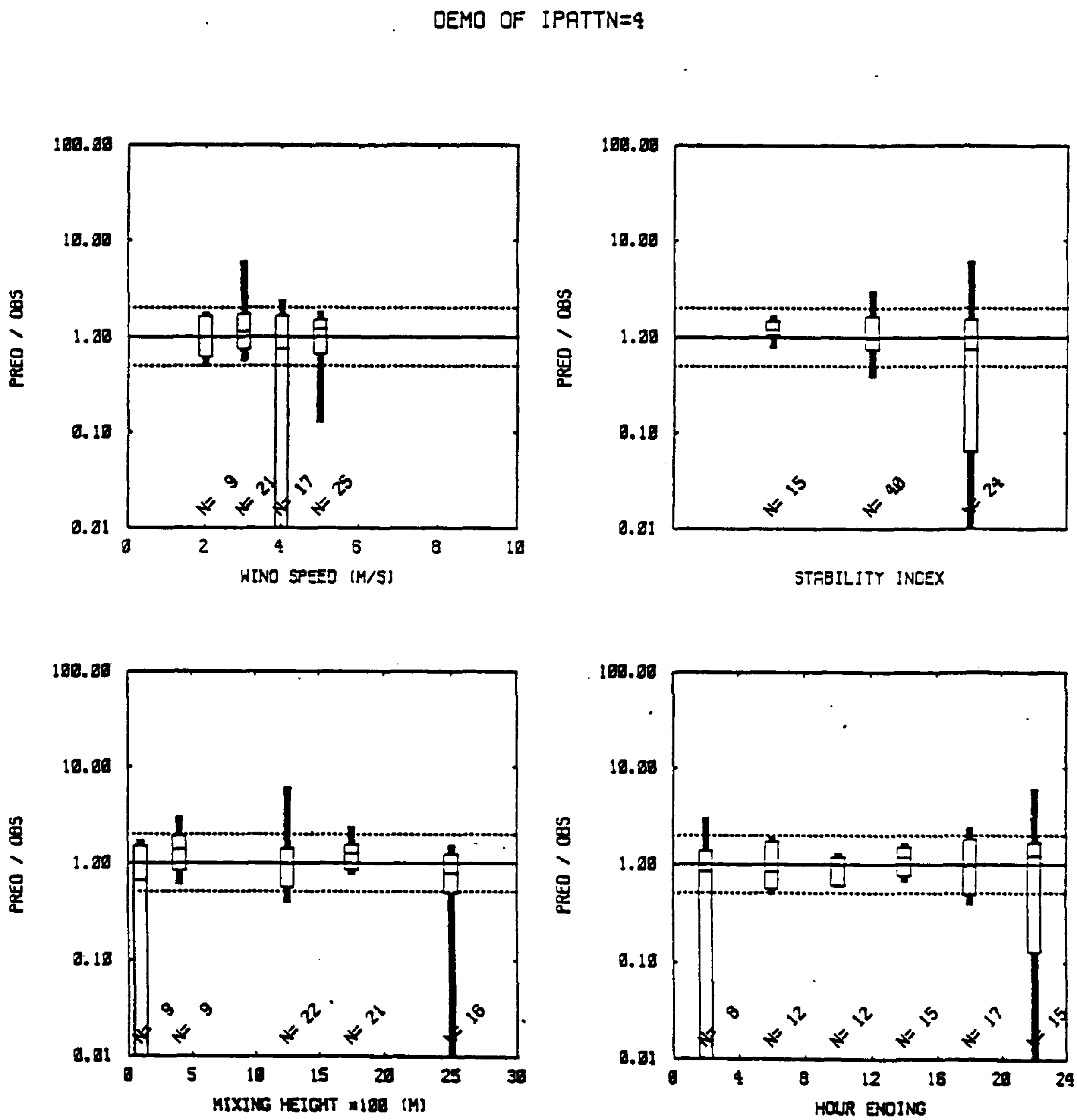

Figure E-8. A sample box plot (IPATTN = 4) generated by SIGPLOT.

DEMO OF IPATTN=5

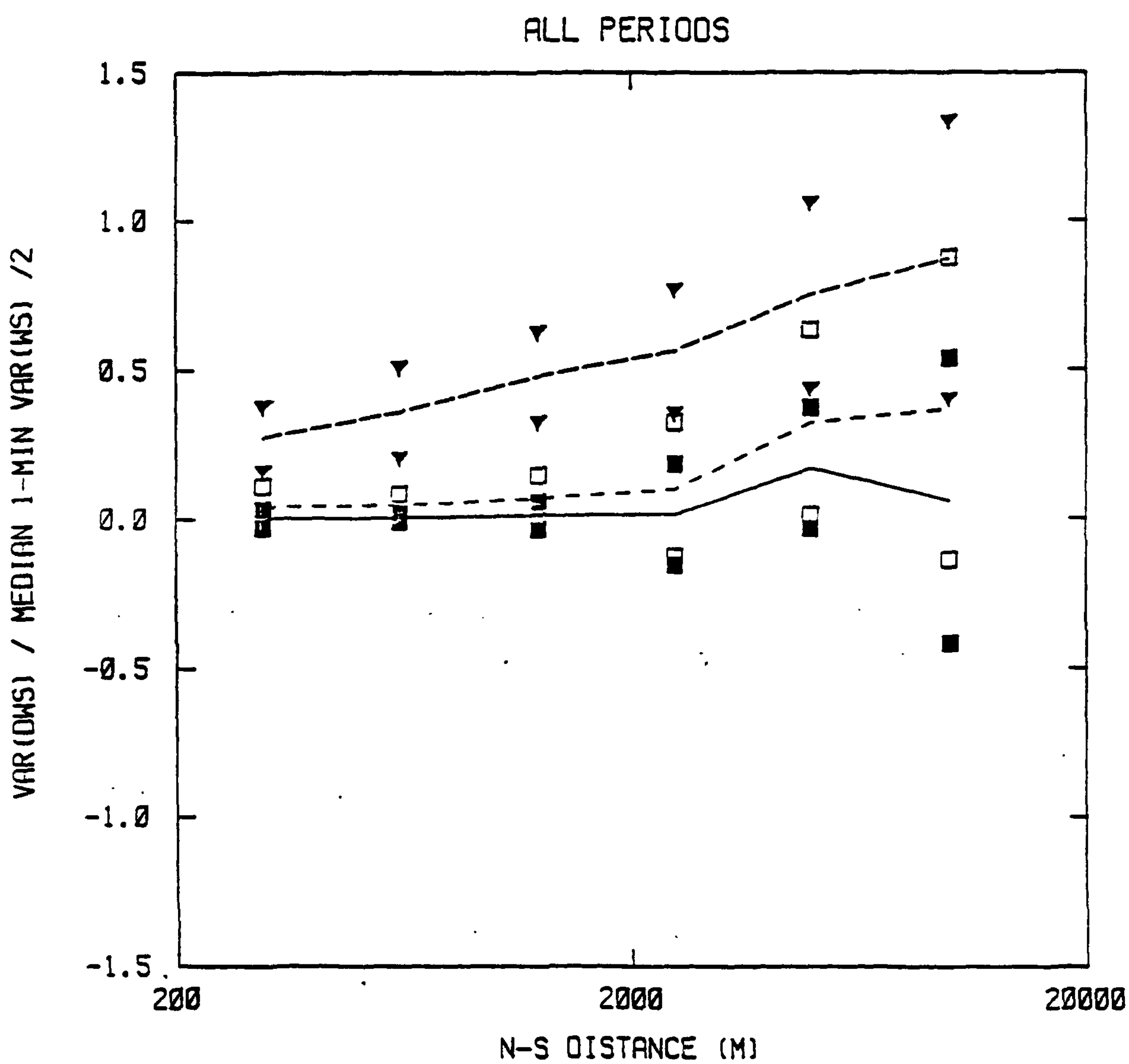

Figure E-9. A sample error bar plot (IPATTN = 5) generated by SIGPLOT. Refer to Figures E-2 and E-4 for the template and data files used for this figure.

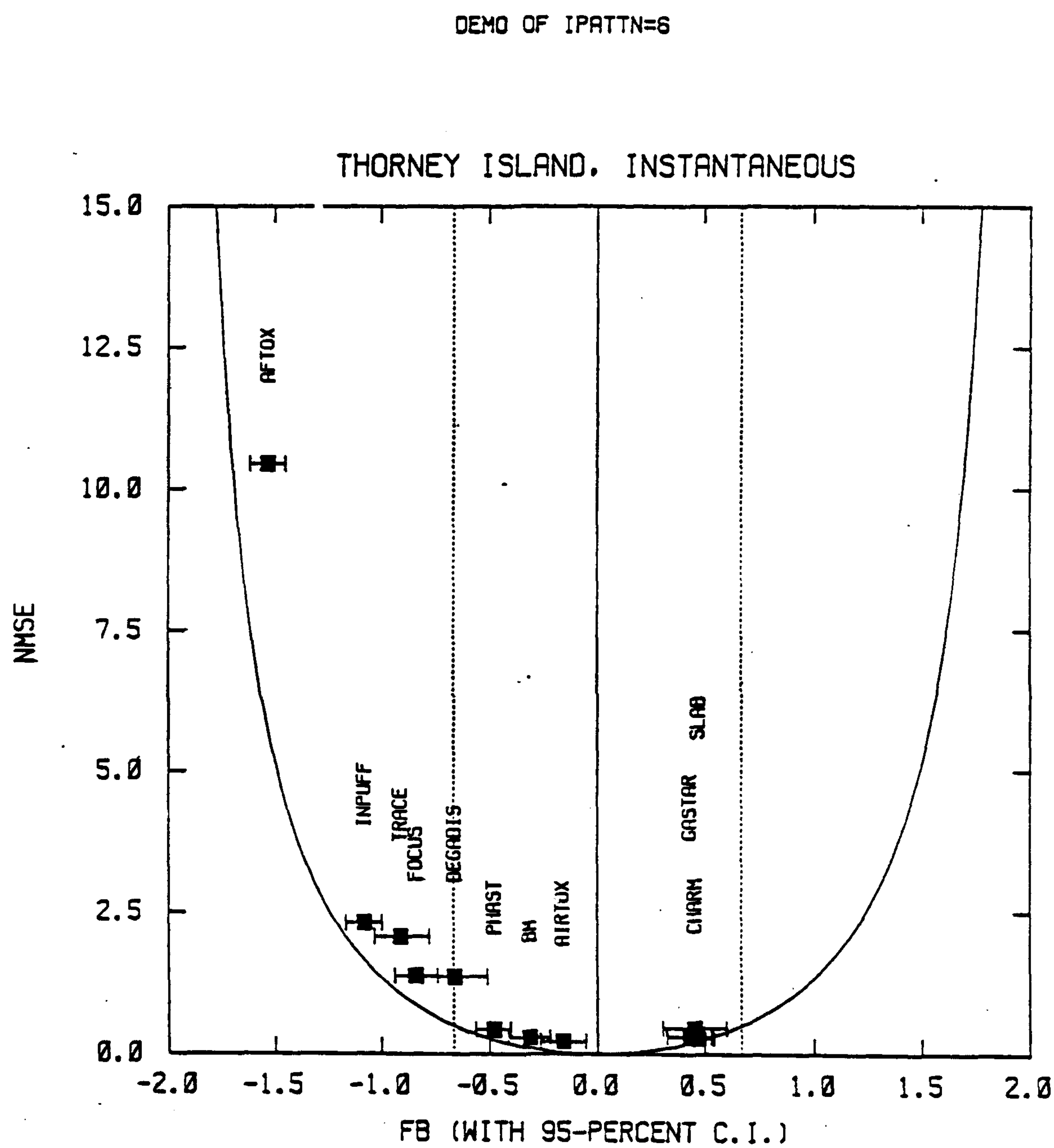

Figure E-10. A sample error bar plot with labelling (IPATTN = 6) generated by SIGPLOT.

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APPENDIX F-1

LISTINGS OF THE DUGWAY DATA ARCHIVES - HISTORICAL DATASETS

Dry Gulch, Course B

12 : number of trials included in DDA
3 : time zone designation
34.50 : latitude (deg)
120.50 : longitude (deg)

dgb1	dgb2	dgb3	dgb4	dgb5	dgb6	dgb7	dgb8	dgb9	dgb10	dgb11	dgb12	: trial ID
6	6	6	6	6	6	6	6	6	6	7	7	: month
12	16	21	23	23	26	26	28	28	30	6	7	: day
1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	: year
12	9	18	15	18	15	18	15	20	19	12	11	: hour
14	55	57	5	30	0	30	4	0	46	30	47	: minute
1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	: source elevation (m)
0.656	0.889	0.661	1.278	0.667	0.967	0.661	0.978	0.667	0.722	1.417	1.333	: emission rate (g/s)
1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
289.15	289.15	284.15	289.15	285.15	289.15	285.15	289.15	284.15	285.15	289.15	290.15	: temperature at level #1 (K)
1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	: measuring height for temperature #1 (m)
288.95	288.35	284.15	288.15	284.75	287.45	284.05	288.15	284.05	285.05	286.95	288.75	: temperature at level #2 (K)
16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	: measuring height for temperature #2 (m)
5.00	2.10	0.80	3.00	1.80	2.90	2.70	5.10	2.50	0.40	7.00	4.00	: wind speed (m/s) at a tower
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring height for wind data (m)
5.00	2.10	0.80	3.00	1.80	2.90	2.70	5.10	2.50	0.40	7.00	4.00	: domain-averaged wind speed (m/s)
328.0	292.0	336.0	315.0	338.0	305.0	334.0	321.0	330.0	330.0	320.0	319.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
15.40	21.00	18.60	19.30	14.00	21.00	14.50	16.00	15.50	26.70	15.00	19.90	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring ht for domain-avg wind speed (m)
2820.0	2820.0	2820.0	2820.0	1800.0	2820.0	2820.0	2820.0	2820.0	1800.0	2820.0	2820.0	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	: albedo
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	: moisture availability
5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
37.5	0.0	87.5	37.5	100.0	37.5	100.0	37.5	0.0	37.5	0.0	0.0	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
2820.0	2820.0	2820.0	2820.0	1800.0	2820.0	2820.0	2820.0	2820.0	1800.0	2820.0	2820.0	: averaging time for concentration (s)
4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	: suggested receptor height (m)
2	2	2	2	2	2	2	2	2	2	2	2	: no. of distances downwind
2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	: distances downwind (m)
5.860E-04	1.980E-03	2.190E-03	2.210E-03	1.050E-03	7.680E-04	5.480E-04	7.310E-04	5.210E-03	1.190E-03	1.520E-03	1.090E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	: distances downwind (m)
2.900E-04	4.440E-04	4.060E-05	8.700E-04	9.370E-04	3.470E-04	9.280E-05	5.650E-04	1.600E-03	4.190E-04	1.000E-03	1.070E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	0	0	0	0	: no. of lines-of-sight

Dry Gulch, Course B

12 : number of trials included in DDA
8 : time zone designation
34.50 : latitude (deg)
120.50 : longitude (deg)

dgb13	dgb14	dgb15	dgb16	dgb17	dgb18	dgb19	dgb20	dgb21	dgb22	dgb23	dgb24	: trial ID
7	7	7	7	7	7	7	7	7	7	7	8	: month
10	17	19	21	24	25	26	27	28	29	31	1	: day
1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	: year
8	11	9	9	19	19	15	19	15	19	15	19	: hour
45	0	3	0	35	30	22	50	15	30	35	25	: minute
1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	: source elevation (m)
1.078	1.844	1.333	1.356	0.750	0.750	1.483	0.722	1.400	0.756	1.467	0.683	: emission rate (g/s)
1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
283.15	294.15	287.15	290.15	287.15	287.15	289.15	286.15	288.15	286.15	288.15	285.15	: temperature at level #1 (K)
1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	: measuring height for temperature #1 (m)
281.35	292.45	286.55	289.15	286.75	286.95	287.55	285.55	286.85	285.75	287.15	284.65	: temperature at level #2 (K)
16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	: measuring height for temperature #2 (m)
2.40	2.60	2.00	4.00	1.20	1.90	4.50	2.70	3.10	2.00	3.80	2.80	: wind speed (m/s) at a tower
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring height for wind data (m)
2.40	2.60	2.00	4.00	1.20	1.90	4.50	2.70	3.10	2.00	3.80	2.80	: domain-averaged wind speed (m/s)
328.0	290.0	273.0	313.0	326.0	342.0	322.0	343.0	318.0	344.0	344.0	337.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
17.70	25.70	22.60	21.10	17.00	17.10	17.40	10.60	18.20	15.60	15.70	14.10	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring ht for domain-avg wind speed (m)
2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	1800.0	2820.0	2820.0	2820.0	2820.0	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	: albedo
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	: moisture availability
5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
0.0	0.0	37.5	87.5	87.5	100.0	87.5	100.0	37.5	100.0	100.0	100.0	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	1800.0	2820.0	2820.0	2820.0	2820.0	: averaging time for concentration (s)
4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	: suggested receptor height (m)
2	2	2	2	2	2	2	2	2	2	2	2	: no. of distances downwind
2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	: distances downwind (m)
3.140E-03	2.030E-03	2.640E-03	9.420E-04	1.340E-03	5.630E-04	8.330E-04	2.570E-03	9.360E-04	8.940E-04	5.820E-04	1.730E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	: distances downwind (m)
7.310E-04	5.810E-04	5.210E-04	5.490E-04	7.860E-04	3.870E-04	8.380E-04	4.430E-04	1.340E-03	1.410E-04	4.910E-04	2.070E-04	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	0	0	0	0	: no. of lines-of-sight

Dry Gulch, Course B

12 : number of trials included in DDA
8 : time zone designation
34.50 : latitude (deg)
120.50 : longitude (deg)

dgb25	dgb26	dgb27	dgb28	dgb29	dgb30	dgb31	dgb32	dgb33	dgb34	dgb35	dgb36	: trial ID
8	8	2	2	3	3	3	3	3	3	3	3	: month
2	3	5	6	9	10	12	19	19	21	23	24	: day
1961	1961	1962	1962	1962	1962	1962	1962	1962	1962	1962	1962	: year
19	19	16	14	16	13	18	12	19	12	12	14	: hour
25	37	45	15	10	55	30	45	40	45	45	45	: minute
1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	: source elevation (m)
1.333	1.367	1.172	1.689	1.611	1.728	1.294	1.572	1.228	1.544	1.544	1.561	: emission rate (g/s)
1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
285.15	285.15	285.15	285.15	283.15	284.15	281.15	-285.15	282.15	285.15	285.15	285.15	: temperature at level #1 (K)
1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	: measuring height for temperature #1 (m)
284.75	284.85	284.75	284.05	282.35	282.65	281.05	284.55	282.45	283.55	283.55	283.75	: temperature at level #2 (K)
16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	: measuring height for temperature #2 (m)
2.40	2.10	3.00	1.50	8.60	6.50	5.30	3.60	1.70	4.80	4.60	3.70	: wind speed (m/s) at a tower
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring height for wind data (m)
2.40	2.10	3.00	1.50	8.60	6.50	5.30	3.60	1.70	4.80	4.60	3.70	: domain-averaged wind speed (m/s)
331.0	337.0	322.0	321.0	333.0	335.0	348.0	324.0	349.0	335.0	329.0	336.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
15.40	13.80	13.60	19.20	12.00	12.70	10.00	16.00	11.80	13.70	14.50	16.90	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring ht for domain-avg wind speed (m)
2820.0	2820.0	1920.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	: albedo
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	: moisture availability
5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
100.0	100.0	37.5	100.0	37.5	37.5	0.0	100.0	100.0	87.5	37.5	37.5	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
2820.0	2820.0	1920.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	: averaging time for concentration (s)
4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	: suggested receptor height (m)
2	2	2	2	2	2	2	2	2	2	2	2	: no. of distances downwind
2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	: distances downwind (m)
3.560E-03	3.520E-03	1.710E-03	1.120E-03	6.030E-04	1.260E-03	8.220E-03	4.650E-04	1.190E-02	1.230E-03	7.480E-04	1.800E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	: distances downwind (m)
9.950E-04	2.460E-03	5.230E-04	5.110E-04	2.480E-04	2.770E-04	1.970E-03	1.810E-04	2.730E-03	3.070E-04	2.690E-04	9.290E-04	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	0	0	0	0	: no. of lines-of-sight

Dry Gulch, Course B

12 : number of trials included in ODA
8 : time zone designation
34.50 : latitude (deg)
120.50 : longitude (deg)

dgb37	dgb38	dgb39	dgb40	dgb41	dgb42	dgb43	dgb44	dgb45	dgb46	dgb47	dgb48	: trial ID
3	3	3	3	6	6	6	6	6	6	6	6	: month
26	27	29	31	4	5	6	8	8	11	11	12	: day
1962	1962	1962	1962	1962	1962	1962	1962	1962	1962	1962	1962	: year
13	15	18	18	15	12	18	15	19	16	20	16	: hour
5	45	50	55	40	50	30	1	6	50	45	43	: minute
1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	: source elevation (m)
1.500	1.128	1.528	1.017	1.244	1.200	0.961	1.383	1.039	1.439	1.072	1.261	: emission rate (g/s)
1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
280.15	284.15	282.15	284.15	287.15	286.15	284.15	286.15	284.15	286.15	284.15	286.15	: temperature at level #1 (K)
1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	: measuring height for temperature #1 (m)
278.75	283.75	282.35	283.95	285.75	284.15	283.65	284.85	283.65	284.75	283.85	285.05	: temperature at level #2 (K)
16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	: measuring height for temperature #2 (m)
2.00	1.50	4.00	2.10	3.30	2.60	1.40	1.70	1.40	3.30	2.60	1.80	: wind speed (m/s) at a tower
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring height for wind data (m)
2.00	1.50	4.00	2.10	3.30	2.60	1.40	1.70	1.40	3.30	2.60	1.80	: domain-averaged wind speed (m/s)
314.0	326.0	342.0	339.0	330.0	319.0	348.0	321.0	347.0	334.0	348.0	320.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
21.30	20.10	12.50	16.30	15.40	24.70	13.20	21.40	18.30	15.40	12.50	20.90	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring ht for domain-avg wind speed (m)
2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	: albedo
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	: moisture availability
5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
87.5	100.0	37.5	100.0	0.0	37.5	100.0	100.0	100.0	87.5	100.0	87.5	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	: averaging time for concentration (s)
4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	: suggested receptor height (m)
2	2	2	2	2	2	2	2	2	2	2	2	: no. of distances downwind
2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	: distances downwind (m)
2.850E-03	4.380E-04	9.540E-03	3.380E-03	7.110E-04	3.910E-04	8.680E-04	6.650E-04	4.440E-04	1.640E-03	2.800E-03	8.170E-04	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	: distances downwind (m)
1.680E-03	3.290E-04	2.020E-03	1.120E-03	4.230E-04	4.520E-04	3.730E-04	5.710E-04	2.760E-04	5.360E-04	5.410E-04	4.450E-04	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	0	0	0	0	: no. of lines-of-sight

Dry Gulch, Course B

7 : number of trials included in DDA
8 : time zone designation
34.50 : latitude (deg)
120.50 : longitude (deg)

dgb49	dgb50	dgb51	dgb52	dgb53	dgb54	dgb55	: trial ID
6	6	6	6	6	6	6	: month
12	18	22	25	25	28	29	: day
1962	1962	1962	1962	1962	1962	1962	: year
20	19	20	17	20	20	15	: hour
35	15	8	25	15	32	50	: minute
1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
2.50	2.50	2.50	2.50	2.50	2.50	2.50	: source elevation (m)
1.489	1.500	1.139	1.350	1.217	1.072	1.578	: emission rate (g/s)
1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
285.15	292.15	286.15	287.15	285.15	287.15	285.15	: temperature at level #1 (K)
1.80	1.80	1.80	1.80	1.80	1.80	1.80	: measuring height for temperature #1 (m)
284.75	291.85	285.75	286.15	285.15	286.85	283.15	: temperature at level #2 (K)
16.50	16.50	16.50	16.50	16.50	16.50	16.50	: measuring height for temperature #2 (m)
0.30	0.90	1.00	5.60	4.00	1.10	3.30	: wind speed (m/s) at a tower
3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring height for wind data (m)
0.30	0.90	1.00	5.60	4.00	1.10	3.30	: domain-averaged wind speed (m/s)
346.0	342.0	335.0	335.0	338.0	1.0	333.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
13.20	11.10	16.30	10.00	13.30	10.30	16.00	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring ht for domain-avg wind speed (m)
1800.0	1800.0	2820.0	2820.0	2820.0	2820.0	2820.0	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.30	0.30	0.30	0.30	0.30	0.30	0.30	: albedo
0.20	0.20	0.20	0.20	0.20	0.20	0.20	: moisture availability
5.00	5.00	5.00	5.00	5.00	5.00	5.00	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
100.0	0.0	100.0	0.0	0.0	100.0	37.5	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	: P-G stability class
1800.0	1800.0	2820.0	2820.0	2820.0	2820.0	2820.0	: averaging time for concentration (s)
4.57	4.57	4.57	4.57	4.57	4.57	4.57	: suggested receptor height (m)
2	2	2	2	2	2	2	: no. of distances downwind
2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	2301.0	: distances downwind (m)
2.770E-03	7.040E-03	3.390E-04	3.050E-03	4.430E-03	1.430E-02	1.210E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	5665.0	: distances downwind (m)
1.020E-03	2.170E-03	2.060E-04	7.010E-04	6.970E-04	7.000E-05	7.220E-04	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	: no. of lines-of-sight

Dry Gulch, Course D

12 : number of trials included in DDA
8 : time zone designation
34.50 : latitude (deg)
120.50 : longitude (deg)

dgd1	dgd2	dgd3	dgd4	dgd5	dgd6	dgd7	dgd8	dgd9	dgd10	dgd11	dgd12	: trial ID
6	6	6	6	6	6	6	6	6	7	7	7	: month
14	15	20	22	24	27	27	29	29	5	6	7	: day
1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	: year
10	8	19	19	19	14	19	16	20	9	7	8	: hour
45	0	15	5	5	50	28	17	25	45	42	8	: minute
1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	: source elevation (m)
1.440	1.400	0.700	0.670	0.680	0.980	0.610	1.180	0.640	1.220	1.290	1.010	: emission rate (g/s)
1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
293.15	293.15	284.15	285.15	285.15	287.15	285.15	288.15	285.15	289.15	287.15	289.15	: temperature at level #1 (K)
1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	: measuring height for temperature #1 (m)
293.25	292.25	283.85	283.95	284.55	285.65	284.75	286.35	284.95	288.15	286.45	288.85	: temperature at level #2 (K)
16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	: measuring height for temperature #2 (m)
2.90	1.70	2.20	2.20	1.20	5.60	3.80	7.10	2.70	8.60	7.20	1.70	: wind speed (m/s) at a tower
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring height for wind data (m)
2.90	1.70	2.20	2.20	1.20	5.60	3.80	7.10	2.70	8.60	7.20	1.70	: domain-averaged wind speed (m/s)
287.0	276.0	301.0	291.0	300.0	300.0	342.0	324.0	325.0	308.0	324.0	269.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
13.40	19.20	12.30	13.10	17.90	12.10	9.60	10.30	10.80	9.00	8.40	20.40	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring ht for domain-avg wind speed (m)
2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	1800.0	2820.0	2820.0	1800.0	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	: albedo
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	: moisture availability
5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
0.0	0.0	100.0	87.5	100.0	87.5	100.0	0.0	37.5	0.0	0.0	0.0	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	1800.0	2820.0	2820.0	1800.0	: averaging time for concentration (s)
4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	: suggested receptor height (m)
3	3	3	3	3	3	3	3	3	3	3	3	: no. of distances downwind
853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	: distances downwind (m)
1.340E-02	2.720E-02	1.020E-02	4.800E-03	4.740E-03	1.820E-03	7.610E-03	4.670E-03	3.580E-02	2.730E-03	5.210E-03	1.260E-02	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	: distances downwind (m)
8.360E-03	1.270E-02	3.380E-03	9.770E-04	1.340E-03	5.630E-04	2.750E-03	1.570E-03	1.450E-02	6.120E-04	1.780E-03	4.780E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	: distances downwind (m)
5.080E-04	3.200E-04	4.260E-04	5.300E-04	1.350E-03	2.290E-04	3.510E-04	2.020E-04	1.220E-03	9.940E-05	5.390E-05	3.010E-04	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	0	0	0	0	: no. of lines-of-sight

Dry Gulch, Course D

12 : number of trials included in DOA
8 : time zone designation
34.50 : latitude (deg)
120.50 : longitude (deg)

dgd13	dgd14	dgd15	dgd16	dgd17	dgd18	dgd19	dgd20	dgd21	dgd22	dgd23	dgd24	: trial ID
7	7	7	7	7	7	7	7	7	7	7	7	: month
8	11	13	18	19	20	24	25	26	27	28	31	: day
1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	: year
9	9	11	11	12	9	16	15	19	15	19	19	: hour
17	35	0	4	30	15	0	10	30	30	55	5	: minute
1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	: source elevation (m)
1.060	0.970	1.090	0.970	1.010	1.010	1.040	1.030	0.680	1.380	0.710	0.710	: emission rate (g/s)
1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
284.15	287.15	289.15	292.15	290.15	290.15	290.15	287.15	286.[illegible]	289.15	286.15	285.15	: temperature at level #1 (K)
1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.[illegible]	1.80	1.80	1.80	: measuring height for temperature #1 (m)
283.55	288.55	287.95	291.15	288.75	289.05	289.25	286.35	285.55	287.85	285.45	284.75	: temperature at level #2 (K)
16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	: measuring height for temperature #2 (m)
3.00	2.40	3.90	4.20	3.20	2.40	3.60	4.20	3.10	4.60	2.70	3.60	: wind speed (m/s) at a tower
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring height for wind data (m)
3.00	2.40	3.90	4.20	3.20	2.40	3.60	4.20	3.10	4.60	2.70	3.60	: domain-averaged wind speed (m/s)
283.0	264.0	287.0	290.0	276.0	289.0	293.0	292.0	327.0	304.0	335.0	321.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
15.30	21.00	13.80	12.90	14.50	21.50	13.20	10.60	12.40	11.20	11.70	9.70	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring ht for domain-avg wind speed (m)
2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	1800.0	2820.0	2820.0	2820.0	2820.0	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	: albedo
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	: moisture availability
5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
37.5	0.0	37.5	37.5	0.0	37.5	87.5	37.5	100.0	87.5	100.0	100.0	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	1800.0	2820.0	2820.0	2820.0	2820.0	: averaging time for concentration (s)
4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	: suggested receptor height (m)
3	3	3	3	3	3	3	3	3	3	3	3	: no. of distances downwind
853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	: distances downwind (m)
3.590E-03	5.740E-03	3.770E-03	7.470E-03	3.580E-03	2.580E-03	1.390E-03	6.480E-03	9.230E-03	5.590E-03	5.880E-03	1.220E-02	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	: distances downwind (m)
3.350E-03	3.280E-03	1.270E-03	2.450E-03	2.010E-03	1.600E-03	1.970E-03	1.530E-03	1.990E-03	1.450E-03	2.340E-03	1.930E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	: distances downwind (m)
7.190E-04	2.980E-04	5.510E-04	-9.990E+01	-9.990E+01	5.960E-04	-9.990E+01	1.710E-04	1.740E-04	5.660E-04	5.020E-04	4.310E-04	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	0	0	0	0	: no. of lines-of-sight

Dry Gulch, Course D

12 : number of trials included in DDA
8 : time zone designation
34.50 : latitude (deg)
120.50 : longitude (deg)

dgd25	dgd26	dgd27	dgd28	dgd29	dgd30	dgd31	dgd32	dgd33	dgd34	dgd35	dgd36	: trial ID
8	3	3	3	3	3	3	3	3	3	3	3	: month
1	7	8	9	10	12	13	19	21	21	22	23	: day
1961	1962	1962	1962	1962	1962	1962	1962	1962	1962	1962	1962	: year
15	16	14	12	10	14	14	16	16	19	18	19	: hour
30	22	55	35	10	45	47	45	10	12	50	40	: minute
1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	: source elevation (m)
1.330	1.540	1.850	1.540	1.700	1.790	1.790	1.380	1.440	1.130	0.820	1.380	: emission rate (g/s)
1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
285.15	285.15	285.15	284.15	283.15	284.15	290.15	284.15	285.15	282.15	282.15	284.15	: temperature at level #1 (K)
1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	: measuring height for temperature #1 (m)
284.05	284.05	284.05	283.05	282.25	283.05	289.05	283.85	284.15	281.85	281.75	284.15	: temperature at level #2 (K)
16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	: measuring height for temperature #2 (m)
4.50	4.00	6.20	10.20	7.60	7.40	3.00	4.60	6.60	6.90	4.90	5.80	: wind speed (m/s) at a tower
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring height for wind data (m)
4.50	4.00	6.20	10.20	7.60	7.40	3.00	4.60	6.60	6.90	4.90	5.80	: domain-averaged wind speed (m/s)
301.0	287.0	296.0	296.0	305.0	302.0	273.0	294.0	304.0	313.0	297.0	327.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
9.80	9.60	9.50	6.10	8.40	9.50	19.30	9.20	7.60	7.50	9.60	6.70	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring ht for domain-avg wind speed (m)
2820.0	2820.0	1800.0	2820.0	2820.0	2820.0	2820.0	2820.0	1800.0	1800.0	2820.0	2820.0	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	: albedo
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	: moisture availability
5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
87.5	37.5	37.5	37.5	87.5	0.0	0.0	100.0	87.5	87.5	37.5	0.0	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
2820.0	2820.0	1800.0	2820.0	2820.0	2820.0	2820.0	2820.0	1800.0	1800.0	2820.0	2820.0	: averaging time for concentration (s)
4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	: suggested receptor height (m)
3	3	3	3	3	3	3	3	3	3	3	3	: no. of distances downwind
853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	: distances downwind (m)
8.700E-03	1.350E-02	1.120E-02	2.680E-03	1.640E-02	1.010E-02	3.600E-03	2.400E-02	1.220E-02	3.300E-02	1.700E-02	3.500E-02	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	: distances downwind (m)
2.950E-03	3.400E-03	1.990E-03	1.300E-03	3.900E-03	1.680E-03	1.860E-03	9.430E-03	2.580E-03	1.460E-02	4.040E-03	9.190E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	: distances downwind (m)
5.420E-04	7.860E-04	8.620E-04	4.970E-04	4.030E-04	1.870E-04	1.070E-03	1.090E-03	2.620E-04	1.260E-03	9.180E-04	1.630E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	0	0	0	0	: no. of lines-of-sight

Dry Gulch, Course D

12 : number of trials included in DDA
8 : time zone designation
34.50 : latitude (deg)
120.50 : longitude (deg)

dgd37	dgd38	dgd39	dgd40	dgd41	dgd42	dgd43	dgd44	dgd45	dgd46	dgd47	dgd48	: trial ID
3	3	3	6	6	6	6	6	6	6	6	6	: month
26	28	29	1	5	7	7	9	21	21	23	23	: day
1962	1962	1962	1962	1962	1962	1962	1962	1962	1962	1962	1962	: year
18	16	15	19	19	16	19	19	18	20	16	19	: hour
50	30	0	43	15	35	55	30	0	35	0	45	: minute
1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	: source elevation (m)
0.960	1.120	1.380	1.150	0.940	1.330	0.740	1.040	1.210	1.130	1.610	1.060	: emission rate (g/s)
1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
284.15	283.15	285.15	284.15	284.15	287.15	284.15	284.15	286.15	286.15	290.15	289.15	: temperature at level #1 (K)
1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	: measuring height for temperature #1 (m)
283.55	282.05	283.35	284.05	283.65	285.85	283.65	283.75	285.45	285.75	288.45	288.65	: temperature at level #2 (K)
16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	: measuring height for temperature #2 (m)
2.20	2.80	6.80	1.50	2.50	1.30	1.20	2.20	2.00	1.70	4.30	3.40	: wind speed (m/s) at a tower
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring height for wind data (m)
2.20	2.80	6.80	1.50	2.50	1.30	1.20	2.20	2.00	1.70	4.30	3.40	: domain-averaged wind speed (m/s)
326.0	287.0	293.0	306.0	291.0	282.0	287.0	317.0	288.0	307.0	285.0	305.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
11.80	9.20	8.90	20.60	11.40	13.50	20.10	12.80	13.10	14.30	11.20	10.70	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring ht for domain-avg wind speed (m)
1800.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	: albedo
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	: moisture availability
5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
100.0	100.0	37.5	0.0	100.0	37.5	100.0	100.0	100.0	100.0	87.5	100.0	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
1800.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	: averaging time for concentration (s)
4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	: suggested receptor height (m)
3	3	3	3	3	3	3	3	3	3	3	3	: no. of distances downwind
853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	853.0	: distances downwind (m)
1.200E-02	2.200E-02	7.120E-03	1.950E-02	1.090E-02	3.920E-03	4.060E-03	1.160E-02	6.850E-03	8.670E-03	5.780E-03	1.220E-02	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	1500.0	: distances downwind (m)
1.130E-03	6.790E-03	4.500E-03	7.050E-03	3.470E-03	1.990E-03	9.690E-04	2.370E-03	1.840E-03	1.740E-03	1.720E-03	1.790E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	4715.0	: distances downwind (m)
8.840E-04	1.460E-03	3.030E-04	6.840E-04	3.650E-04	7.380E-04	4.670E-04	2.420E-04	6.000E-04	4.100E-04	3.040E-04	1.930E-04	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	0	0	0	0	: no. of lines-of-sight

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Dry Gulch, Course D
        3 : number of trials included in DDA
        8 : time zone designation
    34.50 : latitude (deg)
   120.50 : longitude (deg)
    dgd49       dgd50       dgd51 : trial ID
        6           6           6 : month
       26          26          28 : day
     1962        1962        1962 : year
       17          21          17 : hour
       45           0          30 : minute
        1           1           1 : no. of sources
      0.0         0.0         0.0 : x-coord. of source (m)
      0.0         0.0         0.0 : y-coord. of source (m)
     2.50        2.50        2.50 : source elevation (m)
    1.560       1.130       1.140 : emission rate (g/s)
   1800.0      1800.0      1800.0 : emission duration (s)
    -99.9       -99.9       -99.9 : total mass emitted (kg)
    0.000       0.000       0.000 : sigx0 at the source (m)
    0.000       0.000       0.000 : sigy0 at the source (m)
    0.000       0.000       0.000 : sigz0 at the source (m)
    -99.9       -99.9       -99.9 : ambient pressure (atm)
    -99.9       -99.9       -99.9 : relative humidity (%)
   285.15      283.15      291.15 : temperature at level #1 (K)
     1.80        1.80        1.80 : measuring height for temperature #1 (m)
   284.35      283.45      289.95 : temperature at level #2 (K)
    16.50       16.50       16.50 : measuring height for temperature #2 (m)
     5.60        2.40        3.20 : wind speed (m/s) at a tower
     3.70        3.70        3.70 : measuring height for wind data (m)
     5.60        2.40        3.20 : domain-averaged wind speed (m/s)
    327.0       296.0       317.0 : domain-averaged wind direction (deg)
   -99.90      -99.90      -99.90 : domain-averaged sigma-u (m/s)
    14.90       10.20       17.70 : domain-averaged sigma-theta (deg)
   -99.90      -99.90      -99.90 : domain-averaged sigma-phi (deg)
     3.70        3.70        3.70 : measuring ht for domain-avg wind speed (m)
   2820.0      2820.0      2820.0 : averaging time for domain-avg data (s)
  -99.900     -99.900     -99.900 : wind speed power law exponent
   0.5000      0.5000      0.5000 : surface roughness (m)
  -99.900     -99.900     -99.900 : friction velocity (m)
 -99.9000    -99.9000    -99.9000 : inverse Monin-Obukhov length (1/m)
     0.30        0.30        0.30 : albedo
     0.20        0.20        0.20 : moisture availability
     5.00        5.00        5.00 : Bowen raio
    -99.9       -99.9       -99.9 : mixing height (m)
      0.0         0.0         0.0 : cloud cover (%)
      -99         -99         -99 : P-G stability class
   2820.0      2820.0      2820.0 : averaging time for concentration (s)
     4.57        4.57        4.57 : suggested receptor height (m)
        3           3           3 : no. of distances downwind
    853.0       853.0       853.0 : distances downwind (m)
1.530E-02   3.420E-02   3.520E-03 : concentration (mg/m**3)
-9.990E+01 -9.990E+01 -9.990E+01 : cross-wind integrated conc. (mg/m**2)
   -99.90      -99.90      -99.90 : sigma-y (m)
   1500.0      1500.0      1500.0 : distances downwind (m)
4.610E-03   1.070E-02   3.850E-04 : concentration (mg/m**3)
-9.990E+01 -9.990E+01 -9.990E+01 : cross-wind integrated conc. (mg/m**2)
   -99.90      -99.90      -99.90 : sigma-y (m)
   4715.0      4715.0      4715.0 : distances downwind (m)
5.240E-04   1.030E-03   1.920E-04 : concentration (mg/m**3)
-9.990E+01 -9.990E+01 -9.990E+01 : cross-wind integrated conc. (mg/m**2)
   -99.90      -99.90      -99.90 : sigma-y (m)
        0           0           0 : no. of lines-of-sight
```

Ocean Breeze

12 : number of trials included in DDA
5 : time zone designation
28.40 : latitude (deg)
80.73 : longitude (deg)

ob1	ob2	ob3	ob4	ob5	ob6	ob7	ob8	ob9	ob10	ob12	ob13	: trial ID
5	5	5	5	5	5	5	5	5	5	6	6	: month
15	17	17	18	18	19	24	24	29	29	5	6	: day
1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	: year
18	16	21	16	20	19	10	20	16	20	11	9	: hour
25	50	0	50	33	40	50	56	48	52	0	0	: minute
1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	: source elevation (m)
0.578	0.989	0.306	0.989	0.317	0.306	1.083	0.339	0.944	0.617	1.183	1.078	: emission rate (g/s)
1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
298.15	298.85	296.95	298.75	296.35	298.15	297.35	297.05	297.35	294.45	294.25	295.35	: temperature at level #1 (K)
1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	: measuring height for temperature #1 (m)
298.35	298.65	297.25	297.85	296.55	298.95	297.45	297.15	297.05	295.35	293.55	293.25	: temperature at level #2 (K)
16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	: measuring height for temperature #2 (m)
1.30	3.30	1.40	3.10	2.10	2.00	3.30	2.90	3.50	1.90	2.40	1.90	: wind speed (m/s) at a tower
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring height for wind data (m)
1.30	3.30	1.40	3.10	2.10	2.00	3.30	2.90	3.50	1.90	2.40	1.90	: domain-averaged wind speed (m/s)
29.0	39.0	41.0	38.0	34.0	123.0	54.0	110.0	18.0	21.0	92.0	64.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
10.00	11.10	11.10	10.60	10.00	12.20	10.90	12.80	10.90	9.50	13.70	12.60	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring ht for domain-avg wind speed (m)
960.0	2160.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
37.5	37.5	37.5	37.5	0.0	37.5	100.0	87.5	87.5	37.5	37.5	37.5	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
960.0	2160.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	: averaging time for concentration (s)
4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	: suggested receptor height (m)
3	3	3	3	3	3	3	3	3	3	3	3	: no. of distances downwind
1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	: distances downwind (m)
1.970E-02	9.510E-03	2.010E-02	1.060E-02	1.320E-02	1.030E-02	6.700E-03	3.740E-03	6.030E-03	8.530E-03	2.580E-03	5.880E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	: distances downwind (m)
4.530E-03	2.270E-03	3.530E-03	3.130E-03	3.190E-03	1.660E-03	1.100E-03	1.070E-03	1.640E-03	2.530E-03	5.070E-04	1.600E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	: distances downwind (m)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	0	0	0	0	: no. of lines-of-sight

Ocean Breeze

12 : number of trials included in DDA
5 : time zone designation
28.40 : latitude (deg)
80.70 : longitude (deg)

ob14	ob15	ob16	ob18	ob19	ob20	ob21	ob22	ob23	ob25	ob26	ob27	: trial ID
6	6	6	6	6	6	6	6	6	1	1	1	: month
6	7	7	8	9	9	12	13	14	17	17	18	: day
1961	1961	1961	1961	1961	1961	1961	1961	1961	1962	1962	1962	: year
12	9	12	12	8	12	10	10	10	16	18	14	: hour
37	6	39	31	35	10	45	29	37	43	21	12	: minute
1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	: source elevation (m)
1.422	1.517	1.517	1.483	1.450	1.578	1.550	1.561	1.456	1.144	1.217	1.811	: emission rate (g/s)
1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
299.55	296.05	300.15	299.45	299.15	297.55	302.95	302.95	296.95	288.85	288.85	295.35	: temperature at level #1 (K)
1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	: measuring height for temperature #1 (m)
297.95	295.55	298.95	297.75	298.35	296.65	301.85	302.25	295.85	288.55	288.85	295.15	: temperature at level #2 (K)
16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	: measuring height for temperature #2 (m)
3.30	2.30	2.40	4.60	1.70	4.10	1.90	2.30	3.20	5.90	5.10	4.40	: wind speed (m/s) at a tower
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring height for wind data (m)
3.30	2.30	2.40	4.60	1.70	4.10	1.90	2.30	3.20	5.90	5.10	4.40	: domain-averaged wind speed (m/s)
52.0	90.0	103.0	130.0	118.0	103.0	98.0	117.0	127.0	13.0	8.0	15.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
12.80	15.30	10.90	10.20	18.30	20.70	14.90	12.00	12.20	6.40	10.80	10.00	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring ht for domain-avg wind speed (m)
2820.0	2820.0	2820.0	2580.0	2820.0	2160.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
87.5	87.5	100.0	87.5	37.5	87.5	100.0	87.5	87.5	87.5	87.5	37.5	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
2820.0	2820.0	2820.0	2580.0	2820.0	2160.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	: averaging time for concentration (s)
4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	: suggested receptor height (m)
3	3	3	3	3	3	3	3	3	3	3	3	: no. of distances downwind
1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	: distances downwind (m)
6.580E-03	7.060E-03	8.020E-03	6.240E-03	3.520E-03	1.930E-03	5.460E-03	7.060E-03	7.490E-03	2.480E-02	1.710E-02	5.470E-02	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	: distances downwind (m)
1.370E-03	5.000E-04	2.360E-03	4.230E-03	9.420E-04	1.020E-03	1.180E-03	1.220E-03	7.320E-04	4.200E-03	3.490E-03	1.850E-02	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	: distances downwind (m)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	1.640E-03	1.060E-03	3.110E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	0	0	0	0	: no. of lines-of-sight

Ocean Breeze

12 : number of trials included in DDA
5 : time zone designation
28.40 : latitude (deg)
80.70 : longitude (deg)

ob28	ob30	ob31	ob32	ob33	ob34	ob35	ob36	ob37	ob38	ob39	ob40	: trial ID
1	1	1	1	1	1	1	1	1	1	1	1	: month
18	19	20	20	20	22	22	23	23	24	25	26	: day
1962	1962	1962	1962	1962	1962	1962	1962	1962	1962	1962	1962	: year
17	18	13	15	16	16	18	14	16	14	18	16	: hour
24	30	49	42	59	40	25	40	16	31	7	22	: minute
1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	: source elevation (m)
1.217	1.133	1.661	1.628	1.361	1.689	0.817	1.628	1.628	1.600	1.244	1.600	: emission rate (g/s)
1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
290.65	290.05	293.05	288.95	288.95	294.45	292.45	297.75	292.25	299.05	290.65	292.65	: temperature at level #1 (K)
1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	: measuring height for temperature #1 (m)
290.65	290.45	292.25	288.25	288.75	294.35	293.15	296.95	291.75	298.15	290.75	292.15	: temperature at level #2 (K)
16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	: measuring height for temperature #2 (m)
2.90	1.80	6.90	7.50	5.70	2.10	0.50	3.00	2.00	3.30	0.60	2.60	: wind speed (m/s) at a tower
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring height for wind data (m)
2.90	1.80	6.90	7.50	5.70	2.10	0.50	3.00	2.00	3.30	0.60	2.60	: domain-averaged wind speed (m/s)
20.0	16.0	20.0	11.0	8.0	102.0	100.0	133.0	129.0	159.0	36.0	142.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
9.10	9.70	7.30	4.50	11.20	12.60	15.90	16.30	16.10	12.70	13.40	12.40	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring ht for domain-avg wind speed (m)
2820.0	2820.0	2820.0	2820.0	1800.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
87.5	100.0	87.5	87.5	87.5	100.0	37.5	100.0	100.0	37.5	100.0	0.0	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
2820.0	2820.0	2820.0	2820.0	1800.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	: averaging time for concentration (s)
4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	: suggested receptor height (m)
3	3	3	3	3	3	3	3	3	3	3	3	: no. of distances downwind
1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	: distances downwind (m)
5.010E-02	2.740E-02	2.500E-02	1.860E-02	1.740E-02	6.550E-02	7.580E-02	2.900E-02	4.360E-02	1.310E-02	3.350E-02	3.190E-02	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	: distances downwind (m)
1.060E-02	8.880E-03	5.850E-03	3.130E-03	3.730E-03	2.200E-02	1.890E-02	8.030E-03	1.000E-02	4.520E-03	7.620E-03	5.310E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	: distances downwind (m)
3.470E-03	2.650E-03	2.000E-03	1.410E-03	1.310E-03	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	1.730E-03	-9.990E+01	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	0	0	0	0	: no. of lines-of-sight

Ocean Breeze

12 : number of trials included in DDA
5 : time zone designation
28.40 : latitude (deg)
80.70 : longitude (deg)

ob41	ob42	ob43	ob44	ob45	ob46	ob47	ob48	ob49	ob50	ob51	ob52	: trial ID
1	1	1	1	2	2	2	2	2	2	3	3	: month
29	30	31	31	1	1	2	2	2	3	10	10	: day
1962	1962	1962	1962	1962	1962	1962	1962	1962	1962	1962	1962	: year
19	14	13	15	14	16	14	16	13	15	13	15	: hour
30	5	54	42	47	48	2	19	35	16	37	7	: minute
1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	: source elevation (m)
1.600	1.600	1.689	1.628	1.600	1.572	1.661	1.611	1.600	1.628	1.600	1.617	: emission rate (g/s)
1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
293.15	293.15	293.15	293.15	290.95	287.55	294.45	292.25	293.55	291.75	299.95	299.95	: temperature at level #1 (K)
1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	: measuring height for temperature #1 (m)
293.15	292.45	291.65	292.85	290.35	287.25	293.85	292.05	293.05	290.85	299.25	299.25	: temperature at level #2 (K)
16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	: measuring height for temperature #2 (m)
4.70	3.50	3.60	3.00	3.70	2.60	2.90	1.90	3.60	2.80	3.20	3.00	: wind speed (m/s) at a tower
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring height for wind data (m)
4.70	3.50	3.60	3.00	3.70	2.60	2.90	1.90	3.60	2.80	3.20	3.00	: domain-averaged wind speed (m/s)
2.0	48.0	42.0	56.0	35.0	60.0	57.0	100.0	45.0	60.0	85.0	97.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
8.40	17.30	10.10	14.50	10.60	12.40	12.80	13.60	13.80	14.00	15.10	15.90	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring ht for domain-avg wind speed (m)
2820.0	2820.0	2820.0	2820.0	2820.0	1800.0	2820.0	2820.0	2820.0	1800.0	2820.0	2820.0	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
0.0	37.5	37.5	87.5	37.5	37.5	87.5	87.5	0.0	37.5	37.5	37.5	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
2820.0	2820.0	2820.0	2820.0	2820.0	1800.0	2820.0	2820.0	2820.0	1800.0	2820.0	2820.0	: averaging time for concentration (s)
4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	: suggested receptor height (m)
3	3	3	3	3	3	3	3	3	3	3	3	: no. of distances downwind
1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	: distances downwind (m)
4.050E-02	3.930E-03	2.640E-03	1.280E-02	6.820E-03	4.710E-02	1.120E-02	5.150E-02	6.540E-03	2.310E-02	1.180E-02	1.290E-02	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.390E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	: distances downwind (m)
1.050E-02	7.110E-04	2.660E-03	2.270E-03	1.510E-03	1.430E-02	3.850E-03	9.270E-03	2.960E-03	7.370E-03	2.950E-03	3.890E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	: distances downwind (m)
2.710E-03	1.300E-04	1.400E-03	1.180E-03	8.370E-04	3.790E-03	1.110E-03	-9.990E+01	8.600E-04	1.940E-03	-9.990E+01	-9.990E+01	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	0	0	0	0	: no. of lines-of-sight

Ocean Breeze
12 : number of trials included in DDA
5 : time zone designation
28.40 : latitude (deg)
80.70 : longitude (deg)

ob53	ob54	ob55	ob56	ob57	ob58	ob60	ob62	ob63	ob64	ob65	ob66	: trial ID
3	3	3	3	3	3	3	3	3	3	3	3	: month
10	13	13	13	14	14	16	16	17	17	20	22	: day
1962	1962	1962	1962	1962	1962	1962	1962	1962	1962	1962	1962	: year
16	13	15	16	13	15	15	17	13	14	15	15	: hour
39	44	2	33	46	20	5	53	42	51	40	51	: minute
1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	: source elevation (m)
1.689	1.661	1.689	1.661	1.644	1.600	1.644	1.661	1.628	1.661	1.539	1.661	: emission rate (g/s)
1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
293.25	294.15	290.35	290.35	287.45	288.85	287.85	288.95	288.25	286.45	293.45	294.65	: temperature at level #1 (K)
1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	: measuring height for temperature #1 (m)
292.85	295.85	289.55	290.05	287.05	288.65	287.15	289.05	286.75	285.25	293.05	294.05	: temperature at level #2 (K)
16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	: measuring height for temperature #2 (m)
2.50	5.50	3.50	1.40	2.90	2.40	4.10	3.20	7.20	8.10	4.30	3.20	: wind speed (m/s) at a tower
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring height for wind data (m)
2.50	5.50	3.50	1.40	2.90	2.40	4.10	3.20	7.20	8.10	4.30	3.20	: domain-averaged wind speed (m/s)
129.0	23.0	45.0	102.0	19.0	31.0	26.0	22.0	15.0	23.0	162.0	24.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
14.80	7.70	12.40	30.40	10.00	10.00	10.10	10.20	10.00	10.60	13.00	10.70	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring ht for domain-avg wind speed (m)
2820.0	2820.0	2580.0	2820.0	2820.0	2820.0	1440.0	2820.0	2820.0	2820.0	2820.0	2820.0	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
0.0	87.5	37.5	87.5	87.5	87.5	87.5	100.0	50.0	37.5	100.0	100.0	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
2820.0	2820.0	2580.0	2820.0	2820.0	2820.0	1440.0	2820.0	2820.0	2820.0	2820.0	2820.0	: averaging time for concentration (s)
4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	: suggested receptor height (m)
3	3	3	3	3	3	3	3	3	3	3	3	: no. of distances downwind
1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	: distances downwind (m)
2.570E-02	4.670E-03	4.520E-03	1.370E-02	1.550E-02	3.800E-02	1.960E-02	3.630E-02	5.560E-03	7.430E-03	1.320E-02	2.840E-02	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	: distances downwind (m)
7.950E-03	5.130E-04	1.210E-03	3.350E-03	4.230E-03	1.070E-02	2.250E-03	1.000E-02	1.180E-03	7.360E-04	3.500E-03	5.120E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	: distances downwind (m)
-9.990E+01	5.020E-04	9.470E-04	-9.990E+01	1.160E-03	2.150E-03	7.800E-04	3.460E-03	2.940E-04	1.490E-04	-9.990E+01	1.290E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	0	0	0	0	: no. of lines-of-sight

Ocean Breeze

9 : number of trials included in DDA
5 : time zone designation
28.40 : latitude (deg)
80.70 : longitude (deg)

ob67	ob68	ob69	ob70	ob71	ob72	ob73	ob74	ob75	: trial ID
3	3	3	3	3	3	3	3	3	: month
24	24	27	27	28	29	29	30	30	: day
1962	1962	1962	1962	1962	1962	1962	1962	1962	: year
15	18	18	19	18	16	18	15	18	: hour
34	15	21	56	20	28	17	38	48	: minute
1	1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	: source elevation (m)
1.661	0.817	1.233	1.256	1.300	1.672	1.267	1.839	1.244	: emission rate (g/s)
1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
295.85	293.55	290.35	289.25	295.55	296.05	296.05	298.15	298.15	: temperature at level #1 (K)
1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	1.80	: measuring height for temperature #1 (m)
296.15	292.95	290.05	290.15	295.85	295.75	296.25	298.35	298.15	: temperature at level #2 (K)
16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	16.50	: measuring height for temperature #2 (m)
2.70	1.20	4.60	4.10	3.40	4.70	3.70	4.50	3.30	: wind speed (m/s) at a tower
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring height for wind data (m)
2.70	1.20	4.60	4.10	3.40	4.70	3.70	4.50	3.30	: domain-averaged wind speed (m/s)
66.0	80.0	13.0	19.0	151.0	154.0	160.0	154.0	155.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
16.80	8.80	9.60	6.90	6.80	10.40	11.70	12.70	10.60	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	: measuring ht for domain-avg wind speed (m)
2820.0	1800.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
37.5	37.5	0.0	0.0	37.5	87.5	37.5	87.5	37.5	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
2820.0	1800.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	2820.0	: averaging time for concentration (s)
4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	: suggested receptor height (m)
3	3	3	3	3	3	3	3	3	: no. of distances downwind
1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	1200.0	: distances downwind (m)
1.690E-02	1.390E-01	1.830E-02	1.450E-02	4.570E-02	2.460E-02	3.220E-02	1.650E-02	2.000E-02	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.590E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	2400.0	: distances downwind (m)
3.160E-03	3.940E-02	2.600E-03	2.940E-03	1.460E-02	4.910E-03	9.420E-03	3.800E-03	5.000E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.80	-99.90	: sigma-y (m)
4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	4800.0	: distances downwind (m)
-9.990E+01	-9.990E+01	1.180E-03	1.750E-03	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	0	: no. of lines-of-sight

Green Glow
12 : number of trials included in DDA
8 : time zone designation
46.40 : latitude (deg)
119.20 : longitude (deg)

gg1	gg3	gg4	gg5	gg6	gg7	gg8	gg9	gg10	gg11	gg12	gg13	: trial ID
6	6	7	7	7	7	7	7	7	7	7	7	: month
19	28	6	8	10	13	15	16	19	21	23	24	: day
1959	1959	1959	1959	1959	1959	1959	1959	1959	1959	1959	1959	: year
1	23	21	21	22	22	22	23	22	22	0	22	: hour
28	32	49	20	17	1	0	24	0	0	15	30	: minute
1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	: source elevation (m)
0.470	0.861	0.897	0.961	0.944	0.944	0.944	0.672	0.750	1.322	0.794	1.311	: emission rate (g/s)
1800.0	1800.0	1560.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
294.15	286.15	287.15	295.15	301.15	294.15	299.15	299.15	303.15	302.15	303.15	298.15	: temperature at level #1 (K)
0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	: measuring height for temperature #1 (m)
298.95	287.05	288.55	296.45	301.95	297.05	300.45	300.35	303.35	303.85	305.35	298.65	: temperature at level #2 (K)
15.20	15.20	15.20	15.20	15.20	15.20	15.20	15.20	15.20	15.20	15.20	15.20	: measuring height for temperature #2 (m)
1.50	1.90	2.20	2.30	4.50	2.00	3.30	2.70	6.60	1.70	2.40	3.70	: wind speed (m/s) at a tower
3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	: measuring height for wind data (m)
1.50	1.90	2.20	2.30	4.50	2.00	3.30	2.70	6.60	1.70	2.40	3.70	: domain-averaged wind speed (m/s)
279.0	314.0	304.0	313.0	301.0	304.0	310.0	319.0	316.0	335.0	329.0	296.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	: measuring ht for domain-avg wind speed (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	: albedo
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	: moisture availability
5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
75.0	12.5	25.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0	0.0	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: averaging time for concentration (s)
1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	: suggested receptor height (m)
6	6	6	6	6	6	6	6	6	6	6	6	: no. of distances downwind
200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	: distances downwind (m)
2.620E-01	6.120E-01	2.470E-01	9.290E-01	1.570E-01	7.770E-01	6.240E-01	3.040E-01	2.570E-01	1.030E+00	6.610E-01	3.090E-01	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	: distances downwind (m)
9.470E-02	9.110E-02	2.410E-02	1.230E-01	9.710E-03	1.190E-01	6.630E-02	5.040E-02	1.940E-02	1.160E-01	6.300E-02	2.290E-02	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
1600.0	1600.0	1600.0	1600.0	1600.0	1600.0	1600.0	1600.0	1600.0	1600.0	1600.0	1600.0	: distances downwind (m)
1.770E-02	2.640E-02	6.050E-03	4.400E-02	2.340E-03	3.720E-02	2.000E-02	1.030E-02	6.030E-03	1.320E-02	1.240E-02	5.120E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
3200.0	3200.0	3200.0	3200.0	3200.0	3200.0	3200.0	3200.0	3200.0	3200.0	3200.0	3200.0	: distances downwind (m)
5.360E-03	5.980E-03	1.550E-03	1.130E-02	8.010E-04	4.240E-03	4.790E-03	2.490E-03	1.440E-03	9.460E-03	4.530E-03	2.090E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
12800.0	12800.0	12800.0	12800.0	12800.0	12800.0	12800.0	12800.0	12800.0	12800.0	12800.0	12800.0	: distances downwind (m)
1.030E-04	6.230E-04	3.350E-04	6.830E-04	2.960E-04	1.480E-04	3.420E-04	1.290E-04	5.710E-04	6.460E-04	9.910E-05	2.980E-04	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
25600.0	25600.0	25600.0	25600.0	25600.0	25600.0	25600.0	25600.0	25600.0	25600.0	25600.0	25600.0	: distances downwind (m)
6.900E-05	1.920E-04	1.600E-04	1.290E-04	9.110E-05	4.860E-05	1.520E-04	5.190E-05	1.120E-04	1.540E-04	-9.990E+01	1.450E-04	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	0	0	0	0	: no. of lines-of-sight

Green Glow

12 : number of trials included in DDA
8 : time zone designation
46.40 : latitude (deg)
119.20 : longitude (deg)

gg14	gg15	gg17	gg18	gg19	gg21	gg22	gg23	gg24	gg25	gg26	gg27	: trial ID
7	7	8	8	8	8	8	8	8	8	8	8	: month
29	31	7	9	11	14	17	18	25	25	28	30	: day
1959	1959	1959	1959	1959	1959	1959	1959	1959	1959	1959	1959	: year
0	0	21	21	21	21	20	20	0	22	21	21	: hour
5	10	30	45	45	8	50	50	2	8	0	25	: minute
1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	: source elevation (m)
1.289	1.761	1.750	2.017	1.983	2.000	1.983	2.050	1.900	1.983	1.983	1.956	: emission rate (g/s)
1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	1800.0	3600.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
289.15	297.15	300.15	299.15	295.15	298.15	291.15	292.15	288.15	296.15	291.15	292.15	: temperature at level #1 (K)
0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	: measuring height for temperature #1 (m)
292.35	300.85	300.55	299.55	295.25	298.85	291.45	292.25	292.95	296.35	291.45	292.25	: temperature at level #2 (K)
15.20	15.20	15.20	15.20	15.20	15.20	15.20	15.20	15.20	15.20	15.20	15.20	: measuring height for temperature #2 (m)
1.70	2.00	5.50	5.00	6.40	4.10	5.10	6.40	1.60	5.20	4.70	5.80	: wind speed (m/s) at a tower
3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	: measuring height for wind data (m)
1.70	2.00	5.50	5.00	6.40	4.10	5.10	6.40	1.60	5.20	4.70	5.80	: domain-averaged wind speed (m/s)
279.0	300.0	319.0	322.0	309.0	316.0	313.0	315.0	293.0	316.0	325.0	311.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	: measuring ht for domain-avg wind speed (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	0.1000	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	: albedo
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	: moisture availability
5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	: Bowen ratio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
0.0	0.0	100.0	100.0	100.0	25.0	0.0	25.0	0.0	100.0	100.0	100.0	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: averaging time for concentration (s)
1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	: suggested receptor height (m)
6	6	6	6	6	6	6	6	6	6	6	6	: no. of distances downwind
200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	: distances downwind (m)
1.250E+00	7.720E-01	6.510E-01	5.790E-01	3.140E-01	8.450E-01	6.390E-01	6.090E-01	1.870E+00	5.200E-01	4.900E-01	3.180E-01	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	: distances downwind (m)
7.190E-02	5.620E-02	5.040E-02	8.780E-02	2.880E-02	7.810E-02	5.610E-02	5.840E-02	1.350E-01	3.950E-02	6.120E-02	3.070E-02	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
1600.0	1600.0	1600.0	1600.0	1600.0	1600.0	1600.0	1600.0	1600.0	1600.0	1600.0	1600.0	: distances downwind (m)
1.440E-02	2.290E-02	1.300E-02	8.220E-03	5.960E-03	1.960E-02	1.500E-02	1.510E-02	3.030E-02	1.070E-02	1.650E-02	7.590E-03	: concentration (mg/m**3)
-9.990E 01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
3200.0	3200.0	3200.0	3200.0	3200.0	3200.0	3200.0	3200.0	3200.0	3200.0	3200.0	3200.0	: distances downwind (m)
4.190E-03	7.010E-03	3.450E-03	1.030E-03	1.860E-03	3.260E-03	4.160E-03	2.860E-03	6.500E-03	2.430E-03	4.110E-03	2.620E-03	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
12800.0	12800.0	12800.0	12800.0	12800.0	12800.0	12800.0	12800.0	12800.0	12800.0	12800.0	12800.0	: distances downwind (m)
1.640E-04	9.470E-04	3.780E-04	3.600E-04	3.210E-04	3.110E-04	-9.990E+01	3.450E-04	-9.990E+01	3.060E-04	5.430E-04	3.980E-04	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
25600.0	25600.0	25600.0	25600.0	25600.0	25600.0	25600.0	25600.0	25600.0	25600.0	25600.0	25600.0	: distances downwind (m)
9.510E-05	7.790E-05	1.620E-04	1.690E-04	7.940E-05	2.850E-04	1.730E-04	3.240E-04	-9.990E+01	1.020E-04	1.360E-04	1.860E-04	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	0	0	0	0	: no. of lines-of-sight

Prairie Grass

12 : number of trials included in DDA
6 : time designation
42.30 : latitude (deg)
98.30 : longitude (deg)

pg7	pg8	pg9	pg10	pg13	pg15	pg16	pg17	pg18	pg19	pg20	pg21	: trial ID
7	7	7	7	7	7	7	7	7	7	7	7	: month
10	10	11	11	22	23	23	23	23	25	25	25	: day
1956	1956	1956	1956	1956	1956	1956	1956	1956	1956	1956	1956	: year
14	17	16	12	20	8	10	20	22	11	14	22	: hour
15	0	0	0	0	0	0	0	0	0	0	0	: minute
1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	: source elevation (m)
89.900	91.100	92.000	92.100	61.100	95.500	93.000	56.500	57.600	101.800	101.200	50.900	: emission rate (g/s)
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
305.15	305.15	301.15	304.15	293.15	295.15	301.15	300.15	297.15	302.15	307.15	302.15	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
303.55	303.95	299.55	302.15	295.05	294.05	300.15	300.65	298.75	300.85	304.85	302.45	: temperature at level #2 (K)
16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	: measuring height for temperature #2 (m)
4.20	4.90	6.90	4.60	1.30	3.40	3.20	3.30	3.50	5.80	8.60	6.10	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
4.20	4.90	6.90	4.60	1.30	3.40	3.20	3.30	3.50	5.80	8.60	6.10	: domain-averaged wind speed (m/s)
186.0	184.0	204.0	225.0	190.0	209.0	192.0	184.0	187.0	166.0	178.0	181.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
25.60	10.20	10.20	16.80	3.20	12.80	18.50	5.60	5.30	11.60	8.30	6.60	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	: surface roughness (m)
0.310	0.310	0.460	0.320	0.090	0.230	0.240	0.210	0.200	0.390	0.600	0.380	: friction velocity (m)
-0.1020	-0.0556	-0.0323	-0.0909	0.2941	-0.1316	-0.1923	0.0208	0.0400	-0.0357	-0.0161	0.0058	: inverse Monin-Obukhov length (1/m)
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: Bowen raio
1539.0	1580.0	626.0	1090.0	-99.9	86.0	1259.0	-99.9	-99.9	745.0	813.0	-99.9	: mixing height (m)
0.0	0.0	30.0	30.0	20.0	0.0	0.0	70.0	10.0	30.0	20.0	100.0	: cloud cover (%)
2	3	3	2	6	1	1	4	5	3	4	4	: P-G stability class
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	: averaging time for concentration (s)
1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	: suggested receptor height (m)
5	5	5	5	5	5	5	5	5	5	5	5	: no. of distances downwind
50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	: distances downwind (m)
9.260E+01	3.963E+02	1.858E+02	1.704E+02	-9.990E+01	3.887E+02	1.748E+02	6.102E+02	6.048E+02	2.026E+02	1.569E+02	2.693E+02	: concentration (mg/m**3)
4.001E+03	5.102E+03	3.698E+03	4.504E+03	-9.990E+01	7.096E+03	5.003E+03	5.933E+03	6.221E+03	4.500E+03	3.400E+03	2.952E+03	: cross-wind integrated conc. (mg/m**2)
6.20	6.60	9.00	12.30	-99.90	8.60	13.70	-99.90	-99.90	8.70	7.90	-99.90	: sigma-y (m)
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	: distances downwind (m)
2.167E+01	1.066E+02	5.272E+01	4.052E+01	-9.990E+01	1.031E+02	3.301E+01	2.554E+02	2.494E+02	5.100E+01	4.858E+01	9.366E+01	: concentration (mg/m**3)
2.203E+03	2.596E+03	2.199E+03	1.796E+03	-9.990E+01	3.400E+03	1.795E+03	-9.990E+01	-9.990E+01	2.199E+03	1.801E+03	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
12.00	12.00	18.00	20.00	-99.90	16.00	26.00	-99.90	-99.90	16.00	14.00	-99.90	: sigma-y (m)
200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	: distances downwind (m)
4.225E+00	2.378E+01	1.306E+01	1.050E+01	-9.990E+01	2.063E+01	6.008E+00	8.023E+01	9.216E+01	1.222E+01	1.417E+01	2.784E+01	: concentration (mg/m**3)
9.979E+02	1.102E+03	1.003E+03	7.101E+02	-9.990E+01	1.347E+03	4.799E+02	1.921E+03	2.650E+03	8.602E+02	8.501E+02	9.162E+02	: cross-wind integrated conc. (mg/m**2)
22.00	21.00	33.00	35.00	-99.90	26.00	49.00	-99.90	-99.90	32.00	27.00	-99.90	: sigma-y (m)
400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	: distances downwind (m)
6.841E-01	3.781E+00	2.696E+00	2.487E+00	1.246E+02	4.536E+00	5.924E-01	2.475E+01	3.070E+01	1.914E+00	3.006E+00	8.602E+00	: concentration (mg/m**3)
4.001E+02	3.899E+02	4.103E+02	1.999E+02	-9.990E+01	3.696E+02	1.004E+02	-9.990E+01	-9.990E+01	2.698E+02	3.400E+02	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
39.00	41.00	63.00	61.00	-99.90	45.00	72.00	-99.90	-99.90	55.00	49.00	-99.90	: sigma-y (m)
800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	: distances downwind (m)
7.363E-02	6.714E-01	4.839E-01	1.584E-01	9.898E+01	5.186E-01	4.752E-02	9.040E+00	1.359E+01	3.370E-01	7.124E-01	3.034E+00	: concentration (mg/m**3)
1.798E+02	1.403E+02	1.297E+02	3.223E+01	8.126E+03	1.098E+02	1.674E+01	6.215E+02	1.152E+03	5.803E+01	1.295E+02	3.054E+02	: cross-wind integrated conc. (mg/m**2)
71.00	86.00	116.00	97.00	-99.90	92.00	116.00	-99.90	-99.90	85.00	90.00	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	0	0	0	0	: no. of lines-of-sight

Prairie Grass

12 : number of trials included in DDA
6 : time zone designation
42.30 : latitude (deg)
98.30 : longitude (deg)

pg22	pg23	pg24	pg25	pg28	pg29	pg32	pg33	pg34	pg36	pg37	pg38	: trial ID
7	7	7	8	8	8	8	8	8	8	8	8	: month
25	29	29	1	2	3	6	7	7	11	12	12	: day
1956	1956	1956	1956	1956	1956	1956	1956	1956	1956	1956	1956	: year
24	21	23	13	24	2	20	13	15	23	3	5	: hour
0	0	0	0	0	0	0	0	0	30	0	0	: minute
1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	: source elevation (m)
48.400	40.900	41.200	101.400	41.700	41.500	41.400	94.700	97.400	40.000	40.300	45.400	: emission rate (g/s)
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.15	296.15	295.15	298.15	297.15	298.15	295.15	302.15	304.15	293.15	294.15	294.15	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
300.45	296.35	295.35	297.45	298.15	299.05	299.45	301.15	303.05	294.95	294.55	294.35	: temperature at level #2 (K)
16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	: measuring height for temperature #2 (m)
6.40	5.90	6.20	2.80	2.60	3.50	2.20	8.50	9.00	1.90	4.60	4.10	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
6.40	5.90	6.20	2.80	2.60	3.50	2.20	8.50	9.00	1.90	4.60	4.10	: domain-averaged wind speed (m/s)
176.0	128.0	141.0	177.0	174.0	220.0	17[illegible].0	181.0	146.0	160.0	187.0	170.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
5.80	7.30	7.10	24.80	6.40	8.00	3.60	10.50	7.30	3.80	7.00	5.00	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	: surface roughness (m)
0.460	0.390	0.380	0.200	0.160	0.230	0.130	0.500	0.600	0.100	0.290	0.280	: friction velocity (m)
0.0049	0.0052	0.0040	-0.1613	0.0417	0.0278	0.1205	-0.0196	-0.0132	0.1282	0.0105	0.0101	: inverse Monin-Obukhov length (1/m)
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: Bowen raio
-99.9	-99.9	-99.9	763.0	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
60.0	0.0	0.0	100.0	0.0	0.0	10.0	0.0	20.0	0.0	30.0	80.0	: cloud cover (%)
4	4	4	1	5	4	6	4	4	6	4	4	: P-G stability class
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	: averaging time for concentration (s)
1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	: suggested receptor height (m)
5	5	5	5	5	5	5	5	5	5	5	5	: no. of distances downwind
50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	: distances downwind (m)
2.217E+02	1.673E+02	1.383E+02	2.870E+02	4.837E+02	2.270E+02	-9.990E+01	1.941E+02	1.870E+02	7.960E+02	2.216E+02	3.528E+02	: concentration (mg/m**3)
2.275E+03	1.922E+03	1.936E+03	7.899E+03	5.671E+03	4.109E+03	-9.990E+01	3.125E+03	2.922E+03	7.720E+03	2.458E+03	3.541E+03	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	16.20	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	: distances downwind (m)
8.034E+01	5.808E+01	4.820E+01	3.853E+01	1.918E+02	8.590E+01	-9.990E+01	5.976E+01	6.389E+01	5.200E+02	7.738E+01	1.516E+02	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	2.697E+03	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	36.00	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	: distances downwind (m)
2.633E+01	1.812E+01	1.599E+01	6.033E+00	5.755E+01	2.677E+01	2.650E+02	1.780E+01	1.782E+01	1.928E+02	2.221E+01	5.039E+01	: concentration (mg/m**3)
6.776E+02	6.953E+02	6.180E+02	7.504E+02	2.127E+03	1.577E+03	4.761E+03	8.523E+02	8.766E+02	4.000E+03	8.463E+02	1.180E+03	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	72.00	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	: distances downwind (m)
8.276E+00	5.931E+00	5.191E+00	1.369E+00	2.068E+01	8.922E+00	1.114E+02	3.674E+00	4.636E+00	6.080E+01	7.254E+00	1.834E+01	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	3.001E+02	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	134.00	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	: distances downwind (m)
2.357E+00	1.963E+00	1.805E+00	2.160E-01	8.382E+00	2.523E+00	5.465E+01	6.885E-01	1.179E+00	3.704E+01	2.039E+00	6.311E+00	: concentration (mg/m**3)
1.936E+02	1.636E+02	1.648E+02	6.287E+01	6.255E+02	4.980E+02	2.318E+03	1.231E+02	1.753E+02	1.640E+03	2.821E+02	3.632E+02	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	214.00	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	0	0	0	0	: no. of lines-of-sight

Prairie Grass

11 : number of trials included in DDA
6 : time zone designation
42.30 : latitude (deg)
98.30 : longitude (deg)

pg41	pg42	pg43	pg44	pg45	pg48	pg49	pg50	pg51	pg53	pg54	: trial ID
8	8	8	8	8	8	8	8	8	8	8	: month
14	14	15	15	15	21	21	21	21	24	24	: day
1956	1956	1956	1956	1956	1956	1956	1956	1956	1956	1956	: year
3	5	12	14	17	9	10	14	15	20	22	: hour
5	5	0	0	5	0	59	6	29	0	2	: minute
1	1	1	1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	: source elevation (m)
39.900	56.400	98.600	100.700	100.800	104.100	102.000	102.800	102.400	45.200	43.400	: emission rate (g/s)
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
294.15	296.15	308.15	310.15	309.15	293.15	297.15	304.15	305.15	290.15	292.15	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
295.55	296.55	306.75	308.65	308.75	291.95	295.35	302.65	303.75	294.05	293.05	: temperature at level #2 (K)
16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	: measuring height for temperature #2 (m)
4.00	5.80	5.00	5.70	6.10	8.00	6.30	6.60	6.10	2.50	4.00	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
4.00	5.80	5.00	5.70	6.10	8.00	6.30	6.60	6.10	2.50	4.00	: domain-averaged wind speed (m/s)
198.0	212.0	170.0	158.0	163.0	214.0	199.0	215.0	245.0	132.0	140.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
5.00	6.60	12.20	12.70	6.90	8.10	11.90	10.90	10.80	3.90	5.90	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	: surface roughness (m)
0.230	0.370	0.350	0.400	0.390	0.510	0.450	0.440	0.450	0.170	0.240	: friction velocity (m)
0.0286	0.0083	-0.0625	-0.0400	-0.0115	-0.0159	-0.0357	-0.0385	-0.0250	0.1000	0.0250	: inverse Monin-Obukhov length (1/m)
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: Bowen raio
-99.9	-99.9	683.0	1664.0	-99.9	-99.9	636.0	851.0	2136.0	-99.9	-99.9	: mixing height (m)
0.0	0.0	100.0	80.0	90.0	10.0	10.0	10.0	10.0	0.0	0.0	: cloud cover (%)
5	4	3	3	4	4	3	3	4	6	4	: P-G stability class
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	: averaging time for concentration (s)
1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	: suggested receptor height (m)
5	5	5	5	5	5	5	5	5	5	5	: no. of distances downwind
50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	: distances downwind (m)
4.349E+02	2.651E+02	2.268E+02	1.742E+02	3.326E+02	2.155E+02	2.030E+02	2.231E+02	2.560E+02	9.130E+02	4.136E+02	: concentration (mg/m**3)
3.152E+03	2.933E+03	4.999E+03	4.501E+03	5.242E+03	4.997E+03	4.304E+03	4.205E+03	4.700E+03	6.961E+03	3.515E+03	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	10.50	11.40	-99.90	-99.90	8.90	8.20	9.60	-99.90	-99.90	: sigma-y (m)
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	: distances downwind (m)
1.831E+02	9.701E+01	5.236E+01	4.582E+01	1.048E+02	6.298E+01	6.344E+01	7.165E+01	6.748E+01	5.198E+02	1.641E+02	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	2.396E+03	2.296E+03	-9.990E+01	-9.990E+01	2.397E+03	2.303E+03	2.396E+03	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	21.00	22.00	-99.90	-99.90	17.00	15.00	18.00	-99.90	-99.90	: sigma-y (m)
200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	: distances downwind (m)
6.504E+01	3.023E+01	1.469E+01	1.309E+01	3.639E+01	1.624E+01	1.754E+01	1.706E+01	1.710E+01	2.237E+02	5.946E+01	: concentration (mg/m**3)
1.277E+03	9.588E+02	1.085E+03	1.088E+03	1.714E+03	6.246E+02	1.163E+03	9.098E+02	1.000E+03	3.752E+03	1.302E+03	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	40.00	43.00	-99.90	-99.90	35.00	28.00	32.00	-99.90	-99.90	: sigma-y (m)
400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	: distances downwind (m)
2.374E+01	7.558E+00	2.288E+00	2.648E+00	7.772E+00	4.497E+00	3.091E+00	3.526E+00	2.703E+00	8.181E+01	2.161E+01	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	3.698E+02	4.300E+02	-9.990E+01	-9.990E+01	4.498E+02	3.896E+02	3.799E+02	-9.990E+01	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	89.00	73.00	-99.90	-99.90	72.00	55.00	60.00	-99.90	-99.90	: sigma-y (m)
800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	: distances downwind (m)
9.536E+00	2.064E+00	4.693E-01	5.367E-01	2.591E+00	1.260E+00	5.355E-01	5.520E-01	4.055E-01	3.282E+01	9.244E+00	: concentration (mg/m**3)
4.788E+02	2.820E+02	1.203E+02	1.400E+02	3.528E+02	-9.990E+01	1.499E+02	1.100E+02	8.397E+01	2.802E+03	4.774E+02	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	200.00	126.00	-99.90	-99.90	118.00	115.00	77.00	-99.90	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	0	0	0	: no. of lines-of-sight

Prairie Grass

8 : number of trials included in DOA
6 : time zone designation
42.30 : latitude (deg)
98.30 : longitude (deg)

pg55	pg56	pg57	pg58	pg59	pg60	pg61	pg62	: trial ID
8	8	8	8	8	8	8	8	: month
25	25	25	25	25	26	26	26	: day
1956	1956	1956	1956	1956	1956	1956	1956	: year
0	2	17	19	22	0	11	14	: hour
58	1	28	27	26	27	1	0	: minute
1	1	1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	: source elevation (m)
45.300	45.900	101.500	40.500	40.200	38.500	102.100	102.100	: emission rate (g/s)
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	: emission duration (s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
290.15	289.15	309.15	299.15	297.15	299.15	307.15	305.15	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
290.55	289.75	308.55	305.05	300.15	299.85	305.35	304.15	: temperature at level #2 (K)
16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	: measuring height for temperature #2 (m)
5.40	4.30	6.70	1.90	2.60	4.90	8.00	5.20	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
5.40	4.30	6.70	1.90	2.60	4.90	8.00	5.20	: domain-averaged wind speed (m/s)
156.0	153.0	200.0	178.0	174.0	198.0	203.0	212.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
5.80	6.10	8.00	4.10	5.20	5.90	11.00	8.80	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	: averaging time for domain-avg data (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: wind speed power law exponent
0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	0.0060	: surface roughness (m)
0.370	0.290	0.460	0.110	0.140	0.280	0.510	0.340	: friction velocity (m)
0.0081	0.0132	-0.0052	0.1563	0.0909	0.0172	-0.0263	-0.0333	: inverse Monin-Obukhov length (1/m)
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	515.0	-99.9	: mixing height (m)
0.0	0.0	0.0	30.0	50.0	70.0	30.0	80.0	: cloud cover (%)
4	4	4	6	6	4	4	3	: P-G stability class
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	: averaging time for concentration (s)
1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	: suggested receptor height (m)
5	5	5	5	5	5	5	5	: no. of distances downwind
50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	: distances downwind (m)
2.079E+02	3.048E+02	2.568E+02	-9.990E+01	6.995E+02	2.868E+02	1.787E+02	-9.990E+01	: concentration (mg/m**3)
2.401E+03	3.259E+03	4.263E+03	-9.990E+01	5.628E+03	2.387E+03	3.502E+03	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	10.40	-99.90	: sigma-y (m)
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	: distances downwind (m)
8.154E+01	1.079E+02	7.389E+01	-9.990E+01	5.065E+02	1.109E+02	5.125E+01	1.041E+02	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	2.103E+03	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	19.00	-99.90	: sigma-y (m)
200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	: distances downwind (m)
2.609E+01	3.557E+01	2.639E+01	2.892E+02	2.223E+02	4.042E+01	1.521E+01	2.940E+01	: concentration (mg/m**3)
8.154E+02	1.102E+03	1.320E+03	4.253E+03	3.256E+03	8.855E+02	1.144E+03	1.327E+03	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	35.00	-99.90	: sigma-y (m)
400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	: distances downwind (m)
7.429E+00	1.235E+01	7.765E+00	1.300E+02	9.407E+01	1.390E+01	3.808E+00	7.106E+00	: concentration (mg/m**3)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	5.299E+02	-9.990E+01	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	65.00	-99.90	: sigma-y (m)
800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	: distances downwind (m)
2.718E+00	4.590E+00	2.000E+00	5.387E+01	3.626E+01	5.660E+00	8.740E-01	1.848E+00	: concentration (mg/m**3)
2.265E+02	3.213E+02	2.741E+02	2.066E+03	1.246E+03	3.080E+02	2.001E+02	2.348E+02	: cross-wind integrated conc. (mg/m**2)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	109.00	-99.90	: sigma-y (m)
0	0	0	0	0	0	0	0	: no. of lines-of-sight

APPENDIX F-2

LISTINGS OF THE DUGWAY DATA ARCHIVES - SMOKE/OBSCURANT DATASETS

The Inventory Smoke Tests of HC Grenades (INVHC)

6 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

T1	T2	T3	T4	T25	T33	: trial ID
10	10	10	10	10	10	: month
20	20	20	20	20	20	: day
77	77	77	77	77	77	: year
13	13	13	13	13	13	: hour
30	30	30	30	30	30	: minute
1	1	1	1	1	1	: no. of sources
0.0	0.0	0.0	-85.2	-85.2	0.0	: x-coord. of source (m)
0.0	0.0	0.0	126.3	126.3	0.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
62.0	70.0	125.0	129.0	130.0	155.0	: emission duration (s)
1.071	4.765	9.940	23.681	3.527	10.904	: total mass emitted (kg)
0.170	0.170	0.170	0.170	0.350	0.170	: sigx0 at the source (m)
0.170	0.170	0.170	0.170	0.350	0.170	: sigy0 at the source (m)
0.170	0.170	0.170	0.170	0.350	0.170	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
5.28	7.60	4.03	3.93	3.14	2.64	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
5.28	7.60	4.03	3.93	3.14	2.64	: domain-averaged wind speed (m/s)
181.1	156.1	139.6	352.7	344.4	175.8	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
6.67	8.63	11.70	10.60	8.67	9.44	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
60.0	60.0	60.0	60.0	60.0	60.0	: averaging time for domain-avg data (s)
0.124	0.180	0.107	0.053	0.090	0.077	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	: Bowen ralo
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	: P-G stability class
60.0	60.0	60.0	60.0	60.0	60.0	: averaging time for concentration (s)
1.50	1.50	1.50	1.50	1.50	1.50	: suggested receptor height (m)
0	0	0	0	0	0	: no. of distances downwind
3	3	3	3	3	3	: no. of lines-of-sight
240.2	240.2	240.2	240.2	240.2	240.2	: x-coord. of 1st end-point for LOSi (m)
180.4	180.4	180.4	180.4	180.4	180.4	: y-coord. of 1st end-point for LOSi (m)
-257.2	-257.2	-257.2	-257.2	-257.2	-257.2	: x-coord. of 2nd end-point for LOSi (m)
-155.1	-155.1	-155.1	-155.1	-155.1	-155.1	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
7.920E+04	1.936E+05	9.441E+05	5.506E+05	1.633E+05	1.257E+06	: LOS integrated dosage (mg-s/m**2)
206.1	206.1	206.1	206.1	206.1	206.1	: x-coord. of 1st end-point for LOSi (m)
230.9	230.9	230.9	230.9	230.9	230.9	: y-coord. of 1st end-point for LOSi (m)
-291.3	-291.3	-291.3	-291.3	-291.3	-291.3	: x-coord. of 2nd end-point for LOSi (m)
-104.6	-104.6	-104.6	-104.6	-104.6	-104.6	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
2.410E+04	1.420E+05	3.619E+05	8.240E+05	1.634E+05	3.496E+05	: LOS integrated dosage (mg-s/m**2)
172.0	172.0	172.0	172.0	172.0	172.0	: x-coord. of 1st end-point for LOSi (m)
281.5	281.5	281.5	281.5	281.5	281.5	: y-coord. of 1st end-point for LOSi (m)
-325.4	-325.4	-325.4	-325.4	-325.4	-325.4	: x-coord. of 2nd end-point for LOSi (m)
-54.0	-54.0	-54.0	-54.0	-54.0	-54.0	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	1.374E+05	1.705E+05	2.772E+06	4.984E+05	1.003E+05	: LOS integrated dosage (mg-s/m**2)

The Development Test I of M116 (HC), XM803 (RP) and XM825 (WP) Grenades (M116 HC only, DT1HC)

15 : number of trials included in DOA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

G1C7	G3C1	G4C1	G5C1	G6C4	G7C4	G8C3	G9C2	G11C1	G12C2	G13C1	G14C1	G15C1	G16C4	G18C4 : trial ID
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8 : month
8	9	9	10	21	23	16	21	1	1	1	2	2	15	23 : day
78	78	78	78	78	78	78	78	78	78	78	78	78	78	78 : year
10	10	13	11	12	11	9	11	16	13	10	16	13	17	13 : hour
10	45	10	14	24	2	1	5	45	35	4	50	8	29	14 : minute
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 : no. of sources
15.7	-59.7	-53.2	67.0	257.1	-86.7	200.7	101.7	-23.2	-42.3	-32.7	-45.7	-16.0	211.7	-166.9 : x-coord. of source (m)
17.7	43.5	47.2	-177.4	-85.4	48.2	-152.6	-71.2	-4.8	80.2	41.7	34.2	42.1	-111.6	54.1 : y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 : source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : emission rate (g/s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : emission duration (s)
4.525	4.443	4.443	4.216	4.671	5.352	6.130	4.752	4.443	4.007	4.007	4.054	3.925	4.362	5.011 : total mass emitted (kg)
42.715	41.420	29.893	37.884	14.780	11.973	12.123	14.360	42.853	20.202	38.189	43.444	42.066	6.940	12.551 : sigx0 at the source (m)
7.935	13.882	31.527	21.489	0.775	0.699	0.489	3.500	7.153	33.040	20.714	0.361	10.060	13.060	7.043 : sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120 : sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00 : temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00 : measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90 : temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90 : measuring height for temperature #2 (m)
3.49	2.96	2.75	2.99	6.53	2.43	2.82	5.01	3.72	3.46	2.71	4.56	3.00	3.57	2.31 : wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00 : measuring height for wind data (m)
3.49	2.96	2.75	2.99	6.53	2.43	2.82	5.01	3.72	3.46	2.71	4.56	3.00	3.57	2.31 : domain-averaged wind speed (m/s)
335.0	320.0	299.0	136.0	192.0	339.0	160.0	181.0	355.0	296.0	14.0	346.0	260.0	133.0	343.0 : domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90 : domain-averaged sigma-u (m/s)
9.80	16.70	16.10	13.30	7.70	13.70	7.10	7.50	17.10	14.00	8.80	18.30	21.60	5.30	20.70 : domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90 : domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00 : measuring ht for domain-avg wind speed (m)
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0 : averaging time for domain-avg data (s)
0.100	0.090	0.100	0.130	0.130	0.080	0.110	0.130	0.140	0.110	0.120	0.130	0.080	0.160	0.090 : wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300 : surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900 : friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000 : inverse Monin-Obukhov length (1/m)
0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.10	0.10	0.10	0.10 : albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50 : moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50 : Bowen ratio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99 : P-G stability class
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0 : averaging time for concentration (s)
1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50 : suggested receptor height (m)
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 : no. of distances downwind
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 : no. of lines-of-sight
-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0 : x-coord. of 1st end-point for LOS1 (m)
-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0 : y-coord. of 1st end-point for LOS1 (m)
1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2 : x-coord. of 2nd end-point for LOS1 (m)
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0 : y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : LOS integrated conc. (mg/m**2)
1.425E+05	2.131E+05	1.565E+05	4.625E+05	5.233E+05	1.711E+05	1.962E+05	2.332E+05	9.340E+04	1.470E+05	3.340E+05	1.862E+05	2.075E+05	7.260E+04	3.750E+04 : LOS integrated dosage (mg-s/m**2)

The Development Test I of M116 (HC), XM803 (RP) and XM825 (WP) Grenades (XM803 RP only, DT1RP)

17 : number of trials included in DOA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

G1B1	G2B1	G3B1	G4B1	G5B1	G6B7	G7B1	G8B1	G9B1	G11B1	G12B2	G13B2	G14B1	G15B1	G16B1	G17B3	G18B1	: trial ID
8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	: month
8	8	9	9	18	21	23	16	21	1	1	1	2	2	15	15	23	: day
78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	78	: year
10	11	11	12	11	12	10	9	11	15	13	10	15	13	10	13	13	: hour
44	29	2	40	30	0	41	49	16	54	43	28	30	50	24	30	43	: minute
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
-51.5	-20.3	20.8	-22.5	76.7	48.5	-230.4	70.2	76.5	-0.3	-32.7	-46.7	-50.8	-42.3	103.4	41.0	-225	x-coord. of source (m)
74.2	78.9	-66.0	55.7	-102.9	-24.0	144.1	-15.5	-42.5	60.5	41.7	31.0	117.9	88.2	80.5	-11.0	181..	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission duration (s)
16.032	16.697	16.383	16.562	16.293	17.235	18.717	18.178	17.235	16.032	16.293	16.150	16.150	16.150	16.032	17.774	17.774	: total mass emitted (kg)
53.333	51.024	62.033	35.616	65.333	37.403	31.306	20.124	33.503	66.461	50.178	51.595	65.538	50.170	37.710	33.150	14.592	: sigx0 at the source (m)
0.104	14.022	31.380	39.609	19.732	5.970	10.356	0.125	5.409	29.093	17.473	12.675	19.212	17.473	4.760	7.150	24.042	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
4.37	4.60	2.62	3.00	2.43	5.46	2.50	2.46	6.41	1.02	4.15	3.49	1.22	2.22	5.01	4.35	1.90	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
4.37	4.60	2.62	3.00	2.43	5.46	2.50	2.46	6.41	1.02	4.15	3.49	1.22	2.22	5.01	4.35	1.90	: domain-averaged wind speed (m/s)
353.0	337.0	317.0	305.0	195.0	192.0	319.0	180.0	191.0	220.0	334.0	7.0	332.0	334.0	170.0	165.0	301.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
12.60	18.40	15.60	21.80	18.40	13.60	15.50	12.50	8.70	21.20	13.80	7.10	26.70	30.00	7.80	8.70	31.00	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	: averaging time for domain-avg data (s)
0.110	0.120	0.080	0.110	0.080	0.130	0.090	0.110	0.120	0.110	0.120	0.100	0.070	0.090	0.120	0.090	0.070	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.15	0.15	0.15	0.15	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: Bowen ratio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	: averaging time for concentration (s)
1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	: suggested receptor height (m)
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	: no. of distances downwind
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	: no. of lines-of-sight
-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	: x-coord. of 1st end-point for LOS1 (m)
-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	: y-coord. of 1st end-point for LOS1 (m)
1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	: x-coord. of 2nd end-point for LOS1 (m)
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
4.239E+05	2.214E+05	3.646E+05	1.314E+05	3.305E+05	1.732E+05	8.180E+04	5.411E+05	1.022E+05	3.596E+05	2.744E+05	2.610E+05	3.373E+05	1.107E+05	3.697E+05	4.542E+05	6.050E+04	: LOS integrated dosage (mg-s/m**2)

The Development Test I of M116 (MC), XM803 (BF) and XM825 (MP) Grenades (XM825 MP only, DT1MP)

14 : number of trials included in DOA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

G1A2	G2A1	G3A1	G4A1	G5A1	G6A1	G7A1	G9A1	G11A1	G12A2	G13A3	A14A1	G15A1	G18A2 : trial ID
8	8	8	8	8	8	8	8	8	8	8	8	8	8 : month
8	8	9	8	10	21	23	31	1	1	1	2	2	23 : day
78	78	78	78	78	78	78	78	78	78	78	78	78	78 : year
10	12	11	12	10	12	10	10	16	15	17	17	13	14 : hour
20	20	27	15	44	37	24	31	18	17	41	3	22	40 : minute
1	1	1	1	1	1	1	1	1	1	1	1	1	1 : no. of sources
-70.2	-80.7	-65.2	-53.5	67.5	33.2	-276.2	130.5	-57.3	-80.0	-69.2	-61.0	-52.5	-134.2 : x-coord. of source (m)
106.3	112.2	132.6	107.7	-116.0	-4.5	110.3	-175.6	114.2	165.5	85.5	110.4	90.5	52.4 : y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 : source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : emission rate (g/s)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : emission duration (s)
26.167	25.740	25.539	25.120	25.839	26.585	29.097	27.213	28.000	26.376	25.329	25.120	24.911	27.423 : total mass emitted (kg)
62.350	61.411	51.236	59.997	62.107	37.626	27.335	37.716	61.411	61.135	60.279	59.997	60.868	30.646 : sigx0 at the source (m)
8.143	13.547	36.465	18.040	9.360	3.026	25.504	1.113	13.547	14.745	17.924	18.040	15.809	32.013 : sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120 : sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00 : temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00 : measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90 : temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90 : measuring height for temperature #2 (m)
3.21	3.30	3.66	3.40	3.71	6.32	3.01	6.10	3.16	2.57	3.79	4.37	2.53	2.44 : wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00 : measuring height for wind data (m)
3.21	3.30	3.66	3.40	2.71	6.32	3.01	6.10	3.16	2.57	3.79	4.37	2.53	2.44 : domain-averaged wind speed (m/s)
342.0	337.0	314.0	332.0	170.0	188.0	321.0	102.0	337.0	3.0	6.0	232.0	4.0	328.0 : domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90 : domain-averaged sigma-u (m/s)
15.30	19.10	20.00	17.20	10.90	15.00	12.00	9.50	11.20	25.00	10.00	17.90	22.40	31.30 : domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90 : domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00 : measuring ht for domain-avg wind speed (m)
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0 : averaging time for domain-avg data (s)
0.100	0.100	0.100	0.100	0.080	0.120	0.010	0.130	0.100	0.100	0.120	0.110	0.120	0.030 : wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300 : surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900 : friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000 : inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18 : albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50 : moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50 : Bowen ratio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99 : P-G stability class
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0 : averaging time for concentration (s)
1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50 : suggested receptor height (m)
0	0	0	0	0	0	0	0	0	0	0	0	0	0 : no. of distances downwind
1	1	1	1	1	1	1	1	1	1	1	1	1	1 : no. of lines-of-sight
-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0	-259.0 : x-coord. of 1st end-point for LOS1 (m)
-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0	-150.0 : y-coord. of 1st end-point for LOS1 (m)
1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2	1039.2 : x-coord. of 2nd end-point for LOS1 (m)
600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0	600.0 : y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : LOS integrated conc. (mg/m**2)
4.420E+05	4.531E+05	3.054E+05	3.232E+05	7.370E+05	2.734E+05	5.650E+04	1.170E+05	5.692E+05	3.660E+04	4.102E+05	2.992E+05	1.308E+05	2.098E+05 : LOS integrated dosage (mg-s/m**2)

The Development Test II of 155MM SMOKE GRENADES (XM825, 1 projectile, DT2WI)
17 : number of trials included in DOA
6 : time zone designation
40.20 : latitude (deg)
113.80 : longitude (deg)

MP1	MP3	MP6	MP7	MP9	MP10	MP21	MP23	MP24	MP25	MP28	MP30	MP32	MP33	MP35	MP36	MP37	: trial ID
7	7	7	8	8	8	8	8	8	8	8	8	8	8	8	8	8	: month
25	29	30	3	3	3	3	12	12	12	17	18	18	19	19	19	19	: day
81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	: year
15	19	20	16	18	20	21	15	16	17	19	17	21	17	18	19	20	: hour
38	6	5	53	52	27	57	16	24	31	57	8	16	18	45	36	41	: minute
17	22	19	16	18	21	27	21	20	18	26	17	19	21	16	21	20	: no. of sources
-137.0	-125.1	-17.2	93.1	-29.2	23.2	-17.5	169.0	23.2	49.5	11.8	23.2	-5.8	8.7	-3.0	-81.7	-96.2	: x-coord. of source (m)
-93.1	256.5	247.7	-137.0	-102.0	-72.9	-61.2	-26.4	-72.9	-58.3	195.2	-72.9	-20.4	-46.6	-87.4	-131.0	-104.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.260	0.122	0.130	0.302	0.130	0.618	0.122	0.327	0.459	0.146	0.136	0.408	0.133	0.147	0.143	0.580	0.281	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-110.8	49.5	-81.4	119.4	-3.0	49.5	8.7	78.6	49.5	75.7	-78.6	49.5	-17.5	-29.2	23.2	-55.5	-43.8	: x-coord. of source (m)
-78.6	-58.3	177.8	-122.5	-87.4	-58.3	-46.6	-110.8	-58.3	-43.8	110.8	-58.3	-61.2	-102.0	-72.9	-116.5	-75.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.520	0.367	0.130	0.255	0.260	0.124	0.489	0.163	0.153	1.022	0.272	1.088	0.133	0.293	0.287	0.290	0.140	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-122.5	11.5	-2.7	107.7	11.5	-14.7	34.9	104.8	102.0	11.5	-52.3	11.5	8.7	-3.0	11.5	-29.2	-17.5	: x-coord. of source (m)
-119.4	-113.7	221.5	-163.3	-113.7	-128.2	-32.1	-96.3	-29.2	-113.7	125.3	-113.7	-46.6	-87.4	-113.7	-102.0	-61.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.130	0.122	1.949	0.509	0.910	0.124	0.122	0.163	0.153	0.430	0.136	0.136	0.532	0.293	0.860	0.145	0.281	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-96.3	64.0	23.5	133.9	37.8	11.5	23.2	131.0	37.8	37.8	0.1	37.8	-55.5	23.2	37.8	-3.0	-81.7	: x-coord. of source (m)
-104.8	-84.6	236.0	-148.7	-99.1	-113.7	-72.9	-81.7	-99.1	-99.1	154.4	-99.1	-116.5	-72.9	-99.1	-87.4	-131.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
1.040	0.611	0.520	1.146	0.780	0.865	0.367	0.490	0.153	0.292	0.408	1.224	0.399	0.293	1.720	0.145	0.140	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-70.0	90.3	-40.6	186.4	26.1	37.8	49.5	157.3	64.0	64.0	26.4	64.0	-29.2	49.5	-0.1	23.2	-55.5	: x-coord. of source (m)
-90.3	-70.0	166.1	-119.6	-139.9	-99.1	-58.3	-67.2	-84.6	-84.6	169.0	-84.6	-102.0	-58.3	-154.4	-72.9	-116.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.390	0.656	0.650	0.127	0.130	1.360	0.245	0.490	1.683	0.292	0.333	1.224	1.197	0.733	1.147	1.015	0.842	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-43.8	-0.1	-14.4	96.0	52.3	64.8	75.7	183.5	90.3	90.3	-90.3	90.3	-3.0	-14.7	26.1	-67.2	-29.2	: x-coord. of source (m)
-75.7	-154.4	180.7	-204.1	-125.3	-84.6	-43.8	-52.6	-70.0	-70.0	70.0	-70.0	-87.4	-128.2	-139.9	-157.3	-102.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.520	0.122	0.130	0.255	1.170	0.742	0.611	1.307	0.459	1.168	0.136	0.544	0.532	1.027	1.517	0.145	0.702	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-81.7	-26.1	11.8	122.2	78.6	-0.1	102.0	119.4	116.5	116.5	-11.5	116.5	23.2	11.5	52.3	-40.9	-3.0	: x-coord. of source (m)
-131.0	-139.9	195.2	-189.5	-110.8	-154.4	-29.2	-122.5	-55.5	-55.5	113.7	-55.5	-72.9	-113.7	-125.3	-142.7	-87.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.130	0.122	0.520	0.891	1.300	0.494	0.122	2.777	1.224	0.730	0.408	0.136	0.665	0.440	1.577	0.580	0.982	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-55.5	52.3	-26.1	140.4	104.8	26.1	11.5	145.6	52.3	26.1	14.7	26.1	-14.7	37.8	78.6	-14.7	23.2	: x-coord. of source (m)
-116.5	-125.3	139.9	-175.0	-96.3	-139.9	-113.7	-108.0	-125.3	-139.9	128.2	-139.9	-128.2	-99.1	-110.8	-128.2	-72.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.910	0.978	0.520	1.400	0.520	0.124	0.245	0.817	0.153	0.146	2.176	0.408	0.532	0.880	0.430	0.580	0.281	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-29.2	78.6	0.1	134.7	14.4	52.3	37.8	131.6	78.6	52.3	40.9	52.3	11.5	64.0	14.4	11.5	-40.9	: x-coord. of source (m)

-102.0	-110.0	154.4	-160.4	-100.7	-125.3	-99.1	-93.4	-110.0	-125.3	142.7	-125.4	-113.7	-84.6	-100.7	-113.7	-142.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
1.945	1.223	1.949	0.509	0.130	1.854	1.467	0.017	1.071	0.076	0.016	1.632	0.931	1.027	0.143	0.070	0.561	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-3.0	104.0	26.4	200.9	40.6	70.6	64.0	190.1	104.0	70.6	-75.7	70.6	37.0	90.3	40.6	37.0	-14.7	: x-coord. of source (m)
-87.4	-96.3	169.0	-145.9	-166.1	-110.0	-84.6	-70.9	-96.3	-110.0	43.0	-110.0	-99.1	-70.0	-166.1	-99.1	-120.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.650	1.101	1.170	2.037	1.040	1.360	1.467	0.490	1.989	0.076	0.136	0.408	0.798	0.587	2.500	1.015	1.865	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-67.2	40.6	52.6	110.5	66.9	104.0	90.3	107.7	131.0	104.0	-23.2	104.0	64.0	52.3	66.9	-26.4	11.5	: x-coord. of source (m)
-153.3	-166.1	103.5	-230.3	-151.6	-96.3	-70.0	-163.3	-81.7	-96.3	72.9	-96.3	-84.6	-125.3	-151.6	-169.0	-113.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.260	0.734	1.949	0.302	1.020	0.610	1.223	0.163	1.530	1.606	0.272	1.040	0.266	0.587	1.720	0.290	1.604	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-40.9	66.9	70.9	136.7	93.1	-11.0	116.5	133.9	157.2	131.0	3.0	131.0	-0.1	70.6	93.1	-0.1	37.0	: x-coord. of source (m)
-142.7	-151.6	190.1	-215.0	-137.0	-195.2	-55.5	-140.7	-67.2	-81.7	87.4	-81.7	-154.4	-110.0	-137.0	-154.4	-99.1	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
1.040	1.312	0.130	1.400	1.040	0.124	0.122	0.490	0.765	2.044	0.952	0.272	0.266	1.613	1.577	1.305	0.702	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-14.7	93.1	-11.5	163.0	119.4	14.4	-26.4	160.1	66.9	66.9	29.2	40.6	26.1	104.0	20.9	26.1	-26.4	: x-coord. of source (m)
-128.2	-137.0	113.7	-201.2	-122.5	-180.7	-169.0	-134.2	-151.6	-151.6	102.0	-166.1	-139.9	-86.3	-206.9	-139.9	-169.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
2.339	0.611	0.260	0.636	0.130	0.494	0.611	1.144	0.765	0.876	0.272	0.408	0.798	0.733	0.143	1.085	0.140	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
11.5	119.4	14.7	169.2	20.9	40.6	-0.1	186.4	93.1	119.4	55.5	66.9	52.3	40.6	55.2	52.3	-0.1	: x-coord. of source (m)
-113.7	-122.5	128.2	-186.7	-206.9	-166.1	-154.4	-119.6	-137.0	-122.5	116.5	-151.6	-125.3	-166.1	-192.4	-125.3	-154.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
1.040	1.467	0.260	0.891	0.390	1.226	0.489	1.634	1.036	1.460	0.952	0.816	1.064	0.440	0.717	1.595	1.965	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-26.4	145.6	40.9	215.5	55.2	66.9	26.1	212.6	119.4	145.6	81.7	93.1	70.6	66.9	81.4	14.4	26.1	: x-coord. of source (m)
-169.0	-108.0	142.7	-172.1	-192.4	-151.6	-139.9	-105.1	-122.5	-108.0	131.0	-137.0	-110.0	-151.6	-177.8	-180.7	-139.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.910	0.611	0.780	1.782	0.780	1.113	0.978	2.451	1.989	1.090	0.952	2.040	0.399	0.880	1.147	0.435	1.024	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-0.1	81.4	67.2	230.0	81.4	93.1	52.3	230.9	145.6	171.0	-61.2	119.4	14.4	93.1	107.7	40.6	52.3	: x-coord. of source (m)
-154.4	-177.0	157.3	-198.4	-177.0	-137.0	-125.3	-90.6	-100.0	-93.4	17.5	-122.5	-180.7	-137.0	-163.2	-166.1	-125.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
1.040	0.856	1.040	1.655	1.170	0.742	0.611	0.163	1.989	0.430	0.176	1.224	0.133	2.640	0.573	1.305	0.561	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
26.1	107.7	93.4	-99.9	107.7	119.4	70.6	140.4	107.7	107.7	-24.9	107.7	40.6	119.4	-99.9	66.9	-11.0	: x-coord. of source (m)
-139.9	-163.3	171.0	-99.9	-163.3	-122.5	-110.0	-175.0	-163.3	-163.2	32.1	-163.3	-166.1	-122.5	-99.9	-151.6	-195.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
1.130	1.101	0.260	-99.900	1.300	0.247	0.856	0.980	0.153	0.146	0.272	2.312	1.862	1.760	-99.900	2.320	1.544	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	133.9	29.2	-99.9	122.2	20.9	104.0	174.7	133.9	133.9	0.7	-99.9	66.9	81.4	-99.9	20.9	14.4	: x-coord. of source (m)
-99.9	-140.7	102.0	-99.9	-189.5	-206.9	-96.3	-160.4	-140.7	-140.7	46.6	99.9	-151.6	-177.0	-99.9	-206.9	-100.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)

99.900	0.245	0.650	-99.900	0.650	0.243	0.245	0.980	0.306	1.022	0.544	-99.900	1.330	0.440	-99.900	0.145	1.483 ; total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120 ; sigz0 at the source (m)
-99.9	160.1	55.5	-99.9	-99.9	55.2	14.4	200.9	160.1	160.1	17.3	-99.9	93.1	107.7	-99.9	55.2	40.6 ; x-coord. of source (m)
-99.9	-134.2	116.5	-99.9	-99.9	-192.4	-180.7	-145.9	-134.2	-134.2	61.2	-99.9	117.0	-161.3	-99.9	-192.4	-166.1 ; y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 ; source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0 ; emission duration (s)
-99.900	0.245	1.040	-99.900	-99.900	0.494	0.734	0.163	0.612	1.898	0.852	-99.900	3.324	1.133	-99.900	1.015	0.281 ; total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120 ; sigz0 at the source (m)
-99.9	96.4	-99.9	-99.9	-99.9	81.4	40.6	227.2	166.4	-99.9	43.8	-99.9	-99.9	133.9	-99.9	81.4	66.9 ; x-coord. of source (m)
-99.9	-204.1	-99.9	-99.9	-99.9	-177.8	-166.1	-131.3	-119.6	-99.9	75.7	-99.9	-99.9	-148.7	-99.9	-177.8	-151.6 ; y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 ; source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0 ; emission duration (s)
-99.900	0.245	-99.900	-99.900	-99.900	0.618	0.856	0.980	0.153	-99.900	0.852	-99.900	-99.900	0.440	-99.900	0.145	0.702 ; total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120 ; sigz0 at the source (m)
-99.9	122.3	-99.9	-99.9	-99.9	107.7	66.9	189.2	-99.9	-99.9	70.0	-99.9	-99.9	160.1	-99.9	43.5	-99.9 ; x-coord. of source (m)
-99.9	-189.5	-99.9	-99.9	-99.9	-163.3	-151.6	-106.7	-99.9	-99.9	90.3	-99.9	-99.9	-134.2	-99.9	-233.2	-99.9 ; y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 ; source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0 ; emission duration (s)
-99.900	0.611	-99.900	-99.900	-99.900	0.742	0.978	0.163	-99.900	-99.900	0.852	-99.900	-99.900	0.440	-99.900	0.290	-99.900 ; total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120 ; sigz0 at the source (m)
-99.9	140.4	-99.9	-99.9	-99.9	-99.9	93.1	-99.9	-99.9	-99.9	96.3	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; x-coord. of source (m)
-99.9	-175.0	-99.9	-99.9	-99.9	-99.9	-137.0	-99.9	-99.9	-99.9	104.0	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 ; source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0 ; emission duration (s)
-99.900	0.489	-99.900	-99.900	-99.900	-99.900	1.365	-99.900	-99.900	-99.900	0.408	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900 ; total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120 ; sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	28.9	-99.9	-99.9	-99.9	5.8	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-206.9	-99.9	-99.9	-99.9	20.4	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 ; source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0 ; emission duration (s)
-99.900	99.900	-99.900	-99.900	-99.900	-99.900	0.123	-99.900	-99.900	-99.900	0.136	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900 ; total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120 ; sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	55.2	-99.9	-99.9	-99.9	22.1	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-192.4	-99.9	-99.9	-99.9	34.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 ; source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0 ; emission duration (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	0.122	-99.900	-99.900	-99.900	0.680	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900 ; total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120 ; sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	81.4	-99.9	-99.9	-99.9	58.3	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; x-coord. of source (m)
99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-177.8	-99.9	-99.9	-99.9	49.5	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 ; source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0 ; emission duration (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	0.122	-99.900	-99.900	-99.900	1.088	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900 ; total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120 ; sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	107.7	-99.9	-99.9	-99.9	99.1	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-163.3	-99.9	-99.9	-99.9	37.8	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 ; source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0 ; emission duration (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	0.489	-99.900	-99.900	-99.900	0.136	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900 ; total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120 ; sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	133.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-148.7	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 ; y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00 ; source elevation (m)
99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	99.9	-99.9	-99.9	-99.9	-99.9 ; emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0 ; emission duration (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	0.122	-99.900	-99.900	-99.900	-99.900	-99.900	99.900	-99.900	-99.900	-99.900	-99.900 ; total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980 ; sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120 ; sigz0 at the source (m)

-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
6.40	5.60	3.40	3.10	3.80	5.10	6.20	4.00	4.80	3.00	3.20	2.70	5.60	3.80	4.60	2.70	3.80	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
6.40	5.60	3.40	3.10	3.80	5.10	6.20	4.00	4.80	3.00	3.20	2.70	5.60	3.80	4.60	2.70	3.80	: domain-averaged wind speed (m/s)
151.0	221.0	322.0	166.0	194.0	196.0	206.0	141.0	153.0	180.0	307.0	186.0	192.0	158.0	101.0	156.0	154.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
7.20	11.60	15.90	16.90	13.70	11.20	11.40	9.40	8.60	14.30	15.70	16.80	14.90	16.70	14.20	21.70	17.40	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
570.0	580.0	610.0	520.0	580.0	515.0	520.0	660.0	540.0	540.0	580.0	535.0	530.0	525.0	650.0	480.0	525.0	: averaging time for domain-avg data (s)
0.093	0.103	0.044	0.062	0.077	0.066	0.105	0.083	0.087	0.098	0.073	0.087	0.080	0.076	0.072	0.097	0.068	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: Bowen rate
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: averaging time for concentration (s)
1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	-1.50	1.50	: suggested receptor height (m)
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	: no. of distances downwind
6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	: no. of lines-of-sight
-160.5	-160.5	-160.5	-160.5	-160.5	-160.5	-160.5	-160.5	-160.5	-160.5	-160.5	-160.5	-160.5	-160.5	-160.5	-160.5	-160.5	: x-coord. of 1st end-point for LOS1 (m)
-226.2	-226.2	-226.2	-226.2	-226.2	-226.2	-226.2	-226.2	-226.2	-226.2	-226.2	-226.2	-226.2	-226.2	-226.2	-226.2	-226.2	: y-coord. of 1st end-point for LOS1 (m)
626.7	626.7	626.7	626.7	626.7	626.7	626.7	626.7	626.7	626.7	626.7	626.7	626.7	626.7	626.7	626.7	626.7	: x-coord. of 2nd end-point for LOS1 (m)
210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	6.600E+04	3.240E+05	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	1.170E+05	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	: x-coord. of 1st end-point for LOS1 (m)
-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	: y-coord. of 1st end-point for LOS1 (m)
587.9	587.9	587.9	587.9	587.9	587.9	587.9	587.9	587.9	587.9	587.9	587.9	587.9	587.9	587.9	587.9	587.9	: x-coord. of 2nd end point for LOS1 (m)
280.1	280.1	280.1	280.1	280.1	280.1	280.1	280.1	280.1	280.1	280.1	280.1	280.1	280.1	280.1	280.1	280.1	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	2.030E+05	9.300E+04	1.100E+05	2.260E+05	2.900E+05	-9.990E+01	5.020E+05	4.800E+05	3.500E+05	2.750E+05	-9.990E+01	-9.990E+01	-9.990E+01	3.700E+05	2.450E+05	4.650E+05	: LOS integrated dosage (mg-s/m**2)
-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	: x-coord. of 1st end-point for LOS1 (m)
-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	: y-coord. of 1st end-point for LOS1 (m)
549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1	: x-coord. of 2nd end point for LOS1 (m)
350.1	350.1	350.1	350.1	350.1	350.1	350.1	350.1	350.1	350.1	350.1	350.1	350.1	350.1	350.1	350.1	350.1	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
2.270E+05	6.500E+04	2.920E+05	7.200E+04	1.010E+05	1.200E+05	2.610E+05	3.600E+05	3.030E+05	-9.990E+01	-9.990E+01	1.520E+05	2.750E+05	1.030E+05	1.710E+05	5.700E+04	1.530E+05	: LOS integrated dosage (mg-s/m**2)
-276.0	-276.0	-276.0	-276.0	-276.0	-276.0	-276.0	-276.0	-276.0	-276.0	-276.0	-276.0	-276.0	-276.0	-276.0	-276.0	-276.0	: x-coord. of 1st end-point for LOS1 (m)
-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	: y-coord. of 1st end-point for LOS1 (m)
510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	: x-coord. of 2nd end-point for LOS1 (m)
420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	2.290E+05	1.800E+05	-9.990E+01	-9.990E+01	6.300E+04	1.600E+05	9.900E+04	1.100E+05	2.600E+04	7.900E+04	: LOS integrated dosage (mg-s/m**2)
-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	: x-coord. of 1st end-point for LOS1 (m)
281.0	281.0	281.0	281.0	281.0	281.0	281.0	281.0	281.0	281.0	281.0	281.0	281.0	281.0	281.0	281.0	281.0	: y-coord. of 1st end-point for LOS1 (m)
325.9	325.9	325.9	325.9	325.9	325.9	325.9	325.9	325.9	325.9	325.9	325.9	325.9	325.9	325.9	325.9	325.9	: x-coord. of 2nd end-point for LOS1 (m)
-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	5.350E+05	-9.990E+01	4.490E+05	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	: x-coord. of 1st end-point for LOS1 (m)
320.6	320.6	320.6	320.6	320.6	320.6	320.6	320.6	320.6	320.6	320.6	320.6	320.6	320.6	320.6	320.6	320.6	: y-coord. of 1st end-point for LOS1 (m)
395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0	395.0	: x-coord. of 2nd end-point for LOS1 (m)
-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	3.070E+05	-9.990E+01	-9.990E+01	1.960E+05	1.700E+05	2.920E+05	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	1.820E+05	-9.990E+01*	-9.990E+01	1.200E+05	6.300E+04	-9.990E+01	: LOS integrated dosage (mg-s/m**2)

The Development Test II of 155MM SMOKE GRENADES (XM825, 2 projectiles, DT2W2)

9 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

WP11	WP12	WP13	WP14	WP15	WP16	WP17	WP18	WP19	: trial ID
8	8	8	8	8	8	8	8	8	: month
18	19	20	20	24	24	24	24	25	: day
81	81	81	81	81	81	81	81	81	: year
15	15	16	17	16	17	18	19	17	: hour
21	39	31	36	8	19	24	22	17	: minute
26	27	24	24	26	31	28	32	31	: no. of sources
49.5	23.2	-43.8	-29.2	-70.0	-43.8	-58.3	-58.3	-72.9	: x-coord. of source (m)
-58.3	-72.9	-75.7	-102.0	-90.3	-75.7	-49.5	-49.5	-23.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.145	0.158	0.467	0.306	0.151	0.145	0.281	0.135	0.135	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
75.7	11.5	-55.5	-3.0	8.7	-17.5	-32.1	-32.1	-46.6	: x-coord. of source (m)
-43.8	-113.7	-116.5	-87.4	-46.6	-61.2	-34.9	-34.9	-8.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.145	0.317	0.156	0.765	0.301	0.145	0.421	0.406	0.406	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
64.0	37.8	-29.2	-67.2	-55.5	8.7	-43.8	-43.8	-32.1	: x-coord. of source (m)
-84.6	-99.1	-102.0	-157.3	-116.5	-46.6	-75.7	-75.7	-34.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.870	0.475	1.401	0.153	0.151	0.290	0.140	0.135	0.406	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
90.3	64.0	-3.0	-40.9	-29.2	-55.5	-17.5	-17.5	-5.8	: x-coord. of source (m)
-70.0	-84.6	-87.4	-142.7	-102.0	-116.5	-61.2	-61.2	-20.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.870	2.375	2.491	1.224	0.452	0.145	0.421	1.353	0.135	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
26.1	90.3	23.2	-14.7	23.2	-29.2	8.7	-55.5	-96.3	: x-coord. of source (m)
-139.9	-70.0	-72.9	-128.2	-72.9	-102.0	-46.6	-116.5	-104.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.145	0.633	0.778	1.683	0.904	0.145	0.561	0.271	0.135	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
78.6	116.5	49.5	11.5	49.5	-3.0	-29.2	-29.2	-43.8	: x-coord. of source (m)
-110.8	-55.5	-58.3	-113.7	-58.3	-87.4	-102.0	-102.0	-75.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
1.015	0.158	0.156	2.601	0.603	0.435	0.281	1.488	0.135	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
104.8	26.1	-40.9	37.8	-40.9	23.2	-3.0	-3.0	-17.5	: x-coord. of source (m)
-96.3	-139.9	-142.7	-99.1	-142.7	-72.9	-87.4	-87.4	-61.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.725	0.158	1.246	2.142	0.151	1.885	1.965	1.894	0.406	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
131.0	52.3	-14.7	64.0	-14.7	-40.9	23.2	23.2	8.7	: x-coord. of source (m)
-81.7	-125.3	-128.2	-84.6	-128.2	-142.7	-72.9	-72.9	-46.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.870	0.950	1.401	1.224	1.959	0.145	1.403	1.082	1.218	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
66.9	78.6	11.5	-52.6	11.5	-14.7	49.5	49.5	34.9	: x-coord. of source (m)

-151.6	-110.8	-113.7	-183.5	-113.7	-128.2	-58.3	-58.3	-32.1	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.580	1.267	1.090	0.306	2.110	1.450	1.263	0.135	0.271	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
93.1	104.8	37.8	-26.4	37.8	11.5	-14.7	-67.2	-81.7	: x-coord. of source (m)
-137.0	-96.3	-99.1	-169.0	-99.1	-113.7	-128.2	-157.3	-131.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.145	1.584	3.737	1.377	1.507	1.595	1.263	0.271	0.271	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
119.4	131.0	64.0	-0.1	64.0	37.8	11.5	-40.9	-55.5	: x-coord. of source (m)
-122.5	-81.7	-84.6	-154.4	-84.6	-99.1	-113.7	-142.7	-116.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
2.610	1.267	2.180	1.989	3.164	1.885	1.684	0.947	0.406	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
145.6	40.6	-26.4	26.1	90.3	64.0	37.8	-14.7	-29.2	: x-coord. of source (m)
-108.0	-166.1	-169.0	-139.9	-70.0	-84.6	-99.1	-128.2	-102.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
1.450	0.317	0.934	4.438	0.151	1.450	2.947	1.082	1.353	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
171.8	66.9	-0.1	52.3	-0.1	90.3	64.0	11.5	-3.0	: x-coord. of source (m)
-93.4	-151.6	-154.4	-125.3	-154.4	-70.0	-84.6	-113.7	-87.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
2.175	1.742	1.090	3.060	0.452	0.145	0.842	1.624	1.353	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
107.7	93.1	26.1	78.6	26.1	116.5	90.3	37.8	23.2	: x-coord. of source (m)
-163.3	-137.0	-139.9	-110.8	-139.9	-55.5	-70.0	-99.1	-72.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.870	3.326	1.868	1.836	2.110	0.145	0.140	2.842	0.812	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
133.9	119.4	52.3	104.8	52.3	26.1	-0.1	64.0	49.5	: x-coord. of source (m)
-148.7	-122.5	-125.3	-96.3	-125.3	-139.9	-154.4	-84.6	-58.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
3.335	4.434	2.024	0.153	2.562	1.740	0.421	0.541	1.082	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
160.1	145.6	78.6	-11.8	78.6	52.3	26.1	90.3	-40.9	: x-coord. of source (m)
-134.2	-108.0	-110.8	-195.2	-110.8	-125.3	-139.9	-70.0	-142.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
2.175	2.851	2.180	0.459	2.110	1.885	1.544	0.135	0.135	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
186.4	55.2	-11.8	14.4	14.4	78.6	52.3	-0.1	-14.7	: x-coord. of source (m)
-119.6	-192.4	-195.2	-180.7	-180.7	-110.8	-125.3	-154.4	-128.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
2.465	0.158	0.156	0.765	0.151	1.740	2.806	0.812	2.571	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
212.6	81.4	14.4	40.6	40.6	104.8	78.6	26.1	11.5	: x-coord. of source (m)
-105.1	-177.8	-180.7	-166.1	-166.1	-96.3	-110.8	-139.9	-113.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)

0.580	0.475	0.623	1.989	1.808	0.290	1.824	0.812	2.436	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
122.2	107.7	40.6	66.9	66.9	131.0	104.8	52.3	37.8	: x-coord. of source (m)
-189.5	-163.3	-166.1	-151.6	-151.6	-81.7	-96.3	-125.3	-99.1	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.725	1.900	2.491	2.907	2.110	1.740	0.842	1.894	3.518	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
148.4	133.9	66.9	93.1	93.1	40.6	14.4	78.6	64.0	: x-coord. of source (m)
-175.0	-148.7	-151.6	-137.0	-137.0	-166.1	-180.7	-110.8	-84.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.725	3.167	2.647	1.989	2.712	1.305	0.281	1.218	2.436	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
174.7	160.1	93.1	119.4	119.4	66.9	40.6	104.8	-0.1	: x-coord. of source (m)
-160.4	-134.2	-137.0	-122.5	-122.5	-151.6	-166.1	-96.3	-154.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
2.030	3.167	1.401	0.153	0.151	1.160	3.789	1.488	0.271	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
200.9	96.0	28.9	55.2	28.9	93.1	66.9	14.4	26.1	: x-coord. of source (m)
-145.9	-204.1	-206.9	-192.4	-206.9	-137.0	-151.6	-180.7	-139.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.725	0.158	0.467	1.683	0.151	3.190	0.842	1.353	1.624	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
163.0	122.2	55.2	81.4	55.2	119.4	93.1	40.6	52.3	: x-coord. of source (m)
-201.2	-189.5	-192.4	-177.8	-192.4	-122.5	-137.0	-166.1	-125.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.725	0.158	0.934	2.754	2.260	0.870	3.087	1.488	2.706	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
189.2	148.4	107.7	96.0	81.4	145.6	119.4	66.9	78.6	: x-coord. of source (m)
-186.7	-175.0	-163.3	-204.1	-177.8	-108.0	-122.5	-151.6	-110.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
1.885	1.900	0.778	0.306	1.055	0.725	0.702	1.894	2.030	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
215.5	174.7	-99.9	-99.9	107.7	55.2	55.2	93.1	104.8	: x-coord. of source (m)
-172.1	-160.4	-99.9	-99.9	-163.3	-192.4	-192.4	-137.0	-96.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
1.885	0.475	-99.900	-99.900	1.657	0.870	0.702	1.624	0.677	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
241.7	200.9	-99.9	-99.9	133.9	81.4	81.4	119.4	14.4	: x-coord. of source (m)
-157.6	-145.9	-99.9	-95.9	-148.7	-177.8	-177.8	-122.5	-180.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
0.145	0.475	-99.900	-99.900	1.356	3.045	0.421	0.677	0.271	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	163.0	-99.9	-99.9	-99.9	107.7	107.7	28.9	40.6	: x-coord. of source (m)
-99.9	-201.2	-99.9	-99.9	-99.9	-163.3	-163.3	-206.9	-166.1	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
-99.900	0.158	-99.900	-99.900	-99.900	0.725	0.421	0.135	1.624	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)

-99.9	-99.9	-99.9	-99.9	-99.9	133.9	133.9	55.2	66.9	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-148.7	-148.7	-192.4	-151.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
-99.900	-99.900	-99.900	-99.900	-99.900	1.015	0.140	0.406	1.082	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	160.1	-99.9	81.4	93.1	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-134.2	-99.9	-177.8	-137.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
-99.900	-99.900	-99.900	-99.900	-99.900	0.145	-99.900	0.677	0.135	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	148.4	-99.9	107.7	119.4	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-175.0	-99.9	-163.3	-122.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
-99.900	-99.900	-99.900	-99.900	-99.900	1.015	-99.900	0.406	0.135	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	174.7	-99.9	122.2	133.9	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-160.4	-99.9	-189.5	-148.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
-99.900	-99.900	-99.900	-99.900	-99.900	0.870	-99.900	1.488	0.135	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	148.4	-99.9	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-175.0	-99.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: emission duration (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	0.135	-99.900	: total mass emitted (kg)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigx0 at the source (m)
6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	6.980	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
5.30	3.60	3.80	4.90	6.10	5.60	5.40	3.80	3.60	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
5.30	3.60	3.80	4.90	6.10	5.60	5.40	3.80	3.60	: domain-averaged wind speed (m/s)
168.0	163.0	148.0	192.0	131.0	139.0	167.0	175.0	185.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
6.00	9.20	10.40	14.50	7.10	12.50	18.00	18.70	14.50	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
690.0	640.0	705.0	640.0	610.0	640.0	620.0	630.0	613.0	: averaging time for domain-avg data (s)
0.105	0.100	0.065	0.101	0.098	0.090	0.095	0.116	0.102	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	904.0	: averaging time for concentration (s)
1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	: suggested receptor height (m)
0	0	0	0	0	0	0	0	0	: no. of distances downwind
6	6	6	6	6	6	6	6	6	: no. of lines-of-sight
-160.5	-160.5	-160.5	-160.5	-160.5	-160.5	-160.5	-160.5	-160.5	: x-coord. of 1st end-point for LOS1 (m)
-226.2	-226.2	-226.2	-226.2	-226.2	-226.2	-226.2	-226.2	-226.2	: y-coord. of 1st end-point for LOS1 (m)
626.7	626.7	626.7	626.7	626.7	626.7	626.7	626.7	626.7	: x-coord. of 2nd end-point for LOS1 (m)
210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	210.2	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	: x-coord. of 1st end-point for LOS1 (m)
-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	: y-coord. of 1st end-point for LOS1 (m)
587.9	587.9	587.9	587.9	587.9	587.9	587.9	587.9	587.9	: x-coord. of 2nd end-point for LOS1 (m)
280.1	280.1	280.1	280.1	280.1	280.1	280.1	280.1	280.1	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)

5.650E+05	7.960E+05	-9.990E+01	5.520E+05	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	: x-coord. of 1st end-point for LOS1 (m)
-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	: y-coord. of 1st end-point for LOS1 (m)
549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1	: x-coord. of 2ad end-point for LOS1 (m)
350.1	350.1	350.1	350.1	350.1	350.1	350.1	350.1	350.1	: y-coord. of 2ad end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
4.070E+05	5.640E+05	4.500E+05	2.760E+05	5.100E+05	5.100E+05	4.680E+05	3.580E+05	4.790E+05	: LOS integrated dosage (mg-s/m**2)
-276.8	-276.8	-276.8	-276.8	-276.8	-276.8	-276.8	-276.8	-276.8	: x-coord. of 1st end-point for LOS1 (m)
-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	: y-coord. of 1st end-point for LOS1 (m)
510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	: x-coord. of 2nd end-point for LOS1 (m)
420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
2.790E+05	3.880E+05	2.360E+05	1.440E+05	3.120E+05	3.390E+05	2.420E+05	2.010E+05	2.130E+05	: LOS integrated dosage (mg-s/m**2)
-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	: x-coord. of 1st end-point for LOS1 (m)
281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	: y-coord. of 1st end-point for LOS1 (m)
325.9	325.9	325.9	325.9	325.9	325.9	325.9	325.9	325.9	: x-coord. of 2nd end-point for LOS1 (m)
-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	: x-coord. of 1st end-point for LOS1 (m)
320.6	320.6	320.6	320.6	320.6	320.6	320.6	320.6	320.6	: y-coord. of 1st end-point for LOS1 (m)
395.8	395.8	395.8	395.8	395.8	395.8	395.8	395.8	395.8	: x-coord. of 2nd end-point for LOS1 (m)
-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	7.660E+05	-9.990E+01	2.540E+05	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	2.620E+05	: LOS integrated dosage (mg-s/m**2)

The Development Test II of 155MM SMOKE GRENADES (M116A1, 1 projectile, DT2H1)

11 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

HC2	HC3	HC10	HC11	HC12	HC13	HC15	HC16	HC17	HC19	HC20	: trial ID
7	7	9	9	9	9	8	8	8	8	8	: month
29	29	3	3	3	3	12	12	12	17	18	: day
81	81	81	81	81	81	81	81	81	81	81	: year
17	19	17	19	20	21	15	16	17	21	17	: hour
55	44	13	16	56	40	35	42	50	42	44	: minute
4	4	4	4	4	4	4	4	4	4	4	: no. of sources
-74.7	-116.0	-76.6	-61.3	24.0	-29.5	103.6	64.4	12.1	-4.5	70.9	: x-coord. of source (m)
-127.2	-81.5	-103.1	-116.3	-131.9	-115.8	-87.8	-72.9	-96.2	-72.3	-119.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
138.0	138.0	138.0	138.0	138.0	138.0	138.0	138.0	138.0	138.0	138.0	: emission duration (s)
1.090	1.016	1.107	1.107	1.045	1.045	1.567	1.426	1.414	1.144	1.248	: total mass emitted (kg)
0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	: sigx0 at the source (m)
0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	: sigy0 at the source (m)
0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	: sigz0 at the source (m)
-78.5	-91.1	-20.7	-21.1	73.1	-45.3	145.1	129.5	52.6	39.9	80.5	: x-coord. of source (m)
-143.0	-99.7	-133.8	-94.0	-150.4	-145.2	-107.1	-87.2	-101.2	-63.7	-114.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
138.0	138.0	138.0	138.0	138.0	138.0	138.0	138.0	138.0	138.0	138.0	: emission duration (s)
1.090	1.016	1.107	1.107	1.045	1.045	1.567	1.426	1.414	1.144	1.248	: total mass emitted (kg)
0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	: sigx0 at the source (m)
0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	: sigy0 at the source (m)
0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	: sigz0 at the source (m)
4.6	-77.0	43.5	18.7	115.4	5.4	157.9	83.6	60.5	78.2	131.6	: x-coord. of source (m)
-119.8	-127.3	-107.4	-145.1	-156.7	-147.9	-113.7	-124.0	-96.8	-91.6	-136.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
138.0	138.0	138.0	138.0	138.0	138.0	138.0	138.0	138.0	138.0	138.0	: emission duration (s)
1.090	1.016	1.107	1.107	1.045	1.045	1.567	1.426	1.414	1.144	1.248	: total mass emitted (kg)
0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	: sigx0 at the source (m)
0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	: sigy0 at the source (m)
0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	: sigz0 at the source (m)
-7.6	-97.2	-34.4	9.5	56.2	9.0	98.8	100.1	43.3	12.1	105.7	: x-coord. of source (m)
-126.6	-92.8	-107.1	-149.1	-132.3	-121.6	-101.9	-92.0	-102.9	-96.2	-116.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	78.0	: emission duration (s)
0.994	0.926	1.009	1.009	0.952	0.952	1.428	1.300	1.289	1.043	1.138	: total mass emitted (kg)
0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	: sigx0 at the source (m)
0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	: sigy0 at the source (m)
0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	0.290	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
4.70	4.80	2.80	3.70	4.70	4.30	5.00	3.90	3.80	4.20	2.70	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
4.70	4.80	2.80	3.70	4.70	4.30	5.00	3.90	3.80	4.20	2.70	: domain-averaged wind speed (m/s)
193.0	176.0	182.0	159.0	184.0	185.0	126.0	158.0	150.0	321.0	212.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
8.80	10.30	28.80	12.30	14.10	13.80	4.20	9.70	15.70	6.70	13.00	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
195.0	220.0	180.0	240.0	164.0	240.0	210.0	240.0	210.0	150.0	270.0	: averaging time for domain-avg data (s)
0.113	0.104	0.129	0.028	0.062	0.101	0.102	0.089	0.091	0.059	0.073	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
195.0	220.0	180.0	240.0	164.0	240.0	210.0	240.0	210.0	150.0	270.0	: averaging time for concentration (s)
1.50	1.50	1.50	1.50	0	1.50	1.50	1.50	0	1.50	1.50	: suggested receptor height (m)
0	0	0	0	0	0	0	0	0	0	0	: no. of distances downwind
6	6	6	6	6	6	6	6	6	6	6	: no. of lines-of-sight
-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	-199.3	: x-coord. of 1st end-point for LOS1 (m)
-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	-156.2	: y-coord. of 1st end-point for LOS1 (m)
587.9	587.9	587.9	587.9	587.9	587.9	587.9	587.9	587.9	587.9	587.9	: x-coord. of 2nd end-point for LOS1 (m)
280.1	280.1	280.1	280.1	280.1	280.1	280.1	280.1	280.1	280.1	280.1	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	1.270E+05	1.120E+05	6.500E+04	1.030E+05	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	3.800E+04	: LOS integrated dosage (mg-s/m**2)
-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	-238.0	: x-coord. of 1st end-point for LOS1 (m)
-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	-86.2	: y-coord. of 1st end-point for LOS1 (m)

549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1	549.1	: x-coord. of 2nd end-point for LOS1 (m)
350.1	350.1	350.1	350.1	350.1	350.1	350.1	350.1	350.1	350.1	350.1	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
7.600E+04	8.700E+04	3.800E+04	6.100E+04	2.400E+04	6.500E+04	8.500E+04	8.700E+04	6.000E+04	-9.990E+01	1.700E+04	: LOS integrated dosage (mg-s/m**2)
-276.8	-276.8	-276.8	-276.8	-276.8	-276.8	-276.8	-276.8	-276.8	-276.8	-276.8	: x-coord. of 1st end-point for LOS1 (m)
-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	: y-coord. of 1st end-point for LOS1 (m)
510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	510.3	: x-coord. of 2nd end-point for LOS1 (m)
420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	5.200E+04	6.400E+04	2.900E+04	7.800E+04	5.000E+03	: LOS integrated dosage (mg-s/m**2)
-180.4	-180.4	-180.4	-180.4	-180.4	-180.4	-180.4	-180.4	-180.4	-180.4	-180.4	: x-coord. of 1st end-point for LOS1 (m)
243.0	243.0	243.0	243.0	243.0	243.0	243.0	243.0	243.0	243.0	243.0	: y-coord. of 1st end-point for LOS1 (m)
255.9	255.9	255.9	255.9	255.9	255.9	255.9	255.9	255.9	255.9	255.9	: x-coord. of 2nd end-point for LOS1 (m)
-544.2	-544.2	-544.2	-544.2	-544.2	-544.2	-544.2	-544.2	-544.2	-544.2	-544.2	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.190E+05	4.900E+04	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	-110.5	: x-coord. of 1st end-point for LOS1 (m)
281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	281.8	: y-coord. of 1st end-point for LOS1 (m)
325.9	325.9	325.9	325.9	325.9	325.9	325.9	325.9	325.9	325.9	325.9	: x-coord. of 2nd end-point for LOS1 (m)
-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	-505.4	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
7.200E+04	-9.990E+01	4.000E+04	-9.990E+01	6.100E+04	4.200E+04	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	-40.5	: x-coord. of 1st end-point for LOS1 (m)
320.6	320.6	320.6	320.6	320.6	320.6	320.6	320.6	320.6	320.6	320.6	: y-coord. of 1st end-point for LOS1 (m)
395.8	395.8	395.8	395.8	395.8	395.8	395.8	395.8	395.8	395.8	395.8	: x-coord. of 2nd end-point for LOS1 (m)
-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	-466.6	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
3.800E+04	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	5.100E+04	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	6.600E+04	: LOS integrated dosage (mg-s/m**2)

The Development Test II of 155MM SMOKE GRENADES (M116A1, 2 projectiles, DT2H2)

4 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

HC6	HC7	HC8	HC9	
8	8	8	8	: month
19	19	25	25	: day
81	81	81	81	: year
15	16	16	18	: hour
10	48	52	32	: minute
7	7	8	8	: no. of sources
49.7	52.0	24.8	7.5	: x-coord. of source (m)
-106.2	-118.6	-98.3	-122.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
138.0	138.0	138.0	138.0	: emission duration (s)
1.526	1.476	1.281	1.173	: total mass emitted (kg)
0.350	0.350	0.350	0.350	: sigx0 at the source (m)
0.350	0.350	0.350	0.350	: sigy0 at the source (m)
0.350	0.350	0.350	0.350	: sigz0 at the source (m)
156.0	177.9	40.1	60.7	: x-coord. of source (m)
-143.3	-141.5	-121.8	-165.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
138.0	138.0	138.0	138.0	: emission duration (s)
1.526	1.476	1.281	1.173	: total mass emitted (kg)
0.350	0.350	0.350	0.350	: sigx0 at the source (m)
0.350	0.350	0.350	0.350	: sigy0 at the source (m)
0.350	0.350	0.350	0.350	: sigz0 at the source (m)
73.7	142.2	36.2	29.5	: x-coord. of source (m)
-122.6	-132.7	-104.5	-156.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
138.0	138.0	138.0	138.0	: emission duration (s)
1.526	1.476	1.281	1.173	: total mass emitted (kg)
0.350	0.350	0.350	0.350	: sigx0 at the source (m)
0.350	0.350	0.350	0.350	: sigy0 at the source (m)
0.350	0.350	0.350	0.350	: sigz0 at the source (m)
166.2	154.0	73.9	94.5	: x-coord. of source (m)
-151.4	-158.2	-116.8	-170.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
138.0	138.0	138.0	138.0	: emission duration (s)
1.526	1.476	1.281	1.173	: total mass emitted (kg)
0.350	0.350	0.350	0.350	: sigx0 at the source (m)
0.350	0.350	0.350	0.350	: sigy0 at the source (m)
0.350	0.350	0.350	0.350	: sigz0 at the source (m)
135.6	157.9	30.8	69.8	: x-coord. of source (m)
-158.1	-144.6	-113.3	-156.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
138.0	138.0	138.0	138.0	: emission duration (s)
1.526	1.476	1.281	1.173	: total mass emitted (kg)
0.350	0.350	0.350	0.350	: sigx0 at the source (m)
0.350	0.350	0.350	0.350	: sigy0 at the source (m)
0.350	0.350	0.350	0.350	: sigz0 at the source (m)
126.3	112.7	94.8	83.4	: x-coord. of source (m)
-139.2	-125.0	-156.7	-181.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
138.0	138.0	138.0	138.0	: emission duration (s)
1.526	1.476	1.281	1.173	: total mass emitted (kg)
0.350	0.350	0.350	0.350	: sigx0 at the source (m)
0.350	0.350	0.350	0.350	: sigy0 at the source (m)
0.350	0.350	0.350	0.350	: sigz0 at the source (m)
145.1	162.2	34.2	33.4	: x-coord. of source (m)
-148.3	-150.2	-109.1	-132.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
78.0	78.0	78.0	78.0	: emission duration (s)
1.391	1.345	1.168	1.069	: total mass emitted (kg)
0.290	0.290	0.290	0.290	: sigx0 at the source (m)
0.290	0.290	0.290	0.290	: sigy0 at the source (m)
0.290	0.290	0.290	0.290	: sigz0 at the source (m)
-99.9	-99.9	61.5	73.5	: x-coord. of source (m)
-99.9	-99.9	-129.4	-180.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
-99.9	-99.9	78.0	78.0	: emission duration (s)
-99.900	-99.900	1.168	1.069	: total mass emitted (kg)
-99.900	-99.900	0.290	0.290	: sigx0 at the source (m)
-99.900	-99.900	0.290	0.290	: sigy0 at the source (m)
-99.900	-99.900	0.290	0.290	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)

-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
5.40	3.60	5.00	5.00	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	: measuring height for wind data (m)
5.40	3.60	5.00	5.00	: domain-averaged wind speed (m/s)
160.0	157.0	163.0	194.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
3.70	16.80	10.90	8.00	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
360.0	390.0	216.0	210.0	: averaging time for domain-avg data (s)
0.076	0.096	0.088	0.090	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	: P-G stability class
360.0	390.0	216.0	210.0	: averaging time for concentration (s)
1.50	1.50	1.50	1.50	: suggested receptor height (m)
0	0	0	0	: no. of distances downwind
3	3	3	3	: no. of lines-of-sight
-199.3	-199.3	-199.3	-199.3	: x-coord. of 1st end-point for LOSi (m)
-156.2	-156.2	-156.2	-156.2	: y-coord. of 1st end-point for LOSi (m)
587.9	587.9	587.9	587.9	: x-coord. of 2nd end-point for LOSi (m)
280.1	280.1	280.1	280.1	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	1.000E+05	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-238.0	-238.0	-238.0	-238.0	: x-coord. of 1st end-point for LOSi (m)
-86.2	-86.2	-86.2	-86.2	: y-coord. of 1st end-point for LOSi (m)
549.1	549.1	549.1	549.1	: x-coord. of 2nd end-point for LOSi (m)
350.1	350.1	350.1	350.1	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.920E+05	7.500E+04	1.530E+05	9.300E+04	: LOS integrated dosage (mg-s/m**2)
-276.8	-276.8	-276.8	-276.8	: x-coord. of 1st end-point for LOSi (m)
-16.2	-16.2	-16.2	-16.2	: y-coord. of 1st end-point for LOSi (m)
510.3	510.3	510.3	510.3	: x-coord. of 2nd end-point for LOSi (m)
420.1	420.1	420.1	420.1	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.650E+05	3.800E+04	1.070E+05	5.200E+04	: LOS integrated dosage (mg-s/m**2)

The Development Test I of 81mm Smoke Cartridges (XM819, 1 projectile, DT1XI)
15 : number of trials included in DOA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

102A	103A	202A	203A	302A	305A	306A	307A	308A	309A	310A	401A	501A	502A	503A	: trial ID
2	2	2	3	3	12	12	12	12	12	12	12	3	3	3	: month
5	5	23	4	9	10	11	11	12	12	12	12	5	9	8	: day
81	81	81	81	81	80	80	80	80	80	80	80	81	81	81	: year
13	14	12	10	12	15	15	16	13	14	15	16	16	10	11	: hour
24	37	42	25	13	41	40	14	58	37	16	26	0	42	21	: minute
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
93.5	23.7	1.6	-11.0	-14.6	-0.0	-19.0	-51.5	1.2	-33.0	-23.0	-46.0	-2.0	-36.0	-30.7	: x-coord. of source (m)
0.4	-63.4	120.9	-35.0	49.1	-43.0	66.7	64.1	55.6	15.6	70.0	67.0	46.9	64.2	67.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	: emission duration (s)
5.260	5.150	4.400	2.360	5.690	6.893	5.600	5.600	5.000	5.645	5.010	5.740	5.300	3.200	4.950	: total mass emitted (kg)
16.000	10.200	10.300	11.000	4.000	3.600	6.200	6.200	7.200	4.000	5.300	6.000	11.500	1.500	7.200	: sigx0 at the source (m)
16.000	10.200	10.300	11.000	4.000	3.600	6.200	6.200	7.200	4.000	5.300	6.000	11.500	1.500	7.200	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
3.60	3.60	3.50	5.10	1.60	1.30	1.90	1.50	2.40	3.20	2.30	1.40	3.90	2.30	2.00	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
3.60	3.60	3.50	5.10	1.60	1.30	1.90	1.50	2.40	3.20	2.30	1.40	3.90	2.30	2.00	: domain-averaged wind speed (m/s)
151.0	126.0	359.0	142.0	314.0	174.0	347.0	315.0	348.0	343.0	324.0	317.0	348.0	320.0	232.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
11.50	9.00	14.10	6.00	13.30	14.80	13.70	12.30	13.60	11.40	9.50	8.50	15.40	20.40	17.20	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
300.0	466.0	387.0	495.0	417.0	519.0	540.0	698.0	564.0	629.0	673.0	543.0	422.0	456.0	474.0	: averaging time for domain-avg data (s)
0.069	0.100	0.039	0.073	0.087	0.102	0.079	0.112	0.085	0.100	0.094	0.143	0.088	0.044	0.070	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: Bowen ratio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	: averaging time for concentration (s)
1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	: suggested receptor height (m)
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	: no. of distances downwind
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	: no. of lines-of-sight
-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	: x-coord. of 1st end-point for LOS1 (m)
-60.7	-60.7	-60.7	-60.7	-60.7	-60.7	-60.7	-60.7	-60.7	-60.7	-60.7	-60.7	-60.7	-60.7	-60.7	: y-coord. of 1st end-point for LOS1 (m)
1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	: x-coord. of 2nd end-point for LOS1 (m)
650.5	650.5	650.5	650.5	650.5	650.5	650.5	650.5	650.5	650.5	650.5	650.5	650.5	650.5	650.5	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.800E+04	2.300E+04	1.600E+05	2.200E+04	-9.990E+01	7.700E+04	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	7.540E+05	-9.990E+01	-9.990E+01	4.230E+05	: LOS integrated dosage (mg-s/m**2)
-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	: x-coord. of 1st end-point for LOS2 (m)
-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	: y-coord. of 1st end-point for LOS2 (m)
1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	: x-coord. of 2nd end-point for LOS2 (m)
553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	: y-coord. of 2nd end-point for LOS2 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	9.000E+04	-9.990E+01	1.850E+05	-9.990E+01	6.100E+04	5.300E+04	4.200E+04	2.230E+05	1.620E+05	1.550E+05	1.900E+04	2.600E+04	3.000E+04	: LOS integrated dosage (mg-s/m**2)
-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	: x-coord. of 1st end-point for LOS3 (m)
69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	: y-coord. of 1st end-point for LOS3 (m)
421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	: x-coord. of 2nd end-point for LOS3 (m)
-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	: y-coord. of 2nd end-point for LOS3 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	8.200E+04	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	6.100E+04	2.030E+05	-9.990E+01	-9.990E+01	1.000E+04	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	: x-coord. of 1st end-point for LOS4 (m)
142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	: y-coord. of 1st end-point for LOS4 (m)
408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	: x-coord. of 2nd end-point for LOS4 (m)
-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	: y-coord. of 2nd end-point for LOS4 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	2.000E+05	6.180E+04	-9.990E+01	1.420E+05	-9.990E+01	-9.990E+01	3.000E+05	-9.990E+01	9.990E+01	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	: x-coord. of 1st end-point for LOS5 (m)
110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	: y-coord. of 1st end-point for LOS5 (m)
395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	: x-coord. of 2nd end-point for LOS5 (m)
-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	: y-coord. of 2nd end-point for LOS5 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	4.100E+04	-9.990E+01	-9.990E+01	-9.990E+01	1.220E+05	-9.990E+01	6.200E+04	-9.990E+01	-9.990E+01	-9.990E+01	5.600E+04	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)

The Development Test I of 81mm Smoke Cartridges (XM819, 3 projectiles, DT1X3)

7 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

602A	701A	702A	801A	802A	1101A	1102A	: trial ID
12	2	2	3	3	3	3	: month
22	12	12	4	4	9	9	: day
80	81	81	81	81	81	81	: year
12	12	14	10	12	15	13	: hour
0	27	16	59	20	16	45	: minute
1	1	2	1	3	1	2	: no. of sources
-8.1	16.5	61.4	-2.7	86.1	-26.0	-61.8	: x-coord. of source (m)
74.4	-62.9	-22.0	-83.8	-46.0	63.4	64.1	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
120.0	120.0	120.0	120.0	120.0	120.0	120.0	: emission duration (s)
18.881	16.530	6.335	18.030	4.237	11.378	8.910	: total mass emitted (kg)
13.600	17.800	21.600	22.400	8.000	16.400	14.200	: sigx0 at the source (m)
13.600	17.800	21.600	22.400	8.000	16.400	14.200	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-34.8	-99.9	54.4	-99.9	-7.9	: x-coord. of source (m)
-99.9	-99.9	-65.0	-99.9	-69.3	-99.9	69.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
120.0	120.0	120.0	120.0	120.0	120.0	120.0	: emission duration (s)
-99.900	-99.900	8.961	-99.900	6.161	-99.900	4.590	: total mass emitted (kg)
-99.900	-99.900	24.500	-99.900	9.700	-99.900	9.400	: sigx0 at the source (m)
-99.900	-99.900	24.500	-99.900	9.700	-99.900	9.400	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	10.6	-99.9	-99.9	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	-81.0	-99.9	-99.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
120.0	120.0	120.0	120.0	120.0	120.0	120.0	: emission duration (s)
-99.900	-99.900	-99.900	-99.900	5.579	-99.900	-99.900	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	12.600	-99.900	-99.900	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	12.600	-99.900	-99.900	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
1.50	1.90	1.90	4.70	4.40	2.80	2.80	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
1.50	1.90	1.90	4.70	4.40	2.80	2.80	: domain-averaged wind speed (m/s)
329.0	153.0	179.0	152.0	155.0	359.0	353.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
12.70	16.80	27.60	8.10	9.60	17.20	17.20	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
690.0	639.0	502.0	614.0	585.0	620.0	516.0	: averaging time for domain-avg data (s)
0.068	0.060	0.079	0.088	0.070	0.074	0.057	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	: P-G stability class
120.0	120.0	120.0	120.0	120.0	120.0	120.0	: averaging time for concentration (s)
1.50	1.50	1.50	1.50	1.50	1.50	1.50	: suggested receptor height (m)
0	0	0	0	0	0	0	: no. of distances downwind
5	5	5	5	5	5	5	: no. of lines-of-sight
-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	: x-coord. of 1st end-point for LOSi (m)
-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	: y-coord. of 1st end-point for LOSi (m)
1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	: x-coord. of 2nd end-point for LOSi (m)
658.5	658.5	658.5	658.5	658.5	658.5	658.5	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	9.900E+04	8.900E+04	1.580E+05	1.840E+05	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	: x-coord. of 1st end-point for LOSi (m)
-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	: y-coord. of 1st end-point for LOSi (m)
1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	: x-coord. of 2nd end-point for LOSi (m)
553.5	553.5	553.5	553.5	553.5	553.5	553.5	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
2.160E+05	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	9.900E+04	1.110E+05	: LOS integrated dosage (mg-s/m**2)
-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	: x-coord. of 1st end-point for LOSi (m)
69.6	69.6	69.6	69.6	69.6	69.6	69.6	: y-coord. of 1st end point for LOSi (m)
421.8	421.8	421.8	421.8	421.8	421.8	421.8	: x-coord. of 2nd end point for LOSi (m)
-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	: y-coord. of 2nd end point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)

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-9.990E+01 -9.990E+01 -9.990E+01 -9.990E+01 -9.990E+01  1.020E+05  9.000E+04 : LOS integrated dosage (mg-s/m**2)
     -21.7      -21.7      -21.7      -21.7      -21.7      -21.7      -21.7 : x-coord. of 1st end-point for LOS1 (m)
     142.3      142.3      142.3      142.3      142.3      142.3      142.3 : y-coord. of 1st end-point for LOS1 (m)
     408.7      408.7      408.7      408.7      408.7      408.7      408.7 : x-coord. of 2nd end-point for LOS1 (m)
    -768.2     -768.2     -768.2     -768.2     -768.2     -768.2     -768.2 : y-coord. of 2nd end-point for LOS1 (m)
     -99.9      -99.9      -99.9      -99.9      -99.9      -99.9      -99.9 : LOS integrated conc. (mg/m**2)
-9.990E+01 -9.990E+01 -9.990E+01 -9.990E+01 -9.990E+01 -9.990E+01 -9.990E+01 : LOS integrated dosage (mg-s/m**2)
     -78.6      -78.6      -78.6      -78.6      -78.6      -78.6      -78.6 : x-coord. of 1st end-point for LOS1 (m)
     110.8      110.8      110.8      110.8      110.8      110.8      110.8 : y-coord. of 1st end-point for LOS1 (m)
     395.5      395.5      395.5      395.5      395.5      395.5      395.5 : x-coord. of 2nd end-point for LOS1 (m)
    -775.5     -775.5     -775.5     -775.5     -775.5     -775.5     -775.5 : y-coord. of 2nd end-point for LOS1 (m)
     -99.9      -99.9      -99.9      -99.9      -99.9      -99.9      -99.9 : LOS integrated conc. (mg/m**2)
-9.990E+01 -9.990E+01 -9.990E+01 -9.990E+01 -9.990E+01 -9.990E+01 -9.990E+01 : LOS integrated dosage (mg-s/m**2)
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The Development Test I of 81mm Smoke Cartridges (M375A2, 1 projectile, DTIHI)

16 : number of trials included in DOA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

101B	102B	104B	202B	203B	303B	304B	305B	306B	307B	308B	309B	310B	901B	902B	903B	: trial ID
2	2	2	1	3	12	12	12	12	12	12	12	12	3	3	3	: month
2	5	5	27	6	9	10	11	11	12	12	12	12	5	9	9	: day
81	81	81	81	81	80	80	80	80	80	80	80	80	81	81	81	: year
12	12	14	15	10	13	14	14	15	13	13	14	15	15	10	12	: hour
58	37	9	27	13	16	14	42	14	26	39	24	16	49	11	21	: minute
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
-34.6	10.7	-52.9	-24.6	-39.7	-78.4	-23.9	-84.4	-77.1	-60.9	-44.2	-49.6	-54.2	-76.0	-93.4	-88.0	: x-coord. of source (m)
-48.9	1.3	-115.0	-42.2	-110.1	32.0	-60.1	36.7	33.9	62.4	38.4	40.0	54.5	40.2	28.3	26.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	: emission duration (s)
5.340	5.340	5.200	5.030	6.320	5.690	6.080	5.510	5.510	6.300	5.880	5.840	5.880	5.310	5.340	4.650	: total mass emitted (kg)
1.630	1.630	1.630	1.630	1.630	1.630	1.630	1.630	1.630	1.630	1.630	1.630	1.630	1.630	1.630	1.630	: sigx0 at the source (m)
0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	: sigy0 at the source (m)
1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
2.70	2.60	2.90	4.30	4.70	1.60	2.00	1.50	1.80	2.40	2.40	2.80	2.30	3.90	1.90	3.00	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
2.70	2.60	2.90	4.30	4.70	1.60	2.00	1.50	1.80	2.40	2.40	2.80	2.30	3.90	1.90	3.00	: domain-averaged wind speed (m/s)
150.0	134.0	140.0	134.0	147.0	6.0	185.0	338.0	356.0	353.0	336.0	355.0	346.0	349.0	305.0	6.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
3.60	11.10	1.00	4.10	7.30	10.60	4.60	15.60	7.20	11.00	6.40	7.40	12.20	7.60	8.80	10.60	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
49.0	59.0	239.0	62.0	111.0	175.0	110.0	216.0	110.0	140.0	113.0	178.0	304.0	147.0	170.0	189.0	: averaging time for domain-avg data (s)
0.065	0.083	0.091	0.123	0.120	0.062	0.102	0.076	0.074	0.028	0.064	0.105	0.090	0.004	0.040	0.060	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: Bowen ratio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	: averaging time for concentration (s)
1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	: suggested receptor height (m)
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	: no. of distances downwind
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	: no. of lines-of-sight
-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	: x-coord. of 1st end-point for LOS1 (m)
-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	: y-coord. of 1st end-point for LOS1 (m)
1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	: x-coord. of 2nd end-point for LOS1 (m)
658.5	658.5	658.5	658.5	658.5	658.5	658.5	658.5	658.5	658.5	658.5	658.5	658.5	658.5	658.5	658.5	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	1.200E+04	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	1.140E+05	-9.990E+01	2.500E+04	-9.990E+01	-9.990E+01	-9.990E+01	8.000E+04	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	: x-coord. of 1st end-point for LOS2 (m)
-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	: y-coord. of 1st end-point for LOS2 (m)
1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	: x-coord. of 2nd end-point for LOS2 (m)
553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	: y-coord. of 2nd end-point for LOS2 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	3.700E+04	5.100E+04	-9.990E+01	2.400E+04	7.000E+03	2.400E+04	1.200E+04	2.400E+04	2.300E+04	2.100E+04	1.000E+04	1.100E+04	: LOS integrated dosage (mg-s/m**2)
-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	: x-coord. of 1st end-point for LOS3 (m)
69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	: y-coord. of 1st end-point for LOS3 (m)
421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	: x-coord. of 2nd end-point for LOS3 (m)
-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	: y-coord. of 2nd end-point for LOS3 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	2.600E+04	-9.990E+01	-9.990E+01	5.600E+04	-9.990E+01	-9.990E+01	3.400E+04	2.200E+04	-9.990E+01	4.100E+04	2.200E+04	4.600E+04	-9.990E+01	5.600E+04	: LOS integrated dosage (mg-s/m**2)
-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	: x-coord. of 1st end-point for LOS4 (m)
142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	: y-coord. of 1st end-point for LOS4 (m)
408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	: x-coord. of 2nd end-point for LOS4 (m)
-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	: y-coord. of 2nd end-point for LOS4 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	2.200E+04	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	: x-coord. of 1st end-point for LOS5 (m)
110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	: y-coord. of 1st end-point for LOS5 (m)
395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	: x-coord. of 2nd end-point for LOS5 (m)
-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	: y-coord. of 2nd end-point for LOS5 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	3.300E+04	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	1.400E+04	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	3.100E+04	-9.990E+01	: LOS integrated dosage (mg-s/m**2)

The Development Test I of 81mm Smoke Cartridges (M375A2, 3 projectiles, DT1M3)

10 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

601B	602B	604B	605B	701B	702B	801B	802B	1101B	1102B	: trial ID
12	12	12	12	2	2	3	3	3	3	: month
17	22	22	23	5	12	4	4	9	9	: day
80	80	80	80	81	81	81	81	81	81	: year
15	11	15	15	15	12	11	13	12	14	: hour
37	34	42	34	12	9	46	10	35	49	: minute
3	3	3	3	3	3	3	3	3	3	: no. of sources
-48.8	-58.7	-80.8	-13.0	-77.9	-46.1	-12.2	17.1	-88.0	-101.1	: x-coord. of source (m)
32.4	23.5	26.1	-30.1	-94.6	-104.5	-114.2	-36.6	37.0	29.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	: emission duration (s)
7.180	8.100	6.800	6.080	5.110	5.510	5.510	5.300	4.660	4.380	: total mass emitted (kg)
1.630	1.630	1.630	1.630	1.630	1.630	1.630	1.630	1.630	1.630	: sigx0 at the source (m)
0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	: sigy0 at the source (m)
1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	: sigz0 at the source (m)
-64.6	-47.2	-19.5	-9.3	-35.3	-31.4	16.3	25.9	-98.6	-93.1	: x-coord. of source (m)
13.4	25.3	17.7	-22.3	-107.6	-94.0	-89.3	-71.4	23.1	31.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	: emission duration (s)
7.180	8.100	6.800	6.080	5.110	5.510	5.510	5.300	4.660	4.380	: total mass emitted (kg)
1.630	1.630	1.630	1.630	1.630	1.630	1.630	1.630	1.630	1.630	: sigx0 at the source (m)
0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	: sigy0 at the source (m)
1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	: sigz0 at the source (m)
-41.3	-41.8	-91.2	5.6	-21.7	-46.7	-10.9	25.8	-102.8	-89.2	: x-coord. of source (m)
22.9	13.4	18.1	-16.3	-88.7	-101.4	-112.4	-79.5	49.3	24.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	: emission duration (s)
7.180	8.100	6.800	6.080	5.110	5.510	5.510	5.300	4.660	4.380	: total mass emitted (kg)
1.630	1.630	1.630	1.630	1.630	1.630	1.630	1.630	1.630	1.630	: sigx0 at the source (m)
0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	: sigy0 at the source (m)
1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	1.400	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
1.40	1.80	1.60	1.80	3.30	2.20	5.50	2.60	3.10	2.60	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
1.40	1.80	1.60	1.80	3.30	2.20	5.50	2.60	3.10	2.60	: domain-averaged wind speed (m/s)
319.0	19.0	350.0	205.0	144.0	126.0	157.0	180.0	1.0	8.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
11.40	5.60	6.80	3.40	9.90	27.80	3.50	13.90	10.90	7.70	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
308.0	123.0	149.0	88.0	296.0	172.0	165.0	187.0	134.0	164.0	: averaging time for domain-avg data (s)
0.045	0.092	0.271	0.147	0.080	0.026	0.050	0.101	0.084	0.048	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0	: averaging time for concentration (s)
1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	: suggested receptor height (m)
0	0	0	0	0	0	0	0	0	0	: no. of distances downwind
5	5	5	5	5	5	5	5	5	5	: no. of lines-of-sight
-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	: x-coord. of 1st end-point for LOS1 (m)
-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	: y-coord. of 1st end-point for LOS1 (m)
1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	1064.2	: x-coord. of 2nd end-point for LOS1 (m)
658.5	658.5	658.5	658.5	658.5	658.5	658.5	658.5	658.5	658.5	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	2.900E+04	3.900E+04	1.300E+04	5.000E+04	1.430E+05	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	: x-coord. of 1st end-point for LOS1 (m)
-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	: y-coord. of 1st end-point for LOS1 (m)
1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	1122.4	: x-coord. of 2nd end-point for LOS1 (m)
553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	553.5	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
9.500E+04	1.500E+04	2.300E+04	-9.990E+01	-9.990E+01	-9.990E+01	1.150E+05	2.040E+05	1.900E+04	4.500E+04	: LOS integrated dosage (mg-s/m**2)
-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	-152.9	: x-coord. of 1st end-point for LOS1 (m)
69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	69.6	: y-coord. of 1st end-point for LOS1 (m)
421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	421.8	: x-coord. of 2nd end-point for LOS1 (m)
-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	-760.9	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)

-9.990E+01	3.800E+04	1.530E+05	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	1.310E+05	1.660E+05	: LOS integrated dosage (mg-s/m**2)
-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	-21.7	: x-coord. of 1st end-point for LOS1 (m)
142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	142.3	: y-coord. of 1st end-point for LOS1 (m)
408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	408.7	: x-coord. of 2nd end-point for LOS1 (m)
-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	-768.2	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	-78.6	: x-coord. of 1st end-point for LOS1 (m)
110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	: y-coord. of 1st end-point for LOS1 (m)
395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	395.5	: x-coord. of 2nd end-point for LOS1 (m)
-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	-775.5	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)

The Evaluation of the L8 Series Grenades (L81A1)

7 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

BB2	BB3	BB4	BB5	BB6	BB7	BB9	: trial ID
6	6	6	6	6	6	6	: month
10	10	10	10	10	15	17	: day
81	81	81	81	81	81	81	: year
10	11	12	13	14	11	11	: hour
11	51	59	51	29	22	18	: minute
1	1	1	1	1	1	1	: no. of sources
-62.9	-24.4	-24.4	-24.4	-24.4	-45.4	-24.4	: x-coord. of source (m)
68.0	89.4	89.4	89.4	89.4	77.7	89.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
251.0	251.0	251.0	251.0	251.0	251.0	251.0	: emission duration (s)
0.897	0.859	0.840	0.840	0.840	0.878	0.859	: total mass emitted (kg)
9.389	4.224	6.857	8.154	0.491	11.425	2.407	: sigx0 at the source (m)
13.758	16.112	15.180	14.524	16.649	12.120	16.482	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
3.10	3.80	2.80	3.60	3.20	2.20	5.60	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
3.10	3.80	2.80	3.60	3.20	2.20	5.60	: domain-averaged wind speed (m/s)
335.0	24.0	345.0	340.0	11.0	326.0	1.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
13.70	10.70	28.80	28.10	16.40	24.30	10.10	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
267.0	252.0	245.0	255.0	287.0	600.0	211.0	: averaging time for domain-avg data (s)
0.048	0.047	0.079	0.073	0.106	0.049	0.042	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	: Bowen ratio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	: P-G stability class
251.0	251.0	251.0	251.0	251.0	251.0	251.0	: averaging time for concentration (s)
1.00	1.00	1.00	1.00	1.00	1.00	1.00	: suggested receptor height (m)
0	0	0	0	0	0	0	: no. of distances downwind
2	2	2	2	2	2	2	: no. of lines-of-sight
-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	: x-coord. of 1st end-point for LOS1 (m)
-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	: y-coord. of 1st end-point for LOS1 (m)
189.6	189.6	189.6	189.6	189.6	189.6	189.6	: x-coord. of 2nd end-point for LOS1 (m)
173.7	173.7	173.7	173.7	173.7	173.7	173.7	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
2.510E+04	5.300E+04	2.840E+04	3.490E+04	5.140E+04	1.700E+04	5.070E+04	: LOS integrated dosage (mg-s/m**2)
-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	: x-coord. of 1st end-point for LOS1 (m)
-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	: y-coord. of 1st end-point for LOS1 (m)
247.7	247.7	247.7	247.7	247.7	247.7	247.7	: x-coord. of 2nd end-point for LOS1 (m)
68.7	68.7	68.7	68.7	68.7	68.7	68.7	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
6.500E+03	-9.990E+01	7.600E+03	-9.990E+01	-9.990E+01	6.400E+03	2.490E+04	: LOS integrated dosage (mg-s/m**2)

The Evaluation of the L8 Series Grenades (L81B1)

6 : number of trials included in DUA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

BB11	BB12	BB14	BB15	BB16	BB18	: trial ID
6	6	6	6	6	6	: month
8	10	10	10	10	16	: day
81	81	81	81	81	81	: year
13	10	13	13	14	11	: hour
1	23	8	59	48	1	: minute
1	1	1	1	1	1	: no. of sources
39.2	-56.8	-30.4	-30.4	-30.4	39.2	: x-coord. of source (m)
-81.2	71.4	86.0	86.0	86.0	-81.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
199.0	199.0	199.0	199.0	199.0	199.0	: emission duration (s)
0.840	0.897	0.859	0.840	0.840	0.763	: total mass emitted (kg)
7.549	3.468	9.161	6.887	6.216	12.725	: sigx0 at the source (m)
18.834	19.992	18.104	19.086	19.315	15.804	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
3.10	2.70	4.20	3.80	4.20	7.00	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
3.10	2.70	4.20	3.80	4.20	7.00	: domain-averaged wind speed (m/s)
171.0	3.0	346.0	353.0	355.0	154.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
21.50	16.70	13.10	20.00	10.00	12.30	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
361.0	275.0	281.0	293.0	293.0	166.0	: averaging time for domain-avg data (s)
0.102	0.102	0.067	0.094	0.067	0.097	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	: P-G stability class
199.0	199.0	199.0	199.0	199.0	199.0	: averaging time for concentration (s)
1.00	1.00	1.00	1.00	1.00	1.00	: suggested receptor height (m)
0	0	0	0	0	0	: no. of distances downwind
2	2	2	2	2	2	: no. of lines-of-sight
-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	: x-coord. of 1st end-point for LOSi (m)
-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	: y-coord. of 1st end-point for LOSi (m)
189.6	189.6	189.6	189.6	189.6	189.6	: x-coord. of 2nd end-point for LOSi (m)
173.7	173.7	173.7	173.7	173.7	173.7	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.530E+04	4.190E+04	3.000E+04	3.590E+04	3.520E+04	1.890E+04	: LOS integrated dosage (mg-s/m**2)
-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	: x-coord. of 1st end-point for LOSi (m)
-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	: y-coord. of 1st end-point for LOSi (m)
247.7	247.7	247.7	247.7	247.7	247.7	: x-coord. of 2nd end-point for LOSi (m)
68.7	68.7	68.7	68.7	68.7	68.7	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	1.720E+04	1.200E+04	9.700E+03	3.190E+04	: LOS integrated dosage (mg-s/m**2)

The Evaluation of the L8 Series Grenades (L81C1)

6 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

BB21	BB22	BB25	BB26	BB28	BB30	: trial ID
6	6	6	6	6	6	: month
8	10	10	10	16	17	: day
81	81	81	81	81	81	: year
13	10	13	14	11	12	: hour
25	6	37	56	22	5	: minute
1	1	1	1	1	1	: no. of sources
34.0	-62.0	-25.3	-25.3	34.0	-20.9	: x-coord. of source (m)
-84.0	68.5	88.9	88.9	-84.0	91.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
126.0	126.0	126.0	126.0	126.0	126.0	: emission duration (s)
0.820	0.897	0.840	0.859	0.763	0.859	: total mass emitted (kg)
4.144	5.326	7.128	5.557	7.769	4.384	: sigx0 at the source (m)
13.734	13.320	12.449	13.225	12.059	13.659	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
3.90	3.60	4.00	5.10	7.30	3.30	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
3.90	3.60	4.00	5.10	7.30	3.30	: domain-averaged wind speed (m/s)
175.0	350.0	342.0	349.0	159.0	354.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
16.00	17.90	11.50	6.50	6.70	20.40	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
236.0	600.0	221.0	223.0	165.0	230.0	: averaging time for domain-avg data (s)
0.080	0.020	0.067	0.075	0.083	0.116	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	: P-G stability class
126.0	126.0	126.0	126.0	126.0	126.0	: averaging time for concentration (s)
1.00	1.00	1.00	1.00	1.00	1.00	: suggested receptor height (m)
0	0	0	0	0	0	: no. of distances downwind
2	2	2	2	2	2	: no. of lines-of-sight
-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	: x-coord. of 1st end-point for LOS1 (m)
-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	: y-coord. of 1st end-point for LOS1 (m)
189.6	189.6	189.6	189.6	189.6	189.6	: x-coord. of 2nd end-point for LOS1 (m)
173.7	173.7	173.7	173.7	173.7	173.7	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
6.700E+03	3.660E+04	2.850E+04	4.650E+04	1.820E+04	3.670E+04	: LOS integrated dosage (mg-s/m**2)
-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	: x-coord. of 1st end-point for LOS1 (m)
-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	: y-coord. of 1st end-point for LOS1 (m)
247.7	247.7	247.7	247.7	247.7	247.7	: x-coord. of 2nd end-point for LOS1 (m)
68.7	68.7	68.7	68.7	68.7	68.7	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
3.8[illegible]0E+04	1.770E+04	1.100E+04	2.230E+04	3.170E+04	1.110E+04	: LOS integrated dosage (mg-s/m**2)

The Evaluation of the L8 Series Grenades (L81D1)

5 : number of trials included in DUA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

BB32	BB35	BB36	BB38	BB40	: trial ID
6	6	6	6	6	: month
10	10	10	16	17	: day
81	81	81	81	81	: year
10	13	14	10	12	: hour
18	45	42	56	29	: minute
1	1	1	1	1	: no. of sources
-62.0	-25.3	-25.3	34.0	-20.9	: x-coord. of source (m)
68.5	88.9	88.9	-84.0	91.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
115.0	115.0	115.0	115.0	115.0	: emission duration (s)
0.897	0.840	0.840	0.782	0.859	: total mass emitted (kg)
5.479	4.159	1.631	0.456	3.737	: sigx0 at the source (m)
12.343	12.848	13.406	13.497	12.977	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
2.30	1.30	4.50	6.80	6.50	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
2.30	1.30	4.50	6.80	6.50	: domain-averaged wind speed (m/s)
345.0	351.0	2.0	187.0	25.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
13.90	15.70	17.20	13.60	9.60	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
215.0	240.0	241.0	181.0	187.0	: averaging time for domain-avg data (s)
0.094	0.000	0.040	0.080	0.042	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	: P-G stability class
115.0	115.0	115.0	115.0	115.0	: averaging time for concentration (s)
1.00	1.00	1.00	1.00	1.00	: suggested receptor height (m)
0	0	0	0	0	: no. of distances downwind
2	2	2	2	2	: no. of lines-of-sight
-247.7	-247.7	-247.7	-247.7	-247.7	: x-coord. of 1st end-point for LOS1 (m)
-68.7	-68.7	-68.7	-68.7	-68.7	: y-coord. of 1st end-point for LOS1 (m)
189.6	189.6	189.6	189.6	189.6	: x-coord. of 2nd end-point for LOS1 (m)
173.7	173.7	173.7	173.7	173.7	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.210E+04	3.910E+04	3.960E+04	-9.990E+01	1.710E+04	: LOS integrated dosage (mg-s/m**2)
-189.6	-189.6	-189.6	-189.6	-189.6	: x-coord. of 1st end-point for LOS1 (m)
-173.7	-173.7	-173.7	-173.7	-173.7	: y-coord. of 1st end-point for LOS1 (m)
247.7	247.7	247.7	247.7	247.7	: x-coord. of 2nd end-point for LOS1 (m)
68.7	68.7	68.7	68.7	68.7	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	1.430E+04	-9.990E+01	4.410E+04	-9.990E+01	: LOS integrated dosage (mg-s/m**2)

The Evaluation of the L8 Series Grenades (L8112)

6 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

BB41	BB42	BB43	BB44	BB45	BB48	: trial ID
6	6	6	6	6	6	: month
16	16	16	16	16	16	: day
81	81	81	81	81	81	: year
8	9	8	10	8	9	: hour
4	56	52	21	30	30	: minute
12	12	12	12	12	12	: no. of sources
67.7	64.2	57.3	70.2	62.4	62.4	: x-coord. of source (m)
-118.0	-119.9	-123.7	-116.6	-120.9	-120.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
251.0	251.0	199.0	199.0	126.0	115.0	: emission duration (s)
0.820	0.801	0.820	0.801	0.813	0.781	: total mass emitted (kg)
10.995	1.831	10.096	10.096	7.979	5.906	: sigx0 at the source (m)
12.511	16.556	17.600	17.600	11.922	12.145	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
80.4	51.5	71.5	56.0	75.3	75.3	: x-coord. of source (m)
-133.6	-104.3	-141.3	-99.1	-136.8	-136.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
251.0	251.0	199.0	199.0	126.0	115.0	: emission duration (s)
0.820	0.801	0.820	0.801	0.813	0.781	: total mass emitted (kg)
6.053	3.942	3.468	3.468	3.420	1.397	: sigx0 at the source (m)
15.518	16.183	19.992	19.992	13.932	13.432	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
97.6	34.2	90.8	36.7	92.9	92.9	: x-coord. of source (m)
-144.0	-93.9	-152.9	-87.4	-147.4	-147.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
251.0	251.0	199.0	199.0	126.0	115.0	: emission duration (s)
0.820	0.801	0.820	0.801	0.813	0.781	: total mass emitted (kg)
0.381	9.239	3.579	3.579	1.551	3.282	: sigx0 at the source (m)
16.652	13.859	19.972	19.972	14.261	13.100	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
73.3	58.5	63.6	63.9	68.2	68.2	: x-coord. of source (m)
-126.4	-111.5	-133.1	-107.2	-129.4	-129.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
251.0	251.0	199.0	199.0	126.0	115.0	: emission duration (s)
0.820	0.801	0.820	0.801	0.813	0.781	: total mass emitted (kg)
8.656	1.072	6.887	6.887	5.787	3.708	: sigx0 at the source (m)
14.231	16.622	19.086	19.086	13.126	12.586	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
107.3	24.5	101.7	25.8	102.8	102.8	: x-coord. of source (m)
-146.8	-91.1	-156.0	-84.3	-150.2	-150.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
251.0	251.0	199.0	199.0	126.0	115.0	: emission duration (s)
0.820	0.801	0.820	0.801	0.813	0.781	: total mass emitted (kg)
2.517	11.506	6.993	6.993	4.004	5.507	: sigx0 at the source (m)
16.465	12.044	19.047	19.047	13.775	12.331	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
88.5	43.3	80.6	46.9	83.7	83.7	: x-coord. of source (m)
-139.6	-98.3	-147.9	-92.4	-142.9	-142.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
251.0	251.0	199.0	199.0	126.0	115.0	: emission duration (s)
0.820	0.801	0.820	0.801	0.813	0.781	: total mass emitted (kg)
3.267	6.692	0.056	0.056	0.949	0.957	: sigx0 at the source (m)
16.333	15.253	20.290	20.290	14.314	13.471	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
67.7	64.2	57.3	70.2	62.4	62.4	: x-coord. of source (m)
-118.0	-119.9	-123.7	-116.6	-120.9	-120.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
251.0	251.0	199.0	199.0	126.0	115.0	: emission duration (s)
0.820	0.801	0.820	0.801	0.813	0.781	: total mass emitted (kg)
10.995	1.831	10.096	10.096	7.979	5.906	: sigx0 at the source (m)
12.511	16.556	17.600	17.600	11.922	12.145	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
61.1	70.7	49.9	77.6	55.8	55.8	: x-coord. of source (m)
-98.9	-139.0	-102.4	-137.9	-101.5	-101.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
251.0	251.0	199.0	199.0	126.0	115.0	: emission duration (s)
0.820	0.801	0.820	0.801	0.813	0.781	: total mass emitted (kg)
14.612	7.383	15.507	15.507	11.575	9.704	: sigx0 at the source (m)
7.996	14.931	13.085	13.085	8.474	9.392	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
61.5	70.4	50.3	77.2	56.1	56.1	: x-coord. of source (m)

-78.8	-159.1	-79.9	-160.4	-81.0	-81.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
251.0	251.0	199.0	199.0	126.0	115.0	: emission duration (s)
0.820	0.801	0.820	0.801	0.813	0.781	: total mass emitted (kg)
16.465	12.044	19.047	19.047	13.775	12.331	: sigx0 at the source (m)
2.517	11.506	6.993	6.993	4.004	5.507	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
63.6	68.3	52.7	74.8	58.3	58.3	: x-coord. of source (m)
-108.7	-129.2	-113.4	-126.9	-111.5	-111.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
251.0	251.0	199.0	199.0	126.0	115.0	: emission duration (s)
0.820	0.801	0.820	0.801	0.813	0.781	: total mass emitted (kg)
13.001	4.678	12.999	12.999	9.928	7.926	: sigx0 at the source (m)
10.412	15.986	15.579	15.579	10.355	10.934	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
64.3	67.6	53.4	74.0	59.0	59.0	: x-coord. of source (m)
-69.1	-168.8	-69.0	-171.3	-71.1	-71.1	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
251.0	251.0	199.0	199.0	126.0	115.0	: emission duration (s)
0.820	0.801	0.820	0.801	0.813	0.781	: total mass emitted (kg)
16.652	13.859	19.972	19.972	14.261	13.100	: sigx0 at the source (m)
0.381	9.239	3.579	3.579	1.551	3.282	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
60.4	71.4	49.1	78.3	55.0	55.0	: x-coord. of source (m)
-88.8	-149.0	-91.2	-149.2	-91.3	-91.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
251.0	251.0	199.0	199.0	126.0	115.0	: emission duration (s)
0.820	0.801	0.820	0.801	0.813	0.781	: total mass emitted (kg)
15.778	9.863	17.544	17.544	12.871	11.187	: sigx0 at the source (m)
5.338	13.422	10.194	10.194	6.335	7.564	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
6.40	4.30	5.50	5.80	5.90	5.60	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
6.40	4.30	5.50	5.80	5.90	5.60	: domain-averaged wind speed (m/s)
148.0	183.0	163.0	163.0	158.0	163.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
6.80	12.50	10.80	9.10	6.90	8.10	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
293.0	391.0	386.0	351.0	256.0	192.0	: averaging time for domain-avg data (s)
0.087	0.070	0.072	0.075	0.075	0.073	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	: P-G stability class
251.0	251.0	199.0	199.0	126.0	115.0	: averaging time for concentration (s)
1.00	1.00	1.00	1.00	1.00	1.00	: suggested receptor height (m)
0	0	0	0	0	0	: no. of distances downwind
2	2	2	2	2	2	: no. of lines-of-sight
-247.7	-247.7	-247.7	-247.7	-247.7	-247.7	: x-coord. of 1st end-point for LOS1 (m)
-68.7	-68.7	-68.7	-68.7	-68.7	-68.7	: y-coord. of 1st end-point for LOS1 (m)
189.6	189.6	189.6	189.6	189.6	189.6	: x-coord. of 2nd end-point for LOS1 (m)
173.7	173.7	173.7	173.7	173.7	173.7	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.934E+05	-9.990E+01	1.838E+05	1.506E+05	1.654E+05	1.237E+05	: LOS integrated dosage (mg-s/m**2)
-189.6	-189.6	-189.6	-189.6	-189.6	-189.6	: x-coord. of 1st end-point for LOS1 (m)
-173.7	-173.7	-173.7	-173.7	-173.7	-173.7	: y-coord. of 1st end-point for LOS1 (m)
247.7	247.7	247.7	247.7	247.7	247.7	: x-coord. of 2nd end-point for LOS1 (m)
68.7	68.7	68.7	68.7	68.7	68.7	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
2.978E+05	2.086E+05	3.166E+05	2.660E+05	4.909E+05	2.118E+05	: LOS integrated dosage (mg-s/m**2)

The Evaluation of the L8 Series Grenades (L8A1, 6 grenades, L81E6)
5 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

82b	83b	84b	85b	86b	: trial ID
5	6	6	6	6	: month
25	1	1	8	8	: day
82	82	82	82	82	: year
16	17	18	16	21	: hour
52	17	30	33	52	: minute
6	6	6	6	6	: no. of sources
-35.7	-35.7	-35.7	-35.7	-35.7	: x-coord. of source (m)
100.8	100.8	100.8	100.8	100.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.992	0.954	0.859	0.801	: total mass emitted (kg)
6.698	5.032	1.554	1.848	2.872	: sigx0 at the source (m)
15.586	16.201	16.893	16.863	16.719	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-51.4	-51.4	-51.4	-51.4	-51.4	: x-coord. of source (m)
117.5	117.5	117.5	117.5	117.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.992	0.954	0.859	0.801	: total mass emitted (kg)
0.963	0.813	4.318	4.031	8.417	: sigx0 at the source (m)
16.937	16.945	16.405	16.478	14.729	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-83.1	-83.1	-83.1	-83.1	-83.1	: x-coord. of source (m)
130.3	130.3	130.3	130.3	130.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.992	0.954	0.859	0.801	: total mass emitted (kg)
7.634	9.176	11.942	11.730	14.653	: sigx0 at the source (m)
15.149	14.268	12.048	12.255	8.547	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-28.0	-28.0	-28.0	-28.0	-28.0	: x-coord. of source (m)
45.5	45.5	45.5	45.5	45.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.992	0.954	0.859	0.801	: total mass emitted (kg)
16.245	15.645	13.939	14.106	10.962	: sigx0 at the source (m)
4.888	6.559	9.668	9.424	12.947	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-26.8	-26.8	-26.8	-26.8	-26.8	: x-coord. of source (m)
79.7	79.7	79.7	79.7	79.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.992	0.954	0.859	0.801	: total mass emitted (kg)
11.624	10.269	7.237	7.504	3.020	: sigx0 at the source (m)
12.355	13.503	15.343	15.214	16.693	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-25.6	-25.6	-25.6	-25.6	-25.6	: x-coord. of source (m)
56.8	56.8	56.8	56.8	56.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.992	0.954	0.859	0.801	: total mass emitted (kg)
15.149	14.268	12.048	12.255	8.547	: sigx0 at the source (m)
7.634	9.176	11.942	11.730	14.653	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
2.60	4.40	4.90	6.20	4.80	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
2.60	4.40	4.90	6.20	4.80	: domain-averaged wind speed (m/s)
337.0	343.0	355.0	354.0	10.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
22.10	10.50	11.40	12.70	15.70	: domain-averaged sigma-theta (deg)
5.00	3.00	2.50	3.80	2.60	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
300.0	300.0	300.0	300.0	300.0	: averaging time for domain-avg data (s)
0.096	0.074	0.059	0.102	0.051	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: Inverse Monin-Obukhov length (1/m)

0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	: P-G stability class
300.0	300.0	300.0	300.0	300.0	: averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	: suggested receptor height (m)
0	0	0	0	0	: no. of distances downwind
3	3	3	3	3	: no. of lines-of-sight
-173.8	-173.8	-173.8	-173.8	-173.8	: x-coord. of 1st end-point for LOSi (m)
-205.7	-205.7	-205.7	-205.7	-205.7	: y-coord. of 1st end-point for LOSi (m)
356.0	356.0	356.0	356.0	356.0	: x-coord. of 2nd end-point for LOSi (m)
76.0	76.0	76.0	76.0	76.0	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
4.200E+04	3.000E+04	4.500E+04	4.800E+04	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-197.3	-197.3	-197.3	-197.3	-197.3	: x-coord. of 1st end-point for LOSi (m)
-161.5	-161.5	-161.5	-161.5	-161.5	: y-coord. of 1st end-point for LOSi (m)
332.5	332.5	332.5	332.5	332.5	: x-coord. of 2nd end-point for LOSi (m)
120.2	120.2	120.2	120.2	120.2	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
6.200E+04	5.000E+04	7.400E+04	5.900E+04	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-220.7	-220.7	-220.7	-220.7	-220.7	: x-coord. of 1st end-point for LOSi (m)
-117.4	-117.4	-117.4	-117.4	-117.4	: y-coord. of 1st end-point for LOSi (m)
309.0	309.0	309.0	309.0	309.0	: x-coord. of 2nd end-point for LOSi (m)
164.3	164.3	164.3	164.3	164.3	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.150E+05	1.240E+05	1.540E+05	9.800E+04	1.240E+05	: LOS integrated dosage (mg-s/m**2)

The Evaluation of the L8 Series Grenades (L8A1, 8 grenades, L81E8)

6 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

B7b	B8b	B9b	B10b	B11b	B12b	: trial ID
6	6	6	6	6	6	: month
7	7	7	7	7	7	: day
82	82	82	82	82	82	: year
16	19	1	22	20	21	: hour
12	5	29	41	51	51	: minute
7	8	8	8	8	8	: no. of sources
62.6	62.6	-35.7	62.6	62.6	62.6	: x-coord. of source (m)
-73.5	-73.5	100.8	-73.5	-73.5	-73.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.897	0.801	0.782	0.763	0.763	0.763	: total mass emitted (kg)
11.624	7.369	7.769	4.031	4.603	1.848	: sigx0 at the source (m)
12.355	15.280	15.081	16.478	16.327	16.863	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
51.4	51.4	-46.9	51.4	51.4	51.4	: x-coord. of source (m)
-60.4	-60.4	113.9	-60.4	-60.4	-60.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.897	0.801	0.782	0.763	0.763	0.763	: total mass emitted (kg)
8.031	11.072	3.601	8.158	8.672	2.579	: sigx0 at the source (m)
14.943	12.852	16.577	14.873	14.580	16.767	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
37.2	37.2	-61.1	37.2	37.2	37.2	: x-coord. of source (m)
-50.6	-50.6	123.6	-50.6	-50.6	-50.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.897	0.801	0.782	0.763	0.763	0.763	: total mass emitted (kg)
3.889	14.022	0.813	11.730	12.150	6.831	: sigx0 at the source (m)
16.512	9.548	16.945	12.255	11.838	15.528	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
20.9	20.9	-77.4	20.9	20.9	20.9	: x-coord. of source (m)
-44.9	-44.9	129.4	-44.9	-44.9	-44.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.897	0.801	0.782	0.763	0.763	0.763	: total mass emitted (kg)
0.517	16.015	5.170	14.502	14.800	10.617	: sigx0 at the source (m)
16.956	5.594	16.157	8.802	8.290	13.231	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
68.0	68.0	-30.3	68.0	68.0	68.0	: x-coord. of source (m)
-83.6	-83.6	90.6	-83.6	-83.6	-83.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.897	0.801	0.782	0.763	0.763	0.763	: total mass emitted (kg)
13.593	4.603	10.269	1.108	1.698	4.748	: sigx0 at the source (m)
10.149	16.327	13.503	16.928	16.879	16.286	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
72.7	72.6	-25.7	72.6	72.6	72.6	: x-coord. of source (m)
-117.5	-100.2	74.0	-100.2	-100.2	-100.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.897	0.801	0.782	0.763	0.763	0.763	: total mass emitted (kg)
16.847	0.221	13.414	3.311	2.728	8.802	: sigx0 at the source (m)
1.993	16.963	10.385	16.638	16.743	14.502	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
68.4	72.7	-25.6	72.7	72.7	72.7	: x-coord. of source (m)
-134.1	-117.5	56.8	-117.5	-117.5	-117.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.897	0.801	0.782	0.763	0.763	0.763	: total mass emitted (kg)
16.788	4.177	15.645	7.504	6.969	12.255	: sigx0 at the source (m)
2.435	16.442	6.559	15.214	15.467	11.730	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	68.4	-29.9	68.4	68.4	68.4	: x-coord. of source (m)
-99.9	-134.1	40.1	-134.1	-134.1	-134.1	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.897	0.801	0.782	0.763	0.763	0.763	: total mass emitted (kg)
-99.900	8.290	16.809	11.186	10.734	14.873	: sigx0 at the source (m)
-99.900	14.800	2.286	12.753	13.136	8.158	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)

-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
1.70	4.00	5.10	7.30	6.70	7.50	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
1.70	4.00	5.10	7.30	6.70	7.50	: domain-averaged wind speed (m/s)
137.0	206.0	333.0	194.0	196.0	174.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
27.00	22.40	7.10	12.30	15.50	9.20	: domain-averaged sigma-theta (deg)
9.20	4.10	2.80	2.20	3.90	2.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for domain-avg data (s)
0.119	0.134	0.131	0.106	0.084	0.069	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: Inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	: P-G stability class
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	2.00	: suggested receptor height (m)
0	0	0	0	0	0	: no. of distances downwind
5	5	5	5	5	5	: no. of lines-of-sight
-173.8	-173.8	-173.8	-173.8	-173.8	-173.8	: x-coord. of 1st end-point for LOSi (m)
-205.7	-205.7	-205.7	-205.7	-205.7	-205.7	: y-coord. of 1st end-point for LOSi (m)
356.0	356.0	356.0	356.0	356.0	356.0	: x-coord. of 2nd end-point for LOSi (m)
76.0	76.0	76.0	76.0	76.0	76.0	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	8.800E+04	-9.990E+01	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-197.3	-197.3	-197.3	-197.3	-197.3	-197.3	: x-coord. of 1st end-point for LOSi (m)
-161.5	-161.5	-161.5	-161.5	-161.5	-161.5	: y-coord. of 1st end-point for LOSi (m)
332.5	332.5	332.5	332.5	332.5	332.5	: x-coord. of 2nd end-point for LOSi (m)
120.2	120.2	120.2	120.2	120.2	120.2	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	8.800E+04	-9.990E+01	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-220.7	-220.7	-220.7	-220.7	-220.7	-220.7	: x-coord. of 1st end-point for LOSi (m)
-117.4	-117.4	-117.4	-117.4	-117.4	-117.4	: y-coord. of 1st end-point for LOSi (m)
309.0	309.0	309.0	309.0	309.0	309.0	: x-coord. of 2nd end-point for LOSi (m)
164.3	164.3	164.3	164.3	164.3	164.3	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
8.200E+04	1.440E+05	1.300E+05	2.170E+05	1.850E+05	1.880E+05	: LOS integrated dosage (mg-s/m**2)
-244.2	-244.2	-244.2	-244.2	-244.2	-244.2	: x-coord. of 1st end-point for LOSi (m)
-73.2	-73.2	-73.2	-73.2	-73.2	-73.2	: y-coord. of 1st end-point for LOSi (m)
285.6	285.6	285.6	285.6	285.6	285.6	: x-coord. of 2nd end-point for LOSi (m)
208.5	208.5	208.5	208.5	208.5	208.5	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
2.400E+04	-9.990E+01	-9.990E+01	1.550E+05	1.180E+05	1.220E+05	: LOS integrated dosage (mg-s/m**2)
-267.7	-267.7	-267.7	-267.7	-267.7	-267.7	: x-coord. of 1st end-point for LOSi (m)
-29.1	-29.1	-29.1	-29.1	-29.1	-29.1	: y-coord. of 1st end-point for LOSi (m)
262.1	262.1	262.1	262.1	262.1	262.1	: x-coord. of 2nd end-point for LOSi (m)
252.6	252.6	252.6	252.6	252.6	252.6	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
8.400E+03	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	5.900E+04	: LOS integrated dosage (mg-s/m**2)

The Evaluation of the L8 Series Grenades (L8A1, 12 grenades, L81E2)
6 : number of trials included in DUA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

B13b	B14b	B15b	B16b	B17b	B18b	
5	5	6	6	6	6	: month
25	26	1	1	8	8	: day
82	82	82	82	82	82	: year
18	13	20	21	19	18	: hour
19	24	10	32	16	10	: minute
12	12	11	12	12	12	: no. of sources
-35.7	62.6	-35.7	62.6	-35.7	-35.7	: x-coord. of source (m)
100.8	-73.5	100.8	-73.5	100.8	100.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.840	0.859	0.897	0.973	0.840	0.840	: total mass emitted (kg)
10.032	6.425	1.554	7.769	0.075	9.053	: sigx0 at the source (m)
13.680	15.700	16.893	15.081	16.964	14.346	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-51.4	46.9	-51.4	46.9	-51.4	-51.4	: x-coord. of source (m)
117.5	-56.7	117.5	-56.7	117.5	117.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.840	0.859	0.897	0.973	0.840	0.840	: total mass emitted (kg)
4.748	0.667	4.318	2.142	5.731	3.601	: sigx0 at the source (m)
16.286	16.951	16.405	16.828	15.967	16.577	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-71.8	26.5	-71.8	26.5	-71.8	-71.8	: x-coord. of source (m)
127.9	-46.3	127.9	-46.3	127.9	127.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.840	0.859	0.897	0.973	0.840	0.840	: total mass emitted (kg)
1.108	5.170	9.668	3.743	10.846	2.286	: sigx0 at the source (m)
16.928	16.157	13.939	16.546	13.043	16.809	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-42.8	55.5	-42.8	55.5	-42.8	-42.8	: x-coord. of source (m)
109.8	-64.4	109.8	-64.4	109.8	109.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.840	0.859	0.897	0.973	0.840	0.840	: total mass emitted (kg)
7.504	3.601	1.403	5.032	2.872	6.425	: sigx0 at the source (m)
15.214	16.577	16.906	16.201	16.719	15.700	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-83.1	15.3	-83.1	15.3	-83.1	-83.1	: x-coord. of source (m)
130.3	-43.9	130.3	-43.9	130.3	130.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.840	0.859	0.897	0.973	0.840	0.840	: total mass emitted (kg)
4.031	7.898	11.942	6.559	12.947	5.170	: sigx0 at the source (m)
16.478	15.014	12.048	15.645	10.962	16.157	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-61.1	37.2	-61.1	37.2	-61.1	-61.1	: x-coord. of source (m)
123.6	-50.6	123.6	-50.6	123.6	123.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.840	0.859	0.897	0.973	0.840	0.840	: total mass emitted (kg)
1.848	2.286	7.101	0.813	8.417	0.667	: sigx0 at the source (m)
16.863	16.809	15.406	16.945	14.729	16.951	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-30.3	68.0	-25.2	68.0	-30.3	-30.3	: x-coord. of source (m)
90.6	-83.6	68.3	-83.6	90.6	90.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.840	0.859	0.897	0.973	0.840	0.840	: total mass emitted (kg)
12.255	9.051	9.792	10.269	3.020	11.407	: sigx0 at the source (m)
11.730	14.346	13.853	13.503	16.693	12.556	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-25.2	73.1	-28.0	73.1	-25.2	-25.2	: x-coord. of source (m)
68.3	-106.0	45.5	-106.0	68.3	68.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.840	0.859	0.897	0.973	0.840	0.840	: total mass emitted (kg)
15.528	13.414	13.939	14.268	8.547	15.014	: sigx0 at the source (m)
6.831	10.385	9.668	9.176	14.653	7.898	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-28.0	70.3	-26.8	70.3	-28.0	-28.0	: x-coord. of source (m)

45.5	-128.7	79.7	-128.7	45.5	45.5	y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	emission duration (s)
0.840	0.859	0.897	0.973	0.840	0.840	total mass emitted (kg)
16.928	16.157	7.237	16.546	13.043	16.809	sigx0 at the source (m)
1.108	5.170	15.343	3.743	10.846	2.286	sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	sigz0 at the source (m)
-26.8	71.5	-32.3	71.5	-26.8	-26.8	x-coord. of source (m)
79.7	-94.6	34.9	-94.6	79.7	79.7	y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	emission duration (s)
0.840	0.859	0.897	0.973	0.840	0.840	total mass emitted (kg)
14.106	11.407	15.406	12.458	5.873	13.414	sigx0 at the source (m)
9.424	12.556	7.101	11.514	15.915	10.385	sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	sigz0 at the source (m)
-32.3	66.0	-25.6	66.0	-32.3	-32.3	x-coord. of source (m)
34.9	-139.4	56.8	-139.4	34.9	34.9	y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	emission duration (s)
0.840	0.859	0.897	0.973	0.840	0.840	total mass emitted (kg)
16.863	16.809	12.048	16.945	14.729	16.951	sigx0 at the source (m)
1.848	2.286	11.942	0.813	8.417	0.667	sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	sigz0 at the source (m)
-25.6	72.7	-99.9	72.7	-25.6	-25.6	x-coord. of source (m)
56.8	-117.5	-99.9	-117.5	56.8	56.8	y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	emission duration (s)
0.840	0.859	0.897	0.973	0.840	0.840	total mass emitted (kg)
16.478	15.014	-99.900	15.645	10.962	16.157	sigx0 at the source (m)
4.031	7.898	-99.900	6.559	12.947	5.170	sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	measuring height for temperature #2 (m)
3.40	4.00	5.60	4.60	4.20	5.50	wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	measuring height for wind data (m)
3.40	4.00	5.60	4.60	4.20	5.50	domain-averaged wind speed (m/s)
324.0	158.0	355.0	153.0	360.0	328.0	domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	domain-averaged sigma-u (m/s)
18.60	16.60	9.00	6.50	26.40	14.70	domain-averaged sigma-theta (deg)
3.40	2.80	3.40	2.60	5.20	3.10	domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	measuring ht for domain-avg wind speed (m)
300.0	300.0	300.0	300.0	300.0	300.0	averaging time for domain-avg data (s)
0.093	0.140	0.076	0.046	0.084	0.077	wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	albedo
0.50	0.50	0.50	0.50	0.50	0.50	moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	cloud cover (%)
-99	-99	-99	-99	-99	-99	P-G stability class
300.0	300.0	300.0	300.0	300.0	300.0	averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	2.00	suggested receptor height (m)
0	0	0	0	0	0	no. of distances downwind
5	5	5	5	5	5	no. of lines-of-sight
-173.8	-173.8	-173.8	-173.8	-173.8	-173.8	x-coord. of 1st end-point for LOS1 (m)
-205.7	-205.7	-205.7	-205.7	-205.7	-205.7	y-coord. of 1st end-point for LOS1 (m)
356.0	356.0	356.0	356.0	356.0	356.0	x-coord. of 2nd end-point for LOS1 (m)
76.0	76.0	76.0	76.0	76.0	76.0	y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	LOS integrated conc. (mg/m**2)
7.700E+04	-9.990E+01	1.060E+05	-9.990E+01	-9.990E+01	5.900E+04	LOS integrated dosage (mg-s/m**2)
-197.3	-197.3	-197.3	-197.3	-197.3	-197.3	x-coord. of 1st end-point for LOS1 (m)
-161.5	-161.5	-161.5	-161.5	-161.5	-161.5	y-coord. of 1st end-point for LOS1 (m)
332.5	332.5	332.5	332.5	332.5	332.5	x-coord. of 2nd end-point for LOS1 (m)
120.2	120.2	120.2	120.2	120.2	120.2	y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	LOS integrated conc. (mg/m**2)
1.230E+05	-9.990E+01	1.430E+05	-9.990E+01	9.200E+04	8.600E+04	LOS integrated dosage (mg-s/m**2)
-220.7	-220.7	-220.7	-220.7	-220.7	-220.7	x-coord. of 1st end-point for LOS1 (m)
-117.4	-117.4	-117.4	-117.4	-117.4	-117.4	y-coord. of 1st end-point for LOS1 (m)
309.0	309.0	309.0	309.0	309.0	309.0	x-coord. of 2nd end-point for LOS1 (m)
164.3	164.3	164.3	164.3	164.3	164.3	y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	LOS integrated conc. (mg/m**2)
2.560E+05	3.580E+05	2.450E+05	2.840E+05	2.000E+05	1.740E+05	LOS integrated dosage (mg-s/m**2)
-244.2	-244.2	-244.2	-244.2	-244.2	-244.2	x-coord. of 1st end-point for LOS1 (m)
-73.2	-73.2	-73.2	-73.2	-73.2	-73.2	y-coord. of 1st end-point for LOS1 (m)
285.6	285.6	285.6	285.6	285.6	285.6	x-coord. of 2nd end-point for LOS1 (m)

```
     208.5      208.5      208.5      208.5      208.5      208.5 : y-coord. of 2nd end-point for LOS1 (m)
     -99.9      -99.9      -99.9      -99.9      -99.9      -99.9 : LOS integrated conc. (mg/m**2)
-9.990E+01  2.370E+05 -9.990E+01  2.890E+05 -9.990E+01 -9.990E+01 : LOS integrated dosage (mg-s/m**2)
    -267.7     -267.7     -267.7     -267.7     -267.7     -267.7 : x-coord. of 1st end-point for LOS1 (m)
     -29.1      -29.1      -29.1      -29.1      -29.1      -29.1 : y-coord. of 1st end-point for LOS1 (m)
     262.1      262.1      262.1      262.1      262.1      262.1 : x-coord. of 2nd end-point for LOS1 (m)
     252.6      252.6      252.6      252.6      252.6      252.6 : y-coord. of 2nd end-point for LOS1 (m)
     -99.9      -99.9      -99.9      -99.9      -99.9      -99.9 : LOS integrated conc. (mg/m**2)
-9.990E+01  1.600E+05 -9.990E+01  1.530E+05 -9.990E+01 -9.990E+01 : LOS integrated dosage (mg-s/m**2)
```

The Evaluation of the L8 Series Grenades (L8A1, low condition temp., L81EL)

5 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

B2a	B7a	B8a	B13a	B14a	:	
5	6	6	5	5	:	month
25	7	7	25	26	:	day
82	82	82	82	82	:	year
16	16	19	18	13	:	hour
52	12	5	19	29	:	minute
6	7	8	12	12	:	no. of sources
-35.7	62.6	62.6	-35.7	62.6	:	x-coord. of source (m)
100.8	-73.5	-73.5	100.8	-73.5	:	y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	:	source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	:	emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	:	emission duration (s)
0.859	0.897	0.801	0.840	0.859	:	total mass emitted (kg)
6.698	11.624	7.369	10.032	6.425	:	sigx0 at the source (m)
15.586	12.355	15.280	13.680	15.700	:	sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	:	sigz0 at the source (m)
-51.4	51.4	51.4	-51.4	46.9	:	x-coord. of source (m)
117.5	-60.4	-60.4	117.5	-56.7	:	y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	:	source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	:	emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	:	emission duration (s)
0.859	0.897	0.801	0.840	0.859	:	total mass emitted (kg)
0.963	8.031	11.072	4.748	0.667	:	sigx0 at the source (m)
16.937	14.943	12.852	16.286	16.951	:	sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	:	sigz0 at the source (m)
-83.1	37.2	37.2	-71.8	26.5	:	x-coord. of source (m)
130.3	-50.6	-50.6	127.9	-46.3	:	y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	:	source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	:	emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	:	emission duration (s)
0.859	0.897	0.801	0.840	0.859	:	total mass emitted (kg)
7.634	3.889	14.022	1.108	5.170	:	sigx0 at the source (m)
15.149	16.512	9.548	16.928	16.157	:	sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	:	sigz0 at the source (m)
-28.0	20.9	20.9	-42.8	55.5	:	x-coord. of source (m)
45.5	-44.9	-44.9	109.8	-64.4	:	y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	:	source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	:	emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	:	emission duration (s)
0.859	0.897	0.801	0.840	0.859	:	total mass emitted (kg)
16.245	0.517	16.015	7.504	3.601	:	sigx0 at the source (m)
4.888	16.956	5.594	15.214	16.577	:	sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	:	sigz0 at the source (m)
-26.8	68.0	68.0	-83.1	15.3	:	x-coord. of source (m)
79.7	-83.6	-83.6	130.3	-43.9	:	y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	:	source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	:	emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	:	emission duration (s)
0.859	0.897	0.801	0.840	0.859	:	total mass emitted (kg)
11.624	13.593	4.603	4.031	7.898	:	sigx0 at the source (m)
12.355	10.149	16.327	16.478	15.014	:	sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	:	sigz0 at the source (m)
-25.6	72.7	72.6	-61.1	37.2	:	x-coord. of source (m)
56.8	-117.5	-100.2	123.6	-50.6	:	y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	:	source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	:	emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	:	emission duration (s)
0.859	0.897	0.801	0.840	0.859	:	total mass emitted (kg)
15.149	16.847	0.221	1.848	2.286	:	sigx0 at the source (m)
7.634	1.993	16.963	16.863	16.809	:	sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	:	sigz0 at the source (m)
-99.9	68.4	72.7	-30.3	68.0	:	x-coord. of source (m)
-99.9	-134.1	-117.5	90.6	-83.6	:	y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	:	source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	:	emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	:	emission duration (s)
0.859	0.897	0.801	0.840	0.859	:	total mass emitted (kg)
-99.900	16.788	4.177	12.255	9.053	:	sigx0 at the source (m)
-99.900	2.435	16.442	11.730	14.346	:	sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	:	sigz0 at the source (m)
-99.9	-99.9	68.4	-25.2	73.1	:	x-coord. of source (m)
-99.9	-99.9	-134.1	68.3	-106.0	:	y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	:	source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	:	emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	:	emission duration (s)
0.859	0.897	0.801	0.840	0.859	:	total mass emitted (kg)
-99.900	-99.900	8.290	15.528	13.414	:	sigx0 at the source (m)
-99.900	-99.900	14.800	6.831	10.385	:	sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	:	sigz0 at the source (m)
-99.9	-99.9	-99.9	-28.0	70.3	:	x-coord. of source (m)

-99.9	-99.9	-99.9	45.5	-128.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.897	0.801	0.840	0.859	: total mass emitted (kg)
99.900	99.900	-99.900	16.928	16.157	: sigx0 at the source (m)
-99.900	-99.900	-99.900	1.108	5.170	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-26.8	71.5	: x-coord. of source (m)
-99.9	-99.9	-99.9	79.7	-94.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.897	0.801	0.840	0.859	: total mass emitted (kg)
-99.900	-99.900	-99.900	14.106	11.407	: sigx0 at the source (m)
-99.900	-99.900	-99.900	9.424	12.556	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-32.3	66.0	: x-coord. of source (m)
-99.9	-99.9	-99.9	34.9	-139.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.897	0.801	0.840	0.859	: total mass emitted (kg)
-99.900	-99.900	-99.900	16.863	16.809	: sigx0 at the source (m)
-99.900	-99.900	-99.900	1.848	2.286	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-25.6	72.7	: x-coord. of source (m)
-99.9	-99.9	-99.9	56.8	-117.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.897	0.801	0.840	0.859	: total mass emitted (kg)
99.900	-99.900	-99.900	16.478	15.014	: sigx0 at the source (m)
-99.900	-99.900	-99.900	4.031	7.898	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
2.50	1.70	4.00	3.40	4.00	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
2.60	1.70	4.00	3.40	4.00	: domain-averaged wind speed (m/s)
137.0	137.0	206.0	324.0	158.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
22.10	27.00	22.40	18.60	16.60	: domain-averaged sigma-theta (deg)
5.00	9.20	4.10	3.40	2.80	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
300.0	300.0	300.0	300.0	300.0	: averaging time for domain-avg data (s)
0.096	0.119	0.134	0.093	0.140	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	: Bowen ratio
-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	: P-G stability class
300.0	300.0	300.0	300.0	300.0	: averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	: suggested receptor height (m)
0	0	0	0	0	: no. of distances downwind
5	5	5	5	5	: no. of lines-of-sight
-173.8	-173.8	-173.8	-173.8	-173.8	: x-coord. of 1st end-point for LOS1 (m)
-205.7	-205.7	-205.7	-205.7	-205.7	: y-coord. of 1st end-point for LOS1 (m)
356.0	356.0	356.0	356.0	356.0	: x-coord. of 2nd end-point for LOS1 (m)
76.0	76.0	76.0	76.0	76.0	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
4.200E+04	-9.990E+01	-9.990E+01	7.700E+04	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-197.3	-197.3	-197.3	-197.3	-197.3	: x-coord. of 1st end-point for LOS1 (m)
-161.5	-161.5	-161.5	-161.5	-161.5	: y-coord. of 1st end-point for LOS1 (m)
332.5	332.5	332.5	332.5	332.5	: x-coord of 2nd end-point for LOS1 (m)
120.2	120.2	120.2	120.2	120.2	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
6.200E+04	-9.990E+01	9.990E+01	1.230E+05	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-220.7	-220.7	-220.7	-220.7	-220.7	: x-coord. of 1st end-point for LOS1 (m)
-117.4	-117.4	-117.4	-117.4	-117.4	: y-coord. of 1st end-point for LOS1 (m)
309.0	309.0	309.0	309.0	309.0	: x-coord. of 2nd end-point for LOS1 (m)
164.3	164.3	164.3	164.3	164.3	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.150E+05	8.200E+04	1.440E+05	2.560E+05	3.580E+05	: LOS integrated dosage (mg-s/m**2)
-244.2	-244.2	-244.2	-244.2	-244.2	: x-coord. of 1st end-point for LOS1 (m)
-73.2	-73.2	-73.2	-73.2	-73.2	: y-coord. of 1st end-point for LOS1 (m)
285.6	285.6	285.6	285.6	285.6	: x coord. of 2nd end-point for LOS1 (m)

208.5	208.5	208.5	208.5	208.5	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	2.400E+04	-9.990E+01	-9.990E+01	2.370E+05	: LOS integrated dosage (mg-s/m**2)
-267.7	-267.7	-267.7	-267.7	-267.7	: x-coord. of 1st end-point for LOS1 (m)
-29.1	-29.1	-29.1	-29.1	-29.1	: y-coord. of 1st end-point for LOS1 (m)
262.1	262.1	262.1	262.1	262.1	: x-coord. of 2nd end-point for LOS1 (m)
252.6	252.6	252.6	252.6	252.6	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	8.400E+03	-9.990E+01	-9.990E+01	1.600E+05	: LOS integrated dosage (mg-s/m**2)

The Evaluation of the L8 Series Grenades (L8A1, medium condition temp., L81EM)

6 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

B3a	B4a	B9a	B10a	B15a	B16a	: trial ID
6	6	6	6	6	6	: month
1	1	7	7	1	1	: day
82	82	82	82	82	82	: year
17	18	1	22	20	21	: hour
17	30	29	41	10	32	: minute
6	6	8	8	11	12	: no. of sources
-35.7	-35.7	-35.7	62.6	-35.7	62.6	: x-coord. of source (m)
100.8	100.8	100.8	-73.5	100.8	-73.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.992	0.954	0.782	0.763	0.897	0.973	: total mass emitted (kg)
5.032	1.554	7.769	4.031	1.554	7.769	: sigx0 at the source (m)
16.201	16.893	15.081	16.478	16.893	15.081	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-51.4	-51.4	-46.9	51.4	-51.4	46.9	: x-coord. of source (m)
117.5	117.5	113.9	-60.4	117.5	-56.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.992	0.954	0.782	0.763	0.897	0.973	: total mass emitted (kg)
0.813	4.318	3.601	8.158	4.318	2.142	: sigx0 at the source (m)
16.945	16.405	16.577	14.873	16.405	16.828	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-83.1	-83.1	-61.1	37.2	-71.8	26.5	: x-coord. of source (m)
130.3	130.3	123.6	-50.6	127.9	-46.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.992	0.954	0.782	0.763	0.897	0.973	: total mass emitted (kg)
9.176	11.942	0.813	11.730	9.668	3.743	: sigx0 at the source (m)
14.268	12.048	16.945	12.255	13.939	16.546	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-28.0	-28.0	-77.4	20.9	-42.8	55.5	: x-coord. of source (m)
45.5	45.5	129.4	-44.9	109.8	-64.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.992	0.954	0.782	0.763	0.897	0.973	: total mass emitted (kg)
15.645	13.939	5.170	14.502	1.403	5.032	: sigx0 at the source (m)
6.559	9.668	16.157	8.802	16.906	16.201	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-26.8	-26.8	-30.3	68.0	-83.1	15.3	: x-coord. of source (m)
79.7	79.7	90.6	-83.6	130.3	-43.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.992	0.954	0.782	0.763	0.897	0.973	: total mass emitted (kg)
10.269	7.237	10.269	1.108	11.942	6.559	: sigx0 at the source (m)
13.503	15.343	13.503	16.928	12.048	15.645	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-25.6	-25.6	-25.7	72.6	-61.1	37.2	: x-coord. of source (m)
56.8	56.8	74.0	-100.2	123.6	-50.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.992	0.954	0.782	0.763	0.897	0.973	: total mass emitted (kg)
14.268	12.048	13.414	3.311	7.101	0.813	: sigx0 at the source (m)
9.176	11.942	10.385	16.638	15.406	16.945	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-25.6	72.7	-25.2	68.0	: x-coord. of source (m)
-99.9	-99.9	56.8	-117.5	68.3	-83.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.992	0.954	0.782	0.763	0.897	0.973	: total mass emitted (kg)
-99.900	-99.900	15.645	7.504	9.792	10.269	: sigx0 at the source (m)
-99.900	-99.900	6.559	15.214	13.853	13.503	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-29.9	68.4	-28.0	73.1	: x-coord. of source (m)
-99.9	-99.9	40.1	-134.1	45.5	-106.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.992	0.954	0.782	0.763	0.897	0.973	: total mass emitted (kg)
-99.900	-99.900	16.809	11.186	13.939	14.268	: sigx0 at the source (m)
-99.900	-99.900	2.286	12.753	9.668	9.176	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-26.8	70.3	: x-coord. of source (m)

-99.9	-99.9	-99.9	-99.9	79.7	-128.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.992	0.954	0.782	0.763	0.897	0.973	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	7.237	16.546	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	15.343	3.743	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-32.3	71.5	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	34.9	-94.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.992	0.954	0.782	0.763	0.897	0.973	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	15.406	12.458	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	7.101	11.514	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-25.6	66.0	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	56.8	-139.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.992	0.954	0.782	0.763	0.897	0.973	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	12.048	16.945	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	11.942	0.813	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	72.7	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-117.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.992	0.954	0.782	0.763	0.897	0.973	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	-99.900	15.645	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	-99.900	6.559	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
4.40	4.90	5.10	7.30	5.60	4.60	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
4.40	4.90	5.10	7.30	5.60	4.60	: domain-averaged wind speed (m/s)
343.0	355.0	333.0	194.0	355.0	153.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
10.50	11.40	7.10	12.30	9.00	6.50	: domain-averaged sigma-theta (deg)
3.00	2.50	2.80	2.20	3.40	2.60	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for domain-avg data (s)
0.074	0.059	0.131	0.106	0.076	0.046	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	: P-G stability class
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	2.00	: suggested receptor height (m)
0	0	0	0	0	0	: no. of distances downwind
5	5	5	5	5	5	: no. of lines-of-sight
-173.8	-173.8	-173.8	-173.8	-173.8	-173.8	: x-coord. of 1st end-point for LOS1 (m)
-205.7	-205.7	-205.7	-205.7	-205.7	-205.7	: y-coord. of 1st end-point for LOS1 (m)
356.0	356.0	356.0	356.0	356.0	356.0	: x-coord. of 2nd end-point for LOS1 (m)
76.0	76.0	76.0	76.0	76.0	76.0	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
3.000E+04	4.500E+04	8.800E+04	-9.990E+01	1.060E+05	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-197.3	-197.3	-197.3	-197.3	-197.3	-197.3	: x-coord. of 1st end-point for LOS1 (m)
-161.5	-161.5	-161.5	-161.5	-161.5	-161.5	: y-coord. of 1st end-point for LOS1 (m)
332.5	332.5	332.5	332.5	332.5	332.5	: x-coord. of 2nd end-point for LOS1 (m)
120.2	120.2	120.2	120.2	120.2	120.2	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
5.000E+04	7.400E+04	8.800E+04	-9.990E+01	1.430E+05	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-220.7	-220.7	-220.7	-220.7	-220.7	-220.7	: x-coord. of 1st end-point for LOS1 (m)
-117.4	-117.4	-117.4	-117.4	-117.4	-117.4	: y-coord. of 1st end-point for LOS1 (m)
309.0	309.0	309.0	309.0	309.0	309.0	: x-coord. of 2nd end-point for LOS1 (m)
164.3	164.3	164.3	164.3	164.3	164.3	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.240E+05	1.540E+05	1.300E+05	2.170E+05	2.450E+05	2.840E+05	: LOS integrated dosage (mg-s/m**2)
-244.2	-244.2	-244.2	-244.2	-244.2	-244.2	: x-coord. of 1st end-point for LOS1 (m)
-73.2	-73.2	-73.2	-73.2	-73.2	-73.2	: y-coord. of 1st end-point for LOS1 (m)
285.6	285.6	285.6	285.6	285.6	285.6	: x coord. of 2nd end-point for LOS1 (m)

208.5	208.5	208.5	208.5	208.5	208.5	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	-9.990E+01	1.550E+05	-9.990E+01	2.890E+05	: LOS integrated dosage (mg-s/m**2)
-267.7	-267.7	-267.7	-267.7	-267.7	-267.7	: x-coord. of 1st end-point for LOS1 (m)
-29.1	-29.1	-29.1	-29.1	-29.1	-29.1	: y-coord. of 1st end-point for LOS1 (m)
262.1	262.1	262.1	262.1	262.1	262.1	: x-coord. of 2nd end-point for LOS1 (m)
252.6	252.6	252.6	252.6	252.6	252.6	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	1.530E+05	: LOS integrated dosage (mg-s/m**2)

The Evaluation of the L8 Series Grenades (L8A1, high condition temp., L81EH)

6 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

B5a	B6a	B11a	B12a	B17a	B18a	: trial ID
6	6	6	6	6	6	: month
8	8	7	7	8	8	: day
82	82	82	82	82	82	: year
16	21	20	21	19	18	: hour
33	52	51	51	16	10	: minute
6	6	8	8	12	12	: no. of sources
-35.7	-35.7	62.6	62.6	-35.7	-35.7	: x-coord. of source (m)
100.8	100.8	-73.5	-73.5	100.8	100.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.801	0.763	0.763	0.840	0.840	: total mass emitted (kg)
1.848	2.872	4.603	1.848	0.075	9.053	: sigx0 at the source (m)
16.863	16.719	16.327	16.863	16.964	14.346	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-51.4	-51.4	51.4	51.4	-51.4	-51.4	: x-coord. of source (m)
117.5	117.5	-60.4	-60.4	117.5	117.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.801	0.763	0.763	0.840	0.840	: total mass emitted (kg)
4.031	8.417	8.672	2.579	5.731	3.601	: sigx0 at the source (m)
16.478	14.729	14.580	16.767	15.967	16.577	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-83.1	-83.1	37.2	37.2	-71.8	-71.8	: x-coord. of source (m)
130.3	130.3	-50.6	-50.6	127.9	127.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.801	0.763	0.763	0.840	0.840	: total mass emitted (kg)
11.730	14.653	12.150	6.831	10.846	2.286	: sigx0 at the source (m)
12.255	8.547	11.838	15.528	13.043	16.809	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-28.0	-28.0	20.9	20.9	-42.8	-42.8	: x-coord. of source (m)
45.5	45.5	-44.9	-44.9	109.8	109.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.801	0.763	0.763	0.840	0.840	: total mass emitted (kg)
14.106	10.962	14.800	10.617	2.872	6.425	: sigx0 at the source (m)
9.424	12.947	8.290	13.231	16.719	15.700	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-26.8	-26.8	68.0	68.0	-83.1	-83.1	: x-coord. of source (m)
79.7	79.7	-83.6	-83.6	130.3	130.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.801	0.763	0.763	0.840	0.840	: total mass emitted (kg)
7.504	3.020	1.698	4.748	12.947	5.170	: sigx0 at the source (m)
15.214	16.693	16.879	16.286	10.962	16.157	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-25.6	-25.6	72.6	72.6	-61.1	-61.1	: x-coord. of source (m)
56.8	56.8	-100.2	-100.2	123.6	123.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.801	0.763	0.763	0.840	0.840	: total mass emitted (kg)
12.255	8.547	2.728	8.802	8.417	0.667	: sigx0 at the source (m)
11.730	14.653	16.743	14.502	14.729	16.951	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	72.7	72.7	-30.3	-30.3	: x-coord. of source (m)
-99.9	-99.9	-117.5	-117.5	90.6	90.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.801	0.763	0.763	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	6.969	12.255	3.020	11.407	: sigx0 at the source (m)
-99.900	-99.900	15.467	11.730	16.693	12.556	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	68.4	68.4	-25.2	-25.2	: x-coord. of source (m)
-99.9	-99.9	-134.1	-134.1	68.3	68.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.801	0.763	0.763	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	10.734	14.873	8.547	15.014	: sigx0 at the source (m)
-99.900	-99.900	13.136	8.158	14.653	7.898	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-28.0	-28.0	: x-coord. of source (m)

-99.9	-99.9	-99.9	-99.9	45.5	45.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.801	0.763	0.763	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	13.043	16.809	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	10.846	2.286	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-26.8	-26.8	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	79.7	79.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.801	0.763	0.763	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	5.873	13.414	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	15.915	10.385	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-32.3	-32.3	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	34.9	34.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.801	0.763	0.763	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	14.729	16.951	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	8.417	0.667	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-25.6	-25.6	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	56.8	56.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
101.0	101.0	101.0	101.0	101.0	101.0	: emission duration (s)
0.859	0.801	0.763	0.763	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	10.962	16.157	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	12.947	5.170	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
6.20	4.80	6.70	7.50	4.20	5.50	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
6.20	4.80	6.70	7.50	4.20	5.50	: domain-averaged wind speed (m/s)
354.0	10.0	196.0	174.0	360.0	328.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
12.70	15.70	15.50	9.20	26.40	14.70	: domain-averaged sigma-theta (deg)
3.80	2.60	3.90	2.90	5.20	3.10	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for domain-avg data (s)
0.102	0.051	0.084	0.069	0.084	0.077	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	: P-G stability class
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	2.00	: suggested receptor height (m)
0	0	0	0	0	0	: no. of distances downwind
5	5	5	5	5	5	: no. of lines-of-sight
-173.8	-173.8	-173.8	-173.8	-173.8	-173.8	: x-coord. of 1st end-point for LOS1 (m)
-205.7	-205.7	-205.7	-205.7	-205.7	-205.7	: y-coord. of 1st end-point for LOS1 (m)
356.0	356.0	356.0	356.0	356.0	356.0	: x-coord. of 2nd end-point for LOS1 (m)
76.0	76.0	76.0	76.0	76.0	76.0	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
4.800E+04	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	5.900E+04	: LOS integrated dosage (mg-s/m**2)
-197.3	-197.3	-197.3	-197.3	-197.3	-197.3	: x-coord. of 1st end-point for LOS1 (m)
-161.5	-161.5	-161.5	-161.5	-161.5	-161.5	: y-coord. of 1st end-point for LOS1 (m)
332.5	332.5	332.5	332.5	332.5	332.5	: x-coord. of 2nd end-point for LOS1 (m)
120.2	120.2	120.2	120.2	120.2	120.2	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
5.900E+04	-9.990E+01	-9.990E+01	-9.990E+01	9.200E+04	8.600E+04	: LOS integrated dosage (mg-s/m**2)
-220.7	-220.7	-220.7	-220.7	-220.7	-220.7	: x-coord. of 1st end-point for LOS1 (m)
-117.4	-117.4	-117.4	-117.4	-117.4	-117.4	: y-coord. of 1st end-point for LOS1 (m)
309.0	309.0	309.0	309.0	309.0	309.0	: x-coord. of 2nd end-point for LOS1 (m)
164.3	164.3	164.3	164.3	164.3	164.3	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
9.800E+04	1.240E+05	1.850E+05	1.880E+05	2.000E+05	1.740E+05	: LOS integrated dosage (mg-s/m**2)
-244.2	-244.2	-244.2	-244.2	-244.2	-244.2	: x-coord. of 1st end-point for LOS1 (m)
-73.2	-73.2	-73.2	-73.2	-73.2	-73.2	: y-coord. of 1st end-point for LOS1 (m)
285.6	285.6	285.6	285.6	285.6	285.6	: x-coord. of 2nd end-point for LOS1 (m)

208.5	208.5	208.5	208.5	208.5	208.5	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	1.180E+05	1.220E+05	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-267.7	-267.7	-267.7	-267.7	-267.7	-267.7	: x-coord. of 1st end-point for LOS1 (m)
-29.1	-29.1	-29.1	-29.1	-29.1	-29.1	: y-coord. of 1st end-point for LOS1 (m)
262.1	262.1	262.1	262.1	262.1	262.1	: x-coord. of 2nd end-point for LOS1 (m)
252.6	252.6	252.6	252.6	252.6	252.6	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	-9.990E+01	5.900E+04	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)

The Evaluation of the L8 Series Grenades (Reworked L8A1, 6 grenades, L81R6)

6 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

B19b	B20b	B21b	B22b	B23b	B24b	: trial ID
5	5	6	6	6	6	: month
25	25	1	1	8	8	: day
82	82	82	82	82	82	: year
15	16	17	18	16	20	: hour
28	27	31	2	57	59	: minute
4	6	6	5	6	5	: no. of sources
-37.4	-37.4	-37.4	-37.4	-37.4	-37.4	: x-coord. of source (m)
99.7	99.7	99.7	99.7	99.7	99.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.916	0.859	0.973	0.954	0.859	0.820	: total mass emitted (kg)
8.624	5.075	7.476	0.932	5.687	5.330	: sigx0 at the source (m)
16.162	17.602	16.724	18.295	17.414	17.526	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-52.6	-52.6	-52.6	-52.6	-52.6	-83.3	: x-coord. of source (m)
115.9	115.9	115.9	115.9	115.9	128.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.916	0.859	0.973	0.954	0.859	0.820	: total mass emitted (kg)
2.576	1.251	1.305	7.133	0.612	16.852	: sigx0 at the source (m)
18.137	18.276	18.272	16.873	18.309	7.183	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-83.3	-83.3	-83.3	-83.3	-83.3	-29.9	: x-coord. of source (m)
128.3	128.3	128.3	128.3	128.3	46.1	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.916	0.859	0.973	0.954	0.859	0.820	: total mass emitted (kg)
6.837	10.221	8.006	14.614	9.685	10.000	: sigx0 at the source (m)
16.995	15.202	16.477	11.046	15.550	15.349	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-28.7	-29.9	-29.9	-29.9	-29.9	-28.7	: x-coord. of source (m)
79.2	46.1	46.1	46.1	46.1	79.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.916	0.859	0.973	0.954	0.859	0.820	: total mass emitted (kg)
13.632	16.746	17.617	13.416	16.995	0.986	: sigx0 at the source (m)
12.238	7.426	5.023	12.474	6.837	18.292	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-28.7	-28.7	-28.7	-28.7	-27.6	: x-coord. of source (m)
-99.9	79.2	79.2	79.2	79.2	57.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.916	0.859	0.573	0.954	0.859	0.820	: total mass emitted (kg)
-99.900	10.790	12.745	5.382	11.300	7.183	: sigx0 at the source (m)
-99.900	14.804	13.159	17.511	14.419	16.852	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-27.6	-27.6	-99.9	-27.6	-99.9	: x-coord. of source (m)
-99.9	57.0	57.0	-99.9	57.0	-99.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.916	0.859	0.973	0.954	0.859	0.820	: total mass emitted (kg)
-99.900	15.202	16.477	-99.900	15.550	-99.900	: sigx0 at the source (m)
-99.900	10.221	8.006	-99.900	9.685	-99.900	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
2.00	2.80	4.20	4.50	5.20	5.60	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
2.00	2.80	4.20	4.50	5.20	5.60	: domain-averaged wind speed (m/s)
332.0	344.0	336.0	3.0	342.0	17.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
16.90	14.40	14.10	10.90	11.40	12.40	: domain-averaged sigma-theta (deg)
4.00	5.00	2.90	2.70	2.60	3.30	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for domain-avg data (s)
0.088	0.110	0.093	0.084	0.091	0.065	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)

0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	: P-G stability class
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	2.00	: suggested receptor height (m)
0	0	0	0	0	0	: no. of distances downwind
3	3	3	3	3	3	: no. of lines-of-sight
-173.8	-173.8	-173.8	-173.8	-173.8	-173.8	: x-coord. of 1st end-point for LOSi (m)
-205.7	-205.7	-205.7	-205.7	-205.7	-205.7	: y-coord. of 1st end-point for LOSi (m)
356.0	356.0	356.0	356.0	356.0	356.0	: x-coord. of 2nd end-point for LOSi (m)
76.0	76.0	76.0	76.0	76.0	76.0	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
7.200E+04	4.800E+04	4.500E+04	-9.990E+01	3.800E+04	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-197.3	-197.3	-197.3	-197.3	-197.3	-197.3	: x-coord. of 1st end-point for LOSi (m)
-161.5	-161.5	-161.5	-161.5	-161.5	-161.5	: y-coord. of 1st end-point for LOSi (m)
332.5	332.5	332.5	332.5	332.5	332.5	: x-coord. of 2nd end-point for LOSi (m)
120.2	120.2	120.2	120.2	120.2	120.2	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
9.100E+04	8.100E+04	6.700E+04	6.200E+04	5.000E+04	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-220.7	-220.7	-220.7	-220.7	-220.7	-220.7	: x-coord. of 1st end-point for LOSi (m)
-117.4	-117.4	-117.4	-117.4	-117.4	-117.4	: y-coord. of 1st end-point for LOSi (m)
309.0	309.0	309.0	309.0	309.0	309.0	: x-coord. of 2nd end-point for LOSi (m)
164.3	164.3	164.3	164.3	164.3	164.3	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.790E+05	1.740E+05	1.070E+05	1.280E+05	1.010E+05	1.360E+05	: LOS integrated dosage (mg-s/m**2)

The Evaluation of the L8 Series Grenades (Reworked L8A1, 8 grenades, L81R8)

6 : number of trials included in ODA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

B25b	B26b	B27b	B28b	B29b	B30b	: trial ID
6	6	6	6	6	6	: month
7	7	7	7	7	7	: day
82	82	82	82	82	82	: year
18	19	0	22	20	21	: hour
26	30	58	59	13	38	: minute
8	7	8	8	8	7	: no. of sources
60.9	60.9	60.9	60.9	60.9	60.9	: x-coord. of source (m)
-74.6	-74.6	-74.6	-74.6	-74.6	-74.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.801	0.763	0.763	0.763	0.763	0.744	: total mass emitted (kg)
6.837	0.027	7.426	4.094	1.251	7.426	: sigx0 at the source (m)
16.995	18.319	16.746	17.856	18.276	16.746	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
50.0	36.3	50.0	50.0	50.0	50.0	: x-coord. of source (m)
-61.9	-52.4	-61.9	-61.9	-61.9	-61.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.801	0.763	0.763	0.763	0.763	0.744	: total mass emitted (kg)
11.003	9.136	11.507	8.576	5.938	11.507	: sigx0 at the source (m)
14.647	15.878	14.254	16.187	17.330	14.254	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
36.3	20.5	36.3	36.3	36.3	36.3	: x-coord. of source (m)
-52.4	-46.8	-52.4	-52.4	-52.4	-52.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.801	0.763	0.763	0.763	0.763	0.744	: total mass emitted (kg)
14.419	12.934	14.804	12.474	10.221	14.804	: sigx0 at the source (m)
11.300	12.973	10.790	13.416	15.202	10.790	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
20.5	66.1	20.5	20.5	20.5	20.5	: x-coord. of source (m)
-46.8	-84.4	-46.8	-46.8	-46.8	-46.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.801	0.763	0.763	0.763	0.763	0.744	: total mass emitted (kg)
16.852	3.208	17.093	15.521	13.808	17.093	: sigx0 at the source (m)
7.183	18.036	6.590	9.731	12.039	6.590	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
66.1	70.6	66.1	66.1	66.1	66.1	: x-coord. of source (m)
-84.4	-100.5	-84.4	-84.4	-84.4	-84.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.801	0.763	0.763	0.763	0.763	0.744	: total mass emitted (kg)
3.782	7.767	4.405	0.932	1.942	4.405	: sigx0 at the source (m)
17.924	16.591	17.781	18.295	18.216	17.781	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
70.6	70.7	70.6	70.6	70.6	70.7	: x-coord. of source (m)
-100.5	-117.2	-100.5	-100.5	-100.5	-117.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.801	0.763	0.763	0.763	0.763	0.744	: total mass emitted (kg)
0.986	11.796	0.347	3.835	6.590	5.075	: sigx0 at the source (m)
18.292	14.016	18.316	17.913	17.093	17.602	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
70.7	66.6	70.7	70.7	70.7	66.6	: x-coord. of source (m)
-117.2	-133.4	-117.2	-117.2	-117.2	-133.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.801	0.763	0.763	0.763	0.763	0.744	: total mass emitted (kg)
5.687	15.022	5.075	8.341	10.790	9.458	: sigx0 at the source (m)
17.414	10.485	17.602	16.310	14.804	15.688	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
66.6	-99.9	66.6	66.6	66.6	-99.9	: x-coord. of source (m)
-133.4	-99.9	-133.4	-133.4	-133.4	-99.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.801	0.763	0.763	0.763	0.763	0.744	: total mass emitted (kg)
10.000	-99.900	9.458	12.278	14.254	-99.900	: sigx0 at the source (m)
15.349	-99.900	15.688	13.596	11.507	-99.900	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)

-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
4.60	5.80	4.50	6.70	5.00	7.70	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
4.60	5.80	4.50	6.70	5.00	7.70	: domain-averaged wind speed (m/s)
202.0	180.0	204.0	193.0	184.0	204.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
16.20	16.90	5.50	10.80	16.80	16.00	: domain-averaged sigma-theta (deg)
3.30	4.70	2.10	2.20	4.00	3.50	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for domain-avg data (s)
0.093	0.091	0.107	0.078	0.068	0.111	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	: P-G stability class
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	2.00	: suggested receptor height (m)
0	0	0	0	0	0	: no. of distances downwind
3	3	3	3	3	3	: no. of lines-of-sight
-220.7	-220.7	-220.7	-220.7	-220.7	-220.7	: x-coord. of 1st end-point for LOSi (m)
-117.4	-117.4	-117.4	-117.4	-117.4	-117.4	: y-coord. of 1st end-point for LOSi (m)
309.0	309.0	309.0	309.0	309.0	309.0	: x-coord. of 2nd end-point for LOSi (m)
164.3	164.3	164.3	164.3	164.3	164.3	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.660E+05	1.440E+05	2.090E+05	1.920E+05	1.730E+05	1.510E+05	: LOS integrated dosage (mg-s/m**2)
-244.2	-244.2	-244.2	-244.2	-244.2	-244.2	: x-coord. of 1st end-point for LOSi (m)
-73.2	-73.2	-73.2	-73.2	-73.2	-73.2	: y-coord. of 1st end-point for LOSi (m)
285.6	285.6	285.6	285.6	285.6	285.6	: x-coord. of 2nd end-point for LOSi (m)
208.5	208.5	208.5	208.5	208.5	208.5	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	8.600E+04	1.380E+05	1.290E+05	1.070E+05	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-267.7	-267.7	-267.7	-267.7	-267.7	-267.7	: x-coord. of 1st end-point for LOSi (m)
-29.1	-29.1	-29.1	-29.1	-29.1	-29.1	: y-coord. of 1st end-point for LOSi (m)
262.1	262.1	262.1	262.1	262.1	262.1	: x-coord. of 2nd end-point for LOSi (m)
252.6	252.6	252.6	252.6	252.6	252.6	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	4.500E+04	-9.990E+01	-9.990E+01	5.400E+04	-9.990E+01	: LOS integrated dosage (mg-s/m**2)

The Evaluation of the L8 Series Grenades (Reworked L8A1, 12 grenades, L81R2)

6 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.60 : longitude (deg)

B31b	B32b	B33b	B34b	B35b	B36b	: trial ID
5	5	6	6	6	6	: month
25	26	1	8	8	8	: day
82	82	82	82	82	82	: year
17	14	19	19	19	17	: hour
37	7	28	45	35	29	: minute
12	11	12	12	12	12	: no. of sources
-37.4	60.9	-37.4	-37.4	-37.4	-37.4	: x-coord. of source (m)
99.7	-74.6	99.7	99.7	99.7	99.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.840	0.840	0.897	0.820	0.820	0.859	: total mass emitted (kg)
12.278	7.767	0.932	0.986	7.476	8.905	: sigx0 at the source (m)
13.596	16.591	18.295	18.292	16.724	16.009	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-52.6	45.7	-52.6	-52.6	-52.6	-52.6	: x-coord. of source (m)
115.9	-58.3	115.9	115.9	115.9	115.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.840	0.840	0.897	0.820	0.820	0.859	: total mass emitted (kg)
6.888	1.624	7.133	5.330	1.305	2.893	: sigx0 at the source (m)
16.975	18.247	16.873	17.526	18.272	18.089	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-72.4	25.9	-72.4	-72.4	-72.4	-72.4	: x-coord. of source (m)
126.0	-48.2	126.0	126.0	126.0	126.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.840	0.840	0.897	0.820	0.820	0.859	: total mass emitted (kg)
0.666	4.715	12.474	11.003	5.023	3.469	: sigx0 at the source (m)
18.307	17.702	13.416	14.647	17.617	17.988	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-44.3	54.0	-44.3	-44.3	-44.3	-44.3	: x-coord. of source (m)
108.5	-65.8	108.5	108.5	108.5	108.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.840	0.840	0.897	0.820	0.820	0.859	: total mass emitted (kg)
9.731	4.768	4.094	2.206	4.458	5.990	: sigx0 at the source (m)
15.521	17.688	17.856	18.186	17.768	17.312	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-83.3	15.0	-83.3	-83.3	-83.3	-83.3	: x-coord. of source (m)
128.3	-45.9	128.3	128.3	128.3	128.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.840	0.840	0.897	0.820	0.820	0.859	: total mass emitted (kg)
2.523	7.717	14.614	13.379	8.006	6.540	: sigx0 at the source (m)
18.145	16.614	11.046	12.513	16.477	17.112	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-62.0	36.3	-62.0	-62.0	-62.0	-62.0	: x-coord. of source (m)
121.8	-52.4	121.8	121.8	121.8	121.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.840	0.840	0.897	0.820	0.820	0.859	: total mass emitted (kg)
3.835	1.570	9.954	8.292	1.888	0.293	: sigx0 at the source (m)
17.913	18.252	15.378	16.335	18.221	18.317	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-32.2	71.1	-32.2	-32.2	-32.2	-32.2	: x-coord. of source (m)
89.8	-106.1	89.8	89.8	89.8	89.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.840	0.840	0.897	0.820	0.820	0.859	: total mass emitted (kg)
14.452	15.022	2.259	4.147	10.266	11.550	: sigx0 at the source (m)
11.257	10.485	18.179	17.843	15.172	14.219	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-27.2	68.4	-27.2	-27.2	-27.2	-27.2	: x-coord. of source (m)
68.2	-128.1	68.2	68.2	68.2	68.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.840	0.840	0.897	0.820	0.820	0.859	: total mass emitted (kg)
17.431	17.702	8.341	10.000	14.836	15.716	: sigx0 at the source (m)
5.635	4.715	16.310	15.349	10.746	9.412	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-29.9	69.6	-29.9	-29.9	-29.9	-29.9	: x-coord. of source (m)

46.1	-95.0	46.1	46.1	46.1	46.1	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.840	0.840	0.897	0.820	0.820	0.859	: total mass emitted (kg)
18.307	12.973	13.416	14.647	17.617	17.988	: sigx0 at the source (m)
0.666	12.934	12.474	11.003	5.023	3.469	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-28.7	64.2	-28.7	-28.7	-28.7	-28.7	: x-coord. of source (m)
79.2	-138.5	79.2	79.2	79.2	79.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.840	0.840	0.897	0.820	0.820	0.859	: total mass emitted (kg)
16.187	18.252	5.382	7.183	12.745	13.843	: sigx0 at the source (m)
8.576	1.570	17.511	16.852	13.159	11.998	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-34.1	70.7	-34.1	-34.1	-34.1	-34.1	: x-coord. of source (m)
35.8	-117.2	35.8	35.8	35.8	35.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.840	0.840	0.897	0.820	0.820	0.859	: total mass emitted (kg)
17.913	16.614	15.378	16.335	18.221	18.317	: sigx0 at the source (m)
3.835	7.717	9.954	8.292	1.888	0.293	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-27.6	-99.9	-27.6	-27.6	-27.6	-27.6	: x-coord. of source (m)
57.0	-99.9	57.0	57.0	57.0	57.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.840	0.840	0.897	0.820	0.820	0.859	: total mass emitted (kg)
18.145	-99.900	11.046	12.513	16.477	17.112	: sigx0 at the source (m)
2.523	-99.900	14.614	13.379	8.006	6.540	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
3.30	6.00	2.80	5.80	5.90	5.60	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
3.30	6.00	2.80	5.80	5.90	5.60	: domain-averaged wind speed (m/s)
318.0	155.0	3.0	357.0	336.0	331.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
31.10	5.50	9.30	16.20	20.80	10.40	: domain-averaged sigma-theta (deg)
4.20	2.30	4.70	3.10	4.10	2.60	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for domain-avg data (s)
0.094	0.095	0.049	0.060	0.069	0.116	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	: P-G stability class
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	2.00	: suggested receptor height (m)
0	0	0	0	0	0	: no. of distances downwind
5	5	5	5	5	5	: no. of lines-of-sight
-173.8	-173.8	-173.8	-173.8	-173.8	-173.8	: x-coord. of 1st end-point for LOS1 (m)
-205.7	-205.7	-205.7	-205.7	-205.7	-205.7	: y-coord. of 1st end-point for LOS1 (m)
356.0	356.0	356.0	356.0	356.0	356.0	: x-coord. of 2nd end-point for LOS1 (m)
76.0	76.0	76.0	76.0	76.0	76.0	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	1.030E+05	-9.990E+01	1.350E+05	1.240E+05	: LOS integrated dosage (mg-s/m**2)
-197.3	-197.3	-197.3	-197.3	-197.3	-197.3	: x-coord. of 1st end-point for LOS1 (m)
-161.5	-161.5	-161.5	-161.5	-161.5	-161.5	: y-coord. of 1st end-point for LOS1 (m)
332.5	332.5	332.5	332.5	332.5	332.5	: x-coord. of 2nd end-point for LOS1 (m)
120.2	120.2	120.2	120.2	120.2	120.2	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.220E+05	-9.990E+01	1.530E+05	1.650E+05	1.620E+05	1.570E+05	: LOS integrated dosage (mg-s/m**2)
-220.7	-220.7	-220.7	-220.7	-220.7	-220.7	: x-coord. of 1st end-point for LOS1 (m)
-117.4	-117.4	-117.4	-117.4	-117.4	-117.4	: y-coord. of 1st end-point for LOS1 (m)
309.0	309.0	309.0	309.0	309.0	309.0	: x-coord. of 2nd end-point for LOS1 (m)
164.3	164.3	164.3	164.3	164.3	164.3	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
3.360E+05	2.300E+05	2.670E+05	2.710E+05	2.380E+05	2.490E+05	: LOS integrated dosage (mg-s/m**2)
-244.2	-244.2	-244.2	-244.2	-244.2	-244.2	: x-coord. of 1st end-point for LOS1 (m)
-73.2	-73.2	-73.2	-73.2	-73.2	-73.2	: y-coord. of 1st end-point for LOS1 (m)
285.6	285.6	285.6	285.6	285.6	285.6	: x-coord. of 2nd end-point for LOS1 (m)

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   208.5      208.5      208.5      208.5      208.5      208.5 : y-coord. of 2nd end-point for LOS1 (m)
   -99.9      -99.9      -99.9      -99.9      -99.9      -99.9 : LOS integrated conc. (mg/m**2)
-9.990E+01  1.530E+05 -9.990E+01 -9.990E+01 -9.990E+01 -9.990E+01 : LOS integrated dosage (mg-s/m**2)
  -267.7     -267.7     -267.7     -267.7     -267.7     -267.7 : x-coord. of 1st end-point for LOS1 (m)
   -29.1      -29.1      -29.1      -29.1      -29.1      -29.1 : y-coord. of 1st end-point for LOS1 (m)
   262.1      262.1      262.1      262.1      262.1      262.1 : x-coord. of 2nd end-point for LOS1 (m)
   252.6      252.6      252.6      252.6      252.6      252.6 : y-coord. of 2nd end-point for LOS1 (m)
   -99.9      -99.9      -99.9      -99.9      -99.9      -99.9 : LOS integrated conc. (mg/m**2)
-9.990E+01  1.050E+05 -9.990E+01 -9.990E+01 -9.990E+01 -9.990E+01 : LOS integrated dosage (mg-s/m**2)
```

The Evaluation of the L8 Series Grenades (Reworked L8A1, low condition temp., L81RL)

6 : number of trials included in DOA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

B19a	B20a	B25a	B26a	B31a	B32a	: trial ID
5	5	6	6	5	5	: month
25	25	7	7	25	26	: day
82	82	82	82	82	82	: year
15	16	18	19	17	14	: hour
28	27	26	30	37	7	: minute
4	6	8	7	12	11	: no. of sources
-37.4	-37.4	60.9	60.9	-37.4	60.9	: x-coord. of source (m)
99.7	99.7	-74.6	-74.6	99.7	-74.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.916	0.859	0.801	0.763	0.840	0.840	: total mass emitted (kg)
8.624	5.075	6.837	0.027	12.278	7.767	: sigx0 at the source (m)
16.162	17.602	16.995	18.319	13.596	16.591	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-52.6	-52.6	50.0	36.3	-52.6	45.7	: x-coord. of source (m)
115.9	115.9	-61.9	-52.4	115.9	-58.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.916	0.859	0.801	0.763	0.840	0.840	: total mass emitted (kg)
2.576	1.251	11.003	9.136	6.888	1.624	: sigx0 at the source (m)
18.137	18.276	14.647	15.878	16.975	18.247	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-83.3	-83.3	36.3	20.5	-72.4	25.9	: x-coord. of source (m)
128.3	128.3	-52.4	-46.8	126.0	-48.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.916	0.859	0.801	0.763	0.840	0.840	: total mass emitted (kg)
6.837	10.221	14.419	12.934	0.666	4.715	: sigx0 at the source (m)
16.995	15.202	11.300	12.973	18.307	17.702	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-28.7	-29.9	20.5	66.1	-44.3	54.0	: x-coord. of source (m)
79.2	46.1	-46.8	-84.4	108.5	-65.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.916	0.859	0.801	0.763	0.840	0.840	: total mass emitted (kg)
13.632	16.746	16.852	3.208	9.731	4.768	: sigx0 at the source (m)
12.238	7.426	7.183	18.036	15.521	17.688	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-28.7	66.1	70.6	-83.3	15.0	: x-coord. of source (m)
-99.9	79.2	-84.4	-100.5	128.3	-45.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.916	0.859	0.801	0.763	0.840	0.840	: total mass emitted (kg)
-99.900	10.790	3.782	7.767	2.523	7.717	: sigx0 at the source (m)
-99.900	14.804	17.924	16.591	18.145	16.614	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-27.6	70.6	70.7	-62.0	36.3	: x-coord. of source (m)
-99.9	57.0	-100.5	-117.2	121.8	-52.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.916	0.859	0.801	0.763	0.840	0.840	: total mass emitted (kg)
-99.900	15.202	0.986	11.796	3.835	1.570	: sigx0 at the source (m)
-99.900	10.221	18.292	14.016	17.913	18.252	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	70.7	66.6	-32.2	71.1	: x-coord. of source (m)
-99.9	-99.9	-117.2	-133.4	89.8	-106.1	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.916	0.859	0.801	0.763	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	5.687	15.022	14.452	15.022	: sigx0 at the source (m)
-99.900	-99.900	17.414	10.485	11.257	10.485	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	66.6	-99.9	-27.2	68.4	: x-coord. of source (m)
-99.9	-99.9	-133.4	-99.9	68.2	-128.1	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.916	0.859	0.801	0.763	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	10.000	-99.900	17.431	17.702	: sigx0 at the source (m)
-99.900	-99.900	15.349	-99.900	5.635	4.715	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-29.9	69.6	: x-coord. of source (m)

-99.9	-99.9	-99.9	-99.9	46.1	-95.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.916	0.859	0.801	0.763	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	18.307	12.973	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	0.666	12.934	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-28.7	64.2	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	79.2	-138.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.916	0.859	0.801	0.763	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	16.187	18.252	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	8.576	1.570	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-34.1	70.7	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	35.8	-117.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.916	0.859	0.801	0.763	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	17.913	16.614	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	3.835	7.717	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-27.6	-99.9	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	57.0	-99.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.916	0.859	0.801	0.763	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	18.145	-99.900	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	2.523	-99.900	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
2.00	2.80	4.60	5.80	3.30	6.00	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
2.00	2.80	4.60	5.80	3.30	6.00	: domain-averaged wind speed (m/s)
332.0	344.0	202.0	180.0	318.0	155.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
16.90	14.40	16.20	16.90	31.10	5.50	: domain-averaged sigma-theta (deg)
4.00	5.00	3.30	4.70	4.20	2.30	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for domain-avg data (s)
0.088	0.110	0.093	0.091	0.094	0.095	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	: P-G stability class
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	2.00	: suggested receptor height (m)
0	0	0	0	0	0	: no. of distances downwind
5	5	5	5	5	5	: no. of lines-of-sight
-173.8	-173.8	-173.8	-173.8	-173.8	-173.8	: x-coord. of 1st end-point for LOSi (m)
-205.7	-205.7	-205.7	-205.7	-205.7	-205.7	: y-coord. of 1st end-point for LOSi (m)
356.0	356.0	356.0	356.0	356.0	356.0	: x-coord. of 2nd end-point for LOSi (m)
76.0	76.0	76.0	76.0	76.0	76.0	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
7.200E+04	4.800E+04	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-197.3	-197.3	-197.3	-197.3	-197.3	-197.3	: x-coord. of 1st end-point for LOSi (m)
-161.5	-161.5	-161.5	-161.5	-161.5	-161.5	: y-coord. of 1st end-point for LOSi (m)
332.5	332.5	332.5	332.5	332.5	332.5	: x-coord. of 2nd end-point for LOSi (m)
120.2	120.2	120.2	120.2	120.2	120.2	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
9.100E+04	8.100E+04	-9.990E+01	-9.990E+01	1.220E+05	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-220.7	-220.7	-220.7	-220.7	-220.7	-220.7	: x-coord. of 1st end-point for LOSi (m)
-117.4	-117.4	-117.4	-117.4	-117.4	-117.4	: y-coord. of 1st end-point for LOSi (m)
309.0	309.0	309.0	309.0	309.0	309.0	: x-coord. of 2nd end-point for LOSi (m)
164.3	164.3	164.3	164.3	164.3	164.3	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.790E+05	1.740E+05	1.660E+05	1.440E+05	3.360E+05	2.300E+05	: LOS integrated dosage (mg-s/m**2)
-244.2	-244.2	-244.2	-244.2	-244.2	-244.2	: x-coord. of 1st end-point for LOSi (m)
-73.2	-73.2	-73.2	-73.2	-73.2	-73.2	: y-coord. of 1st end-point for LOSi (m)
285.6	285.6	285.6	285.6	285.6	285.6	: x-coord. of 2nd end-point for LOSi (m)

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      208.5      208.5      208.5      208.5      208.5      208.5 : y-coord. of 2nd end-point for LOS1 (m)
      -99.9      -99.9      -99.9      -99.9      -99.9      -99.9 : LOS integrated conc. (mg/m**2)
 -9.990E+01 -9.990E+01 -9.990E+01  8.600E+04 -9.990E+01  1.530E+05 : LOS integrated dosage (mg-s/m**2)
     -267.7     -267.7     -267.7     -267.7     -267.7     -267.7 : x-coord. of 1st end-point for LOS1 (m)
      -29.1      -29.1      -29.1      -29.1      -29.1      -29.1 : y-coord. of 1st end-point for LOS1 (m)
      262.1      262.1      262.1      262.1      262.1      262.1 : x-coord. of 2nd end-point for LOS1 (m)
      252.6      252.6      252.6      252.6      252.6      252.6 : y-coord. of 2nd end-point for LOS1 (m)
      -99.9      -99.9      -99.9      -99.9      -99.9      -99.9 : LOS integrated conc. (mg/m**2)
 -9.990E+01 -9.990E+01 -9.990E+01  4.500E+04 -9.990E+01  1.050E+05 : LOS integrated dosage (mg-s/m**2)
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The Evaluation of the L8 Series Grenades (Reworked L8A1, medium condition temp., L81RM)

6 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

B21a	B22a	B27a	B28a	B33a	B34a	: trial ID
6	6	6	6	6	6	: month
1	1	7	7	1	8	: day
82	82	82	82	82	82	: year
17	18	0	22	19	19	: hour
31	2	58	59	28	45	: minute
6	5	8	8	12	12	: no. of sources
-37.4	-37.4	60.9	60.9	-37.4	-37.4	: x-coord. of source (m)
99.7	99.7	-74.6	-74.6	99.7	99.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.973	0.954	0.763	0.763	0.897	0.820	: total mass emitted (kg)
7.476	0.932	7.426	4.094	0.932	0.986	: sigx0 at the source (m)
16.724	18.295	16.746	17.856	18.295	18.292	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-52.6	-52.6	50.0	50.0	-52.6	-52.6	: x-coord. of source (m)
115.9	115.9	-61.9	-61.9	115.9	115.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.973	0.954	0.763	0.763	0.897	0.820	: total mass emitted (kg)
1.305	7.133	11.507	8.576	7.133	5.330	: sigx0 at the source (m)
18.272	16.873	14.254	16.187	16.873	17.526	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-83.3	-83.3	36.3	36.3	-72.4	-72.4	: x-coord. of source (m)
128.3	128.3	-52.4	-52.4	126.0	126.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.973	0.954	0.763	0.763	0.897	0.820	: total mass emitted (kg)
8.006	14.614	14.804	12.474	12.474	11.003	: sigx0 at the source (m)
16.477	11.046	10.790	13.416	13.416	14.647	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-29.9	-29.9	20.5	20.5	-44.3	-44.3	: x-coord. of source (m)
46.1	46.1	-46.8	-46.8	108.5	108.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.973	0.954	0.763	0.763	0.897	0.820	: total mass emitted (kg)
17.617	13.416	17.093	15.521	4.094	2.206	: sigx0 at the source (m)
5.023	12.474	6.590	9.731	17.856	18.186	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-28.7	-28.7	66.1	66.1	-83.3	-83.3	: x-coord. of source (m)
79.2	79.2	-84.4	-84.4	128.3	128.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.973	0.954	0.763	0.763	0.897	0.820	: total mass emitted (kg)
12.745	5.382	4.405	0.932	14.614	13.379	: sigx0 at the source (m)
13.159	17.511	17.781	18.295	11.046	12.513	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-27.6	-99.9	70.6	70.6	-62.0	-62.0	: x-coord. of source (m)
57.0	-99.9	-100.5	-100.5	121.8	121.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.973	0.954	0.763	0.763	0.897	0.820	: total mass emitted (kg)
16.477	-99.900	0.347	3.835	9.954	8.292	: sigx0 at the source (m)
8.006	-99.900	18.316	17.913	15.378	16.335	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	70.7	70.7	-32.2	-32.2	: x-coord. of source (m)
-99.9	-99.9	-117.2	-117.2	89.8	89.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.973	0.954	0.763	0.763	0.897	0.820	: total mass emitted (kg)
-99.900	-99.900	5.075	8.341	2.259	4.147	: sigx0 at the source (m)
-99.900	-99.900	17.602	16.310	18.179	17.843	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	66.6	66.6	-27.2	-27.2	: x-coord. of source (m)
-99.9	-99.9	-133.4	-133.4	68.2	68.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.973	0.954	0.763	0.763	0.897	0.820	: total mass emitted (kg)
-99.900	-99.900	9.458	12.278	8.341	10.000	: sigx0 at the source (m)
-99.900	-99.900	15.688	13.596	16.310	15.349	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-29.9	-29.9	: x-coord. of source (m)

-99.9	-99.9	-99.9	-99.9	46.1	46.1	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.973	0.954	0.763	0.763	0.897	0.820	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	13.416	14.647	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	12.474	11.003	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-28.7	-28.7	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	79.2	79.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.973	0.954	0.763	0.763	0.897	0.820	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	5.382	7.183	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	17.511	16.852	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-34.1	-34.1	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	35.8	35.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.973	0.954	0.763	0.763	0.897	0.820	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	15.378	16.335	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	9.954	8.292	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-27.6	-27.6	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	57.0	57.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.973	0.954	0.763	0.763	0.897	0.820	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	11.046	12.513	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	14.614	13.379	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
4.20	4.50	4.50	6.70	2.80	5.80	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
4.20	4.50	4.50	6.70	2.80	5.80	: domain-averaged wind speed (m/s)
336.0	3.0	204.0	193.0	3.0	357.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
14.10	10.90	5.50	10.80	9.30	16.20	: domain-averaged sigma-theta (deg)
2.90	2.70	2.10	2.20	4.70	3.10	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for domain-avg data (s)
0.093	0.084	0.107	0.078	0.049	0.060	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	: P-G stability class
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	2.00	: suggested receptor height (m)
0	0	0	0	0	0	: no. of distances downwind
4	4	4	4	4	4	: no. of lines-of-sight
-173.8	-173.8	-173.8	-173.8	-173.8	-173.8	: x-coord. of 1st end-point for LOS1 (m)
-205.7	-205.7	-205.7	-205.7	-205.7	-205.7	: y-coord. of 1st end-point for LOS1 (m)
356.0	356.0	356.0	356.0	356.0	356.0	: x-coord. of 2nd end-point for LOS1 (m)
76.0	76.0	76.0	76.0	76.0	76.0	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
4.500E+04	-9.990E+01	-9.990E+01	-9.990E+01	1.030E+05	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-197.3	-197.3	-197.3	-197.3	-197.3	-197.3	: x-coord. of 1st end-point for LOS1 (m)
-161.5	-161.5	-161.5	-161.5	-161.5	-161.5	: y-coord. of 1st end-point for LOS1 (m)
332.5	332.5	332.5	332.5	332.5	332.5	: x-coord. of 2nd end-point for LOS1 (m)
120.2	120.2	120.2	120.2	120.2	120.2	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
6.700E+04	6.200E+04	-9.990E+01	-9.990E+01	1.530E+05	1.650E+05	: LOS integrated dosage (mg-s/m**2)
-220.7	-220.7	-220.7	-220.7	-220.7	-220.7	: x-coord. of 1st end-point for LOS1 (m)
-117.4	-117.4	-117.4	-117.4	-117.4	-117.4	: y-coord. of 1st end-point for LOS1 (m)
309.0	309.0	309.0	309.0	309.0	309.0	: x-coord. of 2nd end-point for LOS1 (m)
164.3	164.3	164.3	164.3	164.3	164.3	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.070E+05	1.280E+05	2.090E+05	1.920E+05	2.670E+05	2.710E+05	: LOS integrated dosage (mg-s/m**2)
-244.2	-244.2	-244.2	-244.2	-244.2	-244.2	: x-coord. of 1st end-point for LOS1 (m)
-73.2	-73.2	-73.2	-73.2	-73.2	-73.2	: y-coord. of 1st end-point for LOS1 (m)
285.6	285.6	285.6	285.6	285.6	285.6	: x-coord. of 2nd end-point for LOS1 (m)

```
      208.5       208.5       208.5       208.5       208.5       208.5 : y-coord. of 2nd end-point for LOS1 (m)
      -99.9       -99.9       -99.9       -99.9       -99.9       -99.9 : LOS integrated conc. (mg/m**2)
 -9.990E+01  -9.990E+01   1.380E+05   1.290E+05  -9.990E+01  -9.990E+01 : LOS integrated dosage (mg-s/m**2)
```

The Evaluation of the L8 Series Grenades (Reworked L8A1, high condition temp., L81RH)

6 : number of trials included in DOA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

B23a	B24a	B29a	B30a	B35a	B36a	: trial ID
6	6	6	6	6	6	: month
8	8	7	7	8	8	: day
82	82	82	82	82	82	: year
16	20	20	21	19	17	: hour
57	59	13	38	35	29	: minute
6	5	8	7	12	12	: no. of sources
-37.4	-37.4	60.9	60.9	-37.4	-37.4	: x-coord. of source (m)
99.7	99.7	-74.6	-74.6	99.7	99.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.859	0.820	0.763	0.744	0.820	0.859	: total mass emitted (kg)
5.687	5.330	1.251	7.426	7.476	8.905	: sigx0 at the source (m)
17.414	17.526	18.276	16.746	16.724	16.009	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-52.6	-83.3	50.0	50.0	-52.6	-52.6	: x-coord. of source (m)
115.9	128.3	-61.9	-61.9	115.9	115.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.859	0.820	0.763	0.744	0.820	0.859	: total mass emitted (kg)
0.612	16.852	5.938	11.507	1.305	2.893	: sigx0 at the source (m)
18.309	7.183	17.330	14.254	18.272	18.089	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-83.3	-29.9	36.3	36.3	-72.4	-72.4	: x-coord. of source (m)
128.3	46.1	-52.4	-52.4	126.0	126.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.859	0.820	0.763	0.744	0.820	0.859	: total mass emitted (kg)
9.685	10.000	10.221	14.804	5.023	3.469	: sigx0 at the source (m)
15.550	15.349	15.202	10.790	17.617	17.988	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-29.9	-28.7	20.5	20.5	-44.3	-44.3	: x-coord. of source (m)
46.1	79.2	-46.8	-46.8	108.5	108.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.859	0.820	0.763	0.744	0.820	0.859	: total mass emitted (kg)
16.995	0.986	13.808	17.093	4.458	5.990	: sigx0 at the source (m)
6.837	18.292	12.039	6.590	17.768	17.312	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-28.7	-27.6	66.1	66.1	-83.3	-83.3	: x-coord. of source (m)
79.2	57.0	-84.4	-84.4	128.3	128.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.859	0.820	0.763	0.744	0.820	0.859	: total mass emitted (kg)
11.300	7.183	1.942	4.405	8.006	6.540	: sigx0 at the source (m)
14.419	16.852	18.216	17.781	16.477	17.112	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-27.6	-99.9	70.6	70.7	-62.0	-62.0	: x-coord. of source (m)
57.0	-99.9	-100.5	-117.2	121.8	121.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.859	0.820	0.763	0.744	0.820	0.859	: total mass emitted (kg)
15.550	-99.900	6.590	5.075	1.888	0.293	: sigx0 at the source (m)
9.685	-99.900	17.093	17.602	18.221	18.317	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	70.7	66.6	-32.2	-32.2	: x-coord. of source (m)
-99.9	-99.9	-117.2	-133.4	89.8	89.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.859	0.820	0.763	0.744	0.820	0.859	: total mass emitted (kg)
-99.900	-99.900	10.790	9.458	10.266	11.550	: sigx0 at the source (m)
-99.900	-99.900	14.804	15.688	15.172	14.219	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	66.6	-99.9	-27.2	-27.2	: x-coord. of source (m)
-99.9	-99.9	-133.4	-99.9	68.2	68.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.859	0.820	0.763	0.744	0.820	0.859	: total mass emitted (kg)
-99.900	-99.900	14.254	-99.900	14.836	15.716	: sigx0 at the source (m)
-99.900	-99.900	11.507	-99.900	10.746	9.412	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-29.9	-29.9	: x-coord. of source (m)

-99.9	-99.9	-99.9	-99.9	46.1	46.1	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.859	0.820	0.763	0.744	0.820	0.859	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	17.617	17.988	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	5.023	3.469	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-28.7	-28.7	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	79.2	79.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.859	0.820	0.763	0.744	0.820	0.859	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	12.745	13.843	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	13.159	11.998	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-34.1	-34.1	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	35.8	35.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.859	0.820	0.763	0.744	0.820	0.859	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	18.221	18.317	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	1.888	0.293	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-27.6	-27.6	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	57.0	57.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
118.0	118.0	118.0	118.0	118.0	118.0	: emission duration (s)
0.859	0.820	0.763	0.744	0.820	0.859	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	16.477	17.112	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	8.006	6.540	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
5.20	5.60	5.00	7.70	5.90	5.60	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
5.20	5.60	5.00	7.70	5.90	5.60	: domain-averaged wind speed (m/s)
342.0	17.0	184.0	204.0	336.0	331.0	: domain-averaged wind direction (deg)
-99.90	-99.50	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
11.40	12.40	16.80	16.00	20.80	10.40	: domain-averaged sigma-theta (deg)
2.60	3.30	4.00	3.50	4.10	2.60	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for domain-avg data (s)
0.091	0.065	0.068	0.111	0.069	0.116	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	: Bowen ratio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	: P-G stability class
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	2.00	: suggested receptor height (m)
0	0	0	0	0	0	: no. of distances downwind
5	5	5	5	5	5	: no. of lines-of-sight
-173.8	-173.8	-173.8	-173.8	-173.8	-173.8	: x-coord. of 1st end-point for LOS1 (m)
-205.7	-205.7	-205.7	-205.7	-205.7	-205.7	: y-coord. of 1st end-point for LOS1 (m)
356.0	356.0	356.0	356.0	356.0	356.0	: x-coord. of 2nd end-point for LOS1 (m)
76.0	76.0	76.0	76.0	76.0	76.0	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
3.800E+04	-9.990E+01	-9.990E+01	-9.990E+01	1.350E+05	1.240E+05	: LOS integrated dosage (mg-s/m**2)
-197.3	-197.3	-197.3	-197.3	-197.3	-197.3	: x-coord. of 1st end-point for LOS1 (m)
-161.5	-161.5	-161.5	-161.5	-161.5	-161.5	: y-coord. of 1st end-point for LOS1 (m)
332.5	332.5	332.5	332.5	332.5	332.5	: x-coord. of 2nd end-point for LOS1 (m)
120.2	120.2	120.2	120.2	120.2	120.2	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
5.000E+04	-9.990E+01	-9.990E+01	-9.990E+01	1.620E+05	1.570E+05	: LOS integrated dosage (mg-s/m**2)
-220.7	-220.7	-220.7	-220.7	-220.7	-220.7	: x-coord. of 1st end-point for LOS1 (m)
-117.4	-117.4	-117.4	-117.4	-117.4	-117.4	: y-coord. of 1st end-point for LOS1 (m)
309.0	309.0	309.0	309.0	309.0	309.0	: x-coord. of 2nd end-point for LOS1 (m)
164.3	164.3	164.3	164.3	164.3	164.3	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.010E+05	1.360E+05	[illegible]	1.510E+05	2.380E+05	2.490E+05	: LOS integrated dosage (mg-s/m**2)
-244.2	-244.2	-244.2	-244.2	-244.2	-244.2	: x-coord. of 1st end-point for LOS1 (m)
-73.2	-73.2	-73.2	-73.2	-73.2	-73.2	: y-coord. of 1st end-point for LOS1 (m)
285.6	285.6	285.6	285.6	285.6	285.6	: x-coord. of 2nd end-point for LOS1 (m)

208.5	208.5	208.5	208.5	208.5	208.5	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	1.070E+05	-9.990E+01	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-267.7	-267.7	-267.7	-267.7	-267.7	-267.7	: x-coord. of 1st end-point for LOS1 (m)
-29.1	-29.1	-29.1	-29.1	-29.1	-29.1	: y-coord. of 1st end-point for LOS1 (m)
262.1	262.1	262.1	262.1	262.1	262.1	: x-coord. of 2nd end-point for LOS1 (m)
252.6	252.6	252.6	252.6	252.6	252.6	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	5.400E+04	-9.990E+01	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)

The Evaluation of the L8 Series Grenades (L8A3, 6 grenades, L836)

6 : number of trials included in DUA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

B37b	B38b	B39b	B40b	B41b	B42b	: trial ID
5	5	6	6	6	6	: month
25	25	1	1	8	8	: day
82	82	82	82	82	82	: year
15	16	17	17	16	21	: hour
49	44	12	54	49	44	: minute
6	6	6	6	6	6	: no. of sources
-46.6	-46.6	-46.6	-46.6	-46.6	-46.6	: x-coord. of source (m)
93.7	93.7	93.7	93.7	93.7	93.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.897	0.859	0.992	0.973	0.859	0.782	: total mass emitted (kg)
7.731	6.257	3.278	1.837	3.278	1.333	: sigx0 at the source (m)
11.672	12.528	13.615	13.883	13.615	13.940	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-59.2	-59.2	-59.2	-59.2	-59.2	-59.2	: x-coord. of source (m)
107.1	107.1	107.1	107.1	107.1	107.1	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.897	0.859	0.992	0.973	0.859	0.782	: total mass emitted (kg)
3.278	1.594	1.576	3.022	1.576	6.020	: sigx0 at the source (m)
13.615	13.913	13.915	13.674	13.915	12.644	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-84.6	-84.6	-84.6	-84.6	-84.6	-84.6	: x-coord. of source (m)
117.4	117.4	117.4	117.4	117.4	117.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.897	0.859	0.992	0.973	0.859	0.782	: total mass emitted (kg)
3.968	5.576	8.322	9.454	8.322	11.536	: sigx0 at the source (m)
13.430	12.846	11.263	10.331	11.263	7.939	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-40.4	-40.4	-40.4	-40.4	-40.4	-40.4	: x-coord. of source (m)
49.3	49.3	49.3	49.3	49.3	49.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.897	0.859	0.992	0.973	0.859	0.782	: total mass emitted (kg)
13.915	13.619	12.537	11.816	12.537	9.822	: sigx0 at the source (m)
1.576	3.260	6.240	7.516	6.240	9.982	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-39.5	-39.5	-39.5	-39.5	-39.5	-39.5	: x-coord. of source (m)
76.7	76.7	76.7	76.7	76.7	76.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.897	0.859	0.992	0.973	0.859	0.782	: total mass emitted (kg)
11.263	10.164	7.737	6.474	7.737	3.515	: sigx0 at the source (m)
8.322	9.633	11.672	12.417	11.672	13.555	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-38.5	-38.5	-38.5	-38.5	-38.5	-38.5	: x-coord. of source (m)
58.4	58.4	58.4	58.4	58.4	58.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.897	0.859	0.992	0.973	0.859	0.782	: total mass emitted (kg)
13.430	12.846	11.263	10.331	11.263	7.939	: sigx0 at the source (m)
3.968	5.576	8.322	9.454	8.322	11.536	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
2.00	3.00	4.50	5.00	6.10	5.10	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
2.00	3.00	4.50	5.00	6.10	5.10	: domain-averaged wind speed (m/s)
329.0	336.0	349.0	355.0	349.0	8.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
16.30	16.80	7.00	13.30	6.70	12.30	: domain-averaged sigma-theta (deg)
4.90	3.90	2.70	2.70	2.60	3.30	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for domain-avg data (s)
0.030	0.097	0.078	0.069	0.102	0.072	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)

0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	: Bowen ratio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	: P-G stability class
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	2.00	: suggested receptor height (m)
0	0	0	0	0	0	: no. of distances downwind
3	3	3	3	3	3	: no. of lines-of-sight
-173.8	-173.8	-173.8	-173.8	-173.8	-173.8	: x-coord. of 1st end-point for LOS1 (m)
-205.7	-205.7	-205.7	-205.7	-205.7	-205.7	: y-coord. of 1st end-point for LOS1 (m)
356.0	356.0	356.0	356.0	356.0	356.0	: x-coord. of 2nd end-point for LOS1 (m)
76.0	76.0	76.0	76.0	76.0	76.0	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
4.400E+04	2.700E+04	4.500E+04	3.600E+04	5.400E+04	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-197.3	-197.3	-197.3	-197.3	-197.3	-197.3	: x-coord. of 1st end-point for LOS1 (m)
-161.5	-161.5	-161.5	-161.5	-161.5	-161.5	: y-coord. of 1st end-point for LOS1 (m)
332.5	332.5	332.5	332.5	332.5	332.5	: x-coord. of 2nd end-point for LOS1 (m)
120.2	120.2	120.2	120.2	120.2	120.2	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
7.700E+04	5.200E+04	6.600E+04	3.800E+04	6.700E+04	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-220.7	-220.7	-220.7	-220.7	-220.7	-220.7	: x-coord. of 1st end-point for LOS1 (m)
-117.4	-117.4	-117.4	-117.4	-117.4	-117.4	: y-coord. of 1st end-point for LOS1 (m)
309.0	309.0	309.0	309.0	309.0	309.0	: x-coord. of 2nd end-point for LOS1 (m)
164.3	164.3	164.3	164.3	164.3	164.3	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.770E+05	1.220E+05	1.380E+05	1.200E+05	1.340E+05	1.750E+05	: LOS integrated dosage (mg-s/m**2)

The Evaluation of the L8 Series Grenades (L8A3, 8 grenades, L83B)
4 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

B44b	B45b	B46b	B48b	: trial ID
6	6	6	6	: month
7	7	7	7	: day
82	82	82	82	: year
18	0	22	21	: hour
48	14	35	22	: minute
8	8	8	8	: no. of sources
51.7	51.7	51.7	51.7	: x-coord. of source (m)
-80.6	-80.6	-80.6	-80.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	: emission duration (s)
0.801	0.763	0.763	0.744	: total mass emitted (kg)
4.896	3.260	0.357	4.435	: sigx0 at the source (m)
13.120	13.619	13.999	13.283	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	: sigz0 at the source (m)
42.7	42.7	42.7	42.7	: x-coord. of source (m)
-70.0	-70.0	-70.0	-70.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	: emission duration (s)
0.801	0.763	0.763	0.744	: total mass emitted (kg)
8.125	6.674	3.968	7.722	: sigx0 at the source (m)
11.406	12.311	13.430	11.683	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	: sigz0 at the source (m)
31.3	31.3	31.3	31.3	: x-coord. of source (m)
-62.2	-62.2	-62.2	-62.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	: emission duration (s)
0.801	0.763	0.763	0.744	: total mass emitted (kg)
10.800	9.633	7.309	10.482	: sigx0 at the source (m)
8.915	10.164	11.945	9.286	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	: sigz0 at the source (m)
18.2	18.2	18.2	18.2	: x-coord. of source (m)
-57.6	-57.6	-57.6	-57.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	: emission duration (s)
0.801	0.763	0.763	0.744	: total mass emitted (kg)
12.739	11.935	10.152	12.528	: sigx0 at the source (m)
5.816	7.325	9.646	6.257	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	: sigz0 at the source (m)
56.0	56.0	56.0	56.0	: x-coord. of source (m)
-88.7	-88.7	-88.7	-88.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	: emission duration (s)
0.801	0.763	0.763	0.744	: total mass emitted (kg)
2.543	0.846	2.079	2.061	: sigx0 at the source (m)
13.771	13.978	13.849	13.851	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	: sigz0 at the source (m)
59.7	59.7	59.7	59.7	: x-coord. of source (m)
-102.0	-102.0	-102.0	-102.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	: emission duration (s)
0.801	0.763	0.763	0.744	: total mass emitted (kg)
1.108	2.801	5.592	1.594	: sigx0 at the source (m)
13.960	13.721	12.839	13.913	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	: sigz0 at the source (m)
59.8	59.8	59.8	59.8	: x-coord. of source (m)
-115.9	-115.9	-115.9	-115.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	: emission duration (s)
0.801	0.763	0.763	0.744	: total mass emitted (kg)
4.683	6.257	8.725	5.141	: sigx0 at the source (m)
13.197	12.528	10.954	13.026	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	: sigz0 at the source (m)
56.4	56.4	56.4	56.4	: x-coord. of source (m)
-129.3	-129.3	-129.3	-129.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	: emission duration (s)
0.801	0.763	0.763	0.744	: total mass emitted (kg)
7.939	9.286	11.263	8.337	: sigx0 at the source (m)
11.536	10.492	8.322	11.252	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)

-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
3.90	5.60	6.50	3.10	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	: measuring height for wind data (m)
3.90	5.60	6.50	3.10	: domain-averaged wind speed (m/s)
203.0	196.0	184.0	201.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
8.50	10.10	10.00	9.10	: domain-averaged sigma-theta (deg)
3.10	2.50	2.40	3.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
300.0	300.0	300.0	300.0	: averaging time for domain-avg data (s)
0.095	0.121	0.093	0.108	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	: P-G stability class
300.0	300.0	300.0	300.0	: averaging time for concentration (s)
2.00	2.00	2.00	2.00	: suggested receptor height (m)
0	0	0	0	: no. of distances downwind
3	3	3	3	: no. of lines-of-sight
-220.7	-220.7	-220.7	-220.7	: x-coord. of 1st end-point for LOSi (m)
-117.4	-117.4	-117.4	-117.4	: y-coord. of 1st end-point for LOSi (m)
309.0	309.0	309.0	309.0	: x-coord. of 2nd end-point for LOSi (m)
164.3	164.3	164.3	164.3	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.890E+05	1.920E+05	1.670E+05	1.320E+05	: LOS integrated dosage (mg-s/m**2)
-244.2	-244.2	-244.2	-244.2	: x-coord. of 1st end-point for LOSi (m)
-73.2	-73.2	-73.2	-73.2	: y-coord. of 1st end-point for LOSi (m)
285.6	285.6	285.6	285.6	: x-coord. of 2nd end-point for LOSi (m)
208.5	208.5	208.5	208.5	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
9.000E+04	1.360E+05	1.200E+05	8.300E+04	: LOS integrated dosage (mg-s/m**2)
-267.7	-267.7	-267.7	-267.7	: x-coord. of 1st end-point for LOSi (m)
-29.1	-29.1	-29.1	-29.1	: y-coord. of 1st end-point for LOSi (m)
262.1	262.1	262.1	262.1	: x-coord. of 2nd end-point for LOSi (m)
252.6	252.6	252.6	252.6	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	7.400E+04	-9.990E+01	: LOS integrated dosage (mg-s/m**2)

The Evaluation of the L8 Series Grenades (L8A3, 12 grenades, L832)

6 : number of trials included in DOA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

B49b	B50b	B51b	B52b	B53b	B54b	: trial ID
5	5	6	6	6	6	: month
25	26	1	1	8	8	: day
82	82	82	82	82	82	: year
18	14	19	21	18	18	: hour
10	0	54	49	44	0	: minute
12	12	12	12	11	11	: no. of sources
-46.6	51.7	-46.6	51.7	-46.6	-46.6	: x-coord. of source (m)
93.7	-80.6	93.7	-80.6	93.7	93.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.840	0.840	0.897	0.916	0.840	0.840	: total mass emitted (kg)
5.368	6.257	2.801	10.164	2.061	6.037	: sigx0 at the source (m)
12.934	12.528	13.721	9.633	13.851	12.636	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-59.2	39.1	-59.2	39.1	-59.2	-59.2	: x-coord. of source (m)
107.1	-67.1	107.1	-67.1	107.1	107.1	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.840	0.840	0.897	0.916	0.840	0.840	: total mass emitted (kg)
0.620	1.594	2.061	6.257	6.674	1.351	: sigx0 at the source (m)
13.990	13.913	13.851	12.528	12.311	13.938	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-75.6	22.7	-75.6	22.7	-75.6	-75.6	: x-coord. of source (m)
115.5	-58.7	115.5	-58.7	115.5	115.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.840	0.840	0.897	0.916	0.840	0.840	: total mass emitted (kg)
4.202	3.260	6.674	1.594	10.482	3.497	: sigx0 at the source (m)
13.358	13.619	12.311	13.913	9.286	13.560	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-52.3	46.0	-52.3	46.0	-52.3	-52.3	: x-coord. of source (m)
101.0	-73.3	101.0	-73.3	101.0	101.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.840	0.840	0.897	0.916	0.840	0.840	: total mass emitted (kg)
3.040	3.986	0.376	8.337	4.435	3.751	: sigx0 at the source (m)
13.670	13.424	13.999	11.252	13.283	13.492	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-84.6	13.7	-84.6	13.7	-84.6	-84.6	: x-coord. of source (m)
117.4	-56.8	117.4	-56.8	117.4	117.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.840	0.840	0.897	0.916	0.840	0.840	: total mass emitted (kg)
6.458	5.576	8.710	0.846	11.935	5.799	: sigx0 at the source (m)
12.426	12.846	10.965	13.978	7.325	12.747	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-67.0	31.3	-67.0	31.3	-67.0	-67.0	: x-coord. of source (m)
112.0	-62.2	112.0	-62.2	112.0	112.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.840	0.840	0.897	0.916	0.840	0.840	: total mass emitted (kg)
1.819	0.846	4.435	3.986	8.710	1.090	: sigx0 at the source (m)
13.885	13.978	13.283	13.424	10.965	13.961	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-42.3	56.0	-42.3	56.0	-42.3	-42.3	: x-coord. of source (m)
85.5	-88.7	85.5	-88.7	85.5	85.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.840	0.840	0.897	0.916	0.840	0.840	: total mass emitted (kg)
7.532	8.337	5.141	11.683	0.376	8.140	: sigx0 at the source (m)
11.806	11.252	13.026	7.722	13.999	11.395	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-38.2	60.1	-38.2	60.1	-38.2	-38.2	: x-coord. of source (m)
67.6	-106.6	67.6	-106.6	67.6	67.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.840	0.840	0.897	0.916	0.840	0.840	: total mass emitted (kg)
11.116	11.683	9.286	13.619	5.141	11.546	: sigx0 at the source (m)
8.518	7.722	10.482	3.260	13.026	7.924	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-40.4	57.9	-40.4	57.9	-39.5	-40.4	: x-coord. of source (m)

49.3	-124.9	49.3	-124.9	76.7	49.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.840	0.840	0.897	0.916	0.840	0.840	: total mass emitted (kg)
13.358	13.619	12.311	13.913	2.801	13.560	: sigx0 at the source (m)
4.202	3.260	6.674	1.594	13.721	3.497	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-39.5	58.9	-39.5	58.9	-43.9	-39.5	: x-coord. of source (m)
76.7	-97.5	76.7	-97.5	40.8	76.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.840	0.840	0.897	0.916	0.840	0.840	: total mass emitted (kg)
9.468	10.164	7.325	12.846	10.965	9.995	: sigx0 at the source (m)
10.318	9.633	11.935	5.576	8.710	9.809	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-43.9	54.4	-43.9	54.4	-38.5	-43.9	: x-coord. of source (m)
40.8	-133.5	40.8	-133.5	58.4	40.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.840	0.840	0.897	0.916	0.840	0.840	: total mass emitted (kg)
13.885	13.978	13.283	13.424	7.325	13.961	: sigx0 at the source (m)
1.819	0.846	4.435	3.986	11.935	1.090	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-38.5	59.8	-38.5	59.8	-99.9	-99.9	: x-coord. of source (m)
58.4	-115.9	58.4	-115.9	-99.9	-99.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.840	0.840	0.897	0.916	0.840	0.840	: total mass emitted (kg)
12.426	12.846	10.965	13.978	-99.900	-99.900	: sigx0 at the source (m)
6.458	5.576	8.710	0.846	-99.900	-99.900	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
3.20	5.40	4.20	2.90	4.60	5.70	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
3.20	5.40	4.20	2.90	4.60	5.70	: domain-averaged wind speed (m/s)
340.0	156.0	351.0	136.0	11.0	337.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
20.70	5.90	25.90	11.90	20.70	8.00	: domain-averaged sigma-theta (deg)
4.70	2.60	7.40	4.30	2.80	3.20	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for domain-avg data (s)
0.111	0.097	0.085	0.087	0.089	0.084	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	: P-G stability class
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	2.00	: suggested receptor height (m)
0	0	0	0	0	0	: no. of distances downwind
5	5	5	5	5	5	: no. of lines-of-sight
-173.8	-173.8	-173.8	-173.8	-173.8	-173.8	: x-coord. of 1st end-point for LOS1 (m)
-205.7	-205.7	-205.7	-205.7	-205.7	-205.7	: y-coord. of 1st end-point for LOS1 (m)
356.0	356.0	356.0	356.0	356.0	356.0	: x-coord. of 2nd end-point for LOS1 (m)
76.0	76.0	76.0	76.0	76.0	76.0	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
4.500E+04	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	7.300E+04	: LOS integrated dosage (mg-s/m**2)
-197.3	-197.3	-197.3	-197.3	-197.3	-197.3	: x-coord. of 1st end-point for LOS1 (m)
-161.5	-161.5	-161.5	-161.5	-161.5	-161.5	: y-coord. of 1st end-point for LOS1 (m)
332.5	332.5	332.5	332.5	332.5	332.5	: x-coord. of 2nd end-point for LOS1 (m)
120.2	120.2	120.2	120.2	120.2	120.2	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
8.500E+04	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	1.040E+05	: LOS integrated dosage (mg-s/m**2)
-220.7	-220.7	-220.7	-220.7	-220.7	-220.7	: x-coord. of 1st end-point for LOS1 (m)
-117.4	-117.4	-117.4	-117.4	-117.4	-117.4	: y-coord. of 1st end-point for LOS1 (m)
309.0	309.0	309.0	309.0	309.0	309.0	: x-coord. of 2nd end-point for LOS1 (m)
164.3	164.3	164.3	164.3	164.3	164.3	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
2.290E+05	2.450E+05	2.520E+05	3.260E+05	2.580E+05	1.880E+05	: LOS integrated dosage (mg-s/m**2)
-244.2	-244.2	-244.2	-244.2	-244.2	-244.2	: x-coord. of 1st end-point for LOS1 (m)
-73.2	-73.2	-73.2	-73.2	-73.2	-73.2	: y-coord. of 1st end-point for LOS1 (m)
285.6	285.6	285.6	285.6	285.6	285.6	: x-coord. of 2nd end-point for LOS1 (m)

208.5	208.5	208.5	208.5	208.5	208.5	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	1.650E+05	-9.990E+01	1.940E+05	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-267.7	-267.7	-267.7	-267.7	-267.7	-267.7	: x-coord. of 1st end-point for LOS1 (m)
-29.1	-29.1	-29.1	-29.1	-29.1	-29.1	: y-coord. of 1st end-point for LOS1 (m)
262.1	262.1	262.1	262.1	262.1	262.1	: x-coord. of 2nd end-point for LOS1 (m)
252.6	252.6	252.6	252.6	252.6	252.6	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	1.170E+05	-9.990E+01	9.400E+04	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)

The Evaluation of the L8 Series Grenades (L8A3, low condition temp., L83L)

5 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

B37a	B38a	B44a	B49a	B50a	: trial ID
5	5	6	5	5	: month
25	25	7	25	26	: day
82	82	82	82	82	: year
15	16	18	18	14	: hour
49	44	48	10	0	: minute
6	6	8	12	12	: no. of sources
-46.6	-46.6	51.7	-46.6	51.7	: x-coord. of source (m)
93.7	93.7	-80.6	93.7	-80.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.897	0.859	0.801	0.840	0.840	: total mass emitted (kg)
7.737	6.257	4.896	5.368	6.257	: sigx0 at the source (m)
11.672	12.528	13.120	12.934	12.528	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-59.2	-59.2	42.7	-59.2	39.1	: x-coord. of source (m)
107.1	107.1	-70.0	107.1	-67.1	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.897	0.859	0.801	0.840	0.840	: total mass emitted (kg)
3.278	1.594	8.125	0.620	1.594	: sigx0 at the source (m)
13.615	13.913	11.406	13.990	13.913	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-84.6	-84.6	31.3	-75.6	22.7	: x-coord. of source (m)
117.4	117.4	-62.2	115.5	-58.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.897	0.859	0.801	0.840	0.840	: total mass emitted (kg)
3.968	5.576	10.800	4.202	3.260	: sigx0 at the source (m)
13.430	12.846	8.915	13.358	13.619	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-40.4	-40.4	18.2	-52.3	46.0	: x-coord. of source (m)
49.3	49.3	-57.6	101.0	-73.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.897	0.859	0.801	0.840	0.840	: total mass emitted (kg)
13.915	13.619	12.739	3.040	3.986	: sigx0 at the source (m)
1.576	3.260	5.816	13.670	13.424	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-39.5	-39.5	56.0	-84.6	13.7	: x-coord. of source (m)
76.7	76.7	-88.7	117.4	-56.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.897	0.859	0.801	0.840	0.840	: total mass emitted (kg)
11.263	10.164	2.543	6.458	5.576	: sigx0 at the source (m)
8.322	9.633	13.771	12.426	12.846	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-38.5	-38.5	59.7	-67.0	31.3	: x-coord. of source (m)
58.4	58.4	-102.0	112.0	-62.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.897	0.859	0.801	0.840	0.840	: total mass emitted (kg)
13.430	12.846	1.108	1.819	0.846	: sigx0 at the source (m)
3.968	5.576	13.960	13.885	13.978	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	59.8	-42.3	56.0	: x-coord. of source (m)
-99.9	-99.9	-115.9	85.5	-88.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.897	0.859	0.801	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	4.683	7.532	8.337	: sigx0 at the source (m)
-99.900	-99.900	13.197	11.806	11.252	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	56.4	-38.2	60.1	: x-coord. of source (m)
-99.9	-99.9	-129.3	67.6	-106.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.897	0.859	0.801	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	7.939	11.116	11.683	: sigx0 at the source (m)
-99.900	-99.900	11.536	8.518	7.722	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-40.4	57.9	: x-coord. of source (m)

-99.9	-99.9	-99.9	49.3	-124.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.897	0.859	0.801	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	-99.900	13.358	13.619	: sigx0 at the source (m)
-99.900	-99.900	-99.900	4.202	3.260	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-39.5	58.9	: x-coord. of source (m)
-99.9	-99.9	-99.9	76.7	-97.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.897	0.859	0.801	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	-99.900	9.468	10.164	: sigx0 at the source (m)
-99.900	-99.900	-99.900	10.318	9.633	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-43.9	54.4	: x-coord. of source (m)
-99.9	-99.9	-99.9	40.8	-133.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.897	0.859	0.801	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	-99.900	13.885	13.978	: sigx0 at the source (m)
-99.900	-99.900	-99.900	1.819	0.846	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-38.5	59.8	: x-coord. of source (m)
-99.9	-99.9	-99.9	58.4	-115.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.897	0.859	0.801	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	-99.900	12.426	12.846	: sigx0 at the source (m)
-99.900	-99.900	-99.900	6.458	5.576	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
2.00	3.00	3.90	3.20	5.40	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
2.00	3.00	3.90	3.20	5.40	: domain-averaged wind speed (m/s)
329.0	336.0	203.0	340.0	156.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
16.30	16.80	8.50	20.70	5.90	: domain-averaged sigma-theta (deg)
4.90	3.90	3.10	4.70	2.60	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
300.0	300.0	300.0	300.0	300.0	: averaging time for domain-avg data (s)
0.030	0.097	0.095	0.111	0.097	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	: P-G stability class
300.0	300.0	300.0	300.0	300.0	: averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	: suggested receptor height (m)
0	0	0	0	0	: no. of distances downwind
5	5	5	5	5	: no. of lines-of-sight
-173.8	-173.8	-173.8	-173.8	-173.8	: x-coord. of 1st end-point for LOSi (m)
-205.7	-205.7	-205.7	-205.7	-205.7	: y-coord. of 1st end-point for LOSi (m)
356.0	356.0	356.0	356.0	356.0	: x-coord. of 2nd end-point for LOSi (m)
76.0	76.0	76.0	76.0	76.0	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
4.400E+04	2.700E+04	-9.990E+01	4.500E+04	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-197.3	-197.3	-197.3	-197.3	-197.3	: x-coord. of 1st end-point for LOSi (m)
-161.5	-161.5	-161.5	-161.5	-161.5	: y-coord. of 1st end-point for LOSi (m)
332.5	332.5	332.5	332.5	332.5	: x-coord. of 2nd end-point for LOSi (m)
120.2	120.2	120.2	120.2	120.2	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
7.700E+04	5.200E+04	-9.990E+01	8.500E+04	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-220.7	-220.7	-220.7	-220.7	-220.7	: x-coord. of 1st end-point for LOSi (m)
-117.4	-117.4	-117.4	-117.4	-117.4	: y-coord. of 1st end-point for LOSi (m)
309.0	309.0	309.0	309.0	309.0	: x-coord. of 2nd end-point for LOSi (m)
164.3	164.3	164.3	164.3	164.3	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.770E+05	1.220E+05	1.890E+05	2.290E+05	2.450E+05	: LOS integrated dosage (mg-s/m**2)
-244.2	-244.2	-244.2	-244.2	-244.2	: x-coord. of 1st end-point for LOSi (m)
-73.2	-73.2	-73.2	-73.2	-73.2	: y-coord. of 1st end-point for LOSi (m)
285.6	285.6	285.6	285.6	285.6	: x-coord. of 2nd end-point for LOSi (m)

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     208.5       208.5       208.5       208.5       208.5 : y-coord. of 2nd end-point for LOS1 (m)
     -99.9       -99.9       -99.9       -99.9       -99.9 : LOS integrated conc. (mg/m**2)
-9.990E+01  -9.990E+01   9.000E+04  -9.990E+01   1.650E+05 : LOS integrated dosage (mg-s/m**2)
    -267.7      -267.7      -267.7      -267.7      -267.7 : x-coord. of 1st end-point for LOS1 (m)
     -29.1       -29.1       -29.1       -29.1       -29.1 : y-coord. of 1st end-point for LOS1 (m)
     262.1       262.1       262.1       262.1       262.1 : x-coord. of 2nd end-point for LOS1 (m)
     252.6       252.6       252.6       252.6       252.6 : y-coord. of 2nd end-point for LOS1 (m)
     -99.9       -99.9       -99.9       -99.9       -99.9 : LOS integrated conc. (mg/m**2)
-9.990E+01  -9.990E+01  -9.990E+01  -9.990E+01   1.170E+05 : LOS integrated dosage (mg-s/m**2)
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The Evaluation of the L8 Series Grenades (L8A3, medium condition temp., L83M)

6 : number of trials included in DOA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

B39a	B40a	B45a	B46a	B51a	B52a	: trial ID
6	6	6	6	6	6	: month
1	1	7	7	1	1	: day
82	82	82	82	82	82	: year
17	17	0	22	19	21	: hour
12	54	14	35	54	49	: minute
6	6	8	8	12	12	: no. of sources
-46.6	-46.6	51.7	51.7	-46.6	51.7	: x-coord. of source (m)
93.7	93.7	-80.6	-80.6	93.7	-80.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.992	0.973	0.763	0.763	0.897	0.916	: total mass emitted (kg)
3.278	1.837	3.260	0.357	2.801	10.164	: sigx0 at the source (m)
13.615	13.883	13.619	13.999	13.721	9.633	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-59.2	-59.2	42.7	42.7	-59.2	39.1	: x-coord. of source (m)
107.1	107.1	-70.0	-70.0	107.1	-67.1	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.992	0.973	0.763	0.763	0.897	0.916	: total mass emitted (kg)
1.576	3.022	6.674	3.968	2.061	6.257	: sigx0 at the source (m)
13.915	13.674	12.311	13.430	13.851	12.528	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-84.6	-84.6	31.3	31.3	-75.6	22.7	: x-coord. of source (m)
117.4	117.4	-62.2	-62.2	115.5	-58.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.992	0.973	0.763	0.763	0.897	0.916	: total mass emitted (kg)
8.322	9.454	9.633	7.309	6.674	1.594	: sigx0 at the source (m)
11.263	10.331	10.164	11.945	12.311	13.913	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-40.4	-40.4	18.2	18.2	-52.3	46.0	: x-coord. of source (m)
49.3	49.3	-57.6	-57.6	101.0	-73.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.992	0.973	0.763	0.763	0.897	0.916	: total mass emitted (kg)
12.537	11.816	11.935	10.152	0.376	8.337	: sigx0 at the source (m)
6.240	7.516	7.325	9.646	13.999	11.252	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-39.5	-39.5	56.0	56.0	-84.6	13.7	: x-coord. of source (m)
76.7	76.7	-88.7	-88.7	117.4	-56.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.992	0.973	0.763	0.763	0.897	0.916	: total mass emitted (kg)
7.737	6.474	0.846	2.079	8.710	0.846	: sigx0 at the source (m)
11.672	12.417	13.978	13.849	10.965	13.978	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-38.5	-38.5	59.7	59.7	-67.0	31.3	: x-coord. of source (m)
58.4	58.4	-102.0	-102.0	112.0	-62.2	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.992	0.973	0.763	0.763	0.897	0.916	: total mass emitted (kg)
11.263	10.331	2.801	5.592	4.435	3.986	: sigx0 at the source (m)
8.322	9.454	13.721	12.839	13.283	13.424	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	59.8	59.8	-42.3	56.0	: x-coord. of source (m)
-99.9	-99.9	-115.9	-115.9	85.5	-88.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.992	0.973	0.763	0.763	0.897	0.916	: total mass emitted (kg)
-99.900	-99.900	6.257	8.725	5.141	11.683	: sigx0 at the source (m)
-99.900	-99.900	12.528	10.954	13.026	7.722	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	56.4	56.4	-38.2	60.1	: x-coord. of source (m)
-99.9	-99.9	-129.3	-129.3	67.6	-106.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.992	0.973	0.763	0.763	0.897	0.916	: total mass emitted (kg)
-99.900	-99.900	9.286	11.263	9.286	13.619	: sigx0 at the source (m)
-99.900	-99.900	10.482	8.322	10.482	3.260	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-40.4	57.9	: x-coord. of source (m)

-99.9	-99.9	-99.9	-99.9	49.3	-124.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.992	0.973	0.763	0.763	0.897	0.916	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	12.311	13.913	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	6.674	1.594	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-39.5	58.9	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	76.7	-97.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.992	0.973	0.763	0.763	0.897	0.916	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	7.325	12.846	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	11.935	5.576	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-43.9	54.4	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	40.8	-133.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.992	0.973	0.763	0.763	0.897	0.916	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	13.283	13.424	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	4.435	3.986	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-38.5	59.8	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	58.4	-115.9	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.992	0.973	0.763	0.763	0.897	0.916	: total mass emitted (kg)
-99.900	-99.900	-99.900	-99.900	10.965	13.978	: sigx0 at the source (m)
-99.900	-99.900	-99.900	-99.900	8.710	0.846	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
4.50	5.00	5.60	6.50	4.20	2.90	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
4.50	5.00	5.60	6.50	4.20	2.90	: domain-averaged wind speed (m/s)
349.0	355.0	196.0	184.0	351.0	136.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
7.00	13.30	10.10	10.00	25.90	11.90	: domain-averaged sigma-theta (deg)
2.70	2.70	2.50	2.40	7.40	4.30	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for domain-avg data (s)
0.078	0.069	0.121	0.093	0.085	0.087	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	: P-G stability class
300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	2.00	: suggested receptor height (m)
0	0	0	0	0	0	: no. of distances downwind
5	5	5	5	5	5	: no. of lines-of-sight
-173.8	-173.8	-173.8	-173.8	-173.8	-173.8	: x-coord. of 1st end-point for LOS1 (m)
-205.7	-205.7	-205.7	-205.7	-205.7	-205.7	: y-coord. of 1st end-point for LOS1 (m)
356.0	356.0	356.0	356.0	356.0	356.0	: x-coord. of 2nd end-point for LOS1 (m)
76.0	76.0	76.0	76.0	76.0	76.0	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
4.500E+04	3.600E+04	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-197.3	-197.3	-197.3	-197.3	-197.3	-197.3	: x-coord. of 1st end-point for LOS1 (m)
-161.5	-161.5	-161.5	-161.5	-161.5	-161.5	: y-coord. of 1st end-point for LOS1 /m)
332.5	332.5	332.5	332.5	332.5	332.5	: x-coord. of 2nd end-point for LOS1 (m)
120.2	120.2	120.2	120.2	120.2	120.2	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
6.600E+04	3.800E+04	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-220.7	-220.7	-220.7	-220.7	-220.7	-220.7	: x-coord. of 1st end-point for LOS1 (m)
-117.4	-117.4	-117.4	-117.4	-117.4	-117.4	: y-coord. of 1st end-point for LOS1 (m)
309.0	309.0	309.0	309.0	309.0	309.0	: x-coord. of 2nd end-point for LOS1 (m)
164.3	164.3	164.3	164.3	164.3	164.3	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.380E+05	1.200E+05	1.920E+05	1.670E+05	2.520E+05	3.260E+05	: LOS integrated dosage (mg-s/m**2)
-244.2	-244.2	-244.2	-244.2	-244.2	-244.2	: x-coord. of 1st end-point for LOS1 (m)
-73.2	-73.2	-73.2	-73.2	-73.2	-73.2	: y-coord. of 1st end-point for LOS1 (m)
285.6	285.6	285.6	285.6	285.6	285.6	: x-coord. of 2nd end-point for LOS1 (m)

208.5	208.5	208.5	208.5	208.5	208.5	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	1.360E+05	1.200E+05	-9.990E+01	1.940E+05	: LOS integrated dosage (mg-s/m**2)
-267.7	-267.7	-267.7	-267.7	-267.7	-267.7	: x-coord. of 1st end-point for LOS1 (m)
-29.1	-29.1	-29.1	-29.1	-29.1	-29.1	: y-coord. of 1st end-point for LOS1 (m)
262.1	262.1	262.1	262.1	262.1	262.1	: x-coord. of 2nd end-point for LOS1 (m)
252.6	252.6	252.6	252.6	252.6	252.6	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	-9.990E+01	7.400E+04	-9.990E+01	9.400E+04	: LOS integrated dosage (mg-s/m**2)

The Evaluation of the L8 Series Grenades (L8A3, high condition temp., L83M)

5 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

B41a	B42a	B48a	B53a	B54a	: trial ID
6	6	6	6	6	: month
8	8	7	8	8	: day
82	82	82	82	82	: year
16	21	21	18	18	: hour
49	44	22	44	0	: minute
6	6	8	11	11	: no. of sources
-46.6	-46.6	51.7	-46.6	-46.6	: x-coord. of source (m)
93.7	93.7	-80.6	93.7	93.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.859	0.782	0.744	0.840	0.840	: total mass emitted (kg)
3.278	1.333	4.435	2.061	6.037	: sigx0 at the source (m)
13.615	13.940	13.283	13.851	12.636	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-59.2	-59.2	42.7	-59.2	-59.2	: x-coord. of source (m)
107.1	107.1	-70.0	107.1	107.1	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.859	0.782	0.744	0.840	0.840	: total mass emitted (kg)
1.576	6.020	7.722	6.674	1.351	: sigx0 at the source (m)
13.915	12.644	11.683	12.311	13.938	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-84.6	-84.6	31.3	-75.6	-75.6	: x-coord. of source (m)
117.4	117.4	-62.2	115.5	115.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.859	0.782	0.744	0.840	0.840	: total mass emitted (kg)
8.322	11.536	10.482	10.482	3.497	: sigx0 at the source (m)
11.263	7.939	9.286	9.286	13.560	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-40.4	-40.4	18.2	-52.3	-52.3	: x-coord. of source (m)
49.3	49.3	-57.6	101.0	101.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.859	0.782	0.744	0.840	0.840	: total mass emitted (kg)
12.537	9.822	12.528	4.435	3.751	: sigx0 at the source (m)
6.240	9.982	6.257	13.283	13.492	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-39.5	-39.5	56.0	-84.6	-84.6	: x-coord. of source (m)
76.7	76.7	-88.7	117.4	117.4	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.859	0.782	0.744	0.840	0.840	: total mass emitted (kg)
7.737	3.515	2.061	11.935	5.799	: sigx0 at the source (m)
11.672	13.555	13.851	7.325	12.747	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-38.5	-38.5	59.7	-67.0	-67.0	: x-coord. of source (m)
58.4	58.4	-102.0	112.0	112.0	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.859	0.782	0.744	0.840	0.840	: total mass emitted (kg)
11.263	7.939	1.594	8.710	1.090	: sigx0 at the source (m)
8.322	11.536	13.913	10.965	13.961	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	59.8	-42.3	-42.3	: x-coord. of source (m)
-99.9	-99.9	-115.9	85.5	85.5	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.859	0.782	0.744	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	5.141	0.376	8.140	: sigx0 at the source (m)
-99.900	-99.900	13.026	13.999	11.395	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	56.4	-38.2	-38.2	: x-coord. of source (m)
-99.9	-99.9	-129.3	67.6	67.6	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.859	0.782	0.744	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	8.337	5.141	11.546	: sigx0 at the source (m)
-99.900	-99.900	11.252	13.026	7.924	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-39.5	-40.4	: x-coord. of source (m)

-99.9	-99.9	-99.9	76.7	49.3	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.859	0.782	0.744	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	-99.900	2.801	13.560	: sigx0 at the source (m)
-99.900	-99.900	-99.900	13.721	3.497	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-43.9	-39.5	: x-coord. of source (m)
-99.9	-99.9	-99.9	40.8	76.7	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.859	0.782	0.744	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	-99.900	10.965	9.995	: sigx0 at the source (m)
-99.900	-99.900	-99.900	8.710	9.809	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-38.5	-43.9	: x-coord. of source (m)
-99.9	-99.9	-99.9	58.4	40.8	: y-coord. of source (m)
0.00	0.00	0.00	0.00	0.00	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
105.0	105.0	105.0	105.0	105.0	: emission duration (s)
0.859	0.782	0.744	0.840	0.840	: total mass emitted (kg)
-99.900	-99.900	-99.900	7.325	13.961	: sigx0 at the source (m)
-99.900	-99.900	-99.900	11.935	1.090	: sigy0 at the source (m)
0.120	0.120	0.120	0.120	0.120	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
6.10	5.10	3.10	4.60	5.70	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
6.10	5.10	3.10	4.60	5.70	: domain-averaged wind speed (m/s)
349.0	8.0	201.0	11.0	331.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
6.70	12.30	9.10	20.70	8.00	: domain-averaged sigma-theta (deg)
2.60	3.30	3.90	2.80	3.20	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
300.0	300.0	300.0	300.0	300.0	: averaging time for domain-avg data (s)
0.102	0.072	0.108	0.089	0.084	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	: P-G stability class
300.0	300.0	300.0	300.0	300.0	: averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	: suggested receptor height (m)
0	0	0	0	0	: no. of distances downwind
4	4	4	4	4	: no. of lines-of-sight
-173.8	-173.8	-173.8	-173.8	-173.8	: x-coord. of 1st end-point for LOS1 (m)
-205.7	-205.7	-205.7	-205.7	-205.7	: y-coord. of 1st end-point for LOS1 (m)
356.0	356.0	356.0	356.0	356.0	: x-coord. of 2nd end-point for LOS1 (m)
76.0	76.0	76.0	76.0	76.0	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
5.400E+04	-9.990E+01	-9.990E+01	-9.990E+01	7.300E+04	: LOS integrated dosage (mg-s/m**2)
-197.3	-197.3	-197.3	-197.3	-197.3	: x-coord. of 1st end-point for LOS1 (m)
-161.5	-161.5	-161.5	-161.5	-161.5	: y-coord. of 1st end-point for LOS1 (m)
332.5	332.5	332.5	332.5	332.5	: x-coord. of 2nd end-point for LOS1 (m)
120.2	120.2	120.2	120.2	120.2	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
6.700E+04	-9.990E+01	-9.990E+01	-9.990E+01	1.040E+05	: LOS integrated dosage (mg-s/m**2)
-220.7	-220.7	-220.7	-220.7	-220.7	: x-coord. of 1st end-point for LOS1 (m)
-117.4	-117.4	-117.4	-117.4	-117.4	: y-coord. of 1st end-point for LOS1 (m)
309.0	309.0	309.0	309.0	309.0	: x-coord. of 2nd end-point for LOS1 (m)
164.3	164.3	164.3	164.3	164.3	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.340E+05	1.750E+05	1.320E+05	2.580E+05	1.880E+05	: LOS integrated dosage (mg-s/m**2)
-244.2	-244.2	-244.2	-244.2	-244.2	: x-coord. of 1st end-point for LOS1 (m)
-73.2	-73.2	-73.2	-73.2	-73.2	: y-coord. of 1st end-point for LOS1 (m)
285.6	285.6	285.6	285.6	285.6	: x-coord. of 2nd end-point for LOS1 (m)
208.5	208.5	208.5	208.5	208.5	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	8.300E+04	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)

The Tests of Foreign Smoke Pots/Generators (U.S. ABC-M5, INFUS)

17 : number of trials included in DOA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

trial ID	U601	U604	U606	U607	U608	U609	U610	U611	U612	U613	U614	U615	U616	U619	U620	U621	U622
month	9	9	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11
day	14	15	16	16	16	17	17	17	18	18	18	18	19	19	21	21	21
year	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81
hour	13	21	13	19	22	16	19	22	17	18	21	16	13	22	16	19	21
minute	16	6	50	57	23	34	43	4	7	1	9	16	53	27	18	21	17
no. of sources	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
x-coord. of source (m)	-19.4	-29.1	19.4	19.4	19.4	19.4	19.4	-19.4	-19.4	-19.4	-19.4	19.4	19.4	19.4	19.4	19.4	19.4
y-coord. of source (m)	35.0	52.5	-35.0	-35.0	-35.0	-35.0	-35.0	35.0	35.0	35.0	35.0	35.0	-35.0	-35.0	-35.0	-35.0	-35.0
source elevation (m)	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
emission rate (g/s)	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	99.9	-99.9	-99.9	-99.9	99.9	-99.9
emission duration (s)	1600.0	1429.0	1666.2	1716.0	1561.2	1911.0	1396.2	1531.2	1521.0	1031.2	2356.2	2901.0	1531.2	1111.2	1441.2	1771.2	1406.2
total mass emitted (kg)	18.016	13.047	13.814	13.600	13.600	13.404	16.536	17.404	24.957	20.023	19.292	25.621	24.957	19.190	23.018	18.[illegible]94	17.506
sigx0 at the source (m)	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230
sigy0 at the source (m)	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230
sigz0 at the source (m)	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230
ambient pressure (atm)	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9
relative humidity (%)	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9
temperature at level #1 (K)	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00
measuring height for temperature #1 (m)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
temperature at level #2 (K)	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	99.90	-99.90	-99.90	-99.90	-99.90	-99.90
measuring height for temperature #2 (m)	99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90
wind speed (m/s) at a tower	2.50	3.40	3.30	5.10	4.00	4.30	5.90	3.70	5.00	5.60	3.70	2.50	4.60	3.20	3.30	1.50	4.00
measuring height for wind data (m)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
domain-averaged wind speed (m/s)	2.50	3.40	3.30	5.10	4.00	4.30	5.90	3.70	5.00	5.60	3.70	2.50	4.60	3.20	3.30	1.50	4.00
domain-averaged wind direction (deg)	150.0	352.0	146.0	150.0	150.0	150.0	196.0	310.0	322.0	339.0	11.0	111.0	150.0	150.0	130.0	196.0	136.0
domain-averaged sigma-u (m/s)	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	99.90	-99.90	-99.90	-99.90	-99.90	-99.90
domain-averaged sigma-theta (deg)	20.90	20.50	11.00	9.60	5.00	6.00	14.50	19.00	12.00	15.00	13.80	8.60	10.00	8.80	6.70	23.40	6.40
domain-averaged sigma-phi (deg)	-99.90	-99.90	5.00	5.00	4.00	4.20	5.20	5.50	4.80	5.20	6.00	5.10	4.90	4.10	3.90	5.20	4.10
measuring ht for domain-avg wind speed (m)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
averaging time for domain-avg data (s)	1600.0	1429.0	1666.2	1716.0	1561.2	1911.0	1396.2	1531.2	1521.0	1031.2	2356.2	2901.0	1531.2	1111.2	1441.2	1771.2	1406.2
wind speed power law exponent	0.083	0.037	0.119	0.110	0.132	0.140	0.133	0.191	0.131	0.144	0.132	0.124	0.104	0.122	0.144	0.121	0.135
surface roughness (m)	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300
friction velocity (m)	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900
inverse Monin Obukhov length (1/m)	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000
albedo	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
moisture availability	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Bowen ratio	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
mixing height (m)	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9
cloud cover (%)	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9
P-G stability class	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
averaging time for concentration (s)	1600.0	1429.0	1666.2	1716.0	1561.2	1911.0	1396.2	1531.2	1521.0	1031.2	2356.2	2901.0	1531.2	1111.2	1441.2	1771.2	1406.2
suggested receptor height (m)	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
no. of distances downwind	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
no. of lines-of-sight	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
x-coord. of 1st end-point for LOS1 (m)	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7
y-coord. of 1st end-point for LOS1 (m)	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2
x-coord. of 2nd end-point for LOS1 (m)	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5
y-coord. of 2nd end-point for LOS1 (m)	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1
LOS integrated conc. (mg/m**2)	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	99.9	-99.9	-99.9	-99.9	-99.9	-99.9
LOS integrated dosage (mg-s/m**2)	1.120E+05	5.000E+05	1.223E+06	7.150E+05	7.800E+05	6.330E+05	5.780E+05	6.700E+05	7.540E+05	6.840E+05	9.050E+05	1.916E+06	8.650E+05	6.840E+05	1.435E+06	7.250E+05	6.950E+05

The Tests of Foreign Smoke Pots/Generators (British MK5, INTBA)

18 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

8602	8604	8605	8606	8607	8608	8609	8610	8611	8612	8613	8614	8615	8616	8617	8618	8619	8622	: trial ID
9	9	9	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	: month
14	15	16	16	16	16	17	17	17	18	18	18	18	19	20	19	19	21	: day
81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	: year
19	20	18	18	18	21	17	18	22	17	18	20	22	18	20	21	21	21	: hour
41	24	43	23	52	10	11	33	44	42	10	46	58	23	16	12	40	45	: minute
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
-29.1	-29.1	-19.4	19.4	19.4	19.4	19.4	19.4	-19.4	-19.4	-19.4	-19.4	-19.4	19.4	19.4	19.4	19.4	19.4	: x-coord. of source (m)
52.5	52.5	35.0	-35.0	-35.0	-35.0	-35.0	-35.0	35.0	35.0	35.0	35.0	35.0	-35.0	-35.0	-35.0	-35.0	-35.0	: y-coord. of source (m)
0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
1036.0	1120.2	951.0	1356.0	1206.0	1326.0	1105.0	1191.0	916.2	1021.2	1351.2	1051.2	841.2	1141.2	961.2	1126.2	1161.0	1221.0	: emission duration (s)
15.401	15.574	15.574	15.931	16.177	15.006	15.369	15.369	15.606	20.012	19.097	17.938	18.123	18.401	17.613	17.420	17.420	15.713	: total mass emitted (kg)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigx0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigy0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
2.80	3.80	3.10	3.80	3.90	4.90	4.40	4.20	3.90	5.00	6.70	2.50	3.30	4.60	2.40	3.00	3.40	4.60	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
2.80	3.80	3.10	3.80	3.90	4.90	4.40	4.20	3.90	5.00	6.70	2.50	3.30	4.60	2.40	3.00	3.40	4.60	: domain-averaged wind speed (m/s)
333.0	353.0	350.0	161.0	169.0	152.0	143.0	129.0	304.0	318.0	330.0	14.0	0.5	140.0	163.0	130.0	140.0	151.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
18.60	11.60	21.80	9.60	12.00	11.50	7.40	15.20	11.40	11.00	12.80	21.60	13.80	10.80	15.90	20.60	9.80	5.60	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	5.40	5.80	4.40	4.20	6.70	4.70	5.30	4.30	9.90	4.40	4.90	8.10	6.60	4.80	3.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
1036.0	1120.2	951.0	1356.0	1206.0	1326.0	1105.0	1191.0	916.2	1021.2	1351.2	1051.2	841.2	1141.2	961.2	1126.2	1161.0	1221.0	: averaging time for domain-avg data (s)
0.086	0.112	0.129	0.102	0.112	0.123	0.124	0.093	0.176	0.146	0.132	0.127	0.180	0.106	0.089	0.106	0.118	0.123	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: Bowen ratio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
1036.0	1120.2	951.0	1356.0	1206.0	1326.0	1105.0	1191.0	916.2	1021.2	1351.2	1051.2	841.2	1141.2	961.2	1126.2	1161.0	1221.0	: averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: suggested receptor height (m)
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	: no. of distances downwind
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	: no. of lines-of-sight
-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	: x-coord. of 1st end-point for LOS1 (m)
-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	: y-coord. of 1st end-point for LOS1 (m)
560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	: x-coord. of 2nd end-point for LOS1 (m)
315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
5.590E+05	2.980E+05	4.890E+05	4.640E+05	7.750E+05	5.820E+05	4.830E+05	4.510E+05	2.990E+05	3.400E+05	3.490E+05	4.440E+05	8.350E+05	3.270E+05	4.210E+05	4.680E+05	5.860E+05	5.230E+05	: LOS integrated dosage (mg-s/m**2)

The Tests of Foreign Smoke Pots/Generators (Japanese 3-00, INTJA)

7 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

3602	3604	J608	J609	J610	J620	J622	: trial ID
9	9	11	11	11	11	11	: month
14	15	16	17	17	21	21	: day
81	81	81	81	81	81	81	: year
20	21	23	16	18	15	20	: hour
17	42	9	6	9	22	46	: minute
1	1	1	1	1	1	1	: no. of sources
-29.1	-29.1	19.4	19.4	19.4	19.4	19.4	: x-coord. of source (m)
52.5	52.5	-35.0	-35.0	-35.0	-35.0	-35.0	: y-coord. of source (m)
0.25	0.25	0.25	0.25	0.25	0.25	0.25	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
1345.8	1387.2	1426.2	1266.0	1111.2	1381.2	1330.8	: emission duration (s)
14.326	14.413	15.146	14.715	14.326	20.368	15.146	: total mass emitted (kg)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigx0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigy0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
3.50	2.60	3.10	4.50	4.80	3.20	3.60	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
3.50	2.60	3.10	4.50	4.80	3.20	3.60	: domain-averaged wind speed (m/s)
346.0	346.0	136.0	160.0	140.0	134.0	148.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
4.80	26.00	7.00	5.40	9.60	13.60	8.20	: domain-averaged sigma-theta (deg)
-99.90	-99.90	4.00	3.80	4.70	4.50	4.50	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
1345.8	1387.2	1426.2	1266.0	1111.2	1381.2	1330.8	: averaging time for domain-avg data (s)
0.026	0.098	0.193	0.157	0.115	0.142	0.111	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	: Bowen ratio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	: P-G stability class
1345.8	1387.2	1426.2	1266.0	1111.2	1381.2	1330.8	: averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	: suggested receptor height (m)
0	0	0	0	0	0	0	: no. of distances downwind
1	1	1	1	1	1	1	: no. of lines-of-sight
-218.7	-218.7	-218.7	-218.7	-218.7	-218.7	-218.7	: x-coord. of 1st end-point for LOS1 (m)
-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	: y-coord. of 1st end-point for LOS1 (m)
568.5	568.5	568.5	568.5	568.5	568.5	568.5	: x-coord. of 2nd end-point for LOS1 (m)
315.1	315.1	315.1	315.1	315.1	315.1	315.1	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
8.500E+05	3.590E+05	9.610E+05	8.340E+05	5.780E+05	1.156E+06	7.080E+05	: LOS integrated dosage (mg-s/m**2)

The Tests of Foreign Smoke Pots/Generators (Canadian SC39, IMTCA)

17 : number of trials included in DOA
6 : time zone designation
40.20 : latitude (deg)
112.00 : longitude (deg)

C601	C604	C606	C607	C608	C609	C610	C611	C612	C613	C615	C616	C617	C618	C619	C620	C622 : trial ID
9	9	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11 : month
14	15	16	16	16	17	17	17	18	18	18	19	19	20	19	21	21 : day
81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81 : year
19	20	17	20	21	17	20	21	16	20	22	17	19	20	22	16	22 : hour,
15	11	10	33	49	39	42	40	26	13	34	28	48	55	5	48	8 : minute
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 : no. of sources
-29.1	-29.1	19.4	19.4	19.4	19.4	19.4	-19.4	-19.4	-19.4	-19.4	19.4	19.4	19.4	19.4	19.4	19.4 : x-coord. of source (m)
52.5	52.5	-35.0	-35.0	-35.0	-35.0	-35.0	35.0	35.0	35.0	35.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0 : y-coord. of source (m)
0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31 : source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : emission rate (g/s)
651.0	820.0	967.2	1021.2	1141.2	961.2	1150.0	976.2	1021.2	1141.2	1221.0	1141.2	916.2	790.0	1101.0	1036.2	1100.0 : emission duration (s)
13.457	13.330	13.933	13.774	13.536	13.179	13.099	12.623	19.411	15.362	16.925	19.411	15.521	14.687	15.521	18.490	13.250 : total mass emitted (kg)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230 : sigx0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230 : sigy0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230 : sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00 : temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00 : measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90 : temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90 : measuring height for temperature #2 (m)
2.60	2.00	2.40	5.10	5.60	5.00	4.90	3.20	4.00	3.60	3.60	3.20	.10	2.00	3.30	3.60	4.60 : wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00 : measuring height for wind data (m)
2.60	2.00	2.40	5.10	5.60	5.00	4.90	3.20	4.00	3.60	3.60	3.20	3.10	2.00	3.30	3.60	4.60 : domain-averaged wind speed (m/s)
330.0	339.0	146.0	141.0	150.0	151.0	200.0	310.0	314.0	345.0	2.0	134.0	150.0	177.0	152.0	146.0	154.0 : domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90 : domain-averaged sigma-u (m/s)
19.00	16.40	9.20	8.30	7.30	6.00	9.60	6.40	9.30	17.00	9.00	13.00	17.00	16.00	9.40	7.40	5.50 : domain-averaged sigma-theta (deg)
-99.90	-99.90	6.20	4.30	4.20	3.70	4.40	3.50	5.20	6.70	5.10	6.40	7.30	7.00	4.60	4.20	4.00 : domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00 : measuring ht for domain-avg wind speed (m)
651.0	820.0	967.2	1021.2	1141.2	961.2	1150.0	976.2	1021.2	1141.2	1221.0	1141.2	916.2	790.0	1101.0	1036.2	1100.0 : averaging time for domain-avg data (s)
0.100	0.077	0.116	0.110	0.120	0.110	0.155	0.203	0.135	0.136	0.193	0.099	0.088	0.097	0.105	0.131	0.132 : wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300 : surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900 : friction velocity (m)
99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	99.9000	-99.9000	-99.9000	-99.9000	-99.9000 : inverse Monin-Obukhov length (1/m)
0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10 : albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50 : moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50 : Bowen ratio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99 : P-G stability class
651.0	820.0	967.2	1021.2	1141.2	961.2	1150.0	976.2	1021.2	1141.2	1221.0	1141.2	916.2	790.0	1101.0	1036.2	1100.0 : averaging time for concentration (s)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00 : suggested receptor height (m)
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 : no. of distances downwind
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 : no. of lines-of-sight
-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7	-210.7 : x-coord. of 1st end-point for LOS1 (m)
-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2	-121.2 : y-coord. of 1st end-point for LOS1 (m)
560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5	560.5 : x-coord. of 2nd end-point for LOS1 (m)
315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1	315.1 : y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9 : LOS integrated conc. (mg/m**2)
3.210E+05	2.470E+05	9.950E+05	4.270E+05	5.880E+05	3.770E+05	7.160E+05	4.600E+05	6.470E+05	5.380E+05	7.300E+05	7.810E+05	5.030E+05	4.030E+05	6.410E+05	8.250E+05	5.050E+05 : LOS integrated dosage (mg-s/m**2)

Development Test I of the Man-Portable Smoke Generators (XM49, fog oil only, FOXF)

12 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

F001	F003	F004	F005	F008	F010	F012	F013	F015	F016	F017	F018	: trial ID
4	4	4	4	4	4	4	4	4	4	4	4	: month
8	9	13	13	13	13	14	14	22	22	22	22	: day
81	81	81	81	81	81	81	81	81	81	81	81	: year
22	18	17	18	21	22	21	22	20	21	21	22	: hour
58	5	49	38	3	44	22	58	25	9	50	17	: minute
1	1	1	1	1	1	1	1	1	1	1	1	: no. of sources
-192.7	-280.1	-323.5	-308.9	-323.5	-323.5	-352.6	-352.6	-294.4	-308.9	-294.4	-294.4	: x-coord. of source (m)
-364.0	-412.5	-24.9	-51.2	-24.9	-24.9	-75.4	-75.4	-77.4	-51.2	-77.4	-77.4	: y-coord. of source (m)
0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	: emission duration (s)
18.614	16.870	18.170	18.137	16.087	17.799	17.421	16.134	18.178	17.829	16.803	17.391	: total mass emitted (kg)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigx0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigy0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
4.00	3.70	4.70	5.40	5.80	6.10	2.80	2.40	6.00	4.40	5.00	6.30	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
4.00	3.70	4.70	5.40	5.80	6.10	2.80	2.40	6.00	4.40	5.00	6.30	: domain-averaged wind speed (m/s)
130.0	193.0	348.0	348.0	350.0	355.0	349.0	355.0	345.0	352.0	3.0	357.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
9.40	11.90	11.30	11.00	14.30	5.00	18.20	19.20	12.80	19.30	16.20	10.20	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
439.0	480.0	450.0	435.0	450.0	365.0	495.0	490.0	422.0	430.0	428.0	430.0	: averaging time for domain-avg data (s)
0.090	0.061	0.068	0.076	0.081	0.064	0.040	0.064	0.080	0.074	0.066	0.088	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	300.0	: averaging time for concentration (s)
2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	: suggested receptor height (m)
0	0	0	0	0	0	0	0	0	0	0	0	: no. of distances downwind
3	3	3	3	3	3	3	3	3	3	3	3	: no. of lines-of-sight
-779.9	-779.9	-779.9	-779.9	-779.9	-779.9	-779.9	-779.9	-779.9	-779.9	-779.9	-779.9	: x-coord. of 1st end-point for LOS1 (m)
-449.4	-449.4	-449.4	-449.4	-449.4	-449.4	-449.4	-449.4	-449.4	-449.4	-449.4	-449.4	: y-coord. of 1st end-point for LOS1 (m)
532.0	532.0	532.0	532.0	532.0	532.0	532.0	532.0	532.0	532.0	532.0	532.0	: x-coord. of 2nd end-point for LOS1 (m)
277.8	277.8	277.8	277.8	277.8	277.8	277.8	277.8	277.8	277.8	277.8	277.8	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.560E+05	9.900E+04	2.170E+05	2.710E+05	2.120E+05	2.300E+05	1.070E+05	1.860E+05	1.540E+05	2.160E+05	1.580E+05	2.710E+05	: LOS integrated dosage (mg-s/m**2)
-750.8	-750.8	-750.8	-750.8	-750.8	-750.8	-750.8	-750.8	-750.8	-750.8	-750.8	-750.8	: x-coord. of 1st end-point for LOS1 (m)
-501.9	-501.9	-501.9	-501.9	-501.9	-501.9	-501.9	-501.9	-501.9	-501.9	-501.9	-501.9	: y-coord. of 1st end-point for LOS1 (m)
561.1	561.1	561.1	561.1	561.1	561.1	561.1	561.1	561.1	561.1	561.1	561.1	: x-coord. of 2nd end-point for LOS1 (m)
225.3	225.3	225.3	225.3	225.3	225.3	225.3	225.3	225.3	225.3	225.3	225.3	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
2.250E+05	1.820E+05	1.190E+05	1.500E+05	1.360E+05	1.630E+05	8.900E+04	1.180E+05	8.200E+04	1.220E+05	7.400E+04	1.550E+05	: LOS integrated dosage (mg-s/m**2)
-721.7	-721.7	-721.7	-721.7	-721.7	-721.7	-721.7	-721.7	-721.7	-721.7	-721.7	-721.7	: x-coord. of 1st end-point for LOS1 (m)
-554.4	-554.4	-554.4	-554.4	-554.4	-554.4	-554.4	-554.4	-554.4	-554.4	-554.4	-554.4	: y-coord. of 1st end-point for LOS1 (m)
590.2	590.2	590.2	590.2	590.2	590.2	590.2	590.2	590.2	590.2	590.2	590.2	: x-coord. of 2nd end-point for LOS1 (m)
172.8	172.8	172.8	172.8	172.8	172.8	172.8	172.8	172.8	172.8	172.8	172.8	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
3.260E+05	3.120E+05	8.100E+04	9.800E+04	1.110E+05	1.190E+05	4.100E+04	8.400E+04	5.100E+04	7.700E+04	5.200E+04	1.130E+05	: LOS integrated dosage (mg-s/m**2)

Development Test I of the Man-Portable Smoke Generators (M3A3, fog oil only, FOMF)

6 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

F002	F006	F007	F009	F011	F019	: trial ID
4	4	4	4	4	4	: month
9	13	13	13	14	22	: day
81	81	81	81	81	81	: year
17	19	20	21	20	22	: hour
24	22	21	40	26	47	: minute
1	1	1	1	1	1	: no. of sources
-280.1	-323.5	-308.9	-294.4	-338.1	-294.4	: x-coord. of source (m)
-412.5	-24.9	-51.2	-77.4	-101.7	-77.4	: y-coord. of source (m)
0.30	0.30	0.30	0.30	0.30	0.30	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
300.0	300.0	270.0	300.0	300.0	300.0	: emission duration (s)
14.523	8.111	10.878	14.548	10.054	8.188	: total mass emitted (kg)
0.230	0.230	0.230	0.230	0.230	0.230	: sigx0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	: sigy0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
3.50	4.80	5.50	6.10	2.30	6.00	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
3.50	4.80	5.50	6.10	2.30	6.00	: domain-averaged wind speed (m/s)
181.0	336.0	347.0	352.0	311.0	346.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
13.20	13.10	12.10	11.80	30.60	13.20	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
530.0	420.0	435.0	450.0	485.0	450.0	: averaging time for domain-avg data (s)
0.082	0.066	0.065	0.069	0.057	0.075	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	: P-G stability class
300.0	300.0	270.0	300.0	300.0	300.0	: averaging time for concentration (s)
2.44	2.44	2.44	2.44	2.44	2.44	: suggested receptor height (m)
0	0	0	0	0	0	: no. of distances downwind
3	3	3	3	3	3	: no. of lines-of-sight
-779.9	-779.9	-779.9	-779.9	-779.9	-779.9	: x-coord. of 1st end-point for LOSi (m)
-449.4	-449.4	-449.4	-449.4	-449.4	-449.4	: y-coord. of 1st end-point for LOSi (m)
532.0	532.0	532.0	532.0	532.0	532.0	: x-coord. of 2nd end-point for LOSi (m)
277.8	277.8	277.8	277.8	277.8	277.8	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
5.700E+04	7.300E+04	1.610E+05	2.660E+05	1.650E+05	2.130E+05	: LOS integrated dosage (mg-s/m**2)
-750.8	-750.8	-750.8	-750.8	-750.8	-750.8	: x-coord. of 1st end-point for LOSi (m)
-501.9	-501.9	-501.9	-501.9	-501.9	-501.9	: y-coord. of 1st end-point for LOSi (m)
561.1	561.1	561.1	561.1	561.1	561.1	: x-coord. of 2nd end-point for LOSi (m)
225.3	225.3	225.3	225.3	225.3	225.3	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.080E+05	3.700E+04	7.600E+04	1.640E+05	7.300E+04	1.160E+05	: LOS integrated dosage (mg-s/m**2)
-721.7	-721.7	-721.7	-721.7	-721.7	-721.7	: x-coord. of 1st end-point for LOSi (m)
-554.4	-554.4	-554.4	-554.4	-554.4	-554.4	: y-coord. of 1st end-point for LOSi (m)
590.2	590.2	590.2	590.2	590.2	590.2	: x-coord. of 2nd end-point for LOSi (m)
172.8	172.8	172.8	172.8	172.8	172.8	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
2.480E+05	3.100E+04	4.500E+04	1.180E+05	3.400E+04	7.000E+04	: LOS integrated dosage (mg-s/m**2)

Development Test I of the Man-Portable Smoke Generators (XM49, diesel only and diesel part of diesel+IR, POXD)

6 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

D020	D021	DE35a	DE36a	D038	D039	: trial ID
5	5	6	6	6	6	: month
20	20	3	3	3	3	: day
81	81	81	81	81	81	: year
17	19	17	18	21	22	: hour
46	37	42	35	31	1	: minute
1	1	1	1	1	1	: no. of sources
-190.0	-280.1	-209.1	-252.8	-250.6	-250.6	: x-coord. of source (m)
-362.6	-412.5	-30.2	-54.4	-53.2	-53.2	: y-coord. of source (m)
0.38	0.38	0.38	0.38	0.38	0.38	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
240.0	240.0	240.0	240.0	240.0	240.0	: emission duration (s)
11.550	10.658	9.360	10.359	11.938	10.350	: total mass emitted (kg)
0.230	0.230	0.230	0.230	0.230	0.230	: sigx0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	: sigy0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
5.20	3.00	5.10	5.50	5.60	2.90	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
5.20	3.00	5.10	5.50	5.60	2.90	: domain-averaged wind speed (m/s)
158.0	167.0	357.0	6.0	12.0	17.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
8.70	13.20	9.00	13.00	10.60	18.20	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
495.0	420.0	420.0	390.0	380.0	420.0	: averaging time for domain-avg data (s)
0.085	0.071	0.092	0.072	0.085	0.063	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	: P-G stability class
240.0	240.0	240.0	240.0	240.0	240.0	: averaging time for concentration (s)
2.44	2.44	2.44	2.44	2.44	2.44	: suggested receptor height (m)
0	0	0	0	0	0	: no. of distances downwind
3	3	3	3	3	3	: no. of lines-of-sight
-517.5	-517.5	-517.5	-517.5	-517.5	-517.5	: x-coord. of 1st end-point for LOS1 (m)
-304.0	-304.0	-304.0	-304.0	-304.0	-304.0	: y-coord. of 1st end-point for LOS1 (m)
-80.2	-80.2	-80.2	-80.2	-80.2	-80.2	: x-coord. of 2nd end-point for LOS1 (m)
-61.6	-61.6	-61.6	-61.6	-61.6	-61.6	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
2.100E+04	1.300E+04	8.500E+04	4.200E+04	3.400E+04	1.000E+04	: LOS integrated dosage (mg-s/m**2)
-488.4	-488.4	-488.4	-488.4	-488.4	-488.4	: x-coord. of 1st end-point for LOS1 (m)
-356.5	-356.5	-356.5	-356.5	-356.5	-356.5	: y-coord. of 1st end-point for LOS1 (m)
-51.1	-51.1	-51.1	-51.1	-51.1	-51.1	: x-coord. of 2nd end-point for LOS1 (m)
-114.1	-114.1	-114.1	-114.1	-114.1	-114.1	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
4.800E+04	3.800E+04	5.000E+04	2.200E+04	1.100E+04	-9.990E+01	: LOS integrated dosage (mg-s/m**2)
-459.3	-459.3	-459.3	-459.3	-459.3	-459.3	: x-coord. of 1st end-point for LOS1 (m)
-409.0	-409.0	-409.0	-409.0	-409.0	-409.0	: y-coord. of 1st end-point for LOS1 (m)
-22.0	-22.0	-22.0	-22.0	-22.0	-22.0	: x-coord. of 2nd end-point for LOS1 (m)
-166.6	-166.6	-166.6	-166.6	-166.6	-166.6	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.000E+05	9.700E+04	1.700E+04	8.000E+03	5.000E+03	-9.990E+01	: LOS integrated dosage (mg-s/m**2)

Development Test I of the Man-Portable Smoke Generators (XM49, IR only and IR part of diesel+IR, POXI)

6 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

EA22	EA23	EA24	EA25	DE35b	DE36b	: trial ID
5	5	5	5	6	6	: month
27	27	28	28	3	3	: day
81	81	81	81	81	81	: year
18	21	18	19	17	18	: hour
50	48	34	28	42	35	: minute
1	1	1	1	1	1	: no. of sources
-338.1	-294.4	-294.4	-294.4	-204.7	-248.5	: x-coord. of source (m)
-101.7	-77.4	-77.4	-77.4	-27.7	-52.0	: y-coord. of source (m)
0.38	0.38	0.38	0.38	0.38	0.38	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
240.0	240.0	240.0	240.0	240.0	240.0	: emission duration (s)
43.633	2.600	38.475	1.510	13.233	13.015	: total mass emitted (kg)
0.230	0.230	0.230	0.230	0.230	0.230	: sigx0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	: sigy0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
2.30	2.50	2.70	2.80	5.10	5.50	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
2.30	2.50	2.70	2.80	5.10	5.50	: domain-averaged wind speed (m/s)
336.0	347.0	308.0	297.0	357.0	6.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
18.10	16.30	7.80	11.40	9.00	13.00	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
390.0	390.0	420.0	360.0	420.0	390.0	: averaging time for domain-avg data (s)
0.074	0.083	0.041	0.084	0.092	0.072	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	: Bowen ratio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	: P-G stability class
240.0	240.0	240.0	240.0	240.0	240.0	: averaging time for concentration (s)
2.44	2.44	2.44	2.44	2.44	2.44	: suggested receptor height (m)
0	0	0	0	0	0	: no. of distances downwind
3	3	3	3	3	3	: no. of lines-of-sight
-517.5	-517.5	-517.5	-517.5	-517.5	-517.5	: x-coord. of 1st end-point for LOS1 (m)
-304.0	-304.0	-304.0	-304.0	-304.0	-304.0	: y-coord. of 1st end-point for LOS1 (m)
-80.2	-80.2	-80.2	-80.2	-80.2	-80.2	: x-coord. of 2nd end-point for LOS1 (m)
-61.6	-61.6	-61.6	-61.6	-61.6	-61.6	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
2.290E+05	5.400E+04	1.040E+05	3.200E+04	2.320E+05	2.690E+05	: LOS integrated dosage (mg-s/m**2)
-488.4	-488.4	-488.4	-488.4	-488.4	-488.4	: x-coord. of 1st end-point for LOS1 (m)
-356.5	-356.5	-356.5	-356.5	-356.5	-356.5	: y-coord. of 1st end-point for LOS1 (m)
-51.1	-51.1	-51.1	-51.1	-51.1	-51.1	: x-coord. of 2nd end-point for LOS1 (m)
-114.1	-114.1	-114.1	-114.1	-114.1	-114.1	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
4.500E+04	3.000E+04	5.500E+04	1.900E+04	1.580E+05	1.680E+05	: LOS integrated dosage (mg-s/m**2)
-459.3	-459.3	-459.3	-459.3	-459.3	-459.3	: x-coord. of 1st end-point for LOS1 (m)
-409.0	-409.0	-409.0	-409.0	-409.0	-409.0	: y-coord. of 1st end-point for LOS1 (m)
-22.0	-22.0	-22.0	-22.0	-22.0	-22.0	: x-coord. of 2nd end-point for LOS1 (m)
-166.6	-166.6	-166.6	-166.6	-166.6	-166.6	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	3.900E+04	3.600E+04	1.100E+04	1.000E+05	6.200E+04	: LOS integrated dosage (mg-s/m**2)

Development Test I of the Man-Portable Smoke Generators (MX49, fogoil part of fogoil+IR, POXFC)

10 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

FE26a	FE27a	FE28a	FE29a	FE30a	FE31a	FE32a	FE33a	FE34a	FE37a	: trial ID
5	5	5	5	5	5	5	6	6	6	: month
28	29	29	29	29	29	29	1	3	3	: day
81	81	81	81	81	81	81	81	81	81	: year
20	15	16	17	18	19	20	20	15	19	: hour
34	58	45	47	24	10	18	56	58	45	: minute
1	2	2	1	1	1	1	1	1	1	: no. of sources
-296.6	-285.6	-285.6	-296.6	-294.4	-294.4	-333.7	-290.0	-342.5	-255.0	: x-coord. of source (m)
-78.6	-72.6	-72.6	-78.6	-77.4	-77.4	-99.2	-75.0	-104.1	-55.6	: y-coord. of source (m)
0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	: emission duration (s)
12.778	14.317	13.483	13.494	13.802	13.008	13.095	13.988	11.244	13.591	: total mass emitted (kg)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigx0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigy0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigz0 at the source (m)
-99.9	-303.1	-303.1	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: x-coord. of source (m)
-99.9	-82.3	-82.3	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: y-coord. of source (m)
0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	: emission duration (s)
-99.900	13.483	13.756	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: total mass emitted (kg)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigx0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigy0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
3.30	4.60	4.50	3.40	3.50	4.50	3.40	3.70	3.60	5.40	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
3.30	4.60	4.50	3.40	3.50	4.50	3.40	3.70	3.60	5.40	: domain-averaged wind speed (m/s)
332.0	326.0	319.0	313.0	317.0	308.0	298.0	354.0	328.0	351.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
13.40	8.10	7.20	8.90	17.40	10.10	9.90	34.70	13.20	16.50	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
420.0	420.0	420.0	420.0	420.0	390.0	450.0	420.0	420.0	400.0	: averaging time for domain-avg data (s)
0.088	0.099	0.068	0.063	0.058	0.082	0.087	0.056	0.075	0.089	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.60	0.50	0.50	0.50	: Bowen raio
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	: averaging time for concentration (s)
2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	: suggested receptor height (m)
0	0	0	0	0	0	0	0	0	0	: no. of distances downwind
3	3	3	3	3	3	3	3	3	3	: no. of lines-of-sight
-517.5	-517.5	-517.5	-517.5	-517.5	-517.5	-517.5	-517.5	-517.5	-517.5	: x-coord. of 1st end-point for LOSi (m)
-304.0	-304.0	-304.0	-304.0	-304.0	-304.0	-304.0	-304.0	-304.0	-304.0	: y-coord. of 1st end-point for LOSi (m)
-80.2	-80.2	-80.2	-80.2	-80.2	-80.2	-80.2	-80.2	-80.2	-80.2	: x-coord. of 2nd end-point for LOSi (m)
-61.6	-61.6	-61.6	-61.6	-61.6	-61.6	-61.6	-61.6	-61.6	-61.6	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
9.400E+04	2.570E+05	2.460E+05	1.800E+05	1.410E+05	1.300E+05	1.500E+05	1.190E+05	1.660E+05	1.400E+05	: LOS integrated dosage (mg-s/m**2)
-488.4	-488.4	-488.4	-488.4	-488.4	-488.4	-488.4	-488.4	-488.4	-488.4	: x-coord. of 1st end-point for LOSi (m)
-356.5	-356.5	-356.5	-356.5	-356.5	-356.5	-356.5	-356.5	-356.5	-356.5	: y-coord. of 1st end-point for LOSi (m)
-51.1	-51.1	-51.1	-51.1	-51.1	-51.1	-51.1	-51.1	-51.1	-51.1	: x-coord. of 2nd end-point for LOSi (m)
-114.1	-114.1	-114.1	-114.1	-114.1	-114.1	-114.1	-114.1	-114.1	-114.1	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
4.700E+04	2.530E+05	2.180E+05	9.500E+04	5.200E+04	8.300E+04	8.900E+04	7.200E+04	1.230E+05	1.230E+05	: LOS integrated dosage (mg-s/m**2)
-459.3	-459.3	-459.3	-459.3	-459.3	-459.3	-459.3	-459.3	-459.3	-459.3	: x-coord. of 1st end-point for LOSi (m)
-409.0	-409.0	-409.0	-409.0	-409.0	-409.0	-409.0	-409.0	-409.0	-409.0	: y-coord. of 1st end-point for LOSi (m)
-22.0	-22.0	-22.0	-22.0	-22.0	-22.0	-22.0	-22.0	-22.0	-22.0	: x-coord. of 2nd end-point for LOSi (m)
-166.6	-166.6	-166.6	-166.6	-166.6	-166.6	-166.6	-166.6	-166.6	-166.6	: y-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	2.190E+05	1.210E+05	5.100E+04	2.400E+04	5.600E+04	5.100E+04	3.700E+04	9.200E+04	8.100E+04	: LOS integrated dosage (mg-s/m**2)

Development Test I of the Man-Portable Smoke Generators (MX49, IR part of fogoil+IR, POXIC)

10 : number of trials included in DDA
6 : time zone designation
40.20 : latitude (deg)
113.00 : longitude (deg)

FE26b	FE27b	FE28b	FE29b	FE30b	FE31b	FE32b	FE33b	FE34b	FE37b	: trial ID
5	5	5	5	5	5	5	6	6	6	: month
28	29	29	29	29	29	29	1	3	3	: day
81	81	81	81	81	81	81	81	81	81	: year
20	15	16	17	18	19	20	20	15	18	: hour
34	58	45	47	24	10	18	56	58	45	: minute
1	1	1	1	2	2	3	3	1	1	: no. of sources
-292.2	-294.4	-294.4	-292.2	-285.6	-285.6	-325.0	-281.3	-333.7	-246.3	: x-coord. of source (m)
-76.2	-77.4	-77.4	-76.2	-72.6	-72.6	-94.4	-70.2	-99.2	-50.8	: y-coord. of source (m)
0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	: emission duration (s)
17.410	13.860	7.445	27.519	38.004	25.076	6.345	12.234	10.514	38.723	: total mass emitted (kg)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigx0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigy0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-303.1	-303.1	-342.5	-298.7	-99.9	-99.9	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	-82.3	-82.3	-104.1	-79.8	-99.9	-99.9	: y-coord. of source (m)
0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	: emission duration (s)
-99.900	-99.900	-99.900	-99.900	24.813	16.372	17.998	21.627	-99.900	-99.900	: total mass emitted (kg)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigx0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigy0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-351.2	-307.5	-99.9	-99.9	: x-coord. of source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-108.9	-84.7	-99.9	-99.9	: y-coord. of source (m)
0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	: source elevation (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: emission rate (g/s)
240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	: emission duration (s)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	14.502	31.677	-99.900	-99.900	: total mass emitted (kg)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigx0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigy0 at the source (m)
0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	0.230	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: relative humidity (%)
300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	300.00	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: temperature at level #2 (K)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: measuring height for temperature #2 (m)
3.30	4.60	4.50	3.40	3.50	4.50	3.40	3.70	3.60	5.40	: wind speed (m/s) at a tower
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring height for wind data (m)
3.30	4.60	4.50	3.40	3.50	4.50	3.40	3.70	3.60	5.40	: domain-averaged wind speed (m/s)
332.0	326.0	319.0	313.0	317.0	308.0	298.0	354.0	328.0	351.0	: domain-averaged wind direction (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-u (m/s)
13.40	8.10	7.20	8.90	17.40	10.10	9.90	34.70	13.20	16.50	: domain-averaged sigma-theta (deg)
-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	-99.90	: domain-averaged sigma-phi (deg)
2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	: measuring ht for domain-avg wind speed (m)
420.0	420.0	420.0	420.0	420.0	390.0	450.0	420.0	420.0	400.0	: averaging time for domain-avg data (s)
0.088	0.099	0.068	0.063	0.058	0.082	0.087	0.056	0.075	0.089	: wind speed power law exponent
0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	0.0300	: surface roughness (m)
-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	-99.900	: friction velocity (m)
-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	-99.9000	: inverse Monin-Obukhov length (1/m)
0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	: albedo
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: moisture availability
0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	: Bowen ralo
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	: P-G stability class
240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	240.0	: averaging time for concentration (s)
2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	2.44	: suggested receptor height (m)
0	0	0	0	0	0	0	0	0	0	: no. of distances downwind
3	3	3	3	3	3	3	3	3	3	: no. of lines-of-sight
-517.5	-517.5	-517.5	-517.5	-517.5	-517.5	-517.5	-517.5	-517.5	-517.5	: x-coord. of 1st end-point for LOS1 (m)
-304.0	-304.0	-304.0	-304.0	-304.0	-304.0	-304.0	-304.0	-304.0	-304.0	: y-coord. of 1st end-point for LOS1 (m)
-80.2	-80.2	-80.2	-80.2	-80.2	-80.2	-80.2	-80.2	-80.2	-80.2	: x-coord. of 2nd end-point for LOS1 (m)
-61.6	-61.6	-61.6	-61.6	-61.6	-61.6	-61.6	-61.6	-61.6	-61.6	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
1.030E+05	2.700E+05	1.620E+05	3.830E+05	4.290E+05	8.770E+05	7.930E+05	6.830E+05	3.160E+05	5.320E+05	: LOS integrated dosage (mg-s/m**2)
-488.4	-488.4	-488.4	-488.4	-488.4	-488.4	-488.4	-488.4	-488.4	-488.4	: x-coord. of 1st end-point for LOS1 (m)
-356.5	-356.5	-356.5	-356.5	-356.5	-356.5	-356.5	-356.5	-356.5	-356.5	: y-coord. of 1st end-point for LOS1 (m)
-51.1	-51.1	-51.1	-51.1	-51.1	-51.1	-51.1	-51.1	-51.1	-51.1	: x-coord. of 2nd end-point for LOS1 (m)
-114.1	-114.1	-114.1	-114.1	-114.1	-114.1	-114.1	-114.1	-114.1	-114.1	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
5.500E+04	1.390E+05	5.300E+04	1.410E+05	1.830E+05	4.150E+05	4.270E+05	2.660E+05	1.940E+05	3.920E+05	: LOS integrated dosage (mg-s/m**2)
-459.3	-459.3	-459.3	-459.3	-459.3	-459.3	-459.3	-459.3	-459.3	-459.3	: x-coord. of 1st end-point for LOS1 (m)
-409.0	-409.0	-409.0	-409.0	-409.0	-409.0	-409.0	-409.0	-409.0	-409.0	: y-coord. of 1st end-point for LOS1 (m)
-22.0	-22.0	-22.0	-22.0	-22.0	-22.0	-22.0	-22.0	-22.0	-22.0	: x-coord. of 2nd end-point for LOS1 (m)
-166.6	-166.6	-166.6	-166.6	-166.6	-166.6	-166.6	-166.6	-166.6	-166.6	: y-coord. of 2nd end-point for LOS1 (m)
-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	-99.9	: LOS integrated conc. (mg/m**2)
-9.990E+01	9.200E+04	4.100E+04	7.800E+04	9.500E+04	2.610E+05	2.040E+05	1.770E+05	9.100E+04	3.600E+05	: LOS integrated dosage (mg-s/m**2)

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Atterbury-87
        4 : number of trials included in DDA
        6 : time zone designation (CDT)
    39.20 : latitude (deg)
    85.90 : longitude (deg)
      at1        at2        at3        at4 : trial ID
       11         11         11         11 : month
        3          4          4          6 : day
       87         87         87         87 : year
       10          9         15         10 : hour
       31         36         25         51 : minute
        1          1          1          1 : no. of sources
      0.0        0.0        0.0        0.0 : x-coord. of source (m)
      0.0        0.0        0.0        0.0 : y-coord. of source (m)
     1.00       1.00       1.00       1.00 : source elevation (m)
   34.600     26.700     40.700     42.200 : emission rate (g/s)
   3354.0     1650.0     2892.0     4572.0 : emission duration (s)
    115.9       44.0      117.8      193.0 : total mass emitted (kg)
    0.000      0.000      0.000      0.000 : sigx0 at the source (m)
    0.000      0.000      0.000      0.000 :, sigy0 at the source (m)
    0.000      0.000      0.000      0.000 : sigz0 at the source (m)
    -99.9      -99.9      -99.9      -99.9 : ambient pressure (atm)
     41.0       25.0       43.0       40.0 : relative humidity (%)
   296.55     293.15     298.45     281.15 : temperature at level #1 (K)
     2.00       2.00       2.00       2.00 : measuring height for temperature #1 (m)
   296.14     193.25     300.34     280.26 : temperature at level #2 (K)
    10.00      10.00      10.00      10.00 : measuring height for temperature #2 (m)
     5.50       5.10       4.70       1.60 : wind speed (m/s) at a tower
    10.00      10.00      10.00      10.00 : measuring height for wind data (m)
     5.50       5.10       4.70       1.60 : domain-averaged wind speed (m/s)
    239.0      249.0      261.0      240.0 : domain-averaged wind direction (deg)
     1.52       1.17       1.26       0.70 : domain-averaged sigma-u (m/s)
    16.20      11.00      18.60      35.40 : domain-averaged sigma-theta (deg)
     8.80       8.20       8.20      14.90 : domain-averaged sigma-phi (deg)
    10.00      10.00      10.00      10.00 : measuring ht for domain-avg wind speed (m)
   4554.0     2850.0     4092.0     5772.0 : averaging time for domain-avg data (s)
    0.143      0.149      0.183      0.103 : wind speed power law exponent
   0.2000     0.2000     0.2000     0.2000 : surface roughness (m)
    0.610      0.590      0.440      0.260 : friction velocity (m)
  -0.0159    -0.0196    -0.0041    -0.0833 : inverse Monin-Obukhov length (1/m)
     0.20       0.20       0.20       0.20 : albedo
     1.00       1.00       1.00       1.00 : moisture availability
     2.00       2.00       2.00       2.00 : Bowen raio
    668.0      305.0     1135.0      557.0 : mixing height (m)
    -99.9      -99.9      -99.9      -99.9 : cloud cover (%)
        3          3          4          2 : P-G stability class
   3354.0     1650.0     2892.0     4572.0 : averaging time for concentration (s)
     1.00       1.00       1.00       1.00 : suggested receptor height (m)
        0          0          0          0 : no. of distances downwind
        5          5          5          5 : no. of lines-of-sight
    -14.7      -14.7       35.7       35.7 : x-coord. of 1st end-point for LOS1 (m)
     85.6       85.6       33.5       33.5 : y-coord. of 1st end-point for LOS1 (m)
     76.9       76.9      127.3      127.3 : x-coord. of 2nd end-point for LOS1 (m)
     -6.8       -6.8      -58.9      -58.9 : y-coord. of 2nd end-point for LOS1 (m)
1.144E+03  1.916E+03  1.604E+03  2.658E+03 : LOS integrated conc. (mg/m**2)
3.838E+06  3.161E+06  4.638E+06  1.215E+07 : LOS integrated dosage (mg-s/m**2)
    -44.5      -44.5        5.9        5.9 : x-coord. of 1st end-point for LOS1 (m)
    193.4      193.4      141.3      141.3 : y-coord. of 1st end-point for LOS1 (m)
    175.0      175.0      225.4      225.4 : x-coord. of 2nd end-point for LOS1 (m)
    -44.3      -44.3      -96.4      -96.4 : y-coord. of 2nd end-point for LOS1 (m)
8.410E+02  4.705E+02  1.683E+03  1.912E+03 : LOS integrated conc. (mg/m**2)
2.821E+06  7.764E+05  4.866E+06  8.740E+06 : LOS integrated dosage (mg-s/m**2)
     -2.7       -2.7       47.7       47.7 : x-coord. of 1st end-point for LOS1 (m)
    352.9      352.9      300.8      300.8 : y-coord. of 1st end-point for LOS1 (m)
    334.1      334.1      384.5      384.5 : x-coord. of 2nd end-point for LOS1 (m)
     16.1       16.1      -36.0      -36.0 : y-coord. of 2nd end-point for LOS1 (m)
2.138E+02  1.150E+02  4.318E+02  3.252E+02 : LOS integrated conc. (mg/m**2)
7.169E+05  1.898E+05  1.249E+06  1.487E+06 : LOS integrated dosage (mg-s/m**2)
     71.7       71.7      122.1      122.1 : x-coord. of 1st end-point for LOS1 (m)
    548.3      548.3      496.2      496.2 : y-coord. of 1st end-point for LOS1 (m)
    523.3      523.3      573.7      573.7 : x-coord. of 2nd end-point for LOS1 (m)
     99.9       99.9       47.8       47.8 : y-coord. of 2nd end-point for LOS1 (m)
3.619E+01  3.825E+01  8.229E+01  9.440E+01 : LOS integrated conc. (mg/m**2)
1.214E+05  6.311E+04  2.380E+05  4.316E+05 : LOS integrated dosage (mg-s/m**2)
    332.6      332.6      383.0      383.0 : x-coord. of 1st end-point for LOS1 (m)
    625.4      625.4      573.3      573.3 : y-coord. of 1st end-point for LOS1 (m)
    555.5      555.5      605.9      605.9 : x-coord. of 2nd end-point for LOS1 (m)
    403.2      403.2      351.1      351.1 : y-coord. of 2nd end-point for LOS1 (m)
2.034E+01  2.891E+01  1.122E+01  1.680E+01 : LOS integrated conc. (mg/m**2)
6.821E+04  4.771E+04  3.246E+04  7.681E+04 : LOS integrated dosage (mg-s/m**2)
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Atterbury-87

5	: number of trials included in DDA
6	: time zone designation (CDT)
39.20	: latitude (deg)
85.90	: longitude (deg)

at5	at6	at7	at8	at9	: trial ID
11	11	11	11	11	: month
9	10	10	12	13	: day
87	87	87	87	87	: year
15	11	16	13	10	: hour
45	27	37	31	21	: minute
1	1	1	1	1	: no. of sources
0.0	0.0	0.0	0.0	0.0	: x-coord. of source (m)
0.0	0.0	0.0	0.0	0.0	: y-coord. of source (m)
0.40	1.50	1.50	1.50	1.50	: source elevation (m)
148.100	104.700	77.300	79.700	78.300	: emission rate (g/s)
1500.0	2190.0	2838.0	2742.0	2580.0	: emission duration (s)
222.1	229.3	219.5	218.5	202.0	: total mass emitted (kg)
0.000	0.000	0.000	0.000	0.000	: sigx0 at the source (m)
0.000	0.000	0.000	0.000	0.000	: sigy0 at the source (m)
0.000	0.000	0.000	0.000	0.000	: sigz0 at the source (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: ambient pressure (atm)
69.0	61.0	49.0	35.0	45.0	: relative humidity (%)
279.05	276.35	276.15	286.95	286.05	: temperature at level #1 (K)
2.00	2.00	2.00	2.00	2.00	: measuring height for temperature #1 (m)
278.37	275.40	275.45	286.19	285.31	: temperature at level #2 (K)
10.00	10.00	10.00	10.00	10.00	: measuring height for temperature #2 (m)
4.40	7.10	5.20	4.90	4.30	: wind speed (m/s) at a tower
10.00	10.00	10.00	10.00	10.00	: measuring height for wind data (m)
4.40	7.10	5.20	4.90	4.30	: domain-averaged wind speed (m/s)
25.0	34.0	24.0	226.0	241.0	: domain-averaged wind direction (deg)
1.03	1.74	1.28	1.32	1.08	: domain-averaged sigma-u (m/s)
11.00	13.20	14.40	15.30	15.50	: domain-averaged sigma-theta (deg)
8.00	9.30	8.30	9.80	9.90	: domain-averaged sigma-phi (deg)
10.00	10.00	10.00	10.00	10.00	: measuring ht for domain-avg wind speed (m)
2700.0	3390.0	4038.0	3942.0	3780.0	: averaging time for domain-avg data (s)
0.130	0.132	0.132	0.121	0.137	: wind speed power law exponent
0.2000	0.2000	0.2000	0.2000	0.2000	: surface roughness (m)
0.510	0.720	0.570	0.540	0.490	: friction velocity (m)
-0.0217	-0.0091	-0.0147	-0.0159	-0.0189	: inverse Monin-Obukhov length (1/m)
0.20	0.20	0.20	0.20	0.20	: albedo
1.00	1.00	1.00	1.00	1.00	: moisture availability
2.00	2.00	2.00	2.00	2.00	: Bowen raio
649.0	448.0	434.0	816.0	500.0	: mixing height (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: cloud cover (%)
4	4	4	3	3	: P-G stability class
1500.0	2190.0	2838.0	2742.0	2580.0	: averaging time for concentration (s)
1.00	1.00	1.00	1.00	1.00	: suggested receptor height (m)
0	0	0	0	0	: no. of distances downwind
4	4	4	4	4	: no. of lines-of-sight
-282.0	-282.0	-282.0	9.4	9.4	: x-coord. of 1st end-point for LOSi (m)
-389.9	-389.9	-389.9	59.8	59.8	: y-coord. of 1st end-point for LOSi (m)
-190.4	-190.4	-190.4	101.0	101.0	: x-coord. of 2nd end-point for LOSi (m)
-482.3	-482.3	-482.3	-32.6	-32.6	: y-coord. of 2nd end-point for LOSi (m)
1.852E+01	7.577E+01	3.336E+01	5.924E+03	3.365E+03	: LOS integrated conc. (mg/m**2)
2.778E+04	1.659E+05	9.468E+04	1.624E+07	8.681E+06	: LOS integrated dosage (mg-s/m**2)
-311.8	-311.8	-311.8	-20.4	-20.4	: x-coord. of 1st end-point for LOSi (m)
-282.1	-282.1	-282.1	167.6	167.6	: y-coord. of 1st end-point for LOSi (m)
-92.3	-92.3	-92.3	199.1	199.1	: x-coord. of 2nd end-point for LOSi (m)
-519.8	-519.8	-519.8	-70.1	-70.1	: y-coord. of 2nd end-point for LOSi (m)
8.109E+01	9.670E+01	3.813E+01	1.581E+03	1.269E+03	: LOS integrated conc. (mg/m**2)
1.216E+05	2.118E+05	1.082E+05	4.336E+06	3.275E+06	: LOS integrated dosage (mg-s/m**2)
-270.0	-270.0	-270.0	21.4	21.4	: x-coord. of 1st end-point for LOSi (m)
-122.6	-122.6	-122.6	327.1	327.1	: y-coord. of 1st end-point for LOSi (m)
66.8	66.8	66.8	358.2	358.2	: x-coord. of 2nd end-point for LOSi (m)
-459.4	-459.4	-459.4	-9.7	-9.7	: y-coord. of 2nd end-point for LOSi (m)
9.119E+01	5.690E+01	9.662E+01	1.443E+02	5.046E+02	: LOS integrated conc. (mg/m**2)
1.368E+05	1.246E+05	2.742E+05	3.958E+05	1.302E+06	: LOS integrated dosage (mg-s/m**2)
-195.6	-195.6	-195.6	95.8	95.8	: x-coord. of 1st end-point for LOSi (m)
72.8	72.8	72.8	522.5	522.5	: y-coord. of 1st end-point for LOSi (m)
256.0	256.0	256.0	547.4	547.4	: x-coord. of 2nd end-point for LOSi (m)
-375.6	-375.6	-375.6	74.1	74.1	: y-coord. of 2nd end-point for LOSi (m)
5.648E+03	8.213E+02	6.327E+02	4.998E+01	1.274E+02	: LOS integrated conc. (mg/m**2)
8.472E+06	1.799E+06	1.796E+06	1.370E+05	3.287E+05	: LOS integrated dosage (mg-s/m**2)
-99.9	-99.9	-99.9	-99.9	-99.9	: x-coord. of 1st end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: y-coord. of 1st end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: x-coord. of 2nd end-point for LOSi (m)
-99.9	-99.9	-99.9	-99.9	-99.9	: y-coord. of 2nd end-point for LOSi (m)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: LOS integrated conc. (mg/m**2)
-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	-9.990E+01	: LOS integrated dosage (mg-s/m**2)