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Thykier-Nielsen, Søren; Mikkelsen, Torben Krogh

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RIMPUFF

Users Guide

Version 20

S. Thykier Nielsen and Torben Mikkelsen

Risø National Laboratory, DK-4000 Roskilde, Denmark
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Abstract. An operational puff diffusion model, RIMPUFF (RIsø Mesoscale PUFF model) has been developed at Risø National Laboratory to provide risk and safety assessments in connection with e.g. nuclear installations. The computer model releases a sequence of puffs with individual pollutant and heat contents, then calculates the time-dependent concentration field, which is provided by the collection of puffs. The puffs are advected through a three-dimensional grid on the basis of a time sequence of measured horizontal wind vectors. The model code is written in standard FORTRAN 77 for a Burroughs B7800 computer. The code also runs on a VAX or a IBM computer. The input data consists of two data files with parameter specifications. In addition, data files with precalculated wind fields and population distribution can be provided. The model outputs for doses, puff positions wind and concentration fields consists of disk files and printed data. Graphical presentation of results is based on a specific program, which creates background maps, wind vector plots, puff plots and isoconcentration contours.

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Risø National Laboratory, DK-4000 Roskilde, Denmark

AUTHORS

Torben Mikkelsen,	Risø National Laboratory, Denmark
Kenneth Nyren,	FOA4, Sweden
S. Thykier-Nielsen,	Risø National Laboratory, Denmark
S. E. Larsen,	Risø National Laboratory, Denmark

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CONTENTS

1. INTRODUCTION

The atmospheric diffusion model RIMPUFF is originally implemented on the Risø Burroughs B7800 computer in FORTRAN77 language (B7800 version). The following gives a brief introduction on how to prepare input data and how to run the program. The model outputs are disc files and printed data. Graphical evaluation of the output requires a graphic program which creates background maps, wind vector plots, puff plots and isoconcentration contours. Two program systems are currently available at Risø: PUFFPLOT3 which is based on the Risø Interactive Graphics System (RIGS) and Uniplot which is based on the UNIRAS graphics software package.

2. RISØ PUFF DIFFUSION MODEL

2.1. General characteristics

The shortcomings of a standard plume model can be summarized by its ability to handle non-stationary and non-homogeneous flow- and turbulence situations very poorly. When dispersion is modelled out to distances larger than say 20 km, these shortcomings become progressively more important. The area over which the plume moves is more likely to display significant inhomogeniti , such as, e.g. land-water interfaces. Also, as the advection time of the cloud increases, the probability for temporal changes to occur in the the flow and turbulence fields is more likely.

Standard dispersion modelling of non-homogeneous and non-stationary situations is inhibited by the multitude of characteristics which inhomogeneous and instationary flow situations can take. Flow models to be used to handle many of these situations are also either unreliable, expensive and time consuming, unreliable - or a combination hereof. The quantity and the quality of meteorological data available to drive such a model may also vary greatly from site to site.

The Risø-Mesoscale-PUFF model (RIMPUFF) is designed as a modular system in response to these considerations. The core of the model consists of a bookkeeping algoritm that models a continuous release by a series of consecutively released puffs. At each time step the model advects, diffuses and deposits the individual puffs in accordance with the local meteorological parameter values. Concurrently, it monitors the resulting concentrations in user-specified grid points. The local meteorological parameters and the resulting dispersion parameters are organized in sub-programs, which can readily be changed or modified according to the needs and opportunities in the actual modelling situations.

The puff model is structured such that it handles multiple simultaneous sources and its 3-dimensional monitoring grid can contain several hundreds of puffs. Release points can be located anywhere in the grid and can be specified individual release rates, release times and heat production.

2.2. Present model

In its present form (Dec. 87) for treatment of dispersion over non-homogeneous terrain, RIMPUFF calculates the puffs location on the computer grid by computing their movement during finite time steps, using an interpolated wind field. The latter is based on an objective wind analysis from the available wind measurement stations. Growth of the puffs are computed from simultaneous measurements or specifications of the atmospheric turbulence intensity or/and stability in the dispersion area. The height of the inversion cap (through which pollutants is not assumed to pass) and the source height are specified by the user. Grid spacing for collection of data may vary from meters to kilometers, and time durations for the release can vary from seconds to hours.

A parameter controls the amount of reflection/absorption of the pollutant at the surface. (Total reflection is normally assumed).

The model calculates the concentration at each grid point by summing the contributions from surrounding puffs at each advection step. The grid concentrations/doses can either accumulate or simply be updated with the latest instantaneous value.

The modeloutput consists of individual pufflocations and gridconcentrations at time intervals specified in the input data. These data can then optionally be evaluated by an interactive graphic program, which creates background maps, wind-field plots, puffplots and iso-concentration contours.

More detailed information on the RISØ puff diffusion model and its use of parameterized puff diffusion can be found in MIK84 and Mik 1987b.

2.3. Gamma dose model

A gamma dose model is included in RIMPUFF. It is based on the semi-infinite cloud model with correction factors given in SLA68. The model calculates the concentration in the centre of each puff and the distance, R, from the puffcentre to each grid point.

The gamma dose in the grid point is then calculated using the following formula:

$$D_\gamma(R) = \sum_E f(E_\gamma)\, E_\gamma\; 0.2292\; GKOR(\sigma, R/\sigma)\; GKOR1(\sigma, E_\gamma)\; X_{puff}(0,0,0)$$

where

$GKOR(\sigma, R/\sigma)$ - correction factor for variation of doses with distance. (SLA68, Fig. 7.14)

$GKOR1(\sigma, E_\gamma)$ - correction factor for variation of doses with photon energy. (SLA68, Fig. 7.14) This factor is >1 for E < 0.7 MeV and <1 for E > 0.7 MeV

R Distance from puff centre to gridpoint.

$f(E_\gamma)$ Frequency in energy groups.

σ $\sqrt{\sigma_{xy} \cdot \sigma_z}$

2.4. Wind field calculation

The mesoscale wind field over a non-homogeneous region is estimated from a network of available observations by the method of objective wind analysis. A $1/r^2$ -weighting function, where r is the distance from the grid point to the measurement station is used here for the interpolation (STA74).

2.5. Dispersion Parameters

Expansion with time of a single instant puff is fundamentally related to the relative diffusion process. In the surface layer, this is most conveniently described as a function of the local turbulence intensities and downwind distance (see e.g., ref. Mik87). Therefore, the optimal data set for driving the model should include turbulence intensities. Alternatively, in the absence of such data, standard plume dispersion information can be used as, e.g. the Pasquill-Turner system or the Karlsruhe-Jülich system. The latter is as an option implemented in the present version of RIMPUFF. These height-dependent dispersion parameters are shown in Table 2.1. The corresponding stability is in the case determined from the Klug/ Manier-system (KLU68, MAN75).

In table 2.1 the σ-curves are described on the form

$$\sigma(x) = a \cdot X^b$$

where x is the downwind distance and a and b are stability-dependent parameters. The formula is applicable for

$$.01 < X < 20 \text{ km}$$

From this equation the sigma-values after a given advection step ΔX and a given local stability are obtained by differentiation as

$$\sigma(X+\Delta X) = (\sigma(x)^{\frac{1}{b}}+a^{\frac{1}{b}} \cdot \Delta X)^{b}$$

2.6. Plume rise

Since the succession of puffs resembles a continuous release, the formulas used to determine the effective source height after plume rise are taken from standard plume models (PS85b).

The final riseheight for each puff is a function of the atmospheric stability and windspeed at the time of release. The windspeed is adjusted to the release height using an exponential, stability dependent profile, shown in Table 2.2.

2.7. Height of the inversion cap

The height of the inversion cap, the mixing height, varies with stability (KLU68). When the stability changes, the final height is changed accordingly, however, it is never allowed to decrease. For a grid with different stability regions and thus different mixing heights the highest value is chosen to apply for all the stability regions.

Neither the final rise height nor the value of σ_z is allowed to exceed the mixing height chosen.

2.8. Deposition parameters .

Dry deposition is calculated using the source depletion concept. The dry deposition parameters are chosen for the individual puffs according to type of isotope, atmospheric stability and wind speed. Typical values, taken from THY82. are shown in Table 2.3.

Wet deposition is calculated using a wet deposition parameter depending on type of isotope and the actual rain intensity, and taking account of the rain duration. The rain intensity is allowed to vary with time and space. Based on the relevant sets of available information a 'rain field' (field of rain intensities) is again calculated using a method of weighted interpolation on a regular grid. A $1/r^2$ weighting function is used in the present study where r is the distance from the grid point to the measurement station.

Table 2.1. Karlsruhe-Jülich diffusion coefficients as function of stability category and height

Height (m)	Stability Category	Diffusion Coefficient			
		Py	Qy	Pz	Qz
	A	1.503	0.833	0.151	1.219
	B	0.876	0.823	0.127	1.108
	C	0.659	0.807	0.165	0.996
50	D	0.640	0.784	0.215	0.885
	E	0.801	0.754	0.264	0.774
	F	1.294	0.718	0.241	0.662
	A	0.179	1.296	0.051	1.317
	B	0.324	1.025	0.070	1.151
	C	0.466	0.866	0.137	0.985
100	D	0.504	0.818	0.265	0.818
	E	0.411	0.882	0.487	0.652
	F	0.253	1.057	0.717	0.486
	A	0.671	0.903	0.025	1.500
	B	0.415	0.903	0.033	1.320
	C	0.232	0.903	0.104	0.997
180	D	0.208	0.903	0.307	0.734
	E	0.345	0.903	0.546	0.557
	F	0.671	0.903	0.484	0.500

The sigma values as function of distance, X, is given as:

$$\sigma_y = Py\ X^{q_y}$$

$$\sigma_z = Py\ X^{q_y}$$

The formulas are valid for 10 m <= X and X <= 50 km.
Reference: BUN82.

Table 2.2. Wind speed profile.

Stability	A	B	C	D	E	F
P_u	0.07	0.13	0.21	0.34	0.44	0.44

The wind speed at height h (h > 10 m) is calculated from:

$$u(h) = u10 * \left(\frac{h}{10} \right)^{P_u}$$

where u10 is the wind speed at 10 m height.
Reference: PS85b

Table 2.3. Typical values for the dry deposition parameters as a function of stability and wind speed. Based on THY82.

Dry deposition parameter, v_d (m/s)

Stability	A	B	C	D	E	F
Wind speed (m/s)						
u< 1	0.4	0.3	0.3	0.2	0.07	0.05
1<=u< 3	1.0	1.0	1.0	0.7	0.30	0.20
3<=u< 6	1.0	1.0	1.0	1.0	0.60	0.60
6<=u<10	1.0	1.0	1.0	1.0	1.0	0.70
10<=u	1.0	1.0	1.0	1.0	1.0	1.0

3. USERS GUIDE

3.1. The input data

The input data consist of two data files with the logical names INDATA (FILE 1) and WINDDA (FILE 2) and a file with the population data (if collective doses must be calculated), BEFDA (FILE 8). INDATA contains the necessary simulation parameters to run a puff simulation. The wind fields necessary for advecting the puffs are created according to the parameters and meteorological observation data defined in the WINDDA file.

If the wind field is derived from a flow field model two further input files are needed:

FILE30:	Wind speeds in the PUFF grid
FILE31:	Wind directions in the PUFF grid.

(For a description of these files see the subroutine LINCOM in VER20/RIMPUFF.)

3.2. Flow chart for running RIMPUFF

Set up parameters	Prepare the grid size for your simulation. Define the lower left corner of the grid in UTM-coordinates. Find the coordinates of the source(s) and the wind observation station(s) in UTM-coordinates. Set up the INDATA parameters.

	Set up the WINDDA parameters.
	Create a file, BEFDA, with population data.
Running the RIMPUFF code	Prepare a set of wind observation records.
	Create the data files INDATA and WINDDA.
	Run RIMPUFF as a batch job.
Obs! 132 chs output.	Evaluate printer output.
	Run the graphical evaluation program.

4. Description of the INDATA file:

The INDATA file contains the parameters essential for the puff simulation and the output of the results. First the different parameters will be explained followed by an example. The parameters are read by the program using the Fortran NAMELIST facility. The INDATA file is divided into five separate parts and must be defined in the following order:

1. PRIMDA
2. RELDAT
3. STABDA
4. GAMDA
5. DOSDA

4.1. PRIMDA - Namelist

The following parameters must be assigned a value:

TITLE = '<Text string of max. 72 characters defining of your current problem>'

ICOLS = <integer value of number of columns in the concentration grid>

1 < ICOLS < 100

JROWS = <integer value of number of rows in the concentration grid>

1 < JROWS < 100

KPLANS = <integer value of number of vertical plans in the
concentration grid>
1 < KPLANS < 2

DELX = <Decimal value of the horizontal grid size (m)>

DELY = <Decimal value of the lateral grid size (m)>

DELZ = <Decimal value of the vertical grid size (m)>

KOORD = <Selector for coordinate system>
KOORD = 0 : Grid units
KOORD = 1 : UTM-coordinates
KOORD = 1 is recommended

XUTM = <X coordinate for lower left corner of grid in the
UTM - coordinate system. Unit: km>
Only relevant for KOORD = 1 !

YUTM = <Y coordinate for lower left corner of grid in the
UTM - coordinate system. Unit: km>
Only relevant for KOORD = 1 !

TDEL = <Integer value of number of seconds before detection
of air and ground concentrations begin>
Concentrations are =0 when T<TDEL

CHEMIN = <Decimal value of minimum concentration of interest>

NTADV = <Integer value of the number of seconds between each
advection step>

TAU = <Integer value of the number of seconds between release of each puff>

TAU must be an integer multiplum of NTADV.
TAU = NTADV is recommended.

Remember that max. number of puff in the grid at any one time must be less than 300.
To obtain resonable computing times the number of puffs must be less than 100.

MAPTIM = <Integer value of the number of seconds between output of concentration- and wind fields to printer and disc>

REFLEC = <Decimal value for the reflection of each puff>

NRELSE = <Integer number of seconds to the stop of all releases>

IDMP = <Index of the i'th position in the concentration matrix for the printer output of concentration data>

0 < IDMP < ICOLS
IDMP = 0 => no printer output

JDMP = <Index of the j'th position in the concentration matrix for the printer output of concentration data>

0 < JDMP < JROWS
JDMP = 0 => no printer output

KDMP = <Index of the k'th position in the concentration matrix for the printer output of concentration data>

0 < KDMP < KPLANS

ISMODE = <Stability index mode directing the computation of lateral and vertical standard deviation of each puff>

ISMODE	Sigma-Y	Sigma-Z
1	Pasquill Turner (A,B...F)	Pasquill Turner (A,B...F)
2	Pasquill Turner (A,B...F)	Vertical direction deviation
3	Lateral direction deviation	Pasquill Turner (A,B...F)
4	Lateral direction deviation	Vertical direction deviation

PENTPF = .TRUE. or .FALSE.
.TRUE. : Pentafication of puffs
.FALSE.: No pentafication (Default)

SYMPEN = Minimum sigma-xy value for pentafication.
Default value : 300 meters

ROCKET = .TRUE. or .FALSE.
.TRUE. : Exhaust calculations for rocket (Vandenberg AFB.)
Remember: All values of ZMTAB must be equal (= ZM)
.FALSE.: Normal PUFF calculations.

IBFOPT = Option for calculation of collective doses:

0 : No collective doses

1 : Collective doses from inhalation

2 : Collective doses from gamma doses from deposited material

3 : Collective doses from gamma doses from puffs

4 : Total collective doses

100 : Population distribution in grid

NOTE! Calculation of collective doses or population distribution possible only when KOORD=1 i.e. UTM-coordinates are used.

CALCSY = .TRUE. or .FALSE.

.TRUE. : Calculation of sigma-y values along the X-axis from tracer concentrations in air.

.FALSE.: No calculation of sigma-y (Default)

INPRNT = 'YES' or 'NO'

YES : Logg of input data

NO : No logg of input data

OUTPUT = 'OUTPUT' or 'NOOUTP'

OUTPUT : The concentration in air and the puff position file with the logical name OUTAIR is created on disc. (File 10)

NOOUTP : No air concentration and puff position logg file is created.

OUTMOD = 'INST' or 'DOSE'

INST : The instantaneous concentrations are calculated.

DOSE : The time-integrated concentrations are calculated.

OUTWFD = 'OUTPUT' or 'NOOUTP'

OUTPUT : The windfield file with the logical name WFIELD is created. (File 12).

NOOUTP : No windfield file is created.

OUTBEF = 'OUTPUT' or 'NOOUTP'

OUTPUT : A file with collective doses is created, if 1<= IBFOPT <=4. (File 88).
If IBFOPT= 100, a file with the population distribution is created (File 89).

NOOUTP : No file with collective doses or population distribution.

ITAPIN = <Selector for output on tape for KfK>

ITAPIN = 0 : NO tape with concentrations

ITAPIN = 1 : Tape with concentration for each MAPTIM.
The data are written on file 20.

4.2. RELDAT - Namelist

The following parameters must be assigned a value:

PUFFTX = '<Text string of max. 72 characters of your current source specifications>'

NRMULT = No. of sources (<= 25)

For each source the following should be given:

XSOURC(I) = X-coordinate of source no. I in km in the UTM-coordinate system (or grid-units).

YSOURC(I) = Y-coordinate of source no. I in km in the UTM-coordinate system (or grid-units).

ZSOURC(I) = Z-coordinate of source no. I in grid units.

STRTRL(I) = Start-time of source no. I in seconds

STOPRL(I) = Stop-time of source no. I in seconds

SOURCT(I) = Source strength of source no. I in gram/sec

HEATFX(I) = Heat emission of source no. I in kwatt

Note: 1<= I <= NRMULT

ISNAVN = Name of isotope released from all sources. Max. 6 characters!

ISDCAY = Decay constant in sec-1 for the isotope released.

4.3. STABDA - Namelist

The following parameters must be assigned a value:

STABTX = '<Text string of max. 72 characters of your current stability specifications>'

DTDZ = Potential temperature gradient in deg. Kelvin per meter. If not available, set to zero.
(DTDZ >= 0)

SIGYIN = Initial value of sigma-y in meters.
Must be greater than 1 meter.

SIGZIN = Initial value of sigma-z in meters.
Must be greater than 1 meter.

ZMTAB(I) = Limited mixing depth in meters for stability category I.
1 < I < 6
ZMTAB(I) must be an integer multiple of DELZ.
If not estimated set to zero (0.0).

DSHEAR = Switch for wind direction shear:
DSHEAR = 0 : No wind direction shear
= 1 : Wind direction shear

ALFSHE = Wind direction shear over the height interval from HSHEMI to HSHEMA. Unit: degrees.

HSHEMI = Minimum height in meters for wind shear specification.
The shear below HSHEMI is calculated as a linear extrapolation of the shear between HSHEMI and HSHEMA.

HSHEMA = Maximum height in meters for wind shear specification.
The shear above HSHEMA is calculated as a linear extrapolation of the shear between HSHEMI and HSHEMA.

USH = Switch for wind speed shear:
USH = 0 : No wind speed shear
= 1 : Wind speed shear

USTAR = U* in meters per sec.

LMOBUK = Monin-Obukov length in meters.

ZROUGH = Roughness length in meters.

DZERO = Zero displacement factor for calculation of wind speed profile. Unit: meters.

DUSDUM = Switch for dump of shear parameters:
DUSDUM = 0 : No dump of shear parameters
= 1 : Dump of shear parameters for each puff, when TOTTIM is an integer multiple of MAPTIM.

DEPMOD = Switch for deposition:
DEPMOD = 0 : No deposition
DEPMOD = 1 : Dry and wet deposition

OUTDEP = 'OUTPUT' or 'NOOUTP'

OUTPUT : The concentration of material deposited on the ground is written on a disc file with the logical name OUTDEP. (File 11)

NOOUTP : No file with concentrations of deposited material.

VDTAB(I,J)= Dry deposition parameter for stability class I and wind speed interval J.

1 < I < 6
1 < J < 5

The wind speed intervals are (m/s):

J=1 : 0 < Speed < 1
J=2 : 1 < Speed < 3
J=3 : 3 < Speed < 6
J=4 : 6 < Speed < 10
J=5 : 10 < Speed

LDTAB(I) = Wet deposition parameter for precipitation class I.

1 < I < 3

The precipitation classes are (mm/h):

I=1 : 0.01 < Precip. intens. < 1
I=2 : 1 < Precip. intens. < 3
I=3 : 3 < Precip. intens.

TIMRAI(I) = Duration of precipitation in intensity class I.
In seconds (integer number).

Calculation of wind speed and wind direction shear is based on MIK82.

4.4. GAMDA - Namelist

The following parameters must be assigned a value:

GAMMOD = Switch for calculation of gamma doses from puffs
GAMMOD = 0 : No gamma doses
= 1 : Gamma doses from isotope in puffs

OUTGAM = 'OUTPUT' or 'NOOUTP'
OUTPUT : The gamma doses from airborne activity is written on a disc file with the logical name OUTGAM. (File 14)
NOOUTP : No file with gamma doses from airborne activity.

FGAM(I) = Frequency of photons in energy group I.
1 < I < 8
The energy groups are :

No.	Range (MeV)	Mean (MeV)
1	0.000 - 0.080	0.04
2	0.081 - 0.150	0.12
3	0.151 - 0.250	0.20
4	0.251 - 0.510	0.38
5	0.511 - 0.850	0.68
6	0.851 - 1.330	1.09
7	1.331 - 2.030	1.68
8	2.031 - 3.000	2.53

Note that only one isotope may be considered per calculation and that decay and build-up of daughter products are NOT taken into account!

4.5. DOSDA - Namelist

The following parameters must be assigned a value:

RADDOS = Switch for calculation of radiation doses from puffs:
RADDOS = .FALSE. : No radiation doses
= .TRUE. : Doses from radioactive isotopes in puffs.

INDOS = Switch for calculation of inhalation doses from puffs:
INDOS = .FALSE. : No inhalation doses
= .TRUE. : Doses from inhalation of radioactive isotopes in puffs.

GAMDEP = Switch for calculation of gamma doses from deposited radioactive isotopes:
GAMDEP = .FALSE. : No doses from deposited nuclides
= .TRUE. : Doses from deposited material

ORGNAM = '<Text string of max. 8 characters giving the organ to which doses should be calculated>'

DINHAL = Dose factor for inhalation: Dose per curie inhaled integrated over a given time after inhalation.
Unit: Rem/ci.

BRRAT = Breathing rate, m^3/sec

FLTFAK = Filtering factor for houses.
Typical values: 0.33 for average Danish house
1.00 for outdoor stay

GDISO = Dose factor for deposited radioactive isotopes. Unit: Rem/sec/Ci/m´2

DEPSHD = Shielding factor for gamma doses from deposited radioactive material

GAMSHD = Shielding factor for gamma doses from puffs

ORGSHD = Selfshielding factor for the body organ considered

TDPINT = Integration time for gamma doses from deposited activity, sec. The integration starts at the time when the activity is deposited.

OUTTOT = 'OUTPUT' or 'NOOUTP'

OUTPUT : The sum of the 3 dose components: inhalation, gamma dose from puffs and gamma from deposited material is written on a disc file with the logical name OUTTOT. (File 15).

NOOUTP : No file with total doses.

4.6. Example of the INDATA file

```
&PRIMDA
TITLE='RELEASE HOUR 1. IODINE. 500 M GRID ',
ICOLS=81,JROWS=81,KPLANS=1,DELX=500.,DELY=500.,DELZ=100.,
TDEL=0.0,CHEMIN=0.1E-09,NTADV=30,TAU=30,MAPTIM=3600,REFLEC=1.,
NRELSE=3600,IDMP=16,JDMP=34,KDMP=1,ISMODE=1,ITAPIN=0,
KOORD=1,XUTM=437.2609,YUTM=5486.1323,
INPRNT='YES',OUTDAT='OUTPUT',OUTMOD='DOSE',OUTWFD='OUTPUT'
&END
&RELDAT
PUFFTX='SOURCESITE AT XTOWN 20 M ABOVE GROUND ',
NRMULT=1,
XSOURC(1)=457.7609,YSOURC(1)=5506.6323,ZSOURC(1)=0.20,
STRTRL(1)=0,STOPRL(1)=3600,SOURST(1)=277.77777777778,
HEATFX(1)=1.,
&END
&STABDA
STABTX='MIXING HEIGHT VARIES WITH STABILITY .',
DTDZ=0.,ZMTAB(1)=1600.0,ZMTAB(2)=1200.,ZMTAB(3)=800.,
ZMTAB(4)=600.,ZMTAB(5)=300.,ZMTAB(6)=200.,
DSHEAR=0,ALFSHE=0.0,HSHEMI=10.0,HSHEMA=120.0,
USH=0,USTAR=0.265,LMOBUK=70.0,ZROUGH=0.1,DZERO=0.0,
DUSDUM=0,
DEPMOD=1,OUTDEP='OUTPUT',
VDTAB(1,1)=0.010,VDTAB(2,1)=0.010,VDTAB(3,1)=0.010,
VDTAB(4,1)=0.010,VDTAB(5,1)=0.010,VDTAB(6,1)=0.010,
VDTAB(1,2)=0.010,VDTAB(2,2)=0.010,VDTAB(3,2)=0.010,
VDTAB(4,2)=0.010,VDTAB(5,2)=0.010,VDTAB(6,2)=0.010,
VDTAB(1,3)=0.010,VDTAB(2,3)=0.010,VDTAB(3,3)=0.010,
VDTAB(4,3)=0.010,VDTAB(5,3)=0.010,VDTAB(6,3)=0.010,
VDTAB(1,4)=0.010,VDTAB(2,4)=0.010,VDTAB(3,4)=0.010,
VDTAB(4,4)=0.010,VDTAB(5,4)=0.010,VDTAB(6,4)=0.010,
VDTAB(1,5)=0.010,VDTAB(2,5)=0.010,VDTAB(3,5)=0.010,
VDTAB(4,5)=0.010,VDTAB(5,5)=0.010,VDTAB(6,5)=0.010,
```

```
LDTAB(1)=0.000042,LDTAB(2)=0.000106,LDTAB(3)=0.000233,
TIMRAI(1)=1692,TIMRAI(2)=2628,TIMRAI(3)=2232
&END
&GAMDA
GAMMOD=0,OUTGAM='NOOUTP',
FGAM(1)=0.0,FGAM(2)=0.0,FGAM(3)=0.0,FGAM(4)=0.0,FGAM(5)=0.0,
FGAM(6)=1.0,FGAM(7)=0.0,FGAM(8)=0.0
&END
```

Note: One space is required in the beginning of each line.
Gamma doses are NOT calculated in this example!

5. Description of the WINDDA file

The WINDDA file provides the necessary parameters and wind observation records for a simulation. It is divided in two parts and must be defined in the following order:

1. WINPAR - namelist
2. WIND observation records

The WINPAR namelist assigns values to the parameters used by the wind interpolation routine in RIMPUFF. The wind interpolation record contains information on the stability (Pasquill Turner or standard deviation of the wind direction), the wind direction, the wind speed and precipitation intensity.

5.1. WINPAR - Namelist

The following parameters must be assigned a value:

WNDTLE = '<Text string of max. 72 characters defining of your current winddata set>'

TIME = '<5 character string giving the time of your problem with the format: HH:MM>'

DATE = '<9 character string giving the date of your problem with the format: DD-MMM-YY>'

Example

```
.... TIME = ' 9:00',DATE = '16-OCT-85'
```

ITSP = <Integer value of averaging time for the wind observations in seconds>

<u>NOTE:</u> MOD(ITSP,NTADV) must be zero!
i.e. ITSP must be an integer multiple of NTADV

NP = <Integer value of the number of wind observation stations>
Max. 10 stations are allowed!

NFX = <The maximum first index in the wind field matrix>
Note: NFX = ICOLS

NFY = <The maximum second index in the wind field matrix>
Note: NFY = JROWS

NSTL = <Integer value of the limit on number of wind stations to be used in interpolation if limiting radius is reached>

NSKIP = <Number of wind record to be skipped before start of wind field calculations>

RTE = <Decimal angle of the wind field matrix rotation from north>

RCH = <Decimal radius in meters (or grid units) within included stations are to be used in interpolation>

HWOBS = >0: <Height (in meters) at which the wind speed is measured>
The same height is used for all stations.
-1: The wind speed is assumed to be measured at puff centre height, i.e. no gradient for wind speed.

K1ST = < 0 : Interpolation performed with defined stations.
0< K1ST =< NP : Selects the only station from which wind field is exclusively derived.

FLOFLD = .TRUE.: Wind speed and -direction from data calculations by a flow field model.
See the subroutine LINCOM in VER20/SPACEPUFF.
Stability data are taken from the WINDDA file.
.FALSE.: All wind field data are taken from the WINDDA-file.

For each wind station the following data must be given:
I denotes the station number (0< I < NP).

NAMST(I) = '<Max. 6 character station name>'

X(I) = <X coordinate of wind station in km (UTM-grid) or grid units (puff-grid)>

Y(I) = <Y coordinate of wind station in km (UTM-grid) or grid units (puff-grid)>

SSKIP(I) = .FALSE.: Use data for station no. I in calculations of stability and windfield. (DEFAULT).
.TRUE. : Skip data for station no. I.
Remember to correct the limits for the stability arrays.

COR(I) = <correction in degrees to the wind direction>

CONFAC(I) = <Height adjustment multiplier of the wind speed to chosen reference height>

Note: If the wind speeds are measured at different heights at each wind station an appropriate reference height should be defined. The same heigth as the source, if it is elevated, should be chosen.

A(I) = <Alignment angle weigth in deqrees>

The limits for the stability arrays defining the areas around the station in which the stability data for the station applies should be defined. Note that the first station by definition is the "base" station which determines the stability for the whole puff grid. The stability areas for the following stations are then "patched" in to the areas of the first station.

ISXMIN(I) = <X-coordinate for the lower left corner of the stability area, in meters (UTM) or GDU>

ISXMAX(I) = <X-coordinate for the upper rigth corner of the stabilility area, in meters (UTM) or GDU>

ISYMIN(I) = <Y-coordinate for the lower left corner of the stability area, in meters (UTM) or GDU>

ISYMAX(I) = <Y-coordinate for the upper right corner of the stabilility area, in meters (UTM) or GDU>

5.2. Wind data record (BNF-notation)

```
<wind data record>::=
<time>
<Station name>,<Lateral stability>,<Vertical stability>,
<Wind direction>,<Wind speed>,<Rain intensity>
 ..................................
<End Of Wind Record>

 Where:

<time>               ::= 'HH:MM'
<Station name>       ::= 'XXXXXX'    (max. 6 characters)
<Lateral stability>::=  '<Stability category >' |
                        <Standard deviation of the horizontal
                         direction (degrees)>
<Vertical stability>::= '<Stability category >' |
                        <Standard deviation of the vertical
                         direction (degrees)>
<Stability category>::= A|B|C|D|E|F
<Standard deviation of direction>::= 0.0 to 99.99 (degrees)
<End Of Wind Record>::= 'EOWR' | 'STOP'

EOWR  = End of wind record for current time step
STOP  = End of wind record and wind data file
```

5.3. Example of the WINDDA file

```
&WINPAR
WNDTLE='WINDDATA: XTOWN , HOUR 2972 ',
TIME=' 08:00',DATE='08-MAY-75',ITSP=3600,
NP=8,NFX=81,NFY=81,NSTL=3,NSKIP=0,
RTE=0.,RCH=250000.,
NAMST(1)='FCIT',X(1)=470.168,Y(1)=5544.385,COR(1)=0.,
CONFAC(1)=1.000,A(1)=0.,ISXMIN(1)=301200,ISXMAX(1)=618000,
ISYMIN(1)=5345000,ISYMAX(1)=5724610,
NAMST(2)='WCIT',X(2)=569.616,Y(2)=5513.247,COR(2)=0.,
CONFAC(2)=1.000,A(2)=0.,ISXMIN(2)=538000,ISXMAX(2)=618000,
ISYMIN(2)=5478201,ISYMAX(2)=5519801,
NAMST(3)='SCIT',X(3)=514.722,Y(3)=5392.38,COR(3)=0.,
CONFAC(3)=1.000,A(3)=0.,ISXMIN(3)=419600,ISXMAX(3)=618000,
ISYMIN(3)=5345001,ISYMAX(3)=5500601,
NAMST(4)='OCIT',X(4)=537.64,Y(4)=5449.926,COR(4)=0.,
CONFAC(4)=1.000,A(4)=0.,ISXMIN(4)=490000,ISXMAX(4)=618000,
ISYMIN(4)=5433401,ISYMAX(4)=5478201,
NAMST(5)='TOWN',X(5)=362.844,Y(5)=5453.358,COR(5)=0.,
CONFAC(5)=1.000,A(5)=0.,ISXMIN(5)=301200,ISXMAX(5)=416400,
ISYMIN(5)=5345001,ISYMAX(5)=5587001,
NAMST(6)='TCIT',X(6)=331.911,Y(6)=5513.559,COR(6)=0.,
CONFAC(6)=1.000,A(6)=0.,ISXMIN(6)=301200,ISXMAX(6)=358800,
ISYMIN(6)=5478201,ISYMAX(6)=5587001,
NAMST(7)='KCIT',X(7)=368.640,Y(7)=5636.773,COR(7)=0.,
CONFAC(7)=1.000,A(7)=0.,ISXMIN(7)=301200,ISXMAX(7)=416400,
ISYMIN(7)=5590201,ISYMAX(7)=5724601,
NAMST(8)='MONT',X(8)=531.374,Y(8)=5683.4,COR(8)=0.,
CONFAC(8)=1.000,A(8)=0.,ISXMIN(8)=522000,ISXMAX(8)=618000,
ISYMIN(8)=5606201,ISYMAX(8)=5724601,
&END
'19:00'
'FCIT','D','D',  50.0,  5.1,     0.180
'WCIT','D','D', 360.0,  3.3,     0.000
```

```
'SCIT','D','D',  40.0,  4.1,     0.000
'OCIT','D','D',  60.0,  3.9,     0.000
'TOWN','D','D',  40.0,  5.1,     0.090
'TCIT','D','D',  60.0,  6.2,     0.180
'KCIT','E','E',  20.0,  2.6,     0.180
'MONT','D','D',  50.0,  4.1,     0.180
'EOWR'
'20:00'
'FCIT','D','D',  30.0,  5.6,     0.122
'WCIT','D','D', 360.0,  2.8,     0.031
'SCIT','D','D',  40.0,  3.1,     0.016
'OCIT','D','D',  60.0,  3.4,     0.031
'TOWN','D','D',  40.0,  5.1,     0.061
'TCIT','D','D',  70.0,  5.1,     0.122
'KCIT','D','D',  30.0,  2.6,     0.122
'MONT','D','D',  50.0,  4.1,     0.122
'STOP'
```

6. Description of the BEFDA file

The BEFDA file provides the population data for 1 by 1 km squares in the UTM-grid. The data are stored in binary form and are read with the following FORTRAN statement:

```
READ(8,END=8008) (INF(I1),I1=1,675)
```

where

```
INF(1)  = XL = X-coordinate of the lower left corner
               of 25 by 25 km square in the UTM-grid
INF(2)  = YL = Y-coordinate of the lower left corner
               of 25 by 25 km square in the UTM-grid
INF(i1) = Population in a 1 by 1 km square for which
          the lower left corner has the coordinates
          XL+(i-1),YL+(j-1) in km.
i1      = (i-1)*27+(j+1)+1
          1<= i <= 25
          1<= j <= 25
```

XL and YL must be an integer multiple of 25.

The BEFDA file must be assigned to File 8 and the specifications must be equivalent to:

```
(FYSNYREEN) : DIRECTORY  ON USERPACK
.  DKBF92 : DIRECTORY
.  .  RIMP : DATA ALTERDATE= 9/19/86 ´ 10:52:43 AREAS=1
             AREASIZE=1020 BLOCKSIZE=20250
             CREATIONDATE= 9/19/86 ´ 10:52:43 CRUNCHED
             CYCLE=1 FILEORGANIZATION=NOT RESTRICTED
             FILETYPE=0 INTMODE=4
             LASTACCESSDATE=10/14/86 ´ 17:31:07
             LASTRECORD=103 (2700 SEGS) MAXRECSIZE=675
             MINRECSIZE=0 SAVEFACTOR=0
             SECURITY=PRIVATE  (I/O)
             TIMESTAMP= 9/19/86 ´ 10:52:49 UNITS=0
             VERSION=0  NO WARNINGS
```

The following two files, both pertaining to the UTM zone 32 grid are presently available:

DKBF92/85/RIMP.
DKBF92/RIMP.

Both files contain population data for Denmark.

7. Description of the output files

If the 6 output options (OUTDAT='OUTPUT' , OUTDEP='OUTPUT', OUTGAM='OUTPUT', OUTTOT='OUTPUT, OUTWFD='OUTPUT' and OUTBEP='OUTPUT') are specified the following files are created:

1. OUTAIR (FILE10)
   - Concentration in air for each MAPTIM
   - Puff position data for each MAPTIM

2. OUTDEP (FILE11)
   - Concentration on the ground for each MAPTIM
   - Puff position data for each MAPTIM

3. OUTGAM (FILE14)
   - Gammadoses from airborne material for each MAPTIM
   - Puff position data for each MAPTIM

4. WFIELD (FILE12)
   - Position of wind stations
   - Wind velocity field with U and V component for each time step

5. OUTTOT (FILE15)
   - Total radiation doses to individuals for each MAPTIM
   - Puff position data for each MAPTIM

6. OUTBFD (FILE88)
   - Total collective doses for each MAPTIM (1<=IBFOPT<=4)
   - Puff position data for each MAPTIM

7. OUTBFT (FILE89)
   - Population distribution in grid. (IBFOPT=100).
     Only data for MAPTIM = 1 !!

These data files provide the input for a (computer specific) plotting program, PUFFPLOT.

Output on the printer of the concentration matrix is made if the following parameters are specified in the PRIMDA namelist of the INDATA file:

0< IDMP < ICOLS

0< JDMP < JROWS

0< KDMP < KPLANS

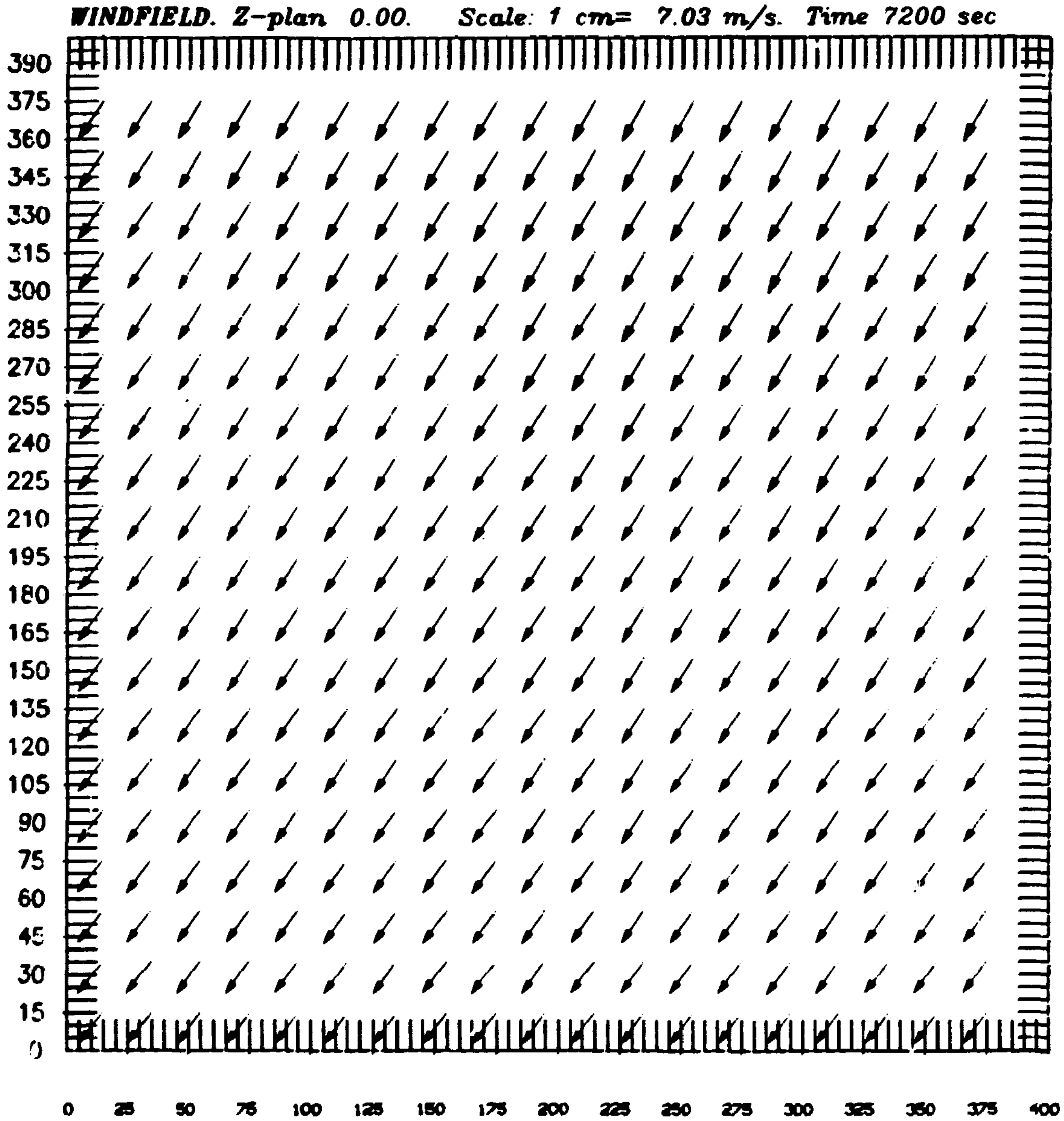
8. EXAMPLES

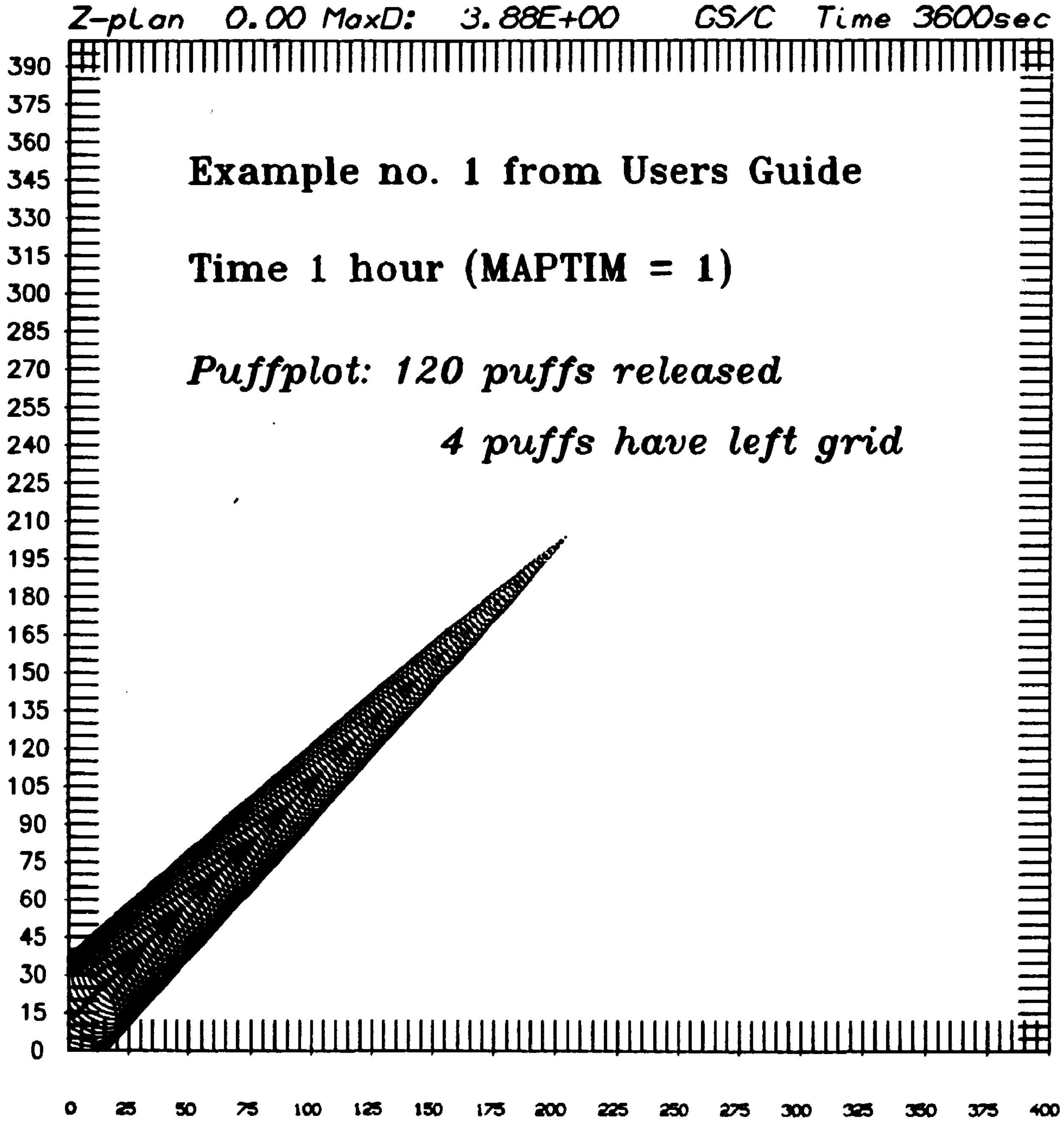
8.1. Example no. 1

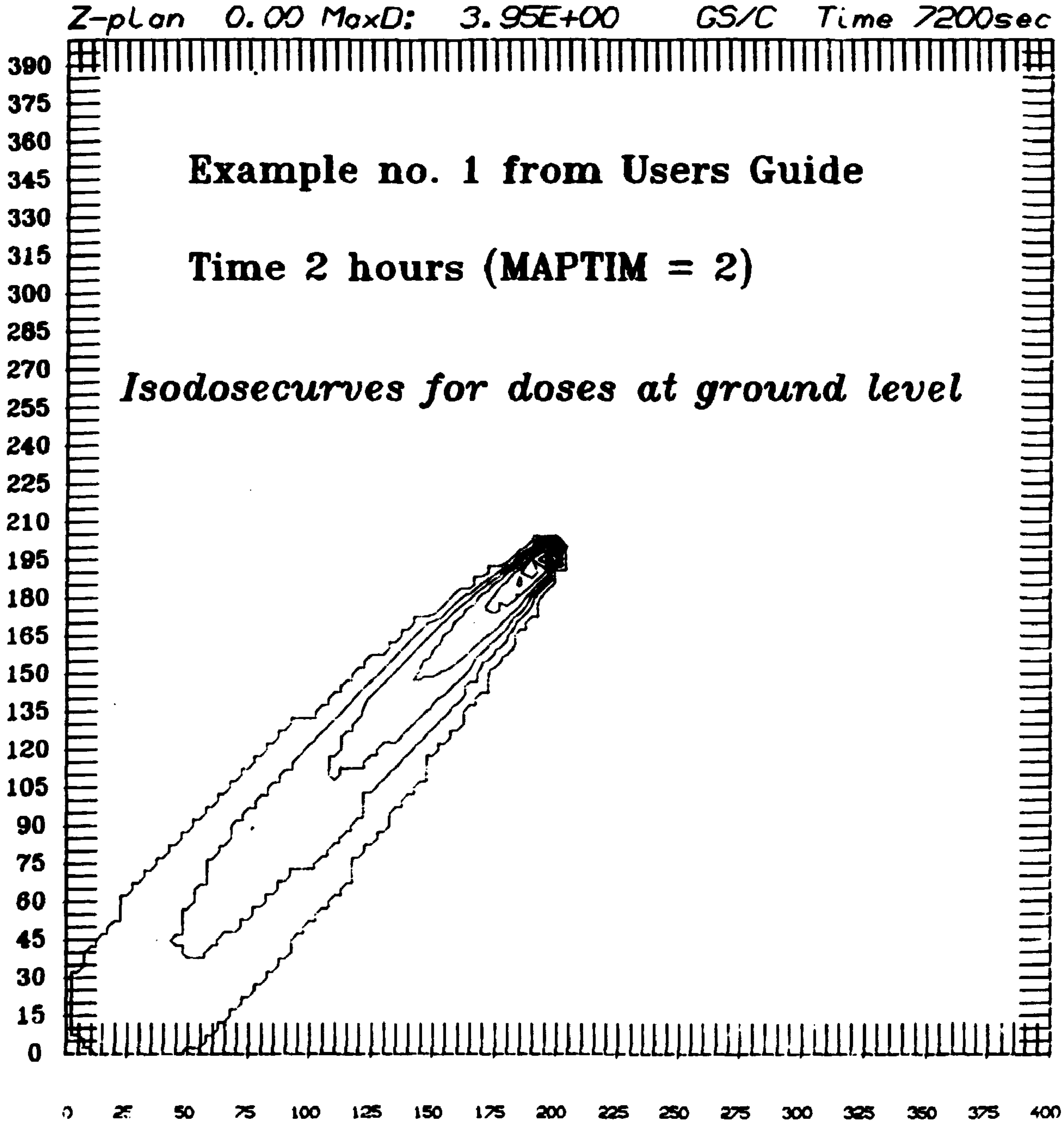
The files INDATA and WINDDA are as given earlier in this paper. The output is as shown on the following pages.

Example no. 1 from Users Guide

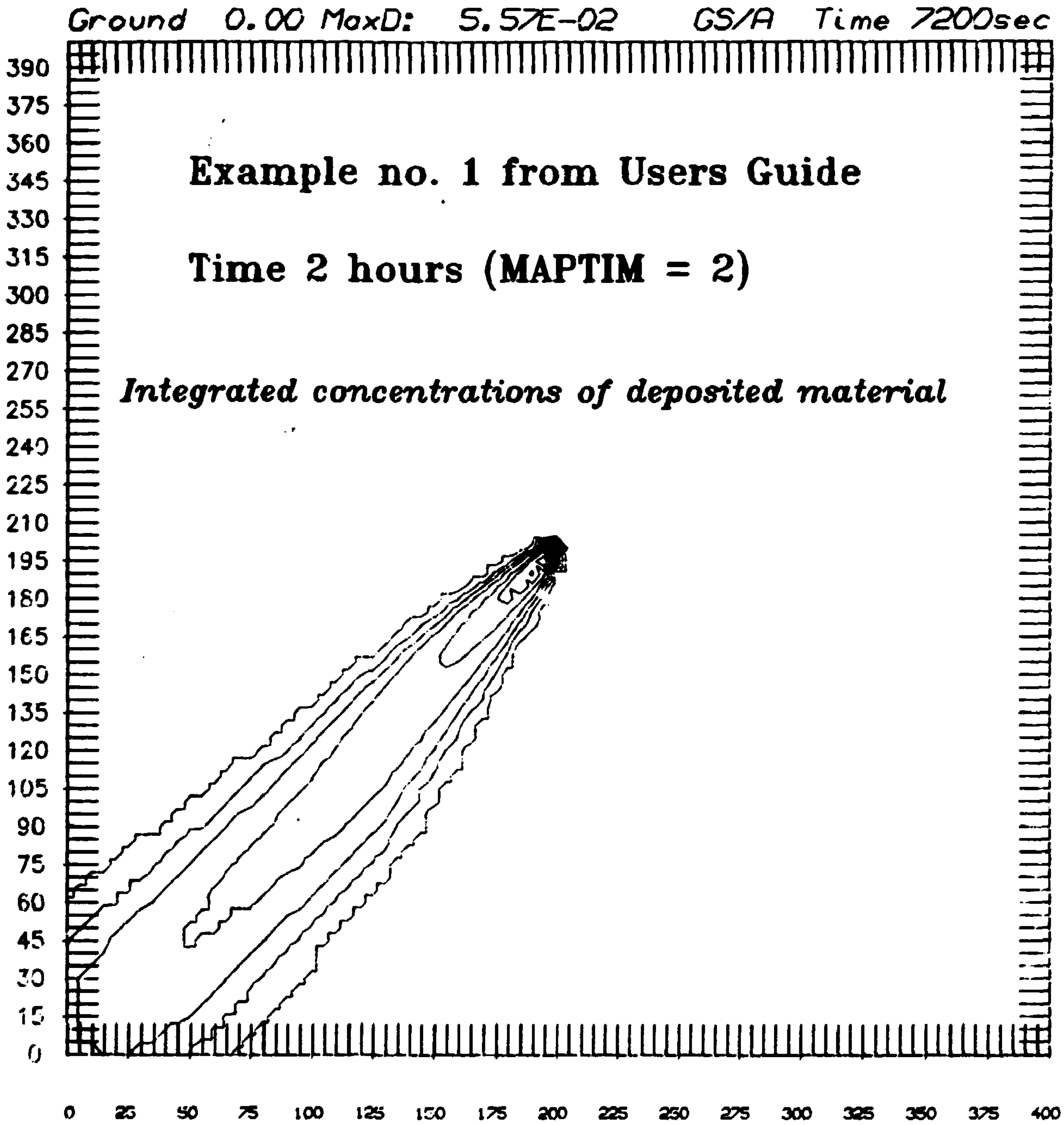
Time 2 hours (MAPTIM = 2)




Z-pLan 0.00 MaxD: 3.88E+00 GS/C Time 3600sec
Example no. 1 from Users Guide
Time 1 hour (MAPTIM = 1)
Puffplot: 120 puffs released
4 puffs have left grid
390
375
360
345
330
315
300
285
270
255
240
225
210
195
180
165
150
135
120
105
90
75
60
45
30
15
0
0 25 50 75 100 125 150 175 200 225 250 275 300 325 350 375 400



Z-plan 0.00 MaxD: 3.95E+00 GS/C Time 7200sec
Example no. 1 from Users Guide
Time 2 hours (MAPTIM = 2)
Isodosecurves for doses at ground level
390
375
360
345
330
315
300
285
270
255
240
225
210
195
180
165
150
135
120
105
90
75
60
45
30
15
0
0 25 50 75 100 125 150 175 200 225 250 275 300 325 350 375 400


Ground 0.00 MaxD: 5.57E-02 GS/A Time 7200sec
Example no. 1 from Users Guide
Time 2 hours (MAPTIM = 2)
Integrated concentrations of deposited material
390
375
360
345
330
315
300
285
270
255
240
225
210
195
180
165
150
135
120
105
90
75
60
45
30
15
0
0 25 50 75 100 125 150 175 200 225 250 275 300 325 350 375 400

FYSNYREEN
EKS1

```
#NEWS    APR.16.86    09:35  : BRUGERMODE TORSDAG KL. 10
####################################################################
#    HUSK RMA'S BRUGERMODE TORSDAG KL 10 I NIELS BOHR AUDITORIET.   #
#    DAGSORDEN:                                                     #
#    1) DANNELSE AF EN NY AFDELING FOR EDB OG INFORMATIK            #
#       VED HANS BJERRUM MOLLER.                                    #
#    2) BERETNING OM B7900'S DRIFT.                                 #
#    3) ERFARINGER MED BETALINGSORDNINGEN.                          #
#    4) PLANER FOR DET NAESTE HALVE AAR, HERUNDER OPRETTELSE AF     #
#       VAX-SERVICE.                                                #
#    5) EVENTUEL.                                                   #
####################################################################
DATE: APR 17, 1986 08:02:29, SYSTEM SERIAL: 128, B7800 MCP: SYSTEM/MCP860305. 35.270.3326
```

W O R K   F L O W   S T A T E M E N T S

```
BEGIN JOB EKS1;CLASS=0;CHARGE=4040201;
MAXPROCTIME=7200;MAXIOTIME=900;MAXLINES=15000;
 RUN OBJECT/VER11K/B/RIMPUFF;
 FILE FILE1=VER11K/INDATA/EKS1;
 FILE FILE2=VER11K/WINDDA/EKS1;
 FILE FILE10=VER11K/OUTAIR/EKS1;
 FILE FILE11=VER11K/OUTDEP/EKS1;
 FILE FILE12=VER11K/WFIELD/EKS1;
 FILE FILE14=VER11K/OUTGAM/EKS1;
 FILE FILE20=VER11K/KFKTAP/EKS1;
 ?END JOB;
```

```
                                          J O B   S U M M A R Y
APR 16, 1986
   18:46:19    BOJ  9187  EKS1.
                          JOB ENTERED SYSTEM: APR 16, 1986 14:05:58 FROM WFL 35.270
                          QUEUE: 0
                          ORIGINATING LSN: 51  MCS: 1
                          PRIORITY: 30
                          USERCODE: FYSNYREEN.
                          CHARGECODE: 4040201.
   18:46:19         9187  STACK EXTENDED FROM 407 TO 676 WORDS.

   18:46:19    BOT  1135  (FYSNYREEN)OBJECT/VER11K/3/RIMPUFF ON USERPACK.
                          CODE COMPILED: APR 10, 1986 11:56:23 BY FORTRAN77 35.123
                          TASK TYPE: COROUTINE(CALL)
                          PRIORITY: 30
                          USERCODE: FYSNYREEN.
                          CHARGECODE: 4040201.
   18:46:21         1135  (FYSNYREEN)VER11K/OUTAIR/EKS1 REMOVED ON USERPACK PK98.
   18:46:22         1135  (FYSNYREEN)VER11K/WFIELD/EKS1 REMOVED ON USERPACK PK98.
   18:46:25         1135  (FYSNYREEN)VER11K/OUTDEP/EKS1 REMOVED ON USERPACK PK98.
   18:52:47    EOT  1135  (FYSNYREEN)OBJECT/VER11K/3/RIMPUFF ON USERPACK.
                          PROCESSOR TIME: 00:06:12.174  USERCODE: FYSNYREEN.
                          I/O       TIME: 00:00:04.425  CHARGECODE: 4040201.
                          READYQ    TIME: 00:00:00.424  LINES PRINTED: 1166.
                          INITPBIT  TIME: 00:00:02.501  AVERAGE MEMORY USAGE: CODE=6694, DATA=353938
                          OTHERPBIT TIME: 00:00:00.312  MEMORY INTEGRAL: CODE=2520.911, DATA=133293.126
                          ELAPSED   TIME: 00:06:27.703  DATA & CODE ALLOWED IN & OCCUPIED: GLOBAL.
                                                        INITIAL PBITS: 1192, OTHER PBITS: 127.

   18:52:47    EOJ  9187  EKS1.
                          PROCESSOR TIME: 00:00:00.084  USERCODE: FYSNYREEN.
                          I/O       TIME: 00:00:00.150  CHARGECODE: 4040201.
                          READYQ    TIME: 00:00:00.017  AVERAGE MEMORY USAGE: CODE=46, DATA=1261
                          INITPBIT  TIME: 00:00:00.034  MEMORY INTEGRAL: CODE=0.011, DATA=0.297
                          OTHERPBIT TIME: 00:00:00.002  DATA & CODE ALLOWED IN & OCCUPIED: GLOBAL.
                          ELAPSED   TIME: 00:06:28.538  INITIAL PBITS: 28, OTHER PBITS: 1.
```

```
RELEASE HOUR 1. IODINE. 500 M GRID

     KEY PARAMETER FOR CURRENT RUN:

     NRELSE =     3600

     ICOLS  =          81      JROWS  =          31      KPLANS =           1

     NTADV  =          30      MAPTIM =        3600      TAU    =          30

     DELX   =      500.00      DELY   =      500.00      DELZ   =      100.00

     CHEMIN =0.1000E-09        REFLEC =     1.00000      TDEL   =       0

     IDMP   =          16      JDMP   =          34      KDMP   =           1

       ISMODE = 1

       INPRNT = YES

       OUTDAT = OUTPUT OUTMOD = DOSE

       OUTMFO = OUTPUT
       KFMTAPE= 0 (0 = NO, 1<= YES)


       * COORDINATES FOR SOURCE AND WINDSTATIONS IN UTM
       * LOWER LEFT CORNER IS 437.2609 , 5486.1323 KM
```

```
SOURCESITE AT XTOWN 20 M ABOVE GROUND

CURRENT SOURCEDATA : NUMBER OF ACTIVE SOURCES :    1
  1 41.00 41.00  0.20          0       3600************* 1.000000000

   ZHGT = 20.0
```

NO GAMMADOSES FROM PUFFS

FRAME FOR PUFF ADVECTION:
X: 0 => 80 - Y: 0 => 80

```
THE MIXING LAYER IS LIMITED AT:   1500.00 METERS IN STABILITY CAT    1
THE MIXING LAYER IS LIMITED AT:   1200.00 METERS IN STABILITY CAT    2
THE MIXING LAYER IS LIMITED AT:    800.00 METERS IN STABILITY CAT    3
THE MIXING LAYER IS LIMITED AT:    500.00 METERS IN STABILITY CAT    4
THE MIXING LAYER IS LIMITED AT:    300.00 METERS IN STABILITY CAT    5
THE MIXING LAYER IS LIMITED AT:    200.00 METERS IN STABILITY CAT    6
```

```
IN THE CURRENT RUN, THE STABILITY-CLASSES ARE
CONNECTED TO INTENSITY DATA AS FOLLOWS:
STABILITY CLASS NO.:   1    2    3    4    5    6
INTENSITY DATA      : 0.42 0.34 0.26 0.17 0.09 0.04
```

MIXING HEIGHT VARIES WITH STABILITY .

IN THE CURRENT RUN, THE POTENTIAL TEMPERATURE
GRADIENT IS SET TO: 0.0000

NO WIND SHEAR

DEPOSITION PARAMETERS

DRY DEPOSITION PARAMETER, VD (M/S)

WINDSPEED (M/S)	A	B	C	D	E	F
U < 1	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02
1 <= U < 3	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02
3 <= U < 6	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02
6 <= U < 10	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02
10 <= U	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02

WASH-OUT COEFFICIENT

PRECIPITAION (MM/H)	LD(S-1)	TIME(SEC)
P < 1	4.20E-05	1652
1 <= P <= 3	1.06E-04	2529
3 < P	2.33E-04	2232

OUTDEP = OUTPUT

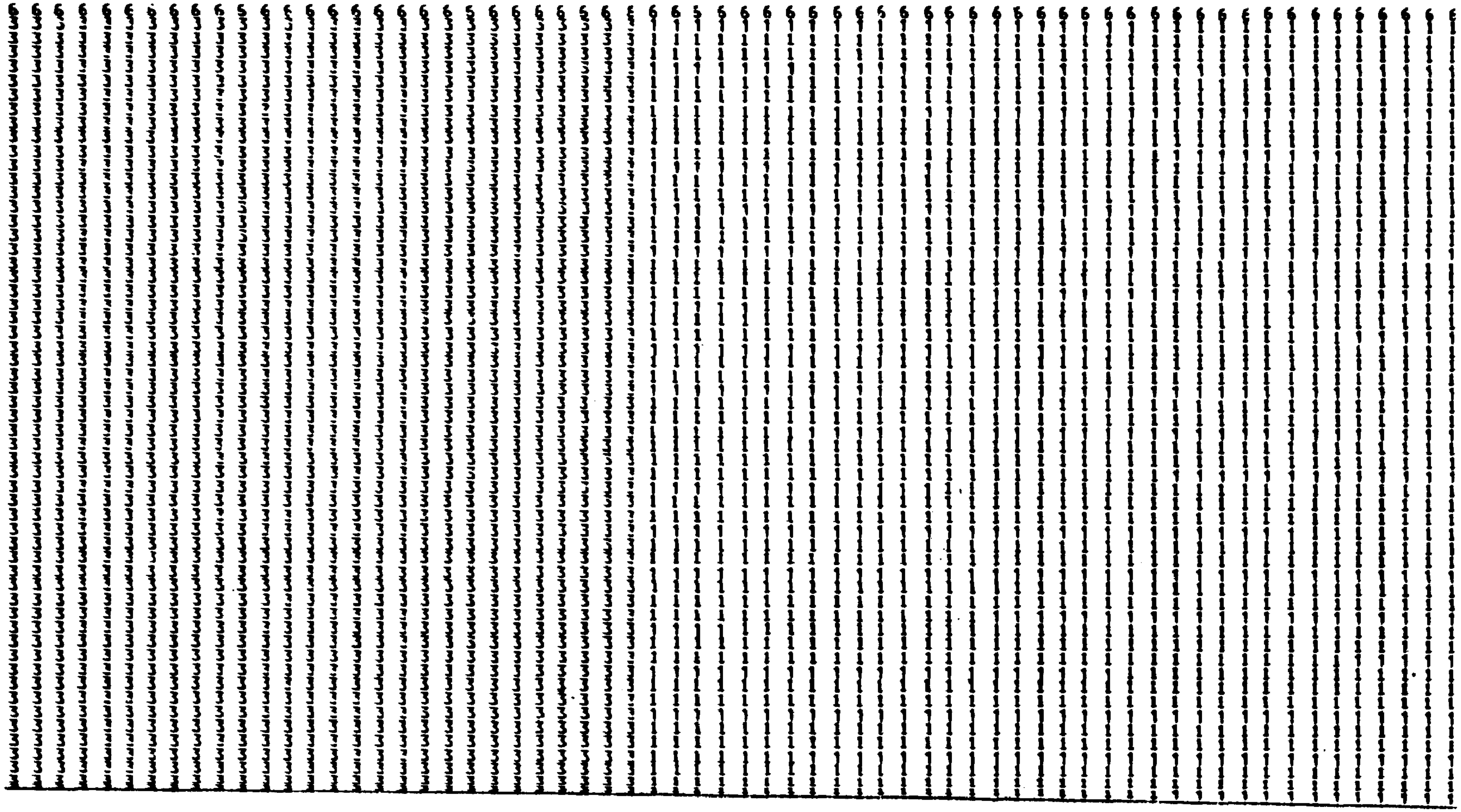
```
WIND PARAMETER DUMP
===================

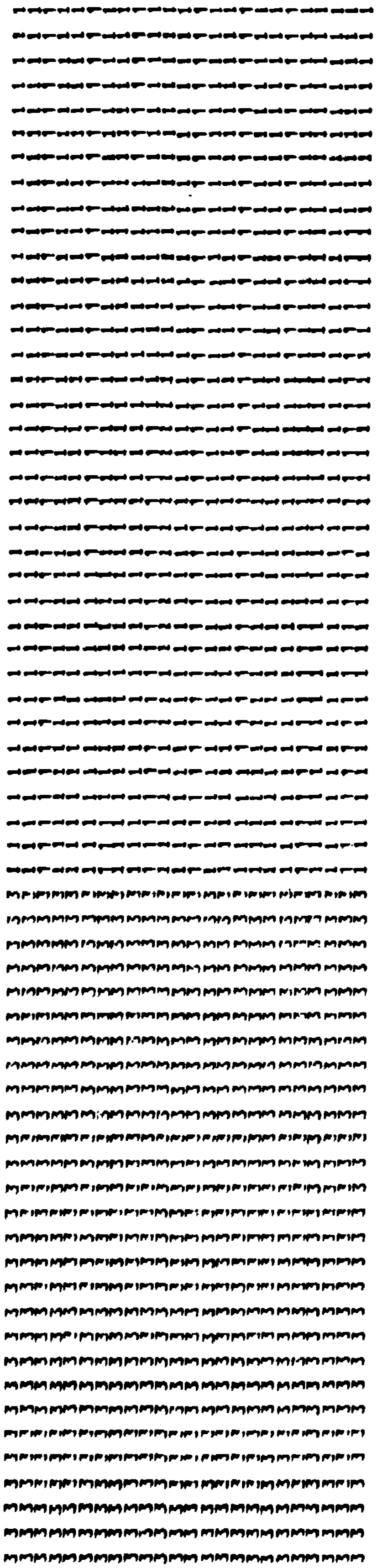
WINDDATA: XTOWN , HOUR 2972

TIME =  0800 DATE = 08-MAY-75 ITSP = 3600 SEC
NP = 8 NFX = 81 NFY = 81
NSTL = 3 NSKIP = 0 KLST = 0
RIE = 0.0 (DEG.) RCH = 500.0 (G.U.)
```

NAME	X GU	Y GU	COR DEG	CONFAC	ALIGN DEG	ISXMIN GU	ISXMAX GU	ISYMIN GU	ISYMAX GU
FCIT	65.8	116.5	0.	1.0	0.0	1	100	1	100
WCIT	264.7	54.2	0.	1.0	0.0	100	100	1	67
SCIT	154.9	-187.3	0.	1.0	0.0	1	100	1	25
OCIT	200.8	-72.4	0.	1.0	0.0	100	100	1	1
TOWN	-148.8	-65.5	0.	1.0	0.0	1	1	1	100
TCIT	-210.7	54.9	0.	1.0	0.0	1	1	1	100
KCIT	-137.2	301.3	0.	1.0	0.0	1	1	100	100
MONT	128.2	394.5	0.	1.0	0.0	100	100	100	100

STABILITY INDEX ARRAY (J= 1.64)





```
STABILITY INDEX ARRAY (CONTINUATION: J=65,JROWS)
================================================
6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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STATION	NO.
FCIT	1
WCIT	2
SCIT	3
OCIT	4
TOWN	5
TCIT	6
KCIT	7
MONT	8

UNDEFINED AREA = 0

TIMESTEP NO = 1

OBSERVATION TIME: 19:00

STATION	DIRECTION (DEG.)	VELOCITY (M/S)	STABILITY (-Y)	STABILITY (-Z)	RAIN (MM/H)
FCIT	50.	5.1	D	D	0.18
WCIT	360.	3.3	D	D	0.00
SCIT	40.	4.1	D	D	0.00
OCIT	60.	3.9	D	D	0.00
TOWN	40.	5.1	D	D	0.09
TCIT	60.	6.2	D	D	0.18
KCIT	20.	2.5	E	E	0.18
MONT	50.	4.1	D	D	0.18

STATION	U (M/S)	V (M/S)	RAIN (MM/H)
FCIT	-3.9	-3.3	0.18
WCIT	0.0	-3.3	0.00
SCIT	-2.6	-3.1	0.00
OCIT	-3.4	-2.0	0.00
TOWN	-3.3	-3.5	0.09
TCIT	-5.4	-3.1	0.18
KCIT	-0.9	-2.4	0.18
MONT	-3.1	-2.6	0.18

* TIMESTEP NO. 1 : ZM = 600.0 => ZMG = 6

**>> WIND-DIRECTION AT SOURCE: 47.317749985
**>> AT TIME : 30 SEC

3600 SEC. AFTER START OF RELEASE
TOT. 120 PUFFS RELEASED AND 4 HAVE LEFT THE GRID

Z-PLAN NO = 1 *** DOSE (GS/M**3)

***	34	35	36	37	38	39	40	41	42	43	44	45
16	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
17	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
18	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
19	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
20	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
21	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
22	3.288E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
23	1.240E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
24	3.963E-05	4.444E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
25	1.211E-04	1.706E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
26	3.595E-04	5.813E-05	5.513E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
27	1.043E-03	1.916E-04	2.243E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
28	2.911E-03	6.183E-04	8.476E-05	6.151E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
29	7.688E-03	1.942E-03	3.110E-04	2.908E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
30	1.870E-02	5.827E-03	1.120E-03	1.241E-04	6.306E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
31	4.043E-02	1.620E-02	3.510E-03	5.252E-04	3.553E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
32	7.399E-02	4.004E-02	1.202E-02	2.194E-03	1.814E-04	5.525E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
33	1.075E-01	8.289E-02	3.757E-02	8.808E-03	9.359E-04	3.925E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
34	1.142E-01	1.324E-01	9.155E-02	3.217E-02	4.813E-03	2.577E-04	3.526E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
35	7.957E-02	1.458E-01	1.665E-01	9.775E-02	2.340E-02	1.779E-03	3.380E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
36	3.188E-02	9.548E-02	1.935E-01	2.140E-01	9.663E-02	1.250E-02	3.234E-04	1.560E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
37	6.293E-03	3.075E-02	1.156E-01	2.696E-01	2.794E-01	8.004E-02	3.561E-03	1.455E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00
38	5.179E-04	3.900E-03	2.672E-02	1.396E-01	4.017E-01	3.617E-01	4.281E-02	2.465E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00
39	1.451E-05	1.537E-04	1.704E-03	1.866E-02	1.620E-01	6.618E-01	4.214E-01	6.479E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
40	0.000E+00	3.560E-07	2.098E-05	3.743E-04	7.874E-03	1.595E-01	1.292E+00	2.616E-01	9.636E-06	0.000E+00	0.000E+00	0.000E+00
41	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.797E-05	8.429E-04	7.353E-02	3.884E+00	4.994E-04	0.000E+00	0.000E+00	0.000E+00
42	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.465E-07	8.059E-05	8.139E-05	0.000E+00	0.000E+00	0.000E+00
43	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
44	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
45	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
46	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
47	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
48	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
49	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
51	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
52	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
53	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
54	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
55	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
56	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
57	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
58	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
59	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
60	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
61	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
62	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
63	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

64	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

*** DEPOSITION : *** DOSE (GS/M**2) *******

	34	35	36	37	38	39	40	41	42	43	44	45
16	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
17	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
18	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
19	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
20	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
21	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
22	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
23	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
24	3.240E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
25	1.533E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
26	7.251E-06	6.473E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
27	2.348E-05	2.897E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
28	6.856E-05	1.463E-05	1.192E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
29	1.845E-04	4.631E-05	6.541E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
30	4.532E-04	1.412E-04	2.657E-05	1.989E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
31	9.831E-04	3.936E-04	9.451E-05	1.220E-05	2.041E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
32	1.797E-03	9.609E-04	3.094E-04	5.220E-05	3.302E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
33	2.597E-03	1.987E-03	8.930E-04	2.072E-04	2.135E-05	2.492E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
34	2.733E-03	3.132E-03	2.138E-03	7.412E-04	1.093E-04	5.192E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
35	1.884E-03	3.395E-03	3.804E-03	2.192E-03	5.156E-04	7.834E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
36	7.454E-04	2.184E-03	4.316E-03	4.652E-03	2.051E-03	2.595E-04	6.186E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
37	1.450E-04	6.908E-04	2.517E-03	5.674E-03	5.691E-03	1.585E-03	6.893E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
38	1.120E-05	8.551E-05	5.697E-04	2.848E-03	7.950E-03	6.792E-03	7.803E-04	3.987E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
39	0.000E+00	2.619E-06	3.523E-05	3.708E-04	3.048E-03	1.179E-02	7.167E-03	1.073E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00
40	0.000E+00	0.000E+00	0.000E+00	6.953E-06	1.439E-04	2.720E-03	2.056E-02	3.966E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
41	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.357E-05	1.118E-03	5.451E-02	6.838E-06	0.000E+00	0.000E+00	0.000E+00
42	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.564E-07	2.444E-06	0.000E+00	0.000E+00	0.000E+00
43	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
44	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
45	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
46	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
47	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
48	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
49	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
51	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
52	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
53	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
54	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
55	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
56	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
57	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
58	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
59	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
60	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
61	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
62	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
63	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
64	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

TIMESTEP NO = 2

OBSERVATION TIME: 20:00

STATION	DIRECTION (DEG.)	VELOCITY (M/S)	STABILITY (-Y)	STABILITY (-Z)	RAIN (MM/H)
FCIT	30.	5.6	D	D	0.12
NCIT	360.	2.8	D	D	0.03
SCIT	40.	3.1	D	D	0.02
OCIT	60.	3.4	D	D	0.03
TOWN	40.	5.1	D	D	0.06
TCIT	70.	5.1	D	D	0.12
KCIT	30.	2.6	D	D	0.12
MONI	50.	4.1	D	D	0.12

STATION	U (M/S)	V (M/S)	RAIN (MM/H)
FCIT	-2.8	-4.8	0.12
NCIT	0.0	-2.8	0.03
SCIT	-2.0	-2.4	0.02
OCIT	-2.9	-1.7	0.03
TOWN	-3.3	-3.5	0.06
TCIT	-4.8	-1.7	0.12
KCIT	-1.3	-2.3	0.12
MONI	-3.1	-2.6	0.12

* TIMESTEP NO. 2 : ZM = 600.0 => ZMG = 6

7200 SEC. AFTER START OF RELEASE
TOT. 120 PUFFS RELEASED AND 120 HAVE LEFT THE GRID

*** Z-PLAN NO = 1 *** DOSE (GS/M**3)

	34	35	36	37	38	39	40	41	42	43	44	45
16	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
17	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
18	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
19	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
20	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
21	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
22	3.372E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
23	1.298E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
24	4.185E-05	4.560E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
25	1.283E-04	1.777E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
26	3.815E-04	6.054E-05	5.650E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
27	1.108E-03	2.013E-04	2.326E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
28	3.098E-03	6.505E-04	8.825E-05	6.302E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
29	8.206E-03	2.046E-03	3.242E-04	3.000E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
30	2.006E-02	6.150E-03	1.159E-03	1.284E-04	6.431E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
31	4.373E-02	1.717E-02	4.086E-03	5.435E-04	3.644E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
32	8.119E-02	4.270E-02	1.343E-02	2.272E-03	1.864E-04	5.601E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
33	1.211E-01	8.945E-02	3.936E-02	5.136E-03	9.618E-04	4.002E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
34	1.352E-01	1.461E-01	9.730E-02	3.349E-02	4.950E-03	2.631E-04	3.552E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
35	1.047E-01	1.666E-01	1.803E-01	1.025E-01	2.411E-02	1.815E-03	3.426E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
36	5.311E-02	1.228E-01	2.185E-01	2.277E-01	1.000E-01	1.277E-02	3.280E-04	1.660E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00
37	1.731E-02	5.143E-02	1.456E-01	2.979E-01	2.925E-01	8.196E-02	3.612E-03	1.466E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00
38	3.436E-03	1.191E-02	4.554E-02	1.724E-01	4.345E-01	3.732E-01	4.344E-02	2.485E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00
39	3.337E-04	1.360E-03	6.156E-03	3.327E-02	1.969E-01	7.009E-01	4.292E-01	6.528E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
40	1.190E-05	5.360E-05	2.832E-04	1.780E-03	1.549E-02	1.521E-01	1.341E+00	2.636E-01	9.655E-06	0.000E+00	0.000E+00	0.000E+00
41	7.442E-08	4.924E-07	2.663E-06	1.585E-05	1.372E-04	2.067E-03	8.931E-02	3.947E+00	5.002E-04	0.000E+00	0.000E+00	0.000E+00
42	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.552E-08	3.082E-07	2.777E-06	1.038E-04	8.140E-05	0.000E+00	0.000E+00	0.000E+00
43	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
44	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
45	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
46	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
47	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
48	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
49	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
51	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
52	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
53	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
54	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
55	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
56	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
57	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
58	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
59	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
60	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
61	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
62	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
63	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
64	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

*** DEPOSITION : *** DOSE (GS/M**2) ***

	34	35	36	37	38	39	40	41	42	43	44	45
16	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
17	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
18	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
19	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
20	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
21	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
22	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
23	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
24	3.370E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
25	1.835E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
26	8.509E-06	6.990E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
27	2.752E-05	3.346E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
28	8.024E-05	1.586E-05	1.274E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
29	2.164E-04	5.241E-05	7.102E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
30	5.346E-04	1.601E-04	2.932E-05	2.120E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
31	1.174E-03	4.481E-04	1.041E-04	1.307E-05	2.041E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
32	2.200E-03	1.114E-03	3.408E-04	5.616E-05	3.468E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
33	3.328E-03	2.330E-03	9.938E-04	2.233E-04	2.252E-05	2.492E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
34	3.823E-03	3.810E-03	2.415E-03	8.026E-04	1.154E-04	5.368E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
35	3.139E-03	4.482E-03	4.437E-03	2.399E-03	5.457E-04	3.979E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
36	1.766E-03	3.430E-03	5.404E-03	5.218E-03	2.185E-03	2.700E-04	6.318E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
37	6.563E-04	1.554E-03	3.747E-03	6.768E-03	6.170E-03	1.652E-03	7.058E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
38	1.425E-04	4.227E-04	1.304E-03	4.039E-03	9.954E-03	7.155E-03	7.992E-04	4.026E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00
39	1.396E-05	5.177E-05	2.024E-04	8.731E-04	4.144E-03	1.291E-02	7.374E-03	1.085E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00
40	4.468E-07	2.064E-06	5.552E-06	5.338E-05	3.701E-04	3.582E-03	2.171E-02	4.010E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
41	0.000E+00	0.000E+00	6.120E-08	4.789E-07	3.419E-06	4.472E-05	1.461E-03	5.571E-02	6.849E-06	0.000E+00	0.000E+00	0.000E+00
42	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.084E-08	1.285E-06	2.444E-06	0.000E+00	0.000E+00	0.000E+00
43	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
44	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
45	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
46	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
47	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
48	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
49	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
50	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
51	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
52	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
53	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
54	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
55	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
56	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
57	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
58	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
59	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
60	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
61	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
62	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
63	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
64	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

*** ARRIVAL TIMES (SEC) ***

	1	2	3	4	5	6	7	8	9	10	11	12
1	2790	2760	2700	2670	2640	2610	2580	2550	2520	2520	2520	2520
2	2760	2730	2670	2640	2610	2580	2550	2520	2490	2460	2430	2430
3	2730	2700	2640	2610	2580	2520	2490	2460	2430	2400	2400	2370
4	2700	2670	2610	2580	2520	2490	2460	2430	2400	2370	2340	2310
5	2670	2640	2580	2550	2490	2460	2430	2400	2340	2310	2310	2280

6	2670	2610	2550	2520	2460	2430	2400	2340	2310	2280	2250	2220
7	2640	2580	2520	2490	2430	2400	2340	2310	2280	2250	2220	2190
8	2640	2580	2520	2460	2400	2370	2310	2290	2250	2190	2160	2130
9	2640	2580	2490	2430	2400	2340	2280	2250	2220	2160	2130	2100
10	2640	2580	2490	2430	2370	2310	2280	2220	2190	2130	2100	2070
11	2640	2580	2490	2430	2370	2280	2250	2190	2160	2100	2070	2010
12	2640	2580	2490	2430	2370	2280	2220	2160	2130	2070	2040	1980
13	2640	2580	2490	2430	2370	2280	2220	2160	2100	2040	2010	1950
14	2640	2580	2490	2430	2370	2280	2220	2160	2070	2040	1980	1920
15	2640	2580	2490	2430	2370	2280	2220	2160	2070	2010	1950	1890
16	2670	2580	2490	2430	2370	2280	2220	2160	2070	2010	1950	1890
17	2730	2610	2490	2430	2370	2280	2220	2160	2070	2010	1950	1860
18	2880	2670	2550	2430	2370	2280	2220	2160	2070	2010	1950	1860
19	3530	3660	2640	2490	2370	2280	2220	2160	2070	2010	1950	1860
20	4320	4050	3780	2610	2460	2340	2220	2160	2070	2010	1950	1860
21	4650	4380	4140	387	2640	2400	2280	2160	2070	2010	1950	1860
22	4950	4710	4470	423	3960	3690	2370	2220	2100	2010	1950	1860
23	5220	5010	4770	4560	4320	4050	3810	2370	2160	2040	1950	1860
24	5490	5280	5070	4950	4620	4380	4140	3900	3660	2130	2010	1890
25	5730	5550	5340	5130	4920	4710	4470	4230	4020	3790	2130	1950
26	5970	5790	5580	5400	5190	4980	4770	4560	4320	4110	3870	3630
27	6210	6000	5820	5640	5430	5250	5040	4930	4620	4410	4200	3960
28	0	0	6060	5880	5670	5490	5310	5100	4890	4710	4500	4290
29	0	0	0	0	5910	5730	5550	5340	5160	4980	4770	4560
30	0	0	0	0	0	0	5760	5580	5400	5220	5040	4830
31	0	0	0	0	0	0	0	0	5640	5460	5280	5100
32	0	0	0	0	0	0	0	0	0	0	5520	5340
33	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0	0	0	0
64	0	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0	0

66	0	0	0	0	0	0	0	0	0	0	0	0
67	0	0	0	0	0	0	0	0	0	0	0	0
68	0	0	0	0	0	0	0	0	0	0	0	0
69	0	0	0	0	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0	0	0	0	0	0
71	0	0	0	0	0	0	0	0	0	0	0	0
72	0	0	0	0	0	0	0	0	0	0	0	0
73	0	0	0	0	0	0	0	0	0	0	0	0
74	0	0	0	0	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0	0	0	0
76	0	0	0	0	0	0	0	0	0	0	0	0
77	0	0	0	0	0	0	0	0	0	0	0	0
78	0	0	0	0	0	0	0	0	0	0	0	0
79	0	0	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0	0	0
81	0	0	0	0	0	0	0	0	0	0	0	0

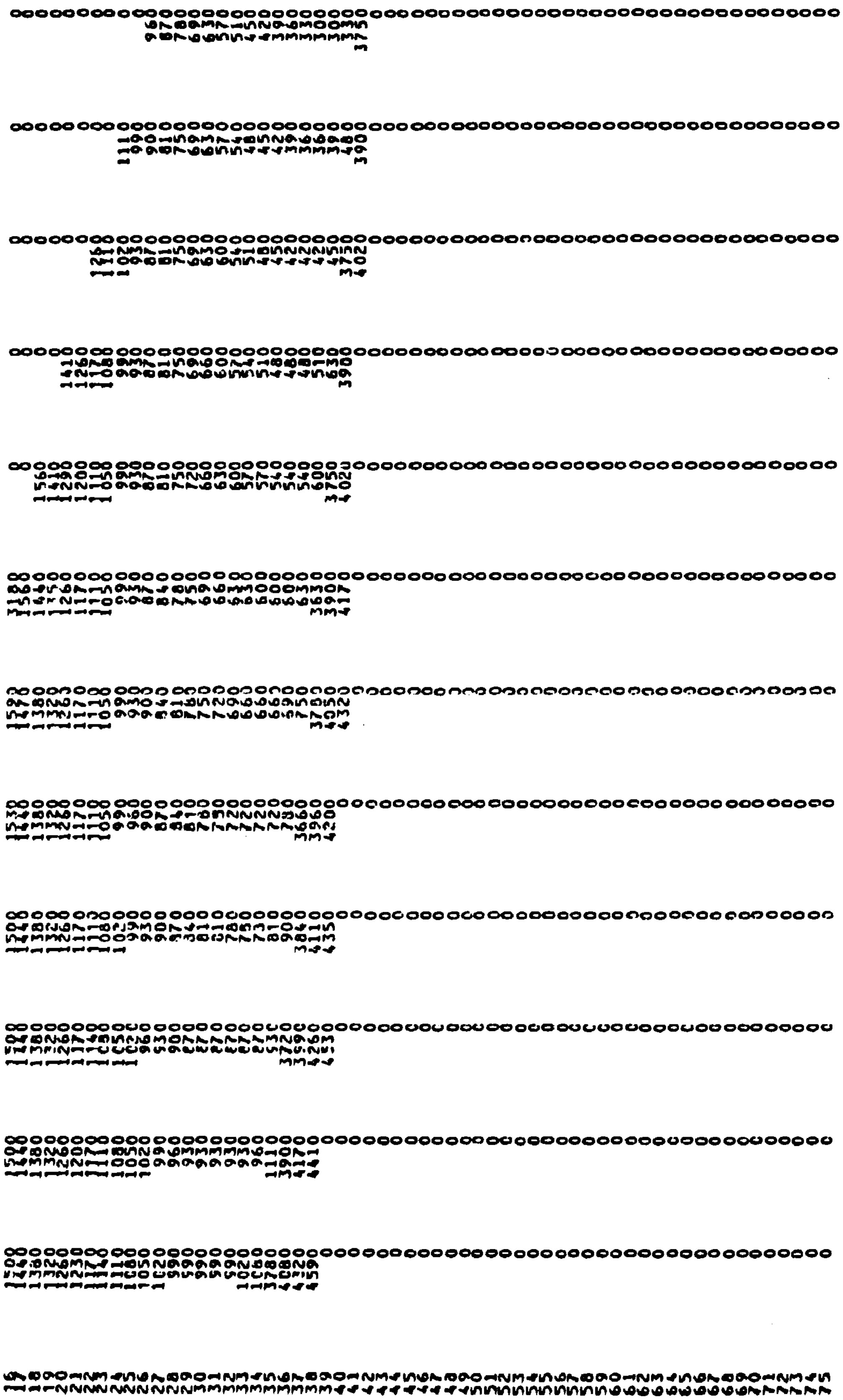
*** ARRIVAL TIMES (SEC) ***

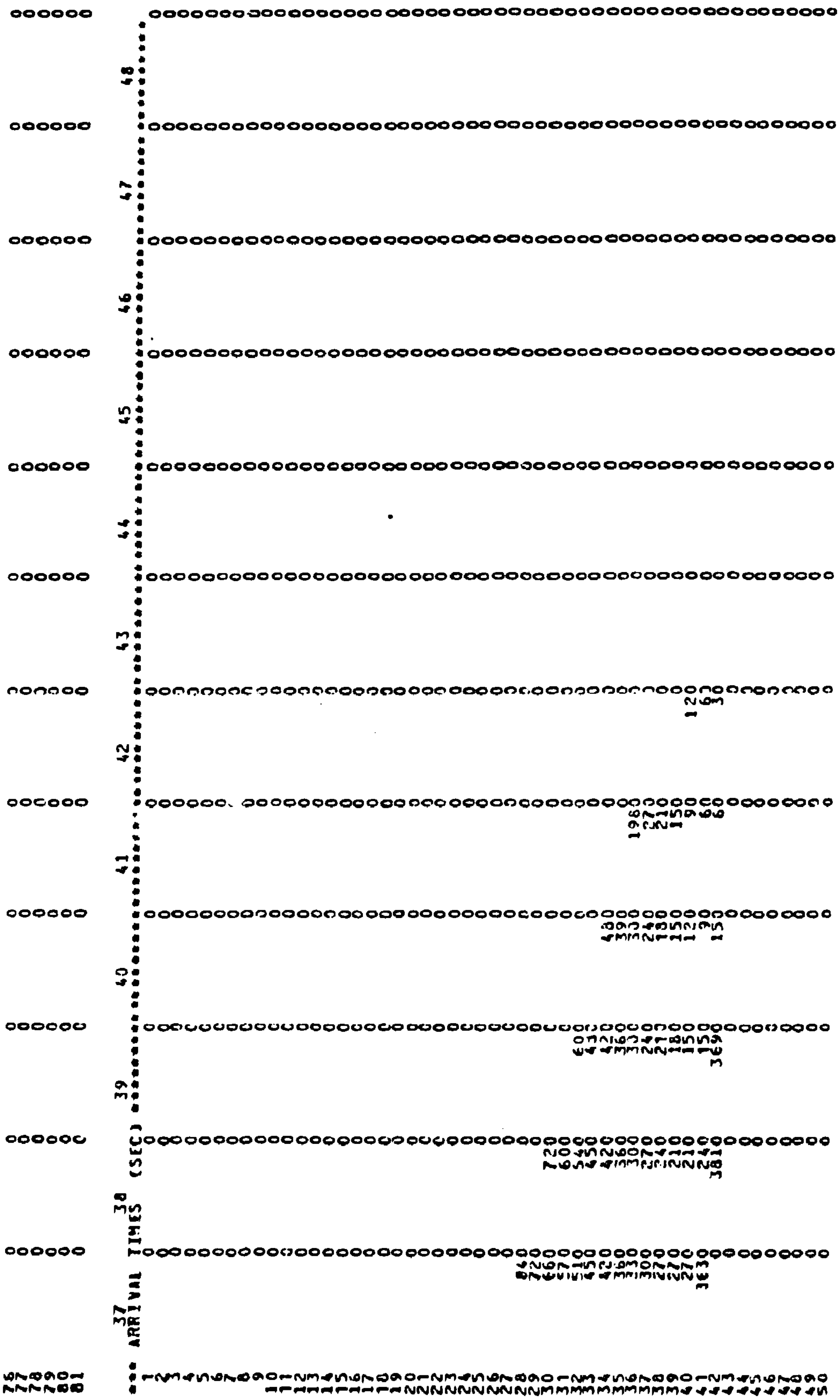
	13	14	15	16	17	18	19	20	21	22	23	24
1	2520	2520	2520	2520	2520	2520	2520	2580	2640	0	0	0
2	2430	2430	2430	2430	2430	2430	2430	2460	2520	2640	0	0
3	2370	2370	2370	2370	2370	2370	2370	2370	2400	2490	2700	0
4	2310	2310	2310	2310	2310	2310	2310	2310	2310	2370	2460	0
5	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250	2310	2430
6	2190	2190	2160	2160	2160	2160	2160	2160	2160	2160	2220	2280
7	2160	2130	2100	2100	2100	2100	2100	2100	2100	2100	2100	2160
8	2100	2070	2070	2040	2040	2040	2040	2040	2040	2040	2040	2070
9	2070	2040	2010	1990	1980	1980	1980	1980	1980	1950	1950	1980
10	2040	1990	1950	1950	1920	1920	1890	1890	1890	1890	1890	1890
11	1980	1950	1920	1890	1860	1860	1830	1830	1830	1830	1830	1830
12	1950	1920	1890	1860	1830	1800	1770	1770	1770	1770	1770	1770
13	1920	1890	1830	1800	1770	1740	1740	1710	1710	1710	1710	1710
14	1890	1860	1800	1770	1740	1710	1680	1650	1650	1650	1650	1650
15	1860	1830	1770	1740	1710	1680	1650	1620	1590	1560	1560	1560
16	1830	1800	1740	1710	1680	1620	1590	1560	1530	1530	1500	1500
17	1800	1770	1710	1680	1620	1590	1560	1530	1500	1470	1440	1440
18	1800	1740	1680	1650	1590	1560	1530	1500	1470	1440	1410	1380
19	1800	1740	1680	1620	1560	1530	1500	1440	1410	1380	1350	1350
20	1800	1740	1650	1590	1560	1500	1470	1410	1380	1350	1320	1290
21	1800	1740	1650	1590	1530	1470	1440	1390	1350	1320	1290	1260
22	1800	1740	1650	1590	1530	1470	1410	1350	1320	1290	1230	1200
23	1800	1740	1650	1590	1530	1440	1380	1350	1290	1260	1200	1170
24	1800	1740	1650	1590	1530	1440	1380	1320	1260	1230	1170	1140
25	1830	1740	1650	1590	1530	1440	1380	1320	1260	1200	1170	1110
26	1920	1770	1680	1590	1530	1440	1390	1320	1260	1170	1140	1080
27	3750	1890	1740	1620	1530	1440	1380	1320	1260	1170	1110	1080
28	4050	3840	3630	1680	1560	1470	1380	1320	1260	1170	1110	1050
29	4380	4170	3930	3720	1680	1530	1410	1320	1260	1170	1110	1050
30	4650	4440	4260	4050	3740	3630	1470	1350	1260	1170	1110	1050
31	4920	4710	4530	4320	4140	3930	3720	1470	1320	1200	1110	1050
32	5160	4980	4800	4620	4410	4230	4020	3840	3630	1260	1140	1050
33	5400	5220	5040	4860	4680	4500	4320	4140	3930	3750	1260	1110
34	0	0	5280	5100	4920	4770	4590	4410	4230	4050	3870	3660
35	0	0	0	0	0	5010	4830	4650	4500	4320	4140	3960
36	0	0	0	0	0	0	0	4890	4740	4560	4410	4230
37	0	0	0	0	0	0	0	0	0	4830	4650	4500
38	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0

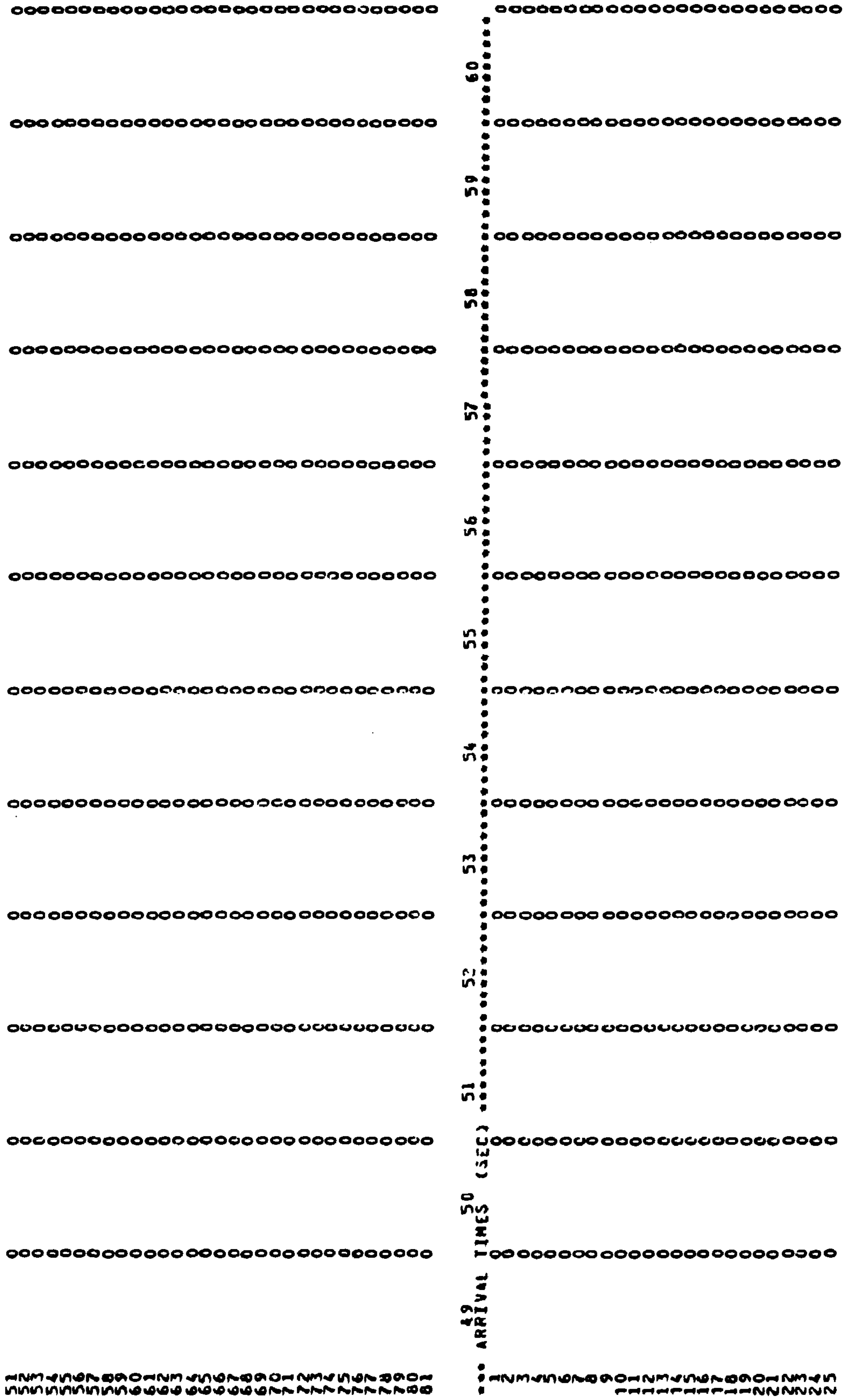
41	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0	0	0	0
64	0	0	0	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0	0	0	0
66	0	0	0	0	0	0	0	0	0	0	0	0
67	0	0	0	0	0	0	0	0	0	0	0	0
68	0	0	0	0	0	0	0	0	0	0	0	0
69	0	0	0	0	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0	0	0	0	0	0
71	0	0	0	0	0	0	0	0	0	0	0	0
72	0	0	0	0	0	0	0	0	0	0	0	0
73	0	0	0	0	0	0	0	0	0	0	0	0
74	0	0	0	0	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0	0	0	0
76	0	0	0	0	0	0	0	0	0	0	0	0
77	0	0	0	0	0	0	0	0	0	0	0	0
78	0	0	0	0	0	0	0	0	0	0	0	0
79	0	0	0	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0	0	0	0
81	0	0	0	0	0	0	0	0	0	0	0	0

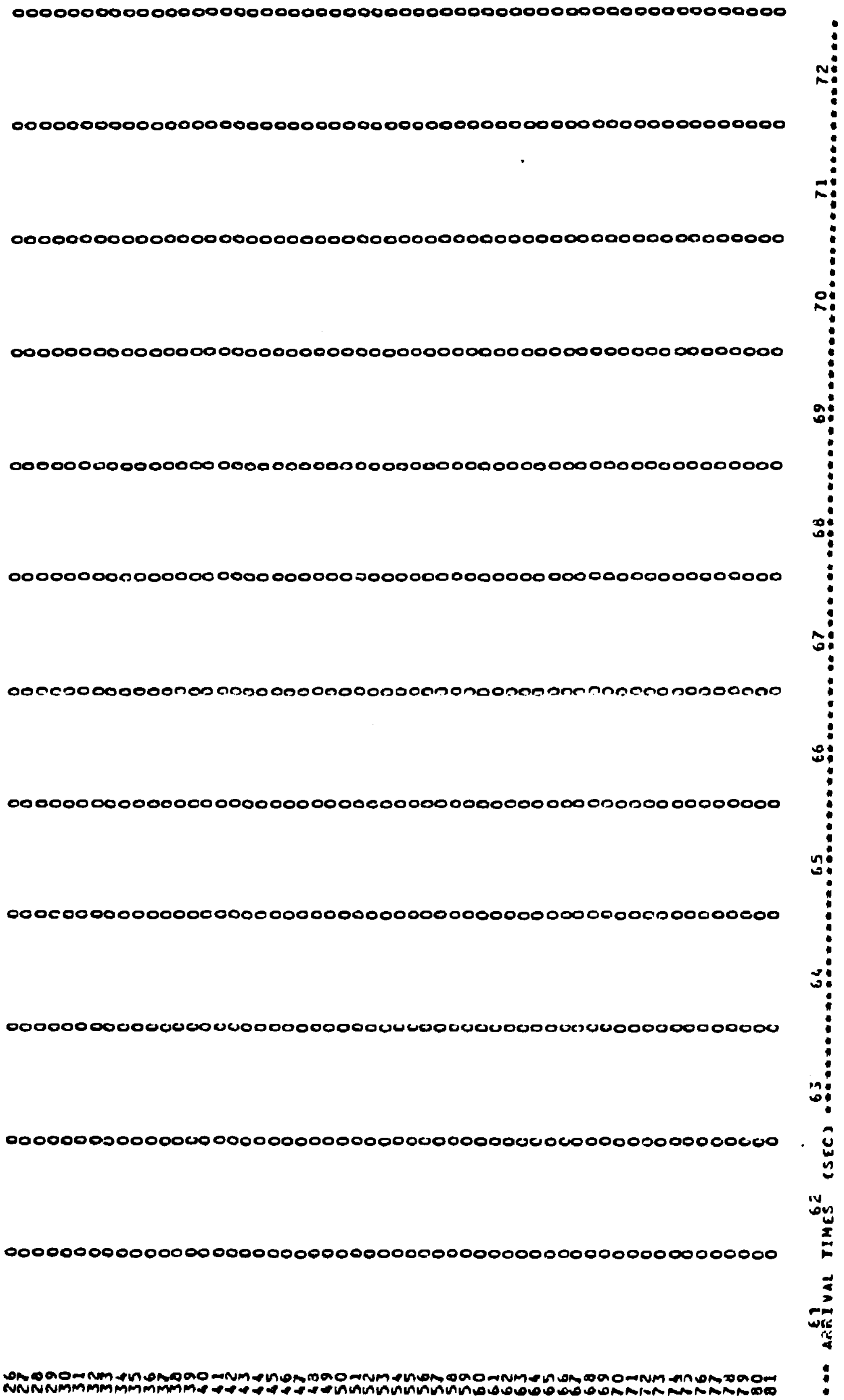
*** ARRIVAL TIMES (SEC) ***

	25	26	27	28	29	30	31	32	33	34	35	36
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	2250	0	0	0	0	0	0	0	0	0	0	0
8	2130	2250	0	0	0	0	0	0	0	0	0	0
9	2010	2100	0	0	0	0	0	0	0	0	0	0
10	1920	1990	2070	0	0	0	0	0	0	0	0	0
11	1830	1860	1920	2190	0	0	0	0	0	0	0	0
12	1770	1770	1830	1890	0	0	0	0	0	0	0	0
13	1710	1710	1710	1770	1890	0	0	0	0	0	0	0
14	1650	1650	1650	1680	1740	0	0	0	0	0	0	0
15	1560	1560	1560	1590	1620	1710	0	0	0	0	0	0

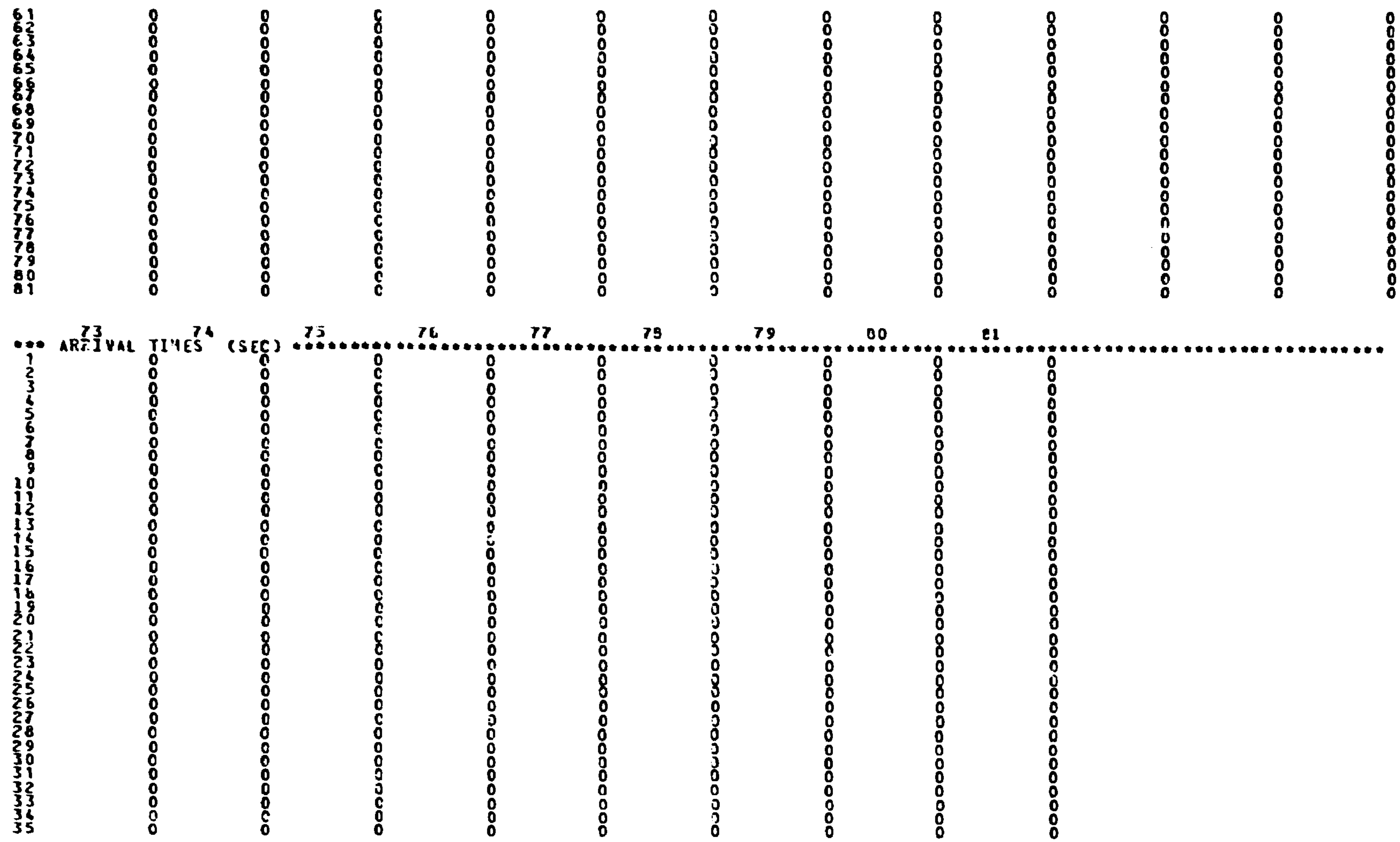



ARRIVAL TIMES (SEC)


ARRIVAL TIMES (SEC)
49
50
51
52
53
54
55
56
57
58
59
60


ARRIVAL TIMES (SEC)
61 62 63 64 65 66 67 68 69 70 71 72

1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0


ARRIVAL TIMES (SEC)

36	0	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0
58	0	0	0	0	0	0	0	0	0
59	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0
61	0	0	0	0	0	0	0	0	0
62	0	0	0	0	0	0	0	0	0
63	0	0	0	0	0	0	0	0	0
64	0	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0	0
66	0	0	0	0	0	0	0	0	0
67	0	0	0	0	0	0	0	0	0
68	0	0	0	0	0	0	0	0	0
69	0	0	0	0	0	0	0	0	0
70	0	0	0	0	0	0	0	0	0
71	0	0	0	0	0	0	0	0	0
72	0	0	0	0	0	0	0	0	0
73	0	0	0	0	0	0	0	0	0
74	0	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0	0
76	0	0	0	0	0	0	0	0	0
77	0	0	0	0	0	0	0	0	0
78	0	0	0	0	0	0	0	0	0
79	0	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0	0
81	0	0	0	0	0	0	0	0	0

8.2. Example no. 2

The files INDATA and WINDDA are as shown below:

8.2.1. INDATA file

```
&PRIMDA
TITLE='DEMO 1. DRY AND WET DEPOSITION  ',
ICOLS=100,JROWS=64,KPLANS=1,DELX=500.,DELY=500.,DELZ=30.,
TDEL=0.0,CHEMIN=0.1E-15,NTADV=60,TAU=60,MAPTIM=900,REFLEC=1.,
NRELSE=9999,IDMP=1,JDMP=26,KDMP=1,ISMODE=1,ITAPIN=0,
KOORD=0,XUTM=332.7609,YUTM=5381.6323,
INPRNT='YES',OUTDAT='OUTPUT',OUTMOD='DOSE',OUTWFD='NOOUTP'
INPRNT='YES',OUTDAT='OUTPUT',OUTMOD='DOSE',OUTWFD='NOOUTP'
&END
&RELDAT
PUFFTX='SOURCEHEIGTH=100 METERS, SOURCESTRENGTH=1/3600',
NRMULT=1,
XSOURC(1)=0.0,YSOURC(1)=32.0,ZSOURC(1)=3.3333,
STRTRL(1)=0,STOPRL(1)=3600,SOURST(1)=277.77777778,HEATFX(1)=0.,
&END
&STABDA
STABTX='MIXING HEIGHT VARIES WITH STABILITY .',
DTDZ=0.,ZMTAB(1)=1620.0,ZMTAB(2)=1200.,ZMTAB(3)=810.,
ZMTAB(4)=570.,ZMTAB(5)=330.,ZMTAB(6)=210.,
DSHEAR=0,ALFSHE=-5.0,HSHEMI=0.0,HSHEMA=200.0,
USH=0,USTAR=0.1397,LMOBUK=44.64,ZROUGH=0.1,DZERO=0.0,
DUSDUM=0,
DEPMOD=1,OUTDEP='OUTPUT',
VDTAB(1,1)=0.010,VDTAB(2,1)=0.010,VDTAB(3,1)=0.010,
VDTAB(4,1)=0.010,VDTAB(5,1)=0.010,VDTAB(6,1)=0.010,
VDTAB(1,2)=0.010,VDTAB(2,2)=0.010,VDTAB(3,2)=0.010,
VDTAB(4,2)=0.010,VDTAB(5,2)=0.010,VDTAB(6,2)=0.010,
VDTAB(1,3)=0.010,VDTAB(2,3)=0.010,VDTAB(3,3)=0.010,
```

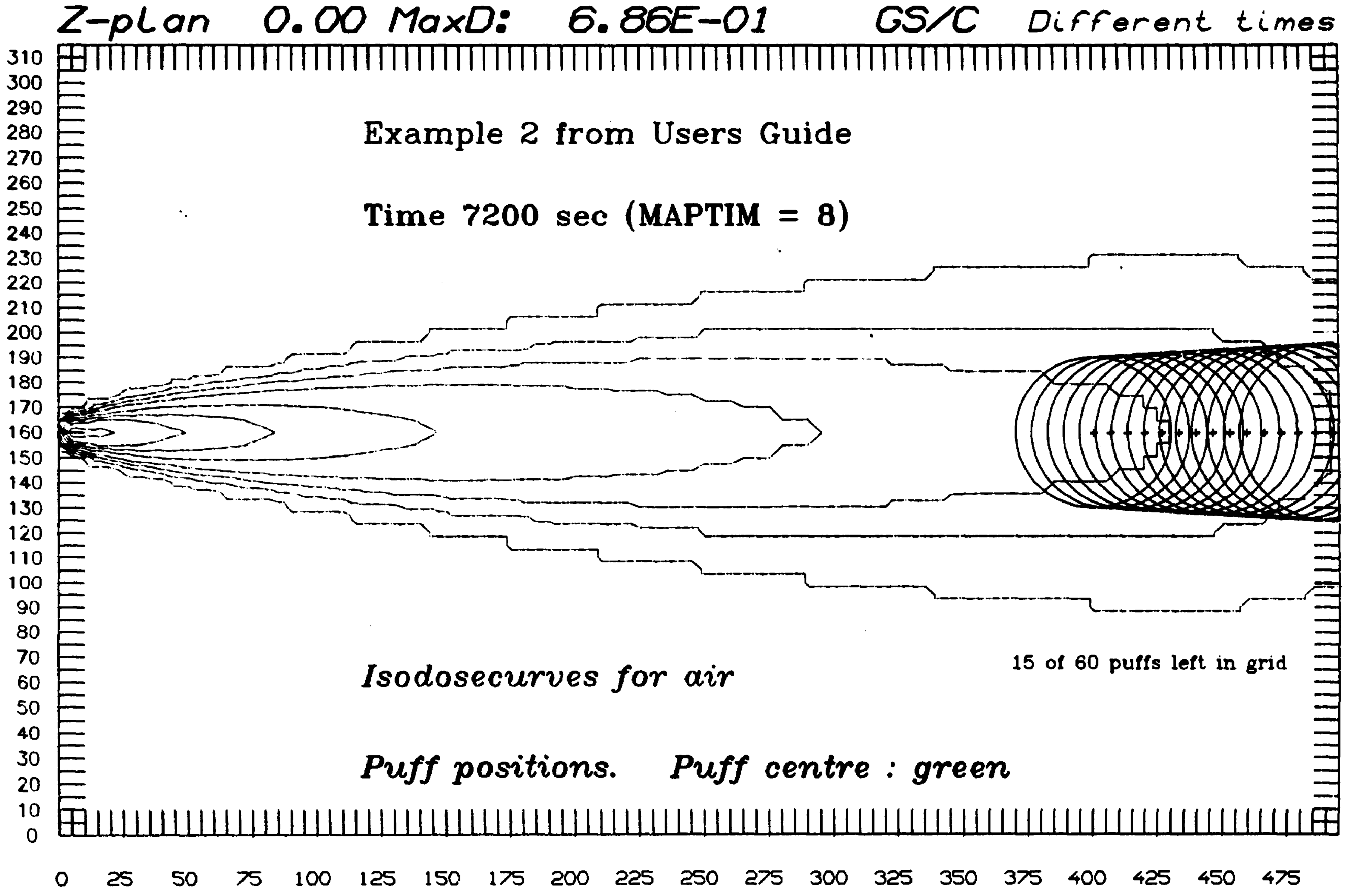
```
VDTAB(4,3)=0.010,VDTAB(5,3)=0.010,VDTAB(6,3)=0.010,
VDTAB(1,4)=0.010,VDTAB(2,4)=0.010,VDTAB(3,4)=0.010,
VDTAB(4,4)=0.010,VDTAB(5,4)=0.010,VDTAB(6,4)=0.010,
VDTAB(1,5)=0.010,VDTAB(2,5)=0.010,VDTAB(3,5)=0.010,
VDTAB(4,5)=0.010,VDTAB(5,5)=0.010,VDTAB(6,5)=0.010,
LDTAB(1)=0.000042,LDTAB(2)=0.000106,LDTAB(3)=0.000233,
TIMRAI(1)=1692,TIMRAI(2)=2628,TIMRAI(3)=2232
&END
```

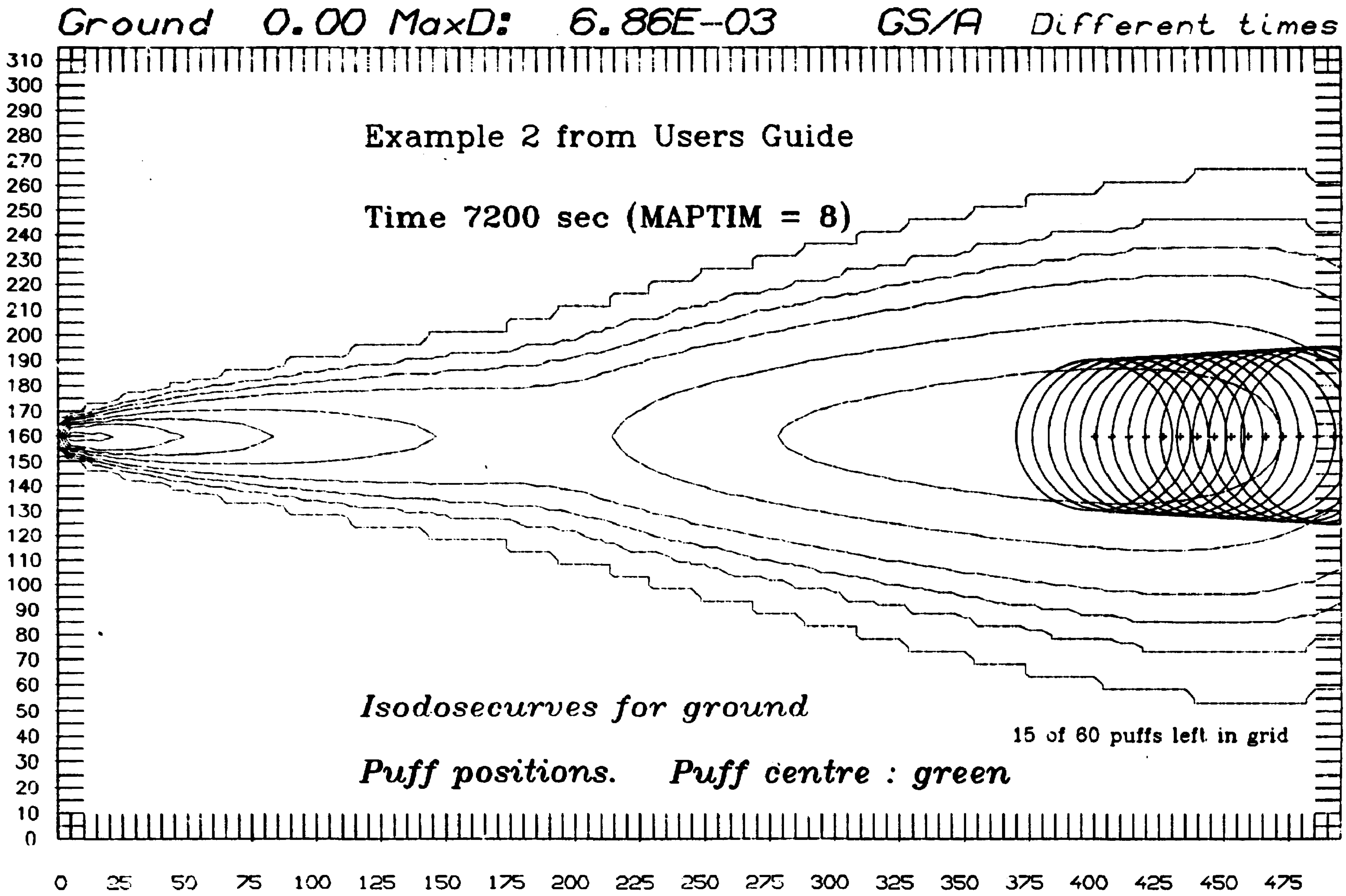
8.2.2. WINDDA file

```
&WINPAR
WNDTLE='WINDDATA (CONSTANT WIND) FOR KFK-INTERCOMP. TEST',
TIME=' 12:00',DATE='25-MAR-85',ITSP=1800,
NP=1,NFX=100,NFY=64,NSTL=1,NSKIP=0,
RTE=0.,RCH=100.,
NAMST(1)='RIS',X(1)=0.,Y(1)=32.,COR(1)=0.,CONFAC(1)=1.0000,
A(1)=0.,ISXMIN(1)=1,ISXMAX(1)=100,ISYMIN(1)=1,ISYMAX(1)=64,
&END
' 12:00'
'RIS','D','D',270.,5.00,0.0
'EOWR'
' 12:30'
'RIS','D','D',270.,5.00,0.0
'EOWR'
' 13:00'
'RIS','D','D',270.,5.00,0.0
'EOWR'
' 13:30'
'RIS','D','D',270.,5.00,2.0
'EOWR'
' 14:00'
'RIS','D','D',270.,5.00,0.0
'EOWR'
' 14:30'
'RIS','D','D',270.,5.00,0.0
'EOWR'
' 15:00'
'RIS','D','D',270.,5.00,0.0
'EOWR'
' 15:30'
'RIS','D','D',270.,5.00,0.0
'EOWR'
' 16:00'
```

```
'RIS','D','D',270.,5.00,0.0
'EOWR'
' 16:30'
'RIS','D','D',270.,5.00,0.0
'STOP'
```

The output from this example is shown on the following pages.


Z-pLan 0.00 MaxD: 6.86E-01 GS/C Different times
Example 2 from Users Guide
Time 7200 sec (MAPTIM = 8)
15 of 60 puffs left in grid
Isodosecurves for air
Puff positions. Puff centre : green
310
300
290
280
270
260
250
240
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
0 25 50 75 100 125 150 175 200 225 250 275 300 325 350 375 400 425 450 475


Ground 0.00 MaxD: 6.86E-03 GS/A Different times
Example 2 from Users Guide
Time 7200 sec (MAPTIM = 8)
Isodosecurves for ground
15 of 60 puffs left in grid
Puff positions. Puff centre : green
310 300 290 280 270 260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0
0 25 50 75 100 125 150 175 200 225 250 275 300 325 350 375 400 425 450 475

FYSNYREEN
DEMO4A

```
HHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH
#NEWS    OKT.29.85   11:09  : 8 FEJL I FORTRAN-77 RETTET.
######################################################################
#   DEN NYESTE VERSION AF FORTRAN-77 ER NU SAT I DRIFT.              #
#   8 KENDTE FEJL ER FORSVUNDET.                                     #
#   FOR NAERMERE DETALJER HENVISES TIL INFO-FILEN                    #
#   *INFO/FORTRAN77.                                                 #
######################################################################
DATE: OCT 29, 1985 18:50:43, SYSTEM SERIAL: 129, B7800 MCP: SYSTEM/MCP851010/FMLYINX001. 35.220.2977

                              W O R K   F L O W   S T A T E M E N T S

     00000100  BEGIN JOB DEMO4A;CLASS=0;CHARGE=1025601;
     00000200  MAXPROCTIME=3600;MAXIOTIME=900;MAXLINES=15000;
     00000300   RUN OBJECT/VER8K3/B/RIMPUFF;
     00000400   FILE FILE1=VER8K3/INDATA/DEMO4;
     00000500   FILE FILE2=VER8K3/WINDDA/DIT4A;
     00000600   FILE FILE10=V8K3/OUTAIR/DEMO4A;
     00000700   FILE FILE11=V8K3/OUTDEP/DEMO4A;
     00000800   FILE FILE12=V8K3/WFIELD/DEMO4A;
     00000880   FILE FILE20=V8K3/KFKTAP/DEMO4A;
     00000900   ?END JOB;

                                        J O B   S U M M A R Y

OCT 29, 1985
   18:25:33    BOJ  9851  DEMO4A.
                          JOB ENTERED SYSTEM: OCT 29, 1985 09:45:13 FROM WFL 35.200
```

```
                                      QUEUE: 0
                                      ORIGINATING LSN: 51  MCS: 1
                                      PRIORITY: 30
                                      USERCODE: FYSNYREEN.
                                      CHARGECODE: 1025601.

18:25:34      BOT   2765   (FYSNYREEN)OBJECT/VER8K3/0/RIMPUFF ON USERPACK.
                           CODE COMPILED: OCT 28, 1985 12:58:32 BY FORTRAN77 36.120
                           TASK TYPE: COROUTINE(CALL)
                           PRIORITY: 30
                           USERCODE: FYSNYREEN.
                           CHARGECODE: 1025601.
18:25:34            2765   STACK EXTENDED FROM 688 TO 878 WORDS.
18:25:38            2765   STACK EXTENDED FROM 878 TO 985 WORDS.
18:50:42      EOT   2765   (FYSNYREEN)OBJECT/VER8K3/0/RIMPUFF ON USERPACK.
                           PROCESSOR TIME: 00:23:02.232  USERCODE: FYSNYREEN.
                           I/O       TIME: 00:00:08.670  CHARGECODE: 1025601.
                           READYQ    TIME: 00:00:36.110  LINES PRINTED: 2142.
                           INITPBIT  TIME: 00:00:04.556  AVERAGE MEMORY USAGE: CODE=5544, DATA=254095
                           OTHERPBIT TIME: 00:00:04.429  MEMORY INTEGRAL: CODE=7711.846, DATA=339512.636
                           ELAPSED   TIME: 00:25:08.312  DATA & CODE ALLOWED IN & OCCUPIED: GLOBAL.
                                                         INITIAL PBITS: 1704, OTHER PBITS: 1062.

18:50:43      EOJ   9851   DEMC4A.
                           PROCESSOR TIME: 00:00:00.078  USERCODE: FYSNYREEN.
                           I/O       TIME: 00:00:00.159  CHARGECODE: 1025601.
                           READYQ    TIME: 00:00:00.015  AVERAGE MEMORY USAGE: CODE=41, DATA=995
                           INITPBIT  TIME: 00:00:00.030  MEMORY INTEGRAL: CODE=0.010, DATA=0.237
                           OTHERPBIT TIME: 00:00:00.002  DATA & CODE ALLOWED IN & OCCUPIED: GLOBAL.
                           ELAPSED   TIME: 00:25:09.541  INITIAL PBITS: 27, OTHER PBITS: 1.
```

```
SOURCEHEIGTH=100 METERS, SOURCESTRENGTH=1/3600

CURRENT SOURCEDATA : NUMBER OF ACTIVE SOURCES :    1
  1  0.00 32.00  3.33          0       3600************* 0.000000000

   ZHGT = 99.999
```

```
DEMO 1. DRY AND WET DEPOSITION

    KEY PARAMETER FOR CURRENT RUN:

    NRELSE =      9999

    ICOLS  =       100      JROWS  =        64      KPLANS =         1

    NTADV  =        60      MAPTIM =       900      TAU    =        60

    DELX   =    500.00      DELY   =    500.00      DELZ   =     30.00

    CHEMIN =0.1000E-15      REFLEC =   1.00000      TDEL   =    0

    IDMP   =         1      JDMP   =        25      KDMP   =         1

      ISMODE = 1

      INFRNT = YES

      OUTDAT = OUTPUT OUTMOD = DOSE

      OUTWFD = NOOUTP
      KFMTAPE= 0 (0 = NO, 1<= YES)

      * COORDINATES FOR SOURCE AND WINDSTATIONS IN GRID-UNITS (GDU)


THE MIXING LAYER IS LIMITED AT:   1520.00 METERS IN STABILITY CAT.   1
```

```
THE MIXING LAYER IS LIMITED AT:   1200.00 METERS IN STABILITY CAT    2
THE MIXING LAYER IS LIMITED AT:    810.00 METERS IN STABILITY CAT    3
THE MIXING LAYER IS LIMITED AT:    570.00 METERS IN STABILITY CAT    4
THE MIXING LAYER IS LIMITED AT:    330.00 METERS IN STABILITY CAT    5
THE MIXING LAYER IS LIMITED AT:    210.00 METERS IN STABILITY CAT    6
```

IN THE CURRENT RUN, THE STABILITY-CLASSES ARE
CONNECTED TO INTENSITY DATA AS FOLLOWS:

STABILITY CLASS NO.:	1	2	3	4	5	6
INTENSITY DATA :	0.42	0.34	0.26	0.17	0.09	0.04

MIXING HEIGHT VARIES WITH STABILITY .

IN THE CURRENT RUN, THE POTENTIAL TEMPERATURE
GRADIENT IS SET TO: 0.0000

NO WIND SHEAR

DEPOSITION PARAMETERS

DRY DEPOSITION PARAMETER, VD (M/S)

WINDSPEED (M/S)	A	B	C	D	E	F
U < 1	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02
1 <= U < 3	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02
3 <= U < 6	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02
6 <= U < 10	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02
10 <= U	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02	1.0E-02

WASH-OUT COEFFICIENT

PRECIPITAION (MM/H)	LD(S-1)	TIME(SEC)
P < 1	4.20E-05	1692
1 <= P <= 3	1.06E-04	2928
3 < P	2.33E-04	2232

OUTDEP = OUTPUT

FRAME FOR PUFF ADVECTION:
X: 0 => 99 , Y: 0 => 63

THE MIXING LAYER IS LIMITED AT: 1520.00 METERS IN STABILITY CAT 1

```
WIND PARAMETER DUMP
===================

WINDDATA (CONSTANT WIND) FOR KFK-INTERCOMP. TEST

TIME =   12:0 DATE = 25-MAR-85 ITSP = 1800 SEC
NP = 1 NFX = 100 NFY = 64
NSTL = 1 NSKIP = 0 K1ST = 0
RTE = 0.0 (DEG.) RCH = 100.0 (G.U.)

 NAME      X       Y  COP CONFAC ALIGN  ISXMIN ISXMAX ISYMIN ISYMAX
           GU      GU DEG          DEG     GU     GU     GU     GU
===================================================================
KFK       0.0    32.0   0.   1.0    0.0      1    100      1     54
```

STABILITY INDEX ARRAY (J= 1,64)

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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STATION NO.
KFK 1

UNDEFINED AREA = 0

```
TIMESTEP NO = 1

OBSERVATION TIME:  12:0

STATION DIRECTION VELOCITY     STABILITY    RAIN
         (DEG.)    (M/S)      (-Y) (-Z)    (MM/H)
KFK       270.      5.0         D    D      0.00

STATION    U      V       RAIN
        (M/S)  (M/S)    (MM/H)
===========================
KFK       5.0    0.0      0.00
* TIMESTEP NO. 1 : ZM = 570.0 => ZMG = 19
```

=> (1.3126525113 , 32.0) DISTANCE: 656.32625566
=> U= 10.938770928 V= 0.0

900 SEC. AFTER START OF RELEASE
TOT. 15 PUFFS RELEASED AND 0 HAVE LEFT THE GRID

*** Z-PLAN NO = 1 *** DOSE (GS/M**3) ***

	26	27	28	29	30	31	32	33	34	35	36	37
1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.183E-11	4.507E-07	4.080E-04	4.040E-03	4.080E-04	4.507E-07	5.183E-11	0.000E+00
2	0.000E+00	0.000E+00	0.000E+00	1.220E-11	1.827E-08	2.979E-05	1.768E-02	1.712E-01	1.768E-02	2.979E-05	1.827E-08	1.220E-11
3	0.000E+00	0.000E+00	2.632E-12	1.348E-09	7.801E-07	3.140E-04	2.363E-02	1.348E-01	2.363E-02	3.140E-04	7.801E-07	1.348E-09
4	0.000E+00	5.531E-13	1.472E-10	4.022E-08	9.440E-06	1.079E-03	3.295E-02	1.141E-01	3.295E-02	1.079E-03	9.440E-06	4.022E-08
5	5.645E-14	2.087E-11	3.249E-09	4.743E-07	4.846E-05	2.351E-03	3.140E-02	7.329E-02	3.140E-02	2.351E-03	4.846E-05	4.743E-07
6	3.487E-12	3.593E-10	3.536E-08	2.857E-06	1.482E-04	3.557E-03	2.876E-02	5.989E-02	2.876E-02	3.557E-03	1.482E-04	2.857E-06
7	4.981E-11	3.543E-09	2.239E-07	1.073E-05	3.175E-04	4.594E-03	2.568E-02	4.653E-02	2.568E-02	4.594E-03	3.175E-04	1.073E-05
8	4.433E-10	2.235E-08	9.398E-07	2.871E-05	5.405E-04	5.232E-03	2.210E-02	3.524E-02	2.210E-02	5.232E-03	5.405E-04	2.871E-05
9	2.708E-09	9.872E-08	2.883E-06	6.000E-05	7.791E-04	5.515E-03	1.888E-02	2.874E-02	1.888E-02	5.515E-03	7.791E-04	6.000E-05
10	1.212E-08	3.279E-07	6.942E-06	1.042E-04	9.991E-04	5.507E-03	1.597E-02	2.293E-02	1.597E-02	5.507E-03	9.991E-04	1.042E-04
11	4.188E-08	8.660E-07	1.383E-05	1.575E-04	1.173E-03	5.278E-03	1.341E-02	1.840E-02	1.341E-02	5.278E-03	1.173E-03	1.575E-04
12	1.167E-07	1.897E-06	2.371E-05	2.131E-04	1.287E-03	4.904E-03	1.119E-02	1.480E-02	1.119E-02	4.904E-03	1.287E-03	2.131E-04
13	2.707E-07	3.558E-06	3.593E-05	2.640E-04	1.337E-03	4.438E-03	9.276E-03	1.190E-02	9.276E-03	4.438E-03	1.337E-03	2.640E-04
14	5.367E-07	5.848E-06	4.909E-05	3.037E-04	1.325E-03	3.920E-03	7.617E-03	9.527E-03	7.617E-03	3.920E-03	1.325E-03	3.037E-04
15	9.248E-07	8.560E-06	6.126E-05	3.271E-04	1.258E-03	3.379E-03	6.177E-03	7.557E-03	6.177E-03	3.379E-03	1.258E-03	3.271E-04
16	1.400E-06	1.126E-05	7.030E-05	3.312E-04	1.145E-03	2.834E-03	4.923E-03	5.927E-03	4.923E-03	2.834E-03	1.145E-03	3.312E-04
17	1.871E-06	1.336E-05	7.429E-05	3.149E-04	9.955E-04	2.301E-03	3.829E-03	4.543E-03	3.829E-03	2.301E-03	9.955E-04	3.149E-04
18	2.205E-06	1.425E-05	7.198E-05	2.795E-04	8.200E-04	1.791E-03	2.876E-03	3.371E-03	2.876E-03	1.791E-03	8.200E-04	2.795E-04
19	2.276E-06	1.357E-05	6.338E-05	2.290E-04	6.323E-04	1.318E-03	2.056E-03	2.386E-03	2.056E-03	1.318E-03	6.323E-04	2.290E-04
20	2.041E-06	1.140E-05	5.004E-05	1.708E-04	4.490E-04	9.018E-04	1.374E-03	1.583E-03	1.374E-03	9.018E-04	4.490E-04	1.708E-04
21	1.570E-06	8.344E-06	3.487E-05	1.138E-04	2.880E-04	5.619E-04	8.409E-04	9.622E-04	8.409E-04	5.619E-04	2.880E-04	1.138E-04
22	1.024E-06	5.237E-06	2.108E-05	6.650E-05	1.635E-04	3.120E-04	4.604E-04	5.243E-04	4.604E-04	3.120E-04	1.635E-04	6.650E-05
23	5.594E-07	2.780E-06	1.088E-05	3.346E-05	8.049E-05	1.511E-04	2.206E-04	2.504E-04	2.206E-04	1.511E-04	8.049E-05	3.346E-05
24	2.530E-07	1.231E-06	4.722E-06	1.425E-05	3.374E-05	6.255E-05	9.066E-05	1.026E-04	9.066E-05	6.255E-05	3.374E-05	1.425E-05
25	9.375E-08	4.494E-07	1.699E-06	5.058E-06	1.184E-05	2.176E-05	3.137E-05	3.544E-05	3.137E-05	2.176E-05	1.184E-05	5.058E-06
26	2.821E-08	1.338E-07	5.009E-07	1.477E-06	3.430E-06	6.267E-06	8.999E-06	1.015E-05	8.999E-06	6.267E-06	3.430E-06	1.477E-06
27	6.844E-09	3.223E-08	1.198E-07	3.511E-07	8.110E-07	1.475E-06	2.113E-06	2.382E-06	2.113E-06	1.475E-06	8.110E-07	3.511E-07
28	1.330E-09	6.234E-09	2.306E-08	6.732E-08	1.549E-07	2.811E-07	4.019E-07	4.528E-07	4.019E-07	2.811E-07	1.549E-07	6.732E-08
29	2.060E-10	9.629E-10	3.552E-09	1.034E-08	2.375E-08	4.301E-08	6.143E-08	6.919E-08	6.143E-08	4.301E-08	2.375E-08	1.034E-08
30	2.536E-11	1.183E-10	4.357E-10	1.266E-09	2.904E-09	5.254E-09	7.500E-09	8.444E-09	7.500E-09	5.254E-09	2.904E-09	1.266E-09
31	2.474E-12	1.153E-11	4.242E-11	1.232E-10	2.822E-10	5.103E-10	7.281E-10	8.197E-10	7.281E-10	5.103E-10	2.822E-10	1.232E-10
32	1.902E-13	8.855E-13	3.272E-12	9.494E-12	2.174E-11	3.930E-11	5.606E-11	6.311E-11	5.606E-11	3.930E-11	2.174E-11	9.494E-12
33	1.163E-14	5.416E-14	1.990E-13	5.770E-13	1.321E-12	2.386E-12	3.403E-12	3.830E-12	3.403E-12	2.386E-12	1.321E-12	5.770E-13
34	0.000E+00	0.000E+00	9.605E-15	2.785E-14	6.376E-14	1.152E-13	1.643E-13	1.849E-13	1.643E-13	1.152E-13	6.376E-14	2.785E-14
35	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
36	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
37	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
38	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
39	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
40	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
41	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
42	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
43	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
44	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
45	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
46	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
47	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
48	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
49	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

*** DEPOSITION : *** DOSE (GS/M**2) **

	26	27	28	29	30	31	32	33	34	35	36	37
1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.692E-13	4.507E-09	4.080E-06	4.040E-05	4.080E-06	4.507E-09	4.692E-13	0.000E+00
2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.827E-10	2.979E-07	1.768E-04	1.712E-03	1.768E-04	2.979E-07	1.827E-10	0.000E+00
3	0.000E+00	0.000E+00	0.000E+00	1.347E-11	7.801E-09	3.140E-06	2.363E-04	1.348E-03	2.363E-04	3.140E-06	7.801E-09	1.347E-11
4	0.000E+00	0.000E+00	1.401E-12	4.021E-10	9.440E-08	1.079E-05	3.295E-04	1.141E-03	3.295E-04	1.079E-05	9.440E-08	4.021E-10
5	0.000E+00	8.996E-14	3.239E-11	4.743E-09	4.846E-07	2.351E-05	3.140E-04	7.329E-04	3.140E-04	2.351E-05	4.846E-07	4.743E-09
6	0.000E+00	3.567E-12	3.535E-10	2.857E-08	1.482E-06	3.557E-05	2.876E-04	5.989E-04	2.876E-04	3.557E-05	1.482E-06	2.857E-08
7	4.187E-13	3.542E-11	2.239E-09	1.073E-07	3.175E-06	4.594E-05	2.568E-04	4.653E-04	2.568E-04	4.594E-05	3.175E-06	1.073E-07
8	4.410E-12	2.235E-10	9.398E-09	2.871E-07	5.405E-06	5.232E-05	2.210E-04	3.624E-04	2.210E-04	5.232E-05	5.405E-06	2.871E-07
9	2.707E-11	9.872E-10	2.883E-08	6.000E-07	7.791E-06	5.515E-05	1.888E-04	2.874E-04	1.888E-04	5.515E-05	7.791E-06	6.000E-07
10	1.212E-10	3.279E-09	6.942E-08	1.042E-06	9.991E-06	5.507E-05	1.597E-04	2.293E-04	1.597E-04	5.507E-05	9.991E-06	1.042E-06
11	4.187E-10	8.660E-09	1.383E-07	1.575E-06	1.173E-05	5.278E-05	1.341E-04	1.840E-04	1.341E-04	5.278E-05	1.173E-05	1.575E-06
12	1.167E-09	1.897E-08	2.371E-07	2.131E-06	1.287E-05	4.904E-05	1.119E-04	1.480E-04	1.119E-04	4.904E-05	1.287E-05	2.131E-06
13	2.707E-09	3.558E-08	3.593E-07	2.640E-06	1.337E-05	4.438E-05	9.276E-05	1.190E-04	9.276E-05	4.438E-05	1.337E-05	2.640E-06
14	5.367E-09	5.848E-08	4.909E-07	3.037E-06	1.325E-05	3.920E-05	7.617E-05	9.527E-05	7.617E-05	3.920E-05	1.325E-05	3.037E-06
15	9.248E-09	8.560E-08	6.126E-07	3.271E-06	1.258E-05	3.379E-05	6.177E-05	7.567E-05	6.177E-05	3.379E-05	1.258E-05	3.271E-06
16	1.400E-08	1.126E-07	7.030E-07	3.312E-06	1.145E-05	2.834E-05	4.923E-05	5.927E-05	4.923E-05	2.834E-05	1.145E-05	3.312E-06
17	1.871E-08	1.336E-07	7.429E-07	3.149E-06	9.955E-06	2.301E-05	3.829E-05	4.543E-05	3.829E-05	2.301E-05	9.955E-06	3.149E-06
18	2.205E-08	1.425E-07	7.198E-07	2.795E-06	8.200E-06	1.791E-05	2.876E-05	3.371E-05	2.876E-05	1.791E-05	8.200E-06	2.795E-06
19	2.276E-08	1.357E-07	6.338E-07	2.290E-06	6.323E-06	1.318E-05	2.056E-05	2.386E-05	2.056E-05	1.318E-05	6.323E-06	2.290E-06
20	2.041E-08	1.140E-07	5.004E-07	1.708E-06	4.490E-06	9.018E-06	1.374E-05	1.583E-05	1.374E-05	9.018E-06	4.490E-06	1.708E-06
21	1.570E-08	8.344E-08	3.467E-07	1.138E-06	2.880E-06	5.619E-06	8.409E-06	9.622E-06	8.409E-06	5.619E-06	2.880E-06	1.138E-06
22	1.024E-08	5.237E-08	2.108E-07	6.650E-07	1.635E-06	3.120E-06	4.604E-06	5.243E-06	4.604E-06	3.120E-06	1.635E-06	6.650E-07
23	5.594E-09	2.780E-08	1.088E-07	3.346E-07	8.049E-07	1.511E-05	2.206E-06	2.534E-06	2.206E-06	1.511E-06	8.049E-07	3.346E-07
24	2.530E-09	1.231E-08	4.722E-08	1.425E-07	3.37[illegible]-07	6.255E-07	9.066E-07	1.026E-06	9.066E-07	6.255E-07	3.374E-07	1.425E-07
25	9.375E-10	4.494E-09	1.699E-08	5.058E-08	1.184E-07	2.176E-07	3.137E-07	3.544E-07	3.137E-07	2.176E-07	1.184E-07	5.058E-08
26	2.821E-10	1.338E-09	5.008E-09	1.477E-08	3.430E-08	6.267E-08	8.999E-08	1.015E-07	8.999E-08	6.267E-08	3.430E-08	1.477E-08
27	6.844E-11	3.223E-10	1.198E-09	3.511E-09	8.110E-09	1.475E-08	2.113E-08	2.382E-08	2.113E-08	1.475E-08	8.110E-09	3.511E-09
28	1.325E-11	6.234E-11	2.306E-10	6.732E-10	1.549E-09	2.811E-09	4.019E-09	4.528E-09	4.019E-09	2.811E-09	1.549E-09	6.732E-10
29	2.060E-12	9.628E-12	3.552E-11	1.034E-10	2.375E-10	4.301E-10	6.143E-10	6.919E-10	6.143E-10	4.301E-10	2.375E-10	1.034E-10
30	2.501E-13	1.183E-12	4.357E-12	1.266E-11	2.904E-11	5.254E-11	7.499E-11	8.443E-11	7.499E-11	5.254E-11	2.904E-11	1.266E-11
31	2.455E-14	1.143E-13	4.199E-13	1.232E-12	2.822E-12	5.103E-12	7.281E-12	8.197E-12	7.281E-12	5.103E-12	2.822E-12	1.232E-12
32	0.000E+00	8.855E-15	3.253E-14	9.435E-14	2.160E-13	3.902E-13	5.564E-13	6.263E-13	5.564E-13	3.902E-13	2.160E-13	9.435E-14
33	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.321E-14	2.386E-14	3.403E-14	3.830E-14	3.403E-14	2.386E-14	1.321E-14	0.000E+00
34	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
35	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
36	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
37	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
38	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
39	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
40	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
41	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
42	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
43	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
44	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
45	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
46	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
47	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
48	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
49	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

=> POSITION OF FIRST PUFF AT TIME 960
=> (1.3126525113 , 32.0) DISTANCE: 656.32625566
=> U= 10.938770928 V= 0.0

=> POSITION OF FIRST PUFF AT TIME 1020
=> (1.3126525113 , 32.0) DISTANCE: 656.32625566

1800 SEC. AFTER START OF RELEASE
TOT. 30 PUFFS RELEASED AND 0 HAVE LEFT THE GRID

*** Z-PLAN NO = 1 *** DOSE (GS/M**3) ***

	26	27	28	29	30	31	32	33	34	35	36	37
1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.078E-10	9.040E-07	8.162E-04	8.081E-03	8.162E-04	9.040E-07	1.078E-10	0.000E+00
2	0.000E+00	0.000E+00	0.000E+00	2.664E-11	3.831E-08	6.052E-05	3.541E-02	3.426E-01	3.541E-02	6.052E-05	3.831E-08	2.664E-11
3	0.000E+00	0.000E+00	6.083E-12	2.981E-09	1.664E-06	6.539E-04	4.850E-02	2.743E-01	4.850E-02	6.539E-04	1.664E-06	2.981E-09
4	0.000E+00	1.369E-12	3.464E-10	9.065E-08	2.061E-05	2.302E-03	6.920E-02	2.386E-01	6.920E-02	2.302E-03	2.061E-05	9.065E-08
5	1.506E-13	5.285E-11	7.812E-09	1.096E-06	1.086E-04	5.158E-03	6.814E-02	1.693E-01	6.814E-02	5.158E-03	1.086E-04	1.096E-06
6	9.642E-12	9.335E-10	8.741E-08	6.796E-06	3.427E-04	8.066E-03	6.442E-02	1.336E-01	6.442E-02	8.066E-03	3.427E-04	6.796E-06
7	1.421E-10	9.504E-09	5.720E-07	2.642E-05	7.601E-04	1.079E-02	5.960E-02	1.076E-01	5.960E-02	1.079E-02	7.601E-04	2.642E-05
8	1.314E-09	6.229E-08	2.496E-06	7.348E-05	1.346E-03	1.278E-02	5.340E-02	8.725E-02	5.340E-02	1.278E-02	1.346E-03	7.348E-05
9	8.406E-09	2.878E-07	8.003E-06	1.605E-04	2.027E-03	1.408E-02	4.766E-02	7.228E-02	4.766E-02	1.408E-02	2.027E-03	1.605E-04
10	3.971E-08	1.008E-06	2.029E-05	2.932E-04	2.732E-03	1.477E-02	4.234E-02	6.057E-02	4.234E-02	1.477E-02	2.732E-03	2.932E-04
11	1.464E-07	2.829E-06	4.289E-05	4.690E-04	3.394E-03	1.496E-02	3.758E-02	5.134E-02	3.758E-02	1.496E-02	3.394E-03	4.690E-04
12	4.400E-07	6.656E-06	7.870E-05	6.781E-04	3.971E-03	1.481E-02	3.339E-02	4.396E-02	3.339E-02	1.481E-02	3.971E-03	6.781E-04
13	1.118E-06	1.358E-05	1.292E-04	9.069E-04	4.441E-03	1.441E-02	2.972E-02	3.795E-02	2.972E-02	1.441E-02	4.441E-03	9.069E-04
14	2.474E-06	2.469E-05	1.939E-04	1.141E-03	4.800E-03	1.365E-02	2.652E-02	3.301E-02	2.652E-02	1.365E-02	4.800E-03	1.141E-03
15	4.874E-06	4.083E-05	2.710E-04	1.368E-03	5.050E-03	1.319E-02	2.372E-02	2.890E-02	2.372E-02	1.319E-02	5.050E-03	1.368E-03
16	8.716E-06	6.243E-05	3.572E-04	1.577E-03	5.201E-03	1.247E-02	2.126E-02	2.544E-02	2.126E-02	1.247E-02	5.201E-03	1.577E-03
17	1.437E-05	8.942E-05	4.496E-04	1.761E-03	5.266E-03	1.172E-02	1.909E-02	2.249E-02	1.909E-02	1.172E-02	5.266E-03	1.761E-03
18	2.205E-05	1.212E-04	5.411E-04	1.915E-03	5.258E-03	1.098E-02	1.718E-02	1.996E-02	1.718E-02	1.098E-02	5.258E-03	1.915E-03
19	3.202E-05	1.569E-04	6.309E-04	2.038E-03	5.187E-03	1.024E-02	1.547E-02	1.777E-02	1.547E-02	1.024E-02	5.187E-03	2.038E-03
20	4.405E-05	1.951E-04	7.146E-04	2.128E-03	5.066E-03	9.514E-03	1.394E-02	1.585E-02	1.394E-02	9.514E-03	5.066E-03	2.128E-03
21	5.808E-05	2.343E-04	7.895E-04	2.186E-03	4.905E-03	8.814E-03	1.257E-02	1.416E-02	1.257E-02	8.814E-03	4.905E-03	2.186E-03
22	7.360E-05	2.731E-04	8.534E-04	2.214E-03	4.711E-03	8.141E-03	1.134E-02	1.267E-02	1.134E-02	8.141E-03	4.711E-03	2.214E-03
23	9.013E-05	3.100E-04	9.049E-04	2.214E-03	4.492E-03	7.495E-03	1.022E-02	1.133E-02	1.022E-02	7.495E-03	4.492E-03	2.214E-03
24	1.070E-04	3.437E-04	9.430E-04	2.188E-03	4.254E-03	6.879E-03	9.199E-03	1.014E-02	9.199E-03	6.879E-03	4.254E-03	2.188E-03
25	1.237E-04	3.729E-04	9.675E-04	2.140E-03	4.003E-03	6.292E-03	8.270E-03	9.062E-03	8.270E-03	6.292E-03	4.003E-03	2.140E-03
26	1.394E-04	3.968E-04	9.782E-04	2.072E-03	3.742E-03	5.734E-03	7.419E-03	8.087E-03	7.419E-03	5.734E-03	3.742E-03	2.072E-03
27	1.535E-04	4.146E-04	9.756E-04	1.996E-03	3.476E-03	5.203E-03	6.639E-03	7.202E-03	6.639E-03	5.203E-03	3.476E-03	1.986E-03
28	1.654E-04	4.258E-04	9.603E-04	1.886E-03	3.206E-03	4.700E-03	5.920E-03	6.395E-03	5.920E-03	4.700E-03	3.206E-03	1.886E-03
29	1.746E-04	4.301E-04	9.331E-04	1.773E-03	2.937E-03	4.223E-03	5.257E-03	5.657E-03	5.257E-03	4.223E-03	2.937E-03	1.773E-03
30	1.806E-04	4.273E-04	8.94[illegible]04	1.650E-03	2.668E-03	3.771E-03	4.645E-03	4.980E-03	4.645E-03	3.771E-03	2.668E-03	1.650E-03
31	1.831E-04	4.175E-04	8.465E-04	1.519E-03	2.403E-03	3.343E-03	4.078E-03	4.358E-03	4.078E-03	3.343E-03	2.403E-03	1.519E-03
32	1.818E-04	4.010E-04	7.893E-04	1.382E-03	2.143E-03	2.938E-03	3.553E-03	3.786E-03	3.553E-03	2.938E-03	2.143E-03	1.382E-03
33	1.767E-04	3.781E-04	7.245E-04	1.240E-03	1.888E-03	2.555E-03	3.065E-03	3.258E-03	3.065E-03	2.555E-03	1.888E-03	1.240E-03
34	1.675E-04	3.493E-04	6.533E-04	1.095E-03	1.641E-03	2.195E-03	2.614E-03	2.771E-03	2.614E-03	2.195E-03	1.641E-03	1.095E-03
35	1.555E-04	3.156E-04	5.775E-04	9.504E-04	1.404E-03	1.857E-03	2.197E-03	2.324E-03	2.197E-03	1.857E-03	1.404E-03	9.504E-04
36	1.400E-04	2.780E-04	4.989E-04	8.077E-04	1.177E-03	1.542E-03	1.815E-03	1.916E-03	1.815E-03	1.542E-03	1.177E-03	8.077E-04
37	1.223E-04	2.380E-04	4.199E-04	6.698E-04	9.650E-04	1.254E-03	1.467E-03	1.547E-03	1.467E-03	1.254E-03	9.650E-04	6.698E-04
38	1.032E-04	1.974E-04	3.429E-04	5.400E-04	7.699E-04	9.928E-04	1.157E-03	1.217E-03	1.157E-03	9.928E-04	7.699E-04	5.400E-04
39	8.375E-05	1.579E-04	2.706E-04	4.214E-04	5.954E-04	7.628E-04	8.852E-04	9.303E-04	8.852E-04	7.628E-04	5.954E-04	4.214E-04
40	6.524E-05	1.213E-04	2.055E-04	3.169E-04	4.444E-04	5.660E-04	6.546E-04	6.871E-04	6.546E-04	5.660E-04	4.444E-04	3.169E-04
41	4.852E-05	8.920E-05	1.495E-04	2.288E-04	3.186E-04	4.038E-04	4.656E-04	4.882E-04	4.656E-04	4.038E-04	3.186E-04	2.288E-04
42	3.433E-05	6.251E-05	1.039E-04	1.578E-04	2.184E-04	2.757E-04	3.171E-04	3.322E-04	3.171E-04	2.757E-04	2.184E-04	1.578E-04
43	2.304E-05	4.159E-05	6.856E-05	1.036E-04	1.427E-04	1.794E-04	2.059E-04	2.155E-04	2.059E-04	1.794E-04	1.427E-04	1.036E-04
44	1.461E-05	2.619E-05	4.296E-05	6.445E-05	8.841E-05	1.108E-04	1.269E-04	1.328E-04	1.269E-04	1.108E-04	8.841E-05	6.445E-05
45	8.730E-06	1.555E-05	2.537E-05	3.790E-05	5.180E-05	6.477E-05	7.406E-05	7.745E-05	7.406E-05	6.477E-05	5.180E-05	3.790E-05
46	4.902E-06	8.687E-06	1.411E-05	2.099E-05	2.860E-05	3.568E-05	4.075E-05	4.259E-05	4.075E-05	3.568E-05	2.860E-05	2.099E-05
47	2.580E-06	4.553E-06	7.365E-06	1.092E-05	1.484E-05	1.848E-05	2.108E-05	2.203E-05	2.108E-05	1.848E-05	1.484E-05	1.092E-05
48	1.271E-06	2.233E-06	3.600E-06	5.324E-06	7.220E-06	8.975E-06	1.023E-05	1.068E-05	1.023E-05	8.975E-06	7.220E-06	5.324E-06
49	5.840E-07	1.023E-06	1.645E-06	2.427E-06	3.264E-06	4.077E-06	4.642E-06	4.848E-06	4.642E-06	4.077E-06	3.284E-06	2.427E-06

***	26	27	28	29	30	31	32	33	34	35	36	37
	DEPOSITION =	***	DOSE (GS/M**2)	*******	********	********	********	********	********	********	********	********
1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.787E-13	9.040E-09	8.162E-06	8.081E-05	8.162E-06	9.040E-09	9.787E-13	0.000E+00
2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.830E-10	6.052E-07	3.541E-04	3.426E-03	3.541E-04	6.052E-07	3.830E-10	0.000E+00
3	0.000E+00	0.000E+00	0.000E+00	2.978E-11	1.664E-08	6.539E-06	4.850E-04	2.743E-03	4.850E-04	6.539E-06	1.664E-08	2.978E-11
4	0.000E+00	0.000E+00	3.285E-12	9.065E-10	2.061E-07	2.302E-05	6.920E-04	2.386E-03	6.920E-04	2.302E-05	2.061E-07	9.065E-10
5	0.000E+00	2.249E-13	7.788E-11	1.096E-08	1.086E-06	5.158E-05	6.814E-04	1.593E-03	6.814E-04	5.158E-05	1.086E-06	1.096E-08
6	0.000E+00	9.254E-12	8.740E-10	6.796E-08	3.427E-06	8.066E-05	6.442E-04	1.336E-03	6.442E-04	8.066E-05	3.427E-06	6.796E-08
7	1.190E-12	9.498E-11	5.720E-09	2.642E-07	7.601E-06	1.079E-04	5.960E-04	1.076E-03	5.960E-04	1.079E-04	7.601E-06	2.642E-07
8	1.303E-11	6.229E-10	2.496E-08	7.348E-07	1.346E-05	1.278E-04	5.340E-04	8.725E-04	5.340E-04	1.278E-04	1.346E-05	7.348E-07
9	8.395E-11	2.878E-09	8.003E-08	1.605E-06	2.027E-05	1.408E-04	4.766E-04	7.228E-04	4.766E-04	1.408E-04	2.027E-05	1.605E-06
10	3.971E-10	1.008E-08	2.029E-07	2.932E-06	2.732E-05	1.477E-04	4.234E-04	6.057E-04	4.234E-04	1.477E-04	2.732E-05	2.932E-06
11	1.464E-09	2.829E-08	4.297E-07	4.690E-06	3.394E-05	1.496E-04	3.758E-04	5.134E-04	3.758E-04	1.496E-04	3.394E-05	4.690E-06
12	4.400E-09	6.656E-08	7.870E-07	6.781E-06	3.971E-05	1.481E-04	3.339E-04	4.396E-04	3.339E-04	1.481E-04	3.971E-05	6.781E-06
13	1.118E-08	1.358E-07	1.292E-06	9.069E-06	4.441E-05	1.441E-04	2.972E-04	3.795E-04	2.972E-04	1.441E-04	4.441E-05	9.069E-06
14	2.474E-08	2.469E-07	1.939E-06	1.141E-05	4.800E-05	1.385E-04	2.652E-04	3.301E-04	2.652E-04	1.385E-04	4.800E-05	1.141E-05
15	4.874E-08	4.083E-07	2.710E-06	1.368E-05	5.050E-05	1.319E-04	2.372E-04	2.890E-04	2.372E-04	1.319E-04	5.050E-05	1.368E-05
16	8.716E-08	6.243E-07	3.572E-06	1.577E-05	5.201E-05	1.247E-04	2.126E-04	2.544E-04	2.126E-04	1.247E-04	5.201E-05	1.577E-05
17	1.437E-07	8.942E-07	4.436E-06	1.751E-05	5.266E-05	1.172E-04	1.909E-04	2.249E-04	1.909E-04	1.172E-04	5.266E-05	1.751E-05
18	2.205E-07	1.212E-06	5.411E-06	1.915E-05	5.258E-05	1.098E-04	1.718E-04	1.996E-04	1.718E-04	1.098E-04	5.258E-05	1.915E-05
19	3.202E-07	1.569E-06	6.309E-06	2.038E-05	5.187E-05	1.024E-04	1.547E-04	1.777E-04	1.547E-04	1.024E-04	5.187E-05	2.038E-05
20	4.409E-07	1.951E-06	7.146E-06	2.128E-05	5.066E-05	9.514E-05	1.394E-04	1.585E-04	1.394E-04	9.514E-05	5.066E-05	2.128E-05
21	5.808E-07	2.343E-06	7.895E-06	2.186E-05	4.905E-05	8.814E-05	1.257E-04	1.416E-04	1.257E-04	8.814E-05	4.905E-05	2.186E-05
22	7.360E-07	2.731E-06	8.534E-06	2.214E-05	4.711E-05	8.141E-05	1.134E-04	1.267E-04	1.134E-04	8.141E-05	4.711E-05	2.214E-05
23	9.013E-07	3.100E-06	9.049E-06	2.214E-05	4.492E-05	7.495E-05	1.022E-04	1.133E-04	1.022E-04	7.495E-05	4.492E-05	2.214E-05
24	1.070E-06	3.437E-06	9.430E-06	2.188E-05	4.254E-05	6.879E-05	9.199E-05	1.014E-04	9.199E-05	6.879E-05	4.254E-05	2.188E-05
25	1.237E-06	3.729E-06	9.675E-06	2.140E-05	4.003E-05	6.292E-05	8.270E-05	9.062E-05	8.270E-05	6.292E-05	4.003E-05	2.140E-05
26	1.394E-06	3.968E-06	9.732E-06	2.072E-05	3.742E-05	5.734E-05	7.419E-05	8.087E-05	7.419E-05	5.734E-05	3.742E-05	2.072E-05
27	1.535E-06	4.146E-06	9.756E-06	1.986E-05	3.476E-05	5.203E-05	6.639E-05	7.232E-05	6.639E-05	5.203E-05	3.476E-05	1.986E-05
28	1.654E-06	4.258E-06	9.603E-06	1.886E-05	3.206E-05	4.700E-05	5.920E-05	6.395E-05	5.920E-05	4.700E-05	3.206E-05	1.886E-05
29	1.746E-06	4.301E-06	9.331E-06	1.773E-05	2.937E-05	4.223E-05	5.257E-05	5.657E-05	5.257E-05	4.223E-05	2.937E-05	1.773E-05
30	1.806E-06	4.273E-06	8.948E-06	1.650E-05	2.668E-05	3.771E-05	4.645E-05	4.980E-05	4.645E-05	3.771E-05	2.668E-05	1.650E-05
31	1.831E-06	4.175E-06	8.465E-06	1.519E-05	2.403E-05	3.343E-05	4.078E-05	4.358E-05	4.078E-05	3.343E-05	2.403E-05	1.519E-05
32	1.818E-06	4.010E-06	7.893E-06	1.382E-05	2.143E-05	2.938E-05	3.553E-05	3.786E-05	3.553E-05	2.938E-05	2.143E-05	1.382E-05
33	1.767E-06	3.781E-06	7.245E-06	1.240E-05	1.888E-05	2.555E-05	3.065E-05	3.258E-05	3.065E-05	2.555E-05	1.888E-05	1.240E-05
34	1.679E-06	3.493E-06	6.533E-06	1.095E-05	1.641E-05	2.195E-05	2.614E-05	2.771E-05	2.614E-05	2.195E-05	1.641E-05	1.095E-05
35	1.555E-06	3.156E-06	5.775E-06	9.504E-06	1.404E-05	1.857E-05	2.197E-05	2.324E-05	2.197E-05	1.857E-05	1.404E-05	9.504E-06
36	1.400E-06	2.780E-06	4.989E-06	8.077E-06	1.177E-05	1.542E-05	1.815E-05	1.916E-05	1.815E-05	1.542E-05	1.177E-05	8.077E-06
37	1.223E-06	2.380E-06	4.199E-06	6.698E-06	9.650E-06	1.254E-05	1.467E-05	1.547E-05	1.467E-05	1.254E-05	9.650E-06	6.698E-06
38	1.032E-06	1.974E-06	3.429E-06	5.400E-06	7.699E-06	9.928E-06	1.157E-05	1.217E-05	1.157E-05	9.928E-06	7.699E-06	5.400E-06
39	8.379E-07	1.579E-06	2.706E-06	4.214E-06	5.954E-06	7.628E-06	8.852E-06	9.303E-06	8.852E-06	7.628E-06	5.954E-06	4.214E-06
40	6.524E-07	1.213E-06	2.055E-06	3.169E-06	4.444E-06	5.660E-06	6.546E-06	6.871E-06	6.546E-06	5.660E-06	4.444E-06	3.169E-06
41	4.852E-07	8.920E-07	1.496E-06	2.288E-06	3.186E-06	4.038E-06	4.656E-06	4.882E-06	4.656E-06	4.038E-06	3.186E-06	2.288E-06
42	3.433E-07	6.251E-07	1.039E-06	1.578E-06	2.184E-06	2.757E-06	3.171E-06	3.322E-06	3.171E-06	2.757E-06	2.184E-06	1.578E-06
43	2.304E-07	4.159E-07	6.866E-07	1.036E-06	1.427E-06	1.794E-06	2.059E-06	2.155E-06	2.059E-06	1.794E-06	1.427E-06	1.036E-06
44	1.461E-07	2.619E-07	4.296E-07	6.445E-07	8.841E-07	1.108E-06	1.269E-06	1.328E-06	1.269E-06	1.108E-06	8.841E-07	6.445E-07
45	8.730E-08	1.555E-07	2.537E-07	3.790E-07	5.180E-07	6.477E-07	7.406E-07	7.745E-07	7.406E-07	6.477E-07	5.180E-07	3.790E-07
46	4.902E-08	8.687E-08	1.411E-07	2.099E-07	2.860E-07	3.568E-07	4.075E-07	4.259E-07	4.075E-07	3.568E-07	2.860E-07	2.099E-07
47	2.580E-08	4.553E-08	7.365E-08	1.092E-07	1.484E-07	1.848E-07	2.108E-07	2.203E-07	2.108E-07	1.848E-07	1.484E-07	1.092E-07
48	1.271E-08	2.233E-08	3.600E-08	5.324E-08	7.220E-08	8.975E-08	1.023E-07	1.068E-07	1.023E-07	8.975E-08	7.220E-08	5.324E-08
49	5.840E-09	1.023E-08	1.645E-08	2.427E-08	3.284E-08	4.077E-08	4.642E-08	4.848E-08	4.642E-08	4.077E-08	3.284E-08	2.427E-08

TIMESTEP NO = 2

```
TIMESTEP NO = 6

OBSERVATION TIME:  14:3

STATION DIRECTION VELOCITY    STABILITY    RAIN
           (DEG.)   (M/S)     (-Y) (-Z)   (MM/H)
KFK         270.     5.0        D    D     0.00

STATION    U      V       RAIN
         (M/S)  (M/S)    (MM/H)
==========================
KFK       5.0    0.0      0.00
* TIMESTEP NO. 6 : ZM = 570.0 => ZMG = 19
```

9900 SEC. AFTER START OF RELEASE
TOT. 60 PUFFS RELEASED AND 60 HAVE LEFT THE GRID

*** Z-PLAN NO = 1 *** DOSE (GS/M**3)

	26	27	28	29	30	31	32	33	34	35	36	37
1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.241E-10	1.813E-06	1.633E-03	1.616E-02	1.633E-03	1.813E-06	2.241E-10	0.000E+00
2	0.000E+00	0.000E+00	0.000E+00	5.776E-11	8.013E-08	1.229E-04	7.093E-02	6.857E-01	7.093E-02	1.229E-04	8.013E-08	5.776E-11
3	0.000E+00	0.000E+00	1.380E-11	6.531E-09	3.535E-06	1.360E-03	9.947E-02	5.579E-01	9.947E-02	1.360E-03	3.535E-06	6.531E-09
4	0.000E+00	3.266E-12	7.967E-10	2.017E-07	4.468E-05	4.892E-03	1.450E-01	4.981E-01	1.450E-01	4.892E-03	4.468E-05	2.017E-07
5	3.766E-13	1.279E-10	1.826E-08	2.486E-06	2.406E-04	1.123E-02	1.470E-01	3.639E-01	1.470E-01	1.123E-02	2.406E-04	2.486E-06
6	2.462E-11	2.297E-09	2.082E-07	1.576E-05	7.779E-04	1.803E-02	1.426E-01	2.948E-01	1.426E-01	1.803E-02	7.779E-04	1.576E-05
7	3.692E-10	2.384E-08	1.393E-06	6.275E-05	1.770E-03	2.477E-02	1.357E-01	2.444E-01	1.357E-01	2.477E-02	1.770E-03	6.275E-05
8	3.484E-09	1.598E-07	6.223E-06	1.790E-04	3.220E-03	3.020E-02	1.252E-01	2.040E-01	1.252E-01	3.020E-02	3.220E-03	1.790E-04
9	2.275E-08	7.562E-07	2.048E-05	4.019E-04	4.992E-03	3.425E-02	1.151E-01	1.742E-01	1.151E-01	3.425E-02	4.992E-03	4.019E-04
10	1.104E-07	2.718E-06	5.338E-05	7.559E-04	6.931E-03	3.704E-02	1.055E-01	1.506E-01	1.055E-01	3.704E-02	6.931E-03	7.559E-04
11	4.180E-07	7.851E-06	1.162E-04	1.246E-03	8.882E-03	3.874E-02	9.666E-02	1.318E-01	9.666E-02	3.874E-02	8.882E-03	1.246E-03
12	1.294E-06	1.904E-05	2.199E-04	1.860E-03	1.073E-02	3.962E-02	8.878E-02	1.156E-01	8.878E-02	3.962E-02	1.073E-02	1.860E-03
13	3.391E-06	4.011E-05	3.729E-04	2.571E-03	1.242E-02	3.989E-02	8.179E-02	1.042E-01	8.179E-02	3.989E-02	1.242E-02	2.571E-03
14	7.750E-06	7.539E-05	5.794E-04	3.349E-03	1.390E-02	3.971E-02	7.562E-02	9.395E-02	7.562E-02	3.971E-02	1.390E-02	3.349E-03
15	1.581E-05	1.291E-04	8.391E-04	4.163E-03	1.517E-02	3.923E-02	7.017E-02	8.534E-02	7.017E-02	3.923E-02	1.517E-02	4.163E-03
16	2.932E-05	2.049E-04	1.148E-03	4.984E-03	1.623E-02	3.854E-02	6.535E-02	7.805E-02	6.535E-02	3.854E-02	1.623E-02	4.984E-03
17	5.023E-05	3.051E-04	1.499E-03	5.789E-03	1.709E-02	3.771E-02	6.108E-02	7.182E-02	6.108E-02	3.771E-02	1.709E-02	5.789E-03
18	8.045E-05	4.309E-04	1.884E-03	6.562E-03	1.779E-02	3.680E-02	5.727E-02	6.644E-02	5.727E-02	3.680E-02	1.779E-02	6.562E-03
19	1.217E-04	5.821E-04	2.294E-03	7.290E-03	1.832E-02	3.584E-02	5.387E-02	6.176E-02	5.387E-02	3.584E-02	1.832E-02	7.290E-03
20	1.753E-04	7.572E-04	2.719E-03	7.964E-03	1.872E-02	3.485E-02	5.081E-02	5.765E-02	5.081E-02	3.485E-02	1.872E-02	7.964E-03
21	2.423E-04	9.539E-04	3.150E-03	8.579E-03	1.901E-02	3.386E-02	4.804E-02	5.402E-02	4.804E-02	3.386E-02	1.901E-02	8.579E-03
22	3.225E-04	1.169E-03	3.579E-03	9.134E-03	1.919E-02	3.287E-02	4.553E-02	5.078E-02	4.553E-02	3.287E-02	1.919E-02	9.134E-03
23	4.171E-04	1.400E-03	4.001E-03	9.627E-03	1.929E-02	3.189E-02	4.324E-02	4.788E-02	4.324E-02	3.189E-02	1.929E-02	9.627E-03
24	5.243E-04	1.641E-03	4.410E-03	1.006E-02	1.931E-02	3.094E-02	4.114E-02	4.526E-02	4.114E-02	3.094E-02	1.931E-02	1.006E-02
25	6.436E-04	1.891E-03	4.801E-03	1.044E-02	1.927E-02	3.000E-02	3.922E-02	4.289E-02	3.922E-02	3.000E-02	1.927E-02	1.044E-02
26	7.737E-04	2.145E-03	5.172E-03	1.076E-02	1.918E-02	2.910E-02	3.744E-02	4.073E-02	3.744E-02	2.910E-02	1.918E-02	1.076E-02
27	9.132E-04	2.400E-03	5.520E-03	1.103E-02	1.904E-02	2.822E-02	3.579E-02	3.875E-02	3.579E-02	2.822E-02	1.904E-02	1.103E-02
28	1.060E-03	2.653E-03	5.843E-03	1.126E-02	1.887E-02	2.737E-02	3.426E-02	3.694E-02	3.426E-02	2.737E-02	1.887E-02	1.126E-02
29	1.214E-03	2.902E-03	6.142E-03	1.144E-02	1.866E-02	2.655E-02	3.284E-02	3.526E-02	3.284E-02	2.655E-02	1.866E-02	1.144E-02
30	1.371E-03	3.144E-03	6.414E-03	1.158E-02	1.843E-02	2.576E-02	3.151E-02	3.371E-02	3.151E-02	2.576E-02	1.843E-02	1.158E-02
31	1.532E-03	3.379E-03	6.662E-03	1.169E-02	1.818E-02	2.499E-02	3.027E-02	3.228E-02	3.027E-02	2.499E-02	1.818E-02	1.169E-02
32	1.694E-03	3.603E-03	6.885E-03	1.177E-02	1.792E-02	2.425E-02	2.911E-02	3.094E-02	2.911E-02	2.425E-02	1.792E-02	1.177E-02
33	1.856E-03	3.817E-03	7.084E-03	1.181E-02	1.764E-02	2.354E-02	2.802E-02	2.969E-02	2.802E-02	2.354E-02	1.764E-02	1.181E-02
34	2.017E-03	4.020E-03	7.260E-03	1.183E-02	1.736E-02	2.286E-02	2.699E-02	2.853E-02	2.699E-02	2.286E-02	1.736E-02	1.183E-02
35	2.175E-03	4.211E-03	7.414E-03	1.183E-02	1.706E-02	2.220E-02	2.602E-02	2.744E-02	2.602E-02	2.220E-02	1.706E-02	1.183E-02
36	2.330E-03	4.390E-03	7.547E-03	1.181E-02	1.677E-02	2.157E-02	2.511E-02	2.641E-02	2.511E-02	2.157E-02	1.677E-02	1.181E-02
37	2.480E-03	4.556E-03	7.661E-03	1.177E-02	1.647E-02	2.096E-02	2.424E-02	2.545E-02	2.424E-02	2.096E-02	1.647E-02	1.177E-02
38	2.626E-03	4.709E-03	7.757E-03	1.171E-02	1.616E-02	2.038E-02	2.342E-02	2.454E-02	2.342E-02	2.038E-02	1.616E-02	1.171E-02
39	2.766E-03	4.850E-03	7.836E-03	1.164E-02	1.586E-02	1.981E-02	2.265E-02	2.368E-02	2.265E-02	1.981E-02	1.586E-02	1.164E-02
40	2.901E-03	4.980E-03	7.899E-03	1.156E-02	1.556E-02	1.927E-02	2.191E-02	2.287E-02	2.191E-02	1.927E-02	1.556E-02	1.156E-02
41	3.025E-03	5.097E-03	7.947E-03	1.146E-02	1.526E-02	1.874E-02	2.121E-02	2.211E-02	2.121E-02	1.874E-02	1.526E-02	1.146E-02
42	3.150E-03	5.203E-03	7.982E-03	1.136E-02	1.497E-02	1.824E-02	2.055E-02	2.138E-02	2.055E-02	1.824E-02	1.497E-02	1.136E-02
43	3.265E-03	5.297E-03	8.005E-03	1.125E-02	1.467E-02	1.775E-02	1.991E-02	2.069E-02	1.991E-02	1.775E-02	1.467E-02	1.125E-02
44	3.373E-03	5.382E-03	8.016E-03	1.113E-02	1.438E-02	1.728E-02	1.931E-02	2.003E-02	1.931E-02	1.728E-02	1.438E-02	1.113E-02
45	3.473E-03	5.456E-03	8.016E-03	1.100E-02	1.409E-02	1.683E-02	1.873E-02	1.941E-02	1.873E-02	1.683E-02	1.409E-02	1.100E-02
46	3.567E-03	5.520E-03	8.007E-03	1.087E-02	1.381E-02	1.639E-02	1.818E-02	1.881E-02	1.818E-02	1.639E-02	1.381E-02	1.087E-02
47	3.655E-03	5.575E-03	7.989E-03	1.074E-02	1.353E-02	1.597E-02	1.765E-02	1.824E-02	1.765E-02	1.597E-02	1.353E-02	1.074E-02
48	3.735E-03	5.621E-03	7.962E-03	1.060E-02	1.326E-02	1.557E-02	1.714E-02	1.770E-02	1.714E-02	1.557E-02	1.326E-02	1.060E-02
49	3.805E-03	5.660E-03	7.929E-03	1.046E-02	1.299E-02	1.517E-02	1.666E-02	1.718E-02	1.666E-02	1.517E-02	1.299E-02	1.046E-02

*** DEPOSITION : *** DOSE (GS/M**2) ***

	26	27	28	29	30	31	32	33	34	35	36	37
1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.039E-12	1.813E-08	1.633E-05	1.616E-04	1.633E-05	1.813E-08	2.038E-12	0.000E+00
2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.013E-10	1.229E-06	7.093E-04	6.857E-03	7.093E-04	1.229E-06	8.013E-10	0.000E+00
3	0.000E+00	0.000E+00	0.000E+00	6.524E-11	3.535E-08	1.360E-05	9.947E-04	5.579E-03	9.947E-04	1.360E-05	3.535E-08	6.524E-11
4	0.000E+00	0.000E+00	7.536E-12	2.017E-09	4.468E-07	4.892E-05	1.450E-03	4.981E-03	1.450E-03	4.892E-05	4.468E-07	2.017E-09
5	0.000E+00	5.397E-13	1.820E-10	2.486E-08	2.406E-06	1.123E-04	1.470E-03	3.639E-03	1.470E-03	1.123E-04	2.406E-06	2.486E-08
6	0.000E+00	2.275E-11	2.032E-09	1.576E-07	7.779E-06	1.803E-04	1.426E-03	2.948E-03	1.426E-03	1.803E-04	7.779E-06	1.576E-07
7	3.084E-12	2.383E-10	1.393E-08	6.275E-07	1.770E-05	2.477E-04	1.357E-03	2.444E-03	1.357E-03	2.477E-04	1.770E-05	6.275E-07
8	3.448E-11	1.597E-09	6.223E-08	1.790E-06	3.220E-05	3.020E-04	1.252E-03	2.040E-03	1.252E-03	3.020E-04	3.220E-05	1.790E-06
9	2.277E-10	7.562E-09	2.048E-07	4.019E-06	4.992E-05	3.425E-04	1.151E-03	1.742E-03	1.151E-03	3.425E-04	4.992E-05	4.019E-06
10	1.104E-09	2.718E-08	5.338E-07	7.559E-06	6.931E-05	3.704E-04	1.055E-03	1.506E-03	1.055E-03	3.704E-04	6.931E-05	7.559E-06
11	4.175E-09	7.851E-08	1.162E-06	1.246E-05	8.882E-05	3.874E-04	9.666E-04	1.318E-03	9.666E-04	3.874E-04	8.882E-05	1.245E-05
12	1.293E-08	1.904E-07	2.199E-06	1.860E-05	1.073E-04	3.962E-04	8.878E-04	1.166E-03	8.878E-04	3.962E-04	1.073E-04	1.860E-05
13	3.391E-08	4.011E-07	3.729E-06	2.571E-05	1.242E-04	3.989E-04	8.179E-04	1.042E-03	8.179E-04	3.989E-04	1.242E-04	2.571E-05
14	7.750E-08	7.539E-07	5.794E-06	3.349E-05	1.390E-04	3.971E-04	7.562E-04	9.395E-04	7.562E-04	3.971E-04	1.390E-04	3.349E-05
15	1.581E-07	1.291E-06	8.391E-06	4.153E-05	1.517E-04	3.923E-04	7.017E-04	8.534E-04	7.017E-04	3.923E-04	1.517E-04	4.163E-05
16	2.932E-07	2.049E-06	1.148E-05	4.984E-05	1.623E-04	3.854E-04	6.535E-04	7.835E-04	6.535E-04	3.854E-04	1.623E-04	4.984E-05
17	5.023E-07	3.051E-06	1.499E-05	5.789E-05	1.709E-04	3.771E-04	6.108E-04	7.182E-04	6.108E-04	3.771E-04	1.709E-04	5.789E-05
18	8.045E-07	4.309E-06	1.884E-05	6.562E-05	1.779E-04	3.680E-04	5.727E-04	6.644E-04	5.727E-04	3.680E-04	1.779E-04	6.562E-05
19	1.217E-06	5.821E-06	2.294E-05	7.290E-05	1.832E-04	3.584E-04	5.387E-04	6.176E-04	5.387E-04	3.584E-04	1.832E-04	7.290E-05
20	1.753E-06	7.572E-06	2.719E-05	7.964E-05	1.872E-04	3.485E-04	5.081E-04	5.765E-04	5.081E-04	3.485E-04	1.872E-04	7.964E-05
21	2.423E-06	9.539E-06	3.150E-05	8.579E-05	1.901E-04	3.386E-04	4.804E-04	5.402E-04	4.804E-04	3.386E-04	1.901E-04	8.579E-05
22	3.229E-06	1.169E-05	3.579E-05	9.134E-05	1.919E-04	3.287E-04	4.553E-04	5.078E-04	4.553E-04	3.287E-04	1.919E-04	9.134E-05
23	4.171E-06	1.400E-05	4.001E-05	9.627E-05	1.929E-04	3.189E-04	4.324E-04	4.788E-04	4.324E-04	3.189E-04	1.929E-04	9.627E-05
24	5.243E-06	1.641E-05	4.410E-05	1.006E-04	1.931E-04	3.094E-04	4.114E-04	4.526E-04	4.114E-04	3.094E-04	1.931E-04	1.006E-04
25	6.436E-06	1.891E-05	4.801E-05	1.044E-04	1.927E-04	3.000E-04	3.922E-04	4.289E-04	3.922E-04	3.000E-04	1.927E-04	1.044E-04
26	7.737E-06	2.145E-05	5.172E-05	1.076E-04	1.918E-04	2.910E-04	3.744E-04	4.073E-04	3.744E-04	2.910E-04	1.918E-04	1.076E-04
27	9.132E-06	2.409E-05	5.520E-05	1.103E-04	1.904E-04	2.822E-04	3.579E-04	3.975E-04	3.579E-04	2.822E-04	1.904E-04	1.103E-04
28	1.060E-05	2.653E-05	5.843E-05	1.126E-04	1.887E-04	2.737E-04	3.426E-04	3.694E-04	3.426E-04	2.737E-04	1.887E-04	1.126E-04
29	1.214E-05	2.902E-05	6.142E-05	1.144E-04	1.866E-04	2.655E-04	3.284E-04	3.526E-04	3.284E-04	2.655E-04	1.866E-04	1.144E-04
30	1.372E-05	3.145E-05	6.416E-05	1.159E-04	1.844E-04	2.576E-04	3.152E-04	3.372E-04	3.152E-04	2.576E-04	1.844E-04	1.159E-04
31	1.534E-05	3.381E-05	6.666E-05	1.170E-04	1.819E-04	2.500E-04	3.028E-04	3.229E-04	3.028E-04	2.500E-04	1.819E-04	1.170E-04
32	1.698E-05	3.610E-05	6.894E-05	1.178E-04	1.794E-04	2.427E-04	2.913E-04	3.096E-04	2.913E-04	2.427E-04	1.794E-04	1.178E-04
33	1.866E-05	3.833E-05	7.106E-05	1.184E-04	1.768E-04	2.359E-04	2.807E-04	2.975E-04	2.807E-04	2.359E-04	1.768E-04	1.184E-04
34	2.038E-05	4.054E-05	7.309E-05	1.190E-04	1.745E-04	2.297E-04	2.711E-04	2.865E-04	2.711E-04	2.297E-04	1.745E-04	1.190E-04
35	2.220E-05	4.281E-05	7.517E-05	1.197E-04	1.725E-04	2.242E-04	2.626E-04	2.759E-04	2.626E-04	2.242E-04	1.725E-04	1.197E-04
36	2.417E-05	4.527E-05	7.750E-05	1.208E-04	1.712E-04	2.199E-04	2.558E-04	2.690E-04	2.558E-04	2.199E-04	1.712E-04	1.208E-04
37	2.643E-05	4.810E-05	8.034E-05	1.228E-04	1.712E-04	2.174E-04	2.510E-04	2.634E-04	2.510E-04	2.174E-04	1.712E-04	1.228E-04
38	2.905E-05	5.152E-05	8.403E-05	1.259E-04	1.729E-04	2.171E-04	2.490E-04	2.607E-04	2.490E-04	2.171E-04	1.729E-04	1.259E-04
39	3.234E-05	5.578E-05	8.895E-05	1.308E-04	1.769E-04	2.198E-04	2.506E-04	2.617E-04	2.506E-04	2.198E-04	1.769E-04	1.308E-04
40	3.635E-05	6.116E-05	9.546E-05	1.379E-04	1.839E-04	2.262E-04	2.562E-04	2.671E-04	2.562E-04	2.262E-04	1.839E-04	1.379E-04
41	4.126E-05	6.786E-05	1.038E-04	1.475E-04	1.942E-04	2.366E-04	2.665E-04	2.773E-04	2.665E-04	2.366E-04	1.942E-04	1.475E-04
42	4.717E-05	7.601E-05	1.142E-04	1.599E-04	2.080E-04	2.512E-04	2.815E-04	2.923E-04	2.815E-04	2.512E-04	2.080E-04	1.599E-04
43	5.413E-05	8.563E-05	1.256E-04	1.749E-04	2.251E-04	2.697E-04	3.008E-04	3.119E-04	3.008E-04	2.697E-04	2.251E-04	1.749E-04
44	6.212E-05	9.665E-05	1.409E-04	1.922E-04	2.451E-04	2.917E-04	3.239E-04	3.354E-04	3.239E-04	2.917E-04	2.451E-04	1.922E-04
45	7.104E-05	1.089E-04	1.567E-04	2.115E-04	2.674E-04	3.162E-04	3.499E-04	3.619E-04	3.499E-04	3.162E-04	2.674E-04	2.115E-04
46	8.080E-05	1.222E-04	1.738E-04	2.322E-04	2.913E-04	3.426E-04	3.778E-04	3.903E-04	3.778E-04	3.426E-04	2.913E-04	2.322E-04
47	9.127E-05	1.363E-04	1.917E-04	2.539E-04	3.162E-04	3.700E-04	4.067E-04	4.198E-04	4.067E-04	3.700E-04	3.162E-04	2.539E-04
48	1.023E-04	1.510E-04	2.103E-04	2.761E-04	3.416E-04	3.978E-04	4.360E-04	4.495E-04	4.360E-04	3.978E-04	3.416E-04	2.761E-04
49	1.135E-04	1.662E-04	2.292E-04	2.985E-04	3.670E-04	4.255E-04	4.650E-04	4.790E-04	4.650E-04	4.255E-04	3.670E-04	2.985E-04

10800 SEC. AFTER START OF RELEASE
TOT. 60 PUFFS RELEASED AND 60 HAVE LEFT THE GRID
===

*** Z-PLAN NO = 1 *** DOSE (GS/M**3) ********

	26	27	28	29	30	31	32	33	34	35	36	37
1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.241E-10	1.813E-05	1.633E-03	1.616E-02	1.633E-03	1.813E-06	2.241E-10	0.000E+00
2	0.000E+00	0.000E+00	0.000E+00	5.776E-11	8.013E-08	1.229E-04	7.093E-02	6.857E-01	7.093E-02	1.229E-04	8.013E-08	5.776E-11
3	0.000E+00	0.000E+00	1.380E-11	6.531E-09	3.535E-06	1.360E-03	9.947E-02	5.579E-01	9.947E-02	1.360E-03	3.535E-06	6.531E-09
4	0.000E+00	3.266E-12	7.967E-10	2.017E-07	4.468E-05	4.892E-03	1.450E-01	4.991E-01	1.450E-01	4.892E-03	4.468E-05	2.017E-07
5	3.766E-13	1.279E-10	1.826E-08	2.486E-06	2.406E-04	1.123E-02	1.470E-01	3.639E-01	1.470E-01	1.123E-02	2.406E-04	2.486E-06
6	2.462E-11	2.297E-09	2.082E-07	1.576E-05	7.779E-04	1.803E-02	1.426E-01	2.948E-01	1.426E-01	1.803E-02	7.779E-04	1.576E-05
7	3.692E-10	2.384E-08	1.393E-06	6.275E-05	1.770E-03	2.477E-02	1.357E-01	2.444E-01	1.357E-01	2.477E-02	1.770E-03	6.275E-05
8	3.484E-09	1.598E-07	6.223E-06	1.790E-04	3.220E-03	3.020E-02	1.252E-01	2.040E-01	1.252E-01	3.020E-02	3.220E-03	1.790E-04
9	2.275E-08	7.562E-07	2.049E-05	4.019E-04	4.992E-03	3.425E-02	1.151E-01	1.742E-01	1.151E-01	3.425E-02	4.992E-03	4.019E-04
10	1.104E-07	2.718E-06	5.338E-05	7.559E-04	6.931E-03	3.704E-02	1.055E-01	1.506E-01	1.055E-01	3.704E-02	6.931E-03	7.559E-04
11	4.180E-07	7.851E-06	1.162E-04	1.246E-03	8.882E-03	3.874E-02	9.666E-02	1.318E-01	9.666E-02	3.874E-02	8.882E-03	1.246E-03
12	1.294E-06	1.904E-05	2.199E-04	1.860E-03	1.073E-02	3.962E-02	8.878E-02	1.166E-01	8.878E-02	3.962E-02	1.073E-02	1.860E-03
13	3.391E-06	4.011E-05	3.729E-04	2.571E-03	1.242E-02	3.989E-02	8.179E-02	1.042E-01	8.179E-02	3.989E-02	1.242E-02	2.571E-03
14	7.750E-06	7.539E-05	5.794E-04	3.349E-03	1.390E-02	3.971E-02	7.562E-02	9.395E-02	7.562E-02	3.971E-02	1.390E-02	3.349E-03
15	1.581E-05	1.291E-04	9.391E-04	4.163E-03	1.517E-02	3.923E-02	7.017E-02	8.534E-02	7.017E-02	3.923E-02	1.517E-02	4.163E-03
16	2.932E-05	2.049E-04	1.148E-03	4.984E-03	1.623E-02	3.854E-02	6.535E-02	7.805E-02	6.535E-02	3.854E-02	1.623E-02	4.984E-03
17	5.023E-05	3.051E-04	1.499E-03	5.789E-03	1.709E-02	3.771E-02	6.108E-02	7.182E-02	6.108E-02	3.771E-02	1.709E-02	5.789E-03
18	8.045E-05	4.309E-04	1.884E-03	6.562E-03	1.779E-02	3.680E-02	5.727E-02	6.644E-02	5.727E-02	3.680E-02	1.779E-02	6.562E-03
19	1.217E-04	5.821E-04	2.294E-03	7.290E-03	1.832E-02	3.584E-02	5.387E-02	6.176E-02	5.387E-02	3.584E-02	1.832E-02	7.290E-03
20	1.753E-04	7.572E-04	2.719E-03	7.964E-03	1.872E-02	3.485E-02	5.081E-02	5.765E-02	5.081E-02	3.485E-02	1.872E-02	7.964E-03
21	2.423E-04	9.539E-04	3.150E-03	8.579E-03	1.901E-02	3.386E-02	4.804E-02	5.402E-02	4.804E-02	3.386E-02	1.901E-02	8.579E-03
22	3.225E-04	1.169E-03	3.579E-03	9.134E-03	1.919E-02	3.287E-02	4.553E-02	5.078E-02	4.553E-02	3.287E-02	1.919E-02	9.134E-03
23	4.171E-04	1.400E-03	4.001E-03	9.627E-03	1.929E-02	3.189E-02	4.324E-02	4.788E-02	4.324E-02	3.189E-02	1.929E-02	9.627E-03
24	5.243E-04	1.641E-03	4.410E-03	1.006E-02	1.931E-02	3.094E-02	4.114E-02	4.526E-02	4.114E-02	3.094E-02	1.931E-02	1.006E-02
25	6.436E-04	1.891E-03	4.801E-03	1.044E-02	1.927E-02	3.000E-02	3.922E-02	4.289E-02	3.922E-02	3.000E-02	1.927E-02	1.044E-02
26	7.737E-04	2.145E-03	5.172E-03	1.076E-02	1.918E-02	2.910E-02	3.744E-02	4.073E-02	3.744E-02	2.910E-02	1.918E-02	1.076E-02
27	9.132E-04	2.400E-03	5.520E-03	1.103E-02	1.904E-02	2.822E-02	3.579E-02	3.875E-02	3.579E-02	2.822E-02	1.904E-02	1.103E-02
28	1.060E-03	2.653E-03	5.843E-03	1.126E-02	1.887E-02	2.737E-02	3.426E-02	3.694E-02	3.426E-02	2.737E-02	1.887E-02	1.126E-02
29	1.214E-03	2.902E-03	6.142E-03	1.144E-02	1.866E-02	2.655E-02	3.284E-02	3.526E-02	3.284E-02	2.655E-02	1.866E-02	1.144E-02
30	1.371E-03	3.144E-03	6.414E-03	1.158E-02	1.843E-02	2.576E-02	3.151E-02	3.371E-02	3.151E-02	2.576E-02	1.843E-02	1.158E-02
31	1.532E-03	3.379E-03	6.652E-03	1.169E-02	1.818E-02	2.499E-02	3.027E-02	3.228E-02	3.027E-02	2.499E-02	1.818E-02	1.169E-02
32	1.694E-03	3.603E-03	6.885E-03	1.177E-02	1.792E-02	2.425E-02	2.911E-02	3.094E-02	2.911E-02	2.425E-02	1.792E-02	1.177E-02
33	1.856E-03	3.817E-03	7.034E-03	1.181E-02	1.764E-02	2.354E-02	2.802E-02	2.969E-02	2.802E-02	2.354E-02	1.764E-02	1.181E-02
34	2.017E-03	4.020E-03	7.260E-03	1.183E-02	1.736E-02	2.286E-02	2.699E-02	2.853E-02	2.699E-02	2.286E-02	1.736E-02	1.183E-02
35	2.175E-03	4.211E-03	7.414E-03	1.183E-02	1.706E-02	2.220E-02	2.602E-02	2.744E-02	2.602E-02	2.220E-02	1.706E-02	1.183E-02
36	2.330E-03	4.390E-03	7.547E-03	1.181E-02	1.677E-02	2.157E-02	2.511E-02	2.641E-02	2.511E-02	2.157E-02	1.677E-02	1.181E-02
37	2.480E-03	4.556E-03	7.661E-03	1.177E-02	1.647E-02	2.096E-02	2.424E-02	2.545E-02	2.424E-02	2.096E-02	1.647E-02	1.177E-02
38	2.626E-03	4.709E-03	7.757E-03	1.171E-02	1.616E-02	2.038E-02	2.342E-02	2.454E-02	2.342E-02	2.038E-02	1.616E-02	1.171E-02
39	2.766E-03	4.850E-03	7.836E-03	1.164E-02	1.586E-02	1.981E-02	2.265E-02	2.368E-02	2.265E-02	1.981E-02	1.586E-02	1.164E-02
40	2.901E-03	4.980E-03	7.899E-03	1.156E-02	1.556E-02	1.927E-02	2.191E-02	2.287E-02	2.191E-02	1.927E-02	1.556E-02	1.156E-02
41	3.025E-03	5.097E-03	7.947E-03	1.146E-02	1.526E-02	1.874E-02	2.121E-02	2.211E-02	2.121E-02	1.874E-02	1.526E-02	1.146E-02
42	3.150E-03	5.203E-03	7.982E-03	1.136E-02	1.497E-02	1.824E-02	2.055E-02	2.138E-02	2.055E-02	1.824E-02	1.497E-02	1.136E-02
43	3.265E-03	5.297E-03	8.005E-03	1.125E-02	1.467E-02	1.775E-02	1.991E-02	2.069E-02	1.991E-02	1.775E-02	1.467E-02	1.125E-02
44	3.373E-03	5.382E-03	8.016E-03	1.113E-02	1.438E-02	1.728E-02	1.931E-02	2.003E-02	1.931E-02	1.728E-02	1.438E-02	1.113E-02
45	3.473E-03	5.456E-03	8.016E-03	1.100E-02	1.409E-02	1.683E-02	1.873E-02	1.941E-02	1.873E-02	1.683E-02	1.409E-02	1.100E-02
46	3.567E-03	5.520E-03	8.007E-03	1.087E-02	1.381E-02	1.639E-02	1.818E-02	1.881E-02	1.818E-02	1.639E-02	1.381E-02	1.087E-02
47	3.653E-03	5.575E-03	7.999E-03	1.074E-02	1.353E-02	1.597E-02	1.765E-02	1.824E-02	1.765E-02	1.597E-02	1.353E-02	1.074E-02
48	3.735E-03	5.621E-03	7.962E-03	1.060E-02	1.326E-02	1.557E-02	1.714E-02	1.770E-02	1.714E-02	1.557E-02	1.326E-02	1.060E-02
49	3.805E-03	5.660E-03	7.929E-03	1.046E-02	1.299E-02	1.517E-02	1.666E-02	1.718E-02	1.666E-02	1.517E-02	1.299E-02	1.046E-02

*** DEPOSITION : *** DOSE (GS/M**2) *******

***	26	27	28	29	30	31	32	33	34	35	36	37
1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.038E-12	1.813E-08	1.633E-05	1.616E-04	1.633E-05	1.813E-08	2.038E-12	0.000E+00
2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.013E-10	1.229E-06	7.093E-04	6.857E-03	7.093E-04	1.229E-06	8.013E-10	0.000E+00
3	0.000E+00	0.000E+00	0.000E+00	6.524E-11	3.535E-08	1.360E-05	9.947E-04	5.579E-03	9.947E-04	1.360E-05	3.535E-08	6.524E-11
4	0.000E+00	0.000E+00	7.536E-12	2.017E-09	4.468E-07	4.892E-05	1.450E-03	4.981E-03	1.450E-03	4.892E-05	4.468E-07	2.017E-09
5	0.000E+00	5.397E-13	1.820E-10	2.486E-08	2.406E-06	1.123E-04	1.470E-03	3.639E-03	1.470E-03	1.123E-04	2.406E-06	2.486E-08
6	0.000E+00	2.275E-11	2.082E-09	1.576E-07	7.779E-06	1.803E-04	1.426E-03	2.948E-03	1.426E-03	1.803E-04	7.779E-06	1.576E-07
7	3.084E-12	2.383E-10	1.393E-08	6.275E-07	1.770E-05	2.477E-04	1.357E-03	2.444E-03	1.357E-03	2.477E-04	1.770E-05	6.275E-07
8	3.448E-11	1.597E-09	6.223E-08	1.790E-06	3.220E-05	3.020E-04	1.252E-03	2.040E-03	1.252E-03	3.020E-04	3.220E-05	1.790E-06
9	2.277E-10	7.562E-09	2.048E-07	4.019E-06	4.992E-05	3.425E-04	1.151E-03	1.742E-03	1.151E-03	3.425E-04	4.992E-05	4.019E-06
10	1.104E-09	2.718E-08	5.338E-07	7.559E-06	6.931E-05	3.704E-04	1.055E-03	1.506E-03	1.055E-03	3.704E-04	6.931E-05	7.559E-06
11	4.179E-09	7.851E-08	1.162E-06	1.246E-05	8.882E-05	3.874E-04	9.666E-04	1.318E-03	9.666E-04	3.874E-04	8.882E-05	1.246E-05
12	1.293E-08	1.904E-07	2.199E-06	1.860E-05	1.073E-04	3.962E-04	8.878E-04	1.166E-03	8.878E-04	3.962E-04	1.073E-04	1.860E-05
13	3.391E-08	4.011E-07	3.729E-06	2.571E-05	1.242E-04	3.969E-04	8.179E-04	1.042E-03	8.179E-04	3.989E-04	1.242E-04	2.571E-05
14	7.750E-08	7.539E-07	5.794E-06	3.349E-05	1.390E-04	3.971E-04	7.562E-04	9.395E-04	7.562E-04	3.971E-04	1.390E-04	3.349E-05
15	1.581E-07	1.291E-06	8.391E-06	4.163E-05	1.517E-04	3.923E-04	7.017E-04	8.534E-04	7.017E-04	3.923E-04	1.517E-04	4.163E-05
16	2.932E-07	2.049E-06	1.148E-05	4.984E-05	1.623E-04	3.854E-04	6.535E-04	7.805E-04	6.535E-04	3.854E-04	1.623E-04	4.984E-05
17	5.023E-07	3.051E-06	1.499E-05	5.789E-05	1.709E-04	3.771E-04	6.108E-04	7.182E-04	6.108E-04	3.771E-04	1.709E-04	5.789E-05
18	8.045E-07	4.309E-06	1.884E-05	6.562E-05	1.779E-04	3.680E-04	5.727E-04	6.644E-04	5.727E-04	3.680E-04	1.779E-04	6.562E-05
19	1.217E-06	5.821E-06	2.294E-05	7.290E-05	1.832E-04	3.584E-04	5.387E-04	6.176E-04	5.387E-04	3.584E-04	1.832E-04	7.290E-05
20	1.753E-06	7.572E-06	2.719E-05	7.964E-05	1.872E-04	3.485E-04	5.081E-04	5.765E-04	5.081E-04	3.485E-04	1.872E-04	7.964E-05
21	2.423E-06	9.539E-06	3.150E-05	8.579E-05	1.901E-04	3.386E-04	4.804E-04	5.402E-04	4.804E-04	3.386E-04	1.901E-04	8.579E-05
22	3.229E-06	1.169E-05	3.579E-05	9.134E-05	1.919E-04	3.287E-04	4.553E-04	5.078E-04	4.553E-04	3.287E-04	1.919E-04	9.134E-05
23	4.171E-06	1.400E-05	4.001E-05	9.627E-05	1.929E-04	3.189E-04	4.324E-04	4.788E-04	4.324E-04	3.189E-04	1.929E-04	9.627E-05
24	5.243E-06	1.641E-05	4.410E-05	1.006E-04	1.931E-04	3.094E-04	4.114E-04	4.526E-04	4.114E-04	3.094E-04	1.931E-04	1.006E-04
25	6.436E-06	1.891E-05	4.801E-05	1.044E-04	1.927E-04	3.000E-04	3.922E-04	4.289E-04	3.922E-04	3.000E-04	1.927E-04	1.044E-04
26	7.737E-06	2.145E-05	5.172E-05	1.076E-04	1.918E-04	2.910E-04	3.744E-04	4.073E-04	3.744E-04	2.910E-04	1.918E-04	1.076E-04
27	9.132E-05	2.400E-05	5.520E-05	1.103E-04	1.904E-04	2.822E-04	3.579E-04	3.875E-04	3.579E-04	2.822E-04	1.904E-04	1.103E-04
28	1.060E-05	2.653E-05	5.843E-05	1.126E-04	1.867E-04	2.737E-04	3.426E-04	3.694E-04	3.426E-04	2.737E-04	1.887E-04	1.126E-04
29	1.214E-05	2.902E-05	6.142E-05	1.144E-04	1.866E-04	2.655E-04	3.284E-04	3.526E-04	3.284E-04	2.655E-04	1.866E-04	1.144E-04
30	1.372E-05	3.145E-05	6.416E-05	1.159E-04	1.844E-04	2.576E-04	3.152E-04	3.372E-04	3.152E-04	2.576E-04	1.844E-04	1.159E-04
31	1.534E-05	3.381E-05	6.666E-05	1.170E-04	1.819E-04	2.500E-04	3.028E-04	3.229E-04	3.026E-04	2.500E-04	1.819E-04	1.170E-04
32	1.698E-05	3.610E-05	6.894E-05	1.178E-04	1.794E-04	2.427E-04	2.913E-04	3.096E-04	2.913E-04	2.427E-04	1.794E-04	1.179E-04
33	1.866E-05	3.833E-05	7.106E-05	1.194E-04	1.768E-04	2.359E-04	2.807E-04	2.975E-04	2.807E-04	2.359E-04	1.768E-04	1.184E-04
34	2.038E-05	4.054E-05	7.309E-05	1.190E-04	1.745E-04	2.297E-04	2.711E-04	2.865E-04	2.711E-04	2.297E-04	1.745E-04	1.190E-04
35	2.220E-05	4.281E-05	7.517E-05	1.197E-04	1.725E-04	2.242E-04	2.626E-04	2.769E-04	2.626E-04	2.242E-04	1.725E-04	1.197E-04
36	2.417E-05	4.527E-05	7.750E-05	1.208E-04	1.712E-04	2.199E-04	2.558E-04	2.690E-04	2.558E-04	2.199E-04	1.712E-04	1.208E-04
37	2.643E-05	4.810E-05	8.034E-05	1.228E-04	1.712E-04	2.174E-04	2.510E-04	2.634E-04	2.510E-04	2.174E-04	1.712E-04	1.228E-04
38	2.905E-05	5.152E-05	8.403E-05	1.259E-04	1.729E-04	2.171E-04	2.490E-04	2.607E-04	2.490E-04	2.171E-04	1.729E-04	1.259E-04
39	3.234E-05	5.578E-05	8.895E-05	1.308E-04	1.769E-04	2.198E-04	2.506E-04	2.617E-04	2.506E-04	2.198E-04	1.769E-04	1.308E-04
40	3.635E-05	6.116E-05	9.546E-05	1.379E-04	1.839E-04	2.262E-04	2.562E-04	2.671E-04	2.562E-04	2.262E-04	1.839E-04	1.379E-04
41	4.126E-05	6.786E-05	1.038E-04	1.475E-04	1.942E-04	2.366E-04	2.665E-04	2.773E-04	2.665E-04	2.366E-04	1.942E-04	1.475E-04
42	4.717E-05	7.601E-05	1.142E-04	1.599E-04	2.080E-04	2.512E-04	2.815E-04	2.923E-04	2.815E-04	2.512E-04	2.080E-04	1.599E-04
43	5.413E-05	8.563E-05	1.266E-04	1.749E-04	2.251E-04	2.697E-04	3.008E-04	3.119E-04	3.008E-04	2.697E-04	2.251E-04	1.749E-04
44	6.212E-05	9.665E-05	1.409E-04	1.922E-04	2.451E-04	2.917E-04	3.239E-04	3.354E-04	3.239E-04	2.917E-04	2.451E-04	1.922E-04
45	7.104E-05	1.089E-04	1.567E-04	2.115E-04	2.674E-04	3.162E-04	3.499E-04	3.619E-04	3.499E-04	3.162E-04	2.674E-04	2.115E-04
46	8.080E-05	1.222E-04	1.738E-04	2.322E-04	2.913E-04	3.426E-04	3.778E-04	3.903E-04	3.778E-04	3.426E-04	2.913E-04	2.322E-04
47	9.127E-05	1.363E-04	1.917E-04	2.539E-04	3.162E-04	3.700E-04	4.067E-04	4.198E-04	4.067E-04	3.700E-04	3.162E-04	2.539E-04
48	1.023E-04	1.510E-04	2.103E-04	2.761E-04	3.416E-04	3.978E-04	4.360E-04	4.495E-04	4.360E-04	3.97[illegible]E-04	3.416E-04	2.761E-04
49	1.135E-04	1.662E-04	2.292E-04	2.985E-04	3.670E-04	4.255E-04	4.650E-04	4.790E-04	4.650E-04	4.255E-04	3.670E-04	2.985E-04

8.3. Example no. 3

The files INDATA and WINDDA for external gamma dose calculations are as shown below:

8.3.1. INDATA file

```
&PRIMDA
TITLE='PROBLEM 1. NO DEPOSITION  ',
ICOLS=25,JROWS=25,KPLANS=1,DELX=500.,DELY=500.,DELZ=30.,
TDEL=0.0,CHEMIN=0.1E-15,NTADV=20,TAU=20,MAPTIM=900,REFLEC=1.,
NRELSE=3600,IDMP=1,JDMP=6,KDMP=1,ISMODE=1,ITAPIN=0,
KOORD=0,XUTM=332.7609,YUTM=5381.6323,
INPRNT='YES',OUTDAT='NOOUTP',OUTMOD='DOSE',OUTWFD='NOOUTP'
&END
&RELDAT
PUFFTX='SOURCEHEIGHT=10 METERS, SOURCESTRENGTH= 1',
NRMULT=1,
XSOURC(1)=0.0,YSOURC(1)=12.0,ZSOURC(1)=0.33333,
STRTRL(1)=0,STOPRL(1)=3600,SOURST(1)=1.0,HEATFX(1)=0.,
&END
&STABDA
STABTX='MIXING HEIGHT VARIES WITH STABILITY .',
DTDZ=0.,ZMTAB(1)=0.0,ZMTAB(2)=0.,ZMTAB(3)=0.,
ZMTAB(4)=0.,ZMTAB(5)=0.,ZMTAB(6)=0.,
DSHEAR=0,ALFSHE=-5.0,HSHEMI=0.0,HSHEMA=200.0,
USH=0,USTAR=0.1397,LMOBUK=44.64,ZROUGH=0.1,DZERO=0.0,
DUSDUM=0,
DEPMOD=0,OUTDEP='NOOUTP',
VDTAB(1,1)=0.010,VDTAB(2,1)=0.010,VDTAB(3,1)=0.010,
VDTAB(4,1)=0.010,VDTAB(5,1)=0.010,VDTAB(6,1)=0.010,
VDTAB(1,2)=0.010,VDTAB(2,2)=0.010,VDTAB(3,2)=0.010,
VDTAB(4,2)=0.010,VDTAB(5,2)=0.010,VDTAB(6,2)=0.010,
VDTAB(1,3)=0.010,VDTAB(2,3)=0.010,VDTAB(3,3)=0.010,
```

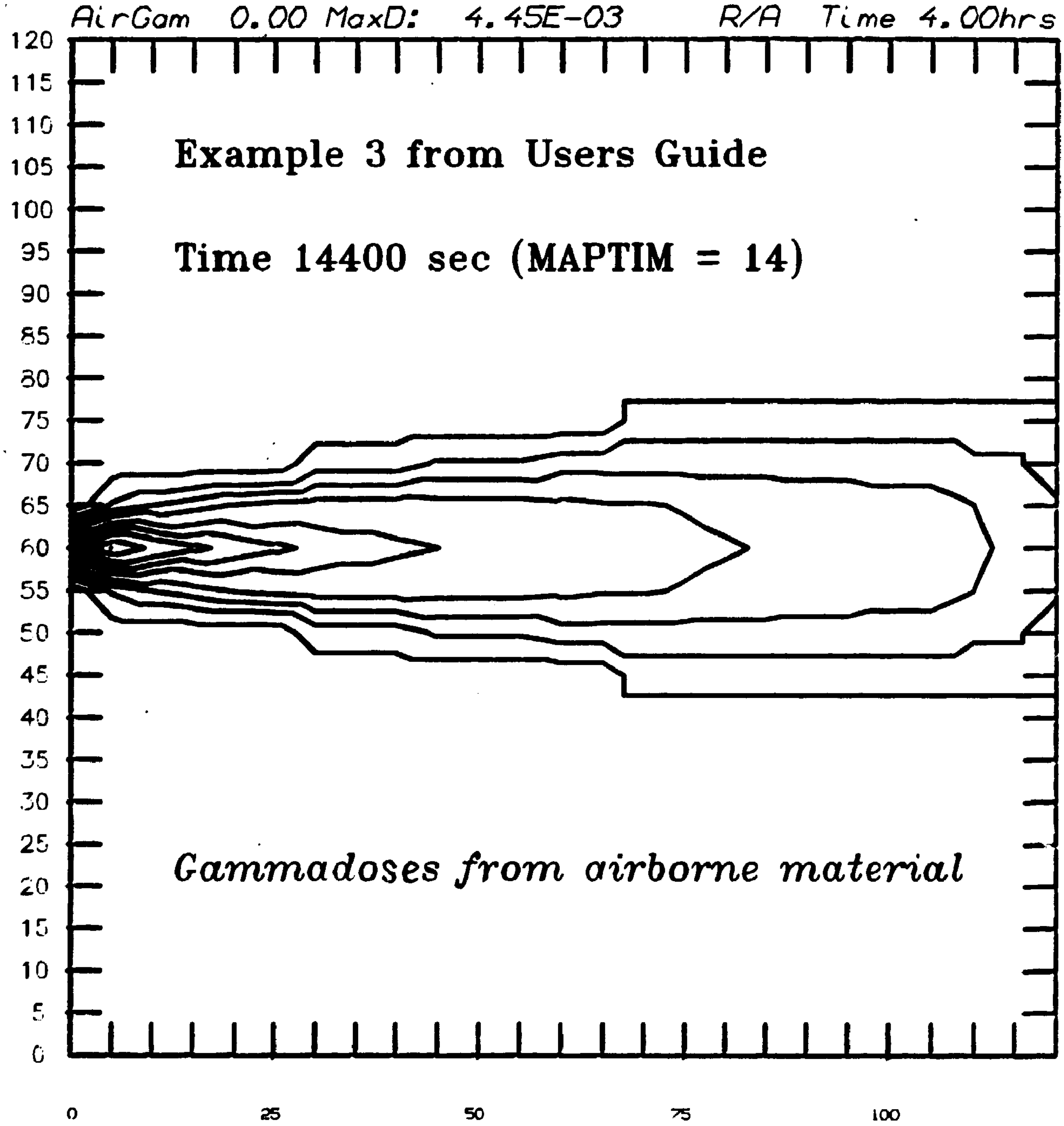
```
 VDTAB(4,3)=0.010,VDTAB(5,3)=0.010,VDTAB(6,3)=0.010,
 VDTAB(1,4)=0.010,VDTAB(2,4)=0.010,VDTAB(3,4)=0.010,
 VDTAB(4,4)=0.010,VDTAB(5,4)=0.010,VDTAB(6,4)=0.010,
 VDTAB(1,5)=0.010,VDTAB(2,5)=0.010,VDTAB(3,5)=0.010,
 VDTAB(4,5)=0.010,VDTAB(5,5)=0.010,VDTAB(6,5)=0.010,
 LDTAB(1)=0.000042,LDTAB(2)=0.000106,LDTAB(3)=0.000233,
 TIMRAI(1)=1692,TIMRAI(2)=2628,TIMRAI(3)=2232
 &END
 &GAMDA
 GAMMOD=1,OUTGAM='OUTPUT',
 FGAM(1)=0.0,FGAM(2)=0.0,FGAM(3)=0.0,FGAM(4)=0.0,FGAM(5)=0.0,
 FGAM(6)=1.0,FGAM(7)=0.0,FGAM(8)=0.0
 &END
```

Note: One space is required in the beginning of each line.

8.3.2. WINDDA file

```
&WINPAR
WNDTLE='WINDDATA (CONSTANT WIND) FOR GAMMA DOSES TEST',
TIME=' 12:00',DATE='21-JUN-84',ITSP=14400,
NP=1,NFX=25,NFY=25,NSTL=1,NSKIP=0,
RTE=0.,RCH=100.,
NAMST(1)='RIS',X(1)=1.,Y(1)=12.,COR(1)=0.,CONFAC(1)=1.0000,
A(1)=0.,ISXMIN(1)=1,ISXMAX(1)=25,ISYMIN(1)=1,ISYMAX(1)=25,
&END
' 12:00'
'RIS','D','D',270.,5.0,0
'STOP'
```

The output from this example is shown on the following pages.


AirGam 0.00 MaxD: 4.45E-03 R/A Time 4.00hrs
Example 3 from Users Guide
Time 14400 sec (MAPTIM = 14)
Gammadoses from airborne material
120
115
110
105
100
95
90
85
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
0
25
50
75
100

FYSNYREEN

EKS3

```
#NEWS     APR.11.86    13:32  : RCL-BRUGERE LAES NEWS!!!
#####################################################################
#   VI GOR OPMAERKSOM PAA AT DET IKKE LAENGERE ER MULIGT AT KORE    #
#   FORTRAN-RCL PAA DEN GAMMELDAGS MANER MED BINDER OG FORTRAN66.   #
#   VI HENVISER TIL DEN NYE MAADE AT GORE TINGENE PAA SOM           #
#   BESKREVET I MANUALET:                                           #
#               FISD COMPUTER LIBRARY, DMA MEMO 70.                 #
#               -----------------------------------                 #
#   DENNE KAN FAAS VED HENVENDELSE TIL BIRGIT ANDERSEN, TELF 5569.  #
#                                                                   #
#   VEJLEDNING KAN IOVRIGT FAAS HOS: PETER KIRKEGAARD   (5561)      #
#                                ELLER  OLE LANG RASMUSSEN (5560)   #
#####################################################################
DATE: APR 16, 1986 08:03:04, SYSTEM SERIAL: 128, B7800 MCP: SYSTEM/MCP360305. 35.270.3326
```

W O R K   F L O W   S T A T E M E N T S

```
00000100   BEGIN JOB EKS3;CLASS=0;CHARGE=4040201;
00000200   MAXPROCTIME=10300;MAXIOTIME=900;MAXLINES=15000;
00000300    RUN OBJECT/VER11K/B/RINPUFF;
00000400    FILE FILE1=VER11K/INDATA/EKS3;
00000500    FILE FILE2=VER11K/WKNODA/EKS3;
00000600    FILE FILE10=VER11K/OUTAIR/EKS3;
00000700    FILE FILE11=VER11K/OUTDEP/EKS3;
00000800    FILE FILE12=VER11K/WFIELD/EKS3;
00000840    FILE FILE14=VER11K/OUTGAM/EKS3;
00000880    FILE FILE20=VER11K/KFKTAP/EKS3;
00000900    ?END JOB;
```

```
                                     J O B   S U M M A R Y

APR 15, 1986
  22:17:12   BOJ  3984  SKS3.
                        JOB ENTERED SYSTEM: APR 15, 1986 11:33:35 FROM HFL 35.270
                        QUEUE: 0
                        ORIGINATING LSN: 45  MCS: 1
                        PRIORITY: 50
                        USERCODE: FYSNYREEN.
                        CHARGECODE: 4040201.
  22:17:12        3984  STACK EXTENDED FROM 407 TO 575 WORDS.
  22:17:12   BOT  6598  (FYSNYREEN)OBJECT/VER11K/9/SIMPUFF ON USERPACK.
                        CODE COMPILED: APR 10, 1986 11:55:23 BY FORTRAN77 36.123
                        TASK TYPE: COROUTINE(CALL)
                        PRIORITY: 50
                        USERCODE: FYSNYREEN.
                        CHARGECODE: 4040201.
  22:17:15        6598  STACK EXTENDED FROM 1142 TO 1242 WORDS.
  22:41:13   EOT  6598  (FYSNYREEN)OBJECT/VER11K/9/SIMPUFF ON USERPACK.
                        PROCESSOR TIME: 00:23:34.040  USERCODE: FYSNYREEN.
                        I/O       TIME: 00:00:06.525  CHARGECODE: 4040201.
                        READYQ    TIME: 00:00:14.352  LINES PRINTED: 1187.
                        INITPBIT  TIME: 00:00:00.983  AVERAGE MEMORY USAGE: CODE=3052, DATA=135336
                        OTHERPBIT TIME: 00:00:00.063  MEMORY INTEGRAL: CODE=12574.974, DATA=263281.565
                        ELAPSED   TIME: 00:24:00.465  DATA & CODE ALLOWED IN & OCCUPIED: GLOBAL.
                                                      INITIAL PBITS: 334, OTHER PBITS: 27.
  22:41:13   EOJ  3984  SKS3.
                        PROCESSOR TIME: 00:00:00.080  USERCODE: FYSNYREEN.
                        I/O       TIME: 00:00:00.177  CHARGECODE: 4040201.
                        READYQ    TIME: 00:00:00.014  AVERAGE MEMORY USAGE: CODE=46, DATA=1296
                        INITPBIT  TIME: 00:00:00.035  MEMORY INTEGRAL: CODE=0.012, DATA=0.334
                        ELAPSED   TIME: 00:24:01.419  DATA & CODE ALLOWED IN & OCCUPIED: GLOBAL.
                                                      INITIAL PBITS: 23.
```

GAMMADOSES. NO DEPOSITION

```
KEY PARAMETER FOR CURRENT RUN:

NRELSE =     3600

ICOLS  =          25     JROWS  =         25     KPLANS =          1

NTADV  =          20     MAFTIM =        900     TAU    =         20

DELX   =      500.00     DELY   =     500.00     DELZ   =      30.00

CHEMIN =0.1000E-15       REFLEC =    1.00000     TDEL   =     0

IDMP   =           1     JDMP   =          6     KDMP   =          1

  ISMODE = 1

  INPRNT = YES

  OUTDAT = OUTPUT OUTMOD = DOSE

  OUTWFD = NOOUTP
  KFMTAPE= 0 (0 = NO, 1<= YES)

  * COORDINATES FOR SOURCE AND WINDSTATIONS IN GRID-UNITS (GDU)
```

```
 SOURCEHEIGTH=10 METERS, SOURCESTRENGTH= 1

CURRENT SOURCEDATA : NUMBER OF ACTIVE SOURCES :     1
  1  0.00 12.00  0.33             0          3600 1.000000000 0.000000000

   ZHGT = 9.9998999999
```

```
IN THE CURRENT RUN, THE STABILITY-CLASSES ARE
CONNECTED TO INTENSITY DATA AS FOLLOWS:
STABILITY CLASS NO.:    1    2    3    4    5    6
INTENSITY DATA      : 0.42 0.34 0.25 0.17 0.09 0.04


MIXING HEIGHT VARIES WITH STABILITY .


IN THE CURRENT RUN,THE POTENTIAL TEMPERATURE
GRADIENT IS SET TO:     0.0000

  NO WIND SHEAR
  -------------

 NO DEPOSITION
 -------------
```

```
EXTERNAL GAMMADOSES FROM PUFFS
------------------------------
FREQUENCIES IN ENERGY GROUPS
0.00     0.00     0.00     0.00     0.00     1.00     0.00     0.00

FRAME FOR PUFF ADVECTION:
X: 0 => 24 , Y: 0 => 24
---------------------------------------------------------

NO FINAL MIXING-DEEPTH IS SPECIFIED.
THE MIXING LAYER IS LIMITED AT:      0.00 METERS IN STABILITY CAT    1
THE MIXING LAYER IS LIMITED AT:      0.00 METERS IN STABILITY CAT    2
THE MIXING LAYER IS LIMITED AT:      0.00 METERS IN STABILITY CAT    3
THE MIXING LAYER IS LIMITED AT:      0.00 METERS IN STABILITY CAT    4
THE MIXING LAYER IS LIMITED AT:      0.00 METERS IN STABILITY CAT    5
THE MIXING LAYER IS LIMITED AT:      0.00 METERS IN STABILITY CAT    6
```

WIND PARAMETER DUMP

WINDDATA (CONSTANT WIND) FOR GAMMA DOSES TEST

TIME = 12:0 DATE = 21-JUN-84 ITSP = 14400 SEC
NP = 1 NFX = 25 NFY = 25
NSTL = 1 NSKIP = 0 NIST = 0
RTE = 0.0 (DEG.) RCN = 100.0 (G.U.)

NAME	X GU	Y GU	COR DEG	CORFAC	ALIGN DEG	ISXMIN GU	ISXMAX GU	ISYMIN GU	ISYMAX GU
KFK	1.0	12.0	0.	1.0	0.0	1	25	1	25

```
   STABILITY INDEX ARRAY (J= 1,64)
   ===============================
 1 1 1 1 1 1 1 1 1 1 1KF 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 STATION   NO.
KFK        1

 UNDEFINED AREA = 0
```

```
    TIMESTEP NO = 1

    OBSERVATION TIME:  12:0

    STATION DIRECTION VELOCITY    STABILITY   RAIN
             (DEG.)    (M/S)     (-Y) (-Z)   (MM/H)
    KFK       270.      5.0        D    D     0.00

 STATION   U      V        RAIN
         (M/S)  (M/S)    (MM/H)
 ==========================
KFK       5.0    0.0      0.00
 * TIMESTEP NO. 1 : ZM = 0.0 => ZMG = 0
```

**>> WIND-DIRECTION AT SOURCE: 270.0
**>> AT TIME : 20 SEC

900 SEC. AFTER START OF RELEASE
TOT. 45 PUFFS RELEASED AND 0 HAVE LEFT THE GRID

*** Z-PLAN NO = 1 *** DOSE (CS/M**3)

	6	7	8	9	10	11	12	13	14	15	16	17
1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.349E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.918E-08	1.155E-02	4.918E-08	0.000E+00	0.000E+00	0.000E+00
3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.067E-10	1.230E-05	3.244E-03	1.230E-05	2.067E-10	0.000E+00	0.000E+00
4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.673E-12	3.148E-08	6.153E-05	1.427E-03	6.153E-05	3.148E-08	3.673E-12	0.000E+00
5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.027E-10	4.199E-07	9.454E-05	7.424E-04	9.454E-05	4.199E-07	3.027E-10	0.000E+00
6	0.000E+00	0.000E+00	0.000E+00	5.328E-12	4.779E-09	1.616E-06	9.436E-05	4.133E-04	9.436E-05	1.616E-06	4.779E-09	5.328E-12
7	0.000E+00	0.000E+00	3.578E-14	7.110E-11	2.572E-08	3.089E-06	7.529E-05	2.329E-04	7.529E-05	3.089E-06	2.572E-08	7.110E-11
8	0.000E+00	0.000E+00	6.405E-13	3.418E-10	5.311E-08	3.661E-06	5.011E-05	1.342E-04	5.011E-05	3.661E-06	6.311E-08	3.418E-10
9	0.000E+00	0.000E+00	1.913E-13	6.635E-10	7.739E-08	2.776E-06	2.619E-05	5.540E-05	2.619E-05	2.776E-06	7.739E-08	6.635E-10
10	0.000E+00	0.000E+00	1.945E-12	5.238E-10	4.562E-08	1.218E-06	9.177E-06	1.817E-05	9.177E-06	1.218E-06	4.562E-08	5.238E-10
11	0.000E+00	0.000E+00	6.972E-13	1.621E-10	1.150E-08	2.650E-07	1.756E-06	3.315E-06	1.756E-06	2.650E-07	1.150E-08	1.621E-10
12	0.000E+00	0.000E+00	8.473E-14	1.883E-11	1.220E-09	2.492E-08	1.536E-07	2.122E-07	1.536E-07	2.492E-08	1.220E-09	1.883E-11
13	0.000E+00	0.000E+00	2.392E-15	7.813E-13	4.812E-11	9.167E-10	5.428E-09	9.324E-09	5.428E-09	9.167E-10	4.812E-11	7.813E-13
14	0.000E+00	0.000E+00	0.000E+00	7.432E-15	6.748E-13	1.245E-11	7.179E-11	1.238E-10	7.179E-11	1.245E-11	6.748E-13	7.432E-15
15	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.392E-15	5.589E-14	3.344E-13	5.761E-13	3.344E-13	5.589E-14	2.392E-15	0.000E+00
16	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
17	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
18	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
19	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
20	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
21	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
22	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
23	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
24	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
25	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

*** GAMMADOSES : *** DOSE (REM)

	6	7	8	9	10	11	12	13	14	15	16	17
1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.560E-07	7.235E-04	4.560E-07	0.000E+00	0.000E+00	0.000E+00
2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.290E-10	3.230E-08	4.395E-06	1.015E-03	4.395E-06	3.230E-08	8.290E-10	0.000E+00
3	0.000E+00	0.000E+00	0.000E+00	8.897E-11	3.423E-09	1.185E-07	8.659E-06	3.320E-04	8.659E-06	1.185E-07	3.423E-09	8.897E-11
4	0.000E+00	0.000E+00	5.924E-12	2.794E-10	8.943E-09	2.284E-07	1.068E-05	1.813E-04	1.068E-05	2.284E-07	8.943E-09	2.794E-10
5	0.000E+00	0.000E+00	1.513E-11	6.732E-10	1.730E-08	2.823E-07	1.210E-05	1.036E-04	1.210E-05	2.823E-07	1.730E-08	6.732E-10
6	0.000E+00	0.000E+00	3.363E-11	1.340E-09	2.377E-08	3.427E-07	1.295E-05	5.972E-05	1.295E-05	3.427E-07	2.377E-08	1.340E-09
7	0.000E+00	0.000E+00	6.431E-11	2.053E-09	2.575E-08	4.181E-07	1.033E-05	3.499E-05	1.033E-05	4.181E-07	2.575E-08	2.053E-09
8	0.000E+00	0.000E+00	1.020E-10	2.316E-09	2.366E-08	4.477E-07	6.978E-06	1.326E-05	6.978E-06	4.477E-07	2.366E-08	2.316E-09
9	0.000E+00	0.000E+00	1.228E-10	1.947E-09	1.774E-08	3.181E-07	3.751E-06	9.031E-06	3.751E-06	3.181E-07	1.774E-08	1.947E-09
10	0.000E+00	0.000E+00	1.035E-10	1.232E-09	9.535E-09	1.400E-07	1.306E-06	2.065E-06	1.306E-06	1.400E-07	9.535E-09	1.232E-09
11	0.000E+00	0.000E+00	7.353E-11	5.742E-10	3.326E-09	3.195E-08	2.272E-07	4.327E-07	2.272E-07	3.195E-08	3.326E-09	5.742E-10
12	0.000E+00	0.000E+00	3.378E-11	2.105E-10	8.637E-10	4.204E-09	1.851E-08	3.294E-08	1.851E-08	4.204E-09	8.637E-10	2.105E-10
13	0.000E+00	0.000E+00	1.772E-11	6.510E-11	1.282E-10	5.788E-10	1.367E-09	1.934E-09	1.367E-09	5.788E-10	1.282E-10	6.510E-11
14	0.000E+00	0.000E+00	5.658E-12	1.465E-11	3.655E-11	8.187E-11	1.457E-10	1.803E-10	1.457E-10	8.187E-11	3.655E-11	1.465E-11
15	0.000E+00	0.000E+00	9.700E-13	2.254E-12	4.832E-12	9.127E-12	1.412E-11	1.652E-11	1.412E-11	9.127E-12	4.832E-12	2.254E-12
16	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
17	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
18	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
19	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
20	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
21	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
22	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
23	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
24	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
25	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00

1900 SEC. AFTER START OF RELEASE
TOT. 90 PUFFS RELEASED AND 0 HAVE LEFT THE GRID

*** Z-PLAN NO = 1 *** DOSE (GS/M**3) ***

	6	7	8	9	10	11	12	13	14	15	16	17
1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.598E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.080E-07	2.432E-02	1.080E-07	0.000E+00	0.000E+00	0.000E+00
3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.293E-10	2.967E-05	7.238E-03	2.967E-05	5.293E-10	0.000E+00	0.000E+00
4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.152E-11	8.561E-08	1.546E-04	3.437E-03	1.546E-04	8.561E-08	1.152E-11	0.000E+00
5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.061E-09	1.268E-06	2.643E-04	2.026E-03	2.643E-04	1.268E-06	1.061E-09	0.000E+00
6	0.000E+00	0.000E+00	0.000E+00	2.990E-11	1.972E-08	5.655E-06	3.040E-04	1.299E-03	3.040E-04	5.655E-06	1.972E-08	2.990E-11
7	0.000E+00	0.000E+00	6.753E-13	5.551E-10	1.365E-07	1.340E-05	2.954E-04	9.654E-04	2.954E-04	1.340E-05	1.365E-07	5.551E-10
8	0.000E+00	0.000E+00	2.773E-11	4.598E-09	5.037E-07	2.214E-05	2.646E-04	6.295E-04	2.646E-04	2.214E-05	5.037E-07	4.598E-09
9	0.000E+00	8.298E-13	2.115E-10	2.169E-08	1.230E-06	2.743E-05	2.266E-04	4.390E-04	2.266E-04	2.743E-05	1.230E-06	2.169E-08
10	0.000E+00	1.215E-11	1.135E-09	6.814E-08	2.265E-06	3.396E-05	1.889E-04	3.402E-04	1.889E-04	3.396E-05	2.265E-06	6.814E-08
11	3.132E-13	6.756E-11	4.115E-09	1.589E-07	3.427E-06	3.553E-05	1.542E-04	2.543E-04	1.542E-04	3.553E-05	3.427E-06	1.589E-07
12	4.505E-12	2.739E-10	1.113E-08	2.946E-07	4.463E-06	3.456E-05	1.236E-04	1.906E-04	1.236E-04	3.456E-05	4.463E-06	2.946E-07
13	1.874E-11	8.328E-10	2.379E-08	4.563E-07	5.170E-06	3.166E-05	9.716E-05	1.420E-04	9.716E-05	3.166E-05	5.170E-06	4.563E-07
14	5.572E-11	1.824E-09	4.125E-08	6.067E-07	5.416E-06	2.743E-05	7.444E-05	1.043E-04	7.444E-05	2.743E-05	5.416E-06	6.067E-07
15	1.234E-10	3.223E-09	5.932E-08	7.016E-07	5.156E-06	2.238E-05	5.504E-05	7.453E-05	5.504E-05	2.238E-05	5.156E-06	7.016E-07
16	2.121E-10	4.704E-09	7.072E-08	7.041E-07	4.425E-06	1.699E-05	3.860E-05	5.087E-05	3.860E-05	1.699E-05	4.426E-06	7.041E-07
17	2.753E-10	5.328E-09	6.975E-08	6.033E-07	3.356E-06	1.170E-05	2.498E-05	3.223E-05	2.498E-05	1.170E-05	3.356E-06	6.033E-07
18	2.693E-10	4.654E-09	5.518E-08	4.297E-07	2.178E-06	7.055E-06	1.438E-05	1.795E-05	1.438E-05	7.055E-06	2.178E-06	4.297E-07
19	1.555E-10	3.155E-09	3.418E-08	2.464E-07	1.165E-06	3.573E-06	7.040E-06	8.330E-06	7.040E-06	3.573E-06	1.166E-06	2.464E-07
20	1.047E-10	1.587E-09	1.619E-08	1.102E-07	4.956E-07	1.462E-06	2.806E-06	3.439E-06	2.806E-06	1.462E-06	4.956E-07	1.102E-07
21	4.052E-11	5.873E-10	5.727E-09	3.736E-08	1.620E-07	4.644E-07	8.755E-07	1.032E-06	8.755E-07	4.644E-07	1.620E-07	3.736E-08
22	1.125E-11	1.576E-10	1.433E-09	9.327E-09	3.967E-08	1.114E-07	2.072E-07	2.349E-07	2.072E-07	1.114E-07	3.967E-08	9.397E-09
23	2.211E-12	3.033E-11	2.739E-10	1.722E-09	7.127E-09	1.970E-08	3.630E-08	4.451E-08	3.630E-08	1.970E-08	7.127E-09	1.722E-09
24	2.990E-13	4.136E-12	3.741E-11	2.270E-10	9.252E-10	2.529E-09	4.626E-09	5.658E-09	4.626E-09	2.529E-09	9.252E-10	2.270E-10
25	1.775E-14	3.206E-13	3.539E-12	2.127E-11	8.578E-11	2.324E-10	4.228E-10	5.153E-10	4.228E-10	2.324E-10	8.578E-11	2.127E-11

*** GAMMADOSES : *** DOSE (REM) ***

	6	7	8	9	10	11	12	13	14	15	16	17
1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.641E-07	1.449E-03	9.641E-07	0.000E+00	0.000E+00	0.000E+00
2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.274E-09	7.769E-08	9.455E-06	2.128E-03	9.455E-06	7.769E-08	2.274E-09	0.000E+00
3	0.000E+00	0.000E+00	0.000E+00	3.337E-10	9.947E-09	2.904E-07	1.966E-05	8.597E-04	1.966E-05	2.904E-07	9.947E-09	3.387E-10
4	0.000E+00	0.000E+00	4.829E-11	1.133E-09	2.660E-08	5.879E-07	2.652E-05	4.443E-04	2.652E-05	5.879E-07	2.680E-08	1.183E-09
5	0.000E+00	8.360E-12	1.798E-10	3.035E-09	5.475E-08	8.241E-07	3.360E-05	2.826E-04	3.360E-05	8.241E-07	5.475E-08	3.055E-09
6	3.428E-13	3.444E-11	4.505E-10	6.530E-09	8.410E-08	1.140E-06	4.157E-05	1.376E-04	4.157E-05	1.140E-06	8.410E-08	6.530E-09
7	3.223E-12	7.995E-11	9.496E-10	1.145E-08	1.115E-07	1.739E-06	4.042E-05	1.333E-04	4.042E-05	1.739E-06	1.115E-07	1.145E-08
8	7.594E-12	1.599E-10	1.775E-09	1.663E-08	1.446E-07	2.605E-06	3.680E-05	9.730E-05	3.680E-05	2.605E-06	1.446E-07	1.663E-08
9	1.568E-11	2.949E-10	2.848E-09	2.164E-08	1.917E-07	3.225E-06	3.284E-05	7.309E-05	3.284E-05	3.225E-06	1.917E-07	2.164E-08
10	3.016E-11	4.926E-10	3.964E-09	2.713E-08	2.610E-07	3.776E-06	2.881E-05	5.536E-05	2.881E-05	3.776E-06	2.610E-07	2.713E-08
11	5.428E-11	7.219E-10	5.053E-09	3.340E-08	3.573E-07	4.283E-06	2.488E-05	4.139E-05	2.488E-05	4.283E-06	3.573E-07	3.340E-08
12	8.868E-11	9.548E-10	6.117E-09	4.084E-08	4.853E-07	4.715E-06	2.116E-05	3.152E-05	2.116E-05	4.715E-06	4.853E-07	4.084E-08
13	1.282E-10	1.168E-09	7.034E-09	4.984E-08	5.619E-07	4.583E-06	1.724E-05	2.372E-05	1.724E-05	4.583E-06	5.619E-07	4.984E-08
14	1.690E-10	1.365E-09	7.734E-09	5.961E-08	5.910E-07	4.035E-06	1.336E-05	1.740E-05	1.336E-05	4.035E-06	5.910E-07	5.961E-08
15	2.002E-10	1.425E-09	8.118E-09	6.847E-08	5.765E-07	3.320E-06	9.918E-06	1.251E-05	9.918E-06	3.320E-06	5.765E-07	6.847E-08
16	2.130E-10	1.360E-09	8.045E-09	7.323E-08	5.161E-07	2.536E-06	6.943E-06	8.584E-06	6.943E-06	2.536E-06	5.161E-07	7.323E-08
17	2.008E-10	1.174E-09	7.234E-09	6.644E-08	4.130E-07	1.751E-06	4.470E-06	5.415E-06	4.470E-06	1.751E-06	4.130E-07	6.644E-08
18	1.615E-10	8.950E-10	5.527E-09	4.705E-08	2.784E-07	1.057E-06	2.504E-06	3.342E-06	2.504E-06	1.057E-06	2.784E-07	4.705E-08
19	1.112E-10	5.861E-10	3.447E-09	2.673E-08	1.467E-07	5.280E-07	1.188E-06	1.479E-06	1.188E-06	5.280E-07	1.467E-07	2.673E-08
20	6.542E-11	3.257E-10	1.711E-09	1.169E-08	5.023E-08	2.068E-07	4.352E-07	5.526E-07	4.352E-07	2.068E-07	5.023E-08	1.169E-08
21	3.219E-11	1.525E-10	6.921E-10	3.756E-09	1.786E-08	5.893E-08	1.214E-07	1.540E-07	1.214E-07	5.893E-08	1.786E-08	3.756E-09
22	1.376E-11	6.066E-11	2.432E-10	9.732E-10	4.132E-09	1.227E-08	2.423E-08	3.112E-08	2.423E-08	1.227E-08	4.132E-09	9.732E-10
23	5.338E-12	2.037E-11	7.509E-11	2.426E-10	7.356E-10	1.995E-09	3.817E-09	4.742E-09	3.817E-09	1.995E-09	7.356E-10	2.426E-10
24	2.013E-12	6.102E-12	2.032E-11	5.926E-11	1.451E-10	2.985E-10	4.868E-10	5.304E-10	4.868E-10	2.985E-10	1.451E-10	5.926E-11
25	7.119E-13	1.787E-12	4.775E-12	1.285E-11	2.930E-11	5.390E-11	7.877E-11	8.958E-11	7.877E-11	5.390E-11	2.930E-11	1.285E-11

14400 SEC. AFTER START OF RELEASE
TOT. 190 PUFFS RELEASED AND 100 HAVE LEFT THE GRID

*** Z-PLAN NO = 1 *** DOSE (GS/M**3)

	6	7	8	9	10	11	12	13	14	15	16	17
1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.540E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00
2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.353E-07	5.059E-02	2.353E-07	0.000E+00	0.000E+00	0.000E+00
3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.284E-09	6.748E-05	1.621E-02	6.748E-05	1.284E-09	0.000E+00	0.000E+00
4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.140E-11	2.165E-07	3.723E-04	8.231E-03	3.723E-04	2.165E-07	3.140E-11	0.000E+00
5	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.031E-09	3.391E-06	5.759E-04	5.134E-03	5.759E-04	3.391E-06	3.031E-09	0.000E+00
6	0.000E+00	0.000E+00	0.000E+00	9.833E-11	5.975E-08	1.617E-05	8.364E-04	3.541E-03	8.364E-04	1.617E-05	5.975E-08	9.833E-11
7	0.000E+00	0.000E+00	[illegible]	1.947E-09	4.433E-07	4.123E-05	8.904E-04	2.614E-03	8.904E-04	4.123E-05	4.433E-07	1.947E-09
8	0.000E+00	0.000E+00	[illegible]	1.740E-08	1.772E-06	7.403E-05	9.532E-04	2.022E-03	9.532E-04	7.403E-05	1.772E-06	1.740E-08
9	0.000E+00	4.145E-12	[illegible]	8.963E-08	4.737E-06	1.079E-04	9.068E-04	1.318E-03	9.068E-04	1.079E-04	4.737E-06	8.963E-08
10	0.000E+00	6.921E-11	[illegible]	3.119E-07	9.674E-06	1.379E-04	7.452E-04	1.330E-03	7.452E-04	1.379E-04	9.674E-06	3.119E-07
11	2.295E-12	4.506E-10	[illegible]	8.175E-07	1.641E-05	1.619E-04	6.826E-04	1.115E-03	6.826E-04	1.619E-04	1.641E-05	8.175E-07
12	4.051E-11	[illegible]	[illegible]	1.739E-06	2.442E-05	1.796E-04	6.234E-04	8.517E-04	6.234E-04	1.796E-04	2.442E-05	1.739E-06
13	2.106E-10	7.252E-09	[illegible]	3.166E-06	3.305E-05	1.915E-04	5.691E-04	8.232E-04	5.691E-04	1.915E-04	3.305E-05	3.166E-06
14	8.157E-10	2.091E-08	[illegible]	5.119E-06	4.169E-05	1.995E-04	5.201E-04	7.203E-04	5.201E-04	1.995E-04	4.169E-05	5.119E-06
15	2.570E-09	[illegible]	[illegible]	7.553E-06	4.985E-05	2.019E-04	4.764E-04	6.356E-04	4.764E-04	2.019E-04	4.985E-05	7.553E-06
16	6.867E-09	1.075E-07	1.237E-06	1.039E-05	5.735E-05	2.021E-04	4.374E-04	5.674E-04	4.374E-04	2.021E-04	5.735E-05	1.039E-05
17	1.600E-08	2.037E-07	1.954E-06	1.347E-05	6.388E-05	2.003E-04	4.027E-04	5.094E-04	4.027E-04	2.003E-04	6.388E-05	1.347E-05
18	3.319E-08	[illegible]	[illegible]	1.671E-05	6.942E-05	1.969E-04	3.718E-04	4.604E-04	3.718E-04	1.969E-04	6.942E-05	1.671E-05
19	6.201E-08	5.606E-07	3.831E-06	1.995E-05	7.390E-05	1.922E-04	3.439E-04	4.182E-04	3.439E-04	1.922E-04	7.390E-05	1.995E-05
20	1.047E-07	8.265E-07	[illegible]	2.297E-05	7.710E-05	1.861E-04	3.181E-04	3.007E-04	3.181E-04	1.861E-04	7.710E-05	2.297E-05
21	1.530E-07	1.122E-06	[illegible]	2.537E-05	7.838E-05	1.777E-04	2.920E-04	3.449E-04	2.920E-04	1.777E-04	7.838E-05	2.537E-05
22	2.132E-07	1.390E-06	6.912E-06	2.647E-05	7.647E-05	1.647E-04	2.622E-04	3.063E-04	2.622E-04	1.647E-04	7.647E-05	2.647E-05
23	2.464E-07	1.504E-06	7.060E-06	2.545E-05	6.961E-05	1.445E-04	2.243E-04	2.598E-04	2.243E-04	1.445E-04	6.961E-05	2.545E-05
24	2.463E-07	1.420E-06	[illegible]	2.189E-05	5.778E-05	1.161E-04	1.769E-04	2.036E-04	1.769E-04	1.161E-04	5.778E-05	2.189E-05
25	2.042E-07	1.136E-06	4.906E-06	1.637E-05	4.201E-05	3.264E-05	1.242E-04	1.423E-04	1.242E-04	3.264E-05	4.201E-05	1.637E-05

*** GAMMADOSES : *** DOSE (REM)

	6	7	8	9	10	11	12	13	14	15	16	17
1	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.032E-06	2.903E-03	2.032E-06	0.000E+00	0.000E+00	0.000E+00
2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.779E-09	1.815E-07	2.024E-05	4.451E-03	2.024E-05	1.815E-07	5.779E-09	0.000E+00
3	0.000E+00	0.000E+00	0.000E+00	9.989E-10	2.609E-08	6.976E-07	4.401E-05	1.908E-03	4.401E-05	6.976E-07	2.609E-08	9.989E-10
4	0.000E+00	0.000E+00	1.675E-10	3.616E-09	7.144E-08	1.438E-06	6.337E-05	1.052E-03	6.337E-05	1.438E-06	7.144E-08	3.616E-09
5	0.000E+00	3.699E-11	6.652E-10	9.542E-09	1.498E-07	2.137E-06	8.600E-05	7.159E-04	8.600E-05	2.137E-06	1.498E-07	9.542E-09
6	1.991E-12	1.599E-10	1.720E-09	2.087E-08	2.415E-07	3.191E-06	1.145E-04	5.116E-04	1.145E-04	3.191E-06	2.415E-07	2.087E-08
7	2.080E-11	3.834E-10	3.679E-09	3.799E-08	3.442E-07	5.288E-06	1.204E-04	3.932E-04	1.204E-04	5.288E-06	3.442E-07	3.799E-08
8	5.165E-11	7.825E-10	7.138E-09	5.856E-08	4.831E-07	8.644E-06	1.193E-04	3.146E-04	1.193E-04	8.644E-06	4.831E-07	5.856E-08
9	1.105E-10	1.460E-09	[illegible]	8.294E-08	7.161E-07	1.176E-05	1.169E-04	2.581E-04	1.169E-04	1.176E-05	7.161E-07	8.294E-08
10	2.210E-10	2.571E-09	[illegible]	1.158E-07	1.089E-06	1.529E-05	1.138E-04	2.165E-04	1.138E-04	1.529E-05	1.089E-06	1.158E-07
11	4.176E-10	4.007E-09	2.535E-08	1.620E-07	1.686E-06	1.950E-05	1.103E-04	1.839E-04	1.103E-04	1.950E-05	1.686E-06	1.620E-07
12	7.310E-10	5.880E-09	[illegible]	2.293E-07	2.633E-06	2.452E-05	1.069E-04	1.576E-04	1.069E-04	2.452E-05	2.633E-06	2.293E-07
13	1.172E-09	8.461E-09	4.859E-08	3.315E-07	3.575E-06	2.780E-05	1.012E-04	1.377E-04	1.012E-04	2.780E-05	3.575E-06	3.315E-07
14	1.836E-09	1.248E-08	6.623E-08	4.851E-07	4.537E-06	2.930E-05	9.360E-05	1.211E-04	9.360E-05	2.930E-05	4.537E-06	4.851E-07
15	2.830E-09	1.715E-08	9.001E-08	7.150E-07	5.579E-06	3.007E-05	8.618E-05	1.072E-04	8.618E-05	3.007E-05	5.579E-06	7.150E-07
16	4.338E-09	2.285E-08	1.243E-07	1.058E-06	6.723E-06	3.043E-05	7.921E-05	9.627E-05	7.921E-05	3.043E-05	6.723E-06	1.058E-06
17	6.432E-09	[illegible]	1.736E-07	1.494E-06	7.990E-06	3.052E-05	7.313E-05	8.661E-05	7.313E-05	3.052E-05	7.990E-06	1.494E-06
18	8.614E-09	3.964E-08	2.430E-07	1.882E-06	9.375E-06	3.042E-05	6.731E-05	7.846E-05	6.731E-05	3.042E-05	9.375E-06	1.882E-06
19	1.111E-08	5.205E-08	3.431E-07	2.272E-06	1.088E-05	3.019E-05	6.243E-05	7.173E-05	6.243E-05	3.019E-05	1.088E-05	2.272E-06
20	1.396E-08	6.301E-08	4.318E-07	2.670E-06	1.188E-05	2.960E-05	5.761E-05	6.541E-05	5.761E-05	2.960E-05	1.188E-05	2.670E-06
21	1.692E-08	8.970E-08	6.677E-07	3.033E-06	1.228E-05	2.910E-05	5.309E-05	5.956E-05	5.309E-05	2.910E-05	1.228E-05	3.033E-06
22	1.945E-08	1.119E-07	[illegible]	3.265E-06	1.215E-05	2.760E-05	4.773E-05	5.317E-05	4.773E-05	2.760E-05	1.215E-05	3.265E-06
23	2.096E-08	1.279E-07	8.396E-07	3.289E-06	1.104E-05	2.489E-05	4.111E-05	4.516E-05	4.111E-05	2.489E-05	1.104E-05	3.289E-06
24	2.016E-08	1.266E-07	7.505E-07	2.952E-06	9.033E-06	2.066E-05	3.164E-05	3.432E-05	3.164E-05	2.066E-05	9.033E-06	2.952E-06
25	1.666E-08	1.024E-07	5.777E-07	2.213E-06	6.539E-06	1.451E-05	2.217E-05	2.455E-05	2.217E-05	1.451E-05	6.539E-06	2.213E-06

ARRIVAL TIMES (SEC)

	1	2	3	4	5	6	7	8	9	10	11	12
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	100
3	0	0	0	0	0	0	0	0	0	0	220	120
4	0	0	0	0	0	0	0	0	0	380	240	130
5	0	0	0	0	0	0	0	0	0	330	230	220
6	0	0	0	0	0	0	0	0	560	400	320	280
7	0	0	0	0	0	0	0	820	550	440	380	340
8	0	0	0	0	0	0	0	760	590	500	440	400
9	0	0	0	0	0	0	1020	760	620	540	500	460
10	0	0	0	0	0	0	960	730	660	600	560	520
11	0	0	0	0	0	[illegible]	960	820	720	650	620	600
12	0	0	0	0	0	[illegible]	980	850	790	720	680	660
13	0	0	0	0	0	[illegible]	1020	900	840	780	740	720
14	0	0	0	0	1440	1200	1060	950	900	840	820	800
15	0	0	0	0	1440	[illegible]	1100	1020	960	900	890	860
16	0	0	0	1700	1440	1260	1160	1030	1020	930	940	920
17	0	0	0	1700	1440	1300	1220	1140	1080	1040	1020	1000
18	0	0	0	1700	1430	1360	1260	1200	1140	1100	1080	1060
19	0	0	1930	1700	1520	1420	1320	1290	1220	1130	1140	1140
20	0	0	1960	1700	1560	1460	1330	1320	1280	1240	1220	1200
21	0	2240	1950	1740	1520	1520	1440	1330	1340	1300	1280	1280
22	0	2240	1960	1780	1580	1580	1520	1460	1420	1330	1360	1340
23	0	2240	1990	1840	1740	1640	1580	1520	1480	1440	1420	1420
24	0	2240	2020	1880	1780	1700	1640	1550	1540	1520	1500	1480
25	0	2240	2060	1940	1840	1730	1700	1550	1620	1580	1560	1560

ARRIVAL TIMES (SEC)

	13	14	15	16	17	18	19	20	21	22	23	24
1	20	0	0	0	0	0	0	0	0	0	0	0
2	60	100	0	0	0	0	0	0	0	0	0	0
3	100	120	220	0	0	0	0	0	0	0	0	0
4	160	160	240	[illegible]	0	0	0	0	0	0	0	0
5	220	220	260	330	0	0	0	0	0	0	0	0
6	280	280	320	400	560	0	0	0	0	0	0	0
7	340	340	330	440	560	820	0	0	0	0	0	0
8	400	400	440	500	580	760	0	0	0	0	0	0
9	460	460	500	540	620	760	1020	0	0	0	0	0
10	520	520	550	600	660	780	960	0	0	0	0	0
11	600	600	620	660	720	[illegible]	960	1230	0	0	0	0
12	660	660	680	720	780	860	980	1200	0	0	0	0
13	720	720	740	780	840	900	1020	1200	0	0	0	0
14	800	800	820	840	900	950	1060	1200	1440	0	0	0
15	860	860	830	900	960	1020	1100	1220	1440	0	0	0
16	920	920	940	980	1020	1030	1160	1250	1440	1700	0	0
17	1000	1000	1020	1040	1020	1140	1220	1300	1440	1700	0	0
18	1060	1060	1060	1100	1140	1200	1260	1360	1480	1700	0	0
19	1140	1140	1140	1130	1220	1260	1320	1420	1520	1700	1960	0
20	1200	1200	1220	1240	1290	1320	1380	1460	1560	1700	1960	0
21	1280	1280	1260	1300	1340	1380	1440	1520	1620	1740	1960	2240
22	1340	1340	1360	1330	1420	1460	1520	1580	1690	1780	1960	2240
23	1420	1420	1420	1440	1490	1520	1590	1640	1740	1840	1980	2240
24	1480	1480	1500	1520	1540	1590	1640	1700	1780	1830	2020	2240
25	1560	1560	1560	1580	1620	1660	1700	1760	1840	1940	2060	2240

```
       25
*** ARRIVAL TIMES  (SEC) ****************************************************************************************
  1          0
  2          0
  3          0
  4          0
  5          0
  6          0
  7          0

  8          0
  9          0
 10          0
 11          0
 12          0
 13          0
 14          0
 15          0
 16          0
 17          0
 18          0
 19          0
 20          0
 21          0
 22          0
 23          0
 24          0
 25          0
```

8.4. Example no. 4

The files INDATA and WINDDA for calculations of integrated air-concentrations with wind shear are shown below:

8.4.1. INDATA file

```
&PRIMDA
TITLE='KFK-MODELCOMPARISON JAN. 1985: EXPERIMENT 1. SHEAR',
ICOLS=100,JROWS=64,KPLANS=1,DELX=300.,DELY=300.,DELZ=30.,
TDEL=0.0,CHEMIN=0.1E-15,NTADV=10,TAU=10,MAPTIM=600,REFLEC=1.,
NRELSE=9999,IDMP=1,JDMP=24,KDMP=1,ISMODE=4,ITAPIN=0,
KOORD=0,XUTM= 0.,YUTM=0.,
INPRNT='YES',OUTDAT='OUTPUT',OUTMOD='DOSE',OUTWFD='NOOUTP'
&END
&RELDAT
PUFFTX='SOURCEHEIGHT=100 METERS, SOURCESTRENGTH=1/3600',
NRMULT=1,
XSOURC(1)=0.00 ,YSOURC(1)=31.0,ZSOURC(1)=0.33333333333,
STRTRL(1)=0,STOPRL(1)=3600,SOURST(1)=2.7777777778,HEATFX(1)=0.,
&END
&STABDA
STABTX='MIXING HEIGHT IS INFINITE',
DTDZ=0.,ZMTAB(1)=0.,ZMTAB(2)=0.,ZMTAB(3)=0.,ZMTAB(4)=0.,
ZMTAB(5)= 0.,ZMTAB(6)=0.,
DSHEAR=1,ALFSHE=45.0,HSHEMI=1.0,HSHEMA=201.0,
USH=1,USTAR=0.265,LMOBUK=70.0,ZROUGH=1.2,DZERO=0.0,
DUSDUM=0,
DEPMOD=0,OUTDEP='NOOUTP',
VDTAB(1,1)=0.010,VDTAB(2,1)=0.010,VDTAB(3,1)=0.010,
VDTAB(4,1)=0.010,VDTAB(5,1)=0.010,VDTAB(6,1)=0.010,
VDTAB(1,2)=0.010,VDTAB(2,2)=0.010,VDTAB(3,2)=0.010,
VDTAB(4,2)=0.010,VDTAB(5,2)=0.010,VDTAB(6,2)=0.010,
VDTAB(1,3)=0.010,VDTAB(2,3)=0.010,VDTAB(3,3)=0.010,
```

```
VDTAB(4,3)=0.010,VDTAB(5,3)=0.010,VDTAB(6,3)=0.010,
VDTAB(1,4)=0.010,VDTAB(2,4)=0.010,VDTAB(3,4)=0.010,
VDTAB(4,4)=0.010,VDTAB(5,4)=0.010,VDTAB(6,4)=0.010,
VDTAB(1,5)=0.010,VDTAB(2,5)=0.010,VDTAB(3,5)=0.010,
VDTAB(4,5)=0.010,VDTAB(5,5)=0.010,VDTAB(6,5)=0.010,
LDTAB(1)=0.000042,LDTAB(2)=0.000106,LDTAB(3)=0.000233,
TIMRAI(1)=1692,TIMRAI(2)=2628,TIMRAI(3)=2232
&END
&GAMDA
GAMMOD=0,OUTGAM='NOOUTP',
FGAM(1)=0.0,FGAM(2)=0.0,FGAM(3)=0.0,FGAM(4)=0.0,FGAM(5)=0.0,
FGAM(6)=1.0,FGAM(7)=0.0,FGAM(8)=0.0
&END
```

Note: One space is required in the beginning of each line.

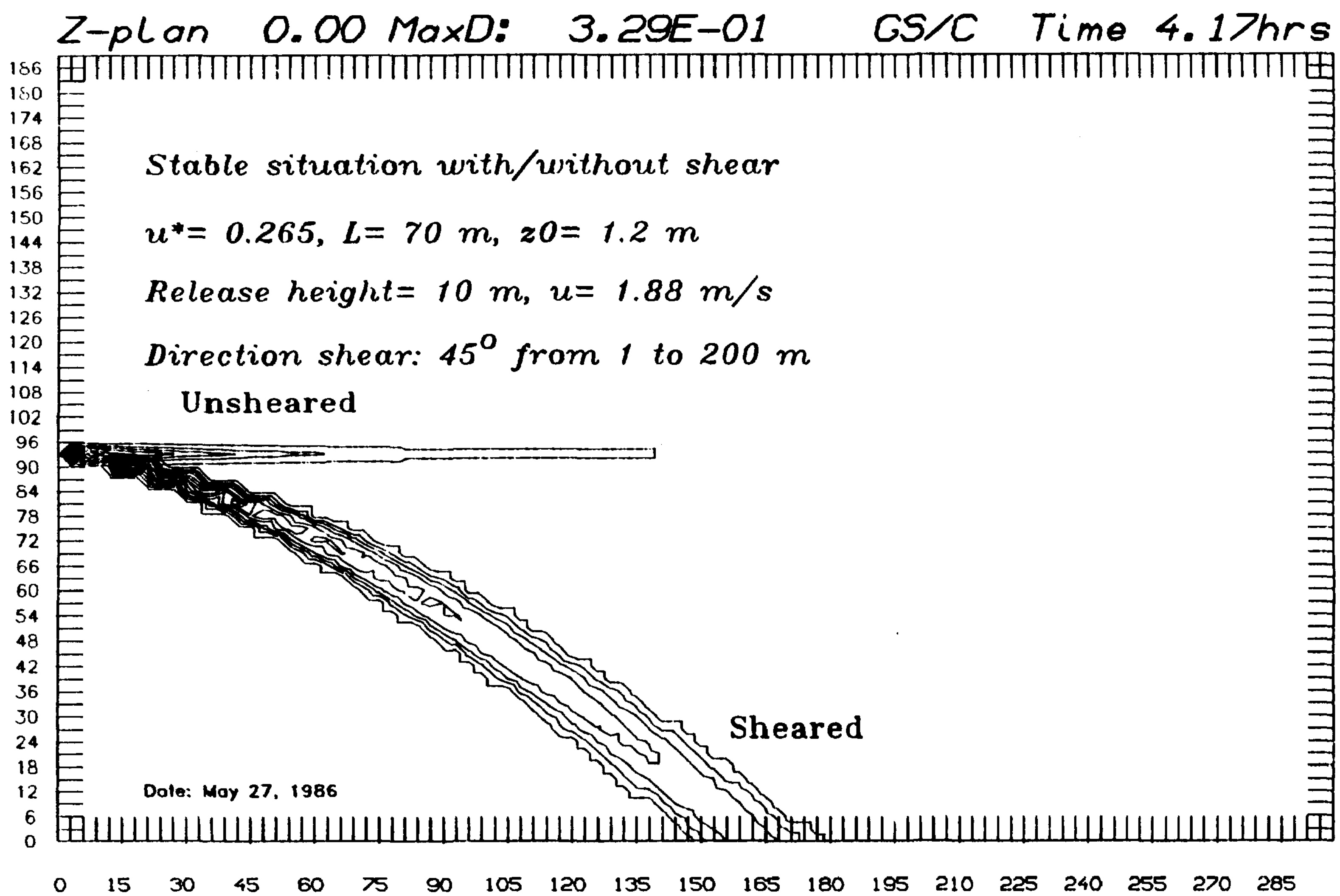
8.4.2. WINDDA file

```
&WINPAR
WNDTLE='WINDDATA KFK EXPERIMENT NO. 1 ',
TIME=' 12:10',DATE='14-FEB-85',ITSP=600,
NP=1,NFX=100,NFY=64,NSTL=1,NSKIP=0,
RTE=0.,RCH=100.,
NAMST(1)='KFK',X(1)=1.,Y(1)=32.,COR(1)=0.,CONFAC(1)=1.0000,
A(1)=0.,ISXMIN(1)=1,ISXMAX(1)=100,ISYMIN(1)=1,ISYMAX(1)=64,
&END
' 12:10'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 12:20'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 12:30'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 12:40'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 12:50'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 13:00'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 13:10'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 13:20'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 13:30'
```

```
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 13:40'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 13:50'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 14:00'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 14:10'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 14:20'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 14:30'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 14:40'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 14:50'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 15:00'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 15:10'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 15:20'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 15:30'
```

```
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 15:40'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 15:50'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 16:00'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 16:10'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 16:20'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 16:30'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 16:40'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 16:50'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 17:00'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 17:10'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 17:20'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 17:30'
```

```
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 17:40'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 17:50'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 18:00'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 18:10'
'KFK',2.6,2.3,270,1.8779,0.0
'EOWR'
' 18:20'
'KFK',2.6,2.3,270,1.8779,0.0
'STOP'
```



Example no. 4: Air concentrations at ground level.

8.5. Example no. 5

The files INDATA and WINDDA for calculations of integrated concentrations of a fictive radioactive isotope with a half-life of 1 hour is shown below.
The data is the same as in example 2 except for the isotope data.

8.5.1. INDATA file

```
&PRIMDA
TITLE='DEMO 1. DRY AND WET DEPOSITION  ',
ICOLS=100,JROWS=64,KPLANS=1,DELX=300.,DELY=300.,DELZ=30.,
TDEL=0.0,CHEMIN=0.1E-15,NTADV=60,TAU=60,MAPTIM=900,REFLEC=1.,
NRELSE=9999,IDMP=1,JDMP=26,KDMP=1,ISMODE=1,ITAPIN=0,
KOORD=0,XUTM=332.7609,YUTM=5381.6323,
INPRNT='YES',OUTDAT='OUTPUT',OUTMOD='DOSE',OUTWFD='NOOUTP'
&END
&RELDAT
PUFFTX='SOURCEHEIGHT=100 METERS, SOURCESTRENGTH=1/3600',
NRMULT=1,
XSOURC(1)=0.0,YSOURC(1)=32.0,ZSOURC(1)=3.3333,
STRTRL(1)=0,STOPRL(1)=3600,SOURST(1)=277.77777778,HEATFX(1)=0.,
ISNAVN(1)='FIKTIV',ISDCAY(1)=1.9254088E-4
&END
&STABDA
STABTX='MIXING HEIGHT VARIES WITH STABILITY .',
DTDZ=0.,ZMTAB(1)=1620.0,ZMTAB(2)=1200.,ZMTAB(3)=810.,
ZMTAB(4)=570.,ZMTAB(5)=330.,ZMTAB(6)=210.,
SIGYIN=1.,SIGZIN=1.0,
DSHEAR=0,ALFSHE=-5.0,HSHEMI=0.0,HSHEMA=200.0,
USH=0,USTAR=0.1397,LMOBUK=44.64,ZROUGH=0.1,DZERO=0.0,
DUSDUM=0,
DEPMOD=1,OUTDEP='OUTPUT',
```

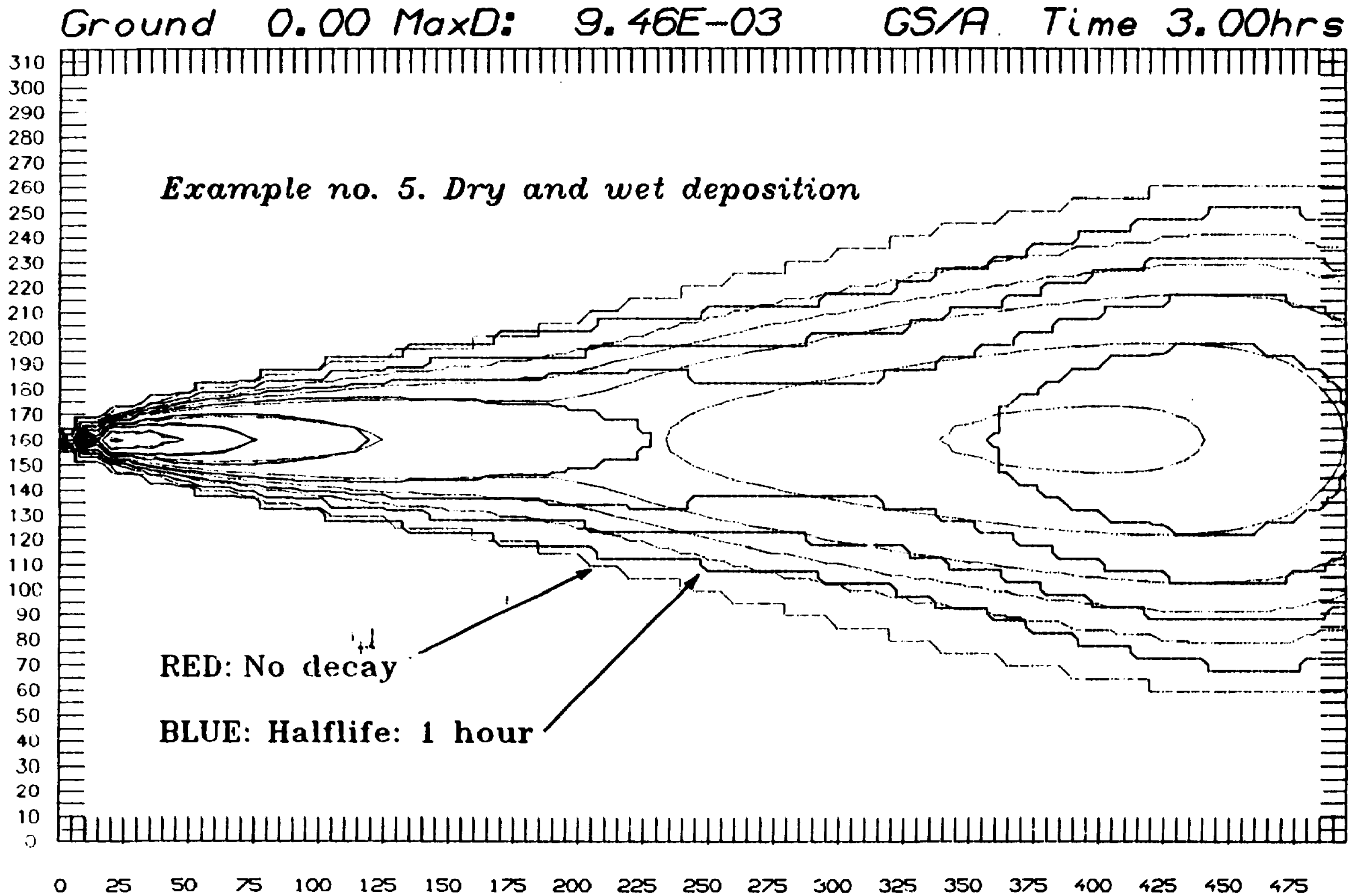
```
VDTAB(1,1)=0.010,VDTAB(2,1)=0.010,VDTAB(3,1)=0.010,
VDTAB(4,1)=0.010,VDTAB(5,1)=0.010,VDTAB(6,1)=0.010,
VDTAB(1,2)=0.010,VDTAB(2,2)=0.010,VDTAB(3,2)=0.010,
VDTAB(4,2)=0.010,VDTAB(5,2)=0.010,VDTAB(6,2)=0.010,
VDTAB(1,3)=0.010,VDTAB(2,3)=0.010,VDTAB(3,3)=0.010,
VDTAB(4,3)=0.010,VDTAB(5,3)=0.010,VDTAB(6,3)=0.010,
VDTAB(1,4)=0.010,VDTAB(2,4)=0.010,VDTAB(3,4)=0.010,
VDTAB(4,4)=0.010,VDTAB(5,4)=0.010,VDTAB(6,4)=0.010,
VDTAB(1,5)=0.010,VDTAB(2,5)=0.010,VDTAB(3,5)=0.010,
VDTAB(4,5)=0.010,VDTAB(5,5)=0.010,VDTAB(6,5)=0.010,
LDTAB(1)=0.000042,LDTAB(2)=0.000106,LDTAB(3)=0.000233,
TIMRAI(1)=1692,TIMRAI(2)=2628,TIMRAI(3)=2232
&END
```

Note: One space is required in the beginning of each line.

8.5.2. WINDDA file

```
&WINPAR
WNDTLE='WINDDATA (CONSTANT WIND) FOR KFK-INTERCOMP. TEST',
TIME=' 12:00',DATE='25-MAR-85',ITSP=1800,
NP=1,NFX=100,NFY=64,NSTL=1,NSKIP=0,
RTE=0.,RCH=100.,HWOBS=100.,
NAMST(1)='KFK',X(1)=0.,Y(1)=32.,COR(1)=0.,CONFAC(1)=1.0000,
A(1)=0.,ISXMIN(1)=1,ISXMAX(1)=100,ISYMIN(1)=1,ISYMAX(1)=64,
&END
' 12:00'
'KFK','D','D',270.,5.00,0.0
'EOWR'
' 12:30'
'KFK','D','D',270.,5.00,0.0
'EOWR'
' 13:00'
'KFK','D','D',270.,5.00,0.0
'EOWR'
' 13:30'
'KFK','D','D',270.,5.00,2.0
'EOWR'
' 14:00'
'KFK','D','D',270.,5.00,0.0
'EOWR'
' 14:30'
'KFK','D','D',270.,5.00,0.0
'EOWR'
' 15:00'
'KFK','D','D',270.,5.00,0.0
'EOWR'
' 15:30'
'KFK','D','D',270.,5.00,0.0
'EOWR'
' 16:00'
```

```
'KFK','D','D',270.,5.00,0.0
'EOWR'
' 16:30'
'KFK','D','D',270.,5.00,0.0
'STOP'
```



Example no. 5: Concentrations of deposited material

8.6. Example no. 6

The files INDATA and WINDDA for calculations of total individual and collective doses from a release of Iodine 131.

8.6.1. INDATA file

```
&PRIMDA
TITLE='RINGHALS: IODINE DOSES TO BONE MARROW: LAESQ',
ICOLS=100,JROWS=100,KPLANS=1,DELX=4000.,DELY=4000.,DELZ=30.,
TDEL=0.0,CHEMIN=0.1E-15,NTADV=60,TAU=60,MAPTIM=900,REFLEC=1.,
NRELSE=10860,IDMP= 10,JDMP=34,KDMP=1,ISMODE=1,ITAPIN=0,
KOORD=1,XUTM=400.0000,YUTM=6030.0000,IBFOPT=4,
INPRNT='YES',OUTDAT='NOOUTP',OUTMOD='DOSE',OUTWFD='NOOUTP',
OUTBEF='OUTPUT'
&END
&RELDAT
PUFFTX='SOURCEHEIGHT=100 METERS, SOURCESTRENGTH=5.865E+7 CI',
NRMULT=1,
XSOURC(1)=690.0,YSOURC(1)=6200.0,ZSOURC(1)=3.333333333,
STRTRL(1)=0,STOPRL(1)=10800,SOURST(1)=5430.55555556,
HEATFX(1)=0.,
ISNAVN(1)='J 131 ',ISDCAY(1)=9.941E-7
&END
&STABDA
STABTX='MIXING HEIGHT VARIES WITH STABILITY .',
DTDZ=0.,ZMTAB(1)=1020.0,ZMTAB(2)=1020.,ZMTAB(3)=1020.,
ZMTAB(4)=1020.,ZMTAB(5)=510.,ZMTAB(6)=210.,
SIGYIN=1.,SIGZIN=1.0,
DSHEAR=0,ALFSHE=-5.0,HSHEMI=0.0,HSHEMA=200.0,
USH=0,USTAR=0.1397,LMOBUK=44.64,ZROUGH=0.1,DZERO=0.0,
DUSDUM=0,
DEPMOD=1,OUTDEP='NOOUTP',
VDTAB(1,1)=0.010,VDTAB(2,1)=0.010,VDTAB(3,1)=0.010,
```

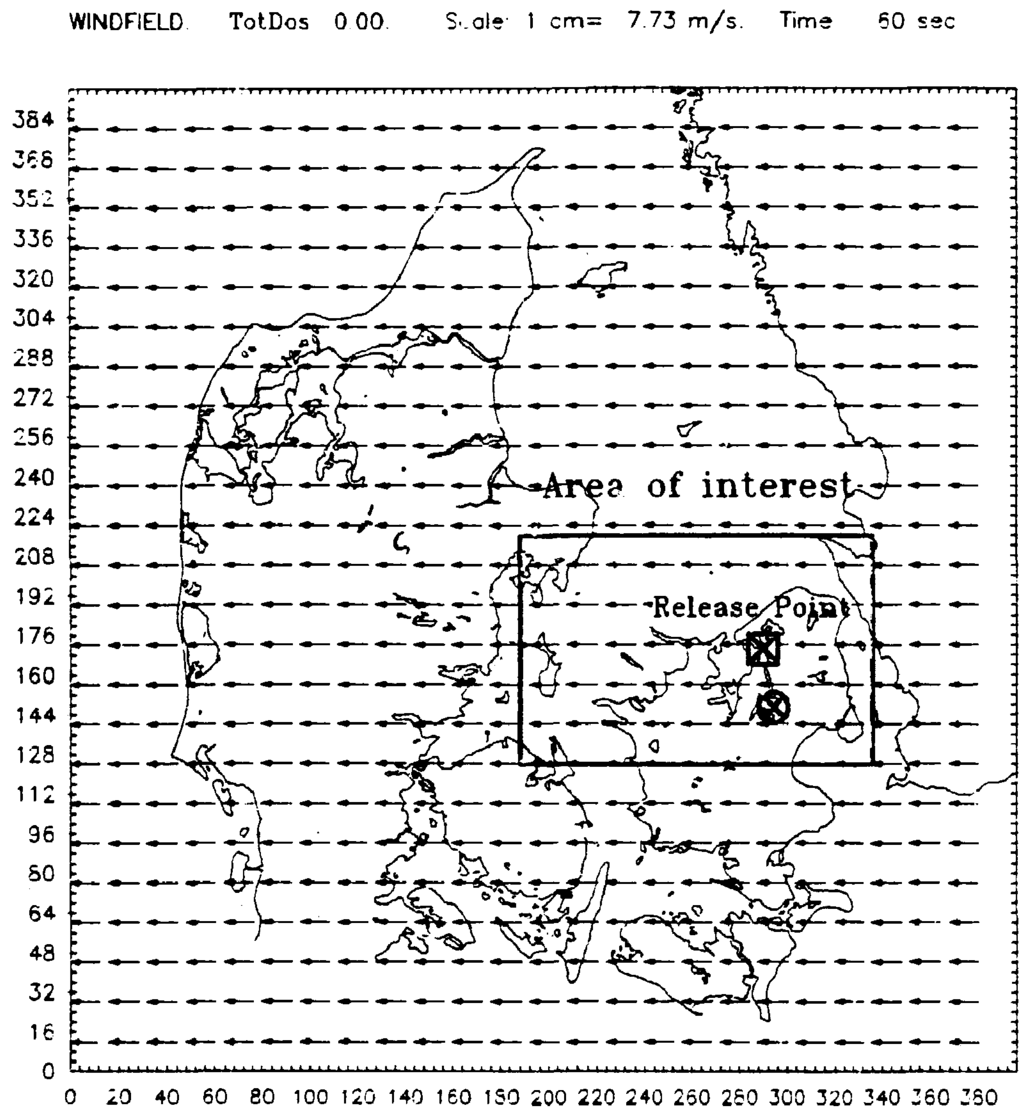
```
VDTAB(4,1)=0.010,VDTAB(5,1)=0.010,VDTAB(6,1)=0.0005,
VDTAB(1,2)=0.010,VDTAB(2,2)=0.010,VDTAB(3,2)=0.010,
VDTAB(4,2)=0.010,VDTAB(5,2)=0.010,VDTAB(6,2)=0.002,
VDTAB(1,3)=0.010,VDTAB(2,3)=0.010,VDTAB(3,3)=0.010,
VDTAB(4,3)=0.010,VDTAB(5,3)=0.010,VDTAB(6,3)=0.004,
VDTAB(1,4)=0.010,VDTAB(2,4)=0.010,VDTAB(3,4)=0.010,
VDTAB(4,4)=0.010,VDTAB(5,4)=0.010,VDTAB(6,4)=0.007,
VDTAB(1,5)=0.010,VDTAB(2,5)=0.010,VDTAB(3,5)=0.010,
VDTAB(4,5)=0.010,VDTAB(5,5)=0.010,VDTAB(6,5)=0.010,
LDTAB(1)=0.000100,LDTAB(2)=0.000350,LDTAB(3)=0.000350,
TIMRAI(1)=3600,TIMRAI(2)=3600,TIMRAI(3)=3600
&END
&GAMDA
GAMMOD=1,OUTGAM='NOOUTP',
FGAM(1)=0.0262,FGAM(2)=0.0,FGAM(3)=0.0027,
FGAM(4)=0.8787,FGAM(5)=0.0929,
FGAM(6)=0.0,FGAM(7)=0.0,FGAM(8)=0.0
&END
&DOSDA
RADDOS=.TRUE.,INDOS=.TRUE.,GAMDEP=.TRUE.,
ORGNAM='AK. MARV',DINHAL=150.0,BRRAT=3.5E-4,FLTFAK=1.0,
GDISO=1.59358E-3,DEPSHD=0.798,GAMSHD=1.0,ORGSHD=0.483,
TDPINT=99900,OUTTOT='OUTPUT'
&END
```

8.6.2. WINDDA file

```
&WINPAR
WNDTLE='WINDDATA (CONSTANT WIND) FOR LAESQ CALC.',
TIME='  0:00',DATE='29-SEP-86',ITSP=900,
NP=1,NFX=100,NFY=100,NSTL=2,NSKIP=0,
RTE=0.,RCH=100.,HWOBS=100.,
NAMST(1)='RIS',X(1)=693.85,Y(1)=6176.65,COR(1)=0.,CONFAC(1)=1.,
A(1)=0.,ISXMIN(1)=390000,ISXMAX(1)=842000,
ISYMIN(1)=6000000,ISYMAX(1)=6500000,
&END
'  0:00'
'RIS','F','F',90.,4.00,0.0
'EOWR'
' 00:15'
'RIS','D','D',90.,5.00,0.0
'EOWR'
' 00:30'
'RIS','F','F',90.,4.00,0.0
'EOWR'
' 00:45'
'RIS','F','F',90.,4.00,0.0
'EOWR'
' 01:00'
'RIS','F','F',90.,4.00,0.0
'EOWR'
' 01:15'
'RIS','F','F',90.,4.00,0.0
'EOWR'
' 01:30'
'RIS','F','F',90.,4.00,0.0
'EOWR'
'  1:45'
'RIS','F','F',90.,4.00,0.0
'EOWR'
```

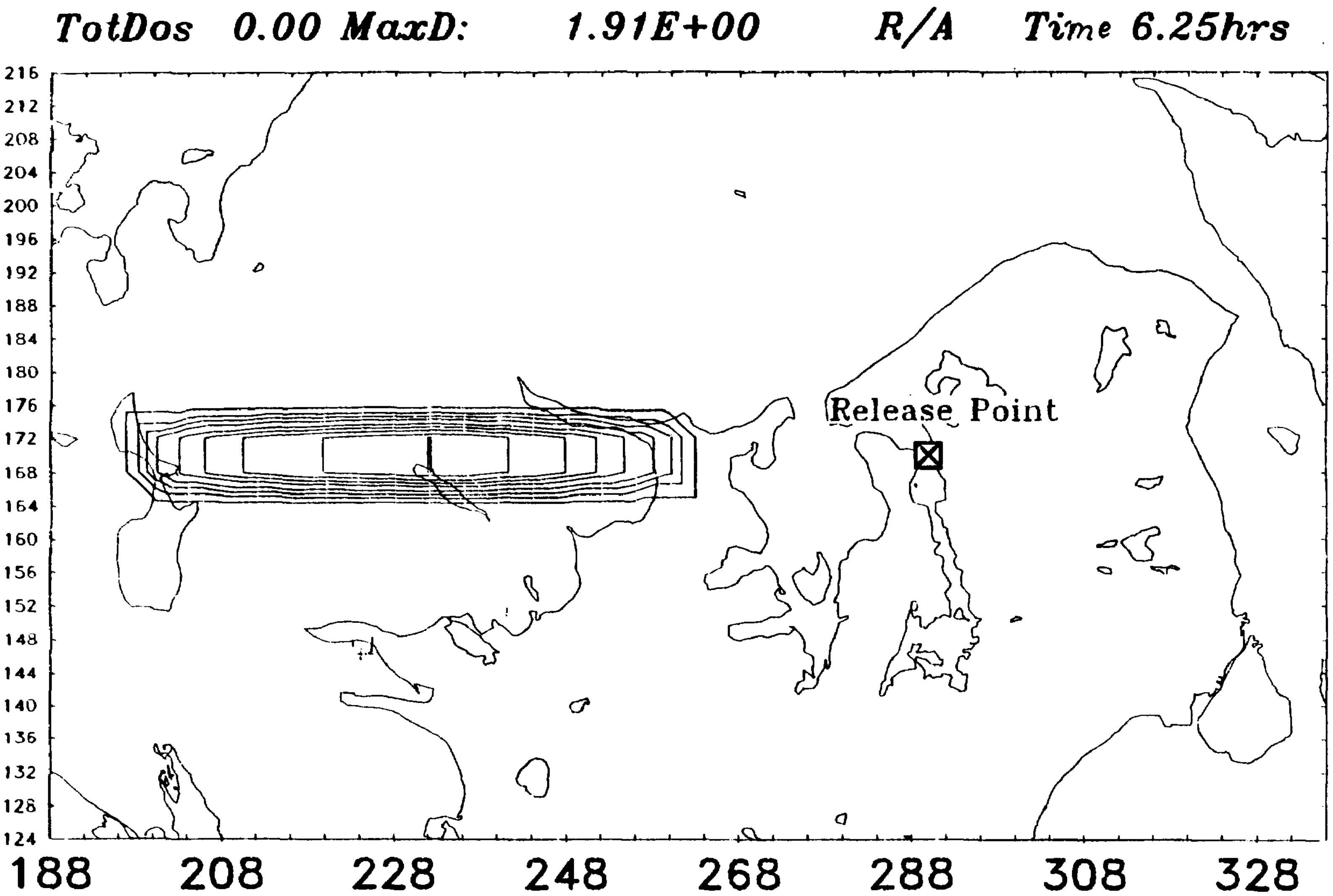
```
' 02:00'
'RIS','D','D',90.,4.00,0.0
'EOWR'
' 02:15'
'RIS','F','F',90.,4.00,0.0
'EOWR'
' 02:30'
'RIS','F','F',90.,4.00,0.0
'EOWR'
' 02:45'
'RIS','F','F',90.,4.00,0.0
'EOWR'
' 03:00'
'RIS','F','F',90.,4.00,0.0
'EOWR'
' 03:15'
'RIS','F','F',90.,4.00,0.0
'EOWR'
' 03:30'
'RIS','F','F',90.,4.00,0.0
'EOWR'
' 03:45'
'RIS','F','F',90.,4.00,1.0
'EOWR'
' 04:00'
'RIS','F','F',90.,4.00,1.0
'EOWR'
' 04:15'
'RIS','F','F',90.,4.00,1.0
'EOWR'
' 04:30'
'RIS','F','F',90.,4.00,1.0
'EOWR'
'  4:45'
'RIS','F','F',90.,4.00,1.0
'EOWR'
```

```
' 05:00'
'RIS','D','D',90.,4.00,1.0
'EOWR'
' 05:15'
'RIS','F','F',90.,4.00,1.0
'EOWR'
' 05:30'
'RIS','F','F',90.,4.00,1.0
'EOWR'
' 05:45'
'RIS','F','F',90.,4.00,1.0
'EOWR'
' 06:00'
'RIS','F','F',90.,4.00,1.0
'STOP'
```

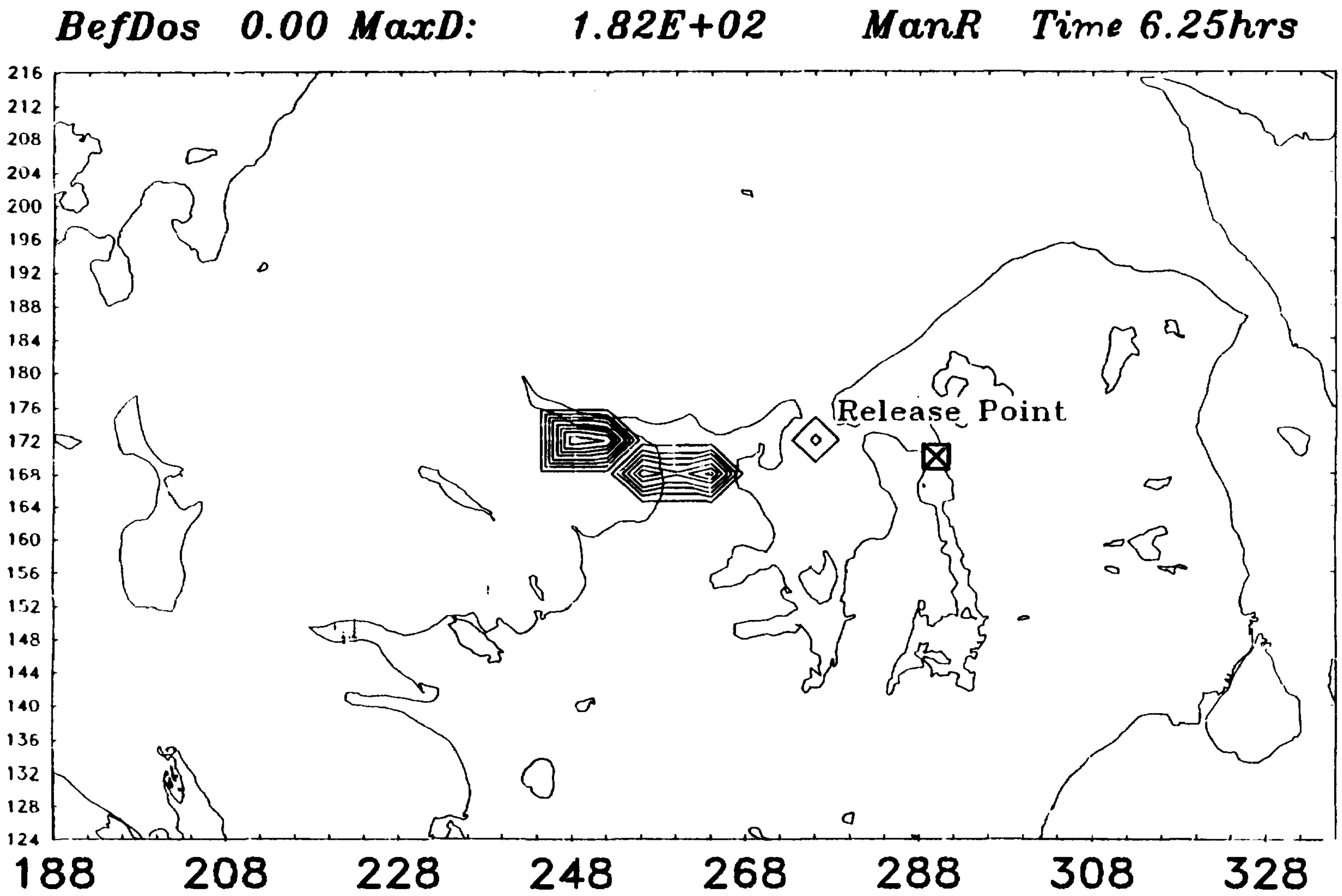


Example no. 6: Wind field

The area of interest for the dose calculations is shown



Example no. 6: Total doses to individuals



Example no. 6: Collective doses.

8.7. Example no. 7

The files INDATA and WINDDA for calculations of a release of HCl in complex terrain. Pentafication of puffs is in effect.

8.7.1. INDATA file

```
&PRIMDA
TITLE='VANDENBERG AFB. SHUTTLE SITE: 100 M',
ICOLS=50,JROWS=80,KPLANS=1,DELX=500.,DELY=500.,DELZ=50.,
TDEL=0.0,CHEMIN=1.0E-16,NTADV=20,TAU=20,MAPTIM=900,REFLEC=0.,
NRELSE=9999,IDMP=7,JDMP=38,KDMP=1,ISMODE=3,ITAPIN=0,
KOORD=1,XUTM= 714.1090386,YUTM=3809.792283,
INPRNT='YES',OUTDAT='OUTPUT',OUTMOD='DOSE',OUTWFD='OUTPUT',
PENTPF=.TRUE.,SYMPEN= 600.,ROCKET=.FALSE.
&END
&RELDAT
PUFFTX='SOURCEHEIGHT=100 METERS, SOURCE= 2. TON HCL PR. S',
NRMULT=1,
XSOURC(1)=718.0495114 ,YSOURC(1)=3829.16345807,ZSOURC(1)=2.000,
STRTRL(1)=0,STOPRL(1)=20,SOURST(1)=2.05E9,HEATFX(1)=0.,
ISNAVN(1)='OTHER ',ISDCAY(1)=1.0000E-30
&END
&STABDA
STABTX='MIXING HEIGHT IS 1000 M',
DTDZ=0.,ZMTAB(1)=1000.,ZMTAB(2)=1000.,ZMTAB(3)=1000.,
ZMTAB(4)=1000.,ZMTAB(5)=1000.,ZMTAB(6)=1000.,
DSHEAR=0,ALFSHE=45.0,HSHEMI=1.0,HSHEMA=201.0,
USH=0,USTAR=0.265,LMOBUK=70.0,ZROUGH=1.2,DZERO=0.0,
DUSDUM=0,
DEPMOD=0,OUTDEP='NOOUTP',
VDTAB(1,1)=0.010,VDTAB(2,1)=0.010,VDTAB(3,1)=0.010,
VDTAB(4,1)=0.010,VDTAB(5,1)=0.010,VDTAB(6,1)=0.010,
VDTAB(1,2)=0.010,VDTAB(2,2)=0.010,VDTAB(3,2)=0.010,
```

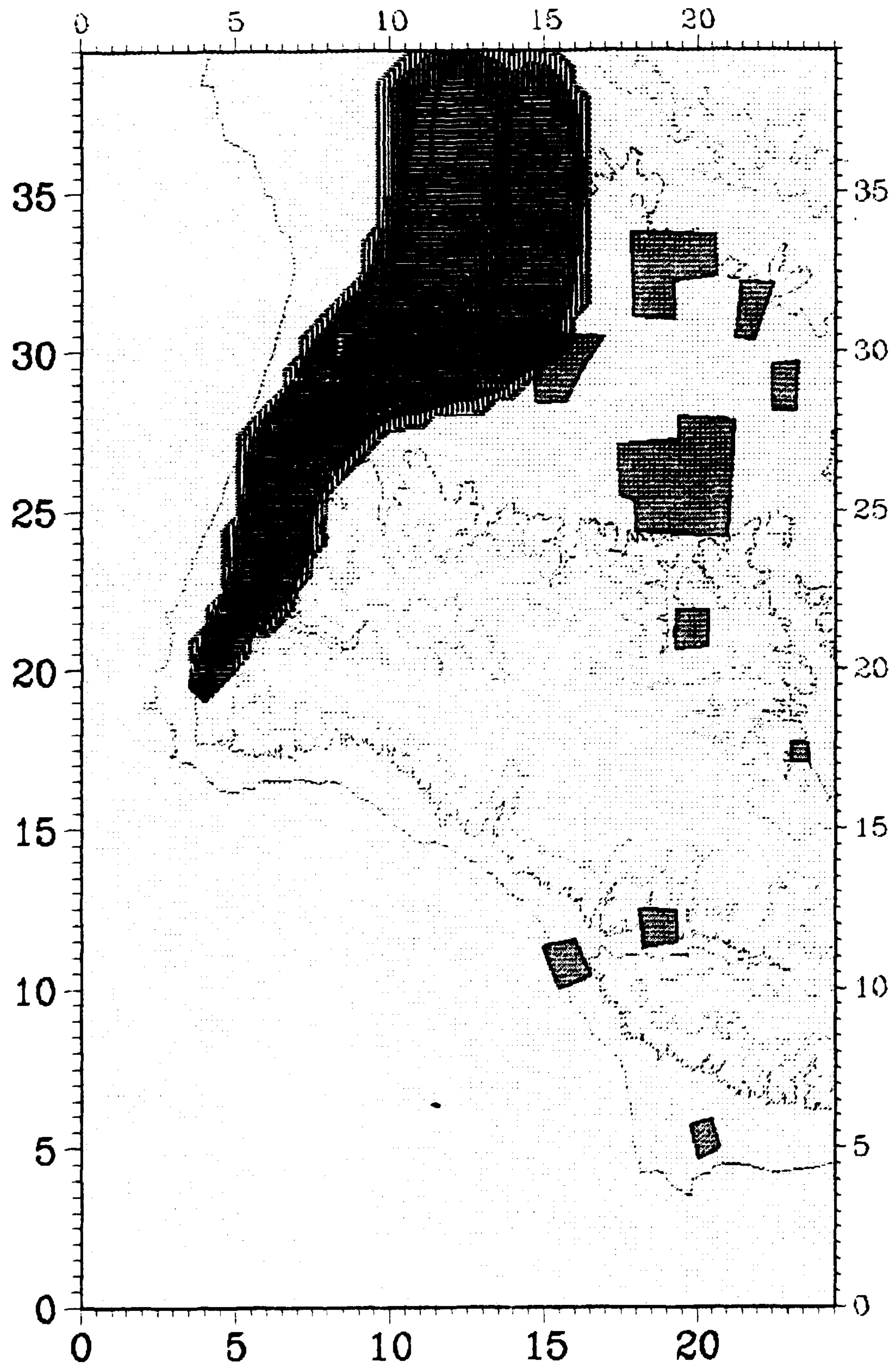
```
VDTAB(4,2)=0.010,VDTAB(5,2)=0.010,VDTAB(6,2)=0.010,
VDTAB(1,3)=0.010,VDTAB(2,3)=0.010,VDTAB(3,3)=0.010,
VDTAB(4,3)=0.010,VDTAB(5,3)=0.010,VDTAB(6,3)=0.010,
VDTAB(1,4)=0.010,VDTAB(2,4)=0.010,VDTAB(3,4)=0.010,
VDTAB(4,4)=0.010,VDTAB(5,4)=0.010,VDTAB(6,4)=0.010,
VDTAB(1,5)=0.010,VDTAB(2,5)=0.010,VDTAB(3,5)=0.010,
VDTAB(4,5)=0.010,VDTAB(5,5)=0.010,VDTAB(6,5)=0.010,
LDTAB(1)=0.000042,LDTAB(2)=0.000106,LDTAB(3)=0.000233,
TIMRAI(1)=1692,TIMRAI(2)=2628,TIMRAI(3)=2232,
SIGYIN=100.,SIGZIN=100.
&END
&GAMDA
GAMMOD=0,OUTGAM='NOOUTP',
FGAM(1)=0.0,FGAM(2)=0.0,FGAM(3)=0.0,FGAM(4)=0.0,FGAM(5)=0.0,
FGAM(6)=1.0,FGAM(7)=0.0,FGAM(8)=0.0
&END
&DOSDA
RADDOS=.FALSE.,INDOS=.FALSE.,GAMDEP=.FALSE.,
ORGNAM='COMM.DEQ',DINHAL=20715.0,BRRAT=3.5E-4,FLTFAK=0.404,
GDISO=3.04480E-3,DEPSHD=0.160,GAMSHD=0.73,ORGSHD=0.53103,
TDPINT=31536000,OUTTOT='NOOUTP'
&END
```

8.7.2. WINDDA file

```
&WINPAR
WNDTLE='WINDDATA FOR VANDENBERG AFB.: CASE 11A',
TIME=' 12:00',DATE='1984.07.14',ITSP=14400,
NP=11,NFX=50,NFY=80,NSTL=1,NSKIP=0,
RTE=4.0,RCH=100000.,HWOBS=16.4,FLOFLD=.FALSE.,
NAMST(1)='009',X(1)=724.907,Y(1)=3837.914,COR(1)=0.,
CONFAC(1)=1.0000,A(1)=0.,ISXMIN(1)=714109,ISXMAX(1)=738609,
ISYMIN(1)=3837763,ISYMAX(1)=3840763,
NAMST(2)='014',X(2)=727.377,Y(2)=3831.980,COR(2)=0.,
CONFAC(2)=1.0000,A(2)=0.,ISXMIN(2)=725550,ISXMAX(2)=738609,
ISYMIN(2)=3809792,ISYMAX(2)=3834817,
NAMST(3)='052',X(3)=721.414,Y(3)=3845.626,COR(3)=0.,
CONFAC(3)=1.0000,A(3)=0.,ISXMIN(3)=719640,ISXMAX(3)=738609,
ISYMIN(3)=3840763,ISYMAX(3)=3849292,
NAMST(4)='054',X(4)=721.532,Y(4)=3835.508,COR(4)=0.,
CONFAC(4)=1.0000,A(4)=0.,ISXMIN(4)=714109,ISXMAX(4)=738609,
ISYMIN(4)=3834817,ISYMAX(4)=3837763,
NAMST(5)='055',X(5)=721.086,Y(5)=3829.540,COR(5)=0.,
CONFAC(5)=0.6000,A(5)=0.,ISXMIN(5)=719640,ISXMAX(5)=722550,
ISYMIN(5)=3809792,ISYMAX(5)=3834817,
NAMST(6)='056',X(6)=724.126,Y(6)=3828.984,COR(6)=0.,
CONFAC(6)=1.0000,A(6)=0.,ISXMIN(6)=722550,ISXMAX(6)=725500,
ISYMIN(6)=3809792,ISYMAX(6)=3831270,
NAMST(7)='101',X(7)=723.736,Y(7)=3832.041,COR(7)=0.,
CONFAC(7)=1.0000,A(7)=0.,ISXMIN(7)=722560,ISXMAX(7)=725550,
ISYMIN(7)=3831270,ISYMAX(7)=3834817,
NAMST(8)='102',X(8)=719.063,Y(8)=3848.291,COR(8)=0.,
CONFAC(8)=1.0000,A(8)=0.,ISXMIN(8)=714109,ISXMAX(8)=719640,
ISYMIN(8)=3840763,ISYMAX(8)=3849292,
NAMST(9)='200',X(9)=718.252,Y(9)=3831.792,COR(9)=0.,
CONFAC(9)=1.0000,A(9)=0.,ISXMIN(9)=714109,ISXMAX(9)=719640,
ISYMIN(9)=3831270,ISYMAX(9)=3834817,
NAMST(10)='300',X(10)=719.640,Y(10)=3834.692,COR(10)=0.,
```

```
CONFAC(10)=1.0000,A(10)=0.,ISXMIN(10)=719640,ISXMAX(10)=719640,
ISYMIN(10)=3834817,ISYMAX(10)=3834817,
NAMST(11)='301',X(11)=717.581,Y(11)=3828.803,COR(11)=0.,
CONFAC(11)=1.0000,A(11)=0.,ISXMIN(11)=714109,ISXMAX(11)=719640,
ISYMIN(11)=3809792,ISYMAX(11)=3831270,
&END
' 00:40'
'009', 29.7,'E', 266, 1.5, 0.0
'014', 17.2,'E', 137, 2.7, 0.0
'052',  8.5,'E', 180, 0.3, 0.0
'054', 11.7,'E', 276, 0.6, 0.0
'055',  5.5,'E', 127, 2.5, 0.0
'056',  3.1,'E', 129, 4.6, 0.0
'101', 15.6,'E',  69, 0.5, 0.0
'102', 10.3,'E', 174, 1.1, 0.0
'200', 32.4,'E', 240, 1.3, 0.0
'300', 38.6,'E', 191, 1.7, 0.0
'301', 25.9,'E', 210, 1.3, 0.0
'STOP'
```

The output from this example is shown on the following pages.



Output from example no. 7

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Abstract (Max. 2000 char.)

Abstract. An operational puff diffusion model, RIMPUFF (RIsø Mesoscale PUFF model) has been developed at Risø National Laboratory to provide risk and safety assessments in connection with e.g. nuclear installations. The computer model releases a sequence of puffs with individual pollutant and heat contents, then calculates the time-dependent concentration field, which is provided by the collection of puffs. The puffs are advected through a three-dimensional grid on the basis of a time sequence of measured horizontal wind vectors. The model code is written in standard FORTRAN 77 for a Burroughs B7800 computer. The code also runs on a VAX or a IBM computer. The input data consists of two data files with parameter specifications. In addition, data files with precalculated wind fields and population distribution can be provided. The model outputs for doses, puff positions wind and concentration fields consists of disk files and printed data. Graphical presentation of results is based on a specific program, which creates background maps, wind vector plots, puff plots and isoconcentration contours.

Descriptors - INIS

ADVECTION; AIR POLLUTION; BOUNDARY LAYERS; COMPUTERIZED SIMULATION; DIFFUSION; GAMMA RADIATION; MANUALS; MATHEMATICAL MODELS; METEOROLOGY; PLUMES; R CODES; RADIATION DOSES; TRAJECTORIES; TURBULENCE; WIND

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