

Anexo 10.2 Listado de la simulación SLAB:

problem input

```
idspl = 1
ncalc = 1
wms = .017031
cps = 2170.00
tbp = 239.72
cmed0 = .20
dhe = 1370840.
cpsl = 4294.00
rhol = 682.80
spb = 2132.52
spc = -32.98
ts = 239.15
qs = 1.76
as = 100.00
tsd = 300.
qtis = .00
hs = .00
tav = 3600.00
xffm = 5000.00
zp(1) = .00
zp(2) = 1.50
zp(3) = 1.80
zp(4) = 9.00
z0 = .020000
za = 10.00
ua = 1.90
ta = 301.00
rh = 80.00
stab = 6.00
```

release gas properties

```
molecular weight of source gas (kg) - wms = 1.7031E-02
vapor heat capacity, const. p. (j/kg-k) - cps = 2.1700E+03
temperature of source gas (k) - ts = 2.3972E+02
density of source gas (kg/m3) - rhol = 6.8280E+02
boiling point temperature - tbp = 2.3972E+02
liquid mass fraction - cmed0= 0.0000E+00
liquid heat capacity (j/kg-k) - cpsl = 4.2940E+03
heat of vaporization (j/kg) - dhe = 1.3708E+06
liquid source density (kg/m3) - rhol= 6.8280E+02
saturation pressure constant - spa = 1.0315E+01
saturation pressure constant (k) - spb = 2.1325E+03
saturation pressure constant (k) - spc = -3.2980E+01
```

spill characteristics

spill type - idspl= 1
 mass source rate (kg/s) - qs = 1.7600E+00
 continuous source duration (s) - tsd = 3.0000E+02
 continuous source mass (kg) - qtcs = 5.2800E+02
 instantaneous source mass (kg) - qtis = 0.0000E+00
 source area (m2) - as = 1.0000E+02
 vertical vapor velocity (m/s) - ws = 2.0328E-02
 source half width (m) - bs = 5.0000E+00
 source height (m) - hs = 0.0000E+00
 horizontal vapor velocity (m/s) - us = 0.0000E+00

field parameters

concentration averaging time (s) - tav = 3.6000E+03
 mixing layer height (m) - hmx = 2.6000E+02
 maximum downwind distance (m) - xffm = 5.0000E+03
 concentration measurement height (m) - zp(1)= 0.0000E+00
 - zp(2)= 1.5000E+00
 - zp(3)= 1.8000E+00
 - zp(4)= 9.0000E+00

ambient meteorological properties

molecular weight of ambient air (kg) - wmae = 2.8617E-02
 heat capacity of ambient air at const p. (j/kg-k)- cpa = 1.0225E+03
 density of ambient air (kg/m3) - rhoa = 1.1586E+00
 ambient measurement height (m) - za = 1.0000E+01
 ambient atmospheric pressure (pa=n/m2=j/m3) - pa = 1.0133E+05
 ambient wind speed (m/s) - ua = 1.9000E+00
 ambient temperature (k) - ta = 3.0100E+02
 relative humidity (percent) - rh = 8.0000E+01
 ambient friction velocity (m/s) - uastr = 5.7620E-02
 atmospheric stability class value - stab = 6.0000E+00
 inverse monin-obukhov length (1/m) - ala = 7.5307E-02
 surface roughness height (m) - z0 = 2.0000E-02

additional parameters

sub-step multiplier - ncalc = 1
 number of calculational sub-steps - nssm = 3
 acceleration of gravity (m/s2) - grav = 9.8067E+00
 gas constant (j/mol- k) - rr = 8.3143E+00
 von karman constant - xk = 4.1000E-01

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instantaneous spatially averaged cloud parameters

x zc h bb b bbx bx cv rho t u ua

-5.00E+00	0.00E+00	0.00E+00	5.00E+00	4.50E+00	5.00E+00	5.00E+00	0.00E+00	1.16E+00
3.01E+02	0.00E+00	0.00E+00						
-4.00E+00	0.00E+00	6.57E-01	5.05E+00	4.50E+00	5.63E+00	5.63E+00	1.03E-01	1.13E+00
2.95E+02	3.67E-01	4.26E-01						
-3.00E+00	0.00E+00	1.12E+00	5.15E+00	4.51E+00	6.26E+00	6.26E+00	1.39E-01	1.12E+00
2.94E+02	3.10E-01	5.47E-01						
-2.00E+00	0.00E+00	1.92E+00	6.24E+00	4.51E+00	6.89E+00	6.89E+00	1.52E-01	1.12E+00
2.93E+02	2.03E-01	6.98E-01						
-1.00E+00	0.00E+00	9.55E-01	6.88E+00	4.52E+00	7.52E+00	7.52E+00	7.38E-02	1.14E+00
2.96E+02	1.03E+00	5.22E-01						
-5.96E-08	0.00E+00	1.27E+00	6.99E+00	4.54E+00	8.15E+00	8.15E+00	7.52E-02	1.14E+00
2.96E+02	9.43E-01	5.89E-01						
1.00E+00	0.00E+00	1.54E+00	7.08E+00	4.56E+00	8.78E+00	8.77E+00	7.95E-02	1.14E+00
2.96E+02	8.70E-01	6.40E-01						
2.00E+00	0.00E+00	1.83E+00	7.18E+00	4.60E+00	9.40E+00	9.40E+00	8.51E-02	1.14E+00
2.96E+02	7.86E-01	6.89E-01						
3.00E+00	0.00E+00	2.23E+00	7.27E+00	4.64E+00	1.00E+01	1.00E+01	9.14E-02	1.14E+00
2.95E+02	6.74E-01	7.50E-01						
4.00E+00	0.00E+00	3.09E+00	7.36E+00	4.64E+00	1.07E+01	1.07E+01	9.71E-02	1.14E+00
2.95E+02	5.09E-01	8.60E-01						
5.00E+00	0.00E+00	7.23E+00	8.10E+00	4.64E+00	1.13E+01	1.13E+01	9.28E-02	1.14E+00
2.95E+02	2.30E-01	1.22E+00						
5.10E+00	1.25E-03	1.65E+00	8.11E+00	4.64E+00	1.14E+01	1.14E+01	9.24E-02	1.14E+00
2.95E+02	1.01E+00	6.66E-01						
5.22E+00	5.17E-03	1.66E+00	8.12E+00	4.64E+00	1.16E+01	1.16E+01	9.19E-02	1.14E+00
2.95E+02	1.01E+00	6.68E-01						
5.37E+00	1.34E-02	1.67E+00	8.13E+00	4.64E+00	1.18E+01	1.18E+01	9.13E-02	1.14E+00
2.95E+02	1.01E+00	6.70E-01						
5.54E+00	2.81E-02	1.69E+00	8.14E+00	4.64E+00	1.20E+01	1.20E+01	9.06E-02	1.14E+00
2.95E+02	1.01E+00	6.72E-01						
5.76E+00	5.29E-02	1.70E+00	8.15E+00	4.64E+00	1.22E+01	1.22E+01	8.98E-02	1.14E+00
2.95E+02	1.01E+00	6.74E-01						
6.01E+00	9.27E-02	1.72E+00	8.16E+00	4.64E+00	1.26E+01	1.26E+01	8.88E-02	1.14E+00
2.96E+02	1.00E+00	6.77E-01						
6.32E+00	1.55E-01	1.74E+00	8.18E+00	4.64E+00	1.29E+01	1.29E+01	8.76E-02	1.14E+00
2.96E+02	1.00E+00	6.81E-01						
6.68E+00	2.49E-01	1.77E+00	8.20E+00	4.64E+00	1.34E+01	1.34E+01	8.63E-02	1.14E+00
2.96E+02	1.00E+00	6.85E-01						
7.12E+00	3.90E-01	1.80E+00	8.22E+00	4.64E+00	1.40E+01	1.40E+01	8.46E-02	1.14E+00
2.96E+02	9.98E-01	6.91E-01						
7.65E+00	5.97E-01	1.84E+00	8.25E+00	4.64E+00	1.46E+01	1.46E+01	8.27E-02	1.14E+00
2.96E+02	9.96E-01	6.97E-01						
8.29E+00	8.99E-01	1.89E+00	8.28E+00	4.64E+00	1.54E+01	1.54E+01	8.05E-02	1.14E+00
2.96E+02	9.93E-01	7.05E-01						
9.06E+00	1.32E+00	1.90E+00	8.30E+00	4.63E+00	1.64E+01	1.64E+01	7.71E-02	1.14E+00
2.96E+02	1.03E+00	7.60E-01						
9.98E+00	1.88E+00	1.89E+00	8.31E+00	4.61E+00	1.76E+01	1.76E+01	7.36E-02	1.14E+00
2.96E+02	1.08E+00	8.32E-01						
1.11E+01	2.61E+00	1.86E+00	8.32E+00	4.59E+00	1.90E+01	1.90E+01	7.06E-02	1.14E+00
2.96E+02	1.15E+00	9.13E-01						
1.24E+01	3.53E+00	1.82E+00	8.33E+00	4.56E+00	2.06E+01	2.06E+01	6.78E-02	1.15E+00
2.96E+02	1.22E+00	1.00E+00						
1.40E+01	4.71E+00	1.77E+00	8.35E+00	4.54E+00	2.27E+01	2.26E+01	6.52E-02	1.15E+00

2.96E+02	1.31E+00	1.10E+00							
1.60E+01	6.17E+00	1.71E+00	8.38E+00	4.52E+00	2.51E+01	2.51E+01	6.27E-02	1.15E+00	
2.96E+02	1.40E+00	1.20E+00							
1.83E+01	7.98E+00	1.66E+00	8.42E+00	4.49E+00	2.80E+01	2.80E+01	6.03E-02	1.15E+00	
2.97E+02	1.49E+00	1.32E+00							
2.11E+01	1.02E+01	1.61E+00	8.47E+00	4.47E+00	3.15E+01	3.15E+01	5.78E-02	1.15E+00	
2.97E+02	1.60E+00	1.43E+00							
2.44E+01	1.30E+01	1.56E+00	8.55E+00	4.45E+00	3.57E+01	3.57E+01	5.54E-02	1.15E+00	
2.97E+02	1.70E+00	1.55E+00							
2.84E+01	1.64E+01	1.52E+00	8.65E+00	4.44E+00	4.08E+01	4.08E+01	5.30E-02	1.15E+00	
2.97E+02	1.81E+00	1.68E+00							
3.33E+01	2.05E+01	1.48E+00	8.77E+00	4.42E+00	4.69E+01	4.69E+01	5.05E-02	1.15E+00	
2.97E+02	1.93E+00	1.80E+00							
3.91E+01	2.55E+01	1.44E+00	8.93E+00	4.40E+00	5.42E+01	5.42E+01	4.80E-02	1.15E+00	
2.97E+02	2.04E+00	1.93E+00							
4.61E+01	3.16E+01	1.41E+00	9.13E+00	4.39E+00	6.30E+01	6.30E+01	4.55E-02	1.15E+00	
2.98E+02	2.16E+00	2.06E+00							
5.45E+01	3.90E+01	1.38E+00	9.38E+00	4.38E+00	7.36E+01	7.36E+01	4.28E-02	1.15E+00	
2.98E+02	2.28E+00	2.19E+00							
6.46E+01	4.80E+01	1.36E+00	9.69E+00	4.36E+00	8.63E+01	8.63E+01	4.01E-02	1.15E+00	
2.98E+02	2.39E+00	2.32E+00							
7.67E+01	5.87E+01	1.34E+00	1.01E+01	4.35E+00	1.02E+02	1.02E+02	3.74E-02	1.15E+00	
2.98E+02	2.51E+00	2.44E+00							
9.14E+01	7.16E+01	1.33E+00	1.05E+01	4.34E+00	1.20E+02	1.20E+02	3.45E-02	1.15E+00	
2.98E+02	2.62E+00	2.56E+00							
1.09E+02	8.69E+01	1.32E+00	1.11E+01	4.34E+00	1.42E+02	1.42E+02	3.17E-02	1.15E+00	
2.99E+02	2.73E+00	2.68E+00							
1.30E+02	1.05E+02	1.32E+00	1.17E+01	4.33E+00	1.69E+02	1.69E+02	2.89E-02	1.15E+00	
2.99E+02	2.83E+00	2.80E+00							
1.55E+02	1.27E+02	1.32E+00	1.26E+01	4.33E+00	2.01E+02	2.01E+02	2.62E-02	1.15E+00	
2.99E+02	2.93E+00	2.90E+00							
1.86E+02	1.52E+02	1.32E+00	1.35E+01	4.32E+00	2.39E+02	2.39E+02	2.35E-02	1.15E+00	
2.99E+02	3.02E+00	3.00E+00							
2.23E+02	1.82E+02	1.32E+00	1.47E+01	4.32E+00	2.85E+02	2.85E+02	2.11E-02	1.15E+00	
2.99E+02	3.11E+00	3.09E+00							
2.67E+02	2.18E+02	1.31E+00	1.61E+01	4.32E+00	3.41E+02	3.41E+02	1.89E-02	1.16E+00	
3.00E+02	3.18E+00	3.18E+00							
3.20E+02	2.59E+02	1.30E+00	1.78E+01	4.31E+00	4.07E+02	4.07E+02	1.69E-02	1.16E+00	
3.00E+02	3.25E+00	3.25E+00							
3.84E+02	2.59E+02	1.30E+00	1.98E+01	4.31E+00	4.88E+02	4.88E+02	1.52E-02	1.16E+00	
3.00E+02	3.25E+00	3.25E+00							
4.60E+02	2.59E+02	1.30E+00	2.22E+01	4.31E+00	4.88E+02	4.88E+02	1.36E-02	1.16E+00	
3.00E+02	3.25E+00	3.25E+00							
5.52E+02	2.59E+02	1.30E+00	2.51E+01	4.31E+00	4.89E+02	4.88E+02	1.20E-02	1.16E+00	
3.00E+02	3.25E+00	3.25E+00							
6.63E+02	2.59E+02	1.30E+00	2.84E+01	4.31E+00	4.90E+02	4.88E+02	1.06E-02	1.16E+00	
3.00E+02	3.25E+00	3.25E+00							
7.96E+02	2.59E+02	1.30E+00	3.24E+01	4.31E+00	4.92E+02	4.88E+02	9.24E-03	1.16E+00	
3.00E+02	3.25E+00	3.25E+00							
9.56E+02	2.59E+02	1.30E+00	3.71E+01	4.31E+00	4.93E+02	4.88E+02	8.05E-03	1.16E+00	
3.00E+02	3.25E+00	3.25E+00							
1.15E+03	2.59E+02	1.30E+00	4.26E+01	4.31E+00	4.95E+02	4.88E+02	6.98E-03	1.16E+00	
3.00E+02	3.25E+00	3.25E+00							

6.01E+00	5.48E-02	5.48E-02	9.27E-01	1.87E-02	1.82E-02	1.78E-01	0.00E+00	0.00E+00	3.70E-02
3.17E-02	1.50E-01								
6.32E+00	5.41E-02	5.41E-02	9.27E-01	1.87E-02	1.82E-02	2.28E-01	0.00E+00	0.00E+00	3.76E-02
3.13E-02	1.56E-01								
6.68E+00	5.32E-02	5.32E-02	9.28E-01	1.87E-02	1.83E-02	2.85E-01	0.00E+00	0.00E+00	3.82E-02
3.08E-02	1.63E-01								
7.12E+00	5.22E-02	5.22E-02	9.29E-01	1.87E-02	1.83E-02	3.52E-01	0.00E+00	0.00E+00	3.89E-02
3.03E-02	1.74E-01								
7.65E+00	5.09E-02	5.09E-02	9.30E-01	1.87E-02	1.84E-02	4.27E-01	0.00E+00	0.00E+00	3.96E-02
2.96E-02	1.88E-01								
8.29E+00	4.95E-02	4.95E-02	9.32E-01	1.88E-02	1.85E-02	5.12E-01	0.00E+00	0.00E+00	4.02E-02
2.89E-02	2.06E-01								
9.06E+00	4.74E-02	4.74E-02	9.34E-01	1.88E-02	1.86E-02	5.98E-01	0.00E+00	0.00E+00	6.07E-02
2.81E-02	2.33E-01								
9.98E+00	4.52E-02	4.52E-02	9.36E-01	1.89E-02	1.87E-02	6.84E-01	0.00E+00	0.00E+00	4.60E-02
2.75E-02	2.62E-01								
1.11E+01	4.32E-02	4.32E-02	9.38E-01	1.89E-02	1.88E-02	7.77E-01	0.00E+00	0.00E+00	3.61E-02
2.73E-02	2.90E-01								
1.24E+01	4.15E-02	4.15E-02	9.40E-01	1.89E-02	1.89E-02	8.74E-01	0.00E+00	0.00E+00	2.91E-02
2.74E-02	3.16E-01								
1.40E+01	3.99E-02	3.99E-02	9.41E-01	1.90E-02	1.89E-02	9.74E-01	0.00E+00	0.00E+00	2.40E-02
2.79E-02	3.40E-01								
1.60E+01	3.83E-02	3.83E-02	9.43E-01	1.90E-02	1.90E-02	1.08E+00	0.00E+00	0.00E+00	2.02E-02
2.87E-02	3.60E-01								
1.83E+01	3.68E-02	3.68E-02	9.44E-01	1.90E-02	1.90E-02	1.19E+00	0.00E+00	0.00E+00	1.71E-02
2.98E-02	3.76E-01								
2.11E+01	3.53E-02	3.53E-02	9.46E-01	1.91E-02	1.91E-02	1.30E+00	0.00E+00	0.00E+00	1.46E-02
3.11E-02	3.89E-01								
2.44E+01	3.37E-02	3.37E-02	9.47E-01	1.91E-02	1.91E-02	1.41E+00	0.00E+00	0.00E+00	1.26E-02
3.27E-02	3.98E-01								
2.84E+01	3.22E-02	3.22E-02	9.49E-01	1.91E-02	1.91E-02	1.53E+00	0.00E+00	0.00E+00	1.08E-02
3.44E-02	4.04E-01								
3.33E+01	3.07E-02	3.07E-02	9.50E-01	1.91E-02	1.91E-02	1.65E+00	0.00E+00	0.00E+00	9.34E-03
3.63E-02	4.06E-01								
3.91E+01	2.91E-02	2.91E-02	9.52E-01	1.92E-02	1.92E-02	1.78E+00	0.00E+00	0.00E+00	8.09E-03
3.84E-02	4.05E-01								
4.61E+01	2.76E-02	2.76E-02	9.53E-01	1.92E-02	1.92E-02	1.90E+00	0.00E+00	0.00E+00	7.04E-03
4.05E-02	4.00E-01								
5.45E+01	2.59E-02	2.59E-02	9.55E-01	1.92E-02	1.92E-02	2.01E+00	0.00E+00	0.00E+00	6.15E-03
4.27E-02	3.92E-01								
6.46E+01	2.43E-02	2.43E-02	9.56E-01	1.93E-02	1.93E-02	2.12E+00	0.00E+00	0.00E+00	5.40E-03
4.48E-02	3.81E-01								
7.67E+01	2.26E-02	2.26E-02	9.58E-01	1.93E-02	1.93E-02	2.22E+00	0.00E+00	0.00E+00	4.75E-03
4.70E-02	3.65E-01								
9.14E+01	2.08E-02	2.08E-02	9.60E-01	1.93E-02	1.93E-02	2.30E+00	0.00E+00	0.00E+00	4.17E-03
4.91E-02	3.44E-01								
1.09E+02	1.91E-02	1.91E-02	9.62E-01	1.94E-02	1.94E-02	2.37E+00	0.00E+00	0.00E+00	3.62E-03
5.11E-02	3.19E-01								
1.30E+02	1.74E-02	1.74E-02	9.63E-01	1.94E-02	1.94E-02	2.43E+00	0.00E+00	0.00E+00	3.09E-03
5.30E-02	2.88E-01								
1.55E+02	1.57E-02	1.57E-02	9.65E-01	1.94E-02	1.94E-02	2.47E+00	0.00E+00	0.00E+00	2.56E-03
5.48E-02	2.51E-01								
1.86E+02	1.41E-02	1.41E-02	9.66E-01	1.95E-02	1.95E-02	2.50E+00	0.00E+00	0.00E+00	2.01E-03

5.63E-02 2.07E-01
 2.23E+02 1.27E-02 1.27E-02 9.68E-01 1.95E-02 1.95E-02 2.53E+00 0.00E+00 0.00E+00 1.42E-03
 5.77E-02 1.56E-01
 2.67E+02 1.13E-02 1.13E-02 9.69E-01 1.95E-02 1.95E-02 2.56E+00 0.00E+00 0.00E+00 7.57E-04
 5.88E-02 1.00E-01
 3.20E+02 1.02E-02 1.02E-02 9.70E-01 1.95E-02 1.95E-02 2.60E+00 0.00E+00 0.00E+00 1.16E-05
 5.95E-02 6.56E-02
 3.84E+02 9.12E-03 9.12E-03 9.71E-01 1.96E-02 1.96E-02 2.66E+00 0.00E+00 0.00E+00 1.16E-05
 5.89E-02 6.56E-02
 4.60E+02 8.12E-03 8.12E-03 9.72E-01 1.96E-02 1.96E-02 2.70E+00 0.00E+00 0.00E+00 1.16E-05
 5.82E-02 1.73E-02
 5.52E+02 7.18E-03 7.18E-03 9.73E-01 1.96E-02 1.96E-02 2.74E+00 0.00E+00 0.00E+00 1.16E-05
 5.74E-02 1.73E-02
 6.63E+02 6.31E-03 6.31E-03 9.74E-01 1.96E-02 1.96E-02 2.78E+00 0.00E+00 0.00E+00 1.16E-05
 5.64E-02 1.73E-02
 7.96E+02 5.52E-03 5.52E-03 9.75E-01 1.96E-02 1.96E-02 2.81E+00 0.00E+00 0.00E+00 1.16E-05
 5.54E-02 1.72E-02
 9.56E+02 4.81E-03 4.81E-03 9.76E-01 1.97E-02 1.97E-02 2.84E+00 0.00E+00 0.00E+00 1.16E-05
 5.41E-02 1.72E-02
 1.15E+03 4.17E-03 4.17E-03 9.76E-01 1.97E-02 1.97E-02 2.86E+00 0.00E+00 0.00E+00 1.17E-05
 5.28E-02 1.72E-02
 1.38E+03 3.60E-03 3.60E-03 9.77E-01 1.97E-02 1.97E-02 2.88E+00 0.00E+00 0.00E+00 1.17E-05
 5.13E-02 1.71E-02
 1.66E+03 3.11E-03 3.11E-03 9.77E-01 1.97E-02 1.97E-02 2.91E+00 0.00E+00 0.00E+00 1.17E-05
 4.96E-02 1.70E-02
 1.99E+03 2.67E-03 2.67E-03 9.78E-01 1.97E-02 1.97E-02 2.93E+00 0.00E+00 0.00E+00 1.17E-05
 4.78E-02 1.70E-02
 2.39E+03 2.29E-03 2.29E-03 9.78E-01 1.97E-02 1.97E-02 2.95E+00 0.00E+00 0.00E+00 1.17E-05
 4.59E-02 1.69E-02
 2.88E+03 1.97E-03 1.97E-03 9.78E-01 1.97E-02 1.97E-02 2.97E+00 0.00E+00 0.00E+00 1.17E-05
 4.39E-02 1.68E-02
 3.46E+03 1.68E-03 1.68E-03 9.79E-01 1.97E-02 1.97E-02 2.99E+00 0.00E+00 0.00E+00 1.18E-05
 4.17E-02 1.66E-02
 4.16E+03 1.44E-03 1.44E-03 9.79E-01 1.97E-02 1.97E-02 3.00E+00 0.00E+00 0.00E+00 1.18E-05
 3.96E-02 1.65E-02
 5.00E+03 1.23E-03 1.23E-03 9.79E-01 1.97E-02 1.97E-02 3.02E+00 0.00E+00 0.00E+00 1.19E-05
 3.73E-02 1.63E-02
 1

time averaged (tav = 3600. s) volume concentration: concentration contour parameters

$$c(x,y,z,t) = cc(x) * (\text{erf}(xa) - \text{erf}(xb)) * (\text{erf}(ya) - \text{erf}(yb)) * (\exp(-za^2) + \exp(-zb^2))$$

c(x,y,z,t) = concentration (volume fraction) at (x,y,z,t)

x = downwind distance (m)

y = crosswind horizontal distance (m)

z = height (m)

t = time (s)

erf = error function

$$xa = (x - xc + bx) / (sr^2 * betax)$$

$xb = (x-xc-bx)/(sr2*betax)$
 $ya = (y+b)/(sr2*betac)$
 $yb = (y-b)/(sr2*betac)$
 exp = exponential function
 $za = (z-zc)/(sr2*sig)$
 $zb = (z+zc)/(sr2*sig)$
 $sr2 = \text{sqrt}(2.0)$

x	cc(x)	b(x)	betac(x)	zc(x)	sig(x)	t	xc(t)	bx(t)	betax(t)
-5.00E+00	0.00E+00	4.50E+00	1.26E+00	0.00E+00	0.00E+00	7.19E+00	0.00E+00	5.00E+00	4.08E-02
-4.00E+00	1.99E-02	4.50E+00	1.32E+00	0.00E+00	3.79E-01	7.80E+00	5.00E-01	5.63E+00	4.60E-02
-3.00E+00	2.75E-02	4.51E+00	1.44E+00	0.00E+00	6.45E-01	8.41E+00	1.00E+00	6.26E+00	5.11E-02
-2.00E+00	3.64E-02	4.51E+00	2.49E+00	0.00E+00	1.11E+00	9.21E+00	1.50E+00	6.89E+00	5.62E-02
-1.00E+00	1.94E-02	4.52E+00	3.00E+00	0.00E+00	5.51E-01	1.00E+01	2.00E+00	7.52E+00	6.14E-02
-5.96E-08	2.00E-02	4.54E+00	3.07E+00	0.00E+00	7.31E-01	1.10E+01	2.50E+00	8.15E+00	6.65E-02
1.00E+00	2.13E-02	4.56E+00	3.13E+00	0.00E+00	8.87E-01	1.21E+01	3.00E+00	8.77E+00	7.16E-02
2.00E+00	2.30E-02	4.60E+00	3.19E+00	0.00E+00	1.05E+00	1.36E+01	3.50E+00	9.40E+00	7.68E-02
3.00E+00	2.48E-02	4.64E+00	3.25E+00	0.00E+00	1.29E+00	1.51E+01	4.00E+00	1.00E+01	8.19E-02
4.00E+00	2.67E-02	4.64E+00	3.31E+00	0.00E+00	1.78E+00	1.91E+01	4.50E+00	1.07E+01	8.71E-02
5.00E+00	2.81E-02	4.64E+00	3.85E+00	0.00E+00	4.17E+00	2.32E+01	5.00E+00	1.13E+01	9.22E-02
5.10E+00	2.80E-02	4.64E+00	3.86E+00	1.25E-03	9.54E-01	2.34E+01	5.10E+00	1.14E+01	9.33E-02
5.22E+00	2.79E-02	4.64E+00	3.86E+00	5.17E-03	9.57E-01	2.37E+01	5.22E+00	1.16E+01	9.45E-02
5.37E+00	2.79E-02	4.64E+00	3.87E+00	1.34E-02	9.59E-01	2.40E+01	5.37E+00	1.18E+01	9.60E-02
5.54E+00	2.80E-02	4.64E+00	3.88E+00	2.81E-02	9.58E-01	2.43E+01	5.54E+00	1.20E+01	9.78E-02
5.76E+00	2.82E-02	4.64E+00	3.89E+00	5.29E-02	9.52E-01	2.47E+01	5.76E+00	1.22E+01	1.00E-01
6.01E+00	2.86E-02	4.64E+00	3.90E+00	9.27E-02	9.40E-01	2.53E+01	6.01E+00	1.26E+01	1.03E-01
6.32E+00	2.94E-02	4.64E+00	3.91E+00	1.55E-01	9.17E-01	2.59E+01	6.32E+00	1.29E+01	1.06E-01
6.68E+00	3.08E-02	4.64E+00	3.93E+00	2.49E-01	8.78E-01	2.66E+01	6.68E+00	1.34E+01	1.09E-01
7.12E+00	3.32E-02	4.64E+00	3.94E+00	3.90E-01	8.16E-01	2.75E+01	7.12E+00	1.40E+01	1.14E-01
7.65E+00	3.78E-02	4.64E+00	3.96E+00	5.97E-01	7.20E-01	2.85E+01	7.65E+00	1.46E+01	1.19E-01

8.29E+00	4.75E-02	4.64E+00	3.99E+00	8.99E-01	5.74E-01	2.98E+01	8.29E+00	1.54E+01
1.26E-01								
9.06E+00	4.80E-02	4.63E+00	4.01E+00	1.32E+00	5.49E-01	3.13E+01	9.06E+00	1.64E+01
1.34E-01								
9.98E+00	4.61E-02	4.61E+00	4.03E+00	1.88E+00	5.46E-01	3.31E+01	9.98E+00	1.76E+01
1.43E-01								
1.11E+01	4.45E-02	4.59E+00	4.05E+00	2.61E+00	5.37E-01	3.51E+01	1.11E+01	1.90E+01
1.55E-01								
1.24E+01	4.31E-02	4.56E+00	4.07E+00	3.53E+00	5.24E-01	3.73E+01	1.24E+01	2.06E+01
1.68E-01								
1.40E+01	4.18E-02	4.54E+00	4.10E+00	4.71E+00	5.10E-01	3.99E+01	1.40E+01	2.26E+01
1.85E-01								
1.60E+01	4.06E-02	4.52E+00	4.14E+00	6.17E+00	4.94E-01	4.27E+01	1.60E+01	2.51E+01
2.05E-01								
1.83E+01	3.95E-02	4.49E+00	4.19E+00	7.98E+00	4.79E-01	4.59E+01	1.83E+01	2.80E+01
2.29E-01								
2.11E+01	3.85E-02	4.47E+00	4.25E+00	1.02E+01	4.64E-01	4.95E+01	2.11E+01	3.15E+01
2.57E-01								
2.44E+01	3.75E-02	4.45E+00	4.33E+00	1.30E+01	4.50E-01	5.36E+01	2.44E+01	3.57E+01
2.92E-01								
2.84E+01	3.66E-02	4.44E+00	4.44E+00	1.64E+01	4.38E-01	5.81E+01	2.84E+01	4.08E+01
3.33E-01								
3.33E+01	3.58E-02	4.42E+00	4.57E+00	2.05E+01	4.26E-01	6.33E+01	3.33E+01	4.69E+01
3.83E-01								
3.91E+01	3.51E-02	4.40E+00	4.74E+00	2.55E+01	4.15E-01	6.92E+01	3.91E+01	5.42E+01
4.42E-01								
4.61E+01	3.44E-02	4.39E+00	4.94E+00	3.16E+01	4.06E-01	7.58E+01	4.61E+01	6.30E+01
5.14E-01								
5.45E+01	3.39E-02	4.38E+00	5.20E+00	3.90E+01	3.99E-01	8.34E+01	5.45E+01	7.36E+01
6.01E-01								
6.46E+01	3.34E-02	4.36E+00	5.53E+00	4.80E+01	3.92E-01	9.21E+01	6.46E+01	8.63E+01
7.04E-01								
7.67E+01	3.31E-02	4.35E+00	5.93E+00	5.87E+01	3.87E-01	1.02E+02	7.67E+01	1.02E+02
8.30E-01								
9.14E+01	3.28E-02	4.34E+00	6.43E+00	7.16E+01	3.84E-01	1.13E+02	9.14E+01	1.20E+02
9.80E-01								
1.09E+02	3.27E-02	4.34E+00	7.04E+00	8.69E+01	3.82E-01	1.26E+02	1.09E+02	1.42E+02
1.16E+00								
1.30E+02	3.27E-02	4.33E+00	7.79E+00	1.05E+02	3.81E-01	1.42E+02	1.30E+02	1.69E+02
1.38E+00								
1.55E+02	3.28E-02	4.33E+00	8.70E+00	1.27E+02	3.80E-01	1.59E+02	1.55E+02	2.01E+02
1.64E+00								
1.86E+02	3.30E-02	4.32E+00	9.82E+00	1.52E+02	3.81E-01	1.80E+02	1.86E+02	2.39E+02
1.95E+00								
2.23E+02	3.34E-02	4.32E+00	1.12E+01	1.82E+02	3.80E-01	2.04E+02	2.23E+02	2.85E+02
2.33E+00								
2.67E+02	3.41E-02	4.32E+00	1.28E+01	2.18E+02	3.79E-01	2.32E+02	2.67E+02	3.41E+02
2.78E+00								
3.20E+02	3.51E-02	4.31E+00	1.47E+01	2.59E+02	3.74E-01	2.65E+02	3.20E+02	4.07E+02
3.33E+00								
3.84E+02	3.64E-02	4.31E+00	1.70E+01	2.59E+02	3.74E-01	3.04E+02	3.84E+02	4.88E+02
3.98E+00								
4.60E+02	3.77E-02	4.31E+00	1.98E+01	2.59E+02	3.74E-01	3.24E+02	4.60E+02	4.88E+02

4.00E+00	1.52E+02	3.00E+02	7.38E+00	1.49E-02	1.08E-02	3.62E-03	4.64E-04	2.00E-05
2.72E-07								
5.00E+00	1.52E+02	3.00E+02	8.13E+00	1.44E-02	1.02E-02	3.40E-03	4.67E-04	2.40E-05
4.40E-07								
5.10E+00	1.52E+02	3.00E+02	8.14E+00	1.43E-02	1.02E-02	3.39E-03	4.65E-04	2.40E-05
4.40E-07								
5.22E+00	1.52E+02	3.00E+02	8.14E+00	1.43E-02	1.02E-02	3.38E-03	4.64E-04	2.39E-05
4.40E-07								
5.37E+00	1.52E+02	3.00E+02	8.15E+00	1.43E-02	1.01E-02	3.37E-03	4.63E-04	2.39E-05
4.42E-07								
5.54E+00	1.52E+02	3.00E+02	8.16E+00	1.43E-02	1.01E-02	3.37E-03	4.64E-04	2.40E-05
4.44E-07								
5.76E+00	1.52E+02	3.00E+02	8.18E+00	1.44E-02	1.02E-02	3.39E-03	4.66E-04	2.42E-05
4.49E-07								
6.01E+00	1.52E+02	3.00E+02	8.19E+00	1.45E-02	1.03E-02	3.42E-03	4.71E-04	2.45E-05
4.57E-07								
6.32E+00	1.52E+02	3.00E+02	8.21E+00	1.47E-02	1.04E-02	3.47E-03	4.78E-04	2.50E-05
4.68E-07								
6.68E+00	1.53E+02	3.00E+02	8.23E+00	1.50E-02	1.06E-02	3.53E-03	4.87E-04	2.55E-05
4.81E-07								
7.12E+00	1.53E+02	3.00E+02	8.26E+00	1.50E-02	1.06E-02	3.52E-03	4.87E-04	2.56E-05
4.87E-07								
7.65E+00	1.53E+02	3.00E+02	8.29E+00	1.35E-02	9.53E-03	3.17E-03	4.39E-04	2.32E-05
4.44E-07								
8.29E+00	1.53E+02	3.00E+02	8.32E+00	6.98E-03	4.93E-03	1.64E-03	2.27E-04	1.21E-05
2.34E-07								
9.06E+00	1.54E+02	3.00E+02	8.34E+00	1.31E-03	9.26E-04	3.07E-04	4.28E-05	2.29E-06
4.48E-08								
9.98E+00	1.54E+02	3.00E+02	8.36E+00	5.98E-05	4.22E-05	1.40E-05	1.95E-06	1.05E-07
2.09E-09								
1.11E+01	1.54E+02	3.00E+02	8.38E+00	1.66E-07	1.17E-07	3.88E-08	5.43E-09	2.95E-10
5.93E-12								
1.24E+01	1.55E+02	3.00E+02	8.40E+00	2.86E-12	2.02E-12	6.69E-13	9.39E-14	5.15E-15
1.05E-16								
1.40E+01	1.55E+02	3.00E+02	8.43E+00	6.38E-21	4.49E-21	1.49E-21	2.09E-22	1.16E-23
2.41E-25								
1.60E+01	1.56E+02	3.00E+02	8.47E+00	3.04E-36	2.14E-36	7.09E-37	1.00E-37	5.61E-39
1.19E-40								
1.83E+01	1.57E+02	3.00E+02	8.53E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
2.11E+01	1.58E+02	3.00E+02	8.61E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
2.44E+01	1.60E+02	3.00E+02	8.73E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
2.84E+01	1.61E+02	3.00E+02	8.87E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
3.33E+01	1.63E+02	3.00E+02	9.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
3.91E+01	1.65E+02	3.00E+02	9.31E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
4.61E+01	1.68E+02	3.00E+02	9.62E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
5.45E+01	1.71E+02	3.00E+02	1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00								
6.46E+01	1.75E+02	3.00E+02	1.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
7.67E+01	1.80E+02	3.00E+02	1.12E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
9.14E+01	1.86E+02	3.00E+02	1.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
1.09E+02	1.93E+02	3.00E+02	1.29E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
1.30E+02	2.01E+02	3.00E+02	1.42E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
1.55E+02	2.11E+02	3.00E+02	1.57E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
1.86E+02	2.23E+02	3.00E+02	1.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
2.23E+02	2.37E+02	3.00E+02	1.98E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
2.67E+02	2.54E+02	3.00E+02	2.25E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
3.20E+02	2.75E+02	3.00E+02	2.59E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
3.84E+02	3.00E+02	3.00E+02	2.98E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
4.60E+02	3.24E+02	3.01E+02	3.46E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
5.52E+02	3.52E+02	3.01E+02	4.03E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
6.63E+02	3.86E+02	3.02E+02	4.71E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
7.96E+02	4.27E+02	3.03E+02	5.51E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
9.56E+02	4.76E+02	3.03E+02	6.45E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
1.15E+03	5.35E+02	3.05E+02	7.56E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
1.38E+03	6.07E+02	3.06E+02	8.86E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
1.66E+03	6.92E+02	3.07E+02	1.04E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
1.99E+03	7.95E+02	3.09E+02	1.21E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
2.39E+03	9.19E+02	3.12E+02	1.42E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
2.88E+03	1.07E+03	3.14E+02	1.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
3.46E+03	1.25E+03	3.17E+02	1.93E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
4.16E+03	1.46E+03	3.21E+02	2.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
5.00E+03	1.72E+03	3.26E+02	2.59E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								

time averaged (tav = 3600. s) volume concentration: concentration in the z = 1.50 plane.

downwind distance x (m)	time of max conc (s)	cloud duration bbc (m)	effective halfwidth 0.0	average concentration (volume fraction) at (x,y,z)					
				y/bbc= 0.5	y/bbc= 1.0	y/bbc= 1.5	y/bbc= 2.0	y/bbc= 2.5	y/bbc= 3.0
-5.00E+00	1.52E+02	3.00E+02	5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
-4.00E+00	1.52E+02	3.00E+02	5.05E+00	5.36E-06	5.00E-06	1.82E-06	5.35E-08	6.01E-11	
0.00E+00									
-3.00E+00	1.51E+02	3.00E+02	5.15E+00	1.22E-03	1.11E-03	4.00E-04	1.55E-05	3.49E-08	
0.00E+00									
-2.00E+00	1.51E+02	3.00E+02	6.24E+00	9.07E-03	6.93E-03	2.38E-03	2.51E-04	6.66E-06	
4.10E-08									
-1.00E+00	1.50E+02	3.00E+02	6.88E+00	2.77E-04	2.03E-04	6.87E-05	8.43E-06	3.26E-07	
3.70E-09									
-5.96E-08	1.50E+02	3.00E+02	6.99E+00	1.39E-03	1.02E-03	3.44E-04	4.27E-05	1.70E-06	
2.03E-08									
1.00E+00	1.50E+02	3.00E+02	7.09E+00	2.91E-03	2.12E-03	7.14E-04	8.95E-05	3.64E-06	
4.50E-08									
2.00E+00	1.51E+02	3.00E+02	7.19E+00	4.73E-03	3.44E-03	1.16E-03	1.46E-04	6.04E-06	
7.66E-08									
3.00E+00	1.51E+02	3.00E+02	7.29E+00	7.11E-03	5.16E-03	1.74E-03	2.20E-04	9.22E-06	
1.19E-07									
4.00E+00	1.52E+02	3.00E+02	7.38E+00	1.05E-02	7.57E-03	2.54E-03	3.26E-04	1.40E-05	
1.91E-07									
5.00E+00	1.52E+02	3.00E+02	8.13E+00	1.35E-02	9.59E-03	3.19E-03	4.37E-04	2.25E-05	
4.12E-07									
5.10E+00	1.52E+02	3.00E+02	8.14E+00	4.17E-03	2.96E-03	9.85E-04	1.35E-04	6.97E-06	
1.28E-07									
5.22E+00	1.52E+02	3.00E+02	8.14E+00	4.19E-03	2.97E-03	9.90E-04	1.36E-04	7.01E-06	
1.29E-07									
5.37E+00	1.52E+02	3.00E+02	8.15E+00	4.20E-03	2.98E-03	9.92E-04	1.36E-04	7.04E-06	
1.30E-07									
5.54E+00	1.52E+02	3.00E+02	8.16E+00	4.20E-03	2.98E-03	9.90E-04	1.36E-04	7.05E-06	
1.30E-07									
5.76E+00	1.52E+02	3.00E+02	8.18E+00	4.17E-03	2.96E-03	9.83E-04	1.35E-04	7.02E-06	
1.30E-07									
6.01E+00	1.52E+02	3.00E+02	8.19E+00	4.11E-03	2.91E-03	9.69E-04	1.33E-04	6.94E-06	
1.29E-07									
6.32E+00	1.52E+02	3.00E+02	8.21E+00	4.01E-03	2.84E-03	9.45E-04	1.30E-04	6.80E-06	
1.28E-07									
6.68E+00	1.53E+02	3.00E+02	8.23E+00	3.90E-03	2.76E-03	9.19E-04	1.27E-04	6.64E-06	
1.25E-07									
7.12E+00	1.53E+02	3.00E+02	8.26E+00	3.90E-03	2.76E-03	9.18E-04	1.27E-04	6.67E-06	
1.27E-07									
7.65E+00	1.53E+02	3.00E+02	8.29E+00	4.46E-03	3.16E-03	1.05E-03	1.45E-04	7.68E-06	
1.47E-07									
8.29E+00	1.53E+02	3.00E+02	8.32E+00	6.88E-03	4.87E-03	1.62E-03	2.24E-04	1.19E-05	
2.31E-07									
9.06E+00	1.54E+02	3.00E+02	8.34E+00	1.14E-02	8.03E-03	2.67E-03	3.71E-04	1.98E-05	
3.88E-07									
9.98E+00	1.54E+02	3.00E+02	8.36E+00	8.95E-03	6.32E-03	2.10E-03	2.93E-04	1.58E-05	

7.96E+02	4.27E+02	3.03E+02	5.51E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
9.56E+02	4.76E+02	3.03E+02	6.45E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
1.15E+03	5.35E+02	3.05E+02	7.56E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
1.38E+03	6.07E+02	3.06E+02	8.86E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
1.66E+03	6.92E+02	3.07E+02	1.04E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
1.99E+03	7.95E+02	3.09E+02	1.21E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
2.39E+03	9.19E+02	3.12E+02	1.42E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
2.88E+03	1.07E+03	3.14E+02	1.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
3.46E+03	1.25E+03	3.17E+02	1.93E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
4.16E+03	1.46E+03	3.21E+02	2.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
5.00E+03	1.72E+03	3.26E+02	2.59E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
1									

time averaged (tav = 3600. s) volume concentration: concentration in the z = 1.80 plane.

downwind distance x (m)	time of cloud max conc (s)	effective duration bbc (m)	average concentration (volume fraction) at (x,y,z) halfwidth	y/bbc=					
				0.0	0.5	1.0	1.5	2.0	2.5
-5.00E+00	1.52E+02	3.00E+02	5.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
-4.00E+00	1.52E+02	3.00E+02	5.05E+00	1.72E-07	1.61E-07	5.84E-08	1.72E-09	1.93E-12	
0.00E+00									
-3.00E+00	1.51E+02	3.00E+02	5.15E+00	3.71E-04	3.38E-04	1.22E-04	4.71E-06	1.06E-08	
0.00E+00									
-2.00E+00	1.51E+02	3.00E+02	6.24E+00	6.07E-03	4.64E-03	1.59E-03	1.68E-04	4.46E-06	
2.74E-08									
-1.00E+00	1.50E+02	3.00E+02	6.88E+00	5.44E-05	3.98E-05	1.35E-05	1.65E-06	6.39E-08	
7.26E-10									
-5.96E-08	1.50E+02	3.00E+02	6.99E+00	5.52E-04	4.03E-04	1.36E-04	1.69E-05	6.72E-07	
8.03E-09									
1.00E+00	1.50E+02	3.00E+02	7.09E+00	1.55E-03	1.13E-03	3.81E-04	4.77E-05	1.94E-06	
2.40E-08									
2.00E+00	1.51E+02	3.00E+02	7.19E+00	3.03E-03	2.21E-03	7.43E-04	9.37E-05	3.87E-06	
4.91E-08									
3.00E+00	1.51E+02	3.00E+02	7.29E+00	5.28E-03	3.83E-03	1.29E-03	1.63E-04	6.84E-06	
8.87E-08									
4.00E+00	1.52E+02	3.00E+02	7.38E+00	8.95E-03	6.48E-03	2.18E-03	2.79E-04	1.20E-05	
1.63E-07									
5.00E+00	1.52E+02	3.00E+02	8.13E+00	1.31E-02	9.32E-03	3.10E-03	4.25E-04	2.19E-05	
4.01E-07									
5.10E+00	1.52E+02	3.00E+02	8.14E+00	2.42E-03	1.72E-03	5.72E-04	7.85E-05	4.05E-06	

9.14E+01	1.86E+02	3.00E+02	1.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
1.09E+02	1.93E+02	3.00E+02	1.29E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
1.30E+02	2.01E+02	3.00E+02	1.42E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
1.55E+02	2.11E+02	3.00E+02	1.57E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
1.86E+02	2.23E+02	3.00E+02	1.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
2.23E+02	2.37E+02	3.00E+02	1.98E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
2.67E+02	2.54E+02	3.00E+02	2.25E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
3.20E+02	2.75E+02	3.00E+02	2.59E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
3.84E+02	3.00E+02	3.00E+02	2.98E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
4.60E+02	3.24E+02	3.01E+02	3.46E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
5.52E+02	3.52E+02	3.01E+02	4.03E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
6.63E+02	3.86E+02	3.02E+02	4.71E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
7.96E+02	4.27E+02	3.03E+02	5.51E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
9.56E+02	4.76E+02	3.03E+02	6.45E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
1.15E+03	5.35E+02	3.05E+02	7.56E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
1.38E+03	6.07E+02	3.06E+02	8.86E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
1.66E+03	6.92E+02	3.07E+02	1.04E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
1.99E+03	7.95E+02	3.09E+02	1.21E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
2.39E+03	9.19E+02	3.12E+02	1.42E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
2.88E+03	1.07E+03	3.14E+02	1.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
3.46E+03	1.25E+03	3.17E+02	1.93E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
4.16E+03	1.46E+03	3.21E+02	2.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						
5.00E+03	1.72E+03	3.26E+02	2.59E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00						

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time averaged (tav = 3600. s) volume concentration: concentration in the z = 9.00 plane.

downwind time of cloud effective average concentration (volume fraction) at (x,y,z)
distance max conc duration halfwidth y/bbc= y/bbc= y/bbc= y/bbc= y/bbc= y/bbc=

1.40E+01	1.55E+02	3.00E+02	8.43E+00	3.92E-18	2.76E-18	9.13E-19	1.29E-19	7.12E-21
1.48E-22								
1.60E+01	1.56E+02	3.00E+02	8.47E+00	7.28E-10	5.12E-10	1.70E-10	2.40E-11	1.34E-12
2.84E-14								
1.83E+01	1.57E+02	3.00E+02	8.53E+00	9.74E-04	6.84E-04	2.26E-04	3.22E-05	1.82E-06
3.94E-08								
2.11E+01	1.58E+02	3.00E+02	8.61E+00	2.81E-04	1.97E-04	6.52E-05	9.31E-06	5.35E-07
1.19E-08								
2.44E+01	1.60E+02	3.00E+02	8.73E+00	1.05E-19	7.32E-20	2.42E-20	3.47E-21	2.03E-22
4.61E-24								
2.84E+01	1.61E+02	3.00E+02	8.87E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
3.33E+01	1.63E+02	3.00E+02	9.06E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
3.91E+01	1.65E+02	3.00E+02	9.31E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
4.61E+01	1.68E+02	3.00E+02	9.62E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
5.45E+01	1.71E+02	3.00E+02	1.00E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
6.46E+01	1.75E+02	3.00E+02	1.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
7.67E+01	1.80E+02	3.00E+02	1.12E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
9.14E+01	1.86E+02	3.00E+02	1.20E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
1.09E+02	1.93E+02	3.00E+02	1.29E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
1.30E+02	2.01E+02	3.00E+02	1.42E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
1.55E+02	2.11E+02	3.00E+02	1.57E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
1.86E+02	2.23E+02	3.00E+02	1.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
2.23E+02	2.37E+02	3.00E+02	1.98E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
2.67E+02	2.54E+02	3.00E+02	2.25E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
3.20E+02	2.75E+02	3.00E+02	2.59E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
3.84E+02	3.00E+02	3.00E+02	2.98E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
4.60E+02	3.24E+02	3.01E+02	3.46E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
5.52E+02	3.52E+02	3.01E+02	4.03E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
6.63E+02	3.86E+02	3.02E+02	4.71E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
7.96E+02	4.27E+02	3.03E+02	5.51E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
9.56E+02	4.76E+02	3.03E+02	6.45E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00							
1.15E+03	5.35E+02	3.05E+02	7.56E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

0.00E+00	0.00E+00								
1.38E+03	6.07E+02	3.06E+02	8.86E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
1.66E+03	6.92E+02	3.07E+02	1.04E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
1.99E+03	7.95E+02	3.09E+02	1.21E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
2.39E+03	9.19E+02	3.12E+02	1.42E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
2.88E+03	1.07E+03	3.14E+02	1.65E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
3.46E+03	1.25E+03	3.17E+02	1.93E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
4.16E+03	1.46E+03	3.21E+02	2.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								
5.00E+03	1.72E+03	3.26E+02	2.59E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0.00E+00	0.00E+00								

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time averaged (tav = 3600. s) volume concentration: maximum concentration (volume fraction) along centerline.

downwind distance	height	maximum concentration	time of cloud	cloud
x (m)	z (m)	c(x,0,z)	(s)	(s)
-5.00E+00	0.00E+00	0.00E+00	1.52E+02	3.00E+02
-4.00E+00	0.00E+00	1.33E-02	1.52E+02	3.00E+02
-3.00E+00	0.00E+00	1.83E-02	1.51E+02	3.00E+02
-2.00E+00	0.00E+00	2.26E-02	1.51E+02	3.00E+02
-1.00E+00	0.00E+00	1.12E-02	1.50E+02	3.00E+02
-5.96E-08	0.00E+00	1.15E-02	1.50E+02	3.00E+02
1.00E+00	0.00E+00	1.21E-02	1.50E+02	3.00E+02
2.00E+00	0.00E+00	1.30E-02	1.51E+02	3.00E+02
3.00E+00	0.00E+00	1.40E-02	1.51E+02	3.00E+02
4.00E+00	0.00E+00	1.49E-02	1.52E+02	3.00E+02
5.00E+00	0.00E+00	1.44E-02	1.52E+02	3.00E+02
5.10E+00	0.00E+00	1.43E-02	1.52E+02	3.00E+02
5.22E+00	0.00E+00	1.43E-02	1.52E+02	3.00E+02
5.37E+00	0.00E+00	1.43E-02	1.52E+02	3.00E+02
5.54E+00	0.00E+00	1.43E-02	1.52E+02	3.00E+02
5.76E+00	0.00E+00	1.44E-02	1.52E+02	3.00E+02
6.01E+00	0.00E+00	1.45E-02	1.52E+02	3.00E+02
6.32E+00	0.00E+00	1.47E-02	1.52E+02	3.00E+02
6.68E+00	0.00E+00	1.50E-02	1.53E+02	3.00E+02
7.12E+00	0.00E+00	1.50E-02	1.53E+02	3.00E+02
7.65E+00	0.00E+00	1.35E-02	1.53E+02	3.00E+02
8.29E+00	8.85E-01	1.20E-02	1.53E+02	3.00E+02
9.06E+00	1.32E+00	1.20E-02	1.54E+02	3.00E+02
9.98E+00	1.88E+00	1.14E-02	1.54E+02	3.00E+02
1.11E+01	2.61E+00	1.10E-02	1.54E+02	3.00E+02
1.24E+01	3.53E+00	1.05E-02	1.55E+02	3.00E+02
1.40E+01	4.71E+00	1.01E-02	1.55E+02	3.00E+02

1.60E+01	6.17E+00	9.71E-03	1.56E+02	3.00E+02
1.83E+01	7.98E+00	9.32E-03	1.57E+02	3.00E+02
2.11E+01	1.02E+01	8.93E-03	1.58E+02	3.00E+02
2.44E+01	1.30E+01	8.53E-03	1.60E+02	3.00E+02
2.84E+01	1.64E+01	8.12E-03	1.61E+02	3.00E+02
3.33E+01	2.05E+01	7.70E-03	1.63E+02	3.00E+02
3.91E+01	2.55E+01	7.27E-03	1.65E+02	3.00E+02
4.61E+01	3.16E+01	6.81E-03	1.68E+02	3.00E+02
5.45E+01	3.90E+01	6.34E-03	1.71E+02	3.00E+02
6.46E+01	4.80E+01	5.85E-03	1.75E+02	3.00E+02
7.67E+01	5.87E+01	5.34E-03	1.80E+02	3.00E+02
9.14E+01	7.16E+01	4.82E-03	1.86E+02	3.00E+02
1.09E+02	8.69E+01	4.31E-03	1.93E+02	3.00E+02
1.30E+02	1.05E+02	3.81E-03	2.01E+02	3.00E+02
1.55E+02	1.27E+02	3.33E-03	2.11E+02	3.00E+02
1.86E+02	1.52E+02	2.89E-03	2.23E+02	3.00E+02
2.23E+02	1.82E+02	2.49E-03	2.37E+02	3.00E+02
2.67E+02	2.18E+02	2.15E-03	2.54E+02	3.00E+02
3.20E+02	2.59E+02	1.86E-03	2.75E+02	3.00E+02
3.84E+02	2.59E+02	1.61E-03	3.00E+02	3.00E+02
4.60E+02	2.59E+02	1.39E-03	3.24E+02	3.01E+02
5.52E+02	2.59E+02	1.19E-03	3.52E+02	3.01E+02
6.63E+02	2.59E+02	1.02E-03	3.86E+02	3.02E+02
7.96E+02	2.59E+02	8.73E-04	4.27E+02	3.03E+02
9.56E+02	2.59E+02	7.45E-04	4.76E+02	3.03E+02
1.15E+03	2.59E+02	6.35E-04	5.35E+02	3.05E+02
1.38E+03	2.59E+02	5.42E-04	6.07E+02	3.06E+02
1.66E+03	2.59E+02	4.62E-04	6.92E+02	3.07E+02
1.99E+03	2.59E+02	3.94E-04	7.95E+02	3.09E+02
2.39E+03	2.59E+02	3.37E-04	9.19E+02	3.12E+02
2.88E+03	2.59E+02	2.88E-04	1.07E+03	3.14E+02
3.46E+03	2.59E+02	2.47E-04	1.25E+03	3.17E+02
4.16E+03	2.59E+02	2.12E-04	1.46E+03	3.21E+02
5.00E+03	2.59E+02	1.82E-04	1.72E+03	3.26E+02